

Report No. CDOT-2006-11
Final Report

**MOBILITY NEEDS OF LOW INCOME AND
MINORITY HOUSEHOLDS RESEARCH STUDY**

UrbanTrans Consultants, Inc.
In Association with RAE Consultants, Inc.

November 2006

**COLORADO DEPARTMENT OF TRANSPORTATION
RESEARCH BRANCH**

The contents of this report reflect the views of the authors, who are responsible for the fact and accuracy of the data presented herein. The contents do not necessarily reflect the official views of the Colorado Department of Transportation or the Federal Highway Administration. The report does not constitute a standard, specification or regulation.

Technical Report Documentation Page

1. Report No CDOT-2006-11	2. Government Accession No.	3. Recipient's Catalog No.	
4. Title and Subtitle MOBILITY NEEDS OF LOW INCOME AND MINORITY HOUSEHOLDS RESEARCH STUDY		5. Report Date November 2006	
		6. Performing Organization Code	
7. Authors(s) Brendon Harrington, Matthew Kaufman, Rick Evans		8. Performing Organization Report No. CDOT-2006-11	
		10. Work Unit No. (TRAVIS)	
9. Performing Organization Name and Address UrbanTrans Consultants, Inc. 730 17th Street, Suite 400 Denver, CO 80202		11. Contract or Grant No. HAA 06HQ000014	
		13. Type of Report and Period Covered Final Report	
12. Sponsoring Agency Name and Address Colorado Department of Transportation 4201 E. Arkansas Avenue Denver, CO 80222		14. Sponsoring Agency Code 32.46	
		15. Supplementary Notes	
16. Abstract <p>This study identifies the mobility needs and barriers of low income and minority households in Colorado. By learning more about the mobility needs of low income and minority households, future planning efforts can better respond to their needs. The research study process included an extensive literature review and seven focus groups throughout Colorado. The seven focus groups were held in Alamosa, Denver, Durango, Greeley, Lamar, Leadville, and Pueblo. Focus group participants discussed specific transportation and mobility challenges.</p>			
17. Key Words transit, poverty, travel, pedestrians, buses, carpools, automobiles, focus groups, urban mobility, rural mobility			18. Distribution Statement No restrictions
19. Security Classif. (of this report) Unclassified	20. Security Classif. (of this page) Unclassified	21. No. of Pages 65	22. Price

This page intentionally left blank.

**MOBILITY NEEDS OF LOW INCOME AND MINORITY
HOUSEHOLDS RESEARCH STUDY**

Report No. CDOT-2006-11

**Prepared by: UrbanTrans Consultants, Inc.
730 17th Street, Suite 400
Denver, CO 80202**

**Sponsored by: Colorado Department of Transportation
in Cooperation with the
U.S. Department of Transportation
Federal Transit Administration**

November 2006

**Colorado Department of Transportation
4201 E. Arkansas Avenue
Denver, CO 80222
(303) 757-9506**

ACKNOWLEDGEMENTS

STUDY ADVISORY COMMITTEE

Kathy Engelson, Colorado Department of Transportation
Gregg Ernst, Colorado Department of Transportation
George Gerstle, Colorado Department of Transportation
William Johnson, Colorado Department of Transportation
Beth Moore, Colorado Department of Transportation
John Valerio, Colorado Department of Transportation

Steve Cook, Denver Regional Council of Governments
Bill Obermann, Denver Regional Council of Governments

Bill Haas, Federal Highway Administration

David Beckhouse, Federal Transit Administration
Ryan Hammon, Federal Transit Administration

Chris Quinn, Regional Transportation District
Dave Shelley, Regional Transportation District

EXECUTIVE SUMMARY

The objective of this study was to identify the mobility needs and barriers of low income and minority households in Colorado. By learning more about the mobility needs of low income and minority households, future planning efforts can better respond to their needs. The study included several key elements including a literature review, demographic research, and focus groups.

Literature Review

The study began with a literature review to determine the types of information currently available on the travel needs of low income and minority individuals, both in Colorado and the entire United States. There has been an increased reliance on automobiles which has put significant financial demands on low income individuals. In addition, low levels of mobility can limit work and other quality of life options for low income individuals.

Demographic Analysis

Supplementing the literature review, and in order to determine ideal focus group locations for this study, statewide demographic research and analysis was conducted. Census data was used to identify areas with high concentrations of low income and minority individuals. Based on the analysis of these data and the desire to obtain information from diverse areas of the state, it was decided to conduct focus groups in the following the CDOT Transportation Planning Regions: 1) Southwest, 2) San Luis Valley, 3) Intermountain, 4) Pueblo Area, 5) Greater Denver Area, 6) Upper Front Range, and 7) Southeast.

Focus Groups

Seven focus groups were conducted in order to expand on the information obtained in the literature review and demographic research. The purpose of the focus groups was to better understand the travel behavior, mobility needs and travel barriers of low income and minority populations in Colorado. Each focus group was to be comprised of members of the public who were a member of a low income and/or minority household. The seven focus groups were held in Alamosa, Denver, Durango, Greeley, Lamar, Leadville, and Pueblo, and included a total of 77 participants. Key findings from the focus groups related to public transit needs, pedestrian safety, and roadway travel.

Study Findings

Overall findings and conclusions were identified regarding how best to address the mobility needs of low income and minority individuals in Colorado in the future. In particular, providing reasonable travel options such as convenient public transportation and safe pedestrian facilities to individuals who do not own vehicles is a critical factor for low income and minority individuals to access jobs and to participate in the same quality of life as the general population.

Based on the literature review and focus group research, many transportation barriers emerged such as auto-oriented land use and development contributing to longer trip lengths, higher energy consumption, increased traffic congestion and higher transportation costs. This type of development imposes a particular burden on low income individuals given the high cost of owning and operating an automobile.

In addition, the relative lack of public transportation in many parts of the state places a high burden on low income individuals, including the inability to access essential life services without access to a car and a high percentage of income allocated to transportation costs. There is a desire among low income and minority populations to invest in basic transit infrastructure improvements such as bus replacement, bus stops and bus shelters. Transit service improvements within small communities and transit access from the outskirts of those communities were expressed as a need in focus groups.

Another key study finding is that better pedestrian facilities in both urban and rural areas would improve the travel safety and mobility of low income and minority individuals. Bicycle and pedestrian roadway safety is an issue for low income and minority populations who use these modes at a higher level than the general population.

Finally, creating carpool matching programs based at human service agency locations could help individuals without cars find more carpool options and may encourage individuals traveling alone to offer rides to others. Other new creative options could also be explored such as car sharing, rural vanpool services and telemedicine.

TABLE OF CONTENTS

1.0	INTRODUCTION.....	1
2.0	SCOPE OF STUDY	1
3.0	LITERATURE REVIEW.....	2
	3.1 Current Studies.....	2
	3.2 Literature Review Findings.....	7
4.0	DEMOGRAPHIC RESEARCH.....	11
5.0	FOCUS GROUPS.....	15
	5.1 Focus Group Locations	15
	5.2 Focus Group Methodology	15
	5.3 Focus Group Findings.....	16
6.0	STUDY FINDINGS.....	19
	6.1 Literature Review Findings.....	19
	6.2 Focus Group Findings.....	20
	6.3 Mobility Needs by Geographic Area.....	21
	6.4 Barriers to Overcome.....	21
	6.5 Need for Further Analysis	23
	6.6 Conclusions.....	23

Appendices

A	STUDY ADVISORY COMMITTEE.....	A-1
B	FOCUS GROUP METHODOLOGY.....	B-1
C	FOCUS GROUP SUMMARIES.....	C-1
D	FOCUS GROUP DETAILED NOTES.....	D-1

This page intentionally left blank.

LIST OF FIGURES

Figure 1. Location of Low Income Population.....	12
Figure 2. Location of Minority Population.....	13

LIST OF TABLES

Table 1. Focus Group Summary: Mobility Needs by Geographic Area....	22
--	-----------

This page intentionally left blank.

1.0 INTRODUCTION

The objective of this study was to identify the mobility needs and barriers of low income and minority households in Colorado. There is much to be learned about the current and future mobility needs of these subgroups of the population. In many cases, low income and minority households that do not own a private vehicle are able to use the existing transit system and find it sufficient to meet both work and non work trip needs. In other cases, carpooling, bicycling or walking are also used to address mobility needs. In some cases mobility needs are likely to go unmet. By learning more about the mobility needs of low income and minority households, future planning efforts can better respond to their needs.

2.0 SCOPE OF STUDY

The study included several key elements. First a literature review was conducted to determine the types of information currently available on the travel needs of low income and minority individuals, both in Colorado and in the United States in general. Demographic information was then obtained from the U.S. Census to assess and analyze the geographic distribution of low income and minority residents in the state. This information was used to identify locations for seven focus groups throughout the state. Focus groups were conducted to hear first hand what was working well and what specific challenges were being experienced by the target population in Colorado. The information gathered was also used to support or refute findings from the literature review. Overall findings and conclusions were then identified regarding how best to address the mobility needs of low income and minority individuals in Colorado in the future.

A Study Advisory Committee met throughout the study process to guide the study effort. The committee included several members of the CDOT staff from the Research Group, Long Range Planning, the Equal Opportunity Office and the Transit Unit. It also included representatives from the Federal Transit Administration, the Regional Transit District (RTD), and the Denver Regional Council of Governments (DRCOG). A complete list of Advisory Committee members is presented in Appendix A.

3.0 LITERATURE REVIEW

This chapter presents the information gathered from the literature review conducted for the Mobility Needs of Low Income and Minority Households Research Study. A broad range of research reports and other documents were examined to better understand the level of existing information on the mobility needs of low income and minority households.

This chapter begins with a review of previous mobility research and data on the mobility of low income and minority individuals. The chapter ends with a summary of findings and recommendations regarding additional research, including emphasis areas for the focus groups that were conducted.

3.1 Current Studies

The information gathered through the literature review has been organized into two sections, urban mobility and rural mobility. While a significant amount of research exists regarding the mobility of low income and minority households in urban areas, relatively little research has been performed on the mobility issues of low income and minority households in rural areas. While some inferences can be made between urban and rural mobility, and are in this literature review, the dearth of information on the mobility issues of the rural poor and minorities speaks to the need for this research project.

Urban Mobility

Significant changes have occurred in recent decades to the travel behaviors of individuals living in urban areas. When analyzing data from the 2001 National Households Transportation Survey, Pucher and Renne (2003) found that the use of public transit for journey to work trips fell from 12.6 to 4.7 percent between 1960 and 2000, while the share of walk trips fell from 10.3 to 2.9 percent. As would be expected, the use of private automobiles increased significantly during the same time period. A similar, although not as extreme pattern, can be seen in the analysis of non-work trips where the automobile's share of those trips increased from 81.8 percent in 1969 to 86.4 percent in 2001 (Pucher and Renne 2003). These statistics show the clear growth of the automobile's dominance in life and transportation in the United States, which has the highest rate of personal vehicle ownership in the world (Pucher and Renne 2003).

The automobile, with its increased importance and high acquisition, maintenance, and operating costs has put significant financial demands on low income individuals. In 1998 households with incomes in the lowest 20 percent (less than \$11,943) spent 36 percent of their household budget on transportation. Households with earnings in the top 20 percent spent only 14 percent of their household budget on transportation (Sánchez et al. 2003). Between 1992 and 2000, households with incomes between \$5,000 and \$9,999 increased their spending on transportation by 57 percent while households with incomes of \$70,000 and above increased their spending on transportation by 16.8 percent, an increase less than the rate of inflation (Sanchez et al. 2003).

The inability of low income households without a car to easily access basic services like grocery stores causes additional financial distress by forcing household members to shop at high-cost mini-marts and similar retailers that are located within walking distance of their homes (Crain and Associates 1999). These very low income households, for whom even transit fares are expensive, will find themselves “denied the right to go to church, visit family and friends, to attend cultural and educational programs, or even to look for better paying jobs” (Mann 2004, 41) when they run out of money. In many cases our land use patterns prevent poor individuals from accessing basic human and social services by foot, the most affordable form of transportation.

The importance U.S. households place on having a car is revealed by automobile ownership statistics. While 26.5 percent of urban households earning less than \$20,000 have no motor vehicle, that number decreases to only five percent when household earnings are between \$20,000 and \$39,999 (Pucher and Renne 2003). The willingness of almost 75 percent of our poorest households to spend their very limited income on car ownership speaks to the importance of this form of transportation. The statistics also show that households place a high priority on making an automobile purchase as soon as their incomes allow.

