

Environmental Justice Atlas and Data Book for the Albuquerque Metropolitan Planning Area



T-0401



**Mid-Region
Council of Governments
of New Mexico**

Mid-Region Council of Governments of New Mexico

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Introduction

This Document

The EJ Atlas is a community profile which includes the geographic distribution of different population groups; an evaluation of the existing and proposed transportation system benefits to these population groups; and a description of public participation initiatives for the AMPA stakeholders to participate in the transportation planning process. A fourth section based on the 2025 Metropolitan Transportation Plan focuses on the future network and its relation/functionality to the community. This document presents information using three main formats (narrative, maps, and tables) to facilitate the presentation.

Section III also outlines the process to be taken when an external complaint of discrimination is submitted as defined by the State of New Mexico Department of Transportation. The 2002 FHWA Memorandum regarding external complaints filed under Title VI of the Civil Rights Act of 1964 establishes the following:

“All complaints initially received by any Federal Highway Administration (FHWA) office must be immediately forwarded to the Headquarters Civil Rights (HCR). Complaints filed under Title VI against State sub-grantees or contractors shall be investigated by the State Transportation Agencies (STA). Complaints filed against the STA will be investigated by FHWA. The HCR will issue decisions in all cases, including complaints investigated by the STA.”¹

Environmental justice determinations are based on effects, not population size. For this reason, it is relevant to consider the comparative impact of an action upon different population groups.

The Regulations

Recipients of federal funds are required to certify nondiscrimination under Title VI of the Civil Rights Act of 1964. In 1994, the Presidential Executive Order (EO) 12898 “Federal Actions to Address EJ in Minority Populations and Low-Income” directed all Metropolitan Planning Organizations (MPO) to consider Environmental Justice (EJ) principles throughout the planning and decision-making process. The U.S. Department of Transportation (USDOT) issued Order 5610.2 in 1994 and Order 6640.23 in 1997 to summarize and expand the requirements of the EO 12898 (see Appendix A for more on these regulations).

“No person in the United States shall, on the ground of race, color, or national origin be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving Federal financial assistance.” – Title VI of the Civil Rights Act of 1964.

“Each Federal agency shall make achieving EJ part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities,

¹ FHWA Memorandum. *Policy for Processing External Complaints of Discrimination*. April 8, 2002.

on minority populations and low-income populations.” –
**Executive Order 12898, Federal Actions to Address EJ
in Minority Populations and Low-Income
Populations, 1994.**

There are three fundamental Environmental Justice principles:

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

The principles of the National Environmental Policy Act (NEPA) of 1969 (23 U.S.C. 109(H))², the Uniform Relocation Assistance and Real Property Acquisitions Policies Act of 1970 as amended, and the Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA) are also considered in transportation projects using federal funds.

The purpose of MRCOG’s EJ program is to provide information about the geographic distribution of population groups (especially minority and low-income) in the Albuquerque Metropolitan Planning Area (AMPA) and how the transportation system serve them. The information will assist in performing further analysis on the impact that transportation projects and policies will have on the community.

The Environmental Justice Program

The MRCOG - EJ program for the AMPA has the following goals:

1. To provide accurate information about the impact of transportation projects, programs and/or policies early in the transportation planning process;
2. To be realistic, flexible and inclusive of regional stakeholders needs;
3. To build a sound methodology that supports assessments of fairness of transportation projects, policies, and actions.

In achieving these goals, MRCOG has developed a methodology to facilitate the evaluation process, data generation, analytical tool development, and reporting of the impacts of transportation planning on the community.

The EJ program provides information to the AMPA stakeholders early in the transportation decision making process. It creates opportunities for local governments and the public for input, as well as an assessment of the impacts of the transportation investments identified in

² The National Environmental Policy Act of 1969 (49 U.S.C. 4321 et seq.) is the Nation’s basic environmental protection charter. (see appendix)

the Metropolitan Transportation Plan (MTP) and the Transportation Improvement Program (TIP) specific to different socio-economic and demographic groups. "The Environmental Justice Atlas and Data Book" is being released in anticipation of the long range transportation plan in each cycle.

I. Community profile

The Albuquerque Metropolitan Planning Area (AMPA) boundaries are defined by the State of New Mexico and include Albuquerque's Urbanized Area, the remainder of Bernalillo County, and areas expected to be urbanized in the next 20 years. In addition, portions of four Indian Reservations (Isleta to the south, To'hajilee and Laguna to the west, and Sandia to the north) are located within the AMPA. They represent approximately 28 percent of the AMPA's total area while they represent only 0.7% of the AMPA's total population.

Population

The City of Albuquerque is the AMPA's largest city and is the home of nearly half a million people. It is located at the crossroads of two major interstates (I-40 and I-25). The City of Rio Rancho, located on the northwest mesa, is the second largest city of the area and had a population of nearly 52,000 in 2000.

Table I-1 shows the AMPA population distribution over the past decade based on the 2000 US Census.

Table I-1: AMPA Population by Jurisdiction

	<u>1990</u>	<u>2000</u>	<u>2000</u>
New Mexico	1,515,069	1,819,046	na
AMPA	525,772	624,253	136.7%
<i>Bernalillo County</i>	480,577	556,678	124.9%
City of Albuquerque	384,736	448,967	100.0%
Village of Corrales, Bernalillo Co. part	536	676	0.1%
Village of Los Ranchos de Albuquerque	3,955	5,096	1.0%
Village of Tijeras	340	474	0.1%
Pueblo of Isleta (pt.)	2,171	2,201	0.6%
To'hajilee Navajo Nation (pt.)	1,072	1,522	0.3%
Remainder of Bernalillo County	87,767	97,742	22.8%
<i>Sandoval County (part within AMPA)</i>	45,195	67,575	11.7%
Town of Bernalillo	5,960	6,616	1.5%
Village of Corrales, Sandoval Co. part	4,917	6,658	1.3%
City of Rio Rancho	32,505	51,807	8.4%
Santa Ana Pueblo (pt.)	474	457	0.1%
Remainder of Sandoval County	1,339	2,037	0.3%

Source: US Census Bureau

na = not applicable

**All AMPA data is based on the 2003 AMPA boundary, which differs from the 2000 AMPA boundary in that it includes Santa Ana Pueblo and Algodones.*

** For comparison purposes, the 1990 population total for the AMPA is based on the 2003 AMPA boundary.*

Figure I-1 shows the population density of the AMPA by census block group. Areas with over 7,000 persons per square mile are located mainly east of I-25, including the North and South east quadrants of the Albuquerque urban area. In the North West quadrant, the densest areas are concentrated along Coors Blvd. and along Southern Blvd. in Rio Rancho.

Similar density areas are also in the Southwest quadrant in the vicinity of Central Ave. and Coors Blvd. with another dense pocket at Atrisco and Westgate areas.

Race and Ethnicity

Many centuries of Native American, Spanish and Anglo influence combine to make the AMPA a culturally unique area. Table I-2 shows the racial and ethnic composition of the AMPA by jurisdiction. The information has been aggregated into two major categories: minority and non-minority.

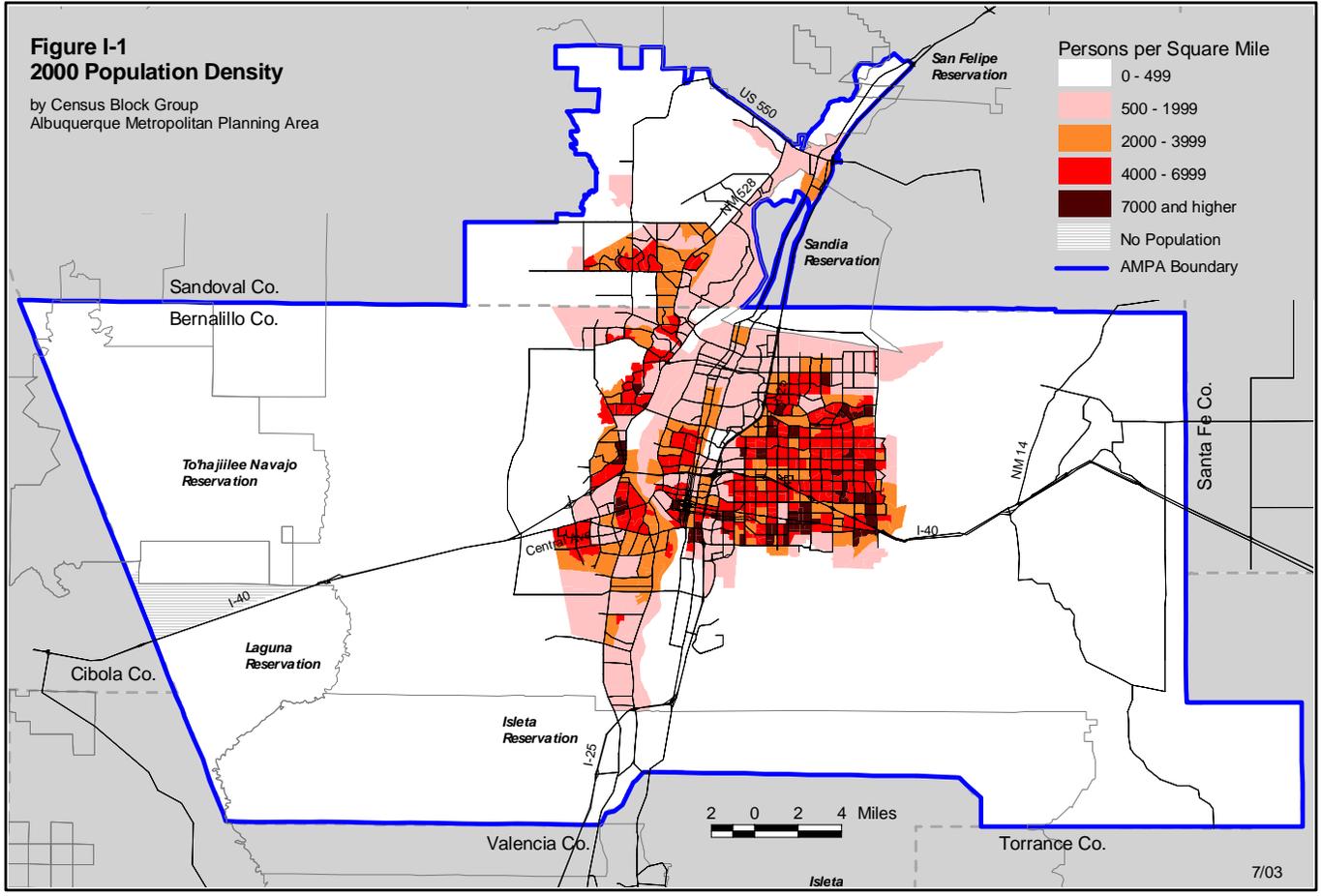
The U.S. Department of Transportation Order 5610.2 on Environmental Justice defines “minority” as persons who identify themselves as one of the following:³

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

The AMPA is a “minority-majority” region, meaning there are more minority residents than white non-Hispanics. The Hispanic population increased by about 37% between 1990 and 2000, accounting for more than two out of every three new minority residents in the AMPA.

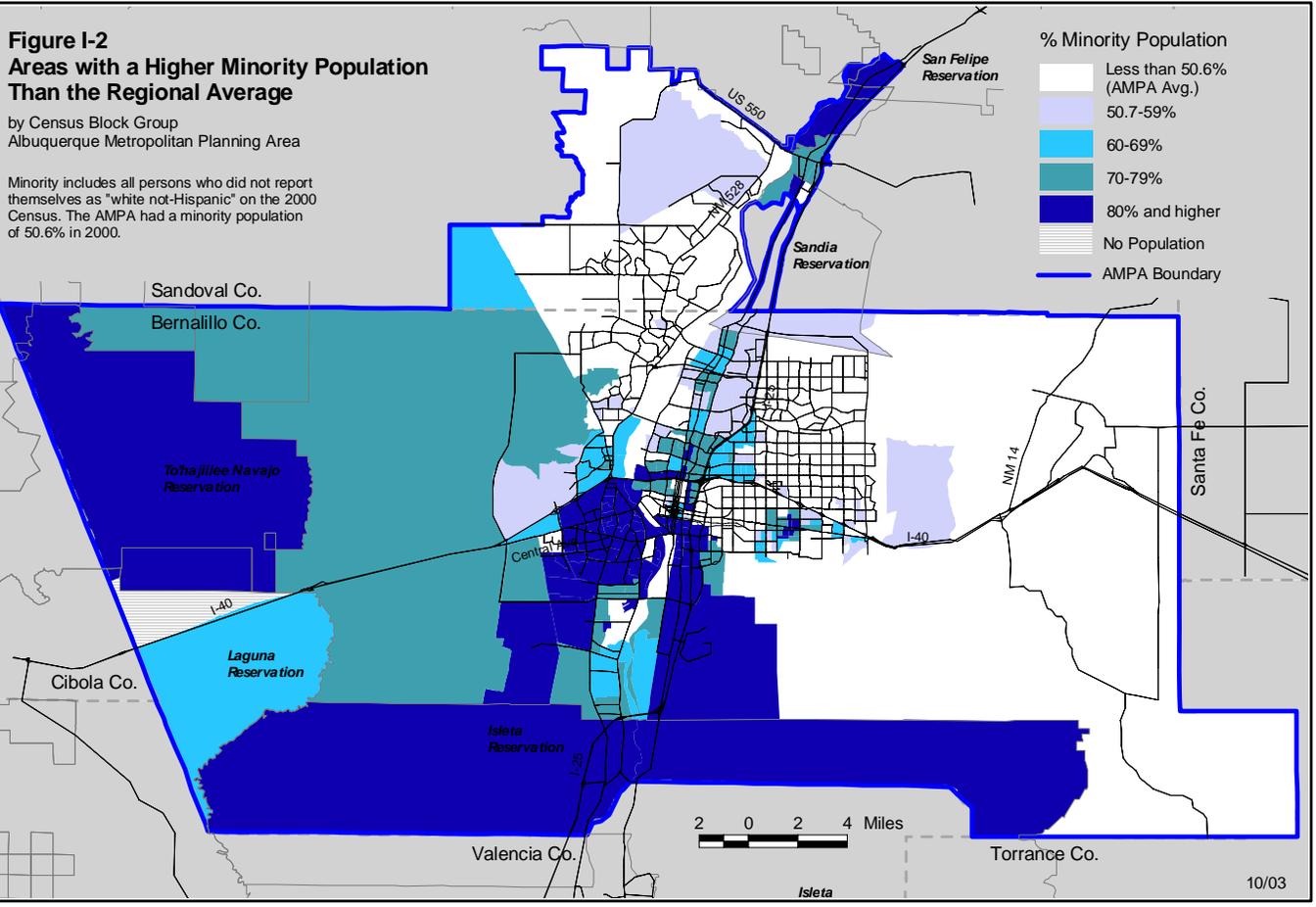
³ DOT Order 5610.2. U.S. Department of Transportation (DOT). DOT order on Environmental Justice to Address Environmental Justice in Minority Populations and Low-Income Populations. April 1997.

Figure I-1
2000 Population Density
 by Census Block Group
 Albuquerque Metropolitan Planning Area



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Source: 2000 US Census.



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Source: 2000 US Census.

Table I-2 : AMPA Minority and Non Minority Population

CHART	2000 Percent Minority in 2000	Growth 1990 - 2000	
		Non Minority Growth	Minority Growth
Growth			
New Mexico	55.3%	6.5%	33.9%
AMPA	50.6%	4.0%	37.6%
City of Albuquerque	50.1%	-0.2%	40.1%
Town of Bernalillo	79.9%	-2.1%	14.8%
Village of Corrales	29.8%	33.4%	37.1%
Village of Los Ranchos de Albuquerque	41.4%	19.4%	44.8%
City of Rio Rancho	35.9%	40.4%	109.5%
Village of Tijeras	58.0%	34.5%	43.2%
Pueblo of Isleta (pt.)	98.5%	-33.3%	2.2%
Santa Ana Pueblo	99.8%	-98.0%	-10.5%
To'hajiilee Navajo Nation (pt.)	99.8%	-66.7%	42.9%

Source: US Census Bureau

** Race and Ethnicity for the AMPA were calculated from summing Census 2000 block group data. In the case where a block group straddled AMPA boundaries, the data was added if the center of the block group was contained within the AMPA. The 1990 figures were calculated by summing 1990 Dasz data on 2000 Dasz's within the AMPA.*

Figure I-2 identifies areas with a higher percentage of minorities than the regional average, 50.6%. These areas are mainly located in the South Valley, southeast, and in the North Valley of the Albuquerque Urban Area. In Sandoval County the minority concentration is mainly along NM 313 in the town of Bernalillo and Algodones. In addition to these areas, the Indian Reservations within the AMPA such as Isleta, and To'hajiilee Navajo Reservation, and Santa Ana show concentrations of 80% and higher.

Figure I-3 presents areas of high minority population and high poverty levels by census block. "High" on this map is defined as higher than the regional average, which is 50.6% minority and 12.9% below the poverty level. These areas are mainly located in the South Valley of the Albuquerque Urban area, along the Edith Blvd. corridor in the North Valley and in the area of Fourth Street and I-25 between Montano Rd, and I-40, the Town of Bernalillo in Sandoval County and pockets in the southeast quadrant of the Albuquerque Urban Area mainly around the New Mexico State Fairgrounds site.

Figure I-4 shows high minority populations in relationship to high transit usage by census block. High transit usage has been defined as percentages of commuters higher than the City of Albuquerque average of 1.7%. This information is important for planning transit when responding to questions about who is benefiting or not benefiting from public transit routes. The map shows pockets of high minority population and high transit usage around the New Mexico State Fairgrounds site, downtown, along Edith Blvd., and south of Montano and east of 4th street, on the South Valley along Isleta Blvd. between Rio Bravo and Arenal,

and Westgate area west of Coors Blvd and south of Central Ave. There are also some scattered areas between Carlisle and San Pedro between I-40 and I-25.

Age

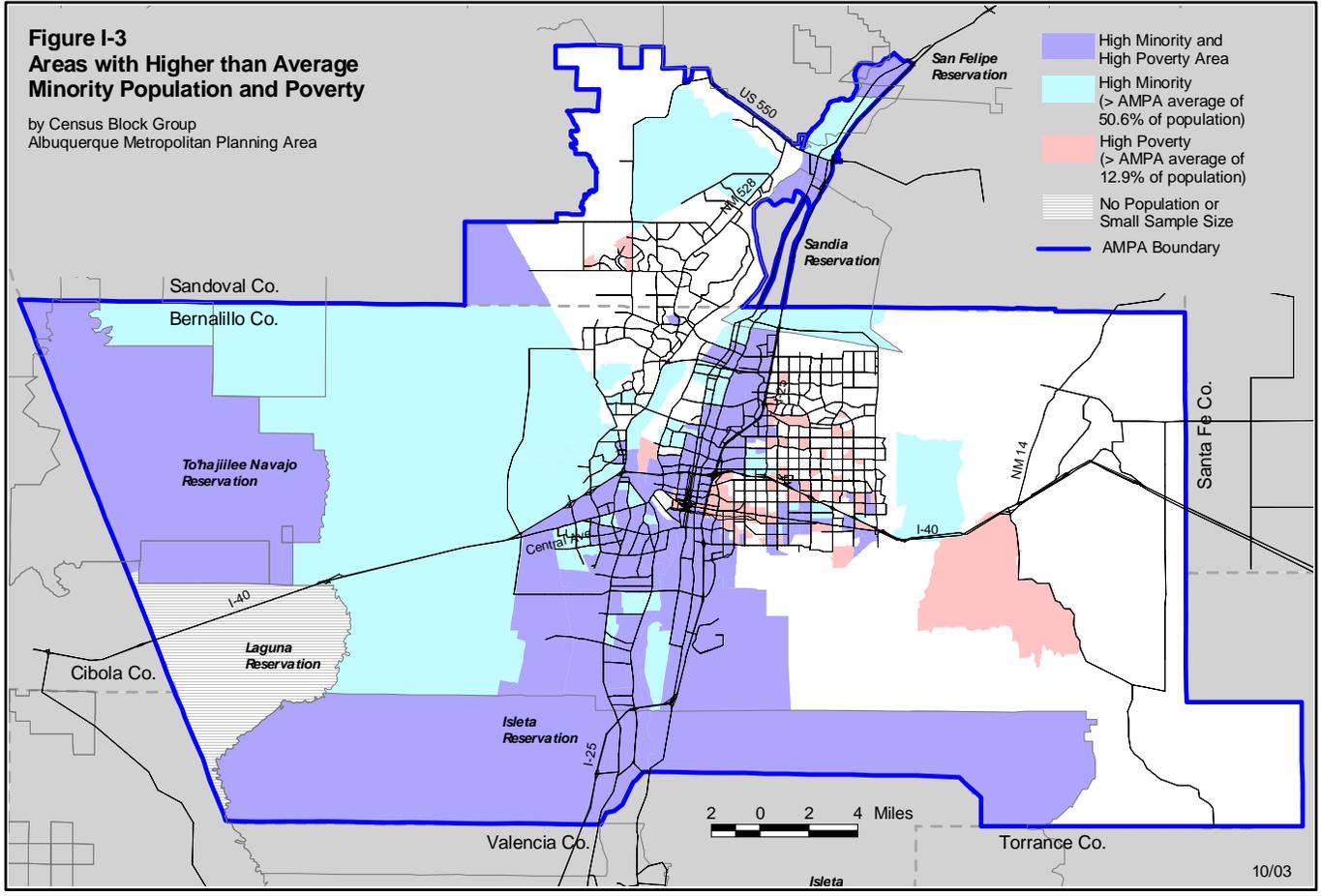
Executive Order 12898 on Environmental Justice and U.S. DOT Order 5610.2 do not provide for separate consideration of elderly, children, disabled, and other populations. However, these groups are protected by Title VI and related non-discrimination statutes, and because they have specific transportation needs they could also experience adverse impacts from transportation actions and need to be included in the analysis.⁴

Table I-3 shows the population under 18 years old and 65 years old and over for the AMPA by jurisdiction. The percentages indicate the relationship of these population groups to the total population of each jurisdiction. The percentage of population under 18 and 65 and over in the AMPA is slightly lower than the corresponding percentages in the State of New Mexico. Indian areas in the AMPA have the highest percentages of youth and lower percentages of seniors, while Los Ranchos has the lowest percentage of youth and the highest percentage of seniors.

