MARKET ST

Greater Austin, Texas
Competitive Realities

OPPORTUNITY AUSTIN II

Submitted by:
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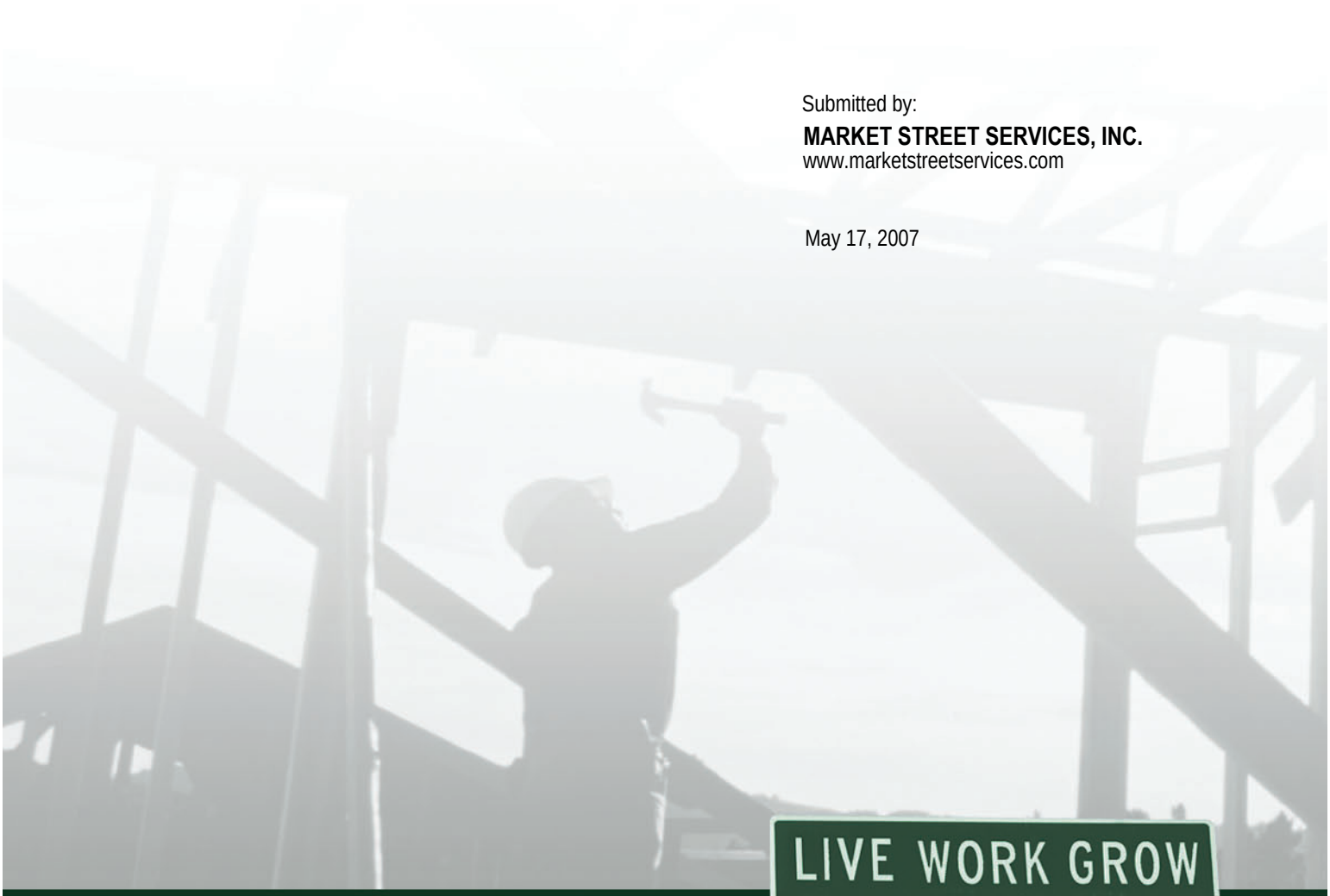

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Market Street brings original insights and clarity to the evaluation and revitalization of the places where people live, work and grow. *Market Street* is an independent firm that focuses solely on community and economic development issues. Through honest and informed assessments, *Market Street* can equip you with the tools to create meaningful change. Our solutions successfully merge our experience and expertise with your economic and social realities.

Table of Contents

BACKGROUND

In 2003, the Greater Austin Chamber of Commerce retained *Market Street Services,* an Atlanta-based community and economic development consulting firm, to develop a holistic, long-term economic development strategy for the five-county Austin region. The Chamber leveraged the strategy recommendations in the creation of the *Opportunity Austin* initiative, which identified opportunities and challenges the Chamber would need to address in order to put the Austin region on the road to economic recovery after losing thousands of high-wage jobs in 2001 and 2002.

Opportunity Austin rolled out in 2004. Its aim was to rejuvenate the region's economy by creating 72,000 new jobs and adding $2.9 billion to the regional payroll by 2008. After registering solid success in *Opportunity Austin's* implementation, Chamber leaders have once again contracted with *Market Street* to assess Greater Austin's competitiveness and draft an economic development strategy – *Opportunity Austin II* – for the next five years.

The following scope of work is designed to continue metro Austin's strategic *Opportunity Austin* process with a comprehensive understanding of the region's present, past and future economic and demographic trends, and degree of business competitiveness. By initiating *Opportunity Austin II* with consensus regarding the challenges at hand, the eventual development of its strategic components and implementation guidelines will be grounded in defensible data, and agreement on priority strategic directions.

The five components of this strategic process are outlined below:

I. **Competitive Realities:** This report begins with a snapshot of the region's economic and demographic trends compared to the state and the nation. Then, the Austin region's business climate is assessed against four peer metro areas: Denver, Colorado; Nashville, Tennessee; Phoenix, Arizona; and Raleigh-Durham, North Carolina. The region's relative competitiveness compared to these metros is evaluated according to the following components: education and workforce development; infrastructure; business costs; innovation and entrepreneurship climate; and quality of life. Finally, stakeholder input gathered from interviews, focus groups, and an online survey is included in this report to provide a more holistic analysis of Greater Austin's competitive realities, beyond the numbers.

II. **Target Business Review**: This report will analyze how the region's employment structure and wages have changed in recent years. This investigation into Greater Austin's business clusters will inform recommendations to revise the Chambers target business sectors, where

necessary. This analysis will help provide clear direction on current and future economic development efforts.

III. **Economic Development Marketing Assessment**: This assessment will examine Greater Austin's multi-faced marketing program against national best practices. A review of the Chamber's website, operations, and international marketing efforts will summarize efforts implemented since *Opportunity Austin's* inception. Lessons from other communities, including three best practice case studies, will provide key findings on how Greater Austin can further improve its marketing effectiveness.

IV. **"Taking it to the Next Level" Strategy**: This economic development strategy will outline goals for the Chamber and its partners to work towards over the five years of *Opportunity Austin II* implementation. Specific policy objectives and action steps will also be recommended. These will directly respond to the key findings of previous deliverables and stakeholder input. Benchmarks and performance measures will also be identified so that the Chamber may track its progress toward achieving the *Strategy's* goals during implementation.

V. **Implementation Plan**: Effective implementation is critical to the success of the *Strategy*. The Steering Committee and *Market Street* will work together to provide program assessments and enhancement recommendations, establish timetables and funding allocations for implementation. *Market Street* will also recommend a communication program for the *Strategy's* public rollout.

INTRODUCTION

The 2007 *Opportunity Austin II* planning process begins with the development of this *Competitive Realities* document, a comprehensive look at Greater Austin's competitive dynamics compared to four peer U.S. regions. Importantly, much of the data also integrates trends at the state and national levels. Indeed, the sobering reality of economic development in today's global economy is that competition for employment is fiercer than at any previous point in the world's history.

Every company considering new enterprise creation or expansion has an almost infinite number of locations in which to invest; Greater Austin must often compete for these projects against not only other U.S. metros, but powerful metropolitan areas and city-states across the globe. In many cases, foreign rivals bring to bear on the competition deep federal pockets – millions of dollars in incentive monies and infrastructure allowances funded by growth-starved central governments.

Economic development in the New Economy is not undertaken in fits and starts. It is a constant, never-ending struggle to stay one step ahead of the opposition in fiscal capacity and also competitive dynamics. The Austin metro area learned a hard lesson in the 1990s when surging employment growth and wealth-creation led to a complacency that the region is only now emerging from. That was the lesson of *Opportunity Austin I*: economic development is a marathon, not a sprint.

Therefore, as regional leaders embark on the creation of *Opportunity Austin II*, a different perspective is in order. The 2007 effort is not about "getting back in the game," but rather staying ahead of the burgeoning pack of competitor communities. It is no less critical an effort, nor one that will require fewer resources. In fact, the fiscal and personnel demands of achieving success in today's economy are greater than ever before. To think otherwise is to risk backsliding to another crisis point in which regional residents see their wealth decline and local governments are forced to cut back services due to falling tax receipts.

EXECUTIVE SUMMARY

This *Competitive Realities* report investigates issues related to business competitiveness in Greater Austin compared to four peer metro areas (Denver, Colorado; Nashville, Tennessee: Phoenix, Arizona; and Raleigh-Durham, North Carolina), Texas, and the nation. The research and stakeholder input presented in this report helps to clarify Greater Austin's competitive position as a place to live and do business based on five primary factors: education and workforce development; infrastructure; business costs; innovation and entrepreneurship; and quality of life. The report's key trends are discussed below.

Demographic and Economic Trends

To inform the analysis of Austin's business competitiveness, a brief "snapshot" of demographic and economic trends is presented in this report. Its purpose is to provide stakeholders with a shared understanding of the population and employment dynamics shaping Greater Austin.

Population Growth

Between 2000 and 2006, Greater Austin's population grew 21 percent (from 1,249,763 to 1,513,565 residents). The region grew at a rate nearly twice that of the state (12.7 percent) and more then three times that of the nation (6.4 percent). Such rapid growth puts greater stress on the region's roadways, water and sewer infrastructure, and public school systems. Managing the impacts of growth will continue to be a key challenge for community leaders to address moving forward.

Growth Dynamics

With this growth, Greater Austin continued to diversify. Between 2003 and 2005, the region's Hispanic and other minority groups (including Asian, Pacific Islanders, American Indians, and residents of more than one race or ethnicity) experienced rapid growth rates. According to data, most of the region's new Hispanic residents are of Mexican heritage who – on average – are less educated and poorer than the region's population as a whole. Closing these gaps and leveraging the region's diversity will continue to be an issue of competitiveness.

This report examines other dynamics of population growth as well, including migration patterns, growth by age cohort, and components of growth. In each of these analyses, it became clear that growth dynamics were different in Travis County, compared to other metro Austin counties.

- Between 2000 and 2006, population growth in Travis fueled by net increases in new births and international migration. Conversely, growth in Bastrop, Caldwell, Hays, and Williamson experienced much lower rates of

international migration. Growth in these counties was driven mostly by net increases in domestic migration.

- IRS data from 2003 to 2005 were analyzed for patterns of "intra-regional" migration, defined as: existing Greater Austin residents who moved from one county to another within the region during this time. In this regard, Travis County posted a net loss of 12,639 residents to the region's other counties. This dynamic offset the net gain of 12,454 residents Travis County gained by new residents moving into the region during this time.

- According to both the U.S. Census Bureau's Population Estimates and the Texas State Data Center, Travis County's only age cohort to decline between 2003 and 2005 was its 18-24 year olds. During this time, this age group experienced growth in the region's other counties.

Job Growth

In the two years since the launch of *Opportunity Austin* in Q1 2004 regional employment has grown 8 percent (compared to 3.8 percent nationwide), adding over 51,000 new jobs to the regional economy. Additionally, since this time unemployment rates have continued to decline Greater Austin's most recent unemployment rate in March 2007 was 3.5 compared to 4.2 and 4.4 for the state and nation, respectively.

Between Q1 2004 and Q1 2006, positive job and wage growth was posted in every business sector, including particularly strong growth in health care (3,435 new jobs, 9.1 percent wage growth), professional services (6,306 new jobs; 10.1 percent wage growth), finance and insurance (2,304 new jobs; 15.2 percent wage growth). Job growth in other sectors like arts and entertainment, and transportation and warehousing has helped to diversify the region's economy. Unlike Greater Austin's dot-com boom, current growth is occurring across all business sectors, thus diversifying, stabilizing, and strengthening the region's economy.

In the years leading up to *Opportunity Austin*, annual regional employment actually declined. Posting strong job growth in this regard is a major accomplishment for the region. However, continued work in economic development is still needed and, in fact, is never finished.

Education and Workforce Development

K-12 Education

This section compared Austin Independent School District (AISD) to central city districts in the four peer metros areas: Denver, Nashville, Phoenix, and Raleigh-Durham. A smaller proportion of K-12 students are enrolled in private schools in the City of Austin than in Denver, Nashville, or Raleigh-Durham. Compared to central

city districts in its peer communities, AISD has the second highest proportion of minority students (72 percent), behind only Denver (80 percent), and the second highest Hispanic student enrollment at 55 percent.

Additionally, AISD registered the second highest per pupil expenditure (PPE) as reported by the National Center for Education Statistics. In the 2003-04 academic year (the most recent for which data are available), Austin's PPE was $10,137 compared to $7,346 in Phoenix, $8,830 in Raleigh-Durham, and $9,428 in Denver. Higher expenditures in Austin could be an indication of the greater investments needed to teach students who come into the program with special needs, like limited English proficiency.

In the 2005-06 academic year, students with limited English proficiency comprised 24 percent of the district's total enrollment (compared to 20 percent in 2001-02), and students from economically disadvantaged families comprised 60 percent (compared to 50 percent in 2001-02). Data show that these student groups are less likely to pass their TAKS exit exams, complete the Recommended High School Plan (RHSP) or the Distinguished Achievement Plan (DAP), or graduate high school than their peers. Leveraging the district's increasing diversity and closing achievement gaps must occur to enhance Greater Austin's competitiveness.

Higher Education

The state's "Closing the Gaps" initiative notes that statewide growth has been spurred by populations that have historically enrolled in college at lower rates. "Closing the Gaps" calls for an increased enrollment capacity of 50,000 in Central Texas' colleges and universities. With enrollment caps at University of Texas-Austin, meeting enrollment and workforce development goals largely rest on increasing capacities at Austin Community College (ACC) and Texas State University.

Meeting these goals is essential for the region to maintain its competitive, highly educated workforce. More than 39 percent of adults held at least a bachelors degree in 2005, compared to 25 percent in Texas and 27 percent nationwide. Analyses of degrees awarded by discipline in 2005 at regional colleges and universities show large numbers of graduates with degrees in business, social sciences, communications, and education.

Input from university students and recent alumni noted that it is often difficult to find entry-level jobs in Greater Austin with a degree in business administration or liberal arts. Additionally, leaders in the business and technology communities expressed difficulty finding skilled workers to fill certain available jobs. This illustrates a potential mismatch between the skills demanded by regional businesses and degree programs from which many students are graduating, contributing to potential "underemployment" and talent-shortage issues.

Workforce

Analysis of labor force and employment data show that, since 2003, the gap between the region's available labor force and the number of jobs in the region has declined, indicating an overall tightening of the market. Input from stakeholders indicates that finding certain types of skilled labor is becoming a "serious problem" for the business community. Major challenges include finding managers and engineers with 5-plus years experience and filling certain entry-level jobs in the technology and digital media sectors. Many stakeholders in the local business community commented that metro Austin could place an increased focus on talent recruitment.

Infrastructure

Roadways

While I-35 provides critical north/south connections throughout Greater Austin, the lack of an east/west Interstate coupled with limited east/west thoroughfares puts the region at a competitive disadvantage against Denver, Nashville, Phoenix, and Raleigh-Durham. According to the Texas Transportation Institute (TTI), in 2003, Greater Austin had 585 miles of freeway lanes compared to 610 in Raleigh-Durham, 955 in Nashville, 1,140 in Denver, and 1,325 in Phoenix. While these figures do not take into account recent toll-road construction in metro Austin, it is clear that investments in transportation infrastructure are having difficulty keeping pace with population growth and demand.

Because of this, traffic congestion has grown increasingly worse in metro Austin. According to TTI, in 2003, Austin's peak-period travelers – defined as those on major roadways between 6-9 a.m. and 4-7 p.m. – experienced 51 hours of traffic delays annually, one of the highest losses among medium-sized metro areas. In fact, the majority of community and business leaders that participated in interviews and focus groups cited traffic as the number one issue threatening Austin's competitiveness. Investing in roads and transit options, enhancing east/west connectivity, and finding funding sources for infrastructure improvements were all listed as key priorities.

Transit

Traffic congestion is likely a contributing factor to higher public transit ridership in Greater Austin compared to other medium-sized metros like Nashville and Raleigh-Durham. Annual bus miles consumed per resident averaged 156 in Austin's Capital Metro system, compared to 112 in Phoenix (Valley Metro system), 104 in Durham (Durham Area Transit Authority system), and 58 in Nashville (Metropolitan Transit Authority system). While many transit improvements for metro Austin and Central Texas have been planned (including Capital MetroRail's commuter line service, Capital MetroRapid's expanded and enhanced bus service, and rail service between Austin and San Antonio), stakeholders expressed frustration with the speed at which such projects have progressed.

Air Service

According to Airports Council International, in 2005 Austin-Bergstrom International Airport served 7.6 million passengers compared to 9.2 million at international airports in both Nashville and Raleigh-Durham (which are more similar in size and scale than busier international airports in Denver and Phoenix). It is important to note that since 2005, passenger traffic at Austin-Bergstrom has increased. In fact, March 2007 marked the highest number of passengers in a single month traveling through the airport. While annual passenger counts at Bergstrom increased at a competitive rate of 6.1 percent between 2005 and 2006, cargo traffic declined 5 percent.

Input gathered from members of the business community who participated in interviews and focus groups suggested a general sense of dissatisfaction with the number and frequency of non-stop destination flights at ABIA. They said layovers increase their business costs and decrease productivity, especially when flying overseas. Many noted that Austin's business climate would be more competitive if air carriers at ABIA would schedule more non-stop flights to select destinations to cities in Europe and Asia. Data confirmed that ABIA offers the fewest non-stop destinations of all the comparison airports.

Business Costs

Industrial and Office Space

According to CB Richard Ellis' *Industrial Availability Index*, in the fourth quarter of 2006, Austin had the second highest percentage of industrial space availability in the nation at 19.5 percent. This is comparatively higher than availability in Nashville (8.4 percent), Denver (9.4 percent), and Phoenix (13.2 percent). Data were not available for Raleigh-Durham. Furthermore, since Q4 2004, there has been limited absorption in Austin's industrial real estate market, indicating that it is currently over supplied. Despite this, lease rates in Austin are comparable to its peer metro areas.

At the other end of the spectrum, the office market is tightening. Vacancies in the City of Austin are their lowest since 2001, while rents are high. In downtown Austin, the office vacancy rate dropped 4.3 percent between the forth the quarters of 2005 and 2006, bringing it down to 18.3 percent. This trend has brought downtown vacancy rates in Austin closer to the national average of 10.8 percent. Class A office space rents for about $30 per square foot, which is comparatively more expensive than Nashville and Raleigh-Durham. However, this trend of high prices and declining vacancies may not hold in the long term, as many new office buildings are under construction throughout the metro area.

Labor Costs

Viable communities are those where wages are balanced between the interests of both employers and employees. In 2005, the Austin MSA had an average annual

wage per job of $43,083, compared to $40,146 nationally. This figure was higher than all of the comparison metro areas, except for Denver ($45,442). Even so, businesses employing workers in computer and mathematical occupations; life science occupations; health care occupations; sales, and administrative support will find that Austin's labor is relatively affordable compared to other metro areas. The high educational attainment of the region's workforce, high labor force participation rates, and a reported issue with "underemployment" are likely factors that contribute to the relative affordability of high-skilled labor in Greater Austin.

Utility Costs

Because metro Austin has competitive natural gas and gasoline prices, the cost of electricity is the main issue challenging business competitiveness. An analysis of data published by the U.S. Department of Energy showed that commercial and industrial consumers pay more for electricity in Greater Austin than industrial consumers in the comparison metro areas. In 2005, Austin's industrial power rate was $0.068 per kilowatt hour compared to $0.058 in Denver, $0.053 in Phoenix, $0.052 in Nashville, and $0.050 in Raleigh-Durham. Furthermore, industrial rates in metro Austin have increased by 43.4 percent since 2002 while commercial costs have increased by 25.2 percent. To address this issue, the City of Austin is determining whether to offer rate discounts to the full array of high-volume users.

Innovation and Entrepreneurship

Entrepreneurs

In 2004, 72 percent of metro Austin's 34,818 business establishments employed fewer than 10 people. This highlights the importance of entrepreneurs and small businesses and their impacts on the region's economy. Greater Austin had a higher proportion of entrepreneurs in professional and technical services, construction, and the arts than its peer metro areas. On average, entrepreneurs grossed $49,282 in metro Austin in 2004, an amount competitive with its peer metro areas.

Access to Capital

The resources available to finance a new business or expand an existing one impact a community's ability to create jobs. A wide variety of financing methods must be available to serve the needs of all types of business owners. Analysis of data on the U.S. Small Business Administration lending programs between 2004 and 2006 showed that Austin's small business lending activity is competitive with metros of similar size, including Nashville and Raleigh-Durham. However, an issue of competitiveness highlighted by stakeholder input is the decline in venture capital available in metro Austin in the last five years. Poor flow of new deals compared to other metropolitan centers of innovation and spin-off venture companies were cited as two major reasons that venture capital has tapered off in Austin.

Innovation Capacity

Between March 2006 and March 2007, over 2,000 patents were assigned to inventors in Greater Austin, compared to approximately 1,213 in Raleigh-Durham, 953 in Phoenix, 437 in Denver, and 133 in Nashville. Over the past five years, Greater Austin's patent activity has consistently outpaced activity occurring in its peer metro area, indicating Austin is clearly a competitive leader in research and innovation. University R&D in metro Austin is strong. According to 2003 figures published by the National Science Foundation, UT-Austin and Texas State University-San Marcos registered over $351 million in funding for research and development compared to $321 million at metro Nashville universities, $261 million in Denver, and $145 million in Phoenix. However, Raleigh-Durham's concentration of research institutions and medical schools put its regional university R&D funding at over $1 billion – one of the highest totals in the nation. It is notable that about half of this funding, $511 million, was appropriated for medical research at Duke University and UNC-Chapel Hill. Currently, Austin is the largest city in the country that lacks a medical school in its region.

While the region is competitive in university R&D funding and stakeholders say technology commercialization processes are improving at UT-Austin, the university's performance remains sub-optimal in this regard.

Quality of Life

Cost of Living

In the third quarter of 2006, Austin's cost of living scored 97.8 on the C²ER index; the national average cost of living is 100. While Austin's cost of living is lower than Denver (102.5), Phoenix (101.8), and Raleigh (99.0), it is comparatively more expensive than Nashville (89.2) or Durham (86.0). Relative to the nation, Austin's housing and utility costs are competitive. However, transportation costs in Austin exceed the national average.

Housing

According to the National Association of Realtors, the median sale price of a single-family home in metro Austin in 2006 was $173,700 compared to $220,000 nationwide. The housing price index published by the Office of Federal Housing Enterprise Oversight examines housing price appreciation across metro areas with varying home average home prices. In the fourth quarter of 2006, Austin's home appreciation rates were ranked 54th in the nation among 282 metro areas – higher than Phoenix (ranked 60), Raleigh (ranked 93), Durham (ranked 111), and Denver (ranked 231). While home prices in Austin are lower than all of the peer metro areas, prices are appreciating at rapid rates.

In fact, many community stakeholders cited rising home prices near Downtown Austin as a major concern. College students and recent graduates who participated

in focus groups said this causes young people who stay in Austin after graduation to move further away from Downtown. House prices were also noted as a major contributing factor of the region's increasing sprawl and traffic congestion.

DEMOGRAPHIC AND ECONOMIC TRENDS

Demographic Trends

This assessment of the region's demographic trends serves as a "snapshot" of the population dynamics shaping Greater Austin. Indicators such as migration, populace by race and ethnicity, and age distribution illustrate the population dynamics contributing to Austin's growth. Socioeconomic indicators such as educational attainment, per capita income, and poverty rates help fill out this picture. This "snapshot" focuses on the Austin metropolitan area's demographic changes since 2000 compared to Texas and the United States.

Population Change

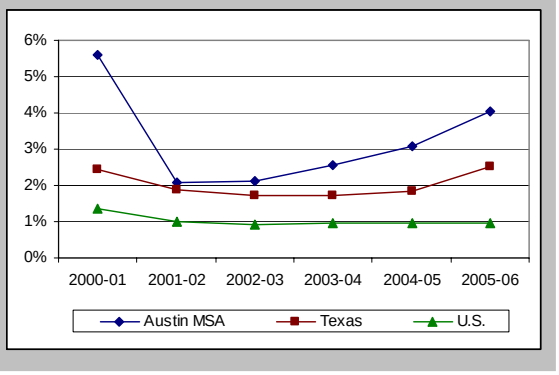
Between 2000 and 2006, the Austin metropolitan area grew by 21.1 percent, adding 263,802 new residents, compared to 12.7 percent growth statewide and 6.4 percent growth nationally. While population growth rates slumped alongside the region's economic recession in 2001, momentum has picked up in the last three years.

Population Change, 2000-2006

	Population		*Change*	
	2000	**2006**	**Number**	**Percent**
Austin MSA	1,249,763	1,513,565	263,802	21.1%
Texas	20,851,820	23,507,783	2,655,963	12.7%
United States	281,421,906	299,398,484	17,976,578	6.4%

Source: U.S. Census Bureau

Annual Population Growth Rates, 2000-2006



Most of the region's 263,802 residents settled in Travis and Williamson Counties. Because Travis is a larger county, its rate of growth between 2000 and 2006 was slower (13 percent) compared to Williamson (42 percent), Hays (34 percent), and Bastrop (24 percent). If current population growth trends continue, greater stress will be put on the region's roadways, water and sewer infrastructure, and public school systems. How the region's leadership responds to and manages such growth will be a key issue of competitiveness moving forward.

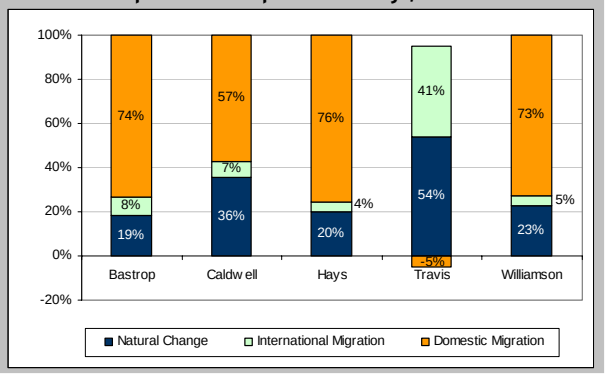
To gain a deeper understanding of these growth dynamics, components of population change from 2000 to 2006 were analyzed for the region's five counties. Three factors account for population growth and decline: natural change (births minus deaths), net international migration, and net domestic migration. In the region's suburban counties, most population growth was attributed to domestic migration while Travis' growth was predominately due to net births-over-deaths and international migration; domestic migration in Travis was negative for the period.

County Population Change, 2000-2006

	Population		Change	
	2000	2006	Number	Percent
Bastrop	57,733	71,684	13,951	24%
Caldwell	32,194	36,720	4,526	14%
Hays	97,589	130,325	32,736	34%
Travis	812,280	921,006	108,726	13%
Williamson	249,967	353,830	103,863	42%

Source: U.S. Census Bureau

Components of Population Change, 2000-2006



Migration Patterns

Understanding the migration dynamics of people moving into, out of, and within a region is important to many aspects of community and economic development, including marketing and regional transportation planning. Understating migration patterns also helps local leaders respond to population changes with adequate and appropriate services and amenities.

Internal Revenue Service (IRS) data for the two most recent years available were analyzed to understand the Austin metro area's migration patterns. It is important to note that because these data are derived from addresses listed on filed tax returns, they do not fully capture movement trends of certain populations, including some students and immigrants. However, they are the most reliable and up-to-date data available to estimate migration.

The IRS data also allow for comparison of adjusted gross income (AGI) of those who have filed tax returns. The IRS defines AGI as "taxable income from all sources minus deductions;" it is the best way to gauge the movement of wealth with migrants. In general, having higher income in-migrants can help generate more economic activity and improve the economic health of a community.

Migration Into and Out of Greater Austin

Between 2003 and 2005, the metro area gained about 120,000 residents from in-migration and lost about 97,000 through out-migration. Thus, the region gained approximately 23,000 residents in these two years from new net migration. Most of these new residents settled in Travis and Williamson Counties. It is interesting to note that in each of the region's counties, in-migrants were more affluent than out-migrants. As illustrated in the next chart, in-migrants were more mobile, moving from other major cities in Texas or California, whereas out-migrants were less mobile, typically moving to counties surrounding the Austin MSA.

Migration Into and Out of the 5-County Austin Region, 2003-05

	Migration Outside of MSA			*Aggregate Gross Income*		
	In	**Out**	**Net**	**In**	**Out**	**Difference**
Bastrop	4,009	3,731	278	$36,573	$34,541	$2,032
Caldwell	2,354	2,277	77	$32,414	$26,372	$6,042
Hays	10,361	8,213	2,148	$41,110	$33,396	$7,713
Travis	72,454	60,000	12,454	$44,430	$42,769	$1,661
Williamson	30,523	22,393	8,130	$49,867	$48,405	$1,462
Austin MSA	*119,701*	*96,614*	*23,087*	$44,895	$42,454	$2,441

Source: Internal Revenue Service

Note: These figures do not include "intra-regional" movements between counties in the Austin MSA. They reflect new residents to the MSA and residents who have moved out of the MSA between 2003 and 2005.

The region's top source-counties for net in-migration are detailed in the following chart. Many of the counties house major cities in Texas including Houston, (Harris County), El Paso, Dallas, and Corpus Christi (Nueces County). Greater Austin is a significant magnet for Californians as well, probably due to its comparative quality of life and lower cost of living. Because of this, recruitment of California-based firms is a key economic development strategy of the Chamber. Greater Austin's top destinations for out-migrants are primarily lower-cost counties surrounding the metro area, including Comal, Burnet, Llano, Guadalupe, and Blanco. Escalating home prices within the metro area likely contribute to this trend.

Top Source-Counties for Net In-Migration & Destination-Counties for Net Out-Migration: Greater Austin, 2003-05

Source Counties	Net Migration	Destination Counties	Net Migration
Harris County, TX	1,397	Comal County, TX	-399
Bell County, TX	937	Burnet County, TX	-359
Los Angeles County, CA	881	Llano County, TX	-167
El Paso County, TX	672	Guadalupe County, TX	-138
Dallas County, TX	610	Hidalgo County, TX	-119
Santa Clara County, CA	605	Williamson County, TN	-112
Cook County, IL	593	King County, WA	-108
Nueces County, TX	564	Duval County, FL	-85
San Diego County, CA	545	Blanco County, TX	-77
Orange County, CA	500	Washington DC	-74

Source: Internal Revenue Service

Note: These figures do not include "intra-regional" movements between counties in the Austin MSA. They

Intra-Regional Migration

Between 2003 and 2005, about 70,000 of the region's existing residents moved from one county to another within the region. Travis County lost more than 12,000 residents to the region's suburban counties during this time. On average, residents moving out of Travis County were more affluent than residents moving into the County were. It is also interesting to note that existing residents migrating to

suburban areas of the MSA cancel out Travis County's in-migration from outside of the region. Because of this dynamic, Travis County's population growth appears to be driven by international migration and new births, as previously discussed.

Migration within the 5-County Austin Region, 2003-05

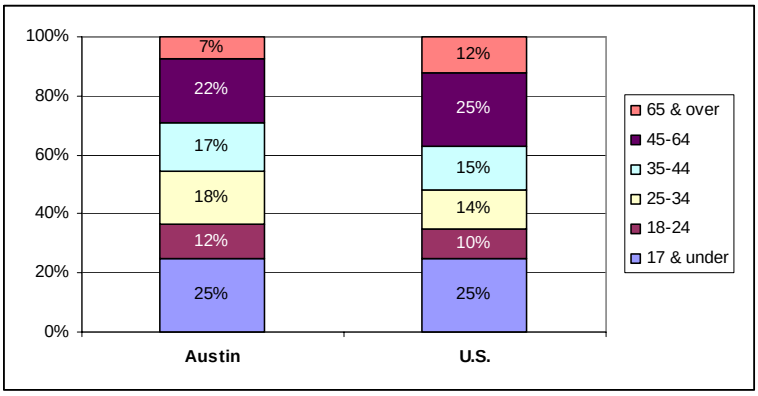
	Migration Within the MSA			*Aggregate Gross Income*		
	In	**Out**	**Net**	**In**	**Out**	**Difference**
Bastrop	5,761	4,284	1,477	$37,280	$31,509	$5,771
Caldwell	3,058	2,745	313	$31,509	$28,690	$2,819
Hays	9,344	6,742	2,602	$42,544	$32,615	$9,929
Travis	26,413	39,052	-12,639	$36,925	$43,665	-$6,740
Williamson	26,739	18,492	8,247	$44,706	$40,150	$4,555

Source: Internal Revenue Service
Note: These figures only include existing Greater Austin residents who moved from one county within the MSA to another between 2003 and 2005.

Age Distribution

The following chart shows how the populations of Greater Austin and the nation are distributed among age cohorts. Compared to the nation, the Austin metro area has a higher proportion of younger residents and a lower proportion of Baby Boomers and seniors. Having a larger proportion of working-aged residents is important because workforce size is always a key factor in business-location decisions.