The automobile is such a dominate form of transportation that the lowest income households use it for 75.9 percent of their trips while using transit for only 4.6 percent of trips (Pucher and Renne 2003, 58). While low income individuals have relatively high access to automobiles, their trip rates and miles of travel are significantly lower than those of higher-income households, differing by 1.6 trips and 13.9 miles per person per day (Pucher and Renne 2003, 54). Some of this difference can be explained by the lower employment levels of low income households and their higher propensity to live in dense urban neighborhoods; however, these items are not able to fully account for the mobility difference, thus indicating that a mobility deficit does exist.

Many of the mobility problems and travel patterns associated with low income individuals are prevalent in minority households. Blacks and Hispanics make up 54 percent of the country’s transit users but only 25 percent of the total population (Pucher and Renne 2003). The use of automobiles for trips is lower among minority groups than it is for white, non-Hispanic households. Whites make 87.6 percent of their trips by car while blacks and Hispanics make 78.9 and 83.1 percent of their trips, respectively, by car. As might be expected based on these statistics, minority groups are more likely to travel by foot than white, non-Hispanic households (Surface Transportation Policy Project 2001). Because fatality rates per mile traveled are 36 times higher for walkers than for car occupants, this travel behavior has a perverse affect on minority health (Pucher and Dijkstra 2000). While blacks account for only 12 percent of the population, they represent 20 percent of all pedestrian deaths in the U.S. (Surface Transportation Policy Project 2001). These data indicate that minority groups are more dependent on transit systems and walking for their mobility and that changes to transit systems and unsafe pedestrian conditions are likely to affect minorities at a high rate.

Mothers, regardless of race and marital status, have unique travel behaviors that reflect their parental roles. Working women, relative to working men, make more trips in general (Hu and Young 1999, Rosenbloom and Burns 1994) and are more likely to stop at multiple locations on their way home from work (McGuckin and Murakami 1999). In a probable response to this

greater need for trip making, working mothers are more likely to drive to work, regardless of income level, than are comparable men or women (Rosenbloom and Burns 1994).

Women who do not drive to work are, relative to their driving peers, more likely to be employed in female-dominated secondary occupations that pay less and offer fewer opportunities for advancement (examples of such occupations include part time secretarial, housekeeping, waitress, and healthcare support jobs). Research found this difference to exist even when controlling for the characteristics of the women studied (Wyle 1998).

Research has found that when low income mothers live in households with automobiles, they are still likely to suffer a mobility deficit when compared to their higher income peers. Working aged adults as a whole, have a ratio of vehicles to householders that is two to three times higher than that of low income mothers (Blumenberg 2004). The low level of access to automobiles means that low income mothers may experience difficulties meeting all of their household's travel needs.

Low income, elderly individuals also suffer from unique transportation barriers. As these individuals age and can no longer drive they often become dependent on friends, family, and public transit for their transportation needs. Unfortunately, elderly individuals may be reluctant to use public transit because of a "lack of shelter at many bus stops, dirty windows that compromise failing eyesight, problems entering and exiting most buses, fear of injury in crowded buses, and unsympathetic drivers" (Patterson 1985, 366).

A lack of access to transportation has been found to affect the level of health care that elderly people receive. A study of elderly individuals using community food programs found that the availability of transportation was positively related to the likelihood that a study participant would seek medical care (Rittner and Kirk 1995). These data indicate that meeting the transportation needs of the elderly may require unique programs such as paratransit, and also serve as a reminder that the failure to meet the transportation needs of the elderly can have highly negative effects on their health.

Unfortunately the strong relationship between transportation and health care is not limited to the elderly population. Multiple studies have been done with low income parents to determine why they defer medical care for their children. Those studies found that 21 to 35 percent of the time that health care was deferred it was because of transportation barriers (Flores et al.1998, Lewis et al. 1994, Wood et al. 1993, Moore and Hepworth 1994). It is clear that the availability of transportation, or lack thereof, can play a significant role in the quality of health care that individuals receive.

The availability of transportation also affects an individual's ability to obtain and keep a job. A study of welfare participants found a positive correlation between car ownership and the likelihood a participant would obtain a job (Cervero, Sandoval, and Landis 2002). This study is supported by the spatial mismatch hypothesis, which states that low-skilled job opportunities, for which low income minorities are often most qualified, are increasing in suburban areas while decreasing in urban areas where low income minorities needing the jobs are most likely to live. This spatial mismatch between jobs and people is believed to be responsible for high levels of

unemployment in some minority neighborhoods (Kain 1968). A study of various Los Angeles neighborhoods found that individuals living in Watts, who were dependent on transit, could access only 8,000 jobs in less than 30 minutes while those with automobiles could access 468,000 jobs. Minority neighborhoods close to major employment centers suffered less or not at all from the effects associated with the spatial mismatch hypothesis (Blumenberg 2004).

A study of minority areas in the Denver region by the Denver Regional Council of Governments found similar patterns. In 2025, once the build out of FasTracks has been completed, individuals living in Five Points will be able to access 299,000 jobs in less than 45 minutes using transit. Residents of Commerce City, which is located farther from the Central Business District, will be able to access only 89,000 jobs. This represents an improvement over the status quo; however, studies have shown that the construction of rail stations has a gentrifying affect on neighborhoods, which results in higher property values (Cervero and Duncan 2002). This has the potential to drive low income households from neighborhoods with rail transit stations to those with lower levels of access to transit, thus decreasing the mobility of low income households.

Rural Mobility

One would expect the mobility levels and needs of rural households to differ from those of their urban counterparts; low income individuals in urban areas are likely to be able to access a significantly larger number of activities by foot or bicycle than their rural counterparts, and access to transit should be better for urban than for the rural residents. Based on these detriments, it might be expected that low income households living in rural areas are highly immobile. This, however, is not the case. Data from the 2001 National Household Travel Survey (NHTS) show that the rural poor travel 28.5 miles more per day than their urban counterparts. The rural poor make only 16 percent fewer trips than the rural population as a whole, while the urban poor make 25 percent fewer trips than the urban population as a whole (Pucher and Renne 2004).

The differences between urban and rural mobility can be directly related to higher levels of rural car-ownership. Only 11 percent of poor, rural households have no car compared to 27 percent of poor, urban households (Pucher and Renne 2004). This high level of automobile access varies little by ethnic and racial group. Car ownership rates for black, Hispanic, and white households are 91, 90, and 91 percent respectively (Pucher and Renne 2004). Unfortunately, these data cannot be taken as an indication that accessibility is not a problem for the rural poor, as the 11 percent of rural households without cars can access very few destinations using non-car based modes (Pucher and Renne 2004). In fact, 97 percent of all journeys to work in rural areas are made by automobile, indicating that employment is almost impossible for those without access to a car (Pucher and Renne 2004). The importance of access to automobiles is further supported by the fact that rural households without cars make 64 percent of their daily trips by car, compared to 34 percent for their urban counterparts (Pucher and Renne 2004).

While a significant amount of data are not available on the travel patterns of women living in rural areas, a few studies have found important differences between rural and urban females. In urban areas work trip distance is positively correlated to a woman's income, but this is not the case in rural settings (Peters and MacDonald 1994). Regardless of trip distance, jobs in which rural women are employed are likely to be part time or seasonal, thus limiting the distance

women are willing to travel (Wekerle and Rutherford 1988, Madden 1981, Madden and Chiu 1990). Based on this information one might expect rural mothers to replicate the behavior of urban mothers, who tend to have shorter work commutes than their childless counterparts. This, however, is not the case. Women living in rural areas with young children are likely to drive longer distances to work than childless women (Peters and MacDonald 1994). This may relate to the fact that while a longer work trip does not equate to higher wages, it is positively correlated with the receipt of health care benefits (Peters and MacDonald 1994), which may be more important to mothers with young children. This difference in commute behavior means that rural mothers are likely to spend more time on the road, have less time to devote to other household activities, and spend more on transportation than their urban counterparts.

Data specific to the mobility issues of low income, elderly individuals living in rural areas is not readily available, but some inferences can be made from data on elderly rural residents as a whole. Interviews with these individuals found differences in travel behavior between what were termed the “young-old,” individuals between the ages of 65 and 74, and the “old-old,” individuals older than 75. The young-old were more likely to drive themselves while the old-old were more likely to depend on paratransit and rides from family and friends (Glasgow and Blakely 2000). The old-old were more likely to avoid fixed route transit citing infrequent service, far away drop off and pick up points, difficulty boarding and alighting, and little assistance from drivers and passengers (Glasgow and Blakely 2000). Such findings indicate that methods for meeting the needs of elderly, rural individuals are likely to vary depending on age.

It is interesting to note that elderly individuals, especially the old-old, report self limiting their automobile travel for fear of having an accident or getting a ticket, which they believe could result in the state or their family taking away their driving privileges (Glasgow and Blakely 2000). This behavior means the transportation needs of elderly individuals who still drive are not necessarily being met.

3.2 Literature Review Findings

The findings within the literature point to some basic transportation needs that vary with demographics. Mothers have the need to make a large number of trips and need to do so using modes that allow for trip chaining. The elderly make fewer trips, but require greater assistance when doing so. Very low income groups, who sometimes cannot afford the cost of a transit fare, need cheaper access to health care and other basic services. Special attention should also be paid to minority neighborhoods that may suffer from a lack of job access, and walking should be made safer to protect all citizens and especially minorities, as blacks account for only 12 percent of the population but represent 20 percent of all pedestrian deaths in the United States (Surface Transportation Policy Project 2001).

Based on this information, it was determined that the focus groups to be conducted as part of this study should include mothers, elderly individuals who are both older and younger than 65, urban minorities, and a cross section of low income individuals. An emphasis on minority participants was not deemed as important in rural areas as it was in urban areas due to the greater similarities between minority and white, non-Hispanic travel patterns in rural settings. An attempt was also made to seek non-English speaking participants as some studies have indicated that these

individuals suffer difficulties using alternative transportation modes, obtaining drivers' licenses, and influencing policymakers and planner (Sánchez, Stolz, and Ma 2003).

Works Cited for the Literature Review

- Blumenberg, Evelyn. 2004. En-gendering Effective Planning: Spatial Mismatch, Low Income Women, and Transportation Policy. *Journal of the American Planning Association*. 70(3):269-81
- Cervero, Robert, Onésimo Sandoval, and John Landis. 2002. Transportation As a Stimulus of Welfare-to-Work: Private versus public mobility. *Journal of Planning Education and Research*. 22(1): 50-63.
- Cervero, Robert and Michael Duncan. 200. Transit's value-added effects: Light and commuter rail services and commercial land values. *Transportation Research Record 1805*: 8-15.
- Crain and Associates. 1999. *Using Public Transportation to Reduce the Economic, Social, and Human Costs of Personal Immobility*. Transit Cooperative Research Program Report 49. Transportation Research Board. Washington, DC.
- Denver Regional Council of Governments. 2004. *Review of the RTD FasTracks Plan: Final Report*.
- Flores, Glenn, Milagros Abreu, Mary Anne Olivar, and Beth Kastner. 1998. Access Barriers to Health Care for Latino Children. *Archive of Pediatric Adolescent Medicine*. 152: 1119-1125
- Garrett, Mark, and Brian Taylor. 1999. Reconsidering Social Equity in Public Transportation. *Berkeley Planning Journal*. 13:6-27.
- Glasgow, Nina, and Robin M. Blakely. 2000. Older Nonmetropolitan Residents' Evaluation of Their Transportation Arrangements. *The Journal of Applied Gerontology*. 19(1):95-116
- Hu, Patricia, S., and Jennifer R. Young. 1999. *Summary of Travel Trends: 1995 Nationwide Personal Transportation Survey*. Washington DC: US Department of Transportation, Federal Highway Administration.
- Kain, J.F. 1968. Residential Segregation, Negro Employment, and Metropolitan Decentralization. *Quarterly Journal of Economics*. 82: 175-197.
- Lewis, M. A., and G. Rachelefsky, C.E. Lewis, B. Leake, and W. Richards. 1994. The Termination of a Randomized Clinical Trial for Poor Hispanic Children. *Archive of Pediatric Adolescent Medicine*. 148:364-367.
- McGuckin, Nancy, and Elaine Murakami. 1999. Examining Trip-Chaining Behavior: Comparison of Travel by Men and Women. *Transportation Research Record 1693*. 79-85.
- Mann, Eric. 2004. in *Highway Robbery: Transportation, Racism and New Routes to Equity*. South End Press. Cambridge MA. Editors Robert D. Bullard, Glenn Johnson, and Angel O. Torres.