⁴ The Age Discrimination Act of 1975, as amended (42U.S.C. 6101 et seq.) prohibits discrimination on the basis of age in programs receiving Federal financial funds while handicapped persons are protected by Section 504 of the Rehabilitation Act of 1973 (29 U.S.C. 794 and 49 C.F.R. Part 27.7).

Figure I-3
Areas with Higher than Average
Minority Population and Poverty

by Census Block Group
 Albuquerque Metropolitan Planning Area



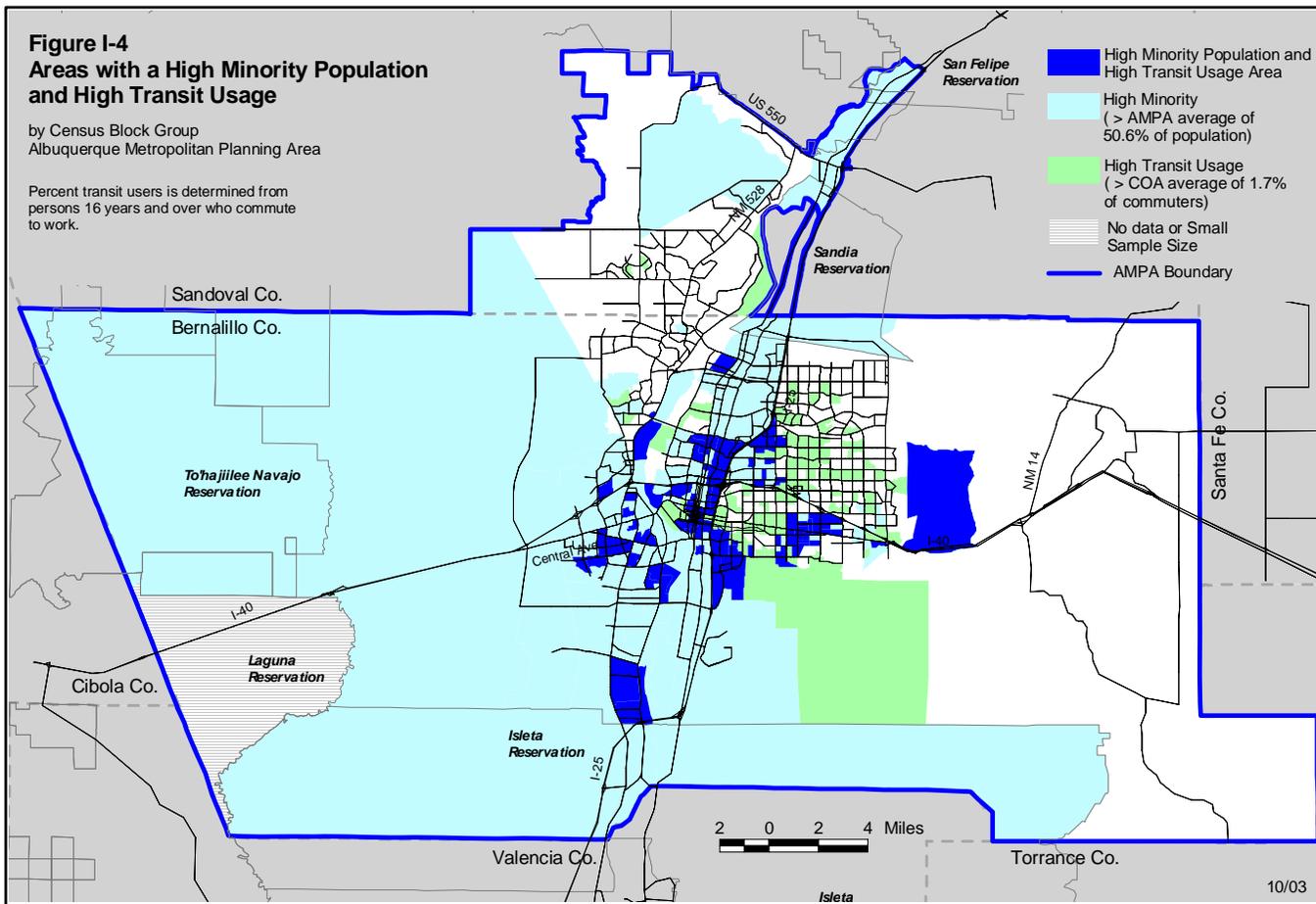
Source: 2000 US Census.

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Figure I-4
Areas with a High Minority Population
and High Transit Usage

by Census Block Group
 Albuquerque Metropolitan Planning Area

Percent transit users is determined from
 persons 16 years and over who commute
 to work.



- High Minority Population and High Transit Usage Area
- High Minority (> AMPA average of 50.6% of population)
- High Transit Usage (> COA average of 1.7% of commuters)
- No data or Small Sample Size
- AMPA Boundary

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Source: 2000 US Census.

Table I-3 : Population under 18 year old and 65 year old and over.

Age, 2000	Number		Percentage of the Population	
	Under 18	65 +	Under 18	65 +
New Mexico	508,574	212,225	28.0%	11.7%
AMPA	160,746	71,680	25.8%	11.5%
City of Albuquerque	110,092	53,670	24.5%	12.0%
Town of Bernalillo	2,052	608	31.0%	9.2%
Village of Corrales	1,806	769	24.6%	10.5%
Village of Los Ranchos de Albuquerque	1,219	704	23.9%	13.8%
City of Rio Rancho	15,106	6,058	29.2%	11.7%
Village of Tijeras	127	49	26.8%	10.3%
Santa Ana Pueblo	172	44	35.3%	9.0%
Pueblo of Isleta (pt.)	695	208	31.6%	9.5%
To'hajiilee Navajo Nation (pt.)	104	11	41.8%	4.3%

Source: US Census Bureau

Table I-4 presents family and household composition by jurisdiction. The City of Rio Rancho has the highest percentage of married couples with children under 18 years old, followed closely by Santa Ana Pueblo.

The percentage of single householders with children under 18 reveals that the Indian pueblos have the highest percentages (42.6%, 38.1%, 35.4%), while the Village of Corrales has the lowest within the AMPA.

Table I-4 : AMPA Family and Household composition with Children under 18 year old

CHART	Married-couple family with children under 18	Married-couple family without children under 18	Single householder with children under 18	Single householder without children under 18	Total
	New Mexico	36.2%	37.1%	19.1%	
City of Albuquerque	33.3%	37.6%	19.9%	9.1%	100.0%
Town of Bernalillo	36.1%	29.6%	25.1%	9.2%	100.0%
Village of Corrales	37.1%	49.7%	8.6%	4.6%	100.0%
Village of Los Ranchos de Albuquerque	34.4%	45.6%	11.9%	8.0%	100.0%
City of Rio Rancho	43.2%	36.7%	13.9%	6.1%	100.0%
Village of Tijeras	35.9%	41.2%	17.6%	5.3%	100.0%
Pueblo of Isleta (pt.)	30.1%	20.9%	35.4%	13.6%	100.0%
Santa Ana Pueblo	41.9%	10.2%	38.1%	9.8%	100.0%
To'hajiilee Navajo Nation (pt.)	36.6%	13.9%	42.6%	6.9%	100.0%

Source: US Census Bureau

The following series of maps provide socioeconomic and demographic data by census block groups.

Figure I-5 shows the median age distribution within the AMPA. This map shows areas with median older population compared to areas with median younger population. Areas in which the median age is 50 to 70 years old are scattered east of I-25 in the Albuquerque urban area, with a pocket in the vicinity of Southern Blvd. and NM528 in Rio Rancho. A different perspective on these age groups is presented in Figure I-6. This map shows areas of higher than average older and younger population in the AMPA. Areas of high youth and senior populations are scattered in the AMPA. Pockets of these population groups combined are mainly located west of I-25 including Rio Rancho and the Town of Bernalillo.

Disabilities

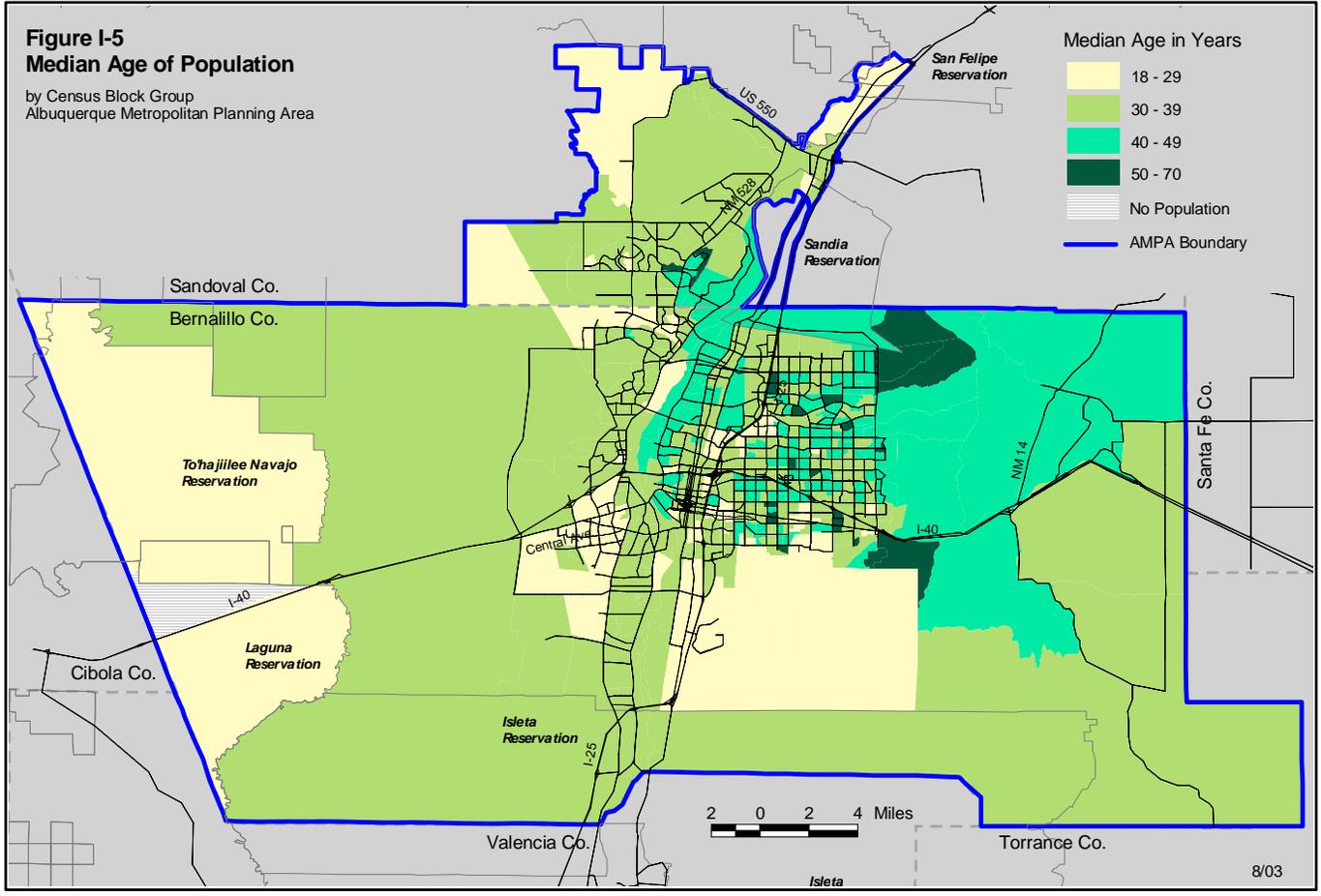
People with disabilities often may need assistance in meeting their various mobility needs. This may include sidewalks that are ADA compliant, public transit service, alternative transportation service other than automobiles such as van service and taxis, transportation centers, and other types of program specially directed to meet their needs.

Table I-5 provides information about the percentage of population with disabilities in each jurisdiction. The Town of Bernalillo is the AMPA jurisdiction with the highest percentage of population with disabilities, while Santa Ana Pueblo and the Village of Corrales have the lowest percentages.

Table I-5: AMPA Population with Disabilities by Jurisdiction

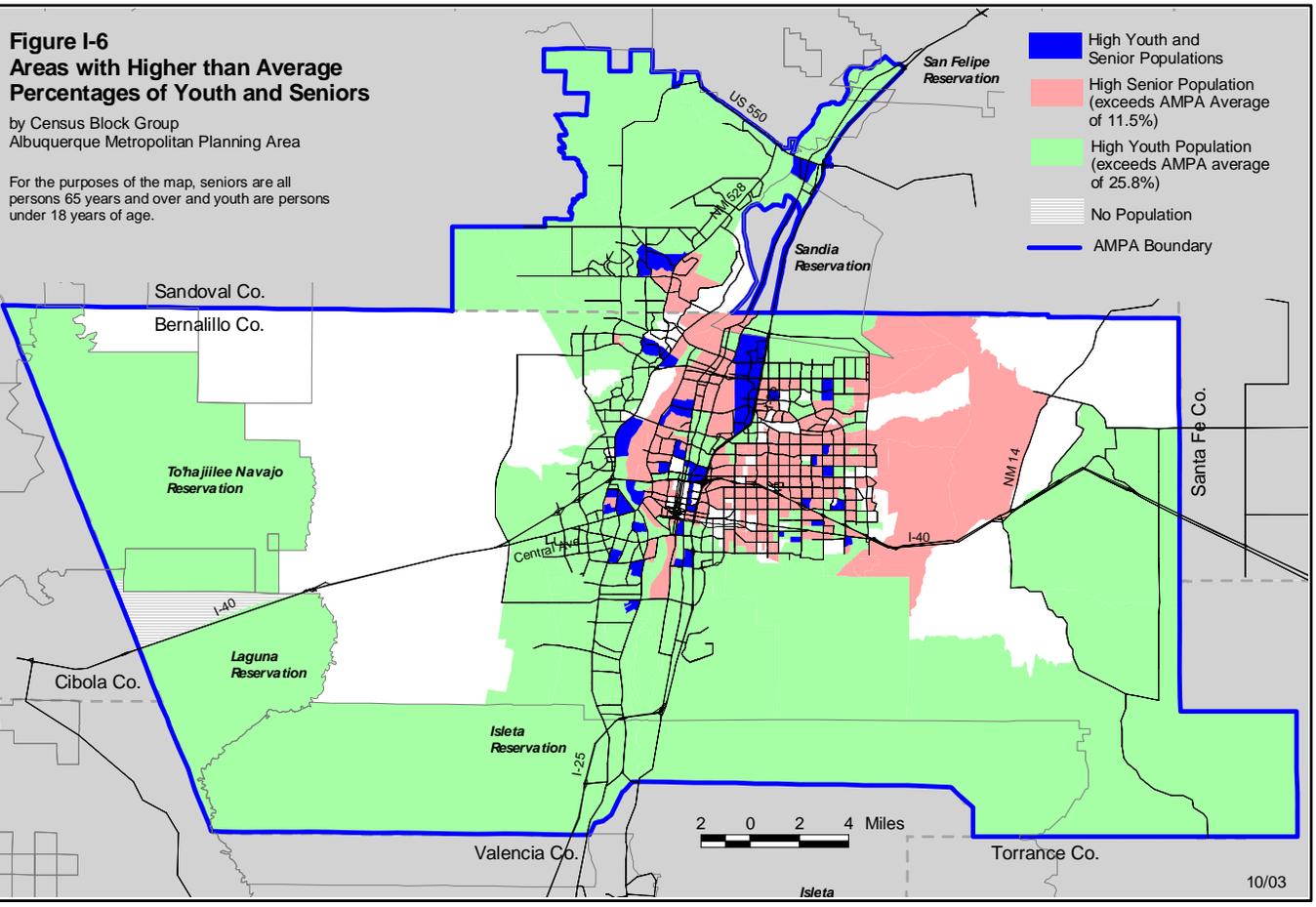
CHART	% with Disabilities
New Mexico	20.4%
City of Albuquerque	19.6%
Town of Bernalillo	31.2%
Village of Corrales	14.5%
Village of Los Ranchos de Albuquerque	16.2%
City of Rio Rancho	17.3%
Village of Tijeras	25.5%
Pueblo of Isleta (pt.)	25.7%
Santa Ana Pueblo	13.9%
To'hajiilee Navajo Nation (pt.)	18.4%

Source: US Census Bureau



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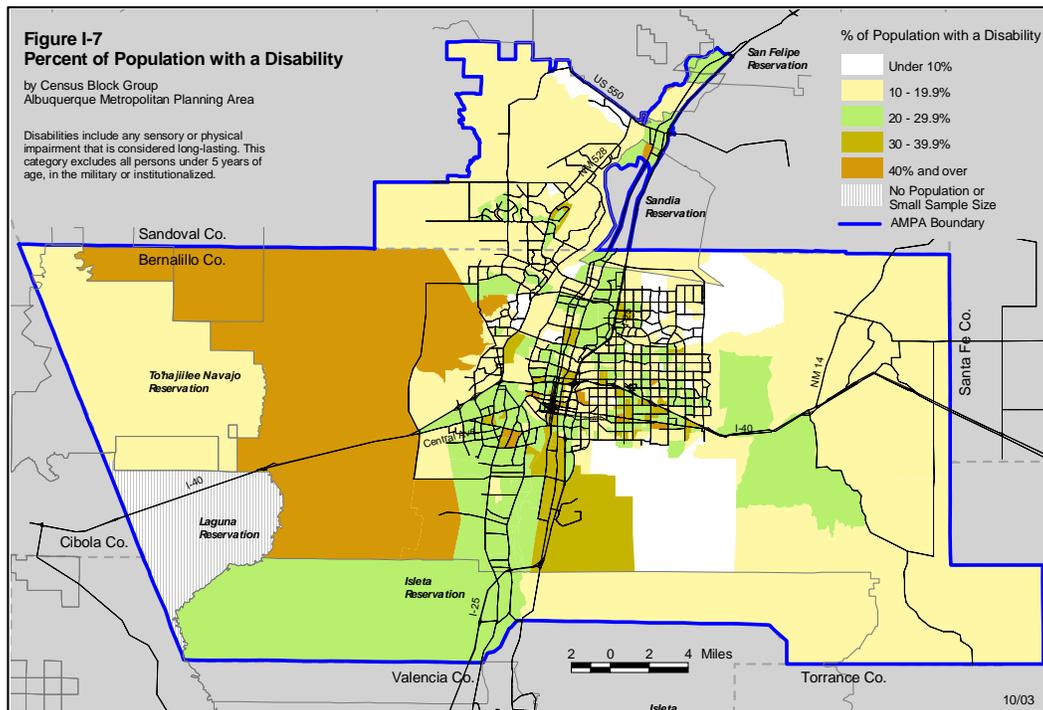
Source: 2000 US Census.



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Source: 2000 US Census.