Age Distributions for the Austin MSA and Nation, 2005



Source: Texas State Data Center (Austin), U.S. Census Bureau Population Estimates (National)
Note: Baby Boomers are defined as people born between 1946 and 1964 (ages 43 – 61)

The following charts show the Austin MSA's population change by age cohort between 2003 and 2005, the most recent years that data are available. For the purposes of this report, *Market Street* utilized two different sources for certain demographic data.[1]

[1] See Methodology section in Appendix A of this report for more information.

The Texas State Data Center housed at the University of Texas-San Antonio is the preferred data source for many Texas localities, whereas the Census Bureau is more likely to be a primary data source for researchers outside of Texas. This includes site selectors. Although there are discrepancies between the two sources, they both highlight similar trends. Greater Austin's school-aged population continues to experience strong growth, as does its Baby Boomer population. The region has also posted strong growth in its 25-34 and 35-44 age groups. It is interesting to note that TSDA estimated a net decline in the region's 18-24 population, while the Census Bureau estimated slight growth in this cohort.

Austin MSA Population Change by Age Cohort, 2003-05

Source: Texas State Data Center

	Austin MSA Population		*Change*		U.S. %
	2003	**2005**	**Number**	**Percent**	**Change**
17 & under	344,068	363,244	19,176	5.6%	0.6%
18-24	171,612	169,811	-1,801	-1.0%	1.2%
25-34	248,178	261,781	13,603	5.5%	0.7%
35-44	228,372	242,545	14,173	6.2%	-1.2%
45-64	280,868	314,693	33,825	12.0%	6.1%
65 & over	99,641	106,567	6,926	7.0%	2.3%
Total	*1,372,739*	*1,458,641*	*85,902*	*6.3%*	*1.9%*

Source: U.S. Census Bureau, Population Estimates Program

	Austin MSA Population		*Change*		U.S. %
	2003	**2005**	**Number**	**Percent**	**Change**
17 & under	353,066	368,538	15,472	4.4%	0.6%
18-24	171,783	174,101	2,318	1.3%	1.2%
25-34	250,739	259,670	8,931	3.6%	0.7%
35-44	221,671	231,733	10,062	4.5%	-1.2%
45-64	278,894	310,866	31,972	11.5%	6.1%
65 & over	99,852	107,621	7,769	7.8%	2.3%
Total	*1,376,005*	*1,452,529*	*76,524*	*5.6%*	*1.9%*

To further investigate this dynamic, the following charts show the region's 18-24 population change by county. Both data sources estimate that Travis County experienced a decline in its 18-24 year old population between 2003 and 2005. This could be attributed to students leaving the region to attend college, rising rents and house prices downtown, and/or the out-migration of workers and college graduates to take jobs outside of the Austin region.

18-24 Age Population Change by County, 2003-05

Source: Texas State Data Center

	18-24 Year Olds		*Change*	
	2003	**2005**	**Number**	**Percent**
Bastrop	5,726	6,368	642	11.2%
Caldwell	3,414	3,661	247	7.2%
Hays	23,850	24,026	176	0.7%
Travis	114,136	107,045	-7,091	-6.2%
Williamson	24,486	28,711	4,225	17.3%
Austin MSA	*171,612*	*169,811*	*-1,801*	*-1.0%*

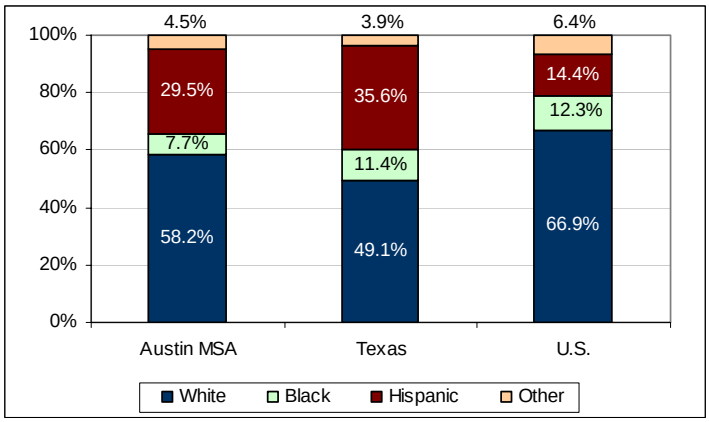
Source: U.S. Census Bureau, Population Estimates Program

	18-24 Year Olds		*Change*	
	2003	**2005**	**Number**	**Percent**
Bastrop	6,233	6,516	283	4.5%
Caldwell	3,482	3,579	97	2.8%
Hays	24,943	25,766	823	3.3%
Travis	109,503	107,230	-2,273	-2.1%
Williamson	27,622	31,010	3,388	12.3%
Austin MSA	*171,783*	*174,101*	*2,318*	*1.3%*

Race and Ethnicity

The following chart shows the racial and ethnic composition of the Austin MSA, the state, and the nation in 2005. The region is less diverse than Texas but more diverse than the nation. As the Austin metro area continues to change, leveraging the region's diversity will continue to be a key issue relating to the region's overall competitiveness.

Population Distribution by Race and Ethnicity, 2005



Source: Texas State Data Center (Austin and Texas), U.S. Census Bureau Population Estimates (National)

The following tables show the region's change in population by race and ethnicity between 2003 and 2005 as estimated by the Texas State Data Center and the U.S. Census Bureau. According to both sources, the region's Hispanic and white populations added the most new residents during the time. The sources differ significantly in estimates of residents of other races and ethnicities (66,356 according to the TSDA and 84,152 according to the Census Bureau). However, both sources concur that this population of residents has grown rapidly- about 10 percent between 2003 and 2005.

A November 2006 article in the *Austin American-Statesman* analyzed data from the Census' American Community Survey and reported that 78 percent of the region's Hispanics are of Mexican heritage. Furthermore, this population group, on average, is younger, less educated, and poorer than the MSA's population as a whole.[2] Closing these education and wealth gaps will continue to be a key priority for the Greater Austin community.

Austin MSA Population by Race and Ethnicity, 2003-2005

Source: Texas State Data Center

		Change since 2003	
	2005	Number	Percent
White	849,632	31,606	3.9%
Black	112,511	4,947	4.6%
Hispanic	430,163	43,272	11.2%
Other	66,335	6,077	10.1%
Total	1,458,641	85,902	6.3%

Source: U.S. Census Bureau, Population Estimates Program

		Change since 2003	
	2005	Number	Percent
White	840,393	31,226	3.9%
Black	106,533	3,154	3.1%
Hispanic	421,451	34,058	8.8%
Other	84,152	8,086	10.6%
Total	1,452,529	76,524	5.6%

Educational Attainment

Educational attainment is an important indicator of socio-economic wellbeing. Not only is educational attainment related to earning potential and income levels, but it is also one of the key determinants of a workforce's competitiveness. In 2005, a higher proportion of Greater Austin adults held at least a bachelor's degree (39.2 percent) than adults state and nationwide (25.2 and 27.1 percent, respectively). The region's highly educated workforce should continue to be a key selling point used in economic development and marketing efforts.

As many public-input respondents told *Market Street*, it will continue to be important moving forward to ensure that enough "knowledge economy" jobs are being created – and that enough students are graduating with relevant degrees – to avoid worker mismatch issues like underemployment or worker shortages. In order for Greater Austin to remain competitive, it is vital that local residents be able to find solid employment opportunities commensurate with their educational training.

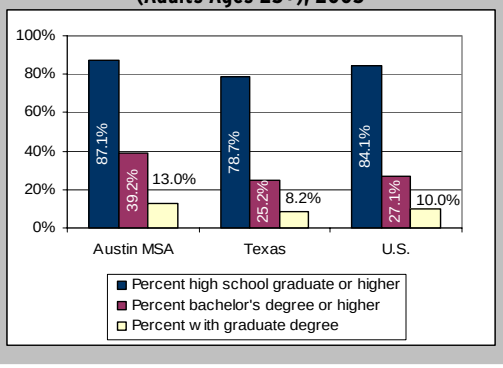
[2] American-Statesman Staff. (November 20, 2006). Census Data Paint a Profile of Mexican Locals. *The Austin American-Statesman*.

Austin MSA Educational Attainment by Terminal Degree (Adults Ages 25+)

	2005		Change since 2000	
	Adults	Percent of All Adults	Number	Percent
No diploma	115,244	13%	-1,557	-1%
High school diploma	185,819	21%	33,187	22%
Some college	184,926	21%	9,808	6%
Associate degree	56,282	6%	14,508	35%
Bachelor's degree	233,167	26%	46,814	25%
Graduate or professional degree	116,137	13%	20,668	22%
Adult Population (ages 25+)	891,575	100%	123,428	16%

Source: U.S. Census Bureau

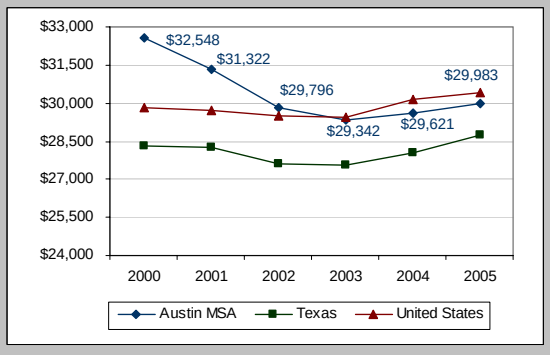
Educational Attainment by Terminal Degree (Adults Ages 25+), 2005



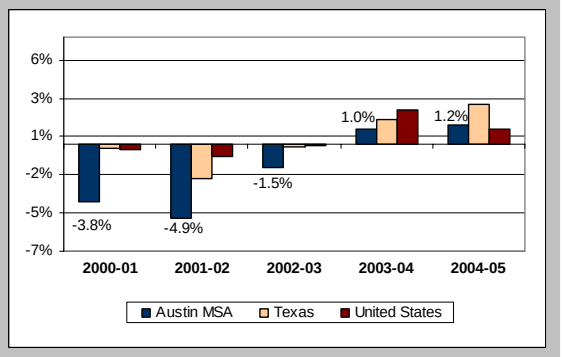
Real Per Capita Income

Per capita income (PCI) is an important indicator of economic stability and potential buying power of a community and its reflects downturns in the economy, unemployment rates, and wages. By adjusting for inflation (real PCI), incomes across many years can be compared more accurately. Between 2000 and 2003, annual growth in real per capita income in the Austin MSA was negative. The region experienced sharp declines in real PCI. Steady gains in local PCI in 2003-04 and 2004-05 indicate that Greater Austin's economy is recovering. However, it is important to note that local PCI growth still lags income growth statewide.

Real Per Capita Income, 2000-2005



Annual Changes in Real Per Capita , 2000-2005



Source: Bureau of Economic Analysis

Poverty Rates

Examining poverty rates is one of the best ways to help gauge a region's socio-economic prosperity. The U.S. Census Bureau uses information such as family size, pre-tax income, and number of children to determine annual poverty thresholds. In

2004, the most recent year for which reliable poverty rates are available, the poverty threshold for a family of four with two children was $19,157. The poverty rate for an individual in the same year was $9,645.

Since 2000, poverty rates for the total population and for children have increased in the Austin MSA. However, both rates remain lower than those for the state and the nation. While total population poverty rates have increased only slightly since 2000, the increase in child poverty is a concern.

Real per capita income in the region has declined since 2000. This means that, on average, families are living on less money today than they were five years ago. This s likely a contributing factors to the increasing child poverty rates.

Poverty Rates, 2000 and 2004

Source:
U.S. Census Bureau

	Total Population			Ages 0-17		
	2000	2004	Number Change	2000	2004	Number Change
Austin MSA	10.2%	10.8%	49,061	12.1%	15.9%	17,467
Texas	14.6%	16.2%	569,011	20.7%	22.7%	194,305
U.S.	11.3%	12.7%	5,458,718	16.2%	17.8%	1,454,374

Economic Trends

This profile of the Austin metropolitan area's economic trends will help stakeholders gain a broad understanding of the recent economic changes within the region, state, and the nation. For this "snapshot," employment data from Q1 2004 are compared to Q2 2006 (the most recent quarter for which data are available) in order to gauge trends that have emerged since the start of *Opportunity Austin* implementation.

Employment Change

In the two years since the start of *Opportunity Austin* implementation, employment throughout the region has grown 8 percent, compared to sluggish job growth at the state and national levels (0.7 and 3.8 percent, respectively). Approximately 51,000 new jobs were added to the Greater Austin economy between the first quarter of 2004 and the first quarter of 2006.

The graph to the right shows the change in regional total employment since the first quarter of 2000. In the three years leading up to *Opportunity Austin*, annual regional employment actually declined. Employment growth trends since the first quarter of 2004 are extremely positive, signaling that Greater Austin is on track to economic recovery.

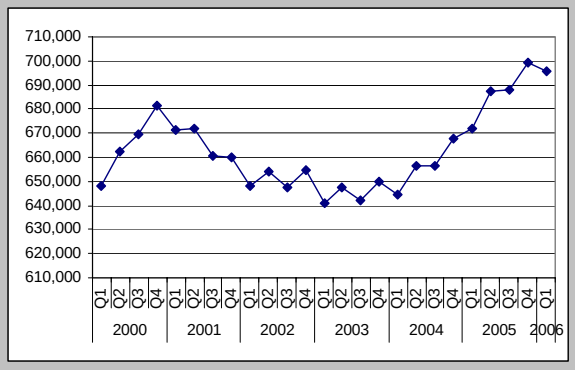
Austin MSA Total Employment, Q1 2004 and Q1 2006

	Employment		Change	
	Q1 2004	Q1 2006	Number	Percent
Austin MSA	644,323	695,717	51,394	8.0%
Texas	9,196,063	9,264,851	68,788	0.7%
U.S.	126,730,069	131,573,445	4,843,376	3.8%

Source: Texas Workforce Commission, BLS

Note: Due to BLS reporting methodology, comparisons across years must be made with the same quarter or annual averages. Although annual data are available at the metro and state levels for 2006, they are not yet available on the national level. As such, employment comparisons from Q1 2004 can only be made to Q1 2006 at this time.

Austin MSA Total Employment, since Q1 2000



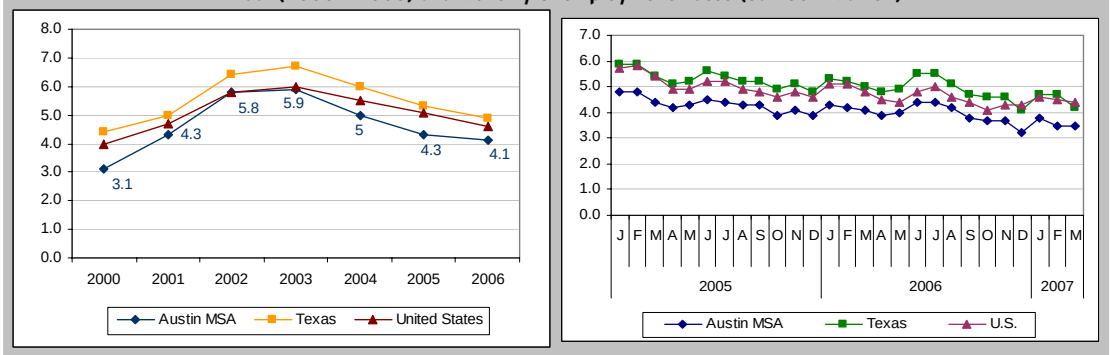
Source: Texas Workforce Commission

Unemployment

The Austin MSA has long enjoyed unemployment rates lower than the state or nation. However, as the region shed jobs between 2001 and 2003, Austin's unemployment rate grew closer to the national rate. Strong job growth in recent

years has worked to reverse this trend, bringing unemployment rates closer to pre-recession rates. In March of 2007, Greater Austin's unemployment rate was 3.5 compared to 4.2 and 4.4 for the state and nation, respectively.

Annual (2000 – 2006) and Monthly Unemployment Rates (Jan 05 – Mar 07)



Source: Texas Workforce Commission

Top Employers

Surveying a region's largest employers provides a good starting point for understanding its economy. Being the state capitol and the home to the University of Texas, Austin's regional economy provides thousands of government and educational jobs to local residents; in fact, ten of the top 20 regional employers are in the public sector. The region is also home to many private firms from diverse business sectors; its largest private sector employers are predominately in computing, semiconductors, and health care.

Top Employers in the Austin MSA, 2007

	Employer	Business Type
Employing 6,000 & over	Austin School District	Public education
	City of Austin	Government
	Dell	Computer equipment mfg./sales (Hdq.)
	Federal Government	Government
	IBM Corp.	Computer hardware & software mfg./R&D
	Seton Healthcare Network	Health care
	State of Texas	Government
	University of Texas at Austin	Higher education
Employing 2,000-5,999	Advanced Micro Devices	Semiconductor chip mfg.
	Applied Materials	Semiconductor production equipment mfg.
	AT&T	Telecommunications (Hdq. of TX operations)
	Austin Community College	Higher education
	Freescale Semiconductor	Semiconductor chip design & mfg. (Hdq.)
	Leander School District	Public education
	National Instruments	Virtual instrumentation software & hardware mfg. (Hdq.)
	Round Rock School District	Public education
	Solectron Texas	Electronics mfg.
	St. David's Healthcare Partnership	Health care
	Travis County	Government
	U.S. Internal Revenue Service	Government

Source: Greater Austin Chamber of Commerce

Employment and Wages by Business Sector

The following table shows how metro Austin's job base and average annual wages have changed from first quarter of 2004 (the beginning of *Opportunity Austin*) to the first quarter of 2006. During this time, the region added 51,256 new jobs (8 percent growth) and average annual wages increased $4,737 (11.4 percent). Positive job and wage growth was posted in every business sector.

In addition to the jobs that are often tied to population growth like retail trade and construction, Greater Austin registered strong job and wage growth in health care (3,435 new jobs, 9.1 percent wage growth), professional services (6,306 new jobs; 10.1 percent wage growth), finance and insurance (2,304 new jobs; 15.2 percent wage growth), and other sectors. Health care's .79 location quotient in the first quarter of 2006 indicates that there are opportunities for Greater Austin to increase this sector even further. Job growth in other sectors like arts and entertainment, transportation and warehousing, and finance and insurance helped to diversify the region's economy. Unlike Greater Austin's dot-com com boom, current growth is occurring across all business sectors.

Austin MSA Employment, Wages, and Location Quotients by Business Sector: Q1 2004- Q1 2006

Business Sector	Q1 2006			Q1 2004	Change since Q1 2004			
					Employment		Wage	
	Emp	Average Annual Wage	LQ	LQ	Number	%	Amount	%
Construction	44,898	$43,306	1.15	1.15	6,364	16.5%	$6,652	18.1%
Manufacturing	58,034	$93,541	0.78	0.80	219	0.4%	$18,272	24.3%
Wholesale Trade	36,623	$83,699	1.20	1.20	2,740	8.1%	$2,083	2.6%
Retail Trade	73,971	$27,095	0.92	0.91	5,426	7.9%	$2,317	9.4%
Transportation and Warehousing	13,802	$40,726	0.50	0.47	1,728	14.3%	$1,795	4.6%
Information	22,650	$66,789	1.35	1.26	1,762	8.4%	$2,383	3.7%
Finance and Insurance	29,754	$68,275	0.94	0.93	2,304	8.4%	$9,000	15.2%
Real Estate and Rental and Leasing	12,110	$39,407	1.06	1.04	1,141	10.4%	$5,919	17.7%
Professional and Technical Services	50,181	$66,964	1.28	1.27	6,306	14.4%	$6,136	10.1%
Management of Companies	4,590	$44,699	0.49	0.47	564	14.0%	$3,277	7.9%
Administrative and Waste Services	44,776	$28,549	1.06	1.04	5,499	14.0%	$99	0.3%
Educational Services	77,132	$34,218	1.20	1.24	2,159	2.9%	$3,405	11.0%
Health Care and Social Assistance	68,066	$38,327	0.79	0.82	3,435	5.3%	$3,204	9.1%
Arts, Entertainment, and Recreation	9,710	$21,096	0.90	0.91	533	5.8%	$1,740	9.0%
Accommodation and Food Services	62,503	$15,932	1.10	1.09	5,459	9.6%	$1,482	10.3%
Other Services, Ex. Public Admin	23,958	$32,780	1.04	1.02	1,699	7.6%	$2,710	9.0%
Public Administration	52,318	$45,990	1.39	1.41	2,214	4.4%	$3,783	9.0%
Total	*695,579*	*$46,351*	-	-	*51,256*	*8.0%*	*$4,737*	*11.4%*

Source: Texas Workforce Commission and U.S. Bureau of Labor Statistics

Note: The following sectors were not included because each represents 1.0 percent or less of the Austin MSA's total employment: agriculture, forestry, fishing and hunting; mining; utilities; and unclassified establishments. Sector job totals do not add up to the reported total metro area employment due to undisclosed employment in certain sub-sectors. This is done to protect employer and employee anonymity.

Note: Due to BLS reporting methodology, comparisons across years must be made with the same quarter or annual averages. Although annual data are available at the metro and state levels for 2006, they are not yet available on the national level. As such, employment comparisons from Q1 2004 can only be made to Q1 2006 at this time.

Location quotient (LQ) analysis of employment by business sector is similar to location quotient analysis of employment by occupation. Location quotient analysis of employment by sector looks at the share of a region's employment in a particular business sector as a ratio of the share of national employment in that sector. LQs help illustrate which business sectors are present in high concentrations (LQs above 1.0) and which are present in low concentrations (LQs below 1.0). As shown in the previous chart, relative to the nation metro Austin has a high proportion of jobs in the information, wholesale trade, professional and technical services, and public administration.

Establishments by Size

In 2004, about 72 percent of the region's businesses employed less than ten people. In other words, small businesses make up the bulk of establishments in Greater Austin. This is also true for Texas and the nation. Only two percent of businesses in the Austin metro area employed more than 100 people in 2004. These statistics highlight the prevalence and importance of small businesses to the region's economy.

Austin MSA Business Establishments by Number of Employees: 2000 and 2004

Source: U.S. Census Bureau

	2000	2004	Change	
			Number	Percent
Under 10	22,875	25,186	2,311	10.1%
10-19	4,033	4,471	438	10.9%
20-49	3,027	3,250	223	7.4%
50-99	1,039	1,107	68	6.5%
100+	848	804	-44	-5.2%
Total	*31,822*	*34,818*	*2,996*	*9.4%*

Key Findings – Demographic and Economic Trends

Demographics

☑ Population growth in Greater Austin is again on the rise after declining and then flattening out after the technology recession.

- The region's suburban counties experienced a surge of in-migration from elsewhere in the U.S., while Travis County grew primarily from natural births and foreign immigration.
- Travis actually lost population to the other four Austin MSA counties, with Travis ex-patriots earning nearly $7,000 more than residents moving to Travis from elsewhere in the region.

☑ Greater Austin's population is increasing faster than the U.S. average in many age groups, but bulges in the school-age (17 and under) and older (45-64, 65 and over) cohorts could potentially create stress on school capacity and social services like elderly care and alternative transportation modes for the transit-dependent.

☑ Diversification in Greater Austin's population continues to redefine the demographic dynamics of the region. White residents dropped from 73 percent of regional population in 2001 to 58 percent of the MSA's total population in 2005. Hispanics continue to be the fastest growing population sub-group in metro Austin.

☑ Per capita incomes in Greater Austin finally began to rise again after dropping precipitously at the start of the decade. Adult and youth poverty in the region continues to increase, but is still below both the state and national averages.

Economics

- ☑ The Austin MSA has far outpaced Texas and the U.S. in terms of total employment growth in recent years. As a result, regional unemployment remains low.
    - Though the labor market is tightening, the potential for severe labor shortages is moderated by the high degree of "underemployment" reported in certain components of the workforce.

- ☑ Employment and wages are increasing in every Greater Austin employment sector. This diversification is in contrast to the region's prior overdependence on technology manufacturing employment.

- ☑ Business establishments with fewer than 19 employees accounted for nearly one quarter of all new establishments created from 2000 to 2004. Conversely, the number of businesses with 100 employees or more actually fell 5.2 percent during the period.

COMPETITIVE POSITION ANALYSIS

This *Competitive Position Analysis* examines Greater Austin's competitive position as a place to live and do business, based on five primary factors: education and workforce development; infrastructure; business costs and capacity; innovation and entrepreneurship; and quality of life. An additional section examines the Austin region's rankings in many prominent community and business indices. This *Analysis* gauges Greater Austin's competitiveness next to four comparison metro areas: Denver, Colorado; Nashville, Tennessee; Phoenix, Arizona; and Raleigh-Durham, North Carolina. Feedback from public input gathered for the *Opportunity Austin II* process will be integrated throughout the analysis, indicated by **blue, bolded text**.

Educational and Workforce Development

The quality of the local workforce is the number one issue in economic development today. Without a proven "pipeline" to prepare its future workforce, a community will be at a distinct competitive disadvantage. At the K-12 level, quality public education systems are needed to prepare graduates for local jobs or college and to make Greater Austin a competitive place for middle-class families. Higher education services are needed to train and educate students, to increase local research capacity, and to provide continuing education opportunities for working adults. Finally, workforce development initiatives link education with regional businesses and create learning opportunities for workers at many different stages in their careers. This section examines Greater Austin's competitiveness in education and workforce development.

K-12 Education

The foundation for the workforce's skills begins in the primary and secondary school systems. Having strong public schools contributes to overall community competitiveness by generating workplace and college-ready students and helps make the community marketable and attractive to workers with families.

In the following analyses for Greater Austin and its peer metro areas, each central city's largest school districts were used to gauge overall competitiveness. This is because central city districts typically are home to the highest concentrations of low-income residents and face the greatest challenges related to preparing students for the workplace or college. For the Austin region, Austin Independent School District (AISD) was used in the following analyses. **More details about the comparison communities' school districts can be found in the Methodology section of this report in Appendix A**.

About Austin Independent School District

Austin Independent School District has a PK- 12th grade enrollment of over 80,000 students. More than half of these students come from economically disadvantaged families, while one-fourth have limited English proficiency.

While AISD faces many challenges in terms of closing student achievement gaps, its students show high attainment in math and science compared to their counterparts in other central city school districts. In a 2005 assessment of ten of the nation's largest central city school districts conducted by the National Center for Education Statistics (NCES), Austin's students ranked in the top three for all tests conducted: 4th and 8th grade mathematics and science.

National Assessment of Educational Progress (NAEP) 4th Grade Math and Science, 2005

	Mathematics				*Science*			
	Average	**White**	**Black**	**Hipanic**	**Average**	**White**	**Black**	**Hipanic**
Austin	242	262	228	234	147	176	133	136
Large Central City	228	247	217	223	135	161	124	128
U.S.	237	246	220	225	149	161	128	132
Austin's Ranking	2	3	2	1	1	2	1	1

National Assessment of Educational Progress (NAEP) 8th Grade Math and Science, 2005

	Mathematics				*Science*			
	Average	**White**	**Black**	**Hipanic**	**Average**	**White**	**Black**	**Hipanic**
Austin	281	305	262	267	144	172	123	129
Large Central City	265	288	250	258	132	158	119	123
U.S.	278	288	254	261	147	159	123	127
Austin's Ranking	1	2	2	1	1	1	2	2

Source: National Center for Education Statistics, Austin Independent School District
Note: The" large central city" group reflects the average across all ten districts.
Ranking 1-10 with the highest performing district ranking 1st and the lowest performing district ranking 10th.
Cities included in the assessment include Atlanta, Austin, Boston, Charlotte, Chicago, District of Columbia, Houston, Los Angeles, New York City, and San Diego.

AISD is attempting to adapt so that its students can graduate with the skills needed in today's economy, be they in the workforce or higher education. AISD has worked to increase options and standards for its students through a number of innovative initiatives. The district's most prominent initiatives are described below.[3]

- **Early Childhood Education**: AISD has committed substantial investments in early childhood education to ensure that all children have a strong start in school. Most elementary schools offer free full-day pre-kindergarten classes. In addition, the new Lucy Read Pre-Kindergarten Demonstration School offers full-day instruction for economically disadvantaged and English-language-learning children. By focusing a cluster of early education services at a single location, AISD can enhance and expand its curriculum to better meet the needs of its youngest students.

- **High School Redesign**: With the support of the Bill & Melinda Gates Foundation and the Michael & Susan Dell Foundation, AISD is working to redesign all 11 of its comprehensive high schools. The aim of this initiative is to transform the system's "20th Century factory model" of education to meet

[3] Source: Interview with Austin Independent School District officials and AISD's Annual Report

the needs of today's students. AISD has put an increased focus on teambuilding, problem solving, effective communication, and using technology. In addition, principals and teachers will take part in additional training and professional development, including theme-based learning communities, to ensure that the staff has the skills needed to transition students into this new way of learning. AISD hopes that this process will result in an improvement in its "four R's": academic rigor, building relationships, making connections of relevance, and improving results.

- **Distinguished Magnet Programs**: AISD determined a need to give families and students greater choice in public education. The district's magnet programs at selected schools in fine arts, liberal arts, humanities and government, and science provide intensive learning environments and focused study for students. Additionally, the district will open the Ann Richards School for Young Women Leaders in the fall of 2007. The school will initially enroll young women in grades six and seven, adding a grade per year through twelfth grade. Because there has been such a positive response to the Ann Richards School (676 applications have been received for 230 spots), AISD is exploring the feasibility of an all-boys academy.[4]

Enrollment

The following chart shows the change in K-12 enrollment between the 2001-02 and 2005-06 academic years for Austin Independent School District (AISD) and the comparison communities' districts as defined in Appendix A of this report. During this time, AISD grew4.3 percent, adding 3,326 new students. Growth in Nashville and Raleigh-Durham's public schools was strong, signaling confidence in central city public schools. On the other hand, Denver Public School enrollments stagnated.

In terms of size, AISD is comparable to Denver Public Schools and the Nashville-Davidson County schools. Raleigh-Durham has two large school districts, Wake County and Durham, while the City of Phoenix has 19 school districts.

5-Year Change in K-12 Enrollment. 2001-02 and 2005-06

	Academic Year		*Change*	
	2001-02	**2005-06**	**Number**	**Percent**
Austin	77,829	81,155	3,326	4.3%
Denver	72,361	72,312	-49	-0.1%
Nashville	69,386	79,297	9,911	14.3%
Phoenix	187,296	194,260	6,964	3.7%
Raleigh-Durham	135,429	152,799	17,370	12.8%

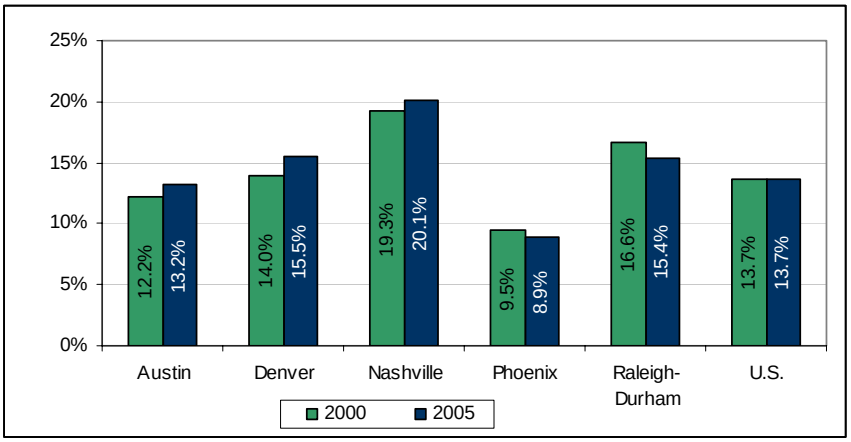
Source: Austin ISD; Colorado, Tennessee, Arizona Departments of Education; North Carolina Public Schools

[4] Hill, Raven. (April 9, 2007). Austin Explores All-Boys Academy. *The Austin American-Statesman.*

Private school enrollment can be an indication of a lack of confidence in the public school system. However, it could also be evidence of an abundant supply of private schools or relatively affordable private tuition costs. The following chart shows the proportion of K-12 students enrolled in private schools in 2000 and 2005 for the City of Austin and each comparison city. Austin's proportion of students in private schools in 2005 was about the same as the national average and was comparatively lower than Denver, Nashville, and Raleigh-Durham.

These findings support input gathered from stakeholders. Many perceive AISD to be a relatively strong central city school district because it has maintained the support of middle class families.