- Moore, P. and J.T. Hepworth. 1994. Use of Prenatal and Infant Health Services by Mexican-American Medicaid Enrollees. *Journal of the American Medical Association*. 272: 297-304.
- Peters, Alan H. and Heather I. MacDonald. 1994. The Work Trips of Rural Nonmetropolitan Women in Iowa. *Growth and Change*. 25(3):335-51.
- Pucher, John, and Lewis Dijkstra. 2000. Making Walking and Cycling Safer: Lessons from Europe. *Transportation Quarterly*. 54(3):25-50.
- Pucher, John, and John L. Renne. 2003. Socioeconomics of Urban Travel: Evidence from the 2001 NHTS. *Transportation Quarterly*. 57(3):49-77.
- Pucher, John, and John L. Renne. 2004. Urban-Rural Difference in Mobility and Mode Choice: Evidence from the 2001 NHTS. *Transportation Quarterly*. 57(3):49-77.
- Rosenbloom, S. 1992. *Reverse Commute Transportation: Emerging Provider Roles*. Washington DC: US Department of Transportation, Federal Transit Administration.
- Rosenbloom, S., and E. Burns. 1994. Why Working Women Drive Alone: Implications for Travel Reduction Programs. *Transportation Research Record 1459*. 39-45.
- Sánchez, Thomas W, Rich Stolz, and Jacinta S. Ma. 2003. *Moving to Equity: Addressing Inequitable Effects of Transportation Policies on Minorities*. Cambridge, MA: The Civil Rights Project at Harvard University.
- Surface Transportation Policy Project. 2001. *Mean Streets 2000*. Washington, DC
- Wood, P.R., H.A. Hidalgo, T.J. Prihoda, and M.E. Kromer. 1993. Hispanic Children with Asthma: Morbidity. *Pediatrics*. 91:62-9
- Wyly, E. K. 1998. Containment and Mismatch: Gender Differences in Commuting in Metropolitan Labor Markets. *Urban Geography*. 19:395-430

Documents Reviewed for the Literature Review

Colorado Department of Transportation. 2002. *Environmental Justice Research Study*. (CDOT Publication No. CDOT-DTD-R-2002-7). Denver, CO: Colorado Department of Transportation Research Branch.

Colorado Department of Transportation. 2003. *Environmental Justice in Transportation Planning Phase II*. (CDOT Publication No. CDOT-DTD-R-2003-12). Denver, CO: Colorado Department of Transportation Research Branch.

Colorado Department of Transportation. 2004. CDOT's Title VI and Environmental Justice Guidelines for NEPA Projects. Denver, Colorado

Colorado Department of Transportation. 2005. *2030 Statewide Transportation Plan*. Denver, Colorado.

Colorado Department of Transportation. 1999. *Transit Needs and Benefits Study*. Denver, Colorado.

4.0 DEMOGRAPHIC RESEARCH

Supplementing the literature review, and in order to determine ideal focus group locations for this study, statewide demographic research and analysis was conducted. Given the broad range of types and size of communities in Colorado and the geographic distribution of the population, the consultant team and the Study Advisory Committee were challenged in determining the best locations to conduct the focus groups.

Similar to the general population, the largest number of low income and minority individuals live along the Front Range in Colorado, including the communities of Denver, Boulder, Colorado Springs, Fort Collins, Pueblo and Greeley. However, these are the locations of many of the states largest transit systems and there was an interest in obtaining information from other areas not well served by public transit. There was also interest in having diverse geographic coverage of the state, especially considering the significant variations in types of communities, including large urban areas, middle-sized urban areas, rural farming and ranching communities, mountain resort communities and two Native American Reservations in southwest Colorado, the Southern Ute Tribe and the Ute Mountain Ute Tribe.

A demographic analysis was conducted to identify areas with high concentrations of low income and minority individuals. For purposes of this analysis “low income” was defined as households with earnings less than 150 percent of the poverty level. This definition coincides with that used for the initial federal Job Access and Reverse Commute transportation grant program of the Federal Transit Administration (FTA).

Data from the 2000 U.S. Census were used to map both low income and minority populations in Colorado. Based on the analysis of these data and the desire to obtain information from diverse areas of the state, it was decided to conduct focus groups in the following CDOT transportation planning regions: 1) Southwest, 2) San Luis Valley, 3) Intermountain, 4) Pueblo Area, 5) Greater Denver Area, 6) Upper Front Range, and 7) Southeast. The consultant team further refined the specific location of the groups to the following communities: Durango, Alamosa, Leadville, Pueblo, Denver, Greeley, and Lamar.

Figures 1 and 2 show the focus group locations. Figure 1 shows the focus group locations overlaid onto a map showing low income population densities. Figure 2 shows the location of the groups overlaid on a map showing concentrations of the minority population.

Low Income Population Concentrations in the State of Colorado

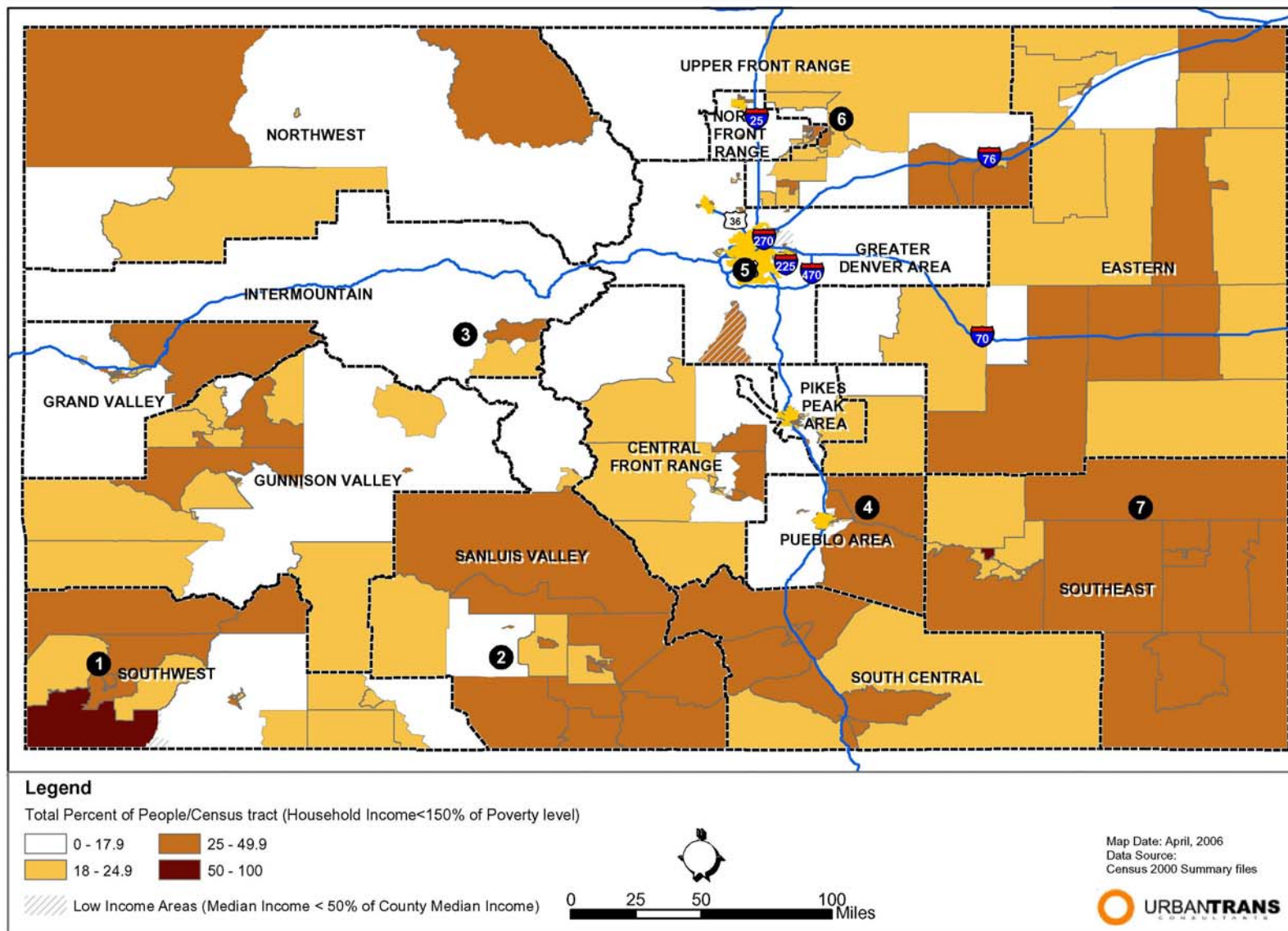


Figure 1. Location of Low Income Population

Minority Population Concentrations in the State of Colorado

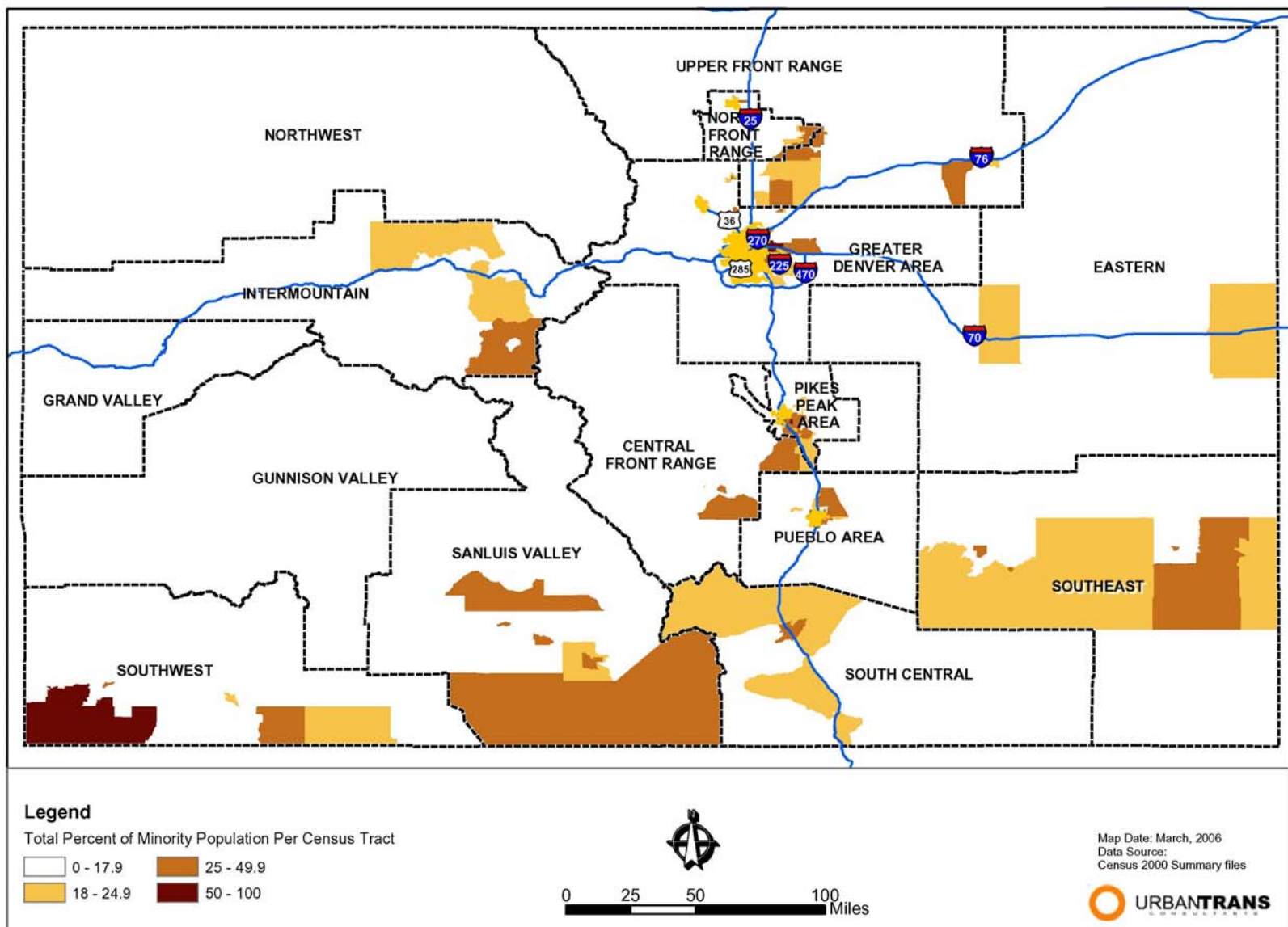


Figure 2. Location of Minority Population

This page intentionally left blank.

5.0 FOCUS GROUPS

Seven focus groups were conducted in order to expand on the information obtained in the literature review and demographic research, so as to better understand the specific travel behavior, mobility needs and travel barriers of low income and minority populations in Colorado.

5.1 Focus Group Locations

Based on the statewide demographic analysis, the study panel decided to conduct focus groups in the following transportation planning regions: 1) Southwest, 2) San Luis Valley, 3) Intermountain, 4) Pueblo Area, 5) Greater Denver Area, 6) Upper Front Range, and 7) Southeast. The consultant team further refined the specific location of the groups to the following communities: Alamosa, Durango, Lamar, Pueblo, Greeley, Leadville and Denver.