Figure I-7 presents information about the percentage of the population with a disability by census block group. It is important to keep in mind that the size and amount of color in certain areas such as the rural portion of Bernalillo County does not mean there are more people of that particular population characteristic than in other smaller areas. The size and amount of color is not representing density. A small pocket in the urban area may contain more people than a big area in the rural portion of the AMPA. This information is relevant to transportation planning because it helps to identify strategies that help to increase transportation opportunities for this population group.




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Source: 2000 US Census.

Employment

Table I-6 : AMPA Employment by Jurisdiction

Employment, 2000	Total Jobs	Share in AMPA
New Mexico	857,092	na
AMPA	367,971	100.0%
City of Albuquerque	291,814	79.3%
Town of Bernalillo	2,243	0.6%
Village of Corrales	1,480	0.4%
Village of Los Ranchos de Albuquerque	2,497	0.7%
City of Rio Rancho	19,955	5.4%
Village of Tijeras	219	0.1%
Pueblo of Isleta (pt.)	1,359	0.4%
Santa Ana Pueblo	171	0.05%
To'hajiilee Navajo Nation (pt.)	186	0.05%
Remainder of the AMPA	48,047	13.1%

na = not applicable

Source: Department of Labor and US Census Bureau

Table I-6 provides employment information by jurisdiction in the AMPA. The City of Albuquerque has the highest concentration of employment with 79.3% of the total AMPA share. The City of Rio Rancho, which is another highly populated area, shares only 5.4% of the AMPA employment. The remainder of the AMPA, which includes the rest of Bernalillo County, shares 13.1% of the employment. This employment distribution in the AMPA highlights important transportation issues when planning ways for people to access the employment centers or identifying land use and transportation strategies that help determine where and what kind of transportation options can be provided for the unemployed to reach their job destination. This is intended to assure that the lack of transportation is not a major contributing factor for individuals in finding jobs.

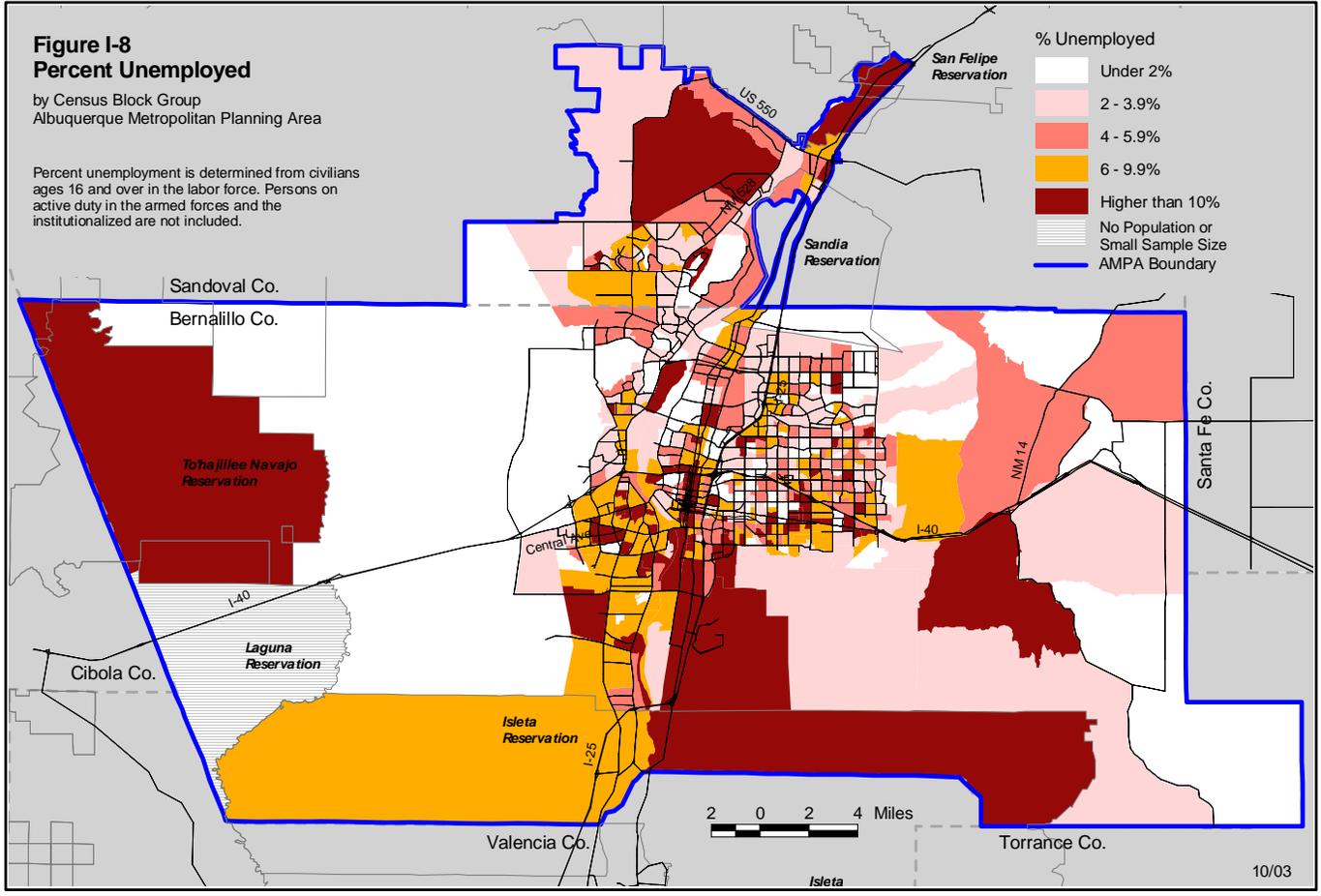
Income

The FHWA Order defines “low-income” as “a person whose household income is at or below the Department of Health and Human Services poverty guidelines.” However, MRCOG has adopted a different threshold for low-income. This is allowed by Federal regulations as long as the threshold is not selectively implemented and is inclusive of all persons. MRCOG has used the 2000 U.S. Census definition of poverty for this analysis. See Appendix B for the official poverty threshold used in the 2000 US Census.

**Figure I-8
Percent Unemployed**

by Census Block Group
Albuquerque Metropolitan Planning Area

Percent unemployment is determined from civilians ages 16 and over in the labor force. Persons on active duty in the armed forces and the institutionalized are not included.



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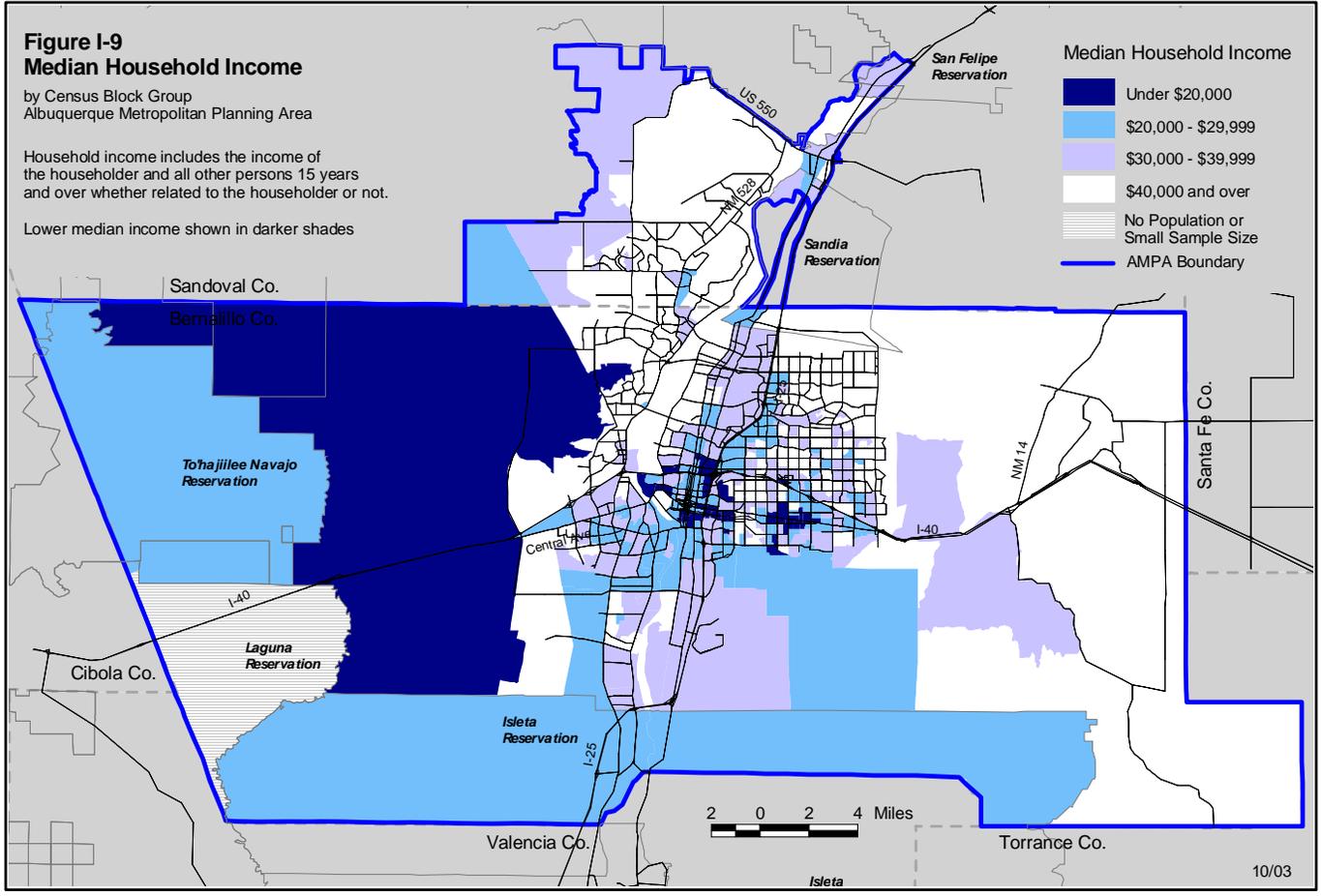
Source: 2000 US Census.

**Figure I-9
Median Household Income**

by Census Block Group
Albuquerque Metropolitan Planning Area

Household income includes the income of the householder and all other persons 15 years and over whether related to the householder or not.

Lower median income shown in darker shades



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Source: 2000 US Census.

The following series of tables and figures present information about income and poverty in the AMPA. Table I-7 presents median income by jurisdiction based on the 2000 US Census. The Village of Corrales (\$67,217) and the Village of Los Ranchos de Albuquerque (\$60,500) have the highest median income. Indian pueblos, with the exception of Santa Ana Pueblo, have the lowest median incomes in the AMPA.

*Table I-7 : AMPA Median Income
by Jurisdiction*

CHART	MEDIAN INCOME
New Mexico	\$ 34,133
City of Albuquerque	\$ 38,272
Town of Bernalillo	\$ 30,864
Village of Corrales	\$ 67,217
Village of Los Ranchos de Albuquerque	\$ 60,500
City of Rio Rancho	\$ 47,169
Village of Tijeras	\$ 34,167
Pueblo of Isleta (pt.)	\$ 24,833
Santa Ana Pueblo	\$ 45,179
To'hajiilee Navajo Nation (pt.)	\$ 19,643

Source: US Census Bureau

Figure I-9 illustrates median household incomes by census block group. Household income includes the income of the householder and all other persons 15 years and over whether related to the householder or not. Block groups with the lowest median incomes are located mainly around the New Mexico State Fairgrounds along Coal/Lead east of I-25 to Yale Blvd., downtown in the vicinity of the Barelmas neighborhood and South Broadway, Santa Barbara and Martinez Town, and the Los Duranes and West Mesa neighborhoods.

Poverty ⁵

Figure I-10 presents the percent of population living below poverty level by block group. This map shows a similar pattern to the previous map (Figure I-9). Areas in which 30% or more of the population is living below poverty level are mainly around the New Mexico State Fair Grounds, downtown in the neighborhoods of Santa Barbara and Martinez town, in downtown areas along Fourth and Second Street, 2nd street between Rio Bravo and Bridge Blvd., Westgate and Atrisco in the southwest, and around Gibson Blvd and Yale Blvd.

⁵ The US Census definition of poverty varies by family size and age and changes annually with the cost of living. The 2000 US Census determined poverty status of families as follows: "The poverty status of families and unrelated individuals in 1999 was determined using 48 income cutoffs arranged in a two dimensional matrix. The matrix consists of family size cross-classified by presence and number of family members under 18 years old. Unrelated individuals and 2 person families were further differentiated by the age of the reference person". US Census Bureau, Census 2000. page B-35, B-36.

Table I-8 shows the percentage of the AMPA population below poverty level by jurisdiction. Isleta and To'hajiilee have the highest levels of poverty in the AMPA. The Town of Bernalillo in Sandoval County follows with 18.2%. These percentages far exceed the AMPA (12.9%) and the nation (12.4%).⁶

Table I-8 : AMPA Population Below Poverty Le

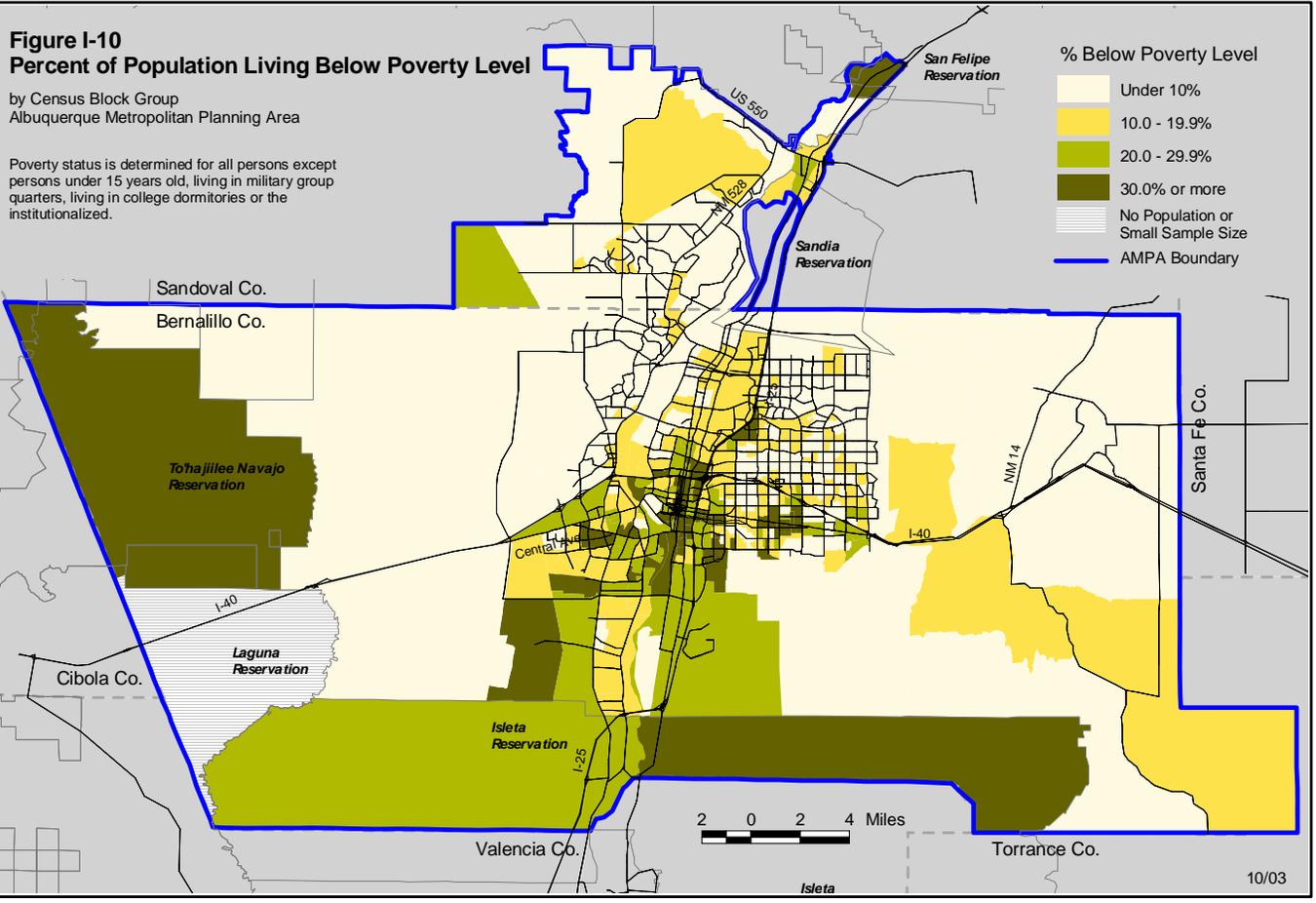
CHART	% BELOW POVERTY
New Mexico	18.4%
AMPA	12.9%
City of Albuquerque	13.5%
Town of Bernalillo	18.2%
Village of Corrales	5.0%
Village of Los Ranchos de Albuquerque	8.7%
City of Rio Rancho	5.1%
Village of Tijeras	9.5%
Pueblo of Isleta (pt.)	22.2%
Santa Ana Pueblo	5.1%
To'hajiilee Navajo Nation (pt.)	40.0%
Source: US Census Bureau	

Percent Below the Poverty Level by Age and

Race/Ethnicity - persons for whom poverty was determined
na = no persons within the category or data suppressed due to confidentiality.

Figure I-11 shows areas of high poverty and high transit usage. This information is important for planning transit services. These are potential transit users who are not able to afford the cost of single vehicle occupancy and depend in transit availability to meet their mobility needs. Areas of high poverty have been defined as areas in which the percentage of population below poverty is greater than the AMPA average of 12.9%. Areas of high transit usage have been defined as those in which the percentage of transit riders is higher than the COA average of 1.7%. Figure I-11 illustrates this information.

⁶ Mid-Region Council of Governments. "2000 Socioeconomic Characteristics by Data Analysis Subzones for the Mid-Region of New Mexico". Publication S-03-02. April 2003.



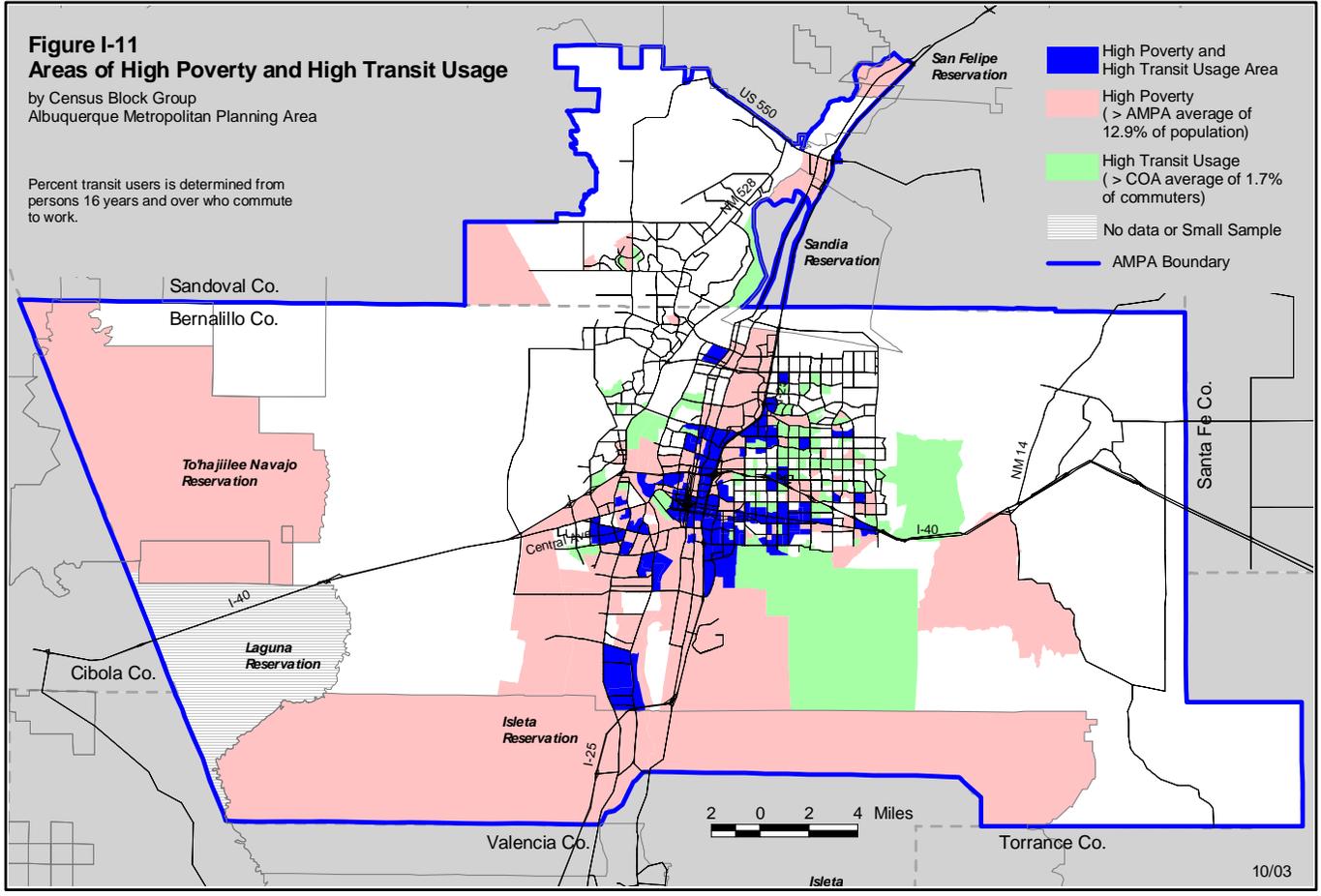
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Source: 2000 US Census.