Proportion of City's Students (PK-12) Enrolled in Private Schools



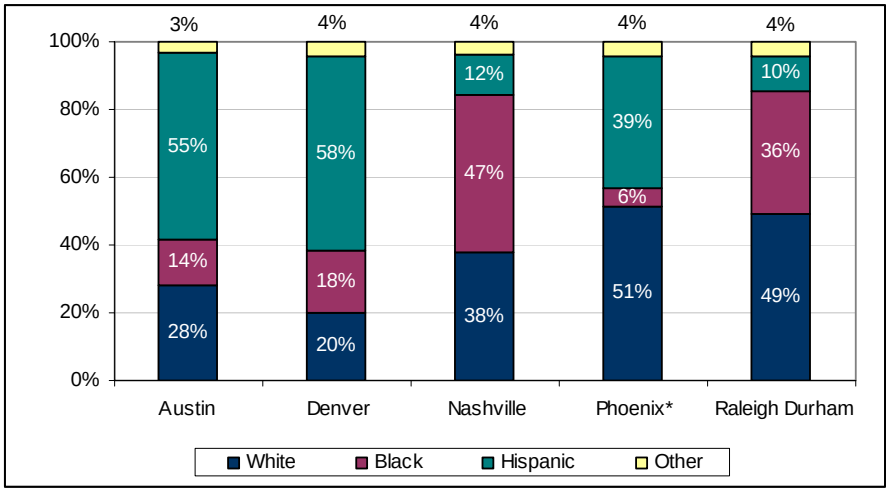
Source: U.S. Census Bureau

Student Characteristics

The following chart shows student enrollment by race and ethnicity in the 2005-06 academic year for the Austin Independent School District and districts in its peer communities. Austin, Denver, Nashville, and Raleigh-Durham's central city districts are all "minority majority" with black, Hispanic, and students of other races (Asian, American Indian, Pacific Islander) comprising more than half of total enrollment. Districts in the southeast have a higher proportion of black students whereas districts in Austin, Phoenix, and Denver have a higher proportion of Hispanic students. In Austin, this cohort of students is growing; Hispanic students comprised 55 percent of total enrollment in the 2005-06 academic year compared to 51 percent in 2002-03.[5]

[5] Source: AISD Annual Reports, 2002-03 and 2005-06

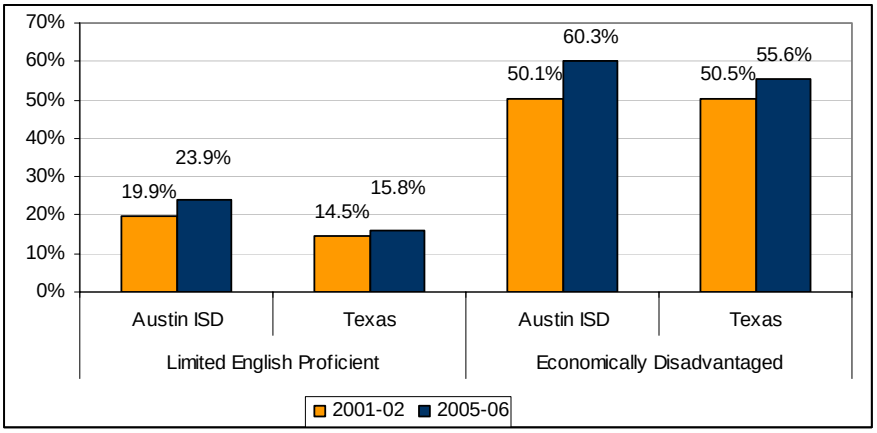
Enrollment by Race and Ethnicity, 2005-06



Source: 2005-06 AISD Annual Report, TN Dept. of Educ., CO Dept. of Educ., NC Public Schools, NCES
*2004-05 data was the most recent year available for Phoenix

Adding another dimension of diversity to AISD is its increasing proportion of students with limited English proficiency (LEP) and those who come from economically disadvantaged[6] families. The following chart shows that these student populations grew at a faster rate locally than statewide. How AISD responds to and leverages this diversity will continue to be a key issue of competitiveness.

LEP and Economically Disadvantaged Students (% of total enrollment), 2001-02 and 2005-06



Source: Texas Education Agency

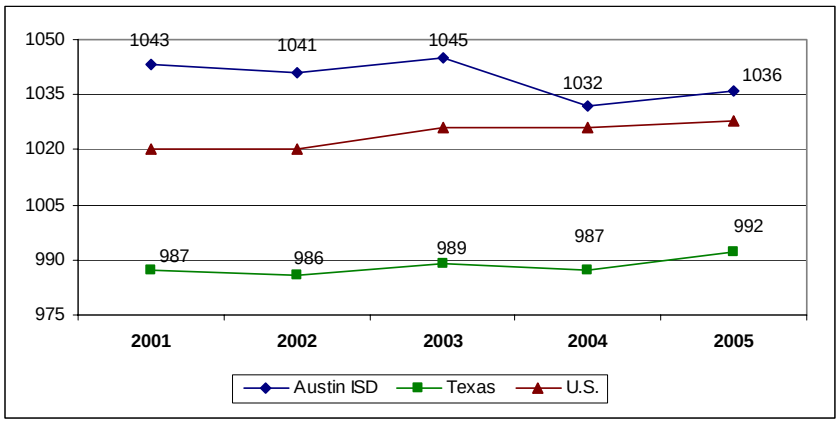
[6] Defined by TEA as students: eligible for free meals under the National School Lunch and Child Nutrition Program (NSLCNP); eligible for reduced-priced meals under NSLCPN; or as students from a family with an annual income at or below the official poverty line, students eligible for TANF or other public assistance, students that received a Pell Grant or comparable state program, students eligible for programs assisted under Title II of the Job Training Partnership Act, and students eligible for benefits under the Food Stamp Act of 1977.

Comparable economically-disadvantaged-student data were not available for the comparison school districts.

College Entrance Exam Performance

The Standardized Admissions Test (SAT) is a college entrance exam that many universities use as a factor in admittance decisions. Like the American College Test (ACT), the SAT is a standardized test that allows for comparison across states and is an indication of student achievement. As shown in the following chart, SAT scores of students enrolled in Austin ISD have historically been higher than state and national average scores. In the 2005-06 academic year, AISD students averaged 1036 out of a possible 1600 on the SAT, compared to 992 for the state, and 1028 for the nation.

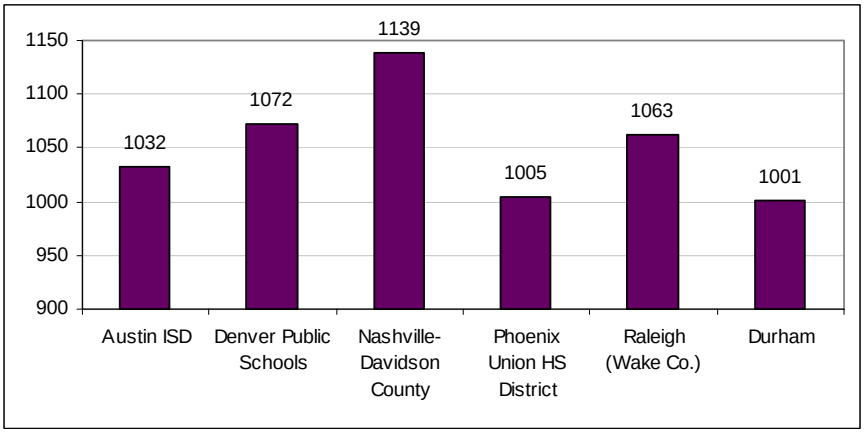
SAT Scores for Academic Years 2001-02 through 2005-06



Source: Texas Education Agency

In some states, like Tennessee and Colorado for example, a higher percentage of students take the ACT than the SAT. This can make it difficult to compare performance on college entrance exams across regions. SAT scores in states that favor the ACT typically reflect the district's "best and brightest" who may be applying to universities out of state. More than half of students tested in Austin, Raleigh, Durham, and Phoenix took the SAT in the 2004-05 academic year. Among these districts, AISD's average SAT score of 1032 was the second highest, behind Raleigh.

SAT Scores, 2004-05 Academic Year



Source: Texas Education Agency, Denver Public Schools, Nashville-Davidson County Schools, Phoenix Union High School District, North Carolina Public Schools
Note: This is the most recent year which data were available for the comparison communities

Per Pupil Expenditures

Lower per pupil expenditures (PPE) can indicate underinvestment in school systems and the community's youth. On the other hand, high per pupil expenditures do not always indicate better quality schools; it is usually costlier to teach students who come into the school system with special needs. In the 2005-06 academic year, AISD reported a local PPE of $7,326.[7]

Because states and localities have varying methodologies for reporting per pupil expenditures, the following chart shows PPE as reported by the National Center for Education Statistics (NCES). NCES computes PPE by dividing total expenditures (local, state, and federal) by total fall enrollment. In the 2003-04 academic year, NCES reported a PPE of $10,137 for Austin ISD compared to $7,151 for Texas. This is an amount higher than every comparison district, except Nashville.

[7] Source: AISD 2005-06 Annual Report. Data are preliminary, based on initial preparation of district PEIMS submissions to TEA. Accessed online at: http://www.austinisd.org/inside/docs/annual_report_2006.pdf

Per Pupil Expenditures, 1999-2000 and 2003-2004 Academic Years

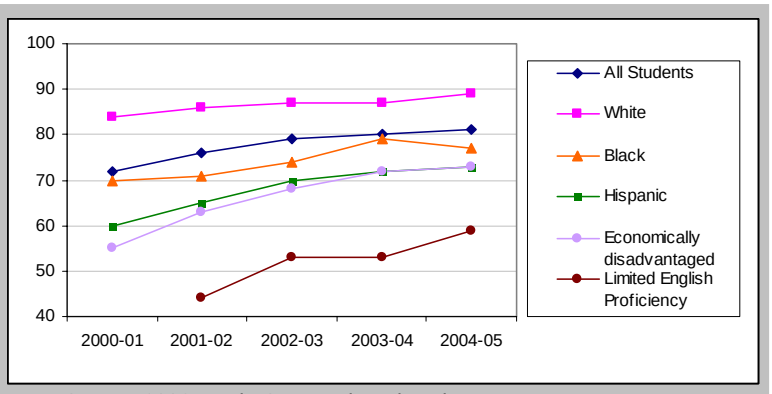
	1999-00	2003-04	Change	
			Amount	Percent
Austin ISD	$9,101	$10,137	$1,036	11.4%
Denver	$7,631	$9,428	$1,797	23.5%
Nashville	$7,540	$10,266	$2,726	36.2%
Phoenix	$6,837	$7,346	$509	7.4%
Raleigh-Durham	$8,108	$8,830	$722	8.9%
Texas	$ 6,288	$ 7,151	$863	13.7%

Source: National Center for Education Statistics
Note: NCES calculates PPE by dividing the district's total current expenditures for (public) elementary and secondary education, divided by fall enrollment.

High School Graduation Rates

High school completion is a key indicator of student achievement, as well as the skills of the future workforce. According to the Texas Education Agency, high school is completed when a student graduates with a diploma within four years after entering high school. As shown in the following chart of AISD's graduation rates from the 2000-01 academic year through 2004-05, students with limited English proficiency are completing high school at drastically lower rates than their peers. Though this achievement gap is still large, it has nevertheless narrowed dramatically since 2001-02.

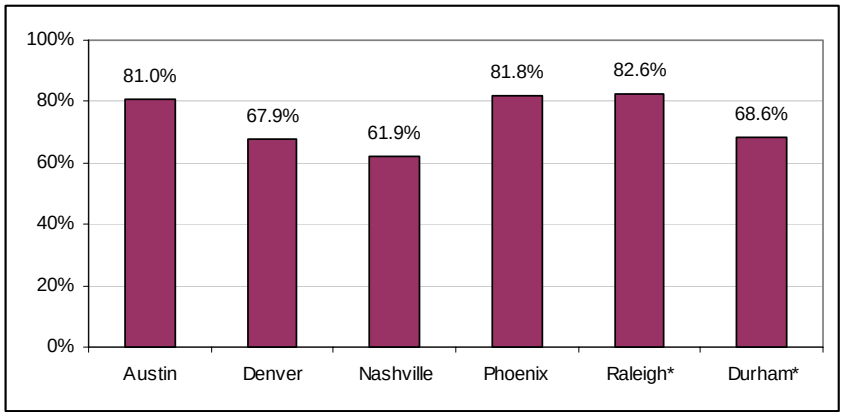
AISD High School Graduation Rates



Source: 2006 Austin Community Education Progress Report

Despite this gap in student achievement, students enrolled in the Austin Independent School District complete high school at higher rates than students in Denver Public Schools, Nashville-Davidson County school district, or Durham Public Schools. Closing gaps in student achievement to boost high school graduation rates even further will help AISD and the workforce of Greater Austin to become more competitive. This is especially important as the percentage of lower-income and LEP students in Austin city schools continues to increase.

High School Graduation Rates, 2004-05



Source: Austin Independent School District, Colorado Department of Education, Tennessee Department of Education, Wake County Public Schools, Arizona Department of Education
*Because of a change in reporting methodologies, data for Raleigh and Durham was only available for the 2005-06 academic year

Stakeholders who participated in interviews and focus groups noted that measures of dropout and graduation rates only count students who have made it to high school and do not adequately measure students who dropped out in middle school. It is important for non-district-affiliated groups like the Greater Austin Chamber and E[3] Alliance that monitor school performance ensure that reported data are representative of actual performance dynamics.[8]

College and Workplace Readiness

Preparing students to enter the workforce or to continue their studies at the college level is an important policy issue for the Greater Austin Chamber of Commerce that largely emerged from the *Opportunity Austin* strategic development process. Some of the Chamber's major initiatives and investments related to college and workplace readiness include:

- **Austin Partners in Education (APIE):** Together with the Austin Independent School District, the Chamber helped found APIE and greatly increased its breadth and scope as a component of *Opportunity Austin* implementation. The program's key mission is to prepare AISD students for the local labor market. It works to achieve this by facilitating mentoring and tutoring services, increasing the number of students who apply for federal financial aid and college, supporting the technology needs of local schools, and creating linkages between the business community and the school district's staff and students.[9] APIE has established rigorous metrics to define

[8] E3 Alliance (Education Equals Economics) is a collaborative effort by Austin Community College (ACC), the Austin Area Research Organization (AARO), the University of Texas, and other stakeholders to initiate a regional effort to increase the competitiveness of Greater Austin by aligning the region's education systems and improving its K-12 public schools.
[9] Source: Austin Partners in Education: http://www.austinpartners.org/aboutus.html

and track "college readiness," which it is working to increase by 7.5 percent for the class of 2007.

- **20,010 in 2010 Coalition**: With the support of three local school districts, six higher education institutions, and 12 community organizations and companies, the Chamber is working to boost higher education enrollment by 30% over 48 months. A component of this effort is a program called **Financial Aid Saturdays.** In order to help meet increased higher education enrollment goals, the Chamber is providing support to Austin, Round Rock, and Manor ISDs to increase FAFSA (Free Application for Federal Student Aid) submission by 15 percent for students graduating in 2007. The Chamber organized and trained volunteers to make calls, answer questions, and walk students and their families through the process of applying for financial aid. The Chamber's more than 200 volunteers have assisted over 500 families in filing FAFSA applications.

- **College Connection Program:** The Chamber provides financial support to Austin Community College's "College Connection" program available to high school seniors in 22 area school districts. The nationally recognized program takes admission and enrollment services onto high school campuses, with the intent of increasing postsecondary enrollment rates, particularly among minority and low-income students. All participating seniors receive an ACC District acceptance letter with their high school diplomas, resulting in increased college-going rates of 38.0 percent in the ACC District in the program's first two years.

- **High School Graduate Data Center:** The Chamber also provides financial support to Skillpoint Alliance, a regional workforce development organization, to administer exit surveys in seven regional school districts. These surveys identify outstanding issues students face in applying to college.

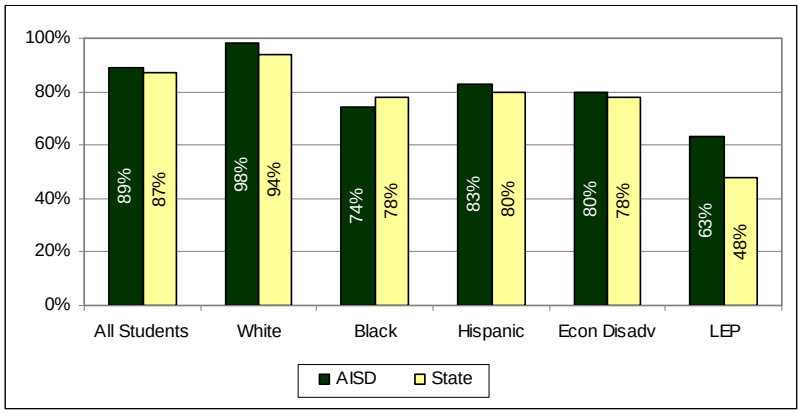
The Chamber tracks the progress students are making toward workplace and college readiness through a number of indicators, which are published in the *Austin Community Education Progress Report*. Two key indicators include cumulative passage rates on state standardized tests and percent of high school graduates to complete recommended coursework for college.

In addition to existing efforts to transition high school students into college, some stakeholders feel that greater focus must be placed on recruiting adults with a high school diploma back to school to earn a certificate or a degree.

The Texas Assessment of Knowledge and Skills test (TAKS) was implemented throughout the state of Texas in 2003 as a way to measure student progress in a variety of subjects. To receive a high school diploma, satisfactory performance on exams in biology, chemistry, algebra, and geometry is required. As shown in the

following chart, cumulative passage rates for all TAKS exit exams where higher among most student groups in Austin than statewide.

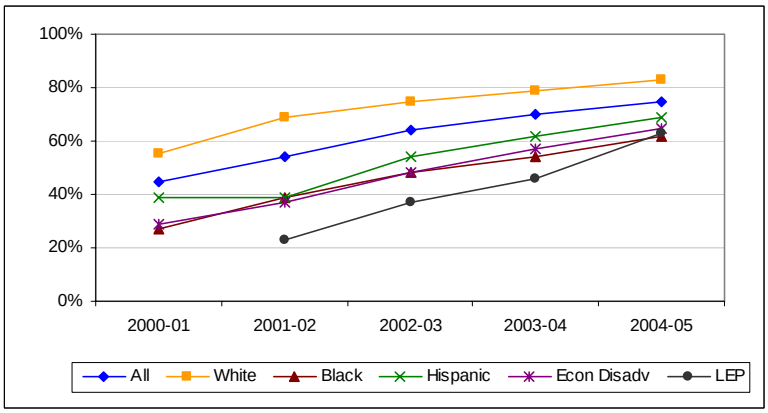
Cumulative Pass Rate for all TAKS Exit Exams, 2005-06 Academic Year



Source: Texas Education Agency
Note: LEP stands for limited English proficiency

High school students in the Austin ISD have the option to complete a curriculum that better prepares them for college or the workplace. These curricula, the Recommended High School Plan (RHSP) and the Distinguished Achievement Plan (DAP), provide an educational foundation needed to compete in today's economy. As shown in the following chart, increasing proportions of students from all backgrounds are opting to partake in these curricula. While progress has been made in this regard and in TAKS performance, the Chamber and AISD are working to develop goals to improve college readiness among local Hispanic, African-American, and English language learning students.

Percent of AISD Graduates that Completed the RHSP or DAP



Source: 2006 Austin Community Education Progress Report, Greater Austin Chamber of Commerce
Note: LEP stands for limited English proficiency

Higher Education

Institutions of higher education are extremely important assets for building a skilled workforce and conducting innovative research. Greater Austin is home to seven institutions of higher education: one public community college, two public four-year universities, and four private four-year universities. In fall 2005, Austin colleges and universities had a cumulative enrollment of 116,906.

In contrast to its comparison metro areas, the Austin region has a small number of colleges. However, cumulative enrollment in Greater Austin was higher than Nashville and Raleigh-Durham, which have twice the number of colleges and universities. All of the comparison metro areas have several community and/or technical colleges, while Austin has one, large community college within its metro area. From an economic development perspective, the benefit of having a smaller number of colleges and universities with higher enrollments is that it is often easier to initiate conversations, including stakeholders, and create partnerships between the education and business communities.

Higher-Education Institutions and Enrollment, Fall 2005

	Metro Area				
	Austin	**Denver**	**Nashville**	**Phoenix**	**Raleigh-Durham**
Enrollment	116,906	118,802	85,598	209,905	111,337
Institutions	7	16	19	25	14

Metro Area	Largest Institutions	Fall 2005 Enrollment
Austin	University of Texas -Austin	49,696
	Austin Community College District	31,908
	Texas State University – San Marcos	27,129
Denver	University of Colorado- Denver	30,140
	Metropolitan State College	21,010
	Front Range Community College	14,957
Nashville	Middle State Tennessee University	22,554
	Vanderbilt University	11,479
	Austin Peay State University	8,813
Phoenix	Arizona State University –Tempe	51,612
	Mesa Community College	26,528
	Glendale Community College	20,070
Raleigh-Durham	North Carolina State University- Raleigh	30,148
	University of North Carolina- Chapel Hill	27,276
	Duke University	14,075

Source: National Center for Education Statistics
Estimates include 2- and 4-year, public and private not-for-profit institutions, except for biblical and theological seminaries

It is also interesting to note that Phoenix and Denver lack major research institutions in their metro areas. In this regard, the University of Texas in Austin makes the region competitive against Nashville (Vanderbilt University) and – to a lesser degree – Raleigh-Durham (with three dynamic research institutions: UNC-Chapel Hill, North Carolina State and Duke).

Since 2000, cumulative enrollment in two- and four-year institutions in Greater Austin has grown by 11.7 percent (from 104,684 to 116,906), adding 12,222 new

students. Driving this growth is increased enrollment within the Austin Community College (ACC) district (6,173 new students) and Texas State University (4,706 new students). The region's private schools experienced modest growth, while University of Texas enrollment levels have remained more or less static due to enrollment caps.

Closing the Gaps Initiative

Texas is a minority-majority state; its population growth has largely been fueled by populations that have historically enrolled in higher education at lower rates than white Texans have. Thus, educational attainment for the state's workers could be expected to decline unless aggressive measures are taken to stem enrollment disparities in higher education.

In 2000, the state of Texas adopted its "Closing the Gaps" initiative aimed at making the state's workforce more competitive, improving the quality of educational programming at the collegiate level, and building greater university research capacity statewide. The goal for 2015 is to boost statewide college enrollment by 630,000 and by 50,000 in Central Texas. To achieve this, the state outlined enrollment goals for each institution.[10] At Texas State University, this means boosting enrollment by 10,000 by 2015. However, because many new students will enter higher education at the community college level, ACC has a more aggressive growth plan in place. ACC estimates it will need to serve an additional 10,000 students by the year 2010.[11]

The Austin Area Research Organization (AARO)[12] outlined three priority issues to meet the "Closing the Gaps" mandate.

1. Increase the number and percentage of students who graduate under the recommended high school curriculum to increase the pool of students prepared for college and thus grow the "pipeline" of college-bound high school seniors.

2. Reduce ethnic and racial disparities in college attendance, with special attention to the fast-growing Hispanic population.

3. Build the capacities and expand degree programs at local colleges and universities so that they can handle larger enrollments and produce more degree-holding residents.[13]

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[10] Closing the Gaps: The Texas Higher Education Plan. Accessed online at: http://www.thecb.state.tx.us/reports/PDF/0379.PDF

[11] Texas State University 2004-09 Master Plan (http://www.upa.txstate.edu/University-Plans/University-Plans/contentParagraph/0/content_files/file/2004-2009%20University%20Plan.pdf) and Austin Community College District 2006-08 Master Plan (http://www.austincc.edu/masterplan).

[12] Committed to the economic and social well being of the Central Texas area, the Austin Area Research Organization is a non-profit organization comprised of 80 business and community leaders representing industry, real estate, finance, professional firms, the arts, and educational, religious, and charitable institutions.

AARO points out that, while University of Texas has been a key factor in Austin's economic growth, enrollment caps at the university means the region can no longer expect UT to produce the growing number of graduates the region will need. Thus, building capacities of ACC and Texas State on existing campuses (including the Round Rock Higher Education Center) and constructing additional facilities if necessary will be key issues of regional workforce competitiveness moving forward.

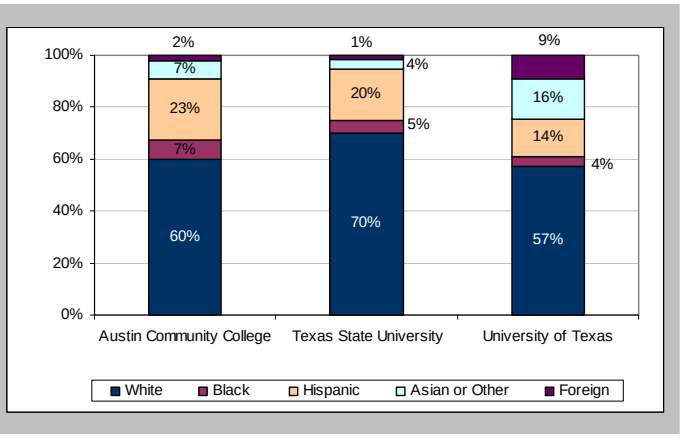
Diversity

Making higher education accessible to every community member is vital in today's knowledge economy. The following chart shows enrollment by race and ethnicity for Greater Austin's largest colleges and universities during the 2004-05 academic year. The University of Texas was the most diverse, with minorities and foreign students accounting for 43 percent of its student body.

Austin Community College's total enrollment and student diversity has grown substantially in recent years. According to a recent article in the *Austin American-Statesman*, the college reached a record high for total enrollment in the fall of 2006 with over 33,000 students. It plans to increase total enrollment to 36,500 by 2015. Furthermore, the community college district is exceeding diversity goals set by the state's "Closing the Gaps" initiative. Its 2015 minority enrollment goal was 27 percent; however, by fall 2006 ACC's minority enrollment topped 38 percent.[14]

Enrollment by Race and Ethnicity, 2004-05

Source:
National Center for Education Statistics



When comparing University of Texas to other larger universities within Austin's peer metro areas, UT-Austin has a more diverse student body. It has the largest proportion of Hispanic students and the second largest proportion of international students of the peer institutions, behind Duke.

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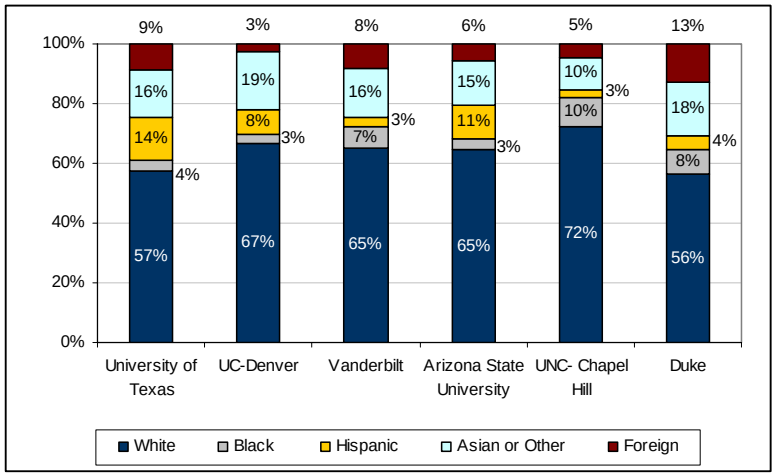
[13] Austin Area Research Organization. (2005). An Investment in the Future of Central Texas: Closing the Gap in Higher Education. Accessed online at: http://www.aaroregion.com/documents.html
[14] Miranda, Marcy. (February 24, 2007). Enrollment Booming at Austin Community College. *The Austin American-Statesman*.

Comparison of Enrollment by Race and Ethnicity, 2004-05



Source: National Center for Education Statistics

Bachelor's, Master's, and Professional Degrees

The Austin region has six institutions that grant bachelor's degrees: Saint Edward's University, Southwestern University, Concordia University (Austin), Huston-Tillotson University, Texas State University (San Marcos), and University of Texas. In 2005, these institutions together conferred 14,396 bachelor's degrees. UT-Austin (8,836) and TSU- San Marcos (4,314) conferred the majority. The following chart shows the top ten bachelor's degrees awarded in 2005 by discipline. Degrees in business, social sciences, and communication accounted for 30 percent of bachelor's degrees. A survey of degrees conferred in biology, physical science, health care, computer science, mathematics, architecture, and engineering shows that 3,139 bachelor's degrees (21.9 percent of total) were granted in math and science-related fields.

Top Ten Bachelor's Degrees Awarded, Metro Austin, 2005

Discipline	Number	Percent of Total
Business, management and marketing	2,462	17%
Social sciences	1,836	13%
Communication, journalism, and related programs	1,504	10%
Multi/interdisciplinary studies	925	6%
Biological and biomedical sciences	879	6%
Engineering	877	6%
Visual and performing arts	782	5%
English language and literature/letters	688	5%
Psychology	647	4%
Health professions and related clinical sciences	423	3%
Total Bachelor's Degrees	*14,396*	-

Source: National Center for Education Statistics, IPEDS Database

In many types of work, advanced degrees are becoming increasingly necessary. In 2005, 4,333 master's degrees were awarded in Greater Austin: 2,900 were awarded by UT-Austin, 1134 by TSU-San Marcos, 260 by Saint Edward's, and 39 by Concordia University. At the master's level, business remains the most common discipline, however engineering and health professions graduate a healthy proportion of master's students as well. A survey of graduates from math and science-related programs showed that 22.8 percent of master's degrees were conferred in math, science, health care, engineering, computing, or architecture programs.

Top Ten Master's Degrees Awarded, Metro Austin, 2005

Discipline	Number	Percent of Total
Business, management and marketing	1,247	29%
Education	629	15%
Engineering	447	10%
Public administration and social service professions	398	9%
Health professions and related clinical sciences	231	5%
Visual and performing arts	133	3%
Social sciences	127	3%
Communication, journalism, and related programs	126	3%
Psychology	124	3%
Library science	120	3%
Total Master's Degrees	*4,333*	-

Source: National Center for Education Statistics, IPEDS Database

University students and recent alumni who participated in focus groups feel that it is often difficult to obtain a job in Greater Austin with a degree in business administration or liberal arts. At the same time, members of the business community expressed difficulty finding qualified people to fill certain specialized technology and management jobs. There seems to be a mismatch between the skills demanded by the region's business community and the degree programs from which many students are graduating.

At the doctoral level, math and science-related degrees dominate, accounting for 43 percent of the 727 degrees awarded in 2005. University of Texas and Texas State University are the only doctoral degree granting institutions in the region. However, TSU's doctoral programs are limited to education and social sciences while UT-Austin confers doctoral degrees in a wide range of disciplines.

In addition to these doctoral degrees, it is worth noting that the Austin region generated 685 first-professional degrees: 544 in legal professions and 141 in health professions. Law degrees (J.D.) are considered to be first-professional degrees.

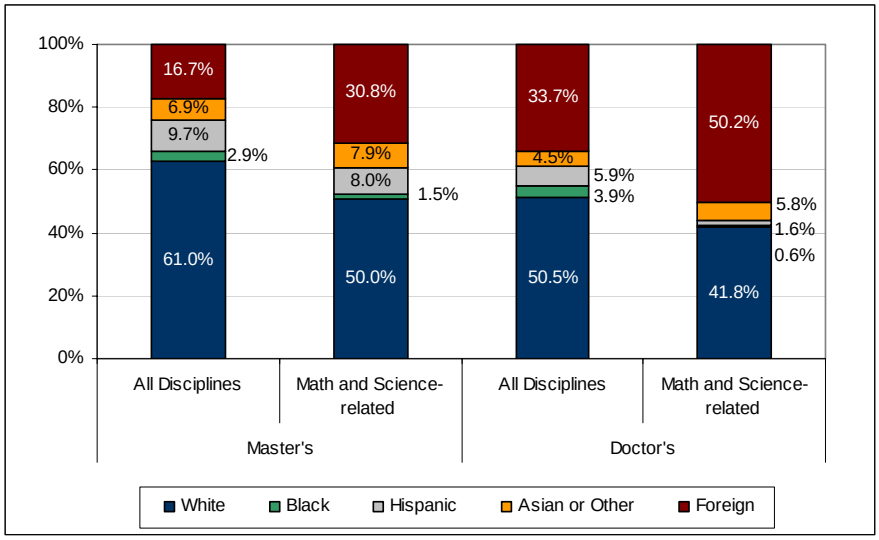
Top Ten Doctorate Degrees Awarded, Metro Austin, 2005

Discipline	Number	Percent of Total
Engineering	145	20%
Education	99	14%
Physical sciences	70	10%
Social sciences	65	9%
Visual and performing arts	54	7%
Biological and biomedical sciences	45	6%
Psychology	45	6%
Foreign languages, literatures, and linguistics	33	5%
Health professions and related clinical sciences	21	3%
Communication, journalism, and related programs	19	3%
Total Doctorate Degrees	*727*	-

Source: National Center for Education Statistics, IPEDS Database

Because Greater Austin is rapidly diversifying, it is important to determine if recent graduates reflect this diversity. The following chart shows the diversity among master's and doctoral graduates in metro Austin's colleges and universities. At both the master's and doctoral levels, there are greater numbers of international students in the math and science fields. In Ph.D. programs in math and science disciplines, white and international students account for 92 percent of graduates.

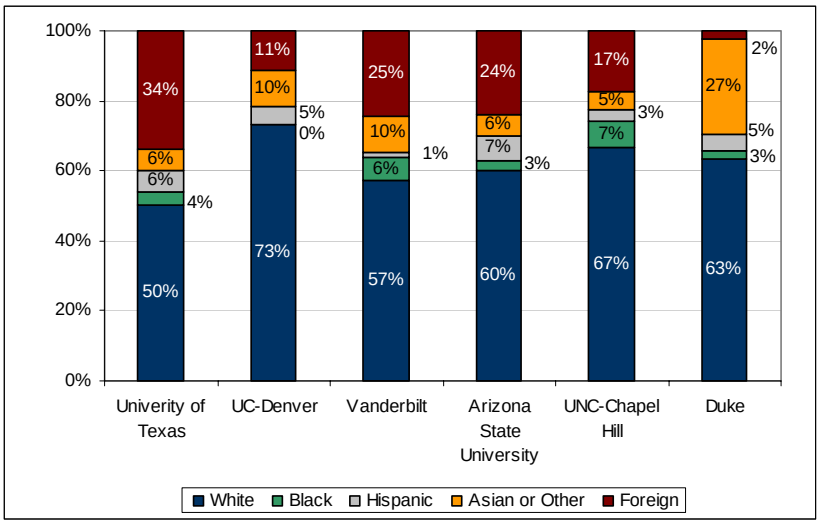
Diversity Among Master's and Doctoral Graduates in Metro Austin, 2005



Source: National Center for Education Statistics, IPEDS Database
Note: Math and science- related disciplines include architecture, biological sciences, computer sciences, engineering, health professions, math, statistics, and physical sciences.

The following chart shows diversity among metro graduates from all doctoral programs at major universities in Austin, Denver, Nashville, Phoenix, and Raleigh-Durham in 2005. The University of Texas had the most diverse graduating class of Ph.D. students, half of which were minorities or international students.