5.2 Focus Group Methodology

The requirement was that each focus group participant be a member of a low income or minority household. The purpose was to better understand the travel behavior, mobility needs and travel barriers of low income and minority populations. The hope was that the focus groups would also validate or dispute the various key findings from the previously conducted literature review for this project.

The focus group methodology included the recruitment and selection of participants, conducting the groups and summarizing results. These elements of the methodology are summarized below. A more detailed description of the methodology is presented in Appendix B.

Focus Group Recruitment and Selection Criteria

Each focus group was to be comprised of members of the public who were members of a low income and/or minority household. Focus groups would ideally have a diversity of race, age, income, and employment status. Participants needed to be able to articulate their transportation needs and their opinions about the transportation system. Participants were given a \$100 incentive for their participation. A detailed recruitment questionnaire was used and is included in Appendix B.

Focus Group Protocol

Several steps were taken to ensure that each focus group was productive. Participants were welcomed by the facilitator and given a short pre-survey and a name card. The facilitator then told the participants that they would receive their incentive at the end of the focus group. A brief overview of the research project was made. Then the goals of the focus group were reviewed participants and were asked if there were any questions. The ground rules were then reviewed

and basic icebreaker questions were used to get discussion going, followed by the questions included in the discussion guide.

The focus group concluded by thanking participants for their time and informing them that their input would help the Colorado Department of Transportation in developing new programs and services to benefit low income people and minorities. Participants received their cash incentive at the conclusion of the focus group.

5.3 Focus Group Findings

There was a broad range of information obtained through the focus group process. Several key findings are presented below, followed by key points from each group. More extensive meeting summaries are presented in Appendix C. Detailed notes from each focus group are included in Appendix D.

Overall Findings

Overall the following key findings came out of the focus groups.

- Pedestrian safety – The quality of pedestrian facilities is important to the low income and minority population in Colorado, both in urban and rural areas. Pedestrian safety is a major concern. Issues include: narrow shoulders on rural roads that limit pedestrian and bicycle access; poor lighting on streets for pedestrians and at bus stops/shelters; and fear of crossing busy city streets, even with crosswalks.
- Roadway travel – Congestion is a concern in rapidly growing areas.
- Public transit – The availability and quality of public transit is very important to low income and minority populations in Colorado. Public transit was available in all but one of the focus group locations. After availability (having transit or not), keys issues include: service area (especially to rural areas of counties outside cities), days and hours of service (especially lack of service in early morning and evening hours and on weekends), and frequency of service (long waits if a bus is missed). The availability of quality public transit service dramatically increases the quality of life for low income and minority residents of Colorado.

Summary Findings by Focus Group

Alamosa

- Relying on friends and relatives for transportation can cause problems in maintaining employment and staying in school if the driver an individual is relying on is sick or otherwise becomes unavailable.
- No public transit service limits mobility.

- Walking can be dangerous with narrow roadways and high traffic speeds. In bad weather, pedestrians may need to walk in traffic lanes to avoid ice or piles of snow.

Durango

- The bus system is good to excellent but there is no public transit outside city limits.
- Improvements to the bus service would help, including later service into the evening, Sunday service, lower costs for people with disabilities and protection from the elements at bus stops.
- Roadways are too narrow to accommodate cars and cyclists and in winter, snow shoveling on roadways makes pedestrian travel difficult.

Lamar

- Life is challenging without a car
- The current bus system was rated average to good. Extending service hours later into the evening would be helpful as well as service into rural areas of the county. Fixed route bus service might be better accepted.
- Narrow roadway shoulders created conflicts among motorists, pedestrians and cyclists. Better street lighting is needed.

Pueblo

- The overall theme was how difficult life can be when access to a private automobile is limited, whether due to age, disability or the need for more than one car in a household.
- Transit services are helpful but do not have the level of service required to be fully effective.
- Pedestrian safety is an issue, including street geometry, periodic signal outages, needed driver education regarding pedestrian rights in crosswalks, and the need for more sidewalks and bike lanes.

Leadville

- Two focus groups were conducted, one in English and one in Spanish.
- Local bus service is needed as well as a bus connector to Summit County.
- People walk long distances and hitchhiking is prevalent.
- Pedestrian safety is an issue with limited sidewalks and inadequate street lighting.
- No major issues were cited by Spanish speakers regarding language barriers.

Greeley

- The bus system appears to be doing a good job. However, an ideal system would have higher frequency service, longer hours, more direct routes and more weekend service.
- Safety concerns included the perceived need for more bike paths and bike lanes, better street lighting and unsafe drivers on U.S. 85.

Denver

- Travel difficulties are evident with high gas prices and maintaining old, unreliable vehicles.

- The existing RTD bus service was rated as good; although, many improvements could be provided to make it even better. These included: later bus service, better customer service, seatbelts on buses, more bus shelters and benches, and better street lighting at bus stops. It was also stated that people shouldn't have to travel somewhere for an in person meeting to qualify for Access-a-Ride service. All participants like the existing light rail operation and all were looking forward to the completion of the FasTracks program.
- Pedestrian safety issues were raised, particularly for children, and also the need for better roadway lighting.
- Out-of-region recreational travel options would also be much appreciated.

6.0 STUDY FINDINGS

This section presents an overall summary of key findings from the literature review detailed in Section 3.0 and the focus groups conducted as part of this research study detailed in Section 5.0.

6.1 Literature Review Findings

Key findings from the literature review are presented below:

General Information

- Low income individuals make fewer trips than more affluent Americans
- Low levels of mobility can limit work and other quality of life options for low income individuals
- Individuals with automobiles are more mobile than individuals without automobiles
- Transportation barriers are a key aspect to finding and keeping a job
- In metro areas, nearly 50 percent of families without a car live in the suburbs
- Walking is especially important for the poor and minorities, and yet pedestrian needs are often unmet in areas with low income and minority populations
- Travel behavior is affected by income, age, race, sex, and ethnicity
- Language barriers are likely to limit an individual's mobility

Mobility, Wealth and Women

- Access to cars increases a welfare participant's likelihood of employment
- The ratio between the number of persons in a household and household cars is two to three times higher for low income, single mothers than for all working age adults. Working mothers also have additional transportation needs associated with raising a family that males and childless woman do not have
- Women who commute by transit are more likely to work in female dominated secondary professions that tend to pay less than non-female dominated professions. Women with access to autos are often more likely to have better jobs, greater employment stability, and higher wages
- It is important to distinguish between poor, urban households that are located near major employment centers with good transit and those located farther from employment centers, as the latter are likely to suffer from low levels of job access if they do not own cars.
- The lowest income households make only 4.6 percent of their trips by transit
- Households with no cars made 34.1 percent of their trips by auto in 2001
- The ownership of even one car can dramatically transform travel behavior. In urban areas transit use drops from 19.1 percent of trips by households with no car to only 2.7 percent of trips by households with one car. Walking also decreases from 41.1 percent of trips to 12.5 percent of trips

- The very poor make fewer trips than their wealthier counterparts; however, this is partially related to a lack of employment
- Improvements to inner-city bus services would better address low income mobility needs in urban areas, rather than improving urban-suburban rail services

Rural Mobility

- A limited amount of research has been performed on rural mobility.
- Almost 90 percent of poor rural households own at least one car. The poor in rural areas use transit for only one percent of their trips.
- Minority households in rural areas tend to have levels of mobility equal to those of white, non-Hispanic households. Mobility differences are seen between households of different income levels rather than race or ethnicity
- Mothers in rural areas will travel farther distances for work than childless women. The opposite behavior is found in urban areas.

6.2 Focus Group Findings

Many of the findings from the focus groups reinforce findings from the literature review. Focus group findings are summarized below.

- The lack of transportation limits work and other quality of life options for low income individuals in Colorado.
- Access to a car increases the likelihood of employment.
- While at least some public transportation is available within many small urban and rural communities in Colorado, the levels of service need to increase. Service from surrounding unincorporated areas into small communities is needed and is mostly nonexistent.
- There is a need for improved long distance medical transportation in small urban and rural areas.
- Pedestrian and bicycle safety is a significant issue for low income and minority populations in Colorado. Wider shoulders and better street lighting are needed, based on focus group input.
- Low income and minority people in Colorado are less concerned with the quality of the highway/roadway system than they are with having basic mobility options.

Summary Findings

A summary of the overall research findings is presented below.

- The availability of transportation is a critical factor for low income and minority individuals to access jobs and to participate in the same quality of life as the general population.
- Transportation barriers are a key aspect to finding and keeping a job.

- Low density development in Colorado and in the United States as a whole creates mobility challenges.
- The availability of public transit service is very helpful to low income and minority individuals. The higher the quality of service, the more useful it is.
- Walking is especially important for the poor and minorities, and yet pedestrian needs are often unmet in areas of low income and minority populations. Pedestrian safety was cited as a concern at each of the focus groups in Colorado.
- The quality of the road/highway system is less of a concern to low income and minority populations than is basic mobility. The ownership of even one car can dramatically transform travel behavior.

6.3 Mobility Needs by Geographic Area

While many of the identified mobility needs were common among the focus groups conducted throughout the state, there were some distinct differences by focus group area. Table One presents a summary of mobility needs by focus group area. The table summarizes needs related to public transit, bicycle and pedestrian travel and roadways.

6.4 Barriers to Overcome

Based on the literature review and focus group research, the following barriers were identified by the consultant team and study committee.

- Auto-oriented land use and development contributes to longer trip lengths, higher energy consumption, increased traffic congestion and higher transportation costs. This type of development imposes a particular burden on low income individuals given the high cost of owning and operating an automobile.
- The relative lack of public transportation in many parts of the state places a high burden on low income individuals, including minorities. This burden includes the inability to access essential life services without access to a car and high transportation costs as a percentage of income.
- Extra efforts will be needed to include low income and minority citizens in the development of transportation solutions including highway repair and maintenance. For example, even when extra efforts were made to solicit focus group participation from low income and minority individuals, many who were interested in participating simply could not attend due to the lack of transportation.
- Minority and low income populations rely on walking to meet their transportation needs to a greater degree than the remainder of the population. Having better pedestrian facilities in both urban and rural areas would improve their travel safety and mobility.

Table 1: Focus Group Summary: Mobility Needs by Geographic Area				
City	Transit Needs	Bicycle/Pedestrian	Roadways	Other
Alamosa	*Public transit is needed but is not available	*High Pedestrian demand in areas with high vehicle speeds and narrow shoulders	*Pedestrian Safety	*Many share rides for work or school. This can result in absenteeism when driver is sick.
Durango	*Good public transit available *Better service to outlying areas and later travel times is needed. *Improve transit shelters	*Snow plowing in winter makes pedestrian travel difficult	*Narrow roadways in rural areas make car-bicycle conflicts an issue *Growing Congestion	*Lack of adequate transportation to jobs
Lamar	*Limited Public transit is available. Need reduced wait times, extended hours on weekends and better customer service	*Shoulders are needed to improve bicycle and pedestrian safety	*Potholes are an issue *Better roadway lighting	*Long travel times
Pueblo	*Good to average public transit is available, would like longer service hours, broader service area, more frequency and Sunday service	*Need better sidewalks and bike lanes	*Drivers don't observe rules when pedestrians are in crosswalks	*Difficult to get and keep a job or attend training without a car
Leadville	*No local public transit is available. Need improved service to Eagle Co. and new services to Summit Co.	*Limited sidewalks *Better street lighting needed	*Roads are beat up *Pedestrian safety issues cited	*Social activities as well as work opportunities are limited without a car
Greeley	*Good local public transit available, but no regional transit *Would like higher frequency, longer hours, more direct routes and weekend service	*Better street lighting needed	*No issues cited other than pedestrian safety issues	*Access to distant recreational sites would be a big benefit
Denver	*Good public transit is available *FasTracks will be positive *Would like later bus trips, more benches/shelters, buses to wait for passengers, better customer service	*Pedestrian safety, especially for children. *Better street lighting needed	*Uneven pavement *Drivers running red lights	*Rising fuel costs and maintaining old vehicles are huge challenges

6.5 Need for Further Analysis

The project team felt that the information gathered during this study process was adequate to develop useful key findings in the context of this study. However, several areas of research may be warranted in the future.

- On a national level there is need for more research on the needs of low income and minority individuals in rural areas. Most of the research currently available focuses on large urban areas
- In Colorado, additional research could be done to enhance information about mobility needs of low income and minority populations in specific Transportation Planning Regions (TPRs) not covered by the focus groups conducted as part of this report.
- People without access to cars are limited in terms of providing information regarding their mobility needs. In fact, numerous individuals would have been willing to participate in the study focus groups, but had no means of transportation to attend the focus group. Finding creative ways to involve people with limited transportation access would be helpful and informative, particularly with respect to the statewide planning process.
- Research could be done to identify quantitative goals and criteria for measuring the degree of need for alternative modes in various areas of the state and the degree to which funding programs help address those needs.