Figure I-11
Areas of High Poverty and High Transit Usage

by Census Block Group
 Albuquerque Metropolitan Planning Area

Percent transit users is determined from persons 16 years and over who commute to work.



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Source: 2000 US Census.

Travel Time

Travel time data provides an indication of how long it takes for commuters to reach their employment destinations. Table I-9 provides information regarding average travel times for commuters and commuters traveling over 20 minutes by jurisdiction. Elements influencing the length of travel time are distance, accessibility, traffic flow, congestion, speed, and other factors that influence the conditions of traveling. With the exception of commuters from Santa Ana Pueblo, more than half of the commuters of the AMPA jurisdictions listed travel over 20 minutes to get to work. Residents living on the Navajo nation lands and those in Rio Rancho and Corrales exhibit the longest average commutes.

Table I-9: AMPA Travel Time for Commuters

Travel Time for Commuters	Average Travel Time for Commuters (in minutes)	Commuters Traveling Over 20 minutes (Percentage)
New Mexico	21.9	45.5%
AMPA	21.9	52.6%
City of Albuquerque	20.4	48.5%
Town of Bernalillo	21.9	55.2%
Village of Corrales	25.7	66.2%
Village of Los Ranchos de Albuquerque	20.8	50.5%
City of Rio Rancho	27.6	63.1%
Village of Tijeras	30.3	77.6%
Pueblo of Isleta (pt.)	19.0	49.3%
Santa Ana Pueblo	16.7	37.1%
To'hajiilee Navajo Nation (pt.)	36.4	75.9%

Source: US Census Bureau

Figure I-12 provides information regarding areas with higher than average commute times. The commute times refer to the time in minutes that it takes for individuals to go to work using any mode of transportation. The average commute time for the AMPA is 21.9 minutes. The map illustrates that the closer people are to a major activity center the shorter the commute time is. The commuter time in the core of the urban area is 21.9 minutes less than in areas of the urban fringe such as Westside, Rio Rancho and the East Mountains. There are a few pockets of commuter times higher than 40 minutes in the urban core but this may be a result of reverse commute patterns.

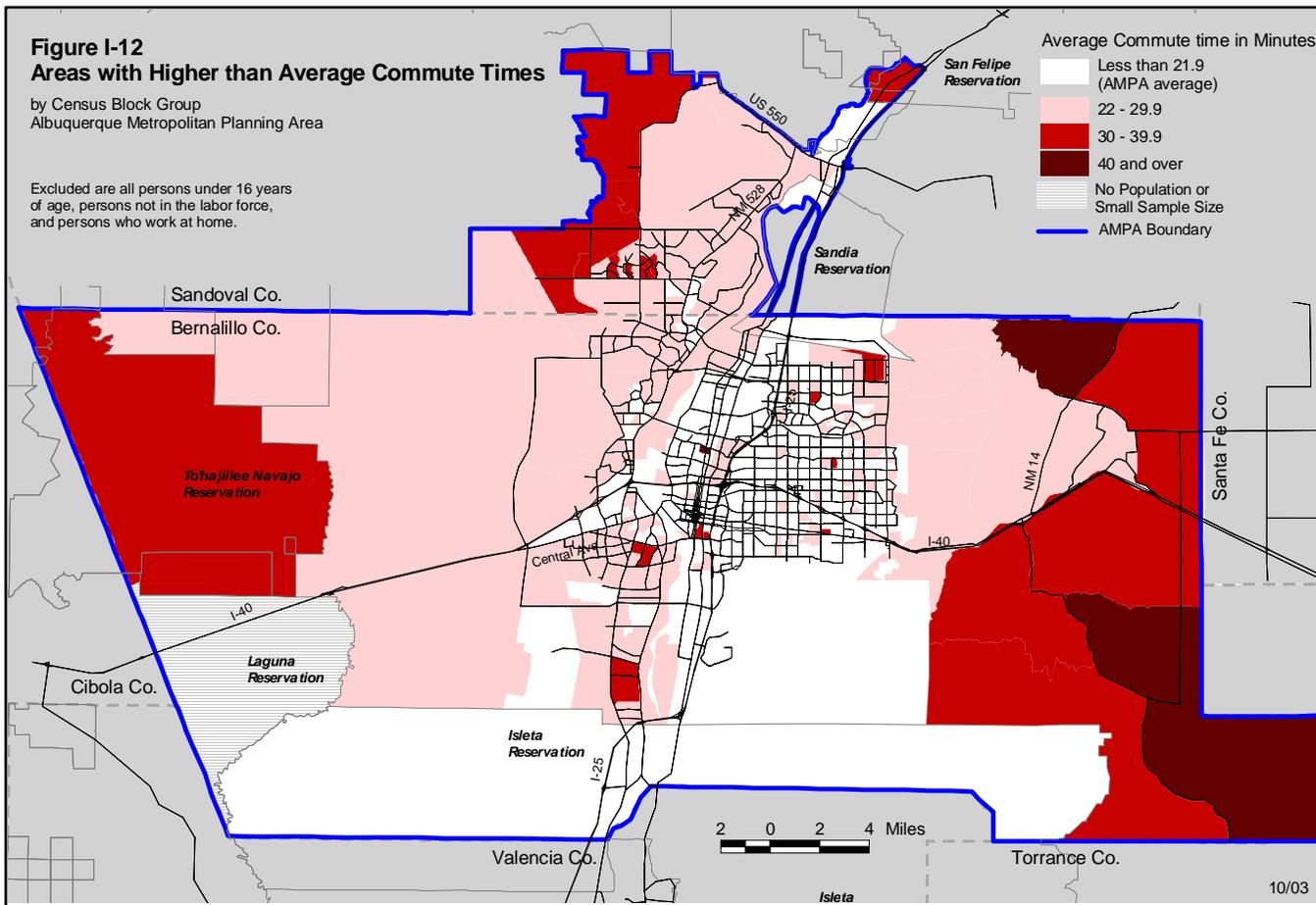
Figure I-12
Areas with Higher than Average Commute Times

by Census Block Group
 Albuquerque Metropolitan Planning Area

Excluded are all persons under 16 years of age, persons not in the labor force, and persons who work at home.

Average Commute time in Minutes

- Less than 21.9 (AMPA average)
- 22 - 29.9
- 30 - 39.9
- 40 and over
- No Population or Small Sample Size
- AMPA Boundary



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Source: 2000 US Census.

Table I-10 presents information about workers 16 years and over who commute alone 2000 by race and ethnicity and by jurisdiction. In most areas, over 80% of the workers drive alone to work. When the data is analyzed by race and ethnicity, it suggests that non-white and Hispanic populations have only slightly less of a tendency to drive alone to work. The air quality and transportation challenges resulting from a high percentage of commuters who drive alone are enormous for the area. Residents in the AMPA need to engage in the development of more collective forms of commuting.

Table I-10: AMPA Population by Race and Ethnicity by Jurisdiction

Drive Alone, 2000 - Workers 16 years and over who commute	Total Population	Hispanic	White, Not Hispanic	Native American	Black	Asian
New Mexico	79.1%	77.2%	82.1%	68.5%	77.6%	76.3%
City of Albuquerque	80.6%	78.5%	83.3%	65.3%	78.3%	77.6%
Town of Bernalillo	81.1%	81.1%	84.6%	55.2%	62.5%	100.0%
Village of Corrales	87.3%	83.7%	89.0%	73.3%	30.8%	na
Village of Los Ranchos de Albuquerque	89.4%	89.3%	88.9%	100.0%	na	100.0%
City of Rio Rancho	87.2%	85.5%	88.0%	85.4%	94.4%	80.9%
Village of Tijeras	76.4%	70.9%	80.0%	100.0%	na	100.0%
Pueblo of Isleta (pt.)	80.6%	75.4%	72.7%	81.8%	na	72.7%
Santa Ana Pueblo	75.8%			75.8%		
To'hajiilee Navajo Nation (pt.)	60.7%	40.0%	na	55.1%	na	100.0%

na = no persons within the category or data suppressed due to confidentiality.

Auto Ownership

Auto ownership is an indication of the ability of individuals to make vehicle trips for working, shopping, and other reasons. A household with no vehicles will depend on other modes of transportation such as biking, walking, and transit. These households are likely to make fewer trips than households with vehicles. This reality is important for transportation planning because it has policy and programming implications with regards to meeting the needs of this population. In addition, auto ownership levels have implications for the amount of traffic on our transportation network and the effects it may have on our communities.

Table I-11 : AMPA Household with no vehic

	% with 0 Vehicles
New Mexico	6.7%
City of Albuquerque	7.2%
Town of Bernalillo	7.8%
Village of Corrales	1.8%
Village of Los Ranchos de Albuquerque	3.9%
City of Rio Rancho	3.5%
Village of Tijeras	4.3%
Pueblo of Isleta (pt.)	9.0%
Santa Ana Pueblo	10.2%
To'hajiilee Navajo Nation (pt.)	19.4%

US Census Bureau

Table I-11 indicates that the Indian Reservations in the AMPA have the highest percent of households without vehicles. The City of Albuquerque and the Town of Bernalillo follow with percentages of 7.2 and 7.8. The data suggests that more than 90% of the AMPA households by jurisdiction have at least one vehicle, with the exception of To' hajiilee Navajo Nation.

Figure I-13 provides information about households that for different reasons do not have vehicles. These are households in which individuals rely on other modes of transportation than automobiles to meet their mobility needs.

The apparent difference between the percentages in the table and the map numbers comes from the geographic unit on which they are based. The table is based on jurisdictional area and the map is based on census block group geography. The latter is a smaller geographic unit.

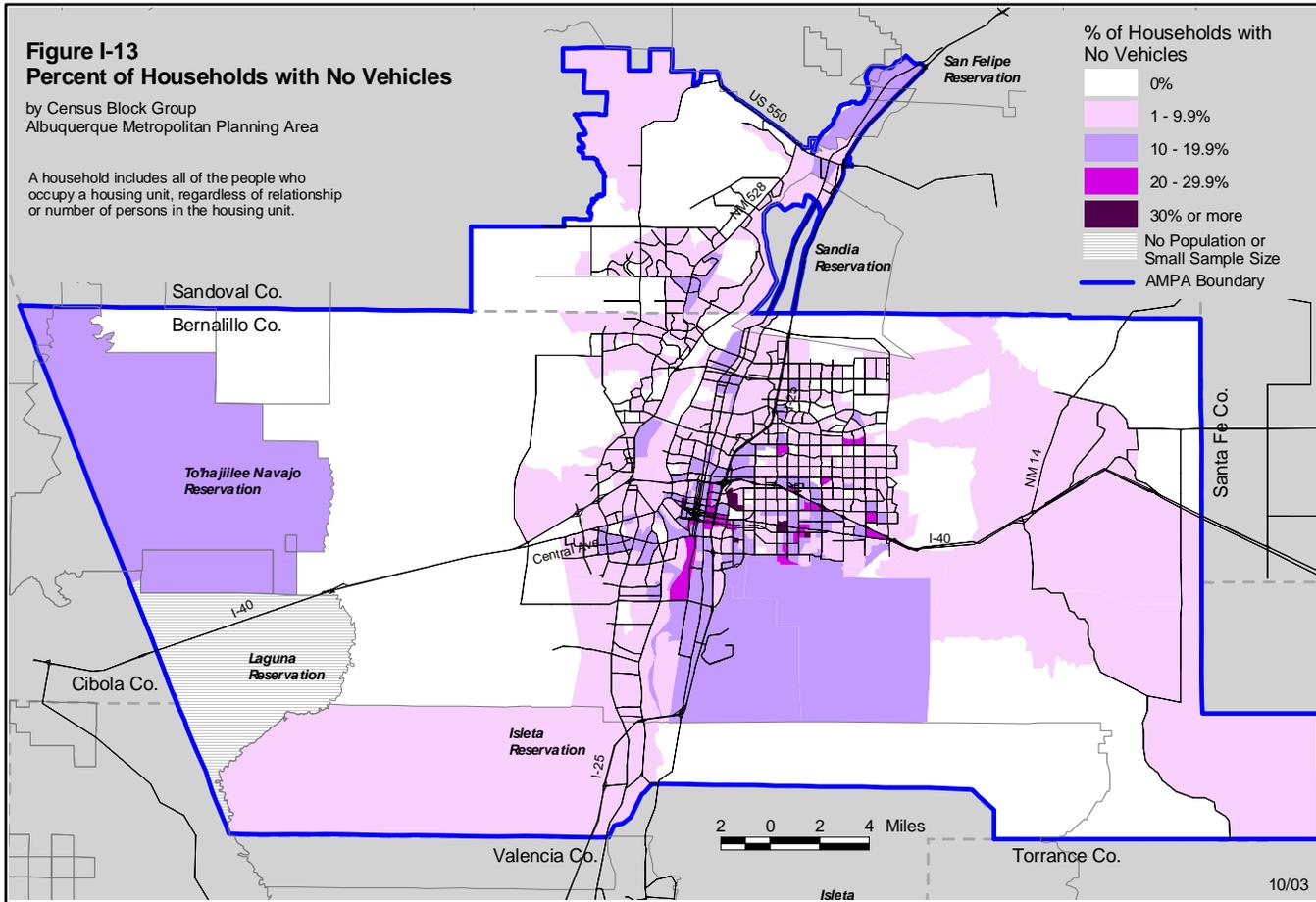
Figure I-14 provides information regarding areas of low vehicle ownership and high transit usage. Low vehicle ownership has been defined as areas in which 10.7% of households have no vehicle. 10.7% is the AMPA average of households with no vehicles. High transit usage has been defined as areas with 1.7% or higher of commuters.⁷ The map shows concentrations of low vehicle ownership and high transit usage in the Southeast Heights and Downtown areas, with other pockets scattered around the city. These may be appropriate areas of emphasis when planning transit service.

⁷ High Transit usage information comes from the 2000 US Census. It is important to acknowledge that transit operates on a shorter and less flexible schedule and with fixed routes in selected areas in relation to other modes of transportation (especially automobiles). These are some of several reasons for cautioning the reader not to make a direct conclusion about mode split and ridership in the AMPA without a more detailed analysis.

Figure I-13
Percent of Households with No Vehicles

by Census Block Group
 Albuquerque Metropolitan Planning Area

A household includes all of the people who occupy a housing unit, regardless of relationship or number of persons in the housing unit.



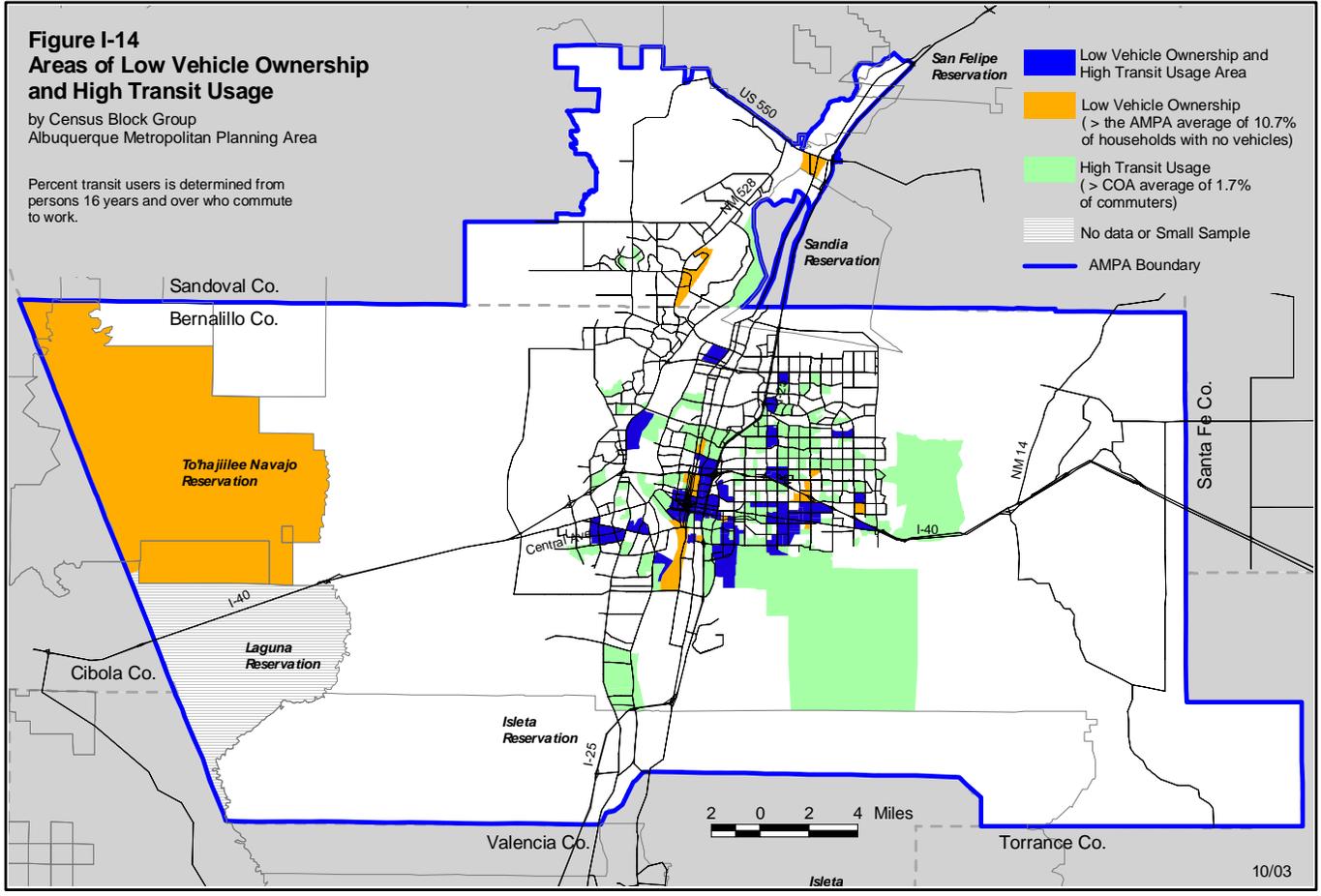
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Source: 2000 US Census.

Figure I-14
Areas of Low Vehicle Ownership
and High Transit Usage

by Census Block Group
 Albuquerque Metropolitan Planning Area

Percent transit users is determined from
 persons 16 years and over who commute
 to work.



Source: 2000 US Census.



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II. The Transportation System

Accessibility and mobility are important dimensions of transportation planning. They allow planners, elected officials, consultants, and the general public to see the transportation system from different perspectives. Each of them look at the transportation system in relation to system capacity, proximity, travel time, connectivity, safety, quality of life, level of service, design, land use, etc. but accessibility also explicitly accounts for land use patterns.⁸

This section provides information about the AMPA transportation system from these two dimensions. The analysis provides information to AMPA stakeholders about how the transportation system performs and provides insights about potential actions for the future.

Mobility

Mobility looks into the level and quality of service of the transportation network. The level of mobility for a specific facility (road, pedestrian, bicycle, and transit) is determined by its capacity, design, speed, and by how many people are using that facility. Typical performance measures used for mobility are level-of-service, volume-to-capacity (v/c) ratios, and/or vehicle miles traveled.

The following analysis was developed for the 2025 Metropolitan Transportation Plan, which was approved by the Metropolitan Policy Board in May 2003. It focuses on different elements of transportation planning that are important in assessing the mobility capacity of the system.