Comparison of Diversity Among Doctoral Program Graduates, 2005



Source: National Center for Education Statistics, IPEDS Database

Associates Degrees and Certificates

At the two-year college level, the region is served by the Austin Community College district. Although the district's total enrollment is over 30,000, 76 percent of students are transfer-bound to a four-year university. While some students may stay at ACC to earn an associate's degree before transferring, others may transfer before a degree has been conferred. It is also important to point out that approximately 13 percent of ACC students already have a bachelor's degree. While some of these students may be on track to earn a certificate or associate's degree, others are at ACC to take courses for professional or personal development. As such, looking at degrees and certificates awarded, while useful, does not necessarily provide the full picture of ACC's services to the community. In 2005, ACC awarded 922 associate's degrees, about 43 percent of which were awarded in math and science-related disciplines.

Top Ten Associate's Degrees Awarded at ACC, 2005

Discipline	Number	Percent of Total
Health professions and related clinical sciences	258	28%
Business, management and marketing	141	15%
Visual and performing arts	81	9%
Engineering technologies/technicians	66	7%
Security and protective services	56	6%
Liberal arts and sciences	48	5%
Computer and information sciences	44	5%
Social sciences	29	3%
English language and literature/letters	26	3%
Foreign languages, literatures, and linguistics	26	3%
Total Associate's Degrees	*922*	-

Source: National Center for Education Statistics, IPEDS Database

More recent figures provided by ACC indicate that the district conferred 1,034 associate's degrees in 2006. This reflects a 12 percent growth in degrees awarded between 2005 and 2006.

In addition to conferring associate's degrees, ACC also awards certificates. Certificate programs require less coursework than a two-year associate's degree program and are usually helpful in developing new business or vocational skills. In 2005, 529 certificates below the Baccalaureate level were awarded at ACC. The large proportion of certificates conferred in health professions, business, engineering, and computer sciences indicates that ACC is likely preparing students for high skilled jobs found in the Austin region.

Top Ten Certificates Awarded (below the Baccalaureate level) at ACC, 2005

Discipline	Number	Percent of Total
Health professions and related clinical sciences	134	25%
Business, management and marketing	105	20%
Security and protective services	77	15%
Mechanic and repair technologies/technicians	50	9%
Engineering technologies/technicians	49	9%
Computer and information sciences	41	8%
Personal and culinary services	18	3%
Visual and performing arts	12	2%
Family and consumer sciences/human sciences	10	2%
Precision production	9	2%
Total Certificates (below the Baccalaureate level)	*529*	-

Source: National Center for Education Statistics, IPEDS Database

Workforce

This section focuses on metro Austin's workforce availability and workforce development resources. Certain Greater Austin measures are compared against the peer metro areas profiled for this report.

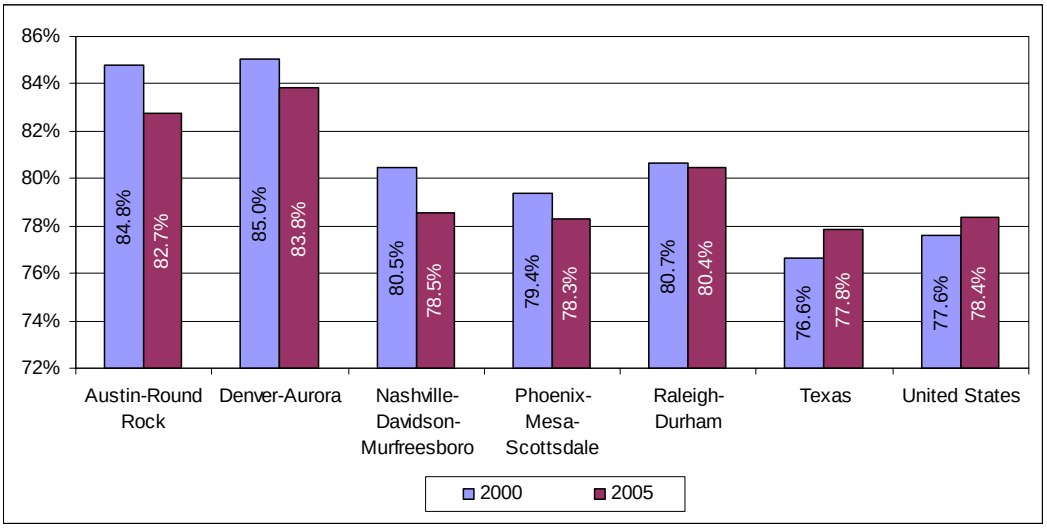
Labor Force Participation Rate

Labor force participation rates (LFPR) can offer a fuller understanding of a community's employment dynamics. Unemployment rates only measure adults who are actively seeking work and receiving benefits. Yet many eligible workers may not be employees or receiving benefits for any number of reasons. LFPR measures the number of adults (ages 18-69) that are employed or looking for work divided by the total working-age population (ages 18-69). The remaining adults comprise the so-called "hidden workforce" because they have either dropped out of the labor market or have given up looking for a job.

Labor force participation rates are a good indication of attitudes toward work, confidence in the labor market, and labor availability in the area. Greater Austin's

LFPR for 2005 was 82.7 percent. Although the rate declined since 2000, the region's market is tighter than the state or nation and every peer region except for Denver.

Labor Force Participation Rate, 2005



Source: U.S. Census Bureau, American Community Survey, U.S. BLS

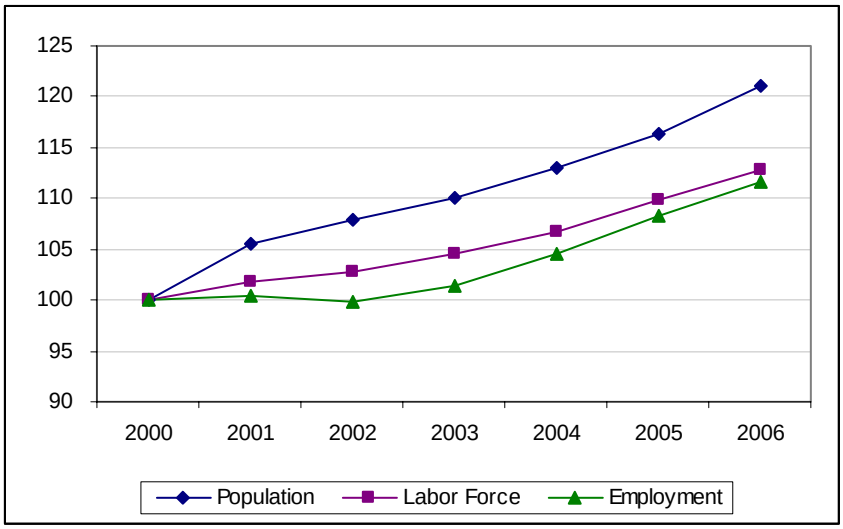
Greater Austin's consistently high LFPR indicates that there are comparatively few working-age adults "falling through the cracks" of the labor system. However, LFPR does not measure so-called "underemployment," in which adults are working in jobs below their skill-level and earnings potential. **Many public input respondents said that underemployment is a reality in Greater Austin, often said to have the "best educated waiters" in America due to the dynamic quality of life in the region compelling people to remain rather than seek better employment elsewhere.**

Workforce Availability

The following chart shows an index of metro Austin's population, employment, and labor force growth since 2000. Indexing values is a way to normalize growth in populations of varying sizes to make comparing changes more meaningful. Growth in the under 18 and over 69 age groups could contribute to Greater Austin's strong population growth relative to the labor force. Furthermore, the gap between total labor force and total jobs has decreased in recent years.

This tightening of the labor market has serious implications. Employers may find it difficult to fill job openings while workers may find it difficult to secure a job commensurate with their qualifications. However, the differential between population growth and labor force could normalize this trend.

Austin MSA Population, Labor Force, and Employment Index 2000-2006

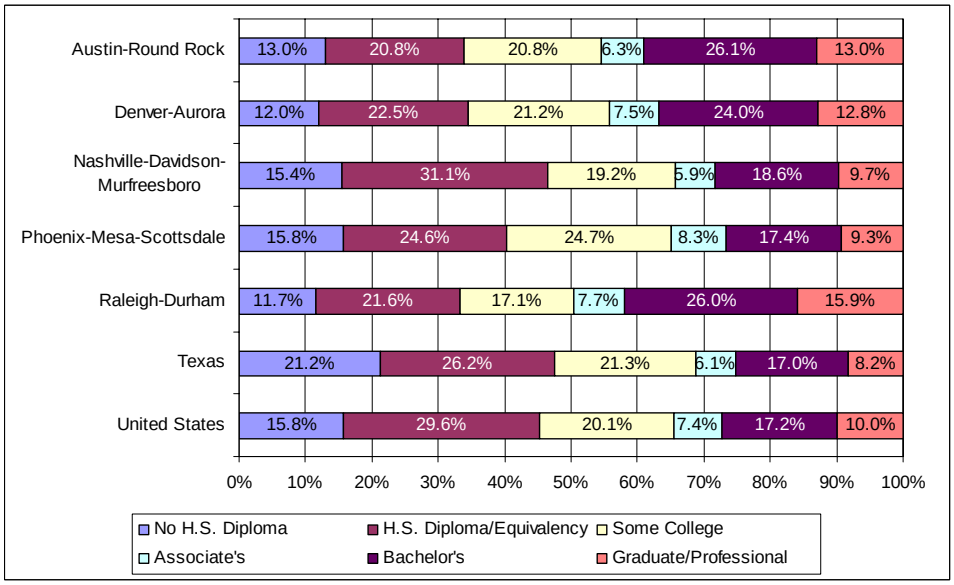


Source: Texas Workforce Commission, U.S. Census Bureau

Educational Attainment

As noted in the Demographics section of this report, educational attainment is an important indicator of socio-economic wellbeing and a key proxy for assessing workforce skill levels. As seen in the following chart, Greater Austin's educational attainment of adults ages 25 and older is high compared to the state and nation. Attainment in metro Austin is most comparable to degree-attainment levels in metro Denver and is below Raleigh-Durham's rate.

Educational Attainment, 2005



Source: U.S. Census Bureau, American Community Survey

Thus, when viewed in a competitive context, Greater Austin's well-known "human capital" may not be a key differentiator if a company is looking at metro Denver or Raleigh-Durham as a potential location to launch or expand operations.

Input from stakeholders indicates that finding skilled labor is becoming a serious problem for the business community. Below are some representative comments made during focus groups and interviews related to talent shortages.

- Start-up and growing companies have significant skills gaps in "C-level" management talent, defined as, "Full-time salaried directors or managers who report to either 'A' (CEO-level) or 'B' (Vice President-level) executives and are the senior person responsible for a particular area of activity." These companies spend a significant amount of time trying to fill such positions. However, recruiting people with proven business and management experience to Austin is difficult because the region lacks a critical mass of management jobs. There is not a "safety net" of other jobs available, which makes moving to Austin risky for an MBA or management professional as many opportunities often fall through or are short-lived.

- Stakeholder input indicates that metro Austin does not have the jobs to effectively retain recent MBAs and undergraduate business school graduates. Stakeholders said these students leave Austin for corporate jobs in Chicago, New York, Dallas, Los Angeles, and San Francisco.

- Leaders from the region's technology sector noted that it is often difficult to fill both entry-level jobs and skilled jobs that require 5+ years of experience.

- Members of the digital media business community find it difficult to fill jobs requiring just a certificate or an associate's degree. ACC has been responsive to helping the business community meet its needs.

- A major challenge for many businesses is that UT-Austin does not provide opportunities for working professionals to get an advanced degree part-time, at nights, or on the weekends. While the addition of flexible degree programs at the Round Rock Higher Education Center (RRHEC) is positive, additional programming needs to be added, particularly in engineering.

Concerns about "underemployment" were heard from many stakeholders, both from the business community and from the "talent pipeline" of graduating college students.

- Students from UT-Austin and Texas State noted that it is not uncommon for graduates to turn down "good jobs" in other cities to stay in Austin. They typically work in jobs that pay less or are beneath their skill levels. One focus group participant has a degree in biology, but has become a music teacher because she was unable to find a job in her field in Austin.

- Recent college graduates and members of the business community agree that UT-Austin does not effectively connect students with employers in metro Austin, especially small and midsized companies. Many students find jobs by posting resumes on national job search websites like monster.com or through personal networking.

- Members of the business community reported that Texas State and Texas A&M have very effective career services for companies of all sizes and business sectors.

Stakeholders in the business community overwhelmingly agree that metro Austin needs to place an increased focus on talent recruitment.

- Existing employers often feel that when new companies are recruited to Greater Austin, this only deludes the workforce even further.

Workforce Development Resources

Greater Austin is served by a wide variety of organizations that provide workforce development services to jobseekers and businesses. These organizations include two state Workforce Development Boards, non-profit organizations, and the Austin Community College district. Brief descriptions of each principal organization are listed in the following paragraphs.

- **Workforce Development Boards:** Two workforce development boards (WDB) serve metro Austin: Capital Area WDB serving Travis County and the Rural Capital Area WDB serving Bastrop, Caldwell, Hays, and Williamson Counties in addition to Blanco, Burnet, Fayette, Lee, and Llano Counties.

    - **WorkSource:** WorkSource is the workforce development system for the Capital Area WDB. It leverages federal Workforce Investment Act monies to provide free and low-cost services for workers including job search assistance, educational programming, and childcare. It also assists local businesses with recruitment and worker training. WorkSource has developed a list of high demand and high growth occupations in Travis County. These "target occupations" are where WorkSource focuses its training and staff commitments. Target occupations are in health care, information technology, construction, biomedical, hospitality, and other business sectors.

    - **Rural Capital Area WorkForce:** RCA WorkForce is the workforce development program operated by the Rural Capital Area WDB. It also provides job search assistance, educational programming, and childcare assistance to local residents. It also helps local businesses fill job openings and train workers. RCA WorkForce's target

occupations are in a variety of business sectors, including professional and technical services, manufacturing, health care, and education.

Stakeholders noted that having two workforce development boards serving the Austin MSA is confusing, both for workers accessing the system and for prospective companies. Streamlining their operations or improving coordination between them would improve clarity, especially in business recruitment operations, according to respondents.

- **Skillpoint Alliance:** The Chamber contracts with Skillpoint Alliance for workforce development services. Skillpoint is a nonprofit organization that helps train and educate workers, connects workers to jobs, and strives to meet the business community's workforce needs. In addition to providing general professional development services, Skillpoint provides specialized services for cluster industries, including semiconductors and information technology/digital media. The organization also helps to address participation gaps in higher education by race, ethnicity, and income.

- **Capital IDEA:** Created by Austin Interfaith and the business community of Central Texas, Capital IDEA funds tuition, books, and child care for underemployed individuals. The organization's goal is to lift working families out of poverty by providing them with the education and training needed to find employment that offers a living wage and benefits. Capital IDEA works with other regional workforce groups and is supported by the City of Austin, ACC, Travis County, WorkSource, and by various private and non-profit organizations.

- **Austin Community College workforce education programs:** ACC serves a wide array of workforce needs from providing adult basic education (including literacy and GED programs) to providing additional training for adults who already hold a bachelor's or advanced degree. ACC supports workforce programming in health sciences, electronics, semiconductors, manufacturing technology, and other areas as well. ACC works with over 450 members of the business community to respond to its specific industry training needs. For example, the district is working to develop training programs in digital media and film at the request of the private sector.

Stakeholder input indicates that greater focus needs to be placed on adult education, particularly since large numbers of adults without key job skills are migrating to Greater Austin. The region needs to build its adult education capacities to better serve this population. Related to this, members of the business community noted that low-skilled workers often lack "soft skills" such as punctuality, a positive attitude, and good manners, and basic business concepts. Focus group participants in the business community said it would be helpful to have a free employment readiness certification program available to workers.

Key Findings – Education and Workforce Development

- ☑ Despite notable rises in the percentage of Austin Independent School District children who are economically disadvantaged or have limited proficiency in English, the District has maintained solid performance measures in assessment testing and graduation rates. Nor has there been a seeming "flight" of students to private schools in the City of Austin.

- ☑ Greater Austin – led by UT-Austin, ACC and Texas State-San Marcos – has more college students per capita than any of the comparison areas, including Raleigh-Durham. However, Greater Austin's share of proposed statewide enrollment increases will likely need to be absorbed by boosting capacities at ACC and Texas State in San Marcos and Round Rock. UT-Austin's enrollment is capped.
    - If existing institutions cannot accommodate enrollment growth generated from efforts such as Texas' "Closing the Gaps" initiative and the Austin Chamber's "20,010 in 2010" program, a new local college may need to be chartered.

- ☑ While Greater Austin's available labor force is tightening relative to employment growth, a reportedly high degree of "underemployment" – coupled with the nearly 18 percent of adults not in the workforce – indicates that labor shortages have yet to reach a critical stage.

- ☑ High levels of educational attainment in Greater Austin are a competitive advantage against many U.S. metro areas, but compared to key peer regions such as Denver and Raleigh-Durham, metro Austin's workforce skills are not a major differentiator.

- ☑ Data showed – and public input confirmed – an apparent mismatch between degrees being awarded in Greater Austin and the workforce needs of the region's businesses.
    - While engineering degrees comprise 10 percent of all Bachelor's awards and 20 percent of doctorate degrees granted in the region, the vast majority of Bachelor's and Master's degrees earned are in business, management, marketing, social sciences, journalism and

other subjects misaligned with Greater Austin's current strengths in technology employment.

- Input respondents spoke of the difficulty recent business and liberal arts graduates have in finding quality local employment.
- Private sector representatives also identified challenges sourcing employees in certain specialized technology fields like computer gaming, as well as seasoned "C-level" executive talent able to guide growing companies to the next level of success.

* Two-year degree awards are seemingly more responsive to local needs, as health professions comprise the highest percentages of degrees and certificates earned by regional students.

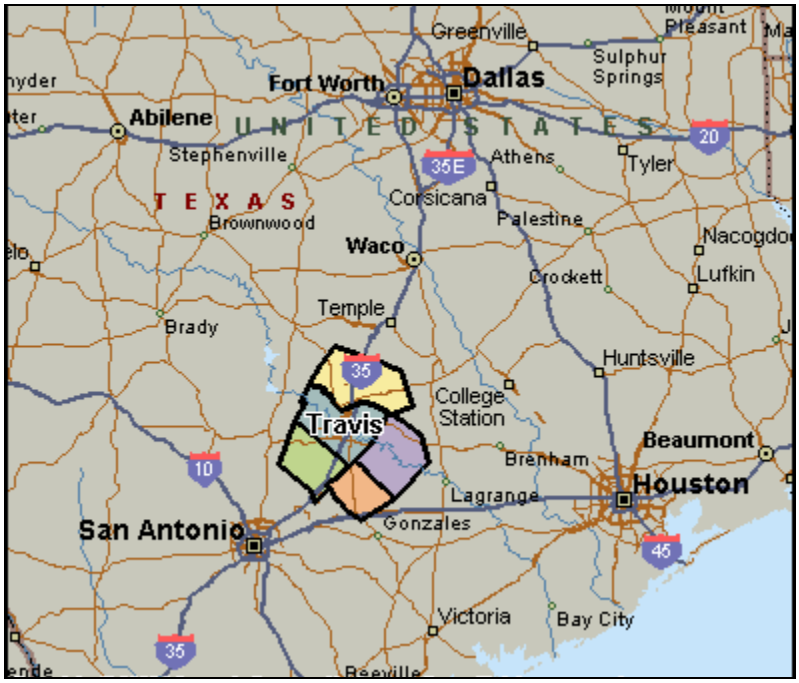
Infrastructure

In today's global economy, a community can create a competitive edge by developing and maintaining traditional infrastructure such as transportation and utilities, as well as information and communications infrastructure such as broadband and wireless services. In addition to affecting bottom-line business costs, quality infrastructure (like highways and public transit options) impacts residents' daily lives and can affect their overall satisfaction with the community. This section will examine Greater Austin's road, transit, rail, utility, and communications infrastructure against the four comparison metro areas.

Highways

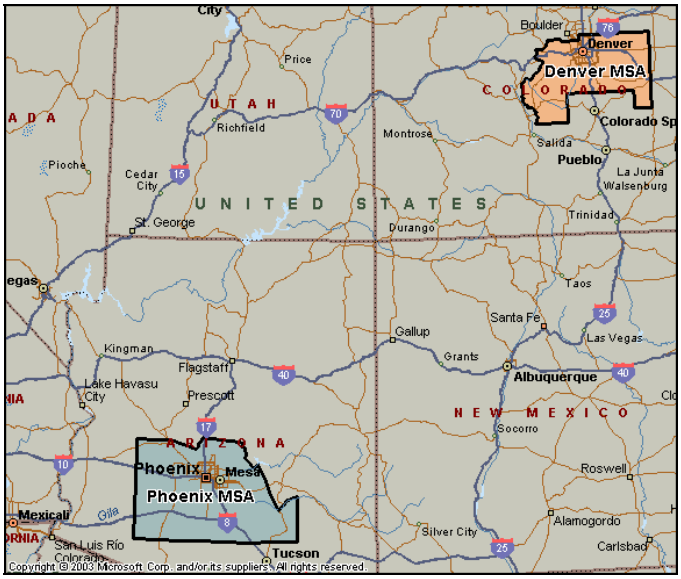
Greater Austin is connected to the large Texas metro areas of Dallas-Ft. Worth and San Antonio via north/south Interstate 35. However, the lack of an east/west Interstate and limited east/west thoroughfares has contributed to worsening traffic congestion within the metro area.

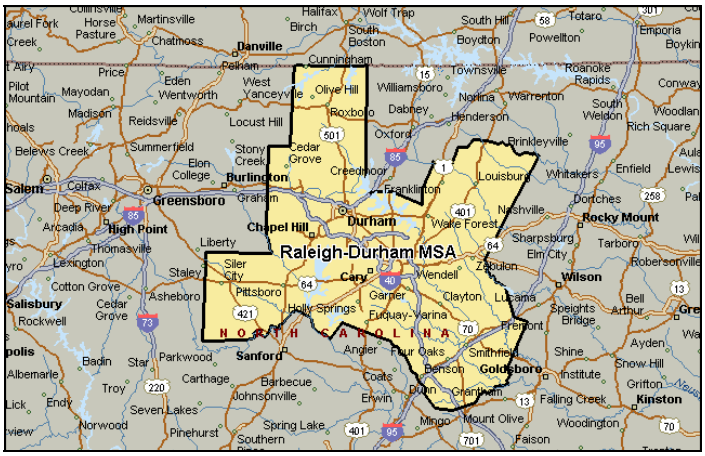
Metro Austin: Major Interstates and Highways



Austin's peer metro areas have far better Interstate connectivity, as shown by the following maps. Nashville and Raleigh-Durham are well connected by Interstate to lucrative markets like Washington DC and Atlanta. Furthermore, each of the comparison metro areas has both north/south and east/west Interstate accessibility.

Comparison Metro Areas: Interstate Access





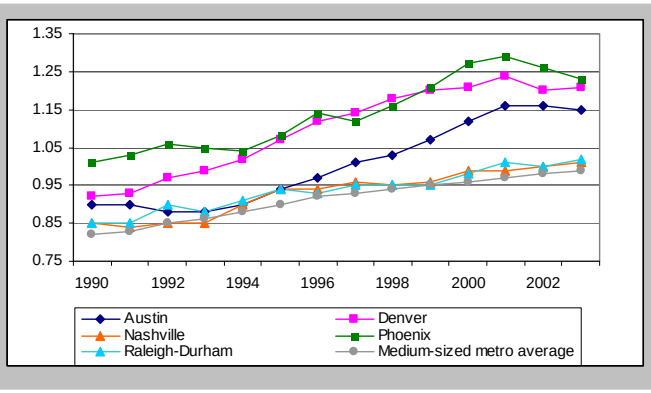
Traffic and Congestion

Because of burgeoning population growth throughout the South, traffic congestion has worsened in many of the Sunbelt's metro areas. The Texas Transportation Institute (TTI) publishes an annual "Urban Mobility Study" that measures traffic congestion and its impacts in urbanized areas throughout the country.[15] Of particular use is the study's Roadway Congestion Index (RCI), which measures vehicle travel density on major roadways in urbanized areas during peak travel times (classified as 6-9 a.m. and 4-7 p.m.). An RCI exceeding 1.0 is undesirable and indicates congestion on freeways and major arterial roads.

The following chart shows the RCI for metro Austin and each comparison community. Between 1990 and 2003, Austin experienced increasingly worse traffic congestion compared to other medium-sized metro areas. Austin, Nashville, and Raleigh-Durham are all classified by TTI as "medium urban areas," while Denver is classified as "large," and Phoenix as "very large."[16] Austin's congestion has gotten so bad that it rivals traffic in much larger urbanized areas like Denver and Phoenix.

Roadway Congestion Index by Metro Area, 1990-2003

Source:
Texas Transportation Institute



The following chart shows that, in 2003, Austin's peak-period travelers experienced 51 hours of traffic delays annually, compared to 27 hours for Raleigh-Durham and 37 hours for Nashville travelers. Austin's relative lack of interstate connectivity, fewer total miles of high-capacity expressway lanes and high population density most likely contribute to this. These factors also help explain Austin's comparatively high usage of public transit versus Nashville and Raleigh-Durham, especially considering the region's limited modes of rapid-transit.

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[15] The U.S. Census Bureau defines urbanized areas to encompass densely settled areas and classifies them for decennial Census years. However, in the years between the decennial Censuses, state Departments of Transportation are responsible for updating the urbanized definitions for their state when reporting to the Texas Transportation Institute. Therefore, while these measures are regional in approach the do not necessarily match the MSA definitions used throughout this report.

[16] Classifications are based on 2000 Census urbanized area definitions. Medium urbanized areas are those with 500,000 to 1,000,000 residents; large urbanized areas are those with is over 1 million but less than 3 million residents; and very large urbanized areas are those with more than 3 million residents.

Urbanized Area Congestion Indicators, 2003

	Urbanized Area		*Peak Travelers*		*UA Roadway Miles*		*Public Transit*
Urban Area (as defined by TTI)	**UA Size (sq miles)**	**Population Density (people/sq mile)**	**Peak Period Travelers**	**Annual Hours of Delay per Peak Traveler**	**Freeway Lane Miles**	**Principal Arterial Lane Miles**	**Annual Miles per Passenger**
Austin TX	445	1921	459,000	51	585	740	124
Denver-Aurora CO	855	2398	1,257,000	51	1140	1820	383
Nashville-Davidson TN	750	1280	516,000	37	955	950	34
Phoenix AZ	1140	2636	1,557,000	49	1325	3060	216
Raleigh-Durham NC	540	1454	422,000	27	610	615	52

Source: Texas Transportation Institute, The 2005 Annual Urban Mobility Report

The majority of community and business leaders that participated in interviews and focus groups cited traffic congestion as the number one issue threatening Austin's competitiveness. Austin was said to be "way behind" other metro areas that had the foresight to invest in transportation infrastructure before population growth boomed. Enhancing east/west connectivity, investing in roads and transit options, and finding funding sources for infrastructure improvements were all listed as key priorities related to easing traffic congestion.

Road Improvement Plans and Initiatives

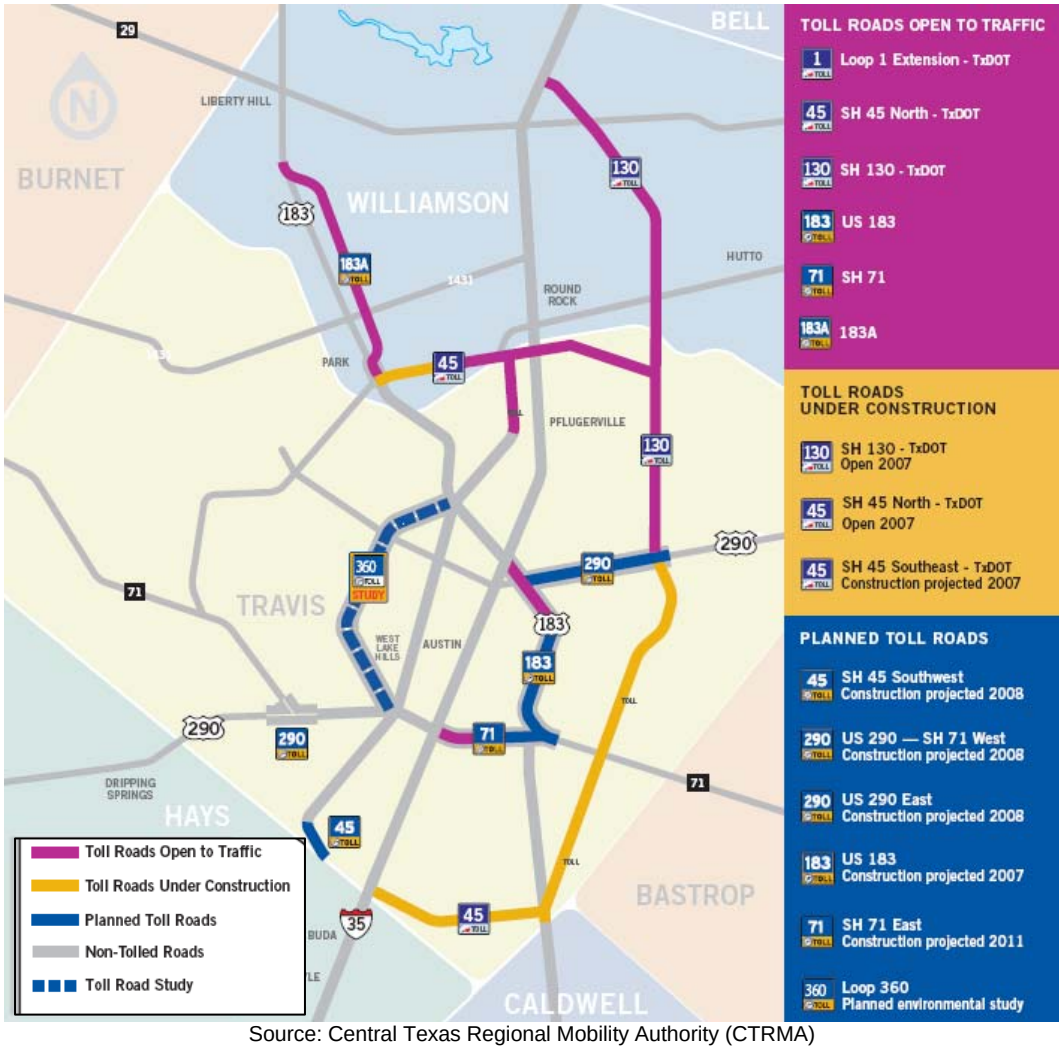
The **Central Texas Turnpike System** (CTTS) is a toll-road initiative of the Texas Department of Transportation (TDOT). Unveiled in 2002, the aim of CTTS is to improve existing roads and build new roads to improve overall traffic mobility throughout Greater Austin. In 2003, the Central Texas Regional Mobility Authority (CTRMA) was formed (under 2001 state enabling legislation Senate Bill 342) by Travis and Williamson Counties to implement the CTTS plan and future toll-road projects. CTRMA is an independent government entity that leverages local revenue bonds to finance critical mobility projects in the Austin region.

Currently, the state of Texas only has the resources to construct roughly one third of needed transportation projects.[17] By bringing local financing to the table, Austin has been able to fast-track key roadway improvements. Drivers using the turnpike system pay tolls range from $0.50 to $1.50, which helps to finance system maintenance and expansion.[18]

The following map shows phases of the CTTS. The Loop 1 (MoPac) extension and portions of SH 45 and SH130 opened in November 2006. Planned and potential roadways are also highlighted on the map, including improvements to US 290, which would help enhance the region's east/west connectivity.

[17] Source: Central Texas Turnpike System: http://www.centraltexasturnpike.org/
[18] Source: Central Texas Regional Mobility Authority: http://www.ctrma.org

Central Texas Toll-road System



Source: Central Texas Regional Mobility Authority (CTRMA)

The Capital Area Metropolitan Planning Organization (CAMPO) serves Hays, Travis, and Williamson Counties. In addition to prioritizing transportation projects for federal matching funds, it provides long-range transportation planning for its three-county region. Efforts are underway to expand CAMPO to all five metro Austin counties. Its most recent long-range plan, **CAMPO Mobility 2030,** was completed in June 2005. General policies related to the region's roadways include:

- √ Providing preferential treatment for transit and other high occupancy vehicles on the regional roadway system;

- √ Providing sufficient vehicle capacity on the regional arterial system to minimize cut-through traffic in neighborhoods;

- √ Developing a roadway system that is compatible with the needs of transportation modes other than motor vehicle, including bicycles, pedestrians, public transportation, truck freight, and rail; and

- √ Requiring appropriate private developer contributions to roadway construction costs in undeveloped areas through the development process.[19]

The Plan outlines priority projects in detail, including construction of new freeway lanes, arterial roads, rapid bus service, and commuter rail service. The Plan also discusses the difficult realities of funding such improvements especially because state and federal appropriations for transportation have declined. As such, CAMPO assumes that some new roads will be tolled. The Greater Austin Chamber views toll-roads as a viable component of a comprehensive approach to solving the region's traffic congestion.

Because of traffic's impacts on the region's economic competitiveness, the Chamber has become more involved with finding a regional, comprehensive solution to the problem. Funded by *Opportunity Austin* monies, the Greater Austin Chamber launched **"Take on Traffic"** in February 2007 in partnership with concerned citizens. 'Take on Traffic" aims to develop a comprehensive transportation plan for Central Texas (including new and expanded roadways, toll roads, rapid bus transit, and light rail) in order to improve the region's economic competitiveness and quality of life.

The organization estimates that 500 cars are added to the region's roadways every week.[20] Increasing congestion has several negative impacts on Greater Austin including high traffic fatality rates, an increased number of childhood asthma diagnoses, stress on the City's emergency services, lost productivity, and negative environmental impacts.[21] Although the initiative is still ramping up, it was said by input participants to be effective in raising awareness about the issues associated with traffic congestion and arming local residents with the facts about traffic impacts, planning actions, and funding options to help make informed decisions about Greater Austin's future.