6.6 Conclusions

Several conclusions can be reached as a result of this study:

- There is a desire among low income and minority populations to invest in basic transit infrastructure improvements such as bus replacement, bus stops and bus shelters. Transit service to unincorporated areas in the outskirts of many communities was expressed as a need in focus groups.
- Bicycle and pedestrian roadway safety is an issue for low income and minority populations who use these modes at a higher level than the general population. Investment is desired for additional bicycle and pedestrian facilities including sidewalks, pedestrian crosswalks, accessible bus stops and bus shelters.
- Individuals without cars in rural areas are highly dependent on others for transportation. Creating carpool matching programs based at human service agency locations could help individuals without cars find more carpool options and may encourage individuals traveling alone to offer rides to others. Other new creative options could also be explored such as car sharing.

- There was a stated desire to explore the possibility of offering more shuttle services from rural areas to major hospitals in urban areas. Focus group attendees cited long travel distances to access medical specialists as a significant challenge. The Veterans Administration offers a shuttle service from Alamosa to the Denver VA Hospital, of which focus group participants spoke highly. It is also recommended that creative options, as identified through the CDOT/Colorado and federal United We Ride initiatives be pursued.
- There may be opportunities associated with telemedicine in rural areas. Telemedicine involves the use of telecommunications technology for medical diagnosis and patient care when the provider and client are separated by distance. Telemedicine includes pathology, radiology, and patient consultation from a distance.

APPENDIX A: STUDY ADVISORY COMMITTEE

Kathy Engelson, Colorado Department of Transportation
Gregg Ernst, Colorado Department of Transportation
George Gerstle, Colorado Department of Transportation
William Johnson, Colorado Department of Transportation
Beth Moore, Colorado Department of Transportation
John Valerio, Colorado Department of Transportation

Steve Cook, Denver Regional Council of Governments
Bill Obermann, Denver Regional Council of Governments

Bill Haas, Federal Highway Administration

David Beckhouse, Federal Transit Administration
Ryan Hammon, Federal Transit Administration

Chris Quinn, Regional Transportation District
Dave Shelley, Regional Transportation District

APPENDIX B: FOCUS GROUP METHODOLOGY

In preparation for the Colorado Department of Transportation Mobility Needs Research Study Focus Groups, the following methodology will be used to conduct the groups. Each focus group was comprised of members of the public who were a member of a low income and/or minority household. The goal of the focus groups was to better understand the travel behavior, mobility needs and travel barriers of low income and minority populations. The focus groups may have also supported, enhanced or disputed the various key findings of the literature review for this project.

I. Focus Group Recruitment and Selection Criteria

Each focus group was to be comprised of up to 10 members of the public who were a member of a low income and/or minority household. Focus groups would ideally have a diversity of race, age, income, and employment status. Participants should also be able to articulate their transportation needs and their opinions about the transportation system. Participants were given a \$100 incentive for their participation. The recruitment questionnaire consisted of the following questions:

- 1) What is your Name? _____
- 2) What is your Sex? ____Male ____Female
- 3) What is your Age? _____
- 4) How many people are in your household? _____
How many are under the age of 18? _____
- 5) What is the zip code of your current address? _____
- 6) How long have you lived at your current address?
 - Less than 1 year
 - 1-2 years
 - 2-5 years
 - Greater than 5 years
- 7) Are you Spanish/Hispanic/Latino?
 - No
 - Yes, Mexican, Mexican Americano, Chicano
 - Yes, Puerto Rican
 - Yes, Cuban
 - Yes, other Spanish/Hispanic/Latino (Please Specify) _____
- 8) What is your race?
 - White
 - Black/African American
 - American Indian

- Asian Indian
- Japanese
- Native Hawaiian
- Chinese
- Korean
- Guamanian or Chamorro
- Filipino
- Vietnamese
- Samoan
- Other (Please Specify)_____

9) Do you own a vehicle?

- Yes
- No

10) Are you currently employed?

- Yes, Full time
- Yes, Part time
- No

11) Do you have any disability?

- Yes
- No

12) Are you fluent in English? If no, are you fluent in another language? (Please Specify)_____

- Yes
- No

13) Do you have access to the internet?

- Yes
- No

14) What is your annual household income?

- \$0 - \$9,999
- \$10,000 - \$19,999
- \$20,000 - \$29,999
- \$30,000 or more

A variety of methods was used to recruit focus group participants. Very few locations throughout the state have focus group recruitment databases. For the CDOT Mobility Research Focus Groups, only the Denver metro area had an accessible recruitment database, available through Plaza Research. The consultant thus relied on local contacts in each of the focus group geographies that work with low income and/or minority populations. Generally consultant staff relied on local and county government social services offices. Staff from each of the area social services offices that were contacted were usually helpful, and in many cases if they did not have any specific recommendations for potential focus group participants, they recommended other organizations or individuals to contact. A summary of organizations or individuals that were contacted in each city to identify potential focus group participants is included below.

Alamosa

Organizations and individuals who were contacted included:

- Larry Henderson, Alamosa County Social Services
- San Luis Valley Development Resources Group
- South Central Colorado Seniors, Inc.
- San Luis Valley Board Of Cooperative Services
- La Gente
- La Puente
- Blue Peaks

Courtesy phone calls were made to:

- George Wilkenson, Alamosa County Commissioner and former CDOT staff.
- John Stump, San Luis Valley Development Resources Group
- Alamosa Chamber of Commerce

Durango

Organizations and individuals who were contacted included:

- Patricia Carlson, Director, La Plata County Social Services
- Charlotte Pirnat, Four C Council TriCounty Head Start
- Isabele Viana, SW Office for Independence
- Durango Senior Services
- Bob Piccoli, Southern Ute Tribe
- Durango Transit

A courtesy email was also sent to the Durango Chamber of Commerce and to the Jim Davis, the director of Public Works for La Plata County.

Lamar

Organizations and individuals who were contacted included:

- Linda Fairbain, Prowers County Social Services
- Dan Tate, Southeast Colorado Enterprise Development , Inc.
- Deanne Tyner, Prowers Area Transit

Lamar Senior Center
Lamar Housing Authority

Pueblo

Organizations and individuals who were contacted included:
Bill Moore and Don Vest, Pueblo Area Council of Governments
Jose Mondragon, Pueblo Social Services

Don Vest contacted several local neighborhood representatives who personally contacted and recruited the majority of focus group participants.

Leadville

Organizations and individuals who were contacted included:
Colorado Legal Aid Services
St. George Episcopal Church
Leadville Senior Center
Full Circle of Leadville (human services)

Greeley

Organizations who were contacted included:
Weld County Food Stamps Office
Catholic Charities
Several Private Health Clinics
North Colorado Medical Center
Vocational Rehabilitation Office

Denver

Focus Group Recruitment was done by Plaza Research as part of their requirements for use and rental of their focus group facility. A customized recruitment questionnaire was provided by UrbanTrans staff based on the approved focus group methodology. The questionnaire was used by Plaza Research staff to screen potential candidates using their recruitment database. All potential participants were contacted by telephone.

II. Focus Group Protocol

Several steps were taken to ensure that each focus group was productive. Below are instructions for the focus group facilitator:

1. When participants arrive, welcome them individually and request they fill out the short pre-survey and a name card. Participants should place the name card in front of them so the facilitator can see it.

2. **Welcome and Introduction:** Welcome participants, thank them for participating, inform them of where restrooms are and that they will receive their incentive at the end of the focus group. Give a brief overview of the research project.
3. Review the goals of the focus group
4. Collect the short pre-survey from participants, ask if there are any questions and begin.
5. Review the Ground Rules
6. Begin with basic icebreaker questions, then conduct the discussion based on the discussion guide.

III. Focus Group Ground Rules

Presenting the focus group Ground Rules was often a critical element of a successful focus group. Participants needed to understand that the focus group process was designed to allow for conversation and for each participant to feel comfortable sharing their thoughts and ideas regarding transportation. In an effort to create a good space for conversation, suggested ground rules included:

1. **Room for Everyone on the Bus** (Everyone participates): We would like to hear from each and every one of you. We may ask you follow-up questions or request participation from a quiet member from time to time. We don't intend to put you on the spot, but are truly interested in each of your thoughts and ideas.
2. **Getting Where We Need to Go - or Keeping the Bus in Gear** (We will respect your time): We respect your time and want to move through our questions and your comments appropriately. Thus, we may have to switch gears from one conversation in order to move the discussion along. If we need to move on and you have an idea or thought that we don't have time for, we will post items and ideas in the Bus Stop. If there is time at the end of the focus group, we will return to those ideas. (The Bus Stop is a piece of poster paper on the wall where you list items that the group doesn't have time to address.)
3. **No Wrong Way Trips** (There are no right or wrong answers): There may be agreement and disagreement among participants about some of the topics. We expect this and hope everyone can agree that there is no "one-way", no right or wrong answers, just differences of opinion. In general, respect each others' ideas and points of view.
4. **Bus Driver is Trained to Drive** (The facilitator will move the discussion along): The job of the facilitator is to track time and move the discussion along. The facilitator is not here to share their opinion or ideas but to guide and build the discussion and to keep the discussion moving. Feel free to ask questions at any time.

IV. Focus Group Pre-Survey

Participants in the focus groups were asked to complete a brief travel survey at the beginning of the focus group. The purpose of this survey was to not only understand travel needs of focus group participants, but to provide the facilitator with helpful background information that would maximize the effectiveness of the focus group discussion.

1) I own a vehicle (Yes or No) _____

2) On a scale of 1-5 (1=Never 2=Rarely 3= Neutral 4=Sometimes 5=Always), please answer the following questions.

- A) The ability to get to work is a serious problem for me.
- B) The ability to make non-work related trips, such as going to the doctor or shopping is a serious problem for me.
- C) I have the ability to use the following travel options for most of the trips I want to take:
 - a. My Own Car
 - b. Ride in someone else's car
 - c. Bicycle
 - d. Walking
 - e. Bus
 - f. A combination of modes (specify)_____
 - g. Other (specify)_____
- D) If I do not own a vehicle I can get a ride with family or friends for the trips I want to take

3) I have access to a telephone (Yes or No) _____

4) I have access to the internet (Yes or No) _____

V. Focus Group Discussion Guide

Participants in the focus groups were asked a series of questions throughout the duration of the focus group. The questions built on the pre-survey and were designed to be flexible, to respond to the pre-survey results and to allow for more comprehensive discussion. The discussion guide could also be used to emphasize certain questions in different geographies.

1. Can you easily travel to where you want to go? Are there places you needed to go that you couldn't get to because there was no way to get there when you needed to?
2. How would you rate the availability of transit in your area?
3. Where would public transit need to go to best meet your needs and how often would it operate? (service days and hours, service area, directness of service, fare, etc.)
4. What type of trips do you need to make outside of your town? What transportation options are currently available? What additional options would you like to see?

5. Can you make necessary trips without a car? For instance, if you need to go to a doctor's appointment, how would you get there without a car? Have you ever missed an important appointment because you couldn't get there?
6. Have you ever had to turn down a job or not applied for a job because you couldn't get there when you needed to?
7. On a scale of 1-5, how would you rate the current transportation system in terms of meeting your needs?
8. If you could change one thing to improve transportation to better meet your travel needs, what would that be?
9. If you were given an extra \$300 each month, would that change how you travel? How? Does any travel option other than having your own car appeal to you? Is so, which options?
10. Do you feel safe when you travel? Why or why not?
11. If a roadway had a toll that you had to pay but allowed you to get to your destination faster, would you be likely to use that toll road?
12. Do you have any additional comments or suggestions about transportation?

The focus group were conclude by thanking participants for their time and informing them that their input would be help the Colorado Department of Transportation in developing new programs and services to benefit low income people and minorities. Participants received their cash incentive at the conclusion of the focus group.

VI. Focus Group Locations

- 1) Southwest Colorado/Durango
- 2) San Luis Valley/Alamosa
- 3) Southeast Colorado/Lamar
- 4) Intermountain/Leadville
- 5) Greater Denver Area
- 6) Pueblo Area
- 7) Upper Front Range/Greeley

APPENDIX C: FOCUS GROUP SUMMARIES

Summaries are provided below of the six focus groups conducted in May and June, 2006 by the consultant team.

Alamosa

May 30th, 2006, Alamosa County Social Services Center

There were 13 participants in the Alamosa focus group. There is no public transit service in Alamosa. The discussion focused on the challenges of living in a community without public bus service.

Taxi service is the only public transportation in Alamosa and that is very expensive, according to focus group participants. There is some social service agency transportation but that is limited to agency clientele. Transportation is needed both within the community and to outlying areas. Many people have jobs that are over 50 miles away.