Traffic Volumes

Monitoring traffic conditions is one of MRCOG's ongoing responsibilities. Traffic on all roads classified as collectors or higher in Bernalillo, Valencia, Sandoval, Tarrant and southern Santa Fe counties is counted on a three-year cycle. The collected traffic data is used to support transportation planning activities, air quality and congestion analyses, and for transportation project development and design. In addition, this data is used to produce annual Traffic Flow Maps of the greater Albuquerque and outlying rural areas. These maps show the volume and distribution of traffic on the roadway network. The 2002 Traffic Flow Map for the greater Albuquerque area is included in the Appendix C of this document.⁹

Table II-1 lists the busiest intersections in the AMPA in 2002, and compares these to their 1991 volumes.¹⁰ It should be noted that these volumes are based on regular traffic counts. This means that each leg is counted once every three years, with growth factors applied in

⁸ Development of an Urban Accessibility Index. Bhat, Chandra; Handy, Susan; and others. Center for Transportation Research. May 2000. Research Report Number 7-4938-1. page 3.

⁹ The 2002 Traffic Flow Map can be found in MRCOG web site http://www.mrgcog.org/maps_on-line.htm.

¹⁰ Please see the document "Local Motion". This document can be found at http://www.mrcog.org/documents_on-line.htm.

the intervening years. Therefore, all legs are not necessarily counted at the same time or in the same year.

While the majority of the AMPA's busiest intersections both in 1991 and in 2001 were located in Albuquerque's Northeast Heights, intersections on the West Side have experienced the most significant growth, particularly along Coors Boulevard.

It is important to note the difference between high volume and congestion. Volume by itself does not necessarily imply anything about the level of congestion experienced by drivers. Congestion is a measure of the traffic volume relative to a roadway's capacity. Factors that affect capacity include the number of through lanes and turn lanes, lane width, signal timing, grade, and the presence or absence of shoulders, street parking, bus stops, and driveways.

Table II-1 25 Highest Volume Intersections 1991 and 2001

2001 Rank	Intersection	Total Vehicles Passing Through		
		1991	2001	Percent Change
1	Montgomery/San Mateo	89,000	99,300	11.6%
2	Montgomery/Wyoming	83,300	95,500	14.6%
3	Menaul/San Mateo	83,400	90,400	8.4%
4	Lomas/San Mateo	74,700	81,800	9.5%
5	Menaul/Wyoming	80,200	77,800	-3.0%
6	Coors/Irving	46,000	77,400	68.3%
7	Eubank/Montgomery	69,500	75,700	8.9%
8	Louisiana/Menaul	67,000	75,600	12.8%
9	Carlisle/Menaul	67,000	75,100	12.1%
10	Academy/Wyoming	55,000	74,500	35.5%
11	Coors/Ouray	57,700	73,800	27.9%
12	Academy/San Mateo	65,450	73,500	12.3%
13	Pan Am. West/ Paseo del Norte	40,300	72,700	80.4%
14	Lomas/Wyoming	68,500	71,200	3.9%
15	Candelaria/San Mateo	69,300	70,500	1.7%
16	Coors/Quail	55,500	69,700	25.6%
17	Central/San Mateo	71,400	69,600	-2.5%
18	Eubank/Lomas	61,200	69,500	13.6%
19	Coors/Coors Bypass	39,700	69,300	74.6%
20	Jefferson/Paseo del Norte	38,900	69,300	78.1%
21	Coors/Montano	36,200	69,100	90.9%
22	Candelaria/Wyoming	60,300	67,500	11.9%
23	Jefferson/Montgomery	51,000	65,000	27.5%
24	N.M. 528/19th Avenue	41,700	64,300	54.2%
25	Eubank/Menaul	63,500	63,900	0.6%

Perhaps the most closely analyzed "intersection" in the AMPA is the interchange between I-25 and I-40, known as the "Big I". This interchange was first built in 1966. Its

reconstruction, the biggest highway project ever executed in the state, began in July 2000 and was completed in May 2002. Although the Big I remained open throughout construction, the capacity of most movements was reduced or completely blocked off at various phases. Therefore, many drivers tried to avoid driving through the Big I by choosing alternate routes, opting for flexible work schedules, joining carpools, or using public transit.

Table II-2 shows the total approach volumes at the Big I. Although population growth in the AMPA was distributed fairly uniformly over the past two decades, the rate of growth in Big I traffic volumes was lower in the 1990s than it was in the 1980s. A likely contributing factor is an increasing proximity of housing to jobs, particularly west of the Rio Grande, which served to relieve some of the demand on the Big I.

Due to continued growth and development on Albuquerque’s West Side, traffic volumes at river crossings have continued to climb. The volumes on these crossings reflect growth and land use patterns on both sides of the river.

Table II-2 Big I Approach Volumes, 1980, 1990 and 1999

	1980	1990	1999
Approach Volume	149,100	242,150	310,450
Percentage Growth	-	62%	28%

Note: 1999 rather than 2000 volumes were used in order to avoid reflecting the shifts in travel patterns that resulted from the Big I reconstruction project. Daily Big I traffic volumes during construction dropped by 26 percent. Travel during the a.m. and p.m. peaks was reduced by an average of 30 percent.

Table I-3 shows that between 1980 and 2000 the total volume of traffic crossing the Rio Grande on an average weekday increased by 158 percent. Similar to the pattern illustrated by Big I approach volumes, river crossing volumes show a larger increase during the 1980’s than the 1990’s (74 and 49 percent respectively).

Table II-3 AMPA River Crossing Volumes, 1980 – 2000

	NM 44/US 550	Alameda Blvd.	Paseo Del Norte	Montano Road	I-40	Central Avenue	Bridge Blvd.	Rio Bravo Blvd.	I-25	Total
1980	-	18,900	-	-	43,400	35,800	27,180	17,300	9,900	152,480
1982	-	18,800	-	-	48,100	30,200	25,900	15,500	10,100	148,600
1984	6,000	23,600	-	-	56,900	35,200	30,400	20,700	11,300	184,100
1986	6,600	28,300	-	-	67,000	44,100	33,200	24,900	12,900	217,000
1988	8,000	24,200	28,000	-	76,600	43,800	44,500	27,000	17,200	269,300
1990	9,700	24,400	38,400	-	68,300	39,700	39,800	27,200	17,200	264,700
1992	11,500	25,000	42,900	-	75,100	39,100	40,000	27,400	18,700	279,700
1994	15,200	24,800	58,500	-	76,400	45,800	41,300	31,600	23,000	316,600
1996	20,000	35,700	57,300	-	97,300	43,000	40,400	30,800	24,400	348,900
1998	23,000	35,300	60,100	20,500	87,800	40,300	39,400	30,400	28,900	365,700
2000	26,500	37,600	66,500	24,700	94,200	41,900	41,000	32,300	28,600	393,300

Vehicle Miles Traveled

The amount of travel in a region is often measured in terms of vehicle miles traveled (VMT). VMT is defined as the total number of miles of vehicular travel on an average day and is used to evaluate transportation system use and performance, and as an input for air quality evaluation models.

Table II-4 shows how the AMPA compares to the whole region (Bernalillo, Tarrant, Sandoval, Valencia and southern Santa Fe Counties) in terms of lane miles of roads and vehicle miles traveled (VMT) on those roads. While the AMPA includes only 13 percent of the region's area, it contains 56 percent of the lane miles of all main roads, and 73 percent of the VMT. These facts emphasize the intensity of travel in New Mexico's largest metropolitan area.

Table II-4 AMPA and MRCOG Region Lane Miles and VMT, 2000

Area	Functional Classification ¹	Lane-Miles	VMT	VMT per Lane-Mile
AMPA	Collectors and Arterials	2,025	8,443,538	4,169
	Freeways	478	4,032,904	8,428
	AMPA Total	2,504	12,476,442	4,983
Non-AMPA	Collectors and Arterials	1,413	1,908,750	1,351
	Freeways	589	2,609,329	4,429
	Non-AMPA Total	2,002	4,518,079	2,257
Region	Collectors and Arterials	3,438	10,352,288	3,011
	Freeways	1,068	6,642,233	6,222
	Regional Total	4,506	16,994,521	3,772

Table II-5 indicates that principal arterials carry the lion's share of VMT: 41 percent in 2000. Interstates follow with 23 percent. It should be noted that principal arterials made up only 9

percent of total miles of roadway in the AMPA in 2000, and interstates constituted a mere 2 percent of the roadway system. Conversely, while 3 out of every 4 miles of roadway are local roads, they carried only 12 percent of the AMPA's total VMT in 2000.

Table II-5 AMPA Average Daily VMT and Roadway Mileage by Road Type, 1980, 1990, and 2000

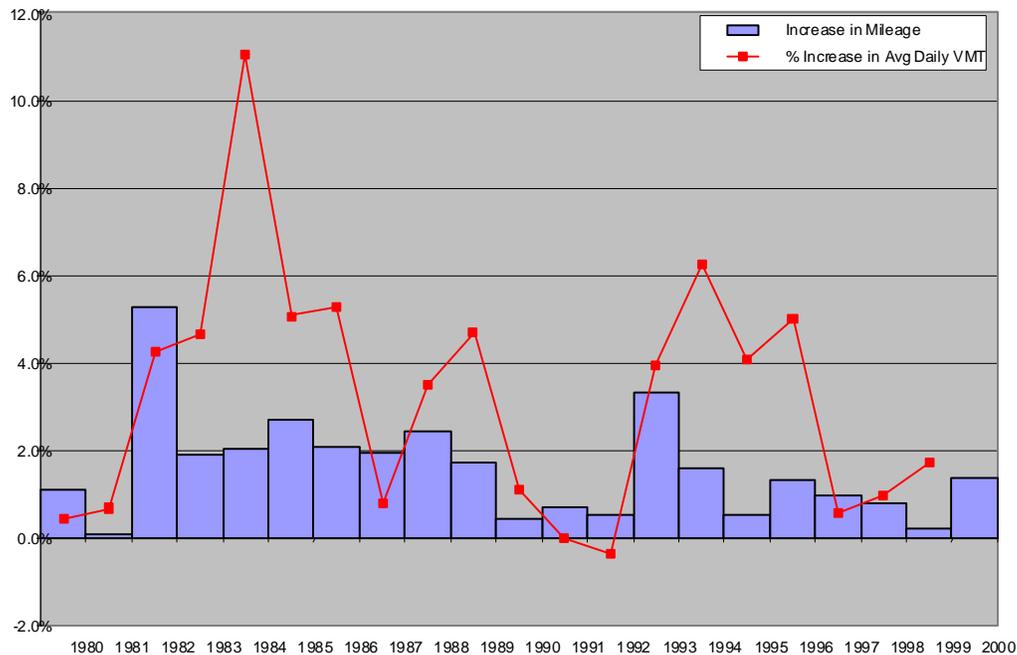
	1980		1990		2000	
	Avg. Daily VMT	Percent of System	Avg. Daily VMT	Percent of System	Avg. Daily VMT	Percent of System
Interstate	1,410,890	20.4%	2,337,921	22.7%	2,888,751	23.1%
Principal Arterial	2,345,678	33.9%	4,297,143	41.7%	5,094,440	40.7%
Minor Arterial	1,160,377	16.8%	1,446,589	14.0%	1,693,634	13.5%
Collector	812,734	11.8%	859,773	8.3%	1,352,561	10.8%
Local	1,182,680	17.1%	1,367,626	13.3%	1,499,850	12.0%
Total	6,912,359	100.0%	10,309,052	100.0%	12,529,236	100.0%

	1980		1990		2000	
	Miles of Roadway	Percent of System	Miles of Roadway	Percent of System	Miles of Roadway	Percent of System
Interstate	40.60	2.3%	40.36	1.8%	42.07	1.7%
Principal Arterial	127.13	7.1%	195.87	9.0%	221.86	9.0%
Minor Arterial	99.70	5.6%	136.42	6.2%	127.84	5.2%
Collector	133.03	7.5%	157.16	7.2%	242.36	9.9%
Local	1,383.35	77.6%	1,657.73	75.8%	1,818.00	74.1%
Total	1,783.81	100.0%	2,187.54	100.0%	2,452.13	100.0%

VMT increased at a far greater rate in the 1980s than in the 1990s (3.4 million compared to 2.2 million). In fact, the growth rate of both VMT and miles of roadway in the 1980s was twice as high as the 1990s rate of growth.

Figure II-2 shows the growth of average daily VMT and roadway miles since 1980. In general, growth in VMT has followed increases in the number of roadway miles, although sometimes with a slight lag time. For example, in 1982 the AMPA increased its roadway mileage by 5.3 percent, and the following year VMT grew by 11 percent. Similarly, the slower increase in roadway miles from 1990 to 1992 was accompanied by a drop in VMT, followed by a subsequent rise in 1993. Table II-5 suggests that increases in roadway mileage may contribute to large increases in VMT.

Figure II-2 AMPA Annual Average Daily VMT and Roadway Mileage, 1980 – 2000



Along with increased roadway capacity, a variety of other factors impact VMT, including;

- Population growth.
- Land use patterns and trends.
- Household size and composition.
- Personal income.
- The price of gasoline and other vehicle operating costs.
- The average number of autos owned by households.
- E-commerce and mail order shopping.
- Personal response to changing levels of congestion.
- The efficiency of public transit systems.

Per capita VMT in the AMPA increased just over 5 miles per person from 1980 to 1999, with 2000 numbers dipping due to Big I reconstruction. Over the past 20 years, growth of average daily VMT (81 percent) has been nearly twice as high as population growth (41 percent). However, during the last 10 years VMT and population had much more similar growth rates: 22 and 19 percent respectively. One explanation for a slower VMT growth rate in the 1990s, as mentioned previously, is an improved proximity of jobs to housing, particularly on the West Side.

Accessibility

MRCOG uses the Transportation Accessibility Model (TRAM) to assess the level of accessibility that different population groups have to destinations within the AMPA (see Appendix B for a description of TRAM capabilities). The accessibility analysis is done for different modes of transportation or any combination of modes. The accessibility analysis provide insights on how well the transportation system supports some types of land use developments and urban designs, and how this could benefit community residents differently.

The following series of tables provide accessibility information as a percentage of people able to reach certain destinations in a specific period of time measured in minutes. Specific destinations are identified such as bus stops, schools, employment centers, recreation areas, etc. and a community profile is created based on census information. Information regarding accessibility by mode of transportation by population groups related to race, ethnicity, age, poverty, employment, and disability is used to create the tables.

Table II-6 provides information about the percentage of people below poverty level living within a certain distance from a bus stop. The data show that the percentage of minorities and persons below poverty level within a 20 minute walking and or biking distance from a bus stop is higher than the percentage of the population in general. ¹¹

An accessibility analysis by age group reveals that seniors have the highest propensity to live close to a bus stop, while a lower percentage of youth than the general population can get to a bus stop under 20 minutes.

¹¹ The data does not consider the frequency of the bus service running along those particular bus routes.

Table II-6 : Contours built around bus stops for 2000

	Total Population	Employment	Below Poverty Level	Minority	Under 16	Over 65	Ages 16 - 64
Total Pop	623,780	367,971	71,116	315,425	142,295	71,672	409,816
Bike	540,644	334,491	64,953	279,454	120,556	64,811	355,275
10 min	499,591	310,628	61,690	260,301	110,849	59,769	328,972
20 min	41,053	23,863	3,263	19,153	9,707	5,042	26,303
Walk	479,832	301,364	59,946	250,958	106,262	57,644	315,926
10 min	385,863	245,013	49,384	196,976	83,433	48,252	254,178
20 min	93,969	56,351	10,562	53,982	22,829	9,392	61,748

	Total Population	Employment	Below Poverty Level	Minority	Under 16	Over 65	Ages 16 - 64
Total Population	623,780	367,971	71,116	315,425	142,295	71,672	409,816
<i>Within 20 min. by Bike</i>	86.7%	90.9%	91.3%	88.6%	84.7%	90.4%	86.7%
0 to 10 minutes	80.1%	84.4%	86.7%	82.5%	77.9%	83.4%	80.3%
11 to 20 minutes	6.6%	6.5%	4.6%	6.1%	6.8%	7.0%	6.4%
<i>Within a 20 min. Walk</i>	76.9%	81.9%	84.3%	79.6%	74.7%	80.4%	77.1%
0 to 10 minutes	61.9%	66.6%	69.4%	62.4%	58.6%	67.3%	62.0%
11 to 20 minutes	15.1%	15.3%	14.9%	17.1%	16.0%	13.1%	15.1%

Source: MRCOG

Table II-7 shows the percentages of people within 20 minutes distance by mode of transportation (or combination of them) from an activity center. Activity Centers considered for the analysis include: Downtown Albuquerque, Uptown, Intel/Central Rio Rancho, Cottonwood/Seven-Bar, UNM-TVU, Kirtland Air Force Base, Airport/Lower North I-25 Corridor, Middle North I-25 Corridor, and Upper North I-25 Corridor.

The analysis indicates that more than 95% of the population lives within 20 minutes of an employment center by automobile while only 50.5% is within bicycling distance and 5.4% within walking distance. The analysis also shows that when combining modes of transportation the percentages change for the 20 minute distance. The percentage increases for walking and transit to 9.1% and remains almost the same for bicycling and transit.

The data also presents the percentage of population accessible when the time is doubled from 20 to 40 minutes for walking and transit and bicycling and transit. The differences in the percentage between these combinations of modes of transportation continue to be less than the percentage of the population using automobiles for the 20 minute threshold, but it is also between these modes of transportation.

Table II-7 shows that the percentage of population over 65 years old accessible to activity centers is higher than the percentage of the population under 16 years old for all modes of transportation. This is constant with the age distribution of the AMPA, which showed seniors more likely to concentrate in the urban core, and high percentages of youths in outlying areas.

Table II-7 : Contours built around selected Activity Center

For Ages 18 to 64 Years Old

	Total Population	Below Poverty Level	Minority	Under 16	Over 65	Ages 16 - 64
Total Population	623,780	71,116	315,425	142,295	71,672	409,813
<i>Within 20 min. by automobile</i>	95.3%	95.6%	95.5%	94.8%	96.9%	95.1%
0 to 10 minutes	75.4%	80.3%	74.2%	72.4%	82.5%	75.2%
11 to 20 minutes	19.9%	15.3%	21.3%	22.4%	14.4%	20.0%
<i>Within 40 min. walking & transit</i>	22.8%	30.0%	23.9%	19.6%	27.1%	23.1%
0 to 20 minutes	9.1%	12.5%	9.7%	7.3%	10.5%	9.5%
21 to 40 minutes	13.6%	17.5%	14.2%	12.3%	16.6%	13.6%
<i>Within 40 min. bicycling & transit</i>	89.7%	90.5%	88.9%	88.5%	92.9%	89.6%
0 to 20 minutes	49.6%	57.9%	50.1%	46.0%	57.6%	49.5%
21 to 40 minutes	40.1%	32.6%	38.8%	42.6%	35.2%	40.1%
<i>Within 20 min. by bicycle</i>	50.5%	59.0%	50.2%	46.7%	58.9%	50.4%
0 to 10 minutes	14.1%	18.2%	13.4%	11.3%	17.6%	14.5%
11 to 20 minutes	36.4%	40.7%	36.8%	35.4%	41.4%	35.9%
<i>Within a 20 min. walk</i>	5.4%	7.7%	5.3%	3.8%	6.2%	5.9%
0 to 10 minutes	0.8%	1.0%	0.7%	0.4%	0.8%	1.0%
11 to 20 minutes	4.6%	6.8%	4.5%	3.4%	5.4%	4.9%

Source; MRCOG

Note that transit trips are measured in 20 minute increments due to the fact that transit trips on average are longer than those by other modes.

Table II-8 shows accessibility levels to schools by mode of transportation. The analysis focuses on the level of accessibility for the general population, minority, below poverty and under 16 years old population groups.

Accessibility by automobile (97%) continues to reach the highest percentage of the population compared to other modes of transportation (86.3% by bicycling and 64.7% by walking) for a 20 minute distance from a school, because automobiles travel at higher speeds. Accessibility levels by these same modes of transportation for the population age group under 16 years old are somewhat similar.

In looking at walk to school data, the lowest percentage accessible within 20 minutes is the population under 16 years old. This is the target population for school location and access. The analysis does not look into the quality of the surrounding access environment to schools. Such analysis would provide additional important insights on potential barriers that can be deterring the levels of people walking and biking safely and comfortably to school.