One stakeholder from the business community noted that population growth will happen regardless if the region is able to absorb it. If investments in infrastructure do not keep pace, this will prove to be a detriment to Austin's quality of life and its competitiveness.

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[19] CAMPO. (June 6, 2005). CAMPO Mobility 2030 Plan. Accessed online at: http://www.campotexas.org/pdfs/AdoptedMobility2030Plan.pdf

[20] Grisales, Claudia. (February 20, 2007). Chamber Launched Traffic Initiative. *Austin American-Statesman*.

[21] Take on Traffic (February 20, 2007). Austin Chamber of Commerce Launches Take on Traffic. Press conference video accessed online at: http://www.takeontraffic.com/

Public Transit

The Capital Metropolitan Transportation Authority (Capital Metro or CMTA) provides bus, trolley, vanpool, and demand-response services within the City of Austin as well as the cities of Manor, San Leanna, Leander, Jonestown, Lago Vista, Point Venture, Volente and selected areas of unincorporated Williamson and Travis Counties. The region's rural areas are served by public transit as well. The Capital Area Rural Transportation System (CARTS) provides bus, demand-response, and park-and-ride commuter services to Austin for Bastrop, Caldwell, and Hays Counties, in addition to the rural areas of Travis and Williamson Counties.[22]

The following chart compares the urban public transportation systems in Austin and the comparison communities in 2005. Capital Metro operates 323 busses, more than Nashville or Raleigh-Durham. Annual-bus-miles-per-resident averages 156 in Austin, more than any comparison community transit service except for Denver. However, Capital Metro's operating costs per mile are comparatively high and its total fare revenues are comparatively low.

Comparison of Public Transportation Systems, 2005

		Service Area Data		*Bus Data*		*Consumption Data*		
	System	**Population**	**Square Miles**	**# Operated or Contracted**	**Operating Expense per Passenger Mile**	**Total Fare Revenues (Millions)**	**Annual Passenger Miles (Millions)**	**Average Annual Miles Per Resident**
Austin	CMTA	727,000	572	323	0.93	4.8	113	156
Denver	RTD	2,598,000	2,326	928	0.64	58.9	443	171
Nashville	MTA	573,294	484	113	0.81	7.1	33	58
Phoenix	RPTA	2,061,020	413	107	0.56	2.5	39	19
	Valley Metro	1,438,726	515	411	0.63	25.3	174	121
Raleigh-Durham	DATA	179,000	93	37	0.69	2.1	19	104
	CAT	311,053	125	46	0.75	1.7	14	45
	TTA	1,002,876	1,525	49	0.97	1.2	18	18

Source: National Transit Database
CMTA=Capital Metropolitan Transportation Authority; RTD=Denver Regional Transportation District; MTA=Metropolitan Transit Authority; RPTA=Regional Public Transportation Authority; Valley Metro=City of Phoenix Public Transit Department; DATA=Durham Area Transit Authority; CAT=Capital Area Transit Authority; TTA=Research Triangle Regional Public Transportation Authority

In Austin, taxpayers more heavily subsidize transit services. About 72 percent of Capital Metro's operating funds are provided locally, compared to 62 percent in Denver, 43 percent in Nashville, 58 to 85 percent in Phoenix, and 10 to 59 percent in Raleigh-Durham. Local funding comes from a one percent sales tax levied in the communities Capital Metro serves. A portion of these monies are sent back by Capital Metro to the local jurisdictions for transportation projects in its service areas.

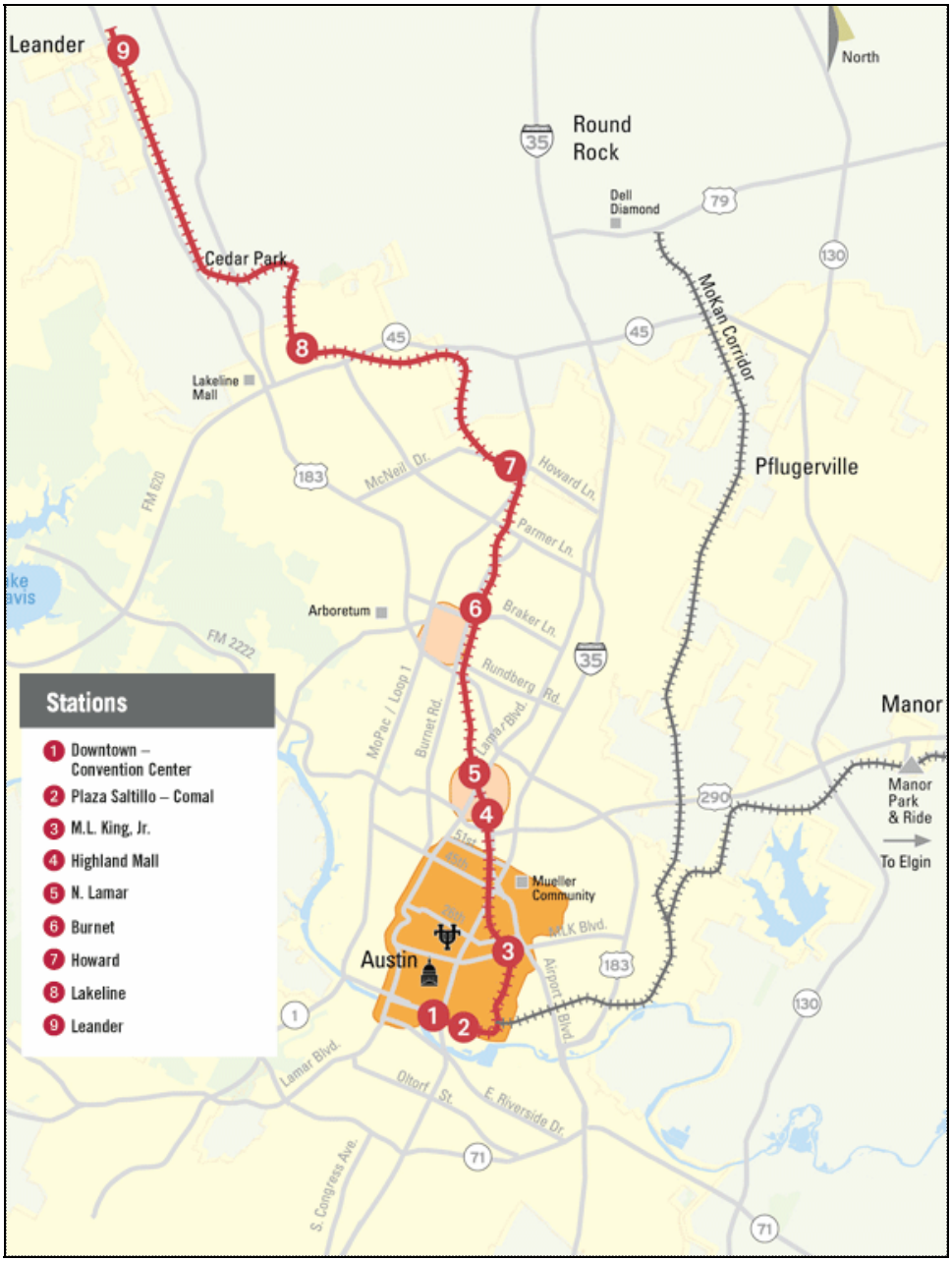
[22] CAMPO. (June 6, 2005). CAMPO Mobility 2030 Plan. Accessed online at: http://www.campotexas.org/pdfs/AdoptedMobility2030Plan.pdf

Stakeholders who participated in interviews and focus groups reported "great frustration" with the speed at which mass transit improvements are made in Austin. One stakeholder noted that a sizable transit bond passed in 2004, but there has been little communication to the public about when they can expect to see results. Improving communication about how investments are being made and when new services will be rolled out would help to garner support for further investments in transit services.

Recent efforts to expand transit options to include commuter and local rail service have the potential to curtail traffic congestion in the future. In 2004, **Capital Metro** developed a 2030 long-range plan through a community-driven visioning process. The result was "All Systems Go," a comprehensive transportation plan that includes local bus service, express and rapid bus service, and commuter rail service. The following map shows the **Capital MetroRail**'s first commuter rail line, currently scheduled to begin service in 2008. The red line will use 32 miles of rail line from Leander to downtown Austin. The red line will have nine stations and its trains will feature bicycle racks and Wi-Fi connections.[23] The map also shows two additional lines for future expansion consideration (in grey). Such expansions would require a voter referendum for approval.

[23] Capital Metro. All Systems Go! Accessed online at: http://allsystemsgo.capmetro.org/capital-metrorail.shtml

Capital MetroRail Commuter Rail

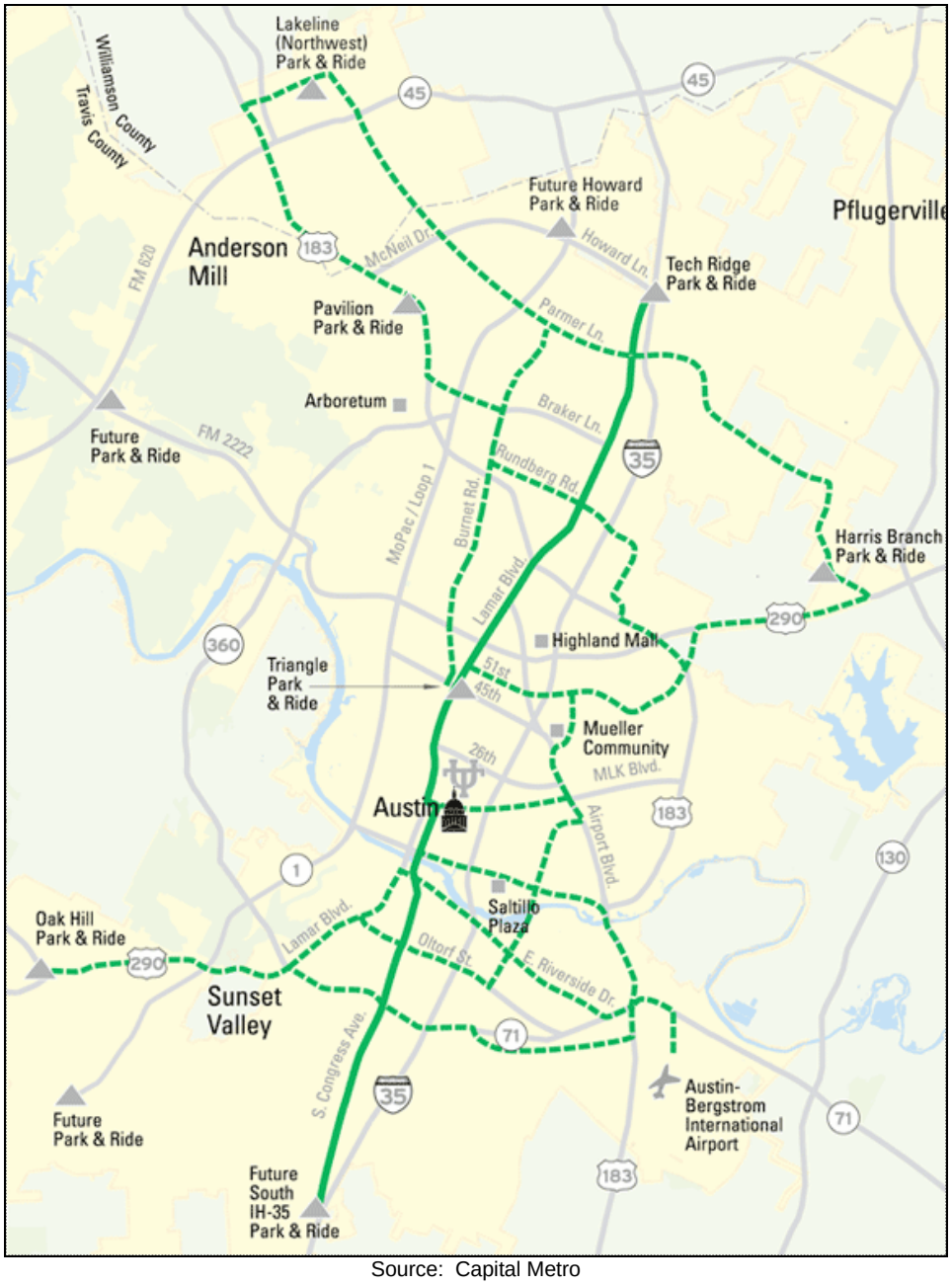


Source: Capital Metro

Capital Metro's rapid bus service aims to improve transit service in-town. Called **Capital MetroRapid,** this service will feature train-like, high-tech buses that "talk" to traffic signals to keep lights green to keep approaching buses moving. The system will also feature stops with monitors that let passengers know exactly what time the

next bus is arriving. Ten rapid bus lines totaling 133 miles are planned over the next twenty-five years.[24]

Capital MetroRapid Bus Service

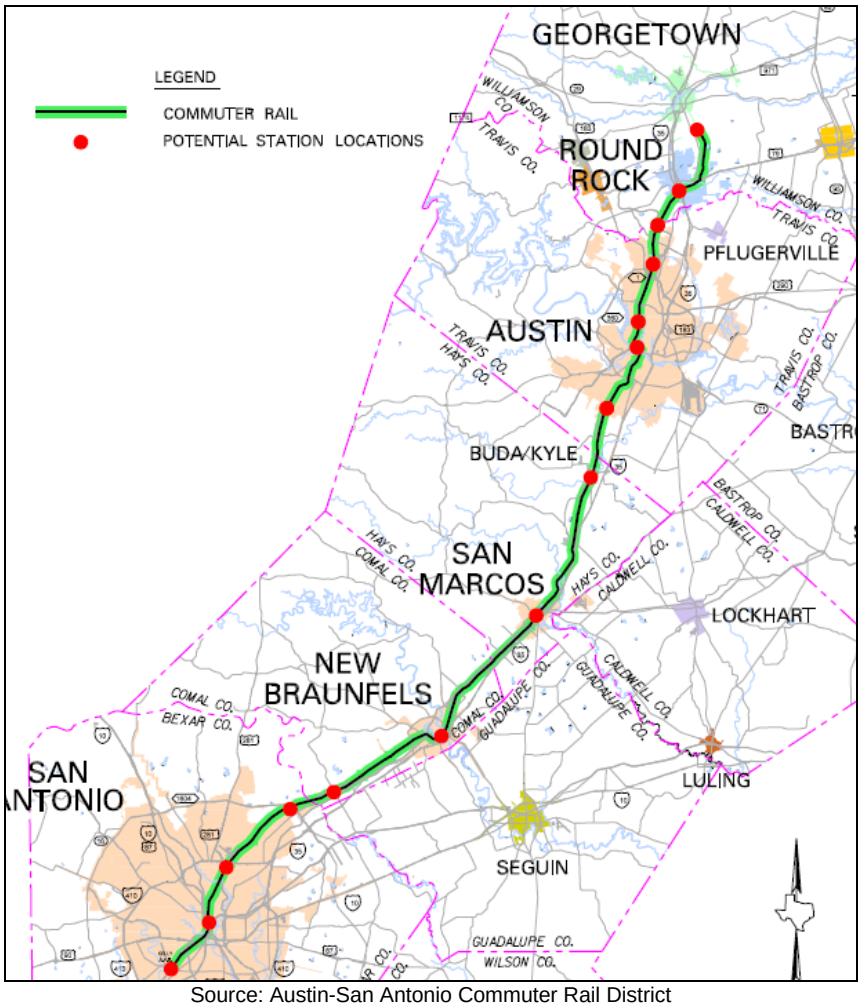


Source: Capital Metro

[24] Capital Metro. All Systems Go! Accessed online at: http://allsystemsgo.capmetro.org/capital-metrorapid.shtml

The **Austin-San Antonio Commuter Rail District (ASARD)** was created by the City of Austin, Travis County, the City of San Antonio, and Bexar County in 2002. Community leaders formed this partnership to collaboratively pursue the development of commuter rail service in the Austin-San Antonio corridor. An initial feasibility study was conducted in 1999 and an update was completed in 2005. The proposed commuter line would have 14 stations over 112 miles of existing Union Pacific freight line and be funded by a consortium of local and regional partners, Texas and the federal government. Once ASARD determines that regional passenger rail is technically and financially feasible, it would proceed to right-of-way acquisition and construction. If all tasks were to continue on schedule, passenger rail service could begin as early as 2012. [25]

Austin-San Antonio Commuter Rail District (ASARD)



Source: Austin-San Antonio Commuter Rail District

[25] ASARD Public Meeting Presentation. Accessed online at: http://asarail.org/ASA_Pub_Presentation.pdf

Air Transportation

Austin-Bergstrom International Airport opened in 1999. It currently provides direct service to 43 domestic cities and two international cities, both in Mexico. The following chart shows passenger and cargo traffic for Austin-Bergstrom and the major airports in each comparison community. Airports in Denver and Phoenix have high passenger and cargo traffic counts, while Austin, Nashville, and Raleigh-Durham airports are second-tier passenger and cargo hubs. While Austin's passenger counts have grown at a competitive rate, cargo traffic declined 5 percent between 2004 and 2005.

Passenger and Cargo Traffic, 2005

	Passengers				*Cargo*		
	Passenger Count (Millions)	**Change since 2004**	**Passenger Traffic Ranking***	**Non-Stop Destinations*** (domestic & int'l.)**	**Cargo (Thousands of Metric Tons)**	**Change since 2004**	**Cargo Traffic Ranking****
Austin (AUS)	7,683,545	6.1%	50	45	109,662	-5.0%	48
Denver (DEN)	43,387,513	2.6%	6	130	309,848	-2.4%	22
Nashville (BNA)	9,232,541	6.5%	45	49	65,274	1.8%	65
Phoenix (PHX)	41,213,754	4.3%	8	102	302,197	0.0%	24
Raleigh-Durham (RDU)	9,204,490	7.0%	46	46	109,768	1.3%	47

Sources: Airports Council International, AUS, DEN, BNA, PHX, RDU
*Ranking of 175 North American commercial airports by total passengers
** Ranking of 161 North American airports by metric tons of cargo moved
***Current as of 2007

It is important to note that since 2005, passenger traffic at Austin-Bergstrom has continued to increase. March 2007 marked the highest number of passengers in a single month traveling through the airport.

Focus group participants from the region's business community note that air service continues to be a competitive challenge in terms of business costs and productivity. While there is satisfaction with the increased number of domestic non-stop destinations at Austin-Bergstrom, the frequency of flights remains an issue. Because most international flights stop in Dallas, representatives from multinational companies say they lose productivity in transit. Initiating non-stop destinations in a few key markets, particularly in Europe and Asia, would help address this issue, participants said.

Rail Service

Class 1 rail service is important for some types of businesses. The Austin region is served by two class 1 railroads, Burlington Northern/Santa Fe and Union Pacific. Unlike Denver, Nashville, and Phoenix, Austin lacks a major inter-modal facility. Such facilities are located in Dallas and Fort Worth. In fact, Greater Austin has no rail yards whatsoever.

Class I Rail Service & Intermodal Facilities, 2007

	Austin	Denver	Nashville	Phoenix	Raleigh-Durham
Burlington Northern/Santa Fe	x	x		X	
CSX			x		x
Norfolk Southern					x
Union Pacific	x	x		X	
Inter-Modal Facilities	-	UP, BNSF	CSX	BNSF	-

Source: Union Pacific, Burlington Northern/Santa Fe, Norfolk Southern, CSX

While this reality may be a competitive disadvantage for shipment of goods, it has opened up opportunities for commuter rail. Both the Austin-San Antonio and MetroRail commuter lines will share existing track and/or relocate freight lines around the station sites.

Communications Infrastructure

The emerging knowledge-based economy is driven in part by the ease with which people can communicate with each other and obtain information via broadband, wire-line, and wireless telecommunications infrastructure. Regions with the most up-to-date telecommunications resources have a natural competitive edge in the global economic development marketplace. The Greater Austin region is served by a wide variety of internet service providers, with SONET ring-protected fiber optic lines as the general standard.

In terms of wireless, Austin has become a best practice community in development of this technology. The City and the University of Texas-Austin had the foresight to invest early in wireless technologies, earning Austin the reputation for being a top "un-wired city" in the nation.[26] This rating is based on the number of commercial and public (or "free") wireless Internet access points and broadband availability in Austin. The City of Austin's "Outdoor Wireless Mesh Project", announced in March 2006, will provide wireless coverage in areas of downtown, east Austin, and Zilker Park not served by independent wireless "hot spots." This "mesh" is the first of its kind in the United States, making Austin an ideal test environment for the network's applications in education, economic development, and digital convergence.[27]

Most Unwired Cities, 2005

Metro Area	Ranking
Austin	3
Denver	7
Nashville	27
Phoenix	55
Raleigh-Durham	8

Source: Intel, Sperling's

Note; Findings are based on the availability of commercial, public and free wireless access points populate cities and metropolitan areas.

Wireless technologies not only enhance Austin's quality of life, but they are also helping to propel the region's economy forward. Several top companies compose

[26] Accessed online at: http://www.intel.com/personal/wireless/unwiredcities/index.htm.
[27] City of Austin. (March 2006). Press Release: City of Austin Introduces Wireless Initiative. Accessed online at: http://www.ci.austin.tx.us/news/2006/digital_convergence.htm.

Austin's wireless business community including IBM, Dell, Texas Instruments, Bandspeed, Cingular Wireless, Motorola, and AT&T. Furthermore, the non-profit WiFi Alliance industry group, which is working to establish a worldwide standard for high-speed wireless, located its world headquarters in Austin. This robust capacity helps to ensure that Austin's communication infrastructure remains cutting-edge and helps create a competitive business climate for companies in virtually every business sector.

KEY FINDINGS – INFRASTRUCTURE

- ☑ Though numerous transportation improvements are either complete or in the development pipeline, traffic congestion was said by many public input respondents to still be Greater Austin's number one competitive concern.
    - When viewed against the comparison communities, Austin has higher annual hours of delay per peak traveler and is the only region without east-west Interstate accessibility.
    - Toll roads, commuter rail, and bus rapid transit have the potential to provide mobility options for regional residents, and thereby lessen congestion at peak periods. However, input respondents said that regional leaders must be vigilant to maintain local consensus behind these projects, and fast-track them whenever possible.

- ☑ Passenger service at Austin-Bergstrom International Airport has improved markedly in recent years, according to local stakeholders. However, passenger counts at ABIA are still lower than the comparison airports, and input respondents lamented a lack of multiple non-stops to certain destinations and few direct international flights.
    - Cargo operations at ABIA are on the decline as metro Austin seems to suffer from a lack of intermodal distribution facilities and competitive transportation infrastructure capacity.

- ☑ Telecommunications infrastructure is a local strength, with Austin named one of the most "unwired" regions in America by a recent survey.

Business Costs

Businesses of all sizes are always seeking to improve their bottom line by cutting operating costs. Thus, operating costs are often a primary concern as business make relocation, expansion, or start-up decisions. This section examines Greater Austin's competitive position in terms of real estate and land prices, labor costs, utility costs, and taxes and incentives.

Land Prices and Availability

Typically, availability of buildings and sites is not an issue in the South; even when urban areas run out of space for development, redevelopment opportunities and space in suburban counties are usually plentiful. As communities in the Sun Belt continue to boom, it will be important to track land prices and availability as a factor of economic competitiveness.

Industrial

Each quarter, the global real estate firm CB Richard Ellis publishes its *Industrial Availability Index*. This index measures the available space in large industrial buildings (100,000 square feet or larger) as a percentage of the total amount of such space. Availability is classified as vacant buildings, under-construction buildings, and empty space available in existing buildings. Compared to its peer metro groups and the United States, Austin has a surplus of large industrial buildings. Nationally, Austin ranked second, just behind Atlanta, for its percentage of industrial availability. Nearly 20 percent of its industrial space is available, compared to just 9.7 percent nationwide. Furthermore, there has been virtually no absorption in the past year. This indicates that Austin's large-scale industrial real estate market is currently over-supplied.

National Industrial Availability Index, Fourth Quarter 2005 – Fourth Quarter 2006

Market Area	4Q06	Change, 4Q05-4Q06
Austin	19.5%	0.4%
Denver	9.4%	-1.4%
Nashville	8.4%	-1.3%
Phoenix	13.2%	5.7%
Raleigh-Durham	n/a	n/a
United States	9.7%	0.0%

Source: CB Richard Ellis

Metro Austin's wide range in industrial lease rates reflects a diverse array of buildings that cater to flex tech, R&D, manufacturing, and other uses. Compared to Raleigh-Durham, which

Industrial Market Average Asking Lease Rates, Square Feet Per Year, Fourth Quarter 2006

Market Area	Total Market	Flex/R&D	Mfg./Warehouse
Austin, 2006	$4.32-$10.20	$7.80-$10.20	$4.32-$7.44
Denver, 4Q06	$5.73	n/a	n/a
Nashville, 3Q06	$3.79	n/a	n/a
Phoenix, 4Q06	$8.76	n/a	n/a
Raleigh-Durham. 3Q06	$4.19-$9.61	$9.61	$4.19

Sources: NAI Commercial Industrial Properties, Co.; CB Richard Ellis

has a similarly high presence of R&D-driven firms and thus may experience similar market demands. Greater Austin's rates are not anti-competitive versus Denver, Nashville, and Phoenix as well.

Office

The numbers tell a different story about metro Austin's office market. Although downtown Austin has a comparatively higher office vacancy rate, suburban and metro-wide rates are similar to its peer metro regions. The downtown vacancy rate dropped 4.3 percent between the fourth quarters of 2005 and 2006, showing absorption and positive movement closer to the national rate.

National Office Vacancy Index, Fourth Quarter 2005 – Fourth Quarter 2006

Market Area	Downtown		Suburban		Metro-Wide	
	4Q06	Change, 4Q05-4Q06	4Q06	Change, 4Q05-4Q06	4Q06	Change, 4Q05-4Q06
Austin	18.3%	-4.3%	13.1%	-1.4%	14.5%	-2.1%
Denver	10.9%	-1.0%	14.6%	-2.3%	13.8%	-2.0%
Nashville	12.3%	0.3%	10.1%	1.9%	10.6%	1.5%
Phoenix	11.5%	-4.4%	11.0%	-1.8%	11.1%	-2.4%
Raleigh-Durham	n/a	n/a	n/a	n/a	n/a	n/a
United States	10.8%	-1.9%	13.6%	-1.0%	12.6%	-1.3%

Source: CB Richard Ellis

Office space downtown Austin is relatively expensive. Class A downtown office space leases for about $30 per square foot. This is comparatively higher than downtown office space in Nashville and Raleigh, which averages about $16 - $16.50 per square foot, and the Austin region's suburbs.[28] Because net absorption trends are favorable, Austin's downtown office market can demand a higher premium.

A recent analysis of Austin's office market by local real estate firm Oxford Commercial noted that city-wide vacancies are at their lowest level, and rents at their highest level, since 2001. This trend may reverse in the long term, however, as leasing activity has slowed and several new office buildings are under construction, including three with 200,000 or more square feet of rentable space. If this infusion of new capacity does not help to bring down Class A lease rates, some tenants may shop around for more affordable options.[29]

Retail

Examining retail is important when determining a region's competitiveness because retailers generate sales tax revenue often used for community improvements and administration. Austin's metro-wide retail lease rates are competitive with its peer

[28] Source: CB Richard Ellis
[29] Novak, Shonda. (April 3, 2007). Area Office Market Tightest in 6 Years. *The Austin American-Statesman*.

metro areas at about $1.54-$1.81 per square foot, with downtown rates slightly higher at $1.75-$2.30.[30]

In the forth quarter of 2006, Austin's downtown had a low 3.6 retail vacancy rate compared to 4.6 in Phoenix and 6.4 in downtown Denver. Metro-wide retail vacancy rates in Greater Austin are higher than Denver, Nashville, and Phoenix (information for Raleigh-Durham was not available). Despite this, new high-end retail developments in the region signal confidence in the market. For example, Domain is a brand new mixed-use community featuring 700,000 square feet of retail space including Louis Vuitton, Barney's and Neiman Marcus.[31] The redevelopment of the Robert Mueller Municipal Airport is also bringing in new retail development into historically underserved East Austin.[32]

Retail Market Vacancy Rate, Fourth Quarter 2006*

Market Area	Dowtown	Metro-Wide
Austin, 3Q & 4Q06	3.6%	6.5%
Denver, 4Q06	6.4%	5.4%
Nashville, 3Q06	2.1%	3.6%
Phoenix, 4Q06	4.6%	5.1%
Raleigh-Durham	n/a	n/a

*"East Phoenix" in report most closely represents the area of the Central Business District.
Sources: NAI Commercial Industrial Properties, Co
CB Richard Ellis

Development Process

High costs and a reportedly arbitrary permitting process were key competitive concerns in 2003. Since that time, the City of Austin has made many changes in the way it approaches planning, permitting, and development. It overhauled its development-review system, which was largely criticized for being difficult to navigate, and instituted a "One Stop Shop" for permitting by co-locating nearly all the agencies involved in the process. Numerous personnel changes were made, with a roughly 40 percent staff turnover rate from 2003.

The City has also adopted – or plans to adopt – citywide design guidelines, a mixed-use overly district, and transit-oriented development (TOD) plans to correspond with the opening of Austin's first commuter rail line.

Austin also launched a new online permitting system in March 2007. The $3.2 million online system took three years to develop and will allow the public, developers, and city staff to easily track the work of six city departments in permitting review and approval process. Instead of using paper forms in duplicate, investments in technology have empowered staff to be more efficient. For example, building inspectors are now equipped with tablet PCs to wirelessly upload inspection results

[30] Source: CB Richard Ellis; forth quarter 2006.
[31] American-Statesman Staff (February 27, 2007). Domain Dwellings Have an Upscale Address. *The Austin American-Statesman*.
[32] Rockwell, Lilly. (March 22, 2007). Seton to Move Headquarters to Mueller. *The Austin American-Statesman*.

immediately.[33] These improvements are intended to make the permitting process more efficient and transparent. City officials estimate that – on the whole – the permitting process has made at least a 50 percent improvement since 2003.

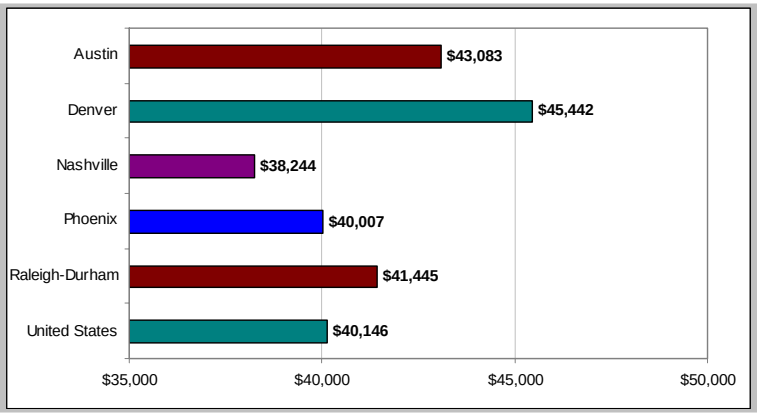
Public input respondents in the development community acknowledged that the City has taken clear strides to improve its development-review and permitting process. While some developers still feel the system is time- and cost-intensive, others say that the City's improvements have had a positive effect. Overall, Austin's permitting process was not said to be as priority a competitive concern as it was in 2003.

Labor Costs and Unionization

Average wages can be a double-edged sword in community and economic development. On one hand, employees want higher wages to raise their standard of living. On the other hand, businesses want lower wages to maintain profitability and competitiveness. Viable communities are those where wages are balanced between the interests of both workers and businesses. In 2005, the Austin MSA had an average annual wage per job of $43,083, which was higher than the national average and those for all the comparison metro areas, except Denver.

Average Wage Per Job (by MSA), 2005

Source: U.S. Bureau of Economic Analysis



The following table shows average hourly wags by business sector for Austin, the comparison metro areas, and the United States. Austin's median hourly wage for all occupations in 2005 was $14.38, just slightly above the nation at $14.15. Businesses employing persons in computer and mathematical occupations; life science occupations; health care occupations; sales; and administrative support will find that Austin's labor is relatively affordable. The region's large, well-educated workforce, high labor force participation rates, and a reported "underemployment" issue are likely contributing factors to the affordability of high-skilled labor in Greater Austin.

[33] Alexander, Kate. (March 1, 2007). Get an Early Peek at Upcoming Development in Austin. *The Austin American-Statesman.*

Median Hourly Wages by Occupation (by MSA), May 2005

	Austin	Denver	Nashville	Phoenix	Raleigh	Durham	United States
Management	$37.00	$41.55	$30.42	$33.82	$37.12	$41.82	$37.32
Business & Financial Operations	$23.11	$26.60	$21.86	$22.90	$23.96	$25.55	$24.88
Computer & Mathematical	$30.72	$33.50	$25.52	$27.49	$30.27	$35.47	$30.74
Architecture & Engineering	$28.04	$30.29	$25.06	$28.33	$26.25	$32.03	$28.94
Life, Physical, & Social Science	$25.95	$29.46	$23.31	$22.55	$21.08	$26.60	$24.78
Community & Social Services	$15.57	$17.31	$14.60	$16.38	$17.08	$16.76	$16.52
Legal	$26.11	$30.23	$21.69	$29.30	$21.70	$22.89	$30.24
Education, Training, & Library	$17.56	$18.68	$17.25	$15.21	$16.83	$20.52	$19.04
Arts, Design, Entertainment, Sports, & Media	$17.39	$18.98	$16.81	$15.78	$17.70	$18.84	$17.71
Healthcare Practitioner & Technical	$23.80	$26.09	$22.56	$24.21	$23.22	$24.15	$23.83
Healthcare Support	$10.77	$13.19	$10.68	$11.06	$10.62	$10.54	$10.64
Protective Service	$14.86	$16.92	$12.46	$14.31	$13.07	$15.01	$15.00
Food Preparation & Serving Related	$7.35	$8.38	$7.55	$7.50	$7.37	$8.15	$7.73
Building & Grounds Cleaning & Maintenance	$9.02	$9.94	$9.17	$8.46	$9.08	$8.73	$9.50
Personal Care & Service	$8.76	$10.17	$8.60	$9.57	$8.80	$9.52	$8.89
Sales & Related	$10.96	$13.38	$11.05	$11.47	$10.79	$10.76	$10.64
Office & Administrative Support	$13.25	$15.16	$12.88	$12.81	$13.48	$14.37	$13.10
Farming, Fishing, & Forestry	$8.66	$9.17	$8.88	$6.88	$11.46	$8.87	$8.41
Construction & Extraction	$12.78	$17.30	$14.42	$14.76	$13.98	$15.02	$16.66
Installation, Maintenance, & Repair	$16.44	$19.35	$16.86	$16.93	$16.31	$18.73	$17.25
Production	$11.96	$13.79	$13.52	$12.00	$13.05	$13.55	$12.91
Transportation & Material Moving	$11.27	$13.46	$12.01	$11.51	$11.66	$11.13	$11.90
All Occupations	**$14.38**	**$16.45**	**$13.73**	**$13.58**	**$14.60**	**$16.43**	**$14.15**

Source: U.S. Bureau of Labor Statistics
Data were not available at the county level and MSAs were aggregated according to 1999 (2000 Census) definitions. At this time, Raleigh and Durham were two separate metropolitan statistical areas. See Methodology section of this report.