When asked about the kind of public transit system they would like, participants suggested a service that operates Monday through Fridays that charges a fare of \$1.25 to \$1.50. They suggested service to Wal-Mart which is a center of activity and is open 24 hours a day. Two suggestions were a call-and-ride service for the elderly and disabled and a shuttle bus that ran every one to two hours in town. The need for transportation to out of town medical appointments was also mentioned. It was stated that there are no dental or other medical specialists in Alamosa.

Many people without cars get around town by walking or relying on friends or relatives. This can be ineffective, however, and some participants cited missed doctors' and other appointments due to lack of transportation. When several people share a ride to work and the driver is sick, everyone in the carpool misses work. The same occurs with students. If a driver decides to drop out of school, other riders often drop out too when transportation is no longer available.

With respect to safety, focus group attendees said they felt that walking in Alamosa is dangerous. Two lane roads with cars going at high speeds feels unsafe. Pedestrians and bicyclists use those same roads which often have narrow shoulders. In bad weather, pedestrians will walk in traffic lanes which is dangerous.

Focus group attendees felt that companies should be willing to subsidize transportation to get employees to work. They should have small buses or vans or other services to help employees out. This could help reduce multiple absences. Not being able to travel can result in depression. People with elderly parents are often forced to take time off from work to get them to doctor's appointments.

Attendees expressed a general unwillingness to pay tolls, although there was some flexibility among the higher income attendees if driving time could be reduced.

Durango

May 30th, 2006, 5:30pm, Durango Community Recreation Center

At the Durango focus group there were 8 participants. The discussion focused on problems which result due to sufficient transportation and how to make the existing bus service even better.

Durango has a bus system which focus group participants rated as good to excellent. However there is no bus service outside the city limits. Due to raising home prices lower income individuals are moving out of town where bus service is not available. There is a Road Runner bus between Ignacio and Durango which connects the Southern Ute Tribe to the city. Desired improvements to the existing in-town service include: service later into the evening, Sunday service, lower costs for people with disabilities and better protection from the elements at bus stops. Greater flexibility within the existing system was also mentioned. This would include using different modes such as call-n-ride, with vans and cars and connections to rural areas. Disabled attendees said that getting from home to doctors' offices can be difficult because of long headways, but at least the trips can be made. Both workers and employers stated that transportation can be a serious problem in keeping employment.

In terms of safety, it was stated that in winter snow plows push snow to the side of the road, which makes it difficult for people to walk. In addition, when the snow melts conditions can become slippery. Drivers in the group felt that there is an issue of not having enough road space to accommodate both cars and cyclists. This is particularly a problem on county road where recreational riding is common.

Given growth in the area, it was stated that congestion is becoming a much greater problem. Better maintained roads and wider shoulders are a need.

Lamar

May 31st, 2006, 11:30am, Southeast Colorado Enterprise Development, Inc.

The Lamar focus group was held May 31, 2006. The group had six participants, all of whom were car owners. The overall theme was how difficult life can be when access to a private automobile is limited, whether due to age, disability or the need for more than one car in a household.

Members of the focus group were aware of the existing demand response public transit system which serves the area in and around Lamar. They rated the system as average to good. It was stated that the wait time for buses is sometimes a problem. This could make riders late for doctors' appointments which then may need to be rescheduled. Interest was expressed in extending service hours before the current 8:00 AM start time and beyond the 5:00 PM end time to better serve workers. There was also interest in serving rural areas of the county where individuals can be isolated without a second car and no access to public transit. Members of the focus group also expressed interest in better customer service by the transit service provider. They also liked the idea of a fixed route bus service, rather than demand response, because there

would be set bus stop pickup times. There is no taxi service currently in Lamar and interest was expressed in having that as an option.

With respect to safety, focus group members mentioned narrow roadway shoulders which caused conflicts between motorists, pedestrians and cyclists. They also mentioned that roadway lighting was often a problem, making it difficult for drivers to see pedestrians and bicyclists at night.

It was also generally agreed that roadways need significant improvements. Approximately half the focus group participants thought roadways were getting better while the other half thought they were getting worse. Toll roads would be acceptable only for long distance travel.

Pueblo

May 31st, 2006, 5:30pm, Pueblo Robert Hoag Public Library

There were 18 participants at the focus group in Pueblo. Of these, 12 had a car available in the household. Again, the overall theme was how difficult life can be when access to a private automobile is limited, whether due to age, disability or the need for more than one car in a household. Transit services are helpful but do not have the level of service required to be fully effective.

Participants were aware of the bus system in Pueblo. Eight attendees rated the service as “good,” seven rated it as “average” and three rated it “poor.” Complaints included the fact that the service doesn’t extend beyond the city limits, the hours are restricted and there is no service on Sundays. It was also mentioned that too often you can’t get to where you need to go without a long walk at one or both ends of a trip. Also, there can be long waits between buses during transfers. There were several complaints about bus drivers talking on their personal cell phones while driving buses and making stops unrelated to bus operations.

In a broader context, problems were expressed about the difficulty of getting a job or attending training without a car. Some participants indicated they had been turned down for jobs because they did not have a car. It was stated that temporary agencies will not accept workers who don’t have cars. Others mentioned that, given the hours of the bus service, taking evening classes at any of the city’s schools is not possible.

With respect to safety, attendees said that accessing some bus stops is dangerous because of traffic and street geometry. This is particularly a challenge for persons with disabilities, especially in winter. Signal outages at intersections were cited as a safety problem for pedestrians, especially for persons with disabilities. The need to better educate drivers regarding pedestrian rights in crosswalks was mentioned. Attendees complained about a general lack of sidewalks and bicycle lanes in Pueblo.

Other than pedestrian and bicycle issues on roadways, only a few of the focus group participants stated that they would be willing to pay roadway tolls under any circumstances. Those who would be willing to pay tolls thought it was only appropriate in large cities such as Denver.

Leadville

June 19th, 2006, 11:30am, National Mining Hall of Fame & Museum

At the Leadville focus group two separate discussions were held, one in English and one in Spanish.

There were 12 participants at the focus group conducted in English in Leadville. Seven of the 12 had a car but many of the vehicles owned were old and/or in poor repair. The overall focus group theme was lack of quality public transportation both within Leadville and to other areas such as Summit County. Pedestrian safety issues were also cited.

Focus group members were aware of the current bus service to Eagle County. However the \$5.00 one-way fare was too expensive for many. It is also difficult to schedule doctor appointments as one must spend the whole day in Vail before getting a return trip. Overall, they rated transit service in the area as “poor.” They expressed interest in local bus service with connections to Summit County. Weekend service is needed as many participants work on weekends. Local special needs service is also needed, according to those in the group. Social activities are limited without a car and it is difficult to get around town with children. Interest was expressed in using Greyhound if it served Leadville. Now it is necessary to go to Vail to access intercity bus service.

Without cars, many people in Leadville hitchhike. Those with cars are willing to take others. Others walk long distances and there is a sense of isolation. There is no taxi service in Leadville. Pedestrian safety is an issue with limited sidewalks and inadequate street lighting.

Participants in the Spanish speaking group cited similar issues. They also rated the existing public transit service as poor. Local transit service was the highest priority, with service until 8:00 PM on weekdays and with service on weekends. Better connections to shopping and for medical facilities outside the county were also mentioned.

The Spanish speaking group also cited poor street lighting and fast drivers as making the streets unsafe. They also stated that it is unsafe for children to ride their bicycles because there are no crosswalks.

Greeley

June 19th, 2006, 5:30pm, Lincoln Park Branch Library

There were two attendees at the Greeley focus group. One had a car, the other did not.

One of the participants used a wheelchair and relies on the bus service a lot. She gave the transit system a high rating, although transfers made travel difficult sometimes. The other participant did not ride the bus. An ideal bus system would have a high frequency, longer hours, more direct routes and more weekend service, according to participants. The taxi service is expensive.

Safety concerns were cited, including the need for more bike paths and bike lanes, better lighting of roadways at night and the problem of unsafe drivers on U.S. 85.

Denver

June 20th, 2006, 11:30am, Plaza Research

The Denver focus group had nine participants. Seven had cars. Several participants cited difficulties caused by high gas prices, especially with older, less fuel efficient vehicles. Those owning vehicle expressed the problem of constantly having to maintain old vehicles which are unreliable.

Three of the participants use RTD every day, two use it sometimes and four use it rarely or never. Two rated the bus service as very good, six as good and one as average. Transfers were cited as being difficult. The transit wish list included the following: later bus service, better customer service, seatbelts on buses, more bus shelters and benches, better street lighting at bus stops. It was also stated that people shouldn't have to travel somewhere to qualify for Access-a-Ride service. All participants like the existing light rail operation and all were looking forward to the completion of the FasTracks program.

Several auto/highway-related issues were also cited. Roadway issues were cited at the I-225/Parker Road/Hampden intersections where merging is difficult. Illiff and Wabash is another problem area, according to participants. The pavement condition on 6th Avenue was also mentioned as well as signal timing in some areas which causes long delays.

Pedestrian safety issues were also mentioned, particularly for children. Lack of adequate roadway lighting is another problem.

Participants would like travel options to recreation areas outside of Denver, including trips to Fort Collins, Rocky Mountain National Park, the Sand Dunes, the Four Corners and Mesa Verde.

APPENDIX D: FOCUS GROUP DETAILED NOTES

Detailed notes of the consultant team are provided below for the seven focus groups conducted in May and June, 2006.

Alamosa

May 30th, 2006, 11:30am,
Alamosa County Social Services Center
8900 Independence Way, Alamosa CO 81101

Basic Information

- The only public transportation available in the town is taxi service. There are no shuttles or vans available to all residents to get people to hospitals, doctor's appointments, social events, or shopping. Some social service agencies, elderly homes, and senior centers will transport their clients to these types of activities.
- All attendees said that transportation in and around Alamosa is poor.
 - They reported that many people who live in town may work 50 miles away and will experience difficulty accessing their jobs.
 - A one-way taxi ride across town is \$8.00 and attendees said many people cannot afford this cost. If a person lives outside of Alamosa the cost of taking a taxi ride into town or from town home can cost \$30.00
- Attendees reported that accessing destinations outside of the county can be very difficult if a person does not have a car or a friend or relative with a car.
- The city used to be served by transit and received funding that required a 50% local match to receive federal funds. There was a lack of agencies willing to take over the program and continue its funding so the service was lost. The service needed additional funding to be successful.

Public Transit

- When asked where transit, if provided, would need to go and when the attendees said the following:
 - Some attendees said they would like to see Monday through Friday service.
 - Some attendees said transit service would need to have better hours sighting the fact that the local Wal-Mart is open 24 hours and workers need access to their jobs.
 - Attendees said many things in town are centered on the Wal-Mart and that they would see this as a point where most routes end.
 - Attendees said one-way fares between \$1.25 and \$1.50 would be reasonable.
- When asked what types of transit service they would like to see the attendees talked about the following:
 - A shuttle bus running through town like the one in Aspen.
 - A call-n-ride service for elderly individuals that allows them to schedule trips with specific drop-off and pick-up times.

- A service that can get people out of town to medical appointments in larger cities. There are no specialists in town providing dental care, so residents must travel to Pueblo for specialized services. Many families will forgo treatment for lack of access to specialists (this was cited as a significant problem by the group). The issue extends to all types of specialists, some of whom are only available in Denver. Attendees specifically cited Children's Hospital in Denver as a place to which they would like to have better access. Attendees said the Veteran's Administration does a good job of getting its clients to services in Denver.
- A shuttle running every one to two hours to take people into and out of town.

Mobility Issues

- People without cars are getting around town by walking, getting rides from friends and family, and carpooling.
 - Individuals who rely on friends for rides will often have to pay their friends to give them rides.
- Within Alamosa it is possible to get most places by foot or on bicycle, but attendees said these options do not serve the elderly or disabled well.
- Attendees said it is not uncommon for residents to stop and pick up friends that they see walking.
- One attendee in a single car household with two adults said that she missed 3 or 4 doctor's appointments when she was pregnant because she was unable to get to the doctor's office because her husband had needed the car for work. Now that her child has been born the attendee said she is unable to take her daughter to the doctor during the day if she becomes sick. She can rely on friends in some circumstances, but friends are not always available.
- One attendee said that she and her children had missed doctors' appointments when her car broke down or one was not available. This experience and the one above were limited to people without cars or unreliable cars.
- Attendees talked about losing jobs because of inadequate transportation that caused them to miss shifts.
- One attendee from a single car household must share his car with his wife, but is also responsible for driving himself and multiple coworkers to work every day. His wife is the one who missed appointments with her doctor when she was pregnant because she didn't have access to a car during the day.
 - The male attendee said that when he is unable to go to work his coworkers, by default, are also unable to go to work. Some social workers in the group said that this situation is common.
- Similar to the above situation, some attendees said that students are often dependent on friends to get them to classes. If the driving friend decides to drop out of school the friends who were dependent on him for transportation are forced to drop out.
- Kendra Lambert manages San Luis Valley Transportation which provides rides to Medicaid Clients throughout the entire San Luis Valley. There are only 6 sedans that are aging and have extremely high mileage on each. About 300,000 miles are logged each year. 80% of their clientele are minorities; most of those are either elderly or single

parents. They must be on Medicaid to receive a ride, which is paid for throughout a reimbursement program. Nearly all rides are for doctors appointments.