Table II-8: Accessibility Level to Schools by Mode of Transportation

	Total Population	Below Poverty Level	Minority	Under 16
Total Population	623,780	71,116	315,425	142,295
<i>Within 20 min. by automobile</i>	97.2%	96.9%	96.5%	96.8%
0 to 10 minutes	91.7%	93.6%	92.5%	90.5%
11 to 20 minutes	5.6%	3.3%	4.0%	6.3%
<i>Within 40 min. walking & transit</i>	82.7%	88.9%	85.8%	81.3%
0 to 20 minutes	54.6%	61.9%	56.0%	51.9%
21 to 40 minutes	28.1%	27.1%	29.9%	29.3%
<i>Within 40 min. bicycling & transit</i>	94.3%	95.1%	94.3%	93.4%
0 to 20 minutes	85.1%	90.4%	87.4%	83.4%
21 to 40 minutes	9.2%	4.8%	6.8%	10.0%
<i>Within 20 min. by bicycle</i>	86.3%	91.3%	88.5%	84.6%
0 to 10 minutes	76.6%	84.0%	79.2%	74.4%
11 to 20 minutes	9.7%	7.3%	9.3%	10.2%
<i>Within a 20 min. walk</i>	64.7%	73.5%	67.1%	61.9%
0 to 10 minutes	25.1%	29.4%	25.6%	23.5%
11 to 20 minutes	39.6%	44.1%	41.4%	38.4%

Source: MRCOG

Table II-9 presents information about levels of accessibility to recreational areas. Recreation facilities include parks, community centers, multipurpose centers, senior centers, and any other facilities that provide sports, cultural, and recreational programs. This is an important aspect of accessibility because of the quality of life implications that it has for the community.

The table shows that the percentage of people living within 20 minutes driving distance from a recreational facility is higher than any of the other modes of transportation. This is also true when the time is doubled from 20 to 40 minutes for the other modes of transportation. An interesting finding is that people over 65 years old have better accessibility to recreational facilities than other population groups regardless of the mode of transportation.

Table II-9: Accessibility to Recreation Areas by Mode of Transportation

	Total Population	Below Poverty Level	Minority	Under 16	Over 65
Total Population	623,780	71,116	315,425	142,295	71,672
<i>Within 20 min. by automobile</i>	98.4%	98.0%	97.7%	98.1%	99.0%
0 to 10 minutes	95.0%	95.5%	94.9%	94.4%	96.7%
11 to 20 minutes	3.3%	2.4%	2.9%	3.7%	2.3%
<i>Within 40 min. walking & transit</i>	89.1%	91.4%	89.4%	87.8%	92.9%
0 to 20 minutes	54.0%	62.8%	55.8%	51.4%	60.7%
21 to 40 minutes	35.2%	28.5%	33.6%	36.4%	32.2%
<i>Within 40 min. bicycling & transit</i>	96.9%	96.4%	96.1%	96.4%	98.0%
0 to 20 minutes	92.1%	93.3%	92.0%	91.1%	94.7%
21 to 40 minutes	4.8%	3.1%	4.0%	5.3%	3.2%
<i>Within 20 min. by bicycle</i>	93.5%	94.3%	93.3%	92.6%	95.8%
0 to 10 minutes	81.5%	85.5%	81.4%	79.6%	87.6%
11 to 20 minutes	12.0%	8.8%	11.9%	13.1%	8.2%
<i>Within a 20 min. walk</i>	66.0%	73.8%	67.3%	63.1%	73.6%
0 to 10 minutes	26.2%	35.1%	28.6%	24.7%	28.7%
11 to 20 minutes	39.8%	38.7%	38.7%	38.4%	44.9%

Source: MRCOG

Safety

Transportation safety is an important element of transportation planning and a concern for any community. Safety demands a comprehensive approach to allow the community to effectively address its safety challenges and the devastating consequences of crashes. The human grief that such events bring to community residents, and the direct and indirect financial costs associated with such events, can be prevented through active innovative strategies. Crashes are no longer considered exclusively accidents or random events.

TEA-21 and other federal regulations require the introduction of safety as a key component in the transportation planning process. There have been diverse ways of addressing this around the nation. MRCOG is building its capacity to monitor the operation of the transportation system as a whole. This effort, in many cases, demands close coordination with other public and private agencies and community groups.

Crash studies have found that certain population groups are more likely to be involved in deadly crashes. Alcohol, vehicle conditions, roadway characteristics, and location characteristics are contributing factors to the level of crashes. In addition, MRCOG considers other more permanent factors that also contribute to a high or low crash incident in any particular location. These more permanent factors demand special monitoring and policies that include land use, engineering, and educational considerations.

The National Highway Traffic Safety Administration has identified New Mexico as having the highest pedestrian fatality rate per 100,000 people (3.94) in 2002 and ranks the City of

Albuquerque 38th of 245 cities in the nation with a pedestrian fatality rate of 2.82.¹² An average of 136 people has been involved in bike related crashes in Bernalillo County between 1998 and 1999. Five of New Mexico's seven highest fatal and injury crash intersections in 2000 (for all crashes) were in the City of Albuquerque.

These alarming statistics indicate that safety issues demand more than just a law enforcement approach. It will require seeing the event not only from the characteristics of the moment but in light of the physical context and the human activities in which it occurred. MRCOG has recently taken a proactive approach in responding to these area efforts through the development of technical tools and safety policies. In addition, MRCOG is working towards better monitoring and guiding the development of the transportation system in the region.

In anticipation of its metropolitan long range plan, which was approved last May, MRCOG's Metropolitan Transportation Board approved a series of goals that guided its development. These goals include safety as a consideration:

- *"To increase the safety, reliability, and dependability of the transportation system for all travelers and goods, including those traveling by foot, bike, bus, train, truck, and auto".*¹³

MRCOG's comprehensive and extensive traffic count program now includes pedestrian and bicycle counts. In addition, MRCOG has developed a computer application that helps to query crash data by geographic location. The development of the Transportation Accessibility Model (TRAM) will allow MRCOG to do accessibility analysis by any mode of transportation or combination system wide.

MRCOG is working on a proposed revision to the project screening and evaluation criteria for the Transportation Improvement Program (TIP). The criteria include ADA requirements, crash data considerations by mode of transportation, and connectivity by mode of transportation.

These are concrete steps MRCOG is taking to provide new opportunities for building a safe multimodal/intermodal transportation system in the AMPA. MRCOG continues to explore additional ways to enhance current planning activities and develop new approaches to addressing this issue.

¹² National Highway Traffic Safety Administration. Pedestrian Roadway Fatalities. DOT-HS 809-456. April 2003. pages 25 and 45.

¹³ MRCOG, 2025 Metropolitan Transportation Plan. Pages IV-2 to IV-4. August 2003.

Cultural and natural considerations

The scoping phase in the NEPA process provides an early opportunity for identification of public and agency Title VI and environmental justice considerations. In project development, environmental justice should be considered in all decisions whether they are processed with an Environmental Impact Statement (EIS), Environmental Assessment (EA), Categorical Exclusion (CE), or Record of Decision (ROD). Potential impacts to the human environment and natural environment should receive equal consideration throughout the transportation planning process.

The New Mexico Natural Heritage Program is the source for generating and maintaining biological and conservation data for the state of New Mexico. More detailed information can be requested from them.¹⁴ The data presented in this document should not be considered a final statement and should not be substituted for on-site surveys required for environmental assessments.

Table II-10 provides information about some identified species by Federal and State Status as of July 2003 from the New Mexico Natural Heritage Program Biological and Conservation Data System. The Federal status was determined by US Fish and Wildlife Service and the State status was determined by NM Energy, Minerals and Natural Resources Department.

Table II-10: Biological species presence in the AMPA			
Common Name	Scientific Name	Federal Status	State Status
Rio Grande Silvery Minnow	Hybognathus amarus	Listed Endangered	Endangered
Bald Eagle	Haliaeetus leucocephalus	Listed Threatened	Threatened
Southwestern Willow Flycatcher	Empidonax trillii extimus	Listed Endangered	Endangered
<i>Source: New Mexico Natural Heritage Program. 2003</i>			

The New Mexico Office of Cultural Affairs – Historic Preservation Division is responsible for generating and maintaining the database of prehistoric and historic places. It is also responsible for nominating those places to the National Register of Cultural Properties. If more detailed information is desired, the reader should contact this office directly.

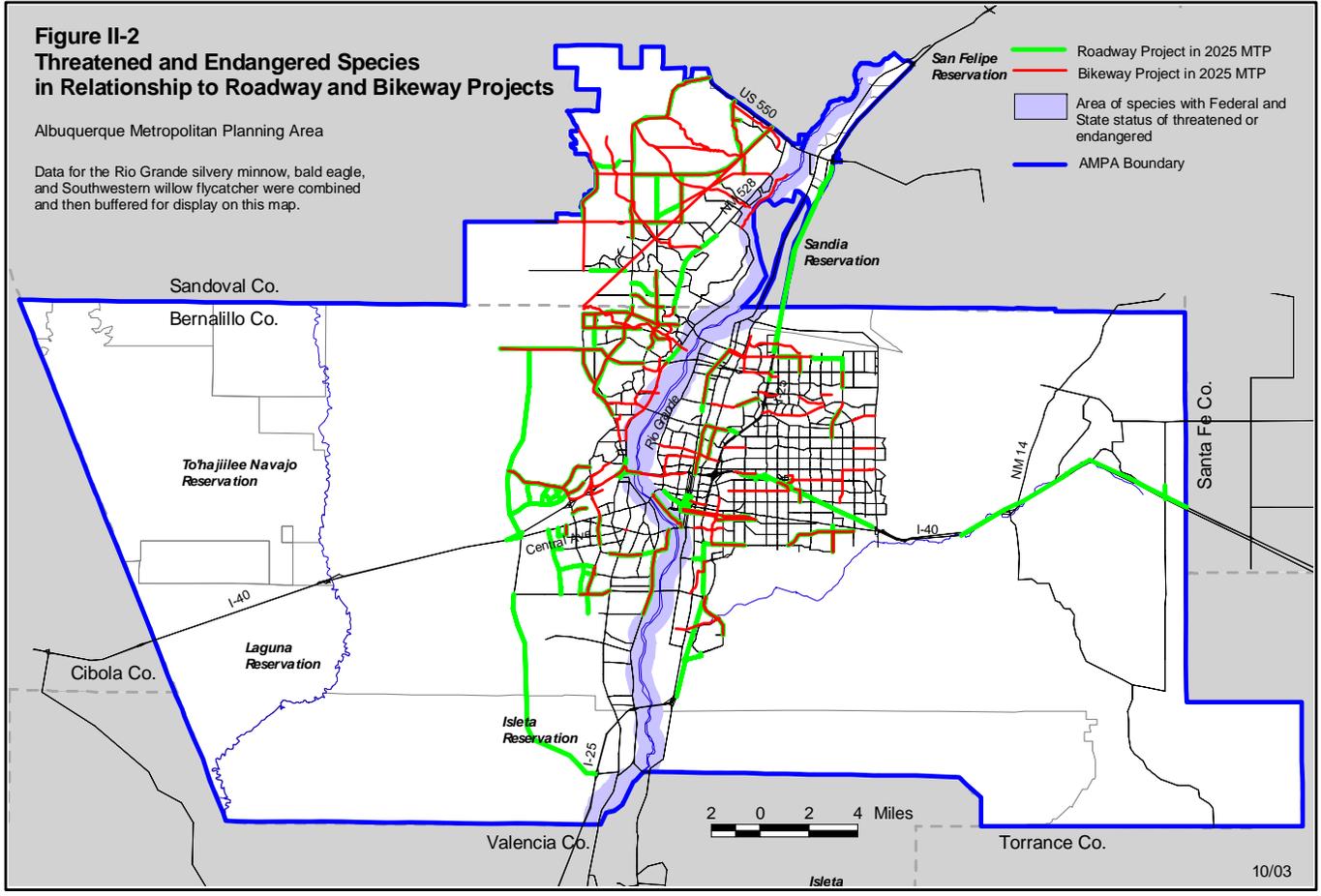
The following series of maps (Figure II-2 and Figure II-3) show the location of archeologically sensitive sites in the AMPA and sites in which endangered and threatened species are present.

¹⁴ Tim Seaman, Archeological Records Management Section (ARMS) manager. Laboratory of Anthropology 708 Camino Lejo, Santa Fe, NM 87501. Phone (505)476-1275.

**Figure II-2
Threatened and Endangered Species
in Relationship to Roadway and Bikeway Projects**

Albuquerque Metropolitan Planning Area

Data for the Rio Grande silvery minnow, bald eagle, and Southwestern willow flycatcher were combined and then buffered for display on this map.

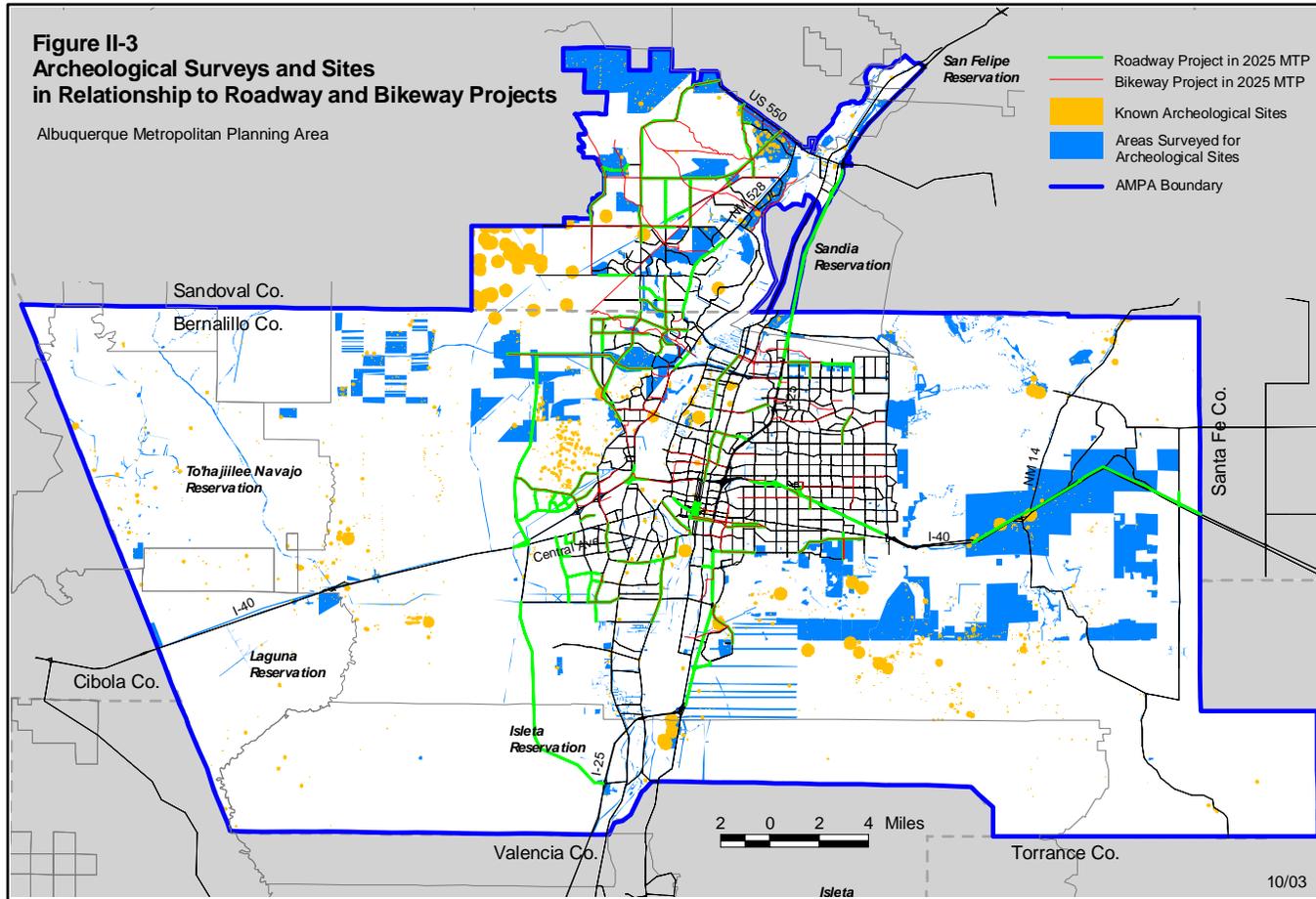


Source: NM Natural Heritage Program, 2000.

**Mid-Region
Council of Governments**
317 Commercial NE, Suite 104
Albuquerque, NM 87102
505-247-1750

Figure II-3
Archeological Surveys and Sites
in Relationship to Roadway and Bikeway Projects

Albuquerque Metropolitan Planning Area



MR COG
Mid-Region
Council of Governments
 317 Commercial NE, Suite 104
 Albuquerque, NM 87102
 505-247-1750

Source: ARMS, Historic Preservation Division,
 NM Office of Cultural Affairs, Oct. 2003.

III. Public Involvement Process

MRCOG's public involvement program is a very dynamic and flexible one. It is built around the principles of fair participation, early community involvement, active outreach efforts, creative formats, and community involvement follow-up. It is designed to accommodate community needs and characteristics. The public involvement program attempts to accommodate all people, issues, locations, days, times, and situations.

Almost all MRCOG plans and programs have been developed with input from local agencies or municipalities. In general, local governments have reviewed a transportation project prior to the project's submission to MRCOG for inclusion in the TIP and will provide information for projects included in the MTP. The public review process of the local governments for the projects they complete includes the development of the local Capital Improvement Program (CIP) and the public meetings associated with it. In other cases it includes bond issues to support the project, votes at the local Council or Commission level, and ultimately the National Environmental Policy Act (NEPA) process.

It is in this regard that MRCOG's public involvement process provides yet another opportunity for the general public to participate in the transportation planning process. MRCOG's public involvement complements rather than duplicates existing public involvement efforts in the area carried out by other government agencies.

An important first step has been to educate the general public about MRCOG's role as the Metropolitan Planning Organization for the Albuquerque Urban Area. It has been crucial to clarify the differences between MRCOG and the responsibilities of local government agencies toward the transportation network construction, maintenance, and enhancement. MRCOG's activities related to regional transportation include:¹⁵

- Policies related to access control for access-controlled roadways
- Alignments for new roadways and bike facilities
- Alignments for new high capacity transit services
- Policies about regional transportation issues (transportation demand management, intelligent transportation system, transit, rails, high occupancy vehicle lanes, etc.)
- Possible corridors for new bike facilities or roadways
- Types of transportation options to be considered for a particular corridor
- Roadway widening and extension projects that will use Federal funds
- Federal funding for transportation projects (roads, bikes, transit, pedestrian facilities, etc.)

The public has an opportunity to provide input regarding transportation policy and funding issues throughout MRCOG's regular committee process which includes the Public Involvement Committee (PIC), the Transportation Coordination Committee (TCC), and the

¹⁵ MRCOG does not make decisions about sector plans, zoning changes, private development approvals, subarea plans, and larger planning projects such as the City of Albuquerque's Centers and Corridors plan.

Metropolitan Transportation Board (MTB) meetings. These meetings are open to the public by NM State regulation/statute.

An extensive public involvement process is followed when a new TIP or MTP is developed or when one of these documents is updated. When a draft MTP or the TIP is released for public review, copies of the document and a comment form are sent to local elected officials, public libraries, targeted local government staff, and the Albuquerque/Bernalillo County Air Quality Control Board.

MRCOG has identified the following strategies to provide outreach to the community and affected public agencies about transportation issues and processes.

MRCOG Public Involvement Strategies 2003	
Open Houses	Workshops
Meetings with neighborhood associations and business/professional groups	Presentations on local news and interview radio and television shows
Presentations on the local cable government channel	Presentations to advocacy and business/professional groups
Project specific Public Meetings	Information in MRCOG newsletter
Focus groups	Discussion groups
Additional press releases	Press conferences
Development of Plan or Program specific community member contact databases	Additional informational brochures in English and Spanish
Plan or program specific newsletters	Spanish language editions of newsletters
Public Service announcements (in English and Spanish)	Open letters to newspaper editors (in English and Spanish)
Display ads (in English and Spanish)	Ad Hoc Citizen advisory committees
Insight and opinion or other staff generated informational pieces in the general circulation newspapers in the area	
Redesign of MRCOG web page	Provide information face to face or by telephone
Use of market segmentation techniques to identify key target audiences and preparation of messages and materials for them	Use of already established community and business/professional events and communication channels to disseminate information to the community

MRCOG also publishes legal notices of regularly scheduled meetings in the general circulation newspapers in advance of MTB, TCC and PIC meetings. Copies of agendas are emailed or faxed to all radio stations, including Spanish radio stations and newspapers such as “El Hispano” and “South Valley Inc.” Notices of the meeting are also posted on MRCOG’s website (www.mrcog-nm.gov).