For some employers, unionization can be an important factor in business location decisions. Union membership as a percentage of all wage and salary workers for the Austin metro area was 3.0 percent compared to 12.0 percent nationwide in 2006. Private sector unionization is virtually non-existent in Austin, with less than two percent of its workers as union members compared to 7.4 percent nationwide. Raleigh-Durham has similarly low unionization rates, while Denver, Nashville, and Phoenix's rates are higher.

Union Membership and Representation Rates of Employed Workforce, 2006

Metro Area	Total		Private Sector Only	
	Membership	Representation	Membership	Representation
Austin	3.0%	3.9%	0.9%	1.5%
Denver	8.0%	9.0%	4.9%	5.5%
Nashville	7.7%	8.9%	5.8%	6.4%
Phoenix	7.8%	10.0%	4.7%	6.4%
Raleigh-Durham	3.1%	3.1%	1.9%	1.9%
United States	12.0%	13.1%	7.4%	8.1%

Source: Unionstats

Utility and Gasoline Costs

Energy costs, availability, and reliability (particularly in peak times) are major considerations for traditional manufacturing companies. However, they are also critical issues for health care and technology firms that rely on consistent, affordable sources for power. Recent increases in industrial and commercial power costs have made Austin's business climate less competitive than its peer metros. At $0.068 per kilowatt hour, industrial businesses in Greater Austin bear a greater burden for electricity than in the comparison communities.[34] Between 2002 and 2005, cost of industrial power nearly doubled in the Austin metro area. This is a potentially key competitive concern in the region.

At the same time, customers experienced issues with reliability with one of the region's largest electricity providers, Austin Energy. Freescale estimated that four power outages over the past four years have cost the company between $15 and $20 million; with each outage its plant was shut down and its machines cleaned and recalibrated. However, Austin Energy maintains it is continuing to upgrade and improve its system.[35] In recent months, reliability has improved and Austin's City Council has reviewed a proposed 2.5 percent rate decrease for large industrial customers like Samsung. Such a move would help address Austin's competitiveness in this regard.[36]

Industrial Power Costs, 2002-2005
(per kilowatt hour)

Metro Area	2002	2005	Percent Change
Austin	$0.048	$0.068	43.4%
Denver	$0.044	$0.058	32.4%
Nashville	$0.046	$0.052	12.0%
Phoenix	$0.054	$0.053	-1.7%
Raleigh-Durham	$0.047	$0.050	7.1%

Commercial Power Costs, 2002-2005
(per kilowatt hour)

Metro Area	2002	2005	Percent Change
Austin	$0.071	$0.088	25.2%
Denver	$0.054	$0.078	42.7%
Nashville	$0.066	$0.072	9.5%
Phoenix	$0.070	$0.074	4.6%
Raleigh-Durham	$0.063	$0.066	4.6%

Source: U.S. Department of Energy, Energy Information Administration

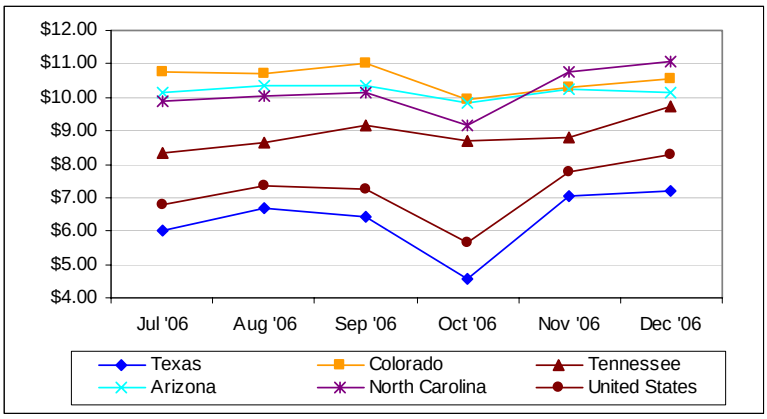
Note: Costs are metro-wide averages of all electricity company rates within each region

Stakeholders raised the cost of electricity for commercial and industrial consumers as a longstanding issue challenging the region's competitiveness. One stakeholder noted that electric deregulation in Texas in 2003 made the market uncertain. Rates were predicted to come down, but this has not happened. There is also the perception that commercial and industrial rates are raised more often than residential rates in Greater Austin.

[34] Cost is calculated by weighing kWh rates by number of customers, then totaling at the regional, metro, and state levels. Cents per kilowatt-hour (kWh) is calculated by dividing revenue by sales.
[35] American-Statesman Staff. (August 29, 2006). Disconnect: Samsung had problems with Austin Energy Too. *The Austin American-Statesman*.
[36] Alexander, Kate. (March 28, 2007). Austin May Cut Power Rates for Tech Firms. *The Austin American-Statesman*.

While industrial power costs have outpaced the comparison metro areas, industrial gas prices in the state of Texas remain lower than the national average. In December 2006, industrial natural gas prices (per thousand cubic feet) were $7.21 in Texas compared to $8.26 nationally. Texas' prices are lower than all of the comparison community states (Arizona, $10.15; Colorado, $10.53; North Carolina $11.05; and Tennessee, $9.75). This is probably due to the state's petroleum industry, which typically harvests natural gas in the oil extraction process.

Industrial Natural Gas Prices (per thousand Cubic Feet), July 2006-December 2006



Source: U.S. Department of Energy, Energy Information Administration

Gas prices are a concern for the workforce, many of whom depend on automobiles to get to and from work, and for many types businesses. In March 2007, the most recent month which data are available, Austin and Nashville posted the lowest regular, unleaded gas prices per gallon at $2.40, compared to the average $2.55 per gallon nationally. Nationally, gas prices again nearing record highs in the summer of 2007.

Average Regular Gasoline Prices, March 2007

Source:
AAA Daily Gauge Fuel Report

Metro Area	March 2007	March 2006	Highest Recorded Price (Sep 2005)
Austin	$2.40	$2.29	$2.92
Denver	$2.45	$2.30	$3.02
Nashville	$2.40	$2.27	$3.14
Phoenix	$2.61	$2.34	$3.15
Raleigh-Durham	$2.49	$2.36	$3.18
United States	$2.55	$2.36	$3.06

Taxes and Incentives

Companies and site selection consultants often focus on local and state taxes and incentives as reasons to select or eliminate a particular site from consideration. While this section will describe various tax rates in Texas in comparison to Austin's peer metro areas, it is important to note that very low tax rates can sometimes indicate a possible unwillingness to make targeted investments in education, health

care, and infrastructure through higher tax rates. In addition, the importance of various types of taxes depends on individual businesses and their total tax package. Greater Austin's comparative tax rates are very competitive compared to peer metros, particularly its new 1 percent corporate tax rate. While Austin's property and sales taxes are higher, local residents enjoy a high quality of life in return.

Key Local and State Sales Tax Rates

	Austin	Denver	Nashville	Phoenix	Raleigh-Durham
State Corporate Income Tax Rates, as of 12/31/2006	4.50% on net taxable earned surplus, which was repealed as of 1/1/07, and replaced with Texas Margins Tax of 1% on all corporate gross receipts	4.63%	6.50%	6.968% (min. $50)	6.90%
State Individual Income Tax Rates, as of 12/31/2006	None	4.63%	6.00%	5 brackets ranging from 2.73% (under $10K) to 4.79% (over $150K)	4 brackets ranging from 6.0% (under $12,750) to 8.25% (over $120K)
Median Local & State Property Taxes on Owner-Occupied Housing, 2005, for Largest County (Most Affordable County)	$3,669 Travis Co. ($2,217 Bastrop Co.)	$1,188 Denver Co. (same*)	$1,372 Davidson Co. ($989 Rutherford Co.)	$1,219 Maricopa Co. ($905 Pinal Co.)	$1,546 Wake Co. ($990 Johnston Co.)
Total State & Local Sales Tax Rate, as of 12/31/06	8.25%	6.52%	9.25%	7.40%	6.75%
State Sales Tax Rate	6.25%	2.90%	7.00%	5.60%	4.25% (rate will become 4.00% as of 7/1/07)
Local Sales Tax Rate in Primary City	City of Austin 2.00%	Denver-Denver Co. 3.62%	Nashville-Davidson Co. 2.25%	City of Phoenix 1.80%	Raleigh-Wake Co. 2.50%
State Gasoline Tax Rates, as of 12/31/06	$0.20 per gallon	$0.22 per gallon	$0.214 per gallon	$0.19 per gallon	$0.302 per gallon (adj. for inflation every 6 mos.)
Total State & Local Tax Revenue Per Capita, 2006	**$3,368 for Texas**	**$4,098 for Colorado**	**$2,979 for Tennessee**	**$3,350 for Arizona**	**$3,526 for North Carolina**

*Data not available for Austin MSA county of Caldwell; Denver MSA counties of Broomfield, Clear Creek, Elbert, Gilpin, and Park; Nashville MSA counties of Cannon, Cheatham, Dickson, Hickman, Macon, Robertson, Smith, and Trousdale; and Raleigh-Durham MSA counties of Person, Franklin, and Chatham.

**SPD: Special Purpose District; Elbert and Gilpin Co. in the Denver MSA are not listed because they do not have a local sales tax.

*** "Median Property Taxes Paid on Homes" is the median real estate tax paid on owner-occupied housing units for that county. They exclude property taxes paid by businesses, renters, and others. These figures are calculated by the Tax Foundation using 2005 data from the U.S. Census Bureau and are considered more meaningful than comparing assessment rates and methodologies, which vary greatly between communities.

Sources: Tax Foundation, Texas Comptroller of Public Accounts, Colorado Department of Revenue, Tennessee Department of Revenue, City of Phoenix, North Carolina Department of Revenue

Incentives are often important to close new deals or entice existing companies to remain within the region. Communities within the Austin region have the ability to offer incentives like tax abatement, Enterprise zones, fast track permitting, financing programs, and reduced utility rates. However, the region has not historically provided local cash incentives for businesses. The Greater Austin Chamber of Commerce lacks a capital fund of incentives, which restricts the type of package the region is able to bring to the table. This can be a challenge. To the region's credit, the City of Austin, Travis County, and local school districts have become more willing to put together tax abatement deals for prospective new companies.

Currently, the Austin City Council is discussing new rules for provision of incentives. The return-on-investment "matrix" for assessment of whether or not to award incentives is said by some to be skewed towards large industrial firms and does not "fit" emerging companies or high-tech firms.

Government stakeholders noted the importance of tracking the results of tax abatement packages. Currently, there is not effective system in place to track the number of jobs created and who is being placed in those jobs. These stakeholders feel that incentives should not be basis of the region's economic development efforts. They should be used only if it makes sense in terms of costs and benefits.

Recently, California-based IndyMac Bancorp, one of the country's largest mortgage companies, announced it would create 300-600 new jobs in North Austin at a new home loan-servicing center. However, company officials have publicly stated that IndyMac's long-term presence depends on if it receives state and/or local subsidies.[37] Having access to a broad range of incentives is important for communities to stay competitive in today's economy. It is important for localities to have their own incentives to bring to the table, and for those incentives to be flexible and complimentary to state-offered incentives.

The following are some of the incentives offered by the state of Texas for eligible businesses and/or property owners.

Taxes and Business Financing

- The Enterprise Fund allows the state to aggressively pursue opportunities to bring new jobs to Texas with cash incentives to businesses.
- Refunds on state sales, use, and franchise taxes for paying local sales taxes.
- Research and Development Franchise Tax Credit for certain eligible research expenses.

[37] Elder, Robert and Shonda Novak. (March 9, 2007). IndyMac to Bring at Least 300 Jobs to North Austin. *The Austin American-Statesman*.

- Job-Creation Franchise Tax Credit for certain jobs in central administrative offices, distribution, data processing, manufacturing, research and development, and warehousing.

- Texas Capital Access program finances business ventures that are unable to receive loans through more conventional means.

- The Texas Leverage Fund allows cities to better utilize economic development sales tax receipts.

- The Product Development and Small Business Incubator Funds support the development of small businesses or eligible products the areas of semiconductor, nanotechnology, biotechnology, and biomedicine.

Real Estate

- Texas Capital Real Estate Development Program for real estate development for businesses that will create and/or retain permanent jobs for low- and moderate-income people.

- Tax-exempt financing for land and depreciable property for certain industrial and manufacturing work via the Texas Industrial Revenue Bond Program.

- The Texas Commission for Environmental Quality develops regulatory, tax, and technical assistance programs to help with Brownfield site cleanup.

Workforce Training

- Workforce Investment Act (WIA) funding for training programs, via the workforce investment board.

- Skill Development/Smart Jobs fund helps community and technical colleges fund customized job training for local businesses.

- The Texas Workforce Commission helps business design, fund, and implement customized job training (with local community and technical colleges) for training or retraining via the Self-Sufficiency Fund.[38]

Stakeholders from the business community voiced dissatisfaction with how state incentives are slanted toward recruiting and new businesses, new construction, and assisting entrepreneurs. Few incentives are perceived to be offered to existing businesses that choose to expand in Texas. Incentives were also said to be lacking for small to medium-sized emerging high-tech and clean-energy firms.

[38] State of Texas: Office of the Governor, Economic Development and Tourism. http://www.governor.state.tx.us/divisions/ecodev/etf/

Key Findings – Business Costs

- ☑ Availability of industrial, office and retail lease-properties in Austin and its submarkets is high, while rental rates are not anti-competitive in any category. Class-A office space in Downtown Austin is comparatively expensive, but could be moderated by a spate of new developments coming to market.

- ☑ The City of Austin's streamlined and technology-enhanced development process was said to be a notable improvement by input participants. While some in the real estate community still expressed dissatisfaction with the system, it was not said to be as priority a concern as before the improvements were made.

- ☑ Wages in metro Austin are comparatively high, but this dynamic speaks to the positive supply of quality, well-paying jobs in the region. In addition, average wages-by-occupation in Greater Austin are comparable – and often, lower – than its regional peers for certain key sub-sectors.

- ☑ Industrial and commercial power costs are highest in metro Austin compared to Denver, Nashville, Phoenix and Raleigh-Durham.
    - * However, Austin Energy (one of the region's largest electricity providers) has been working to broaden the availability of cost discounts for high-volume users and address reliability concerns that surfaced in 2006 regarding service disruptions.

- ☑ Tax rates in Greater Austin were not said to be anti-competitive by input respondents. Research versus its comparison regions also showed that metro Austin's tax rates were in line with competitors. Higher local and state property taxes in Greater Austin are moderated by the lack of a state income tax.

- ☑ State and local incentives have been provided more liberally in recent years for Austin-area relocations and expansions, however some local business representatives expressed dismay that incentives and abatements still seem skewed towards non-local relocating companies rather than local concerns or emerging high-tech enterprises.

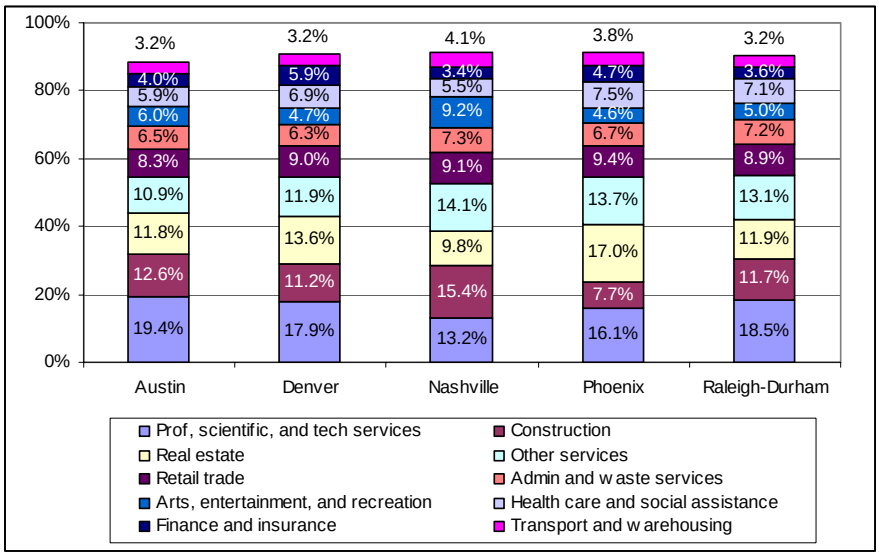
Innovation and Entrepreneurship

The vast majority of job growth in today's economy is generated from the creation of small businesses and the expansion of existing operations. In today's knowledge economy, supporting innovation (which occurs at the intersection of research and business) and entrepreneurship are vital components of any progressive economic development strategy. To better understand the Austin metro area's competitive position in these regards, this section will examine entrepreneurial activity, research and development (R&D) activity, and the availability of financial resources for innovators and small business owners.

Entrepreneurship

Supporting entrepreneurship should be an integral part of economic development strategies. Along with business recruitment and expansion, small business development provides a third avenue for economic growth. In fact, the majority of businesses in metro Austin and nationwide have fewer than 10 employees, as previously discussed. The following chart shows self-employed individuals (also called non-employers by the Census Bureau) in 2004. Compared to its peer metro areas, Greater Austin has a higher proportion of entrepreneurs in professional, scientific, and technical services. People working in these fields tend to have a high degree of technical training. Austin has slightly higher entrepreneurship rates in construction and arts, entertainment, and recreation compared to Denver, Phoenix, and Raleigh-Durham.

Non-Employer Establishments by Business Sector (by MSA), 2004



Source: U.S. Census Bureau Economic Census
Note: Business sectors representing 2.0 percent or less of non-employer establishments in Austin were not included in this chart.

Entrepreneur income can be estimated by dividing non-employer gross receipts (as reported on income taxes and include sales, commission, and payment for services rendered) by the number of non-employers in a given year. In 2004, metro Austin's entrepreneurs grossed, on average, $49,282 - more than entrepreneurs in Denver and Raleigh-Durham, but less than those in Nashville and Phoenix.

Non-Employer Average Gross Annual Income, 2004

	Austin	Denver	Nashville	Phoenix	Raleigh-Durham
Total for all sectors	$ 49,282	$ 47,795	$ 50,148	$ 52,544	$ 44,103
Real estate and rental and leasing	$ 89,204	$ 83,287	$ 83,370	$ 75,750	$ 88,404
Construction	$ 72,853	$ 63,694	$ 72,877	$ 76,322	$ 74,833
Finance and insurance	$ 59,067	$ 66,116	$ 60,606	$ 68,880	$ 52,221
Transportation and warehousing	$ 49,593	$ 54,466	$ 54,984	$ 56,750	$ 47,817
Prof, scientific, and technical services	$ 43,748	$ 41,483	$ 43,924	$ 45,615	$ 35,175
Health care and social assistance	$ 41,149	$ 31,157	$ 49,764	$ 42,135	$ 28,980
Retail trade	$ 40,822	$ 42,999	$ 50,037	$ 50,622	$ 37,669
Information	$ 36,458	$ 33,199	$ 36,459	$ 37,130	$ 26,998
Other services	$ 28,435	$ 27,391	$ 26,218	$ 31,667	$ 24,632
Arts, entertainment, and recreation	$ 26,073	$ 18,981	$ 39,286	$ 27,890	$ 19,231
Admin and waste management services	$ 22,958	$ 26,460	$ 24,341	$ 34,724	$ 23,765
Educational services	$ 15,827	$ 15,246	$ 13,526	$ 17,766	$ 13,831

Source: U.S. Census Bureau Economic Census

Access to Business Capital

The resources available to finance a new business or expand an existing one impact a community's ability to create jobs. A wide variety of financing methods must be available to serve the needs of all types of entrepreneurs and business owners, from the small home-based business to the high-risk, high-growth start-up venture. In the world of economic development, ensuring that financing methods are available to meet the needs of local businesses is vital to promoting economic growth.

Small Business Lending

Under the Community Reinvestment Act, commercial and savings banks having at least $250 million in assets must report their small business lending activity. In 2005, Greater Austin's banks issued more loans than did banks in Nashville and Raleigh-Durham, but the average loan amount was smaller ($29,822 compared to $40,455 and $38,646, respectively). Lending in Phoenix and Denver was greater, with about twice as many loans made than in metro Austin. This could indicate a number of things. Bank loans may be less accessible to Austin's small businesses, due to lending practices or a greater proportion of high-risk firms. It could also indicate the Austin, Nashville, and Raleigh-Durham have a greater variety of financing methods available to their regional small businesses.

Small Business Lending Activity of Commercial and Savings Banks, 2005

Metro Area	# of Loans	Total Amount	Avg. Loan Amount
Austin	44,728	$1.3 billion	$29,822
Denver	87,555	$2.7 billion	$31,351
Nashville	40,047	$1.6 billion	$40,455
Phoenix	106,153	$3.3 billion	$31,415
Raleigh-Durham	42,811	$1.7 billion	$38,646

Source: Federal Financial Institutions Examination Council

SBA Loan Activity

The most recognized small business loan is the 7(a) program offered by the U.S. Small Business Administration (SBA). These loans are made by institutions and are guaranteed by the SBA for financing small business activities. Between 2004 and 2006, about 1,500 7(a) loans were made in metro Austin averaging $183,100 each. As with small business loans, far more loans were made in Denver and Nashville compared to Austin, Nashville, and Raleigh-Durham. Aggregate 7(a) lending between 2004 and 2006 totaled over $1.1 billion in metro Phoenix compared to $283 million in Greater Austin.

The other main SBA loan program is the 504 program, also known as the Certified Development Company Program. These loans are only available for "brink and mortar" financing of real estate, machinery, and/or equipment. 504 loans are provided through certified development companies, which are non-profits established for economic development purposes. A greater number of 504 loans were made in Austin compared to Nashville and Raleigh-Durham, however, as with the other types of loans examined, higher-population areas Denver and Phoenix's total loans exceeded Austin.

SBA Loan Activity, 7(a) Program, 2004- 2006

Metro Area	Number of Loans	Total Amount (Millions)	Average Loan Amount
Austin	1,543	$283	$183,100
Denver	3,380	$615	$181,837
Nashville	1,066	$140	$131,268
Phoenix	4,447	$1,143	$256,972
Raleigh-Durham	937	$146	$155,990

SBA Loan Activity, 504 Program, 2004-2006

Metro Area	Number of Loans	Total Amount (Millions)	Average Loan Amount
Austin	120	$68	$565,025
Denver	446	$230	$516,722
Nashville	70	$36	$510,591
Phoenix	533	$347	$651,641
Raleigh-Durham	61	$37	$604,459

Source: U.S. Small Business Administration

Venture Capital

High-growth firms, which are often at the forefront of innovation, can find it difficult to secure traditional financing for research and development. Typically, banks are not willing to lend to high-risk start-up or expanding firms. Venture capital fills this need. A venture capital firm, comprised of a group of investors, makes investments in such firms in exchange for an equity position. This type of funding is essential to researchers and innovators. According to the Greater Austin Chamber of Commerce, regional businesses received $438 million in venture capital in 2005.

Data obtained from PriceWaterhouse Coopers show that in forth quarter 2006, Austin had the highest number of venture capital deals, a greater number of active venture capital firms, and greater variety of investments (in terms of business sectors) than its peer metro areas. Thus, although many in Austin feel that the current number of venture deals is low, that assessment may be in comparison to innovation capitals such as Silicon Valley.

Venture Capital Firm Investment Activity by Sector, Fourth Quarter 2006

Sector	Austin	Denver	Nashville	Phoenix	Raleigh-Durham
Biotechnology					7
Computers & Peripherals			1		
Consumer Products & Services	1				
Health Care Services	1		3		
Industrial/Energy		2			1
IT Services	1		1		
Media & Entertainment		1			
Medical Devices/Equipment					1
Networking/Equipment	1				
Retailing & Distribution		2			
Semiconductors	1				1
Software	9	2		1	2
Telecommunications	1	2	1		2
Total Investments	**15**	**9**	**6**	**1**	**14**
Total Active VC Firms	**7**	**6**	**4**	**1**	**6**
Apparent Strength	**Software**	**-**	**Health Care**	**-**	**Bio-technology**

Source: PriceWaterhouseCoopers Money Tree Report

Many of these deals were made by Austin Ventures, which is ranked as one of the nation's top ten most active venture capital firms. Austin Ventures made 46 investments in 2006. Most of the nation's most active venture capital firms are located near San Jose, California. In this regard, Austin's lack of diversity in venture capital sources puts it at a competitive disadvantage relative to other markets on the east and west coasts. In fact, one of Austin Ventures partners recently announced that he would be leaving Austin to join a VC firm in Silicon Valley, where most of his recent investments are based.[39]

[39] Statesman Staff. (April 23, 2007). Austin Ventures official is leaving for California. *The Austin American-Statesman*.

Top 10 Most Active Venture Investors in the U.S., 2006

Source: PriceWaterhouseCoopers Money Tree Report

Rank	Firm	Location	# of deals
1	Draper Fisher Jurvetson	Menlo Park, CA	76
2	Intel Capital	Santa Clara, CA	74
3	New Enterprise Associates	Baltimore, MD	71
4	Polaris Venture Partners	Waltham, MA	63
5 (tie)	Kleiner Perkins Caufield & Byers	Menlo Park, CA	59
5 (tie)	U.S. Venture Partners	Menlo Park, CA	59
7	Sequoia Capital	Menlo Park, CA	54
8	Oak Investment Partners	Westport, CT	51
9	Venrock Associates	New York, NY	50
10	**Austin Ventures, L.P.**	**Austin, TX**	**46**

Stakeholders from the business and technology communities have noted that Austin has lost its competitive edge in venture capital funding, noting this type of capital has tapered off significantly over the past five years. Poor flow of new deals and spin-off companies were citied as two major reasons contributing to this trend. The general sense is that Austin is not able to compete for "A-round" emerging companies against San Jose and Seattle, which have larger and more diverse venture capital communities. One stakeholder noted that a potential way to jumpstart the flow of capital back to Austin would be to lobby to get a Texas-based pension fund to invest in an Austin venture capital fund.

Another source of capital for start-up firms is angel investors. These high-worth individuals are willing to invest their assets in start-ups. Angel investors are usually connected to firms through personal contacts or a formalized network sponsored by a community business or industry group. Because very few angel investments are publicized, data about angel capital activity in a community are generally not available. In 2006, the Greater Austin Chamber of Commerce launched the Central Texas Angel Network (CTAN). Aimed at providing money and guidance to companies that are not yet big enough to attract venture capital, the region's new network of angel investors filled an existing gap in terms of types of business financing available.[40]

Innovation Capacity

Austin's combination of educational assets, technology businesses, incubators, and venture capital funding makes capacity for innovation a key opportunity for continued economic growth. If successfully commercialized, cutting-edge products and processes developed in labs can result in high-growth companies and the creation of high-wage jobs.

Patent Activity

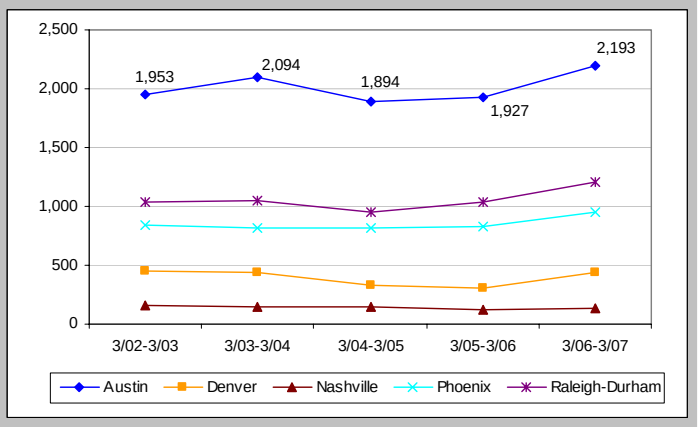
The number of patents issued in a community provides a good indication of its capacity for innovation and local research activity. The United States Patent and Trademark Office provides information on patents issued, by community. The most

[40] Rockwell, Lilly. (January 25, 2007). Angels find Investors for Young Firms. *The Austin American-Statesman.*

common type of patent is a utility patent, which is a "patent for invention." As shown in the following chart, between March 31, 2006 and March 31, 2007 over 2,000 utility patents were assigned to Greater Austin-based inventors compared to approximately 1,213 in Raleigh-Durham, 953 in Phoenix, 437 in Denver, and 133 in Nashville.[41] Over the past five years, Austin's patent activity has consistently outpaced activity occurring in its peer metro areas, indicating Austin is clearly a competitive leader in research and innovation.

IBM employs about 6,300 people in Austin. In 2006, the company filed 3,621 patents, 640 of which were filed at the Austin site. This made IBM the top patent filer in the nation and Austin its most productive site, in terms of new patents.[42] Clearly, private-sector innovation in Greater Austin is a dynamic complement to UT-Austin's capacity for research-driven economic development.

Number of Patents Issued, March 2002 through March 2007



Source:
U.S. Patent and Trademark Office

Note: Data were only available at the city level. For each metro area, the largest cities were used (see footnote).

University R&D

University research and development is a good indicator of innovation capacity, because it shows the relative financial commitment in a community to developing new technologies, products, and processes. According to 2003 figures published by the National Science Foundation, UT-Austin and Texas State University registered over $351 million in R&D, 9.2 percent of which was industry funded. Phoenix and Denver's R&D investments were significantly lower, while Nashville's investments were competitive with Austin. The strong research universities in Raleigh-Durham, including UNC-Chapel Hill, Duke, and North Carolina State, had R&D investments

[41] Data were only available at the city level. For each metro area, the largest cities were used. For Austin, that was Austin and Round Rock (53.5% of MSA's total population); for Denver, that was Denver, Aurora, Lakewood, Thornton, Westminster, and Arvada (55.5%); for Nashville, that was Nashville-Davidson County (unified), Murfreesboro, and Franklin (48.4%); for Phoenix, that was Phoenix, Mesa, and Glendale (55.5%); and for Raleigh-Durham, that was Raleigh, Durham, and Cary (46.4%).
[42] Ladendorf, Kirk. (January 11, 2007). Austin Fuels IBM's Record Year for Patents. *The Austin American-Statesman*.

in excess of $1 billion, 13.7 percent of which came from private businesses. It is important to note that about half of this funding, $511 million, was appropriated for medical research at Duke University and UNC-Chapel Hill. In this regard, top-tier medical schools are highly lucrative.

For the last five years, people in Austin's business community, educational institutions, and elected leadership have discussed the opportunities a local medical school would bring to the region. Currently, Austin is the largest city in the country that lacks a medical school in its region. A medical school would help open metro Austin up to business and research biomedical opportunities, traditionally drawn to places like Raleigh-Durham, Boston, and San Diego. In 2006, the University of Texas system was ranked first among 400 U.S. and international research universities in biotechnology patents.[43] The Greater Austin Chamber of Commerce supports bringing a medical school to the region, as it would leverage these existing strengths and help to further improve university R&D, local innovation capacity in biosciences, and the regional economy.

Stakeholders noted that massive private and public investments at the former Mueller municipal airport site are priming Austin to be a more competitive location for a medical school. Stakeholders in the business community noted that development of the region's health care sector, particularly in education and research, would open Greater Austin up to opportunities in biotech in the future.