Safety

- Attendees said they felt that walking in Alamosa is dangerous.

Recurring Themes

- Attendees said that individuals without cars are stuck in their counties of residence and unable to travel. Some counties have cheaper goods, e.g. lower priced grocery stores or places like Wal-Mart, and people without cars are not able to access these cheaper goods. One attendee said that people will move to have access to the cheaper shopping located in an adjacent county.

If you had \$300 more to spend each month, what would you spend it on?

- Many individuals said they would use the money for gas or to buy a new car.
- An individual from a two person household with one car indicated an interest in using the money to purchase a second car.
- Many indicated a preference to use the additional money for housing or food.

Safety

- Attendees said that two-lane roads with high speeds tend to feel less safe to them. People will use these roads to walk and bike and the attendees think this is scary. The shoulders on the roads tend to be very narrow and pedestrians will walk in the through lanes in bad weather.

Toll Roads

- Attendees expressed a general unwillingness to pay tolls. The higher income participants expressed some willingness to pay tolls if they could get to their destinations faster, but the lower income participants did not express a willingness to pay a toll even if it meant reaching a destination more quickly.

Other

- Attendees felt that companies should be willing to subsidize transportation (small vans or other services) to get employees to work. This would allow the companies to avoid the issue of having multiple absences in one day when a driving employee, who brings other employees to work, is sick.
- Attendees said that individuals who are not able to travel and are stuck in their towns can become depressed.
- People with elderly parents are often forced to take time off from work to get their parents to doctors' appointments.

Durango

May 30th, 2006, 5:30pm, Durango Community Recreation Center
2700 Main Avenue, Durango, CO 81301

Basic Information

- The town has a bus called the Trolley that runs through the center of town.
- Fixed-route bus service is available within Durango and extends to an area $\frac{3}{4}$ mile outside the city's boundaries.
- The Opportunity Bus is available for ADA clients
- The only service available outside of the city is vehicles operated by Senior Services.
- Taxi service is available in the town but costs \$3.00 per mile. This is generally too expensive for low income individuals. Residents on Medicaid have the costs of taxi rides covered for specific types of trips.
- The Ignacio Road Runner has scheduled service between Ignacio and Durango

Public Transit

- Attendees ranked city transportation as good to excellent. At the county level they ranked transit as poor because there are no services available to the general public outside of the city.
 - Housing prices are increasing in Durango forcing lower income individuals out of the city and into the rural area where there is no transit service. Some of the older attendees said the retirees are also often forced out of town when they stop working and are then left with fewer transportation options.
- Attendees said that bus service in the city does not run late enough and that lower income individuals cannot always afford to use the bus.
- Bus service does not run on Sundays and attendees said it would be nice to see service on that day (in the summer the Trolley runs on Sundays to serve tourists). People said the lack of service on Sundays prevents them from getting to Church.
- Bus passes cost \$12.00 per month and the lower income attendees said that paying this is difficult. The attendees would like to see lower fares for disabled riders.
- When asked how they would improve the transportation services in their area the attendees made the following comments:
 - More service outside the city to serve county residents.
 - Lower prices for the disabled using transit.
 - Longer hours of operation and Sunday service
 - Greater flexibility within the transit system so that different modes can be used to serve different needs (Call-n-ride services using vans and cars in the outlying areas and fixed route services along major rural corridors).
 - Park-n-rides throughout the county so that a person could get a ride from a neighbor to the park-n-ride but not need the neighbor to take them all the way into the city.
 - Better protection from the elements at bus stops. There are currently no shelters at the town's bus stops. This comment came from both elderly and disabled participants.

- One attendee talked about a jitney service with central locations where people could be picked up. There would be an expectation that riders would pay for the service. The attendee said this kind of service is common on Native American reservations.
- Durango Para transit reduced service area to only within 3/4 mile of city limits. La Plata County board has talked about the issue, but not doing anything to replace the serve. In many cases, people are not able to get to family or friends and are calling 911 just to get to the doctor. The lack of affordable housing and the vast rural area (6500 square miles spread over the five counties in the SW region) compound this problem. The transit system schedule is heavily influenced by Fort Lewis College schedules. The buses stop earlier when school is not in session between May 28th and August 4th. Because the focus group was scheduled on May 29th, a number of individuals we spoke with during the focus group recruitment process indicated that many potential participants would not be able to attend due to the bus schedule; the last bus was scheduled to depart prior to the end of the focus group. One participant agreed to come if we were able to provide a return trip home, which we did using a local taxi service, Durango Transportation.
- There is also a city shuttle that serves various special events such as Cinco de Mayo. There is also regular shuttle service between Durango and Ignacio.
- In a conversation with Rodney Class-Erickson, the Southern Ute Tribal planner, he strongly emphasized the need for increased transit opportunities, particularly more local routes. An existing transit route called the Road Runner between Ignacio, Bayfield and Durango is growing in popularity but does not serve all transit needs in the region. The service has grown from 4713 riders in 2000 to 9975 riders in 2005. He also indicated that a number of Southern Ute members that live in or near Ignacio do not have vehicles and that they are relying on family and friends for access to activities and other destinations that they need to travel to. Many are not taking jobs, or are not being hired for jobs unless they have reliable transportation. There is also some concern about statewide allocation of dollars to necessary transportation improvements.

Mobility

- Disabled attendees said that getting from home to a doctor's appointment is difficult because of long headways, but the trips can be made. The trip home from a doctor's appointment can last 2 hours depending on when the appointment ends. These attendees talked about the difficulty associated with being exposed to elements while waiting for a bus. If a transfer is missed the wait will generally be close to an hour because that is the typical headway.
- Transit trips from one side of town to the other will generally involve a bus ride a transfer to the trolley and then another bus ride.
- One disabled attendee reported that he is sometimes unable to drive and in those cases is dependent on transit. He said that qualifying for ADA transit services has been difficult due to bureaucratic issues.
- One attendee noted that to get to her mother, who was dying she had to walk 10 miles. The attendee said she was glad she made the trip as her mother dies the next day.
- Some attendees said that on weekends they are unable to get to church or other social activities. A reverend that was in attendance said that in many cases individuals without cars can get rides from other parishioners when going to church.

- One attendee with a car said that if he loses the ability to drive he suspects he simply will not travel.

Jobs

- Two attendees without cars noted difficulties getting jobs because of transportation problems.
- A business owner said that an employee had had to quit her job because she could no longer get to work. Another employee had to work fewer hours because she could no longer get work at all of the hours needed because she had to share her car with her husband. Another one of the business owner's employees has to wait 1 to 2 hours for a ride home at the end of her shifts.
- The majority of participants said that having a job without owning a private vehicle was difficult but not impossible.

Safety

- In the winter snow plows push snow to the side of the road, which makes it difficult for people to walk along the edge of the road and as the snow melts conditions become very slippery.
- The drivers in the group felt there is a safety issue associated with bicyclists because there is not enough space on the roads for bicycle and cars, which leads to many confrontations between cyclists and cars. Attendees said that this is primarily a problem on county roads where recreational riding is common.
- A disabled individual noted that walking is difficult because she cannot always see what she is walking on.

Roadways

- Attendees said that congestion is becoming a much greater problem in the region due to growth.
- Attendees said the roadways needed to be better maintained and that shoulders needed to be added to the roads.

If you had \$300 more to spend each month, what would you spend it on?

- Most attendees said they would not use the money to change the way they travel. Only one attendee said she would use the money to change her travel behavior and expressed an interest in using the money for cab fare.
- One low income attendee said she would use the money to buy more food.

Lamar

May 31st, 2006, 11:30am, Southeast Colorado Enterprise Development, Inc.
112 West Elm Street, Lamar, CO 81502

Basic Information

- All attendees were car owners
- When asked about distances traveled on a daily basis one attendee noted that her husband used to drive 100 miles each way to work until the moved closer to his job.

Public Transit

- Residents in Lamar are served by PATS (Prowers Area Transit System). PATS provides general transportation service to local residents. Trips must be scheduled and a van picks up passengers and offers door-to-door service. The cost is \$1.25 per ride.
 - After a call is placed to PATS requesting service it will take the van about 15 to 20 minutes to arrive.
 - Attendees noted that PATS is often used in combination with private riders. An individual may receive a ride from a friend or family member to get to the store or work and then use PATS to get home or vice versa.
- Attendees rated transit service in Lamar as good to average. Those giving a lower rating did so because of the long waits they or others have experienced waiting for PATS to arrive.
 - Attendees expressed an interest in fixed route service so as to avoid having to wait for PATS. Their main interest seemed to come from having access to a service with a set timetable.
 - Attendees noted that PATS sometimes arrives for pick-ups late causing people to arrive late for appointments, often doctor's appointments, which then must be rescheduled.
 - Attendees also said they would like to see better customer service at the transit agency.
 - Attendees said they would like to see longer service hours for PATS, which starts service at 8:00 and ends service at 5:00, making it difficult for individuals to use the service for both legs of their commutes or to access services outside of work hours.

Other Alternative Travel Modes

- There is no taxi service in Lamar but attendees noted they would like to see such service.
- One attendee noted that walking is a good travel option in Lamar for younger individuals.
- When asked about the ability to travel within and around Lamar without a car all attendees said that such travel would be very difficult. In outlying areas there is no transit service and some of the smaller towns lack grocery stores making access to food purchases very difficult.
- One attendee noted that her niece's car is broken. In order for the niece to maintain mobility she will be moving in with her aunt who lives in a more central location. The niece will also be using her aunt's car to get to a doctor's appointment. The niece will stay with her aunt until her car is repaired.

- One attendee came from a one car household and described the difficulties associated with having only one car but two adults, children, and a home 20 miles away from the closest town:
 - The husband will use to car to get to work leaving the wife and children without a car during the day.
 - The wife was often sick but couldn't access health care without the car. At times she was able to depend on friends for rides.
 - It was not possible to access the grocery store during the middle of the day when her husband had the car.
- When members of the group were asked if they ever had to pass-up on a job because of transportation issues all of the attendees reported that had never been a problem.
 - One attendee reported that a friend of hers who does not have a car would not be able to work without PATS to get her to her job. When PATS is not operating her friend becomes dependent on friends and family to get her to or home from her job.
- When asked about regional travel two attendees, with cars, said they do not feel comfortable driving into Denver or Colorado Springs because of the heavy traffic. These two are generally dependent on others when traveling to these towns.

Roadways

- Attendees generally agreed that the roadways need significant repairs. About half of the attendees thought the roadways were getting better while the other half thought that roadways were getting worse. Attendees generally complained about potholes.
- When asked if they perceived any safety issues on the roadways the attendees said that narrow or non-existent shoulders on some roadways caused conflicts between cars and pedestrians and cyclists. Attendees said there are only two roads with significant numbers of pedestrians and bicyclists.
 - Attendees also said that the roads with pedestrians and cyclists lack sufficient lighting making it difficult for drivers to see pedestrians and bicyclists at night.

Toll Roads

- Attendees expressed a willingness to pay tolls for long distance trips to outlying towns if it would mean they could get to their destinations more quickly. The attendees were universally against paying tolls for local trips.

Pueblo

May 31st, 2006, 5:30pm, Pueblo Robert Hoag Public Library
100 East Abriendo Avenue, Pueblo, CO 81004

Basic Information

- 12 attendees out of 18 had cars in their households
- City has taxi service. The cost of a trip from one side of the town's core to the other is about \$12.00. Attendees felt that this amount is cost prohibitive.

Public Transit

- Attendees said that outside of Pueblo there is no bus service.
- Pueblo Transit is available within the city. On demand service is available for individuals aged 55+ and the disabled.
- Greyhound service is available for trips outside of Pueblo.
- When asked to rate the quality of their transit services 8 attendees gave a rating of good, 7 attendees gave a rating of average, and 3 said poor.
- Attendees complained that transit service cannot always get them where they need to go, that walks to a bus or from a bus to a final destination can be very long, that waits of 30 minutes when transferring from one route to another are not uncommon, and that bus service stops too early and does not operate on Sundays.
 - One attendee who does not have a car said that on Sundays he is simply unable to travel.
- The attendees had a number items on their wish list for improving the transit system:
 - Longer hours to allow transit users to access more employment and education options.
 - Better access for individuals with wheelchairs who some attendees said can be passed when all of the wheelchair spaces on a bus are in use or the bus is full.
 - More bus routes
 - Service to areas outside of the city
 - Express routes
 - Shorter headways
 - Sunday service so that people can go to church, do shopping, and work weekend jobs
- Many attendees said they would like to see more money spent on transit and less money spend on roads.
- Some attendees live within Pueblo County but not within the City of Pueblo. These attendees said they had to walk 5 miles to access Pueblo Transit.
- Many attendees complained about bus drivers talking on their personal cell phones while driving buses or making random stops unrelated to the bus's operation.