Following each public comment period, all comments are compiled and provided to the MTB and its advisory committees for review during their deliberations. MPO staff also recommends ways to address the comments received. After the MTB’s final action on a plan or program, MPO staff writes personalized letters to each community member who has commented. The letters acknowledge the time and effort taken to comment and explain how the input was addressed. When a comment concerning a specific issue associated with a

transportation project is made, MRCOG forwards the comment to the implementing agency and the community member is provided with a copy of the letter transmitting the comment.¹⁶

External Complaint Processing Procedure

The FHWA Memorandum of April 8, 2002 titled "Policy for Processing External Complaints of Discrimination" establishes the responsibilities of government agencies toward processing complaints of discrimination. The document "FHWA External Complaint Processing Procedures" provides guidance for processing external complaints of discrimination¹⁷ files under Title VI of the Civil Rights Act of 1964 and the Americans with Disabilities Act (ADA).

According to the above documents:

- FHWA Division offices are responsible for informally resolving or, where necessary, investigating assigned ADA complaints.
- All complaints initially received by any FHWA office must be immediately forwarded to the Headquarters Civil Rights (HCR) office.
- Complaints filed under Title VI against State sub-grantees or contractors shall be investigated by the State Transportation Agencies (STA).
- Complaints filed against the STA will be investigated by FHWA.
- The HCR will issue decisions in all cases, including complaints investigated by the STA.

Complaints filed with a State Transportation Agency in New Mexico need to be processed in accordance with the FHWA approved complaint procedures as required under 23 DFR 200, 23 CFR 1.36, and 49 CFR 21.13. Complaints filed with a sub-recipient such as an MPO (MRCOG) will be processed in accordance with the approved New Mexico Department of Transportation procedures.¹⁸

The New Mexico Department of Transportation (NMDOT) Title VI Plan establishes the following complaint procedures:

"Any person who believes they have been aggrieved by an unlawful discriminatory practice under Title VI has a right to file a formal complaint with the NMDOT. Any such complaint must be in writing and filed with the DOT Title VI Coordinator within one hundred eighty days following the date of the alleged discriminatory

¹⁶ These materials are included in the appendices to the plans and programs. A summary, analysis and report on the disposition of comments are provided for each plan and program.

¹⁷ Discrimination is defined as an "act (or action) whether intentional or unintentional, through which a person in the United States, based on race, color, sex, age, national origin, or disability has been subjected to unequal treatment under any program or activity receiving financial assistance from the FHWA under Title 23 USC." FHWA Memorandum. Policy of Processing External Complaints of Discrimination. Page 3.

¹⁸ New Mexico Department of Transportation: Office of Equal Opportunity Programs. Title VI Plan. Part V. April 27, 2001.

occurrence. Charge of Title VI Discrimination Complaint Form may be obtained from the Office of Equal Opportunity Programs at no cost to the complainant by calling (800)544-0936.”¹⁹

Every effort should be made to resolve the issues raised in a complaint of discrimination informally at the lowest level possible. Mediation is an important option for the affected parties and the NMDOT in reaching a resolution of complaint.

The FHWA document establishes that decisions issued by the FHWA are administratively final and the complainant shall be notified of all appeal rights pursuant to 49 CFR 21 “In the event the FHWA concludes that the respondent is in compliance with laws/regulations, the complainant, if dissatisfied, has the right to file an action in the appropriate U.S. District Court”.

¹⁹ Idem. Page 24.

IV. The Future

This section focuses on the analysis done for the 2025 MTP approved by the MRCOG Metropolitan Transportation Board on May 8, 2003 by resolution R-03-15 MTB. The analysis and findings still apply for the purpose of this document. The aim is to compare how the transportation system proposed in the next 20 years performs compared to the existing one. The analysis looks into the impact of systems regionally in relation to specific population groups. Project level analysis will be performed during TIP development.

Accessibility of Transit

MRCOG's transportation accessibility model (TRAM) was used to see if the 2025 transit network improved accessibility of important activity centers like employment centers, commercial centers, schools, and hospitals. The analysis took into account the service area (where the bus runs), the headways (how frequently the bus runs), and the connectivity between bus routes (transfer times).

Table IV-1 shows access to premium bus stops on routes that operate with 10 minute headways. The 2000 transit network includes only one such route, whereas the 2025 transit network includes four.

The number of people living within a five minute walk to a premium bus service is projected to increase by 20,500 people in 2025, from 2.9 percent of the population in 2000, to 4.5 percent in 2025. The number of people living within a 10 minute walk to premium bus service is expected to increase by 83,800 people. By 2025, it is projected that at least one of every four people in the AMPA will live within a 15 minute walk to a premium bus route.

The total number and percentage of jobs accessible by premium transit service is expected to increase significantly. The percentage of AMPA employment within a 10 minute walk to premium bus routes doubles by 2025, reaching nearly a fourth of all jobs in 2025. Of all jobs accessible by premium transit in 2002 and 2025, 65 percent are service related, due, among other things, to the geographic locations of these jobs.

An analysis of 130 public schools (elementary, middle, and high schools) shows that the increase in premium bus routes leads to greater accessibility. Currently, 17 APS schools are within a 15 minute walk to premium bus routes. In 2025, this number will more than double to a total of 41 schools.

Accessibility of Bikeway/Pedestrian Facilities

A similar analysis was performed to evaluate the accessibility of bike lanes and bike/pedestrian trails/paths for the 2002 and 2025 bicycle networks. Table IV-2 shows how

accessible premium bicycle facilities (off-road bike and pedestrian trails and paths or on-road bike lanes that are specifically designated for bike use) are to people, jobs, and schools.⁴

The number of people and employment within a five minute bike ride to a premium bicycle facility is expected to increase by 200,600 and 148,500, respectively. These numbers are projected to increase to be 200,400 people and 115,300 employment when the time is increased to a 10 minute bicycle ride to a premium bicycle facility. However, as a percentage of the total AMPA, accessibility is expected to decrease, as a larger portion of the population growth is expected to occur in outlying areas where the system is less fully developed. There is a significant increase in access to premium bicycling facilities expected for schools. The number of schools located within a 5 minute bike ride from a bike trail/path and lane is projected to increase from 83 in 2002 to 116 by 2025. By 2025, nearly 80 percent of the existing schools are projected to be within a 5 minute bike ride from a bicycle facility.

Table IV-1 AMPA Accessibility to Premium Transit Service, 2002 and 2025

	2002 Transit Network	% of AMPA Total	2025 Transit Network	% of AMPA Total
Population *	622,674	100	865,341	100
Within 5 minute walk from premium bus service	18,104	2.9	38,681	4.5
Within 10 minute walk from premium bus service	53,033	8.5	110,518	12.8
Within 15 minute walk from premium bus service	84,840	13.6	175,776	20.3
Employment **	367,780	100	507,353	100
	B (113,586) R (66,539) S (187,655)		B (122,067) R (84,398) S (300,888)	
Within 5 minute walk from premium bus service	16,879	4.6	54,957	10.8
	B (2,546) R (3,228) S (11,106)		B (8,315) R (8,261) S (38,381)	
Within 10 minute walk from premium bus service	47,557	12.9	122,716	24.2
	B (7,123) R (8,167) S (32,268)		B (19,483) R (21,149) S (82,084)	
Within 15 minute walk from premium bus service	67,689	18.4	177,509	35.0
	B (9,855) R (11,341) S (46,494)		B (30,743) R (30,847) S (115,919)	
Albuquerque Public Schools ***	130	100	130	100
Educational Institution (Elementary and High Schools) within a 5, 10, or 15 minute walk from premium bus service	5 minute: 0 10 minute: 9 15 minute: 17	0.0 6.9 13.1	5 minute: 3 10 minute: 22 15 minute: 41	2.3 16.9 31.5

*Population and Employment totals vary slightly from MRCOG official totals due to minor geographical boundary variations.

**Employment is broken into three categories: Basic (B) includes agriculture, mining, construction, manufacturing, transportation, communication, and utilities, wholesale, and military Service (S) includes fire, services, and civilian government. Retail (R) includes retail.

***While the number of schools is projected to increase in MRCOG's 2025 dataset, this number is held constant for the purposes of this analysis. Therefore, the 2025 column demonstrates 2025 transit network access to 2002 schools. In addition, Albuquerque Public Schools are presented as opposed to all AMPA schools because bus service is only available to the City of Albuquerque.

Table IV-2 AMPA Accessibility to Bike Trails/Paths and Lanes, 2002 and 2025⁵

	2002 Bicycle Network	% of AMPA Total	2025 Bicycle Network	% of AMPA Total
Population*	622,674	100	865,341	100
Within a 5 minute bike ride from a trail/path/lane	417,294	67.0	618,895	71.5
Within a 10 minute bike ride from a trail/path/lane	539,178	86.6	741,648	85.7
Within a 15 minute bike ride from a trail/path/lane	569,504	91.5	769,661	88.9
Employment**	367,780	100	507,353	100
	B (113,586)		B (122,067)	
	R (66,539)		R (84,398)	
	S (187,655)		S (300,888)	
Within a 5 minute bike ride from a trail/path/lane	216,635	59.0	365,228	72.0
	B (48,799)		B (70,224)	
	R (47,432)		R (64,966)	
	S (120,404)		S (230,037)	
Within a 10 minute bike ride from a trail/path/lane	318,632	86.6	433,942	85.5
	B (81,311)		B (90,741)	
	R (63,117)		R (76,756)	
	S (174,204)		S (266,443)	
Within a 15 minute bike ride from a trail/path/lane	336,018	91.4	448,687	88.4
	B (90,868)		B (96,241)	
	R (64,861)		R (78,345)	
	S (180,290)		S (274,099)	
AMPA Public Schools ***	145	100	145	100
Educational Institution (Elementary and High Schools)	5 minute: 83	57.2	5 minute: 116	80.0
within a 5, 10, or 15 minute bike ride from a trail/path/lane	10 minute: 126	86.9	10 minute: 138	95.2
	15 minute: 137	94.5	15 minute: 140	96.5

*Population and Employment totals vary slightly from MRCOG "official" totals due to minor geographical boundary variations.

**Basic (B) includes agriculture, mining, construction, manufacturing, transportation, communication and utilities, wholesale, and military. Service (S) includes fire, services, and civilian government. Retail (R) includes retail.

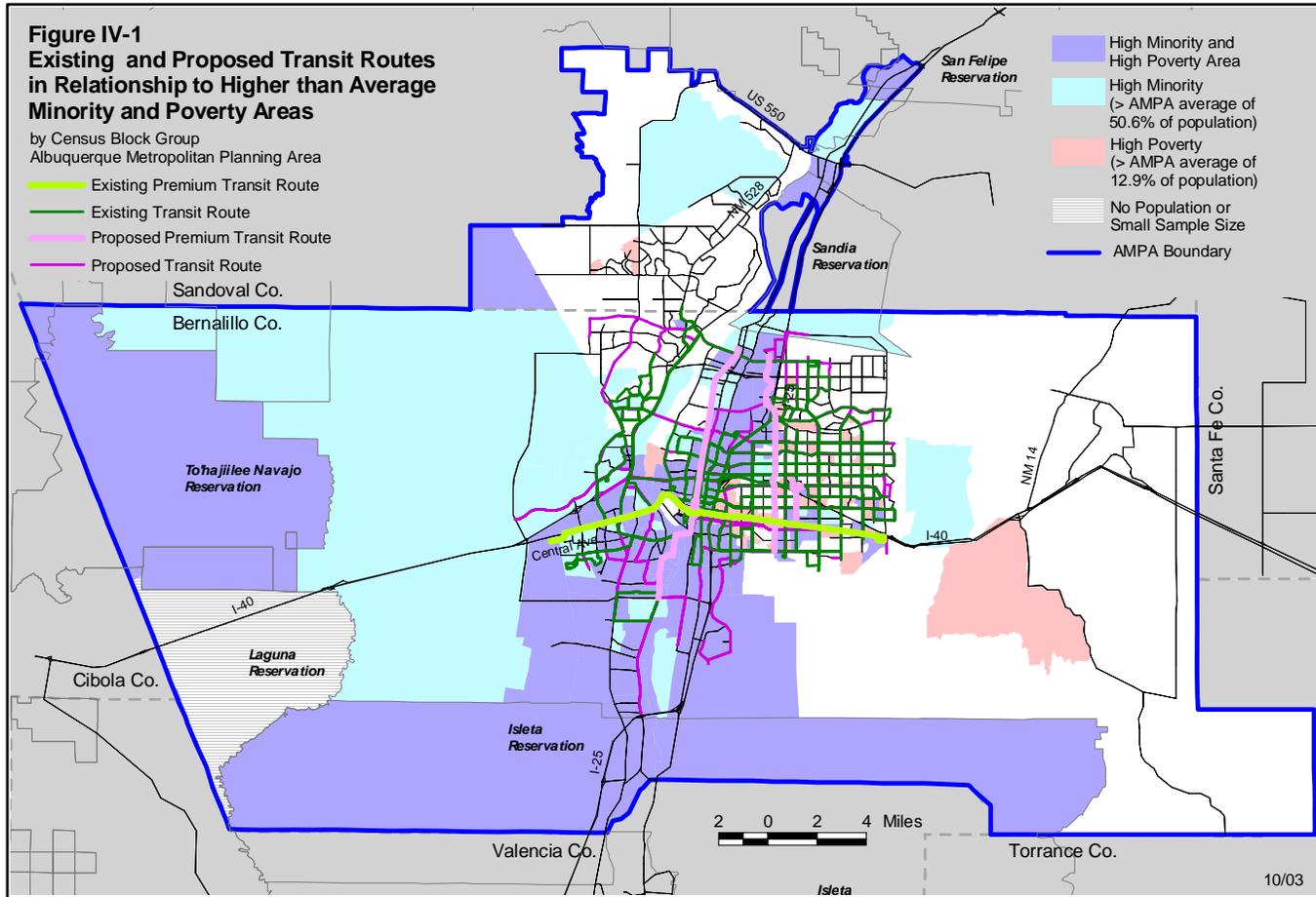
***While the number of schools is projected to increase in MRCOG's 2025 dataset, this number is held constant for the purposes of this analysis. Therefore, the 2025 column demonstrates 2025 bike network access to 2002 public schools.

Figure IV-1
Existing and Proposed Transit Routes
in Relationship to Higher than Average
Minority and Poverty Areas

by Census Block Group
 Albuquerque Metropolitan Planning Area

- Existing Premium Transit Route
- Existing Transit Route
- Proposed Premium Transit Route
- Proposed Transit Route

- High Minority and High Poverty Area
- High Minority (> AMPA average of 50.6% of population)
- High Poverty (> AMPA average of 12.9% of population)
- No Population or Small Sample Size
- AMPA Boundary



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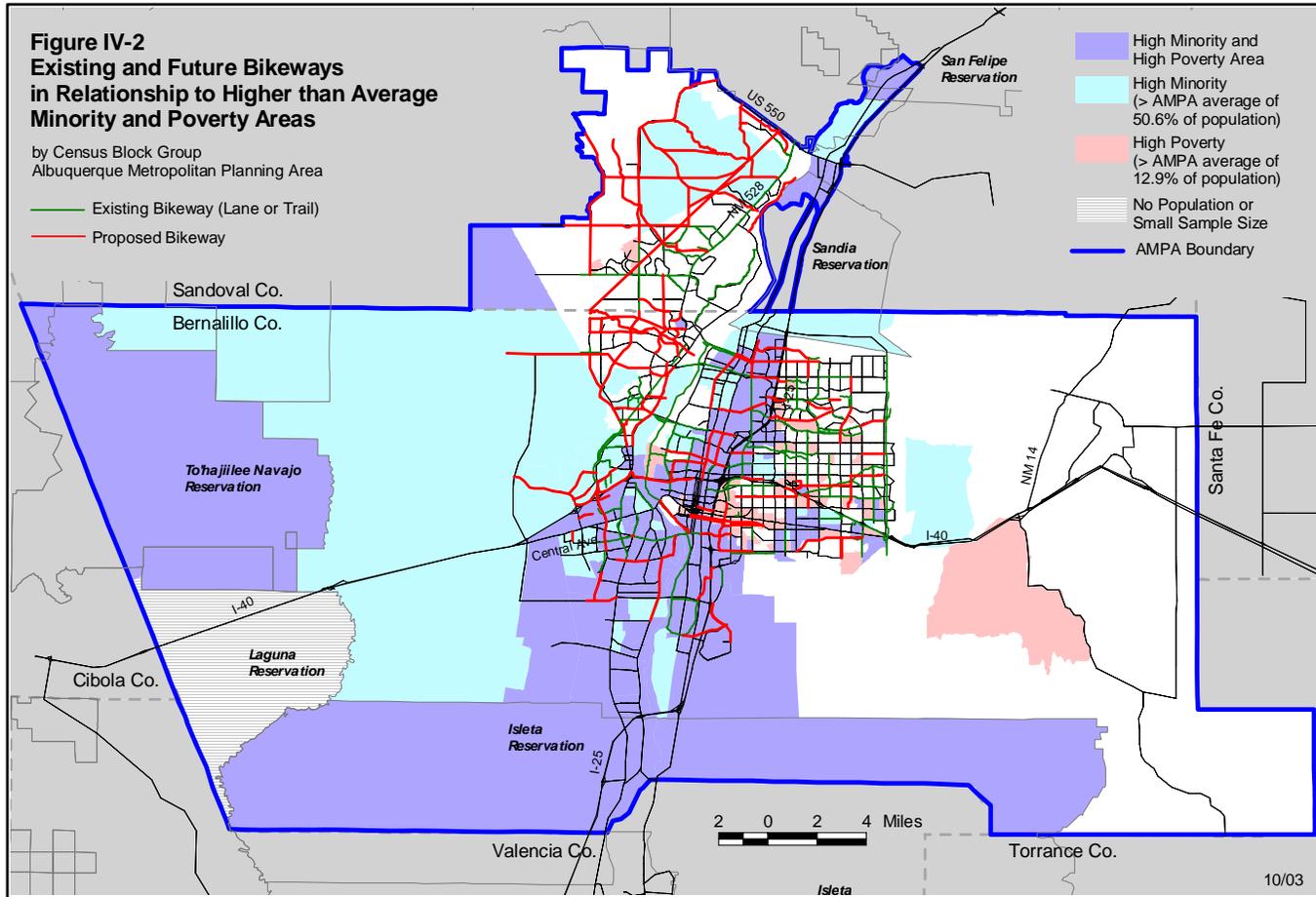
Source: 2000 US Census.

**Figure IV-2
Existing and Future Bikeways
in Relationship to Higher than Average
Minority and Poverty Areas**

by Census Block Group
Albuquerque Metropolitan Planning Area

- Existing Bikeway (Lane or Trail)
- Proposed Bikeway

- High Minority and High Poverty Area
- High Minority (> AMPA average of 50.6% of population)
- High Poverty (> AMPA average of 12.9% of population)
- No Population or Small Sample Size
- AMPA Boundary



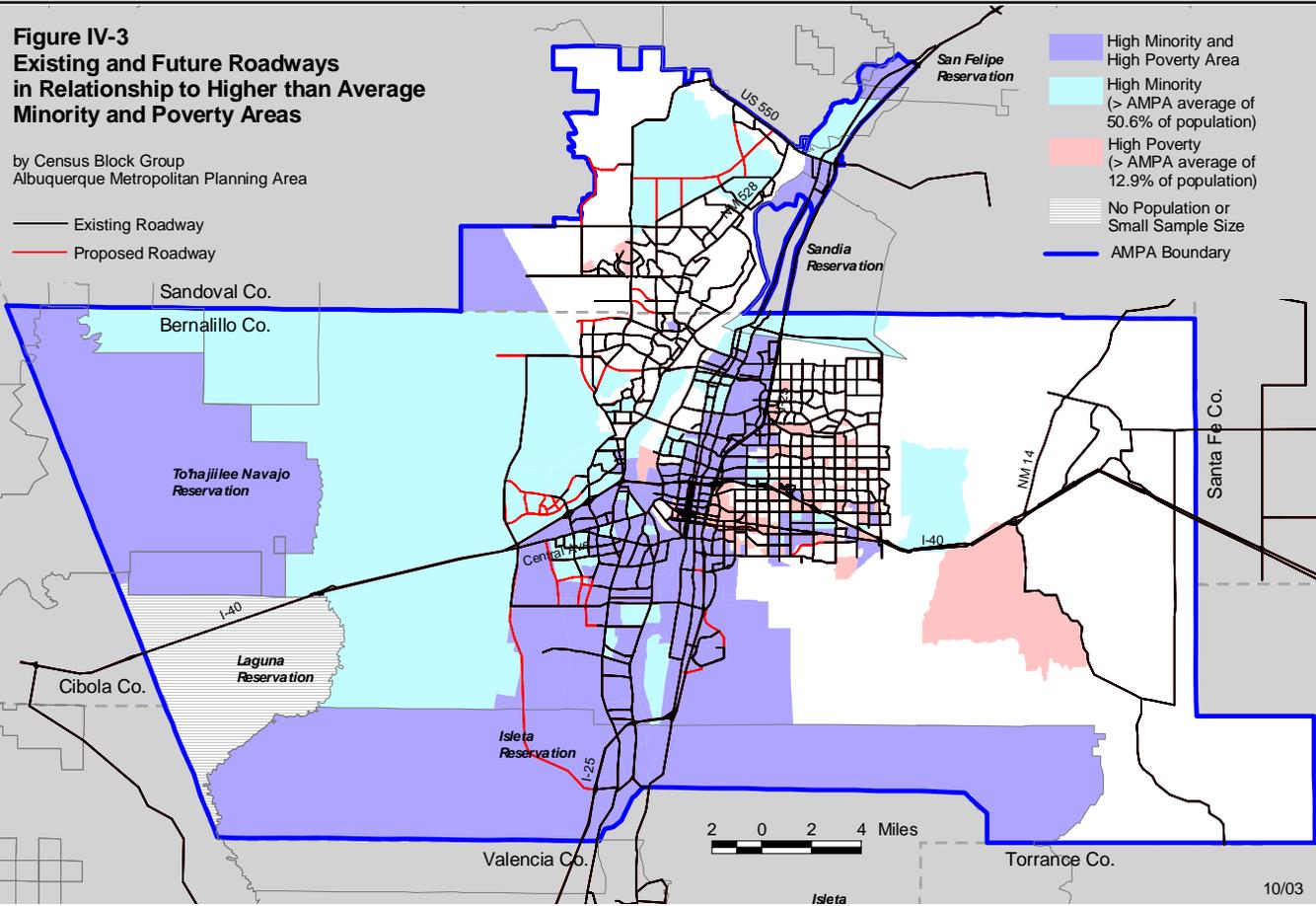
Source: 2000 US Census.