[43] DeVol, Ross, and Bedroussian. (September 20, 2006). Mind to Market. A Global Analysis of University Biotechnology Transfer and Commercialization. *The Milken Institute*. Accessed online at: http://www.milkeninstitute.org/publications/publications.taf?function=detail&ID=576&cat=ResRep

Total R&D Expenditures by University, Fiscal Year 2003

Metro Area	University	All R&D Expenditures (in 000s)	Source of Funding as % of Total Expenditures				
			Fed Govt	State & Local Govt	Industry	Institutional Funds	All Other Sources
Austin	University of Texas-Austin	$343,854	67.5%	6.2%	9.4%	12.4%	4.5%
	Texas State University- San Marcos	$7,621	50.8%	30.5%	2.7%	4.9%	11.2%
	Total	**$351,475**	**67.1%**	**6.7%**	**9.2%**	**12.3%**	**4.7%**
Denver	University of Colorado Health Sciences Center	$216,064	84.6%	2.4%	3.1%	4.1%	5.9%
	Colorado School of Mines	$29,162	55.9%	4.7%	38.8%	0.5%	0.0%
	University of Denver	$9,949	83.1%	2.7%	4.3%	6.3%	3.7%
	University of Colorado-Denver	$6,426	43.8%	9.7%	0.7%	39.6%	6.3%
	Total	**$261,601**	**80.3%**	**2.8%**	**7.1%**	**4.6%**	**5.2%**
Nashville	Vanderbilt University	$276,074	80.4%	0.0%	1.8%	13.5%	4.2%
	Meharry Medical College	$25,427	95.2%	0.0%	0.0%	0.0%	4.8%
	Tennessee State University	$14,306	71.9%	0.7%	2.0%	25.5%	0.0%
	Fisk University	$3,000	100.0%	0.0%	0.0%	0.0%	0.0%
	Middle Tennessee State University	$2,219	68.2%	10.6%	1.7%	19.6%	0.0%
	Total	**$321,026**	**81.3%**	**0.1%**	**1.7%**	**12.9%**	**4.0%**
Phoenix	Arizona State University	$145,591	49.3%	12.5%	5.6%	30.3%	2.4%
	Total	**$145,591**	**49.3%**	**12.5%**	**5.6%**	**30.3%**	**2.4%**
Raleigh-Durham	Duke University	$520,191	59.0%	2.8%	23.5%	8.8%	5.9%
	University of North Carolina-Chapel Hill	$390,542	71.9%	4.0%	1.7%	22.4%	0.0%
	North Carolina State University	$286,025	33.6%	29.0%	12.6%	22.0%	2.8%
	Shaw University	$1,261	81.9%	6.3%	0.0%	0.0%	11.7%
	North Carolina Central University	$1,100	93.5%	0.0%	0.0%	0.0%	6.5%
	Total	**$1,199,119**	**57.2%**	**9.5%**	**13.7%**	**16.3%**	**3.3%**

Source: National Science Foundation

Technology Transfer

Technology transfer is the process of commercializing research, inventions, and processes from colleges and universities to promote economic grow and continued innovation. Typically, a university's technology transfer office will file a patent on the behalf of the university researcher. The university will then issue licenses to companies to use the patented invention, or directly to the researcher (or third party) to form their own start-up company.

A 2006 study on technology transfer and commercialization utilized information gathered by AUTM (Association of University Technology Managers) to create an index of technology transfer rates among U.S. colleges and universities. The following table lists the top ranked 15 universities for technology transfer and commercialization between 2000 and 2004. The University of Texas-Austin was not ranked in Milken's index.

Milken Institute University Technology Transfer and Commercialization Index Top 15 Universities, 2000-04

Source: "Mind to Market"
Milken Institute, September 2006

	Rank
Massachusetts Institute of Technology	1
University of California System	2
California Institute of Technology	3
Stanford University	4
University of Florida	5
University of Minnesota	6
Brigham Young University	7
University of British Columbia	8
University of Michigan	9
New York University	10
Georgia Institute of Technology	11
University of Pennsylvania	12
University of Illinois, Chicago, Urbana-Champaign	13
University of Utah	14
University of Southern California	15

The following chart shows data from AUTM's annual survey specifically for the major research institutions in Austin and its peer metro areas. Of the major research institutions in these metros, University of Texas-Austin had the second lowest number of active licenses between 2003 and 2005. Active licenses represent relationships between universities and private companies and investors.

Additionally, UT-Austin registered the lowest number of invention disclosures during this time. Invention disclosures represent the initial step in the patent and intellectual property management process. It usually involves university researchers meeting with technology transfer personnel about the business and social values of the innovation. However, because UT-Austin has competitive research expenditures, this indicates that there may be a gap between the university's researchers and its technology transfer services at this time.

University Tech Transfer Survey, 2003-2005

Metro Area	University	Research Expenditures	Active Licenses	Adjusted License Income	Start-ups	Invention Dis-closures	Patents Issued	New Patent Apps.
Austin	University of Texas-Austin	$ 1,098,722,000	120	$ 15,745,801	4	282	32	104
Denver	-	-	-	-	-	-	-	-
Nashville	Vanderbilt University	$ 996,280,735	219	$ 17,996,165	4	354	23	57
Phoenix	Arizona State University	$ 294,866,969	28	$ 4,781,780	5	300	25	63
Raleigh-Durham	Total	$ 3,219,871,466	1,212	$ 32,078,233	9	1,272	100	113
	UNC-Chapel Hill	$ 974,672,904	274	$ 9,589,665	2	319	26	58
	Duke University	$ 1,477,366,335	405	$ 10,118,073	3	380	25	55
	North Carolina State U	$ 767,832,227	533	$ 12,370,495	4	573	49	N/A

Source: Association of University Technology Managers, 2005 Licensing Survey

A recent article in the *Austin American-Statesman* reported improvements in UT-Austin's technology transfer process. Complaints about inefficiencies and red tape were used to create an efficient, streamlined commercialization process that is more "user friendly" and less bureaucratic for UT researchers to navigate. Results from

such changes have been positive and include an increase in licensing income and a more favorable perception of tech transfer by faculty.[44]

Support for Innovation and Entrepreneurship

Innovation and entrepreneurship processes do not occur in an isolated environment. Entrepreneurs, researchers, and small business owners rely on other people and networks to share ideas, find resources, and solve technical or organizational issues. Bringing a business concept to fruition also requires money, and research-intensive activities require large amounts of capital. Organizations, agencies, and networks that provide services including financial assistance, networking, professional development, and operational assistance are part of the support system for innovation and entrepreneurship in a region. Below are some of the region's key resources for small business owners and innovators.

- **Greater Austin Chamber of Commerce:** The Chamber does not provide in-house small business assistance, but rather offers referral services to regional resources. It also publishes and distributes a small business guide, which provides a comprehensive list of small business services throughout the metro area. The Chamber serves small business members in a variety of ways. One unique and innovate program offered through the Chamber is its Health Coalition Program that allows businesses with less than 50 employees to pool together in order to enjoy lower rates and better coverage.

- **Central Texas Regional Center of Innovation and Commercialization (CenTex RCIC):** Housed within the Greater Austin Chamber, CenTex RCIC coordinates the region's research entities and technology stakeholders to secure research and commercialization dollars from the state of Texas' Emerging Technology Fund.

- **City of Austin Small Business Development Program (SBDP):** Administered by the Office of Economic Growth and Redevelopment Services, SBDP provides a variety of services to help small business grow, including its Business Solutions Center, business plan development, loan packaging, and marketing plan development. In addition, SBDP offers a variety of conferences, workshops, and events. SBDP publishes the *Gold Pages,* which is a directory of services provided to entrepreneurs by regional government and non-profit groups. It also publishes the *Silver Pages*, which lists networking organizations and opportunities by industry.

- **Service Corps of Retires Executives (SCORE):** SCORE calls itself "Counselors to America's Small Business," and is the country's top source of

[44] Ladendorf, Kirk. (April 2, 2007). Universities Cashing in on Innovation. The Austin American Statesman.

free and confidential small business advice for entrepreneurs. Austin's chapter has over 30 active volunteers who meet regularly with entrepreneurs throughout the region.

- **Texas State University's Small Business Development Center (SBDC):** The U.S. Small Business Administration SBDCs offer "one-stop" free assistance to entrepreneurs and small business owners by providing a wide variety of information and guidance. Texas State's SBDC serves a 12-county region including all of metro Austin with offices in San Marcos, Round Rock, and Austin. Counseling services cover a variety of topics including business planning, market research, cash flow and financial analysis, strategies planning, tax services, manufacturing advising, government contracting, home-based businesses, and international trade.

- **Innovation Creativity and Capital Institute (IC^2 Institute):** Founded in 1979, IC^2 is a UT research institution focused on wealth and job creation in Austin through technology and innovation. The Institute's academic and research programs include the IC^2 Institute Fellows, Visiting Scholars, the Master's degree in Science and Technology Commercialization, the Bureau of Business Research, and Global Commercialization. Through such programs, IC^2 has formed strategic alliances with institutions in 25 nations. In addition, IC^2 runs the Austin Technology Incubator and the Clean Energy Incubator to promote job growth through innovation.

    - **Austin Technology Incubator (ATI):** Founded in 1989, ATI has graduated over 65 companies, creating over 2,820 jobs, and generating over $1.2 billion in cumulative revenue. ATI provides a range of services including strategy development, human resources support, marketing and public retaliations, financial advising, office space, and networking opportunities. Companies must apply for membership. Member companies grant a percentage of their equity to ATI.

    - **Clean Energy Incubator (CEI):** Housed within ATI, the Clean Energy Incubator was launched in 2001 in cooperation with the National Renewable Energy Laboratory (NREL). Its mission is to facilitate the development early-stage clean-energy companies. CEI has served 18 companies in the renewable and energy efficiency industries.

Key Findings – Innovation and Entrepreneurship

- ☑ Non-employer (sole proprietor) and small-business lending/loan data confirmed that significant capital is flowing to Greater Austin entrepreneurs and small businesses.
    - Even so, metro Austin trailed its peer regions in commercial and savings banks' per capita small-business-loan amount.
    - Greater Austin experienced better results in SBA lending categories, trailing only the Phoenix region in per-capita 7(a) loans, and the Phoenix and Raleigh-Durham metros for per-capita 504-program loans.

- ☑ Metro Austin venture capital activity as measured by deal flow and most-active venture investors showed that the region is certainly a major player in this category compared to its peer metros.
    - However, public-input participants noted that Austin's venture capacity has suffered since the dot-com collapse of the late 1990s as VC firms and investors' focus centered on Silicon Valley. They said that the limited number of deals compared to other technology hotbeds impairs the region's ability to return to pre-recession funding levels.

- ☑ Tremendously high numbers of patent awards in Austin and competitive university-R&D expenditures did not translate into comparable enterprise-development and technology-licensing activity in the region.
    - Though this dynamic was said to be improving by input participants, metro Austin must continue efforts to catch up to competitor regions with much more advanced and formalized technology-commercialization pipelines.
    - Respondents also noted a lack of a "culture of entrepreneurship" in Greater Austin.

Quality of Life

Quality of life is a subjective term that means different things to different people. In general, quality of life includes factors like location; cost of living; community safety; quality of local schools; access to recreational and cultural amenities; and quality of community leadership. Because businesses and workers in the New Economy are more mobile, quality of life is increasingly an important factor for economically competitive communities. In research and technology-related fields in particular, highly trained workers demand a superior local quality of life. This section examines some of these concepts and their implications on Greater Austin's competitiveness.

Cost of Living

A cost of living (COL) index provides more information about how expensive it is to live in a community or region because it considers not only home values, but also the cost of groceries, utilities, transportation, health care, and miscellaneous goods and services. The COL index can affect relocation decisions and a household's standard of living when moving to a new community. National data sources are helpful for evaluating and comparing the cost of living relative to the national average, typically represented by the index value of 100. C_2ER (formerly ACCRA), a national community and economic development research organization, publishes quarterly cost of living indices for metropolitan communities across the nation. While the data provide some indication about the cost of living differences between regions, they do not provide direct comparison of actual costs in metro areas.

The following chart shows the COL index for Austin and its peer metro areas for the third quarter of 2006. Austin's overall cost of living is lower than Denver, Phoenix, Raleigh, and the nation, but is more expensive, on average, than Nashville or Durham. Relative to the national average, Austin's housing and utility costs are competitive.

Cost of Living Index, 3rd Quarter 2006

Metro Area	Composite Index	Grocery	Housing	Utilities	Transport-ation	Health Care	Misc.
Austin MSA							
Austin, TX	97.8	93.8	89.8	92.2	100.2	99.1	106.5
Round Rock, TX	91.7	83.4	76.0	106.5	95.0	111.0	99.9
San Marcos, TX	88.9	79.7	80.3	83.2	98.1	99.0	97.1
Denver MSA	102.5	99.2	110.8	108.1	96.6	102.3	97.1
Nashville MSA	89.2	87.9	81.9	89.2	89.9	90.3	95.1
Phoenix MSA	101.8	98.9	105.7	93.1	104.3	101.4	101.6
Raleigh-Cary MSA	99.0	97.9	93.5	97.4	100.6	102.4	103.4
Durham MSA	86.0	98.2	70.9	88.9	91.4	95.0	90.1

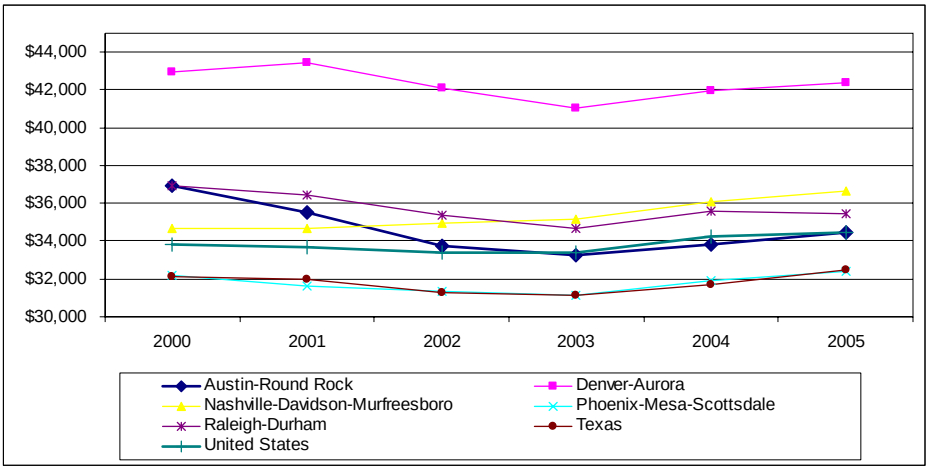
Source: C_2ER (100=National Average)
Percentage each category contributes to overall cost of loving: Total (100%), Grocery (13%), Housing (28%), Utilities (10%), Transportation (10%), Health care (4%), and Miscellaneous good and services (35%).

Some private sector focus group participants noted that increases in Greater Austin's overall cost of living are a concern. Increasing cost of living translates to wage escalation and rising business costs for regional companies. One stakeholder noted that higher wages make Austin an anti-competitive location for call center or manufacturing operations, because wages are much lower in other parts of the country for these types of jobs.

Per Capita Income and Poverty

The relative wealth of a community's population has a direct impact on many elements of quality of life. If residents cannot afford quality food, shelter and health care, the local economy will suffer in addition to placing pressures on the area's schools, social services and public safety.

Real Per Capita Income, 2000-2005

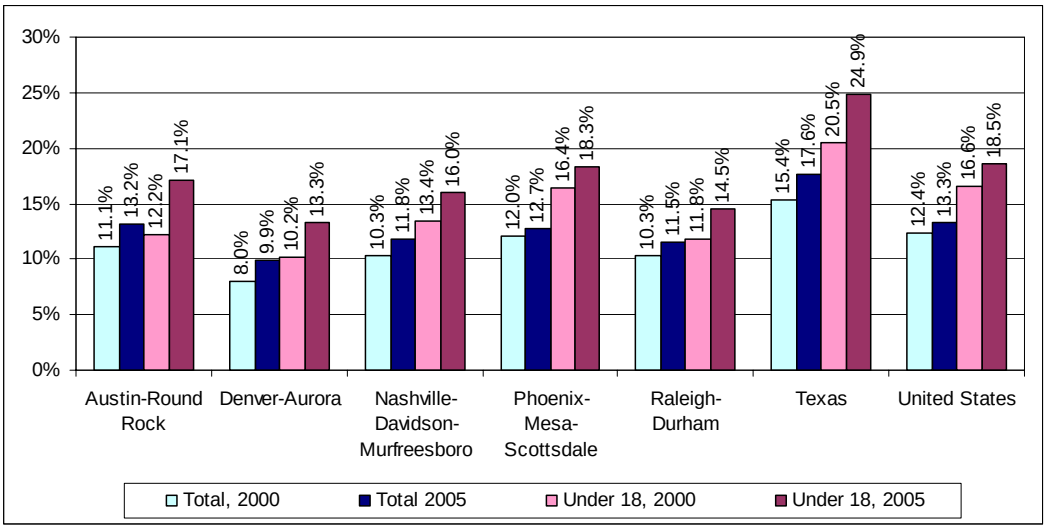


Source: U.S. Bureau of Economic Analysis

As seen in the previous graph, Greater Austin's real per capita income (indexed for inflation) is in the mid-range compared to its peer regions. Metro Nashville, Raleigh-Durham and – especially – Denver have higher average incomes than the Austin area. Thus, the Austin region has room for improvement in terms of translating its high wages into equally high average incomes for all its residents.

This dynamic is reinforced by the following chart, which shows that the Austin MSA has, on average, higher total and youth poverty rates than its peer metros. Clearly, prosperity in Greater Austin is not being diffused to the whole of the local population.

Poverty Rates, Total Population and Under-18 Population, 2000 and 2005



Source: U.S. Census Bureau, American Community Survey

Housing

For a community to be economically competitive, it must have housing that is both affordable and attractive to its workforce. Because regional economies have workers of all pay scales, it is important to have housing options to suit the needs of all types of workers, families, and individuals.

According to the National Association of Realtors, in 2006 the median sale price of a single-family home in Greater Austin was $173,000 compared to $222,000 nationwide. Housing prices appreciated 12.3 percent in Austin between 2004 and 2005, which is comparable to increases nationwide (13.7 percent). Since 2004, median sale prices in Phoenix have increased by 58.3 percent while the Nashville and Raleigh-Cary metro areas posted increases in excess of 20 percent. When 2007 data become available, they will likely show price declines in some previously "hot" markets as the "housing bubble" continues to deflate across the U.S.

Median Single-Family Home Prices 2004 and 2006

Source: National Association of Realtors

Metro Area	2004	2006	Percent Change
Austin	$154,700	$173,700	12.3%
Denver	$239,100	$249,500	4.3%
Nashville	$145,400	$177,900	22.4%
Phoenix	$169,400	$268,200	58.3%
Raleigh	$169,900	$213,700	25.8%
Durham	$149,000	$172,800	16.0%
United States	$195,200	$222,000	13.7%

Note: A year-end estimate for Nashville in 2006 was not available, the figure listed is from Q2 2006

The Office of Federal Housing Enterprise Oversight (OFHEO) calculates a housing price index (HPI) by metropolitan area. The HPI serves as a reliable and timely indicator of single-family house price trends. Because price changes are indexed, it is a better gauge of appreciation rates across markets with varying average house prices. Out of the 282 metro areas examined, Greater Austin ranked 54th in home price appreciation between Q4 2005 and Q4 2006. While the region's 5-year appreciation rates remain lower than most of the comparison metro areas, its comparatively high one-year appreciation rate indicates that this dynamic could be changing.

Percent Change in MSA House Prices, Q4 2006

MSA	Rank*	1 Year Change	5 Year Change	Change Since Last Quarter
Austin	54	9.1%	21.5%	1.5%
Denver	231	1.3%	16.8%	0.3%
Nashville	52	9.3%	32.9%	1.7%
Phoenix	60	9.0%	99.8%	0.8%
Raleigh-Cary	93	7.4%	22.2%	1.9%
Durham	111	6.1%	24.4%	1.7%

Source: Office of Federal Housing Enterprise Oversight
*Rankings based on annual percentage change, for all MSAs containing at least 15,000 transactions since Q4 1990

Many community stakeholders cited rising home prices near Downtown Austin as a major concern. College students and recent graduates said this causes young people who stay after graduation to move further away from Downtown. One graduate noted housing prices were a determining factor in her decision to move to Dallas. Housing prices were also cited as a major contributing factor to the region's increasing sprawl and traffic congestion.

In 2005, the Austin metro area had a comparatively lower proportion of owner-occupied units (60.4 percent) and relatively affordable median contract rents ($634). Having a larger stock of inexpensive rental housing is typical in communities with large college and universities like Austin. One interesting trend is the higher proportion of new housing structures in Austin relative to its peer metro areas. Since 2000, the number of housing structures in the Austin region has increased by 19.2 percent. In Greater Austin, the value of new construction single-family homes nearly doubled between June 2003 and June 2006 ($116,600 to $232,600). The number of permits for single-family homes has also increased dramatically.[45] Ensuring that the region's housing stock remains diverse and affordable for its workers will continue to be a key issue of Greater Austin's competitiveness.

Key Housing Data, 2005

MSA	% Units Vacant	% Units Owner Occupied	% of Housing Structures Built Since 2000	Median Contract Rent
Austin	8.4%	60.4%	19.2%	$634
Denver	8.2%	67.8%	12.6%	$687
Nashville	7.4%	67.5%	12.4%	$563
Phoenix	10.9%	68.1%	18.1%	$651
Raleigh-Durham	8.9%	65.2%	17.4%	$605

Source: US Census Bureau

[45] Real Estate Center at Texas A&M University

Because of rising home prices, gentrification of the City's poorer neighborhoods, such as East Austin, is a concern. While passage of the City's $578 million bond election will help secure some affordable housing in the City, some stakeholders in the government and business communities feel more needs to be done.

Sub-prime mortgages have emerged as a way for individuals and families of modest incomes or with poor credit histories to own a home, particularly in high-cost markets. Sub-prime mortgages typically have higher interest rates and can carry other requirements like prepayment penalties or a hefty balloon payment. Critics of sub-prime mortgages say that such penalties and terms increase foreclosure rates. In recent months, stock values of national sub-prime lenders like New Century, NovaStar and Accredited Home Lenders have declined up to 80 percent as increased number of borrowers defaulted on their loans.[46] In Austin, sub-prime mortgages account for only 8.56 percent of all mortgages. Of local sub-prime loans made, only 10.9 percent were delinquent in December 2006. Austin's competitive standings in this regard probably relate to its comparatively affordable housing market.

Sub-Prime Mortgages

Metropolitan area	Portion of all mortgages as of Dec. '06.	Delinquency portion of subprime as of Dec. '06	Delinquency portion of subprime as of Dec. '05	Pct. change in delinquencies from '05 to '06
Austin	8.56	10.93	10.06	0.87%
Denver	13.44	17.74	12.77	4.97%
Nashville	13.25	11.82	10.31	1.51%
Phoenix	14.88	6.56	2.64	3.92%
Raleigh-Durham	9.15	12.78	10.46	2.32%

Sources: The Wall Street Journal Online via First American Loan Performance; US Census Bureau
Note: Figures are based on the value of mortgages outstanding as of December 2006. Mortgage percentages are First American Loan Performance estimates, based on its projections of the value of loans outstanding; projections are based on its coverage of 50% of sub-prime mortgage originators and of 80% of prime originators; 331 metropolitan areas based on 1999 Census Bureau divisions.

Renter Affordability

Another key aspect of housing affordability is reasonable rent prices. According to the National Low Income Housing Coalition, a national non-profit research and advocacy organization, people earning the Austin metro area's median wage (for renters) can only afford $746 per month for rent. However, renters in metro Austin can expect to pay $836 for a two-bedroom apartment, representing 112% of what can be afforded on the median renter's wage. While rental unit affordability is an issue in most metro areas across the country, it is important to have a plan in place to address rental affordability before housing prices appreciate at rapid rates.

[46] Dreman, David. (April 3, 2007). Bad Times Ahead? Forbes.com

Renter Affordability, 2006

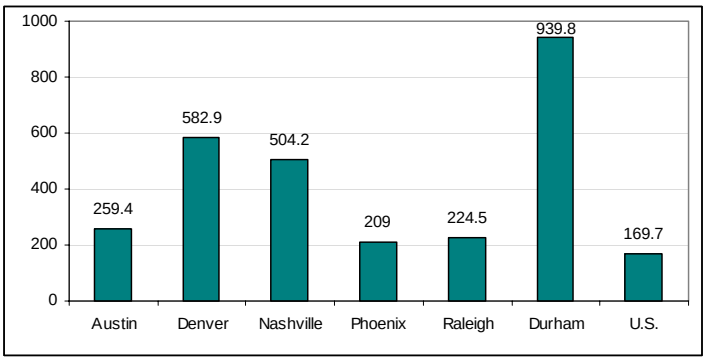
Metro Area	Mean Hourly Wage for Renters	Rent Affordable w/ full time job (paying median renter wage)	Fair Market Rent (2 bedroom apt)	FMR % Change since 2000
Austin	$14.35	$746	$836	3.3%
Denver	$14.69	$764	$909	11.4%
Nashville	$12.25	$637	$693	12.1%
Phoenix	$12.81	$666	$782	7.6%
Raleigh	$11.54	$600	$850	19.6%
Durham	$15.18	$790	$785	19.3%

Source: National Low Income Housing Coalition

Health Care

Accessibility to quality health care services is one of the most important factors affecting a community's overall quality of life and competitiveness. One useful measure that gives an indication of the comprehensiveness of health care services available in a community is physicians per capita. As shown in the following chart, in January 2007, Austin averaged 259 physicians per 100,000 residents compared to 170 nationwide. While this level of coverage is comparable to the cities of Phoenix and Raleigh, the other peer areas have significantly higher numbers of physicians - most likely due to a higher number of teaching hospitals and the presence of medical schools.

Physicians per 100,000 people (by City), January 2007



Source: Sperling's
(Using data from the American Medical Association and the U.S. Department of Health and Human Services)

The Austin metro area was ranked 78 out of 317 metro areas in a Health Pole Index released by the Milken Institute in 2003. The index ranked metro areas based on their concentration of health care employment relative to the national average. While its ranking is not particularly strong, Austin's index score was 7.57, higher than the national average of 7.39. However, compared to its peer metro areas, Austin has a smaller concentration of health care workers. Phoenix ranked 28 (index score of 20.48), Denver ranked 35 (index score of 17.08), Raleigh-Durham ranked 36 (index

score of 16.29), and Nashville ranked 47 (index score of 13.12).[47] These rankings support physician-per-capita data previously discussed.

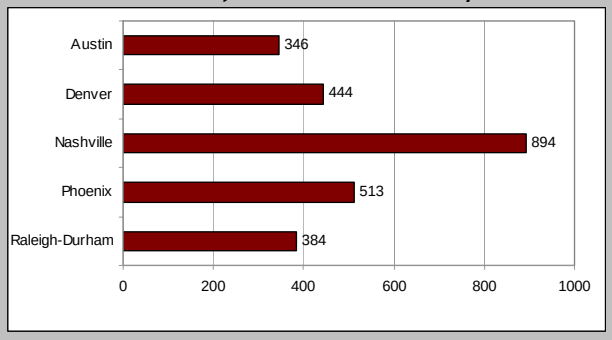
However, Greater Austin's medical community continues to grow. Seton Family of Hospitals, which owns eight hospitals in Central Texas, is headquartered in Austin. In March 2007, the company announced it would relocate its headquarters to the mixed-use development at the old Mueller Municipal Airport site. This site will serve as a campus and house (in addition to retail and residential developments) a Ronald McDonald House and the new Dell Children's Medical Center of Central Texas slated to open July 1, 2007.[48]

The Michael & Susan Dell Foundation also donated $50 million to the University of Texas to establish the Dell Pediatric Research Institute, to compliment treatment efforts at the children's hospital with cutting edge research in children's health and biomedicine. In addition, the Dell Foundation funded the Center for Advancement of Healthy Living, a research center focused on combating childhood obesity.[49] The donation is one of the highest in the University's history and its impact will only help strengthen Austin's case for a medical school in the future.

Crime Rates

Another of the most important factors contributing to the attractiveness of a community for existing and potential residents is public safety. In certain urban areas, perceptions about crime and safety are localized to specific neighborhoods. The U.S. Bureau of Justice Statistics reports both property and crime rates for large cities and counties, metropolitan areas, and states. Violent crimes include manslaughter, rape, robbery, aggravated assault, and murder. In 2005, Greater Austin's violent crime rate was 346 per 100,000 residents, lower than all of its comparison metro areas. The fact that Austin is a comparatively safe community is a major selling point for the region. In terms of property crime rates, Austin was comparable to Denver and Nashville. The Phoenix

Violent Crime Rates per 100,000 Persons (by MSA), 2005



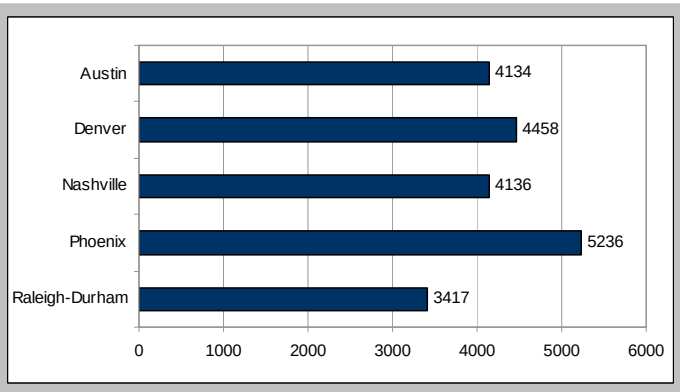
Source: U.S. Bureau of Justice Statistics

[47] The Milken Institute. (2003). Health Pole Index. Accessed online at: http://www.milkeninstitute.org/pdf/healthpole_overall_2003.pdf
[48] Seton Family Hospital, Dell Children's medical center, Ronald McDonald House
Rockwell, Lilly. (March 22, 2007). Seton to Move Headquarters to Mueller. The Austin American-Statesman.
[49] Source: University of Texas System. Accessed online at: http://www.utsystem.edu/news/2006/UTS-MSDFGrant05-15-06.htm

metro area has a significantly higher occurrence of property crimes, while Raleigh-Durham has a relatively low occurrence. Property crime includes burglary, larceny, and motor vehicle theft.[50]

Property Crime Rates per 100,000 Persons (by MSA), 2005

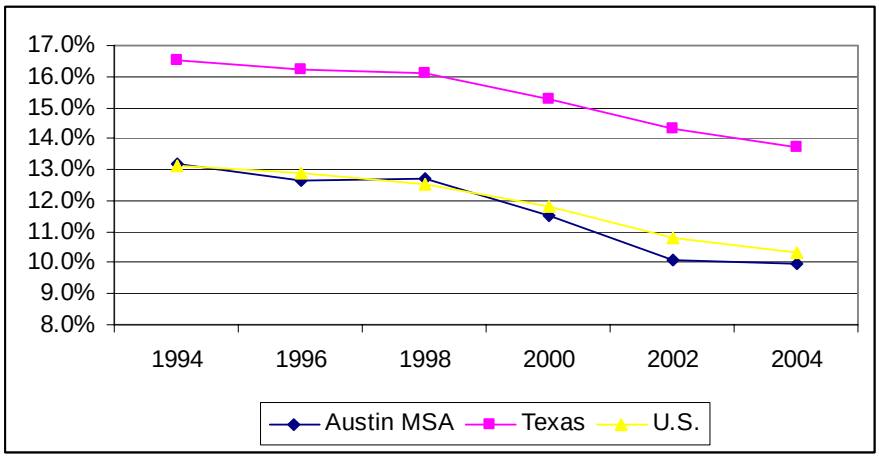
Source:
U.S. Bureau of Justice Statistics



Youth Development

An important aspect of quality of life is ensuring that the community's children and teenagers have the support they need both at home and at school. High teenage pregnancy rates can highlight potential youth development issues in a community. They can also undermine the social and economic stability of a labor force's next generation of workers. The following chart shows teenage pregnancies (births to females ages 13-19) as a percentage of all live births in the Austin MSA and Texas.

Teenage Pregnancy (Births to females ages 13-19 as a percentage of all live births)



Source: Texas Dept. of State Health Services, Centers for Disease Control

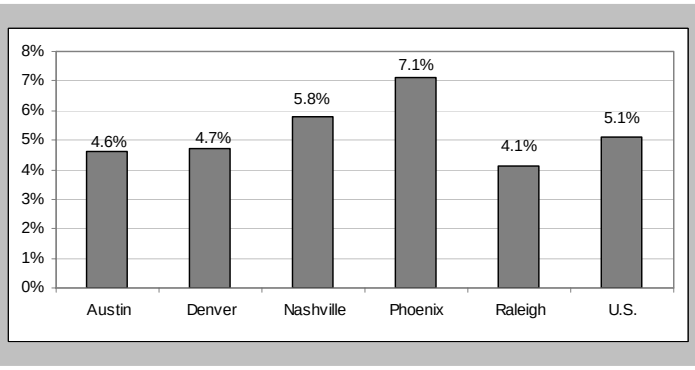
[50] Due to changes in reporting practices, annexations, and/or incomplete data, figures are not comparable to previous years' data

In 2004, births to teen mothers accounted for 10 percent of births in Austin, compared to 13.7 percent in Texas. Because different methodologies are used across states to track teenage pregnancy and/or teenage birth rates, these data could not be benchmarked against Austin's peer metro areas.

The U.S. Census Bureau tracks teenage "idleness," which is a useful indicator of youth development. Teenage idleness is defined as, "the percentage of 16-19 year olds who are neither enrolled in school nor participating in the workforce." In 2005, 4.6 percent of Austin's teens of this age group were "idle" compared to 5.1 percent nationwide. Of its peer metro areas, Nashville and Phoenix have comparatively high teenage idleness rates.

Teenage Idleness: 16-19 year olds not in school or workforce 2005

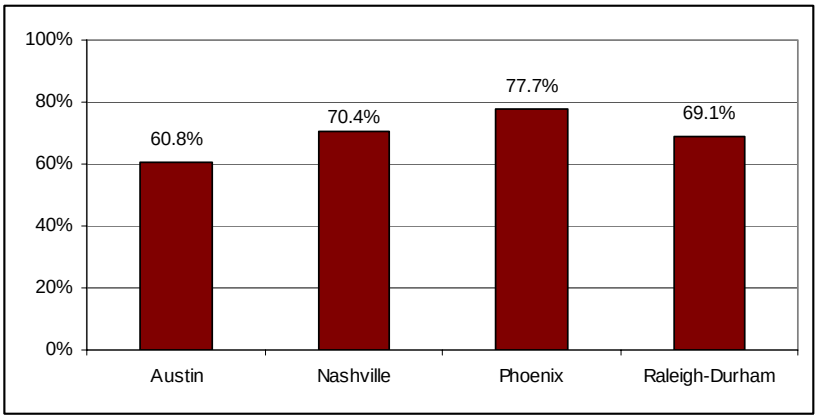
Source: U.S. Census Bureau



Civic Engagement

Voting is a basic and vital form of civic participation. In the 2004 presidential election, 60.8 percent of those registered in Greater Austin voted, versus 69.1 percent in Raleigh-Durham, 70.4 percent in Nashville and 77.7 percent in Phoenix.