Mobility Issues

- One attendee said that she had been turned down for jobs because she didn't have a car. The transit system's short operating hours mean that some individuals are able to get to jobs but are not able to get home or vice versa. Multiple attendees said that temporary work agencies will not accept workers who do not have cars.
- Another attendee said she was told at a job she could not be considered for rehire because she does not have a car.
- One attendee said that when applying for a job in Pueblo West, which is outside Pueblo City limits and not served by transit, she was turned down for the position when she revealed to the employer that she would be getting rides from another person in order to get to work.
- Attendees noted that taking evening classes at any of the city's schools is not possible if you must take transit because the transit system will not be operating when the class ends.
- One attendee noted that she was generally able to schedule her appointments based on the bus schedule.
- Attendees said that there are some stores they would like to shop at but are unable to access via transit.
- One attendee noted that individuals who lose their licenses in Pueblo are likely to also lose their jobs because of transportation issues.

Safety

- Attendees said that accessing some bus stops is dangerous because of traffic and street geometry. One attendee said that her disabled relative once slipped on ice after exiting a paratransit vehicle. The vehicle had pulled away before the relative fell. The relative was unable to get up until someone passed by and provided assistance.
- Attendees complained about frequent signal outages at intersections. Drivers said that such situations made them nervous when entering the intersection and one pedestrian said she becomes very scared when crossing intersections with signal outages because she is afraid that cars will not stop for her.
- One attendee felt that pedestrians were not safe in Pueblo. She had recent and specific examples of four children being hit in crosswalks.
- Attendees felt that there is a need to better educate drivers about the need to yield to pedestrians.
 - An elderly attendee said that when attempting to cross a sidewalk she counted 15 cars pass by before one yielded to her.
- Attendees unanimously said there is a severe shortage of bike lanes. In one attendee's words, "There are none."
- Attendees also complained about a general lack of sidewalks. Many also said that where sidewalks exist it is not uncommon for cars to park on the sidewalk forcing pedestrians onto the street. Some attendees became visibly angry over this matter. They also complained about cars that pass stop lines at intersections and block crosswalks thus forcing pedestrians into through traffic lanes.

Toll Roads

- Only a few attendees said they would be willing to be a toll to access a destination more quickly. The attendees who expressed a willingness to pay tolls said they would not do so in Pueblo. They would only be willing to pay tolls in Denver where they consider the traffic to be worse.

Repeating Themes

- The following themes were repeated by attendees throughout the focus group:
 - Longer hours of operation for the transit service
 - More bus routes
 - Sunday bus service

If you had \$300 more to spend each month, what would you spend it on?

- Individuals said they would spend the money on the following items
 - 5 said they would divide it evenly between food, clothing, and transportation
 - 2 on medical
 - 1 on partying
 - 1 on food and clothing
 - 1 on a better car
 - 1 would invest the money
 - 2 on food and travel
 - Many said they would like to use the money to travel more and to have mobility on Sunday when there is no transit service.

Leadville

June 19th, 2006, 11:30am
National Mining Hall of Fame & Museum
120 West 9th Street, Leadville, CO 80461

Two separate discussions were held, the first in English, the second in Spanish.

Focus Group in English

Transit

- Residents in Leadville have limited transit service; all participants rated it as poor.
- A bus route runs to Vail and Avon “over the hill” in Eagle County. There are three early morning runs and three late afternoon runs. One way fare is \$5.
- \$10 round trip is too expensive for many
- Bus schedule is difficult to coordinate doctor visits, must stay the whole day in Vail until the return bus arrives
- No transit service to Summit County
- Many desire some kind of local shuttle service. Ideal transit system:
 - Shuttle to connect with out-of-town jobs
 - Connects Mountain View to Lake Fork
 - Need daytime trips
 - Costs low, ideally free such as Eagle County Shuttle
 - Access to Summit County (sales tax lower in County)
 - Interconnects to Greyhound, circulator connects to regional service
 - Day pass option would be favorable
 - Discounted local service
 - Elderly/special needs services
 - Access local adult education classes
 - Weekend service, many work on Saturday and Sunday, others want to go to church
 - Activities bus for school kids, access to daycare
- Greyhound would be used by participants if it went to Leadville, must go to Vail to get a Greyhound bus
- Some employers run private vans to employment sites (eg Copper Mountain) but do not allow non employees access

Other Alternative Travel Modes

- Seven out of 12 participants have a car. Some that have a vehicle own a very low quality car. One person works at a junkyard in return for spare parts.
- A significant amount of informal carpooling occurs among the focus group participants, those that have cars give many rides, those that do not rely almost exclusively on getting rides from others.
- Many of the participants regularly hitchhike to destinations in and around Leadville
- In winter, some ski jobs are available (Ski Cooper) but in the summer must go out of town for work

- There is no taxi service in Leadville
- Many will walk long distances if necessary
- Difficulties in getting back and forth with small children
- Social activities are more limited without transportation. Many feel isolated
- Many live in trailer parks, most are 3-5 miles from town, no grocery or Laundromat at the trailer parks
- Only one grocery in town
- One participant has a four year old daughter. Without a car she has to walk everywhere with her. She has had difficulty with jobs and with access to doctors. Must get a ride, not always available, too far to walk.

Roadways

- Need better lighting on streets for walking
- No sidewalks to Safeway
- Desire bike paths
- Schools on side streets, but often without adequate pedestrian access
- Bicycling

If you had \$300 more to spend each month, what would you spend it on?

- Food and clothing
- For bills
- To pay for medicine
- For gasoline (to take more trips around town)
- Car payments
- Day care
- Mortgage
- Continuing adult education
- Vacation to Salida
- One cited that they would get a better car; another would give more people a ride.

Focus Group in Spanish

It is difficult to travel because there are not any bus routes or taxis. Provided below is a list of places that the group had difficulty getting to:

- Courthouse
- Offices (work) and school (English class)
- Department of Social Services
- Bank
- Grocery store and Laundromat

All participants rated the current system as poor. The group recommended that a transit service operate to the grocery store, Laundromat, courthouse, bank and Department of Social Services and throughout various neighborhoods (trailer parks).

Service needs to operate until 8:00 pm in the evening and on weekends. Evening and weekend service would allow the participants and their families to attend the movies and swimming pool.

Participants would like shuttle buses that make trips to and from shopping outside of the county.

Sometimes when children are sick the participants said they are not able to get them to appointments because they do not have a way to get to the doctors. A neighbor who sometimes gives 'rides' is frequently busy with other responsibilities and cannot take them.

Someone from the group had a friend who turned down a job because she didn't have the transportation to get there.

All participants rated the current transportation system as poor (one on a scale of 1-5 where one is the worst) in terms of meeting their travel needs?

When asked if you could change one thing to improve transportation to better meet your travel needs what would it be? Shuttle buses in and around Leadville was cited as most important to most participants.

If you were given \$300 extra per month, how would you use it?

- Food and clothing
- For bills
- To pay for medicine
- For gasoline (to take more trips around town)
- Food and clothing
- For bills
- Gasoline, car note and to make more trips

Do you feel safe when you travel?

- The streets are beat up
- There is inadequate lighting/lights
- The citizens drive very fast and reckless
- It is unsafe for kids to ride their bicycles because there are no crosswalks

Additional comments:

There are more services in the center of the city. One participant suggested the reason is that the majority of residents in the trailers are Hispanic and they do not speak English

- All attendees were car owners
- When asked about distances traveled on a daily basis one attendee noted that her husband used to drive 100 miles each way to work until the moved closer to his job.

Greeley

June 19th, 2006, 5:30pm
Lincoln Park Branch Library
919 7th Street, Greeley, CO 80631

Basic Information

- 2 attendees – one had a car, one did not
- One disabled person, generally wheelchair bound. She is happy with the paratransit service in Greeley, and can easily access many destinations such as Safeway, Rite Aid, the Library and other Downtown Greeley services, though also says that she makes trips only based on where she can get with a wheelchair. Would make more trips to other places if she had the ability.

Public Transit

- Transit in Greeley was rated adequate by focus group participants. One with car generally does not ride transit. One without heavily relies on transit.
- Service to areas outside of the city is lacking. Would very much like to go to the Denver Zoo, Museums in Denver and the Butterfly pavilion. Also can't get to Fort Collins or to Red Rocks
- \$2 each way for paratransit service is reasonable and works well. Buses have lifts
- Ranked service a five on a scale of one to five (five is best)
- Transfers are difficult on fixed routes
- Frequency seems ok
- Do have to plan a day ahead for paratransit
- Ideal transit system, more frequency, longer hours, more direct fixed routes, more weekend service

Mobility Issues

- Taxi service expensive

Roadways

- Safety concerns on US 85 (Accidents, unsafe drivers)
- Crosswalks generally are good
- Sidewalks generally good, a few in need of maintenance/repair
- Need more bike paths and bike lanes. This is good near UNC.
- Night lighting on roads an issue

If you had \$300 more to spend each month, what would you spend it on?

- Medical Needs
- Savings
- More Trips

Due to the low turnout at the Greeley meeting, Walt Speckman and Patsy Drewer on Weld County Human Resources were contacted regarding any further comments. They reaffirmed the difficulties people have who do not have access to a car.

Denver

June 20th, 2006, 11:30am
Plaza Research, 1200 17th Street, Suite 800
Denver, CO 80202

Basic Information

- 9 participants – 7 out of 9 own a car
- Rising fuel costs huge issue – many own older, less fuel efficient vehicles
- Job access somewhat of an issue; one person cited problem accessing an interview, another cited issue of being able to get somewhere but not back

Transit

- Three use transit (RTD) every day, 2 use it sometime, 4 rarely/never use transit
- Two rated transit as very good, 6 as good, and one as only ok (average)
- Transfers were cited as being difficult
- Light Rail works very well, everyone likes the existing light rail service. All focus group participants indicated that they are looking forward to T-REX opening and then to FasTracks opening.
- One person specifically cited that they will use it daily from their home in Lakewood to Downtown (West Corridor LRT)

Mobility Issues

- Of those that do own cars, many own old or very old vehicles that are in need of constant maintenance, car is often unreliable. Three vehicles specifically mentioned owned by participants: 85 Camaro, 79 Ford, 75 Ford pickup.
- Access to areas outside of Denver sometimes challenging; Fort Collins and the mountains were two specific areas that are difficult to get to. One participant suggested use of casino buses to get to other destinations in the mountains.
- Another access issue is to national parks such as Sand Dunes, Four Corners, Mesa Verde

Roadways

- T-REX will improve traffic
- Specific concern about pedestrian safety; one participant noted the incident a couple years ago where a women jogger was killed by a motorist in Commerce City
- Aurora at the 225/Parker Road/Hampden area a specific area of concern, difficulty merging, multiple accidents occur in that stretch, including a Broncos player last fall
- Illiff and Wabash area of Aurora is bad
- Federal Blvd. between 96th and 104th very unsafe for pedestrians
- 6th Avenue pavement conditions an issue
- Safety a huge concern for kids walking
- Drivers paying attention an issue
- Sidewalks with uneven pavement is common and is unpleasant and a potential safety hazard.

- Crosswalks generally are good – like the countdown signals found in some parts of the metro area
- Signal timing a problem in some areas, the long delays at some intersection provoke some to run the light, causing safety problems for pedestrians – a friend of a participant was a victim of such an incident, has long term injuries as a result
- Night lighting on roads an issue – street lights

Toll Roads

- One participant with a job near Parker Road and 470 used to take toll road to job at McDonalds, but gas and toll would eat up a significant percentage of daily wages.
- Not worth it – if low cost and high time savings maybe
- One person has already used the new I-25 Express Toll lanes
- Quality of road should be higher if charging tolls. Prefer that roads are free though should still be high quality

Wish List

- Signal timing improvements
- Later bus trips
- Better customer service
- Buses should always wait for passengers running to catch the bus
- Accelerate construction of Fastracks plan
- Better traffic design and control on Parker Road near 225
- Install seat belts on buses
- Bus drivers should pay more attention
- More bus shelters and benches throughout the region
- Better street lighting and better lighting at bus stops
- Shouldn't have to go somewhere to qualify for using paratransit (Access a Ride)

If you had \$300 more to spend each month, what would you spend it on?

More car trips
 Upgrade car
 Auto maintenance
 Bills
 Fix Car