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**Figure IV-3
Existing and Future Roadways
in Relationship to Higher than Average
Minority and Poverty Areas**

by Census Block Group
Albuquerque Metropolitan Planning Area

— Existing Roadway
— Proposed Roadway



- High Minority and High Poverty Area
- High Minority (> AMPA average of 50.6% of population)
- High Poverty (> AMPA average of 12.9% of population)
- No Population or Small Sample Size
- AMPA Boundary

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Source: 2000 US Census.

1. AMPA Demographic Profile¹²

As shown in Table IV-3, minorities make up 50.5 percent of the AMPA's total population. This percentage is expected to increase to 62.3 in 2025. The AMPA's total population is projected to grow by 39 percent by 2025 while the minority population is projected to grow by 72 percent. Within the minority population, the Hispanic and other non-white not Hispanic groups are projected to grow by 62 and 113 percent respectively.

Based on historical trends and MRCOG assumptions (see *Technical Documentation for the 2025 MTP*), the AMPA is forecast to have a low-income population of 279,197 people by the year 2025: over 32 percent of the total population. Currently, 38 percent of the population is low income.

Table IV-3 AMPA Population and Minority Population, 2000 and 2025

Year	Total Population	Minority Population	Percent Minority	Hispanic Origin	Non-White Not Hispanic
2000	622,674	314,472	50.5	255,337	59,135
2025	865,341	539,452	62.3	413,612	125,840

Source: U.S Bureau of the Census, BBER, and MRCOG

2. Community Impact Analysis

This section enhances preceding accessibility analyses by addressing the relationship between the 2025 transportation system and the AMPA's low income and high minority population.

Figure IV-2 and Figure IV-3 identify the proposed roadway projects and the proposed bikeway projects for the next 20 years in the AMPA area. The reader is able to relate these transportation projects geographically to minority and low income populations.

Table IV-4 Minority and Low-Income Population Accessible to Premium Bicycle and

AMPA	Existing Network		2025 Network	
	Premium Bicycle Facilities	Premium Transit Routes	Premium Bicycle Facilities	Premium Transit Routes
Non Minority Population (308,202) in 2000 (325,889) in 2025	5' (69.5)	5' (2.4)	5' (72.8)	5' (3.5)
	10' (87.7)	10' (6.6)	10' (86.7)	10' (9.6)
	15' (92.0)	15' (10.5)	15' (89.9)	15' (15.1)
Minority Population (314,472) in 2000 (539,452) in 2025	5' (64.5)	5' (3.4)	5' (70.7)	5' (5.1)
	10' (85.5)	10' (10.4)	10' (85.0)	10' (14.7)
	15' (90.9)	15' (16.7)	15' (88.2)	15' (23.4)
Low Income Population (236,485) in 2000 (279,197) in 2025	5' (62.7)	5' (6.5)	5' (77.6)	5' (14.6)
	10' (84.5)	10' (18.9)	10' (90.9)	10' (35.2)
	15' (88.7)	15' (28.6)	15' (92.4)	15' (50.8)

Transit Facilities, 2000 and 2025

*Source: 2000 Census Data and MRCOG projections
5'= five minutes; 10'= ten minutes; and 15'= fifteen minutes bike in the case of bicycle facilities and walk in the case of transit routes.*

Figure IV-2 and IV-3 also show that a number of new bicycle and roadway projects are located in areas populated by low income and high minority groups. Table IV-4 shows how accessible premium bicycle facilities and transit routes are to the AMPA’s minority and low-income population groups. For each group, the number of people residing within a five, ten or 15 minute walk of a premium transit facility is shown, as well as the number of people residing within a five, ten, or 15 minute bike ride to a premium bicycle facility. The table shows that:

- Approximately 3 percent of the minority population resides within a five minute walk to premium transit. This percentage is expected to increase to 4.3 in 2025. A 15 minute walk captures 19.3 percent of the minority population in 2025, up from 14 percent today.
- 64.5 percent of the AMPA’s minority population resides within a 5 minute bike ride to a bike trail/path or lane. This percentage is projected to increase to 70.7 percent by 2025.
- The percentage of the AMPA’s low income population residing within a five minute walk to premium bus service is expected to increase from 6.5 percent today to 14.6 percent in 2025.
- Approximately 80 percent of the low income population was located within a 10 minute bike ride to a premium bicycle facility in 2000. This percentage will increase to 90.9 in 2025.

Table IV-5 Population by Age Group Accessible to Premium Bicycle and Transit

AMPA	Existing Network		2025 Network	
	Premium Bicycle Facilities	Premium Transit Routes	Premium Bicycle Facilities	Premium Transit Routes
Population Under 16 (141,976) in 2000 (157,116) in 2025	5' (65.0)	5' (2.4)	5' (70.3)	5' (4.1)
	10' (84.7)	10' (7.6)	10' (84.8)	10' (12.3)
	15' (90.3)	15' (12.6)	15' (88.1)	15' (20.0)
Population 16 - 64 (409,121) in 2000 (535,344) in 2025	5' (66.8)	5' (3.0)	5' (71.0)	5' (4.3)
	10' (86.5)	10' (8.8)	10' (85.2)	10' (12.2)
	15' (91.3)	15' (14.0)	15' (88.5)	15' (19.3)
Population 65 and over (71,577) in 2000 (172,882) in 2025	5' (72.4)	5' (3.1)	5' (74.3)	5' (5.3)
	10' (90.7)	10' (8.6)	10' (88.2)	10' (14.9)
	15' (94.5)	15' (13.7)	15' (91.0)	15' (23.6)

Facilities, 2000 and 2025

Source: 2000 Census Data and MRCOG projections.

5'= five minutes; 10'= ten minutes; and 15'= fifteen minutes bike ride in the case of bicycle facilities and walk in the case of transit routes.

People under 16 and over 65 often depend on others for vehicular transportation. Young people can sometimes use alternatives like walking or biking to reach locations such as schools, but options are more limited for people 65 years old and over. This is why accessibility to public transit is so important to this age group.

Table IV-5 shows that more than 80 percent of the population under 16 is able to access a premium bicycle facility by a 10 minute bike ride today and in 2025. Approximately 7.6 percent of this same age group resides within a 10 minute walk to a premium transit bus stop. This percentage is expected to increase to 12.3 percent in 2025. A 15 minute walk currently provides access to 12.6 percent of people under 16. This is expected to increase to 20 percent by 2025.

Currently, only 8.6 percent of people 65 and over reside within a 10 minute walk of premium transit. This percentage is expected to increase to 14.9 percent in 2025. A similar analysis shows that 23.6 percent of this age group is expected to live a 15 minute walk away from a premium transit facility in the year 2025. Currently, this percentage is 13.7.

**Table IV-6 Activity Centers Walking Distance from Premium Transit
2000 and 2025**

	Community Centers *	Day Care Centers	Libraries	Recreational Facilities **
Existing Transit Service	5' (1)	5' (13)	5' (2)	5' (3)
	10' (4)	10' (30)	10' (3)	10' (14)
	15' (8)	15' (44)	15' (5)	15' (31)
2025 Transit Service	5' (4)	5' (31)	5' (4)	5' (8)
	10' (12)	10' (58)	10' (5)	10' (29)
	15' (16)	15' (89)	15' (10)	15' (58)

* Community Centers include senior centers, community centers, and multi-service Centers.

** Recreational facilities include public sport fields (basketball, softball, swimming pools, tennis courts, community centers with indoors sports facilities or recreational activities, senior centers with sports facilities or recreational activities, museums, and public parks.

Table IV-6 shows the number of common destinations (in parentheses) that can be reached by taking a bus and then walking for 5, 10 or 15 minutes using the existing or 2025 transit system. It shows that:

- The number of community centers located within a 10 minute walk of premium transit will triple by 2025.
- The number of day care centers that can be reached by walking for 5, 10, or 15 minutes from a premium transit facility will more than double by 2025. Day care centers are an important destination for families with children.
- Access to libraries is expected to improve slightly by 2025.
- Recreational activities are important for the quality of life in any community. Assuming the number and geographic distribution of recreational facilities will remain the same, the number of these facilities that are accessible by premium transit will increase by 46 percent by 2025.

These results indicate that the impact of the 2025 transportation projects on the minority and low income population is not much different than the impact of these projects on the AMPA's population as a whole.

Conclusion

MRCOG's Environmental Justice Program is a process requiring constant revision and transformation. It is designed to be a program which operates in a flexible format that responds to the region's needs. Communities are continually changing, so evaluation of transportation impacts on the community need to receive continuous attention throughout the planning process, project development, implementation, operation, and maintenance.

MRCOG has incorporated EJ as an important element of the planning process and it should be considered in all phases of the transportation planning process. This includes the public involvement plans and activities, the development of the Metropolitan Transportation Plan (MTP), the Transportation Improvement Plan (TIP), and the Unified Planning Work Program (UPWP).

EJ requirements are not new or intended to add to existing processes for the project documentation established by the NEPA process. 23 U.S.C. 109(h) and NEPA require the identification and analysis of impacts on all communities, including low income. 23 C.F.R. 450 requires MPO's to consider the needs of the underserved by the existing transportation system including low income and minority populations. This document provides a tool for completing these analyses.

Appendix A

The need to consider environmental justice is already embodied in many laws, regulations, and policies such as:

-Title VI of the Civil Rights Act of 1964

-National Environmental Policy Act of 1969 (NEPA)

-Section 109(h) of Title 23

-The Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (URA), as amended

-The Transportation Equity Act for the 21st Century (TEA-21)

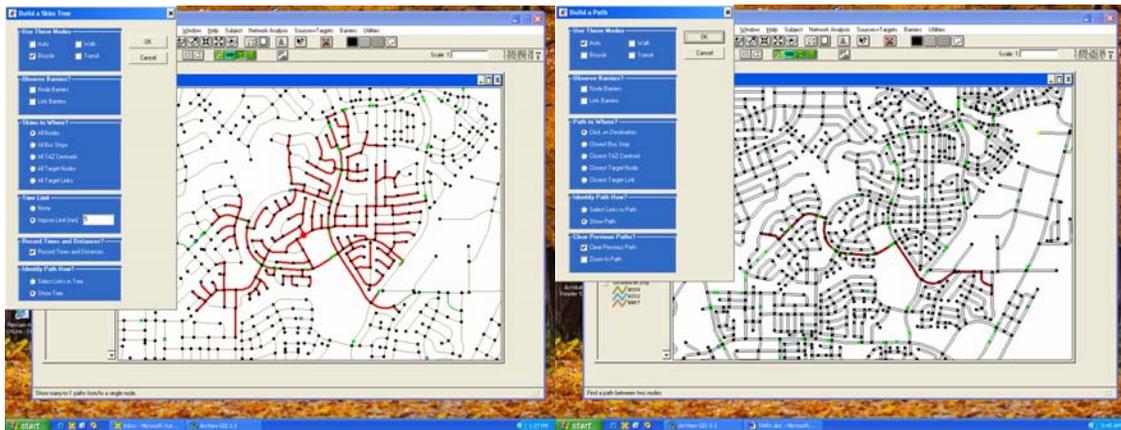
-Other U.S. DOT statutes and regulations.

Appendix B

The Transportation Accessibility Model (TRAM): An Innovative Tool for Environmental Justice Analysis.

The Mid-Region Council of Governments (MRCOG) of Albuquerque, New Mexico has implemented a new state-of-the-art transportation analytical model. This GIS-ArcView based tool is capable of evaluating the levels of mobility and accessibility of current and future transportation systems.

TRAM uses a network that contains all streets (including locals), as well as sidewalks, bike lanes, trails and actual routes and schedules of the public transportation system. The network is based on over 85,000 links that can be modified to reflect even more detail information for specific applications (such as ADA compliant sidewalks)



The level of detail of the network allows the analysis to be sensitive to urban design rather than the traditional simple uniform algorithms and aggregated “representations” of a transportation system.

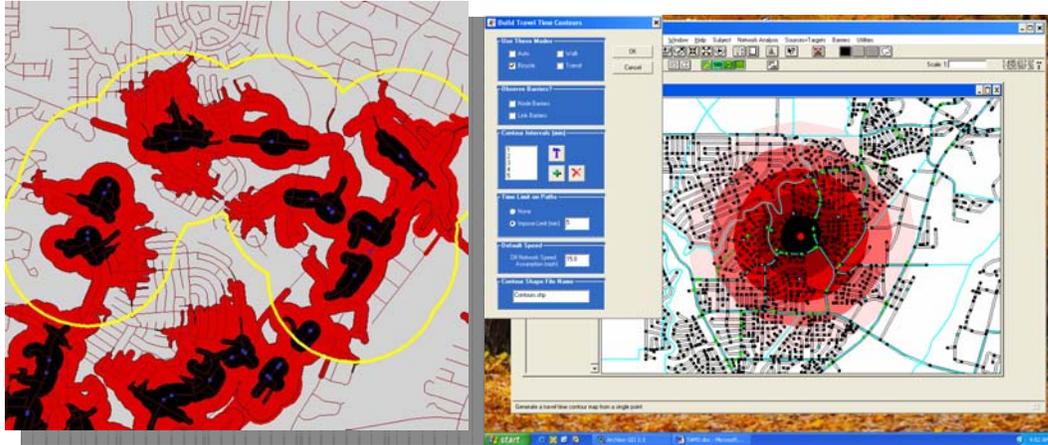
This model will allow MRCOG and its member agencies to address and evaluate a myriad of issues by:

- Determining true levels of walk access to transit using actual walking distances on sidewalks to actual bus stop locations. (use 2025 MTP data)
- Determining the level of accessibility of specific locations (such community centers, schools, employment centers, and shopping centers) via different modes or by combination of modes of transportation. (use 2025 MTP data)
- Assessing general accessibility via any mode of transportation and/or proximity to a specific network facility type (i.e. bicycle trail/lane, bus stop) throughout the region. (use 2025 MTP data)
- Assessing the “connectivity” of pedestrian and bike systems.

- Evaluating and prioritizing proposed improvements to the transportation system from a market based perspective.
- Do community profiles based on census data for all the above issues.

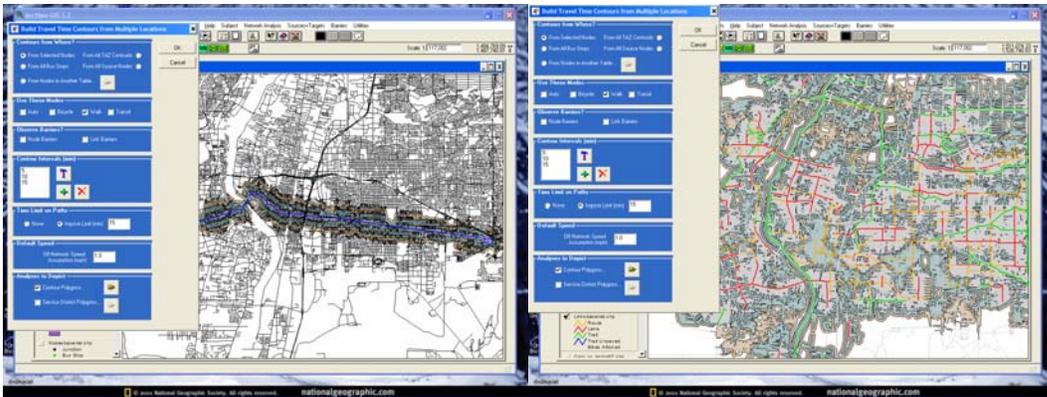
The model generates “paths” on the network from one or more user specified origin(s) to one or more user specified destination(s) as illustrated by the figure above.

The paths are generated using true distances instead of the “airline miles” that are used by less sophisticated applications as illustrated by the figure below.



The network on which these paths are built contains detailed information for each segment including speeds (for each mode), number of lanes, type of facility, bus route information, and the locations of bus stops. Segments and node fields are designed to allow for easy integration of attributes from other MRCOG applications such as the Land Use Analysis Model (LAM), the traffic counts program, the travel forecasting model and crash data. In addition, the model provides the flexibility to code local impediments to pedestrian and/or bike mobility (for example, the inability to cross certain streets due to high traffic volumes).

Once the paths are built the model can perform an accessibility analysis (by mode or combination of modes) based on a user selected parameter (e.g. distance, time). Travel time contours based on user specified intervals can then be produced (see figure below).

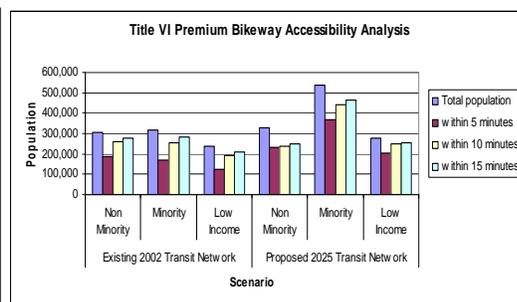
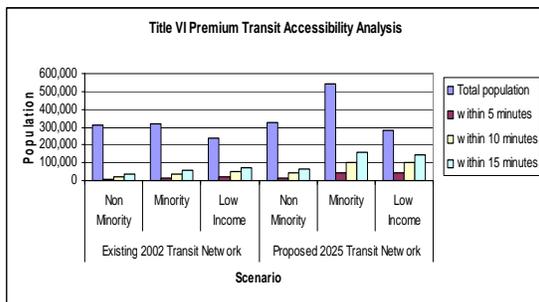


These contours can subsequently be overlaid on census data and market profile describing the demographic characteristics of the area covered by each time interval can be generated.

MRCOG intends to deploy the TRAM model in a number of areas including the evaluation of transportation alternatives, transit market analysis, environmental justice evaluations, transportation Improvement Plan project assessments, and for the development and assessment of transportation strategies in the region.

The following graphs and tables are examples of the used of TRAM in the development of the 2025 MTP for the Albuquerque Metropolitan Planning Area. TRAM was used to determine the level of accessibility for minority and low income population groups in the AMPA to premium bikeway facilities and premium bus service.

Minorities make up 50.5 percent of the AMPA’s total population. This percentage is expected to increase to 62.3 in 2025. The AMPA’s total population is projected to grow by 39 percent during the life of the 2025 Metropolitan Transportation Plan while the minority population is projected to grow by 72 percent. Within the minority population, the Hispanic and non-white Hispanic groups are projected to grow by 62 and 113 percent respectively. The low income population is forecasted to be around 279,197 people.



The following conclusions can be drawn from the above graphs:

- Approximately 4.5 % of the minority population resides within 5 minutes walking distance from a premium transit service. This percentage is expected to increase

to 7.7 percent in 2025. 15 minutes walking distance from a transit premium service captures 29.7% in 2025, up from 18.9% today.

- More than 50% of the AMPA's minority population resides within 5 minutes biking distance from a bike premium facility. This percent increases to more than 80% of the minority population for a 10 minutes distance.

Appendix C

The 2002 Traffic Flow Map can be found in MRCOG website at www.mrgcog.org/maps_online.htm.