Percentage of Registered Voters that Voted in the 2004 Presidential Election (by MSA)



Source: Texas Secretary of State, Arizona Secretary of State, North Carolina State Board of Electors, Colorado Secretary of State, Tennessee Department of State
Note: Denver's percentage reflects the number of "active" registered voters who turned out for the 2004 presidential election. Active means these are registered voters who participated in the last election.

Data were not available for Denver, as Colorado measures voter turnout by "active" registered voters, which uses a different methodology for collection. With Austin's reputation as a hotbed for activism and political discourse, the region's comparatively low turnout in the 2004 election is notable.

Volunteer activities and charitable donations are another important form of civic participation. The number of non-profit 501(c)(3) organizations in Greater Austin per 1,000 people is 5.2, a higher proportion than is found in any of its peer metro areas. Furthermore, the number of local non-profits has grown significantly in recent years, indicating that Austin has solid civic participation in this regard.

Registered Nonprofit Organizations, May 2006

Metro Area	Number	Per 1,000 Persons	% Change from 2002
Austin	7,899	5.2	15.2%
Denver	11,072	4.6	7.6%
Nashville	6,180	4.2	14.6%
Phoenix	11,223	2.8	18.1%
Raleigh-Durham	7,373	5.1	15.9%

Source: National Center for Charitable Statistics and U.S. Census Bureau

Environmental Quality

Protecting and enhancing the integrity and quality of the natural environment has become an increasingly important issue related to community competitiveness in recent years. The U.S. Environmental Protection Agency collects data on air, water, and soil quality to monitor pollutants that can affect the health of community members. The following chart summarizes the number of facilities that release pollutants in Greater Austin and the comparison metro areas. Of all of the metros examined, the Austin region has by far the fewest number of facilities that pollute the environment.

EPA Envirofacts, April 2007

Metro Area	Facilities that product and release air pollutants	Facilities that have reported toxic releases	Facilities that have reported hazardous waste activities	Potential hazardous waste sites that are part of Superfund	Facilities issued permits to discharge to U.S. waters
Austin	84	103	1,284	6	173
Denver	4,281	258	5,151	76	492
Nashville	761	270	2,963	22	260
Phoenix	256	482	5,172	70	166
Raleigh-Durham	792	170	1,562	17	1,260

Source: U.S. Environmental Protection Agency

Outdoor recreational amenities and organized recreational programs provide outlets for community residents to exercise, learn new skills, develop new hobbies, and connect with other residents. Because of this, investing in parks and open space helps bolster quality of life. As shown in the following table, the City of Austin has

the most parkland per 1,000 residents compared to its peer cities. It also invests heavily in its park system. In 2004, the City of Austin received the National Recreation and Park Association's Gold Metal Award for its park and recreation system.

Public Park Investments by City, 2005

City	Park Related Expenditures per Resident	Total Parkland per 1,000 Residents
Austin	$100	39.2
Denver	$113	13.1
Nashville	$73	18
Phoenix	$89	27.1

Source: The Trust for Public Land

Stakeholders who participated in focus groups noted that, as the Austin region continues to grow, protecting open space will continue to be a key challenge. While many noted the success Envision Central Texas has had bringing this issue to light, it remains a concern for many residents. A key challenge for Greater Austin will be retaining its high quality of life in the midst of rapid population and economic growth.

Arts, Cultural, and Recreational Amenities

Developing an array of recreational, cultural, arts and entertainment amenities is a key strategy for communities trying to attract and retain "knowledge workers." In this regard, Greater Austin has built a solid national and inter-national reputation. Some of metro Austin's arts, cultural, and recreational amenities are listed below. While not a comprehensive list, they represent the wide array of entertainment options open to residents and visitors.

Historic Sites and Museums:

- State Capitol
- Governor's Mansion
- Bob Bullock Texas State History Museum
- Lyndon Baines Johnson Library and Museum
- UT Tower Observation Deck

Art Museums:

- Austin Museum of Art
- Elisabet Ney Museum
- Mexic-Arte Museum
- Texas Music Museum

Outdoor Recreation:

- Lady Bird Johnson Wildflower Center
- Zilker Metropolitan Park & Barton Springs Pool

- Austin Bats & Congress Avenue Bridge
- Town Lake

Other Entertainment Options:

- 6th Street bars and restaurants
- Shopping on 2nd Street and South Congress

Festivals:

- SXSW
- Austin City Limits Festival
- Austin Film Festival

The City's wide variety of cultural, recreational, and entertainment amenity options was cited as a strength by college students and recent graduates. They like that Austin's "young professional scene" is not confined to social drinking. Concerts, outdoor sporting events and competitions, and festivals like SXSW make Austin an attractive place for young professionals.

Austin's unique arts and music culture is one of the community's key strengths. In 2006, the Urban Institute published metro area rankings based on community and cultural vitality. The Austin MSA ranked markedly higher in a number of arts related measures, relative to the comparison metro areas. In particular, Greater Austin was cited as having the second highest number of non-profit festivals, fairs, parades, and community celebrations of any MSA in the country. Austin also ranked highly in its number of arts establishments and artist jobs.

Urban Institute Community and Cultural Vitality Index (select indicators), 2006

Ranking by Indicator	Austin	Denver	Nashville	Phoenix	Raleigh-Durham
Most Arts Establishments	13	17	2	43	14
Highest Employment in Art Establishments	17	16	3	47	27
Most Arts Nonprofits	13	16	27	54	11
Most Nonprofit Festivals, Fairs, Parades and Community Celebrations	2	28	33	56	7
Highest Nonprofit Arts Expenses	40	11	19	57	4
Most Nonprofit Arts Contributions	51	11	9	56	6
Most Artist Jobs	11	12	4	32	44

Source: The Urban Institute

Note: 50 Highest Ranking Metropolitan Areas, all with a population of 1,000,000 or more, were listed in each category. Figures were all calculated per 1,000 residents.

Key Findings – Quality of Life

- ☑ Cost of living in metro Austin was in the mid-range compared to peer regions in late 2006, although transportation costs were comparatively high.
    - Housing costs are also competitive in Greater Austin, especially compared to overheated housing markets in Phoenix, Nashville and Raleigh. The Austin area is also much less vulnerable to sub-prime-mortgage defaults than Denver, Nashville and Phoenix.
    - However, price-trends indicate that metro Austin is gradually catching up to median home values in certain competitor markets.

- ☑ Despite Greater Austin's high average wages, the region has mid-range per capita incomes and comparatively high adult and youth poverty rates. This indicates that certain local constituencies are not benefiting from the region's dynamic economy.

- ☑ Compared to metros with large health-care economies such as Denver, Nashville and Raleigh-Durham, Greater Austin is relatively underserved for physicians.
    - The lack of a teaching hospital in metro Austin also contributes to the region's low concentration of health-care professionals, although efforts are underway to address this issue through the development of a medical teaching facility in the Mueller district.

- ☑ Metro Austin is the safest of the peer metros for violent crimes, although its rate of property crime is more comparable to competitor regions.

- ☑ Teenage pregnancies have been declining in the Austin MSA and are well below state averages. Measures of teenage "idleness" (16-19 year olds not in school or working) are also comparatively low in Greater Austin.

- ☑ Metro Austin's non-profit organizational capacity and activity is strong, with the region topping its peer metros in number of registered organizations per resident.

- ☑ Austin's significantly low numbers of facilities that generate pollution – coupled with the city's high per-capita rates of parkland and park-related investments – combine to make the region's natural environment a great local strength.

- ☑ The Austin area has a competitive array of arts and cultural amenities that not only contribute to the region's quality of life, but also rate highly in rankings of cultural "vitality" and arts-related employment.

Community Indices

In the past decade, rankings that profile "best cities" for business, singles, retirees, entrepreneurs, and the like have become increasingly popular in print and online media sources. Such rankings and indices can help shape opinions outsiders hold about communities. This section of the report lists a select group of community indices recently published in various media including magazines, online, books, and academic publications in order to gain an "outsider's perspective" on Greater Austin compared to Denver, Nashville, Phoenix, and Raleigh-Durham.

Quality of Life

The following table lists the results of three quality of life rankings from Sperling's (2005) and *Forbes* (2006). Sperling's ranked Austin 22nd out of 331 metro areas in its "Best Places to Live" list. The ranking analyzed several factors that contribute to overall quality of life including cost of living, job growth, environmental quality, and commuting times. Austin ranked considerably higher than Denver, Nashville, and Phoenix but lower than Raleigh-Durham.

Sperling's also published a "Best Places for Seniors" ranking in the same year. Based on an analysis of 331 metro area's senior living facilities, medical care, transportation services, and senior population, Austin ranked 29th, higher than only Phoenix (which ranked 35th). Austin's lack of a medical school and its smaller proportion of senior residents probably contributed to its ranking in this regard.

Forbes published a "Best Cities for Singles" list in 2006, which ranked 40 of the largest metro areas in the nation. Indicators examined for the rankings include nightlife, culture, job growth, number of singles, cost of living, "coolness," and online dating activity. Austin ranked as the 8th best metro area in the country for singles. While it cracked the top ten, Austin still ranked lower than Denver, Phoenix, and Raleigh-Durham.

Quality of Life Rankings (by MSA), 2005 and 2006

	Sperling's		*Forbes*
	Best Places to Live, 2005	Best Places for Seniors, 2005	Best Cities for Singles, 2006
Austin	22	29	8
Denver	60	20	1
Nashville	206	24	23
Phoenix	273	35	2
Raleigh-Durham	13	26	6

Best Places to Live (2005): Ranks 331 metro areas based on a variety of quality of life issues including job outlook, cost of living, weather, environmental quality, crime rates, commuting times, and leisure amenities.

Best Places for Seniors (2005): Ranks 331 metro areas based over to categories such as senior living facilities, medical care, specialized transportation services, and senior population.

Best Cities for Singles (2006): Forbes ranked 40 of the largest continental U.S. metropolitan centers in seven different areas: nightlife, culture, job growth, number of singles, cost of living alone, coolness, and for the first time, online dating. All categories are weighted equally, with the exception of the number of singles, which received a double weighting.

Sustainability

Environmental protection and sustainability have become increasingly important issues associated with quality of life and community competitiveness. However, measuring and tracking issues of sustainability on the local and regional levels can be difficult. SustainLane is the first organization to track indicators associated with sustainability across communities. Popular media outlets including *The New York Times, USA Today, The Wall Street Journal,* NPR, CNN, *Forbes,* and others have cited the organization's achievements in raising awareness about environmental protection and responsibility.

The following chart shows SustainLane's rankings of the City of Austin and its peer cities in air quality, planning and land use, local food and agriculture production, green (LEED) buildings, and regional public transit ridership. Among the largest 50 cities in the nation, Austin ranked in the top 10 for air quality, local food and agriculture, and green buildings. It ranked very well for planning and land use as well. However, the City posted a weaker ranking in regional public transit ridership.

Sustainability Rankings by Indicator (by City), 2006

	Air Quality	Planning and Land Use	Local Food and Agriculture	Green (LEED) Buildings	Regional Public Transit Ridership
Austin	8	11	7	8	27
Denver	14	17	10	14	19
Nashville	35	25	23	27	42
Phoenix	46	9	40	28	24
Raleigh-Durham	NR	NR	NR	NR	NR

Source: SustainLane.com.
Note: The largest 50 US cities by population (based on 2004 US Census data) were selected as the universe for the study. Neither Raleigh nor Durham was included in the study. More information can be found at http://www.sustainlane.us/Methodology.jsp, including sources for each indicator.

Creative Class

Related to rise of the knowledge economy is a group of workers that professor and author Richard Florida calls the "creative class." These are the people who use their minds to create new processes and products. The so-called creative class includes scientists, engineers, artists, actors, architects, researchers, and analysts. They also include those who work in knowledge-intensive industries such as finance, law, health care, business management, and high-tech sectors. According to Florida, the creative class will drive growth in the 21st century economy. While it is debatable whether the creative class will indeed be the *de facto* lynchpin of the New Economy, it is reasonable to believe that today's knowledge-based economy is heavily dependent on the human capital behind it.

According to Florida's theory, the creative class is attracted to cities with the three "T's": technology, talents, and tolerance. He argues that these principles are key determinants of successful economic development. To measure community competitiveness along these dimensions, he developed a Creativity Index of metro areas based on four factors: the creative class' share of the workforce, innovation (measured as patents per capita), high-tech industry (using the Milken Institute's Tech Pole Index), and diversity.[51] The following table shows Florida's rankings of the metro areas with the highest Creativity Index. Austin ranked second out of 268 metro areas, bolstered by its high scores in innovation and its total proportion of creative class workers. While Raleigh-Durham and Denver also scored well, Phoenix and Nashville did not place in the top 20.

Richard Florida's Creativity Index Rankings (by MSA), 2006

Metropolitan Area	Overall Rank	Creative Class Rank	High Tech Rank	Innovation Rank	Diversity Rank
San Francisco	1	12	1	5	1
Austin	**2**	**7**	**13**	**6**	**23**
Boston	3	6	2	12	41
San Diego	3	30	14	13	4
Seattle	5	20	3	34	11
Raleigh-Durham	**6**	**5**	**16**	**8**	**52**
Houston	7	22	19	39	16
Washington, D.C.	9	4	5	85	18
New York	10	25	15	54	20
Minneapolis	11	14	28	11	60
Dallas	11	55	6	40	15
Denver	14	17	65	29	25
Phoenix	22	92	8	46	21
Nashville	66	79	70	171	45

Source: http://www.creativeclass.org/rankings.shtml
Note: Rankings based on 268 metro areas

[51] The Tech Pole Index is based on a region's high-tech industrial output as a percentage of the U.S. high-tech industrial output, and the percentage of a region's total economic output that comes from high-tech industries compared to the national percentage.

City Vitals Rankings

CEOs for Cities is a non-profit organization with a network of mayors, corporate CEOs, university presidents, foundation officials, and civic leaders working to strengthen America's urban communities. According to the organization's 2006 "City Vitals" report, competitive communities are those that seek to develop talent, innovation, connections, and distinctiveness. As such, the report analyzed metro area competitiveness in four indices along these dimensions.

Talented City

The skill and abilities of a community's workforce play a key role in its competitiveness in today's knowledge economy. Because studies have shown the correlation between a person's income level and his/her educational attainment, the regions with the best educated residents also typically have the highest levels of income. This index looked at the following indicators to measure intellectual capital by region.

- **Educational attainment:** Percent of the metro population ages 25+ with at least a four-year college degree
- **Creative professionals:** Percentage of workers employers as mathematicians, scientists, artists, engineers, architects, and designers
- **Young and restless:** Percentage of the metro population that are 25-34 years old who have competed at least a four-year college degree
- **Traded sector talent:** Percent of metro workers who have a college degree and are employed in private sector businesses excluding health care and education
- **International talent:** Percentage of metropolitan population ages 25+ who have competed a college degree and were born outside of the United States

As shown in the following chart, Raleigh-Durham ranked higher than Austin in each indicator area. However, Austin was highly rated in workforce competitiveness. It ranked higher than Denver, Nashville, and Phoenix for every indicator area.

Talented City Indicators (by MSA), City Vitals Rankings, 2006

Indicator	Austin	Denver	Nashville	Phoenix	Raleigh-Durham
College Attainment	3	6	22	33	1
Creative Professionals	4	5	31	25	2
Young & Restless	2	6	14	33	1
Traded Sector Talent	4	9	26	29	2
International Talent	17	27	44	23	21

Source: CEOs For Cities "City Vitals" report
Note: All calculations were computed at the metropolitan area level using the best and most recent data available. A complete methodology can be found in the report on page 5.

Innovative City

Because the ability to create and commercialize new ideas is a key factor of economic growth, promoting innovation is a key strategy for competitive communities. As noted in the "City Vitals" report, regions with strong clusters of talent, innovative firms, and research institutions with a strong risk-taking entrepreneurial climate account for a greater number of new ideas and patents. This index examined four indicators to measure innovation activity by region.

- **Patents:** Number of patents issued per 1,000 population
- **Venture capital:** Amount of venture capital raised per 1,000 population
- **Self-employed:** Percent of adult population who are self-employed
- **Small business:** Number of firms with fewer than 20 employees per 1,000 population

Austin ranked higher than its peer metro areas in patents and venture capital activity. However, it ranked comparatively lower in self-employment and its proportion of small businesses.

Innovative City Indicators (by MSA), City Vitals Rankings, 2006

Indicator	Austin	Denver	Nashville	Phoenix	Raleigh-Durham
Patents	3	12	48	13	6
Venture Capital	3	6	22	25	5
Self-Employment	15	17	7	12	20
Small Businesses	24	11	46	44	23

Source: CEOs For Cities "City Vitals" report
Note: All calculations were computed at the metropolitan area level using the best and most recent data available. A complete methodology can be found in the report on page 5.

Connected City

Because of the realities of today's global economy, connected communities maintain a competitive advantage. The study examined many dimensions of connectedness including physical connections (made through transportation infrastructure), telecommunications connections, and local connections (made through volunteering and voting). The "City Vitals" index examined seven indicators to measure these dimensions of connectedness.

- **Voting:** Number of votes cast in the November 2004 presidential election divided by the voting age population of the metro area
- **Community involvement:** Percentage of the metro area population who reported volunteering for a community activity in the past year
- **Economic integration:** Percentage of the population who would not have to move from their current neighborhood in order to equalize the distribution of

high-income and low-income households across all neighborhoods in a metro area

- **Transit use:** Percentage of non-poor households that use public transportation at least once per week
- **International students:** Number of foreign students enrolled in institutions of higher education in the metro area per 1,000 population
- **Foreign travel:** Percent of the population reporting taking a trip outside the United States
- **Wireless internet access:** Number of Wi-Fi hotspots per 100,000 population

Austin ranked highly in foreign travel, internet connectivity, community involvement, and proportion of international students. However, it ranked very low in voter participation and economic integration.

Connected City Indicators (by MSA), City Vitals Rankings, 2006

Indicator	Austin	Denver	Nashville	Phoenix	Raleigh-Durham
Voting	41	19	25	46	18
Community Involvement	4	6	47	35	5
Economic Integration	49	47	12	43	13
Transit Use	n/a	14	n/a	23	n/a
International Students	11	10	44	25	27
Foreign Travel	1	29	41	23	3
Internet Connectivity	1	10	15	9	12

Source: CEOs For Cities "City Vitals" report
Note: All calculations were computed at the metropolitan area level using the best and most recent data available. A complete methodology can be found in the report on page 5.

Distinctive City

The "City Vitals" report noted that one of the paradoxes of globalization is that, through increased communication and commerce, distinctive differences between communities are often diminished. Fostering a strong "sense of place" makes communities more attractive to visitors and helps enhance quality of life for local residents. In addition, ideas gained through local experiences are often the inspirations behind major technological and business-model breakthroughs. Because there are many dimensions of distinctiveness, this index examined four broad measures.

- **Weirdness index:** Average of the extent to which the metro area's 10 most distinctive consumer behaviors exceed the national norm for each behavior
- **Culture/cable radio:** Ratio of persons attending cultural events to the number of persons regularly watching cable television

- **Restaurant variety:** Ratio of ethnic restaurants to fast food restaurants in the metro area
- **Movie variety:** Variance of local movie attendance from national movie attendance for the top 60 motion pictures nationally in 2005

Despite the local push to "Keep Austin Weird," Denver ranked higher on all dimensions of distinctiveness. While Austin ranked better than the other comparison metro areas in weirdness and the culture/cable ratio, it ranked in the bottom half of the index for movie and restaurant variety.

Distinctive City Indicators (by MSA), City Vitals Rankings, 2006

Indicator	Austin	Denver	Nashville	Phoenix	Raleigh-Durham
Weirdness Index	17	3	25	23	27
Culture/Cable Ratio	7	2	50	14	17
Restaurant Variety	28	21	35	18	24
Movie Variety	30	10	27	31	21

Source: CEOs For Cities "City Vitals" report
Note: All calculations were computed at the metropolitan area level using the best and most recent data available. A complete methodology can be found in the report on page 5.

Southern Growth Policies Board Community Index

In 2005, the Southern Growth Policies Board published its *Southern Community Index*. The index tracks southern states' progress in building healthier, more vibrant communities. To achieve this, the index includes 15 quality of life measures that are – together – considered to be the foundation for healthy and viable communities.

These measures include: access to healthcare; homeownership rates; crime rates; employment rates; and levels of civic engagement and leadership diversity. Building strong communities underpins long-term economic development strategies by providing the services, infrastructure, and environment to support families, workers, and businesses.

In addition to tracking state progress along these 15 dimensions, the stated goal of publishing this index was to encourage communities to develop a localized index to gauge progress and competitiveness. Using the *Southern Community Index* as a basis, *Market Street* developed the following index to gauge Austin's competitiveness against its peer metro areas.

In terms of competitive advantages, the educational attainment of Greater Austin's workforce is clearly an advantage. In addition, the region has the highest proportion of international students enrolled in higher education compared to Denver, Nashville, Phoenix, and Raleigh-Durham. Despite this, metro Austin's per capita income as a percent of the U.S. per capita income is 99 percent. In Denver, Nashville, and Raleigh-Durham PCI as a percent of national PCI exceeds 100 percent.

Austin's "weirdness" is also an advantage in creating an environment attractive to knowledge workers. The Austin metro area has the highest number of arts businesses per 1,000 residents at 3.46 compared to 2.8 in Denver, 2.66 in Nashville, 2.21 in Raleigh-Durham, and 1.85 in Phoenix.

In terms of competitive disadvantages, Greater Austin's high real estate prices make rents unaffordable for a higher percentage of renters. It also helps explain comparatively low home-ownership rates. These findings are supported by research noted earlier in this report.

Southern Growth Policies Board Community Index (by MSA)

	Indicator	Austin	Denver	Nashville	Phoenix	Raleigh-Durham	U.S.
1	Voter Turnout (as percent of registered voters)	61%	n/a	70%	78%	69%	64%
2	Teenage Idleness (16-19 year olds not in school or workforce)	5%	5%	6%	7%	4%	5%
3	Economic Integration	54%	55%	63%	56%	63%	n/a
4	International Students (# enrolled in higher education per 1,000 population)	54.2	45.6	10.8	18.1	45.6	n/a
5	Uninsured (as percent of total population)	14%	15%	11%	17%	13%	14%
6	Homeownership Rate	60%	68%	68%	68%	65%	67%
7	Renters with Unaffordable Housing	49%	50%	47%	48%	45%	49%
8	Violent Crime Rate (per 100,000 population)	346	444	894	513	386	469
9	Property Crime Rate (per 100,000 population)	4,134	4,458	4,136	5,236	3,438	3,430
10	Arts Businesses per 1,000 Residents	3.46	2.80	2.66	1.85	2.21	n/a
11	Children in Poverty	16%	12%	16%	20%	14%	18%
12	Per Capita Income (as percent of U.S.)	99%	123%	106%	94%	101%	100%
13	Labor Force Participation Rate	83%	84%	79%	78%	80%	78%
14	Population with H.S. Degree or Higher	87%	88%	85%	84%	88%	84%
15	Population with a B.A. or Higher	39%	37%	28%	27%	42%	27%

Sources and Notes:

1 Texas, Arizona, and Colorado Secretary of State offices; NC State Board of Elections; TN Dept. of State
2 American Community Survey, 2005
3 City Vitals Report by CEOs for Cities.
Measure reflects the number of students who would not have to move from their current neighborhood in order to equalize distribution of high-income households across all neighborhoods in the metropolitan area
4 City Vitals Report by CEOs for Cities
5 U.S. Census Bureau, Small Area Health Insurance Estimates, 2000
6,7 American Community Survey, 2005
8, 9 Federal Bureau of Investigation, 2005
10 Americans for the Arts, 2004 (based on 2000 data)
Arts businesses include those in museum/collections; performing arts; visual/photography; film, radio, TV design/publishing; and schools/services.
11 U.S. Census Bureau, Small Area Income and Poverty Estimates, 2004
12 U.S. Bureau of Labor Statistics, 2005
13 Texas Workforce Commission, U.S. Bureau of Labor Statistics, U.S. Census Bureau, 2005
14, 15 American Community Survey, 2005

CONCLUSION

The competitive issues, challenges and opportunities faced by Greater Austin as it embarks on development of the *Opportunity Austin II* strategy are alike in some ways to the concerns identified in 2003's first *Opportunity Austin* strategic process, but there are significant differences. Traffic congestion and mobility are still priority local competitive constraints, as are challenges to effectively leverage the region's growing minority populations. The protection and enhancement of Greater Austin's quality schools, plentiful greenspace, dynamic quality of life and inimitable quirkiness still deserves serious strategic attention. However, metro Austin is in a different place in 2007 than it was in 2003. The economy is racing along in high-gear, total population and per-capita incomes are increasing, regional cooperation and public-private partnerships have been solidified, and Greater Austin is again prominently on the economic development "radar screen" for relocation professionals and non-local companies.

Therefore, successfully addressing the key issues identified in this *Competitive Realities* report – and each successive research phase of this planning process – will focus on taking Greater Austin to the "next level" of success.

The priority competitive concerns identified in this report can be summarized in the following categories:

Talent – This issue impacts the full spectrum of workforce availability, including:

- Improvement of regional school systems' ability to effectively prepare students for college and the workplace;
- Addressing enrollment capacity issues of regional two and four-year colleges and universities, and better linkages of these institutions' curricula with local occupations-in-demand;
- Working to provide good jobs for local graduates with non-technology degrees; and
- Ensuring that professionals with specialized skills and demonstrated management experience are available for local companies.

Economic Development Catalysts – This dynamic is inclusive of:

- Sufficient venture and seed-capital resources to enable local researchers and entrepreneurs to successfully create growing businesses;
- A best-practice regional environment for technology-transfer and research commercialization; and
- Comprehensive attention to the key supportive actions necessary to expand local companies of all sizes.

Keeping Greater Austin Great – These concerns address the region's inevitable growth, including:

- Getting "ahead" of growth by coordinating regional development and transportation planning to the extent necessary to improve mobility, protect natural environments and accommodate residents of all incomes and ages; and
- Ensuring that Greater Austin's quality of life and all that contributes to it continues to be the region's principal competitive strength.

Ultimately, strategic actions recommended to address these issues will require a level of participation and attention from regional stakeholders at least equivalent to – and likely even more robust – than the dynamic efforts aligned behind implementation of *Opportunity Austin* in 2004.

APPENDICES

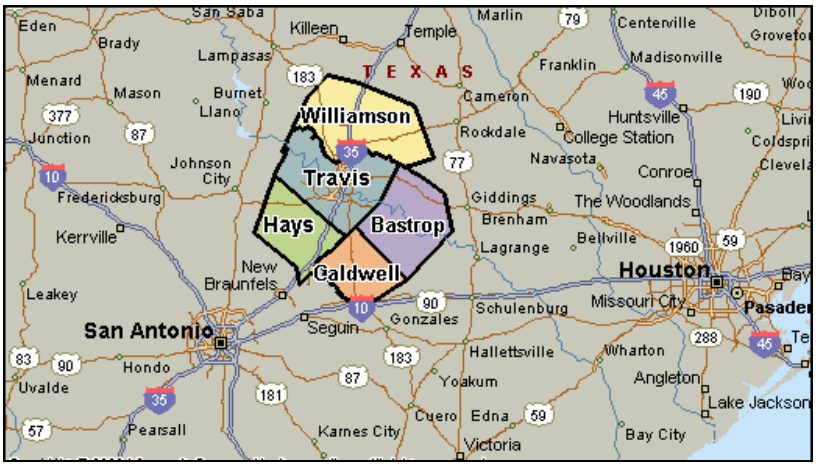
APPENDIX A: METHODOLOGY

This section describes the methodologies used in the research and data analysis of this report, including geographies used in the *Competitive Position Analysis* as well as a note on the data sources cited in this *Competitive Realities* report.

Geography

The Austin-Round Rock MSA (also referred to as Greater Austin, metro Austin, and the Austin region) is comprised of five counties in central Texas: Bastrop, Caldwell, Hays, Travis, and Williamson. The City of Austin is located in Travis County.

Austin-Round Rock, Texas MSA 2005



This report compares the Austin-Round Rock metropolitan statistical area against the state of Texas and the United States in the demographic and economic snapshots and against four peer metro areas in the *Competitive Position Analysis*. The peer metro areas include Denver, Colorado; Nashville, Tennessee; Phoenix, Arizona; and Raleigh-Durham, North Carolina.

The following chart shows how these metro area's definitions have changed since the 1999 classifications used for the decennial Census. The Austin and Phoenix metro area definitions have not changed, but changes did occur for Denver, Nashville, and Raleigh-Durham. Because most of these changes reflect the inclusion of outlying, developing counties, the 1999 definitions for Nashville, Denver, and Raleigh-Durham include more than 94 percent of the population captured by the 2005 MSA definitions. As such, *Market Street* is comfortable using data sources that aggregate these metro areas according to the 1999 definitions (2000 Census and the 2005 American Community Survey. Where possible, *Market Street* has aggregated data to match the most current MSA definitions.

Metro Area Definition Changes, 1999 (used for the 2000 Census) and 2005

	1999 Definition	2005 Definition
Austin	*Austin-San Marcos MSA*	*Austin-Round Rock MSA*
	Bastrop Caldwell Hays Travis Williamson	Definition remains the same
	Current Population (based on 1999 def.) 1,452,529	*Current Population (based on 2005 def.)* 1,452,529
Denver	*Denver PMSA*	*Denver-Aurora MSA*
	Adams Arapahoe Denver Douglas Jefferson	Adams Arapahoe Broomfield* Clear Creek Denver Douglas Elbert Gilpin Jefferson Park
	Current Population (based on 1999 def.) 2,262,650 96% of the pop captured by 2005 def.	*Current Population (based on 2005 def.)* 2,359,994
Nashville	*Nashville MSA*	*Nashville-Davidson-Murfreesboro MSA*
	Cheatham Davidson Dickson Robertson Rutherford Sumner Williamson Wilson	Cannon Cheatham Davidson Dickson Hickman Macon Robertson Rutherford Smith Sumner Trousdale Williamson Wilson
	Current Population (based on 1999 def.) 1,337,541 94% of the pop captured by 2005 def.	*Current Population (based on 2005 def.)* 1,422,544
Phoenix	*Phoenix-Mesa MSA*	*Phoenix-Mesa-Scottsdale MSA*
	Maricopa Pinal	Definition remains the same
	Current Population (based on 1999 def.) 3,865,077	*Current Population (based on 2005 def.)* 3,865,077
Raleigh-Durham	*Raleigh-Durham-Chapel Hill MSA*	*Raleigh-Cary MSA / Durham MSA*
	Chatham Durham Franklin Johnston Orange Wake	Chatham (Durham) Durham (Durham) Franklin (Raleigh-Cary) Johnston (Raleigh-Cary) Orange (Durham) Wake (Raleigh-Cary) Person (Durham)
	Current Population (based on 1999 def.) 1,368,651 97% of the pop captured by 2005 def.	*Current Population (based on 2005 def.)* 1,405,868

Source: U.S. Census Bureau, Population Estimates (2005)
Note: 2000 Decennial Census and the 2005 American Community Survey both use the 1999 definitions.
*Broomfield County was formed from parts of Adams, Boulder, Jefferson, and Weld Counties, CO in late 2001

Data Sources

Market Street used the most recent data available for this *Competitive Realities* report. Reputable and reliable private, non-profit, local, state, and national data sources are used, making every effort to match methodologies and units of comparison across sources to provide the most accurate and informative analysis of Greater Austin's economic trends and competitive position.

Major data sources for this report include the U.S. Census Bureau, the U.S. Bureau of Economic Analysis, the U.S. Bureau of Labor Statistics, and the Internal Revenue Service. State and local data sources include the Texas Workforce Commission, the Greater Austin Chamber of Commerce, and the City of Austin.

In many cases, the data are presented in a chart as the percentage each component represents of the total. In these cases, unless otherwise noted, if the summation of the percentages of all the components does not equal 100 percent, it is due to rounding.

Education Data Coverage

In the K-12 analysis in the "Education and Workforce Development" section of this report, a number of indicators were examined in order to gauge Austin's competitive position. Each central city's largest school districts were used for this analysis. The following chart outlines the school districts used for this report.

Education Data Coverage: Districts by City

City	Districts Used for Data Analysis	Total Number of Districts in City	Student Coverage for Analysis
Austin	Austin ISD	3	87%
Denver	Denver County	2	93%
Nashville	Nashville-Davidson County School District	1	100%
Phoenix*	(See Note)	19	81%
Raleigh	Wake County Schools	1	100%
Durham	Durham Public Schools	1	100%

The City of Phoenix has 19 separate school districts, three of which cover grades K-12 (Deer Valley, Paradise Valley, and Scottsdale). This analysis includes these districts as well as the largest five elementary districts (Alhambra, Cartwright, Pendergast, Roosevelt, and Washington) and the only high school district (Phoenix Union).

Age Data

For the purposes of this report, *Market Street* utilized two different sources for certain demographic data. The University of Texas at San Antonio houses the Texas State Data Center (TSDA). The TSDA develops population estimates and projections by age, race and ethnicity, and gender for the State of Texas and its counties. The

estimates produced by the TSDA differ from those produced by the U.S. Census Bureau on three points.

1. The TSDA data uses more recent birth and death data than the Census Bureau.
2. The TSDA data takes into account recent annexations whereas the Census Bureau figures do not.
3. The Census Bureau uses the "administrative records method" to estimate county populations. This method uses income tax records that are not available to analysts outside of the Census Bureau. As such, the TSDA employs three different methods (ratio-component, component method II, and the housing-unit method) to estimate county populations. The estimates reported by the TSDA average the results of these three methods together.

The Texas State Data Center is the preferred data source for many Texas localities, whereas the Census Bureau is more likely to be a primary data source for researchers outside of Texas. This includes site selectors. Although there are discrepancies between the two sources, they both highlight similar trends.