City of Austin Comprehensive Housing Market Analysis

Prepared for

City of Austin

Prepared by

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INTRODUCTION

Background and Summary of Top Needs

INTRODUCTION

BACKGROUND

This Housing Market Analysis (HMA) serves as an update to the City of Austin's 2014 Comprehensive Housing Market Study. It examines demographic and housing market trends since that study was conducted and identifies the greatest housing needs in Austin. The report is organized around the following sections:

- **Section I. Demographic Context.** Section I. provides information on population growth, household characteristics, income and poverty and employment in order to set context for the housing analysis.
- **Section II. Housing Market Profile.** Section II. examines how the City of Austin's housing market has changed since the City's 2014 Comprehensive Housing Market Study. It includes data on residential permitting, housing stock, home values, rental costs, homeownership and the geographic distribution of housing by affordability range.
- Section III. Housing Market Gaps. This section builds upon the housing market profile by connecting changes in affordability to housing needs. It includes current data on housing prices changes relative to incomes and a recalculation of the housing gap, or shortage, in affordable units.

The report also includes an updated and expanded zip-codelevel housing model that provides indicators of housing supply and affordability for each zip code in the City. Appendix A includes the output from the zip code model.

DATA SOURCES

The primary data and information sources used in the 2019 HMA include the following:

- Population and household levels and projections from the City Demographer;
- Social and economic information from the U.S. Census Bureau's 2010 decennial survey, 2012 American Community Survey (ACS), and 2017 ACS;
- Employment data from the Bureau of Labor Statistics and the Texas Workforce Commission;
- Rental data from Austin Investor Interests;
- Data on subsidized rental units from the City of Austin and the Housing Authority of the City of Austin (HACA); and
- Data on home resales from the Austin Board of Realtors (ABOR).

SUMMARY OF TOP NEEDS

The top housing needs in Austin, identified through the analysis conducted for this study are summarized on the following page. Needs are organized around rental and ownership affordability.

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INTRODUCTION

Rental Affordability

- Austin's median rent increased 38% from 2010. This is about the same increase as Nashville—less than Portland, San Jose, Denver (45-59%); and higher than Dallas, and San Antonio (17-20%).
- Naturally occurring (market-rate) affordable rentals continued to decline. In 2012, 38% of rental units were priced between \$625 and \$875. This compares to 14% in 2017.
- Overall, renters have been able to manage changes in the rental market due to rising incomes. The City's renters are now comprised of higher income households. Yet, some low-income renters left the City, assumedly due to rental price increases. Austin has about 12,000 fewer renters earning less than \$25,000 per year than in 2012.
- Today, the rental gap for units renting at less than \$625 per month ranges from a shortage of 36,400 to 25,000 units, after accounting for student households.
- The good news is that the loss of deeply affordable rentals was less than the change in low-income renters. The change in the rental gap from 2012, therefore, was more closely linked to renters leaving the City or moving into higher income brackets than a decline in supply.
 - The City of Austin has played a role in this relatively positive outcome:
- The City's investments in affordable rental units have helped stabilize the rental market by adding units to assist low-to-moderate-income renters and alleviating high levels

of cost burden for a range of low-income renters. The City's investments are also increasingly producing affordable units within mixed-income developments.

Homeownership Affordability

- Austin's median home value (\$333,000 in 2017) rose 55% from 2010, more than peer cities except for Denver (58%).
 Yet Austin is still more affordable than San Jose, Portland, and Denver, and less affordable than Nashville.
- The City's inventory of for-sale units that are affordable to renters earning <\$75,000 to buy has decreased substantially from 49% of all homes listed/sold in 2008 to 22% in 2017-2018. Today, there are 14 times more renters earning <\$75,000 than there are affordable homes to buy.
- Attached homes¹ make up one-third (35%) of for-sale units affordable to < \$75,000 renters. Yet they comprise only 20% of all for-sale homes and just 12% of the City's owneroccupied housing stock (and are a very small proportion of annual building permits).
- Middle-income households (earning \$35,000 to \$100,000) now have lower ownership rate than households in the City overall and their ownership rate has dropped from 44% in 2012 to 36% in 2017.
- Preserving relative affordability of and adding attached¹ homes to the for-sale market will be important for maintaining homeownership opportunities among middle income households.

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¹ Single family attached, du-/tri-/four-plexes, townhomes, and condos.

SECTION I.

Demographic Context

This section of the Housing Market Analysis (HMA) discusses the City's changing demographics. The analysis sets the context for the sections that follow, which focus on housing demand and preferences.

POPULATION

The 2018 population of Austin was 967,629, according to the City Demographer. This is a 22% increase from a 2010 population of 790,390. As of 2018, Austin was the 11th largest city in the nation, which is up from the 16th largest in 2000.¹

Figure I-1 shows annual growth trends since 1960. Growth was strongest during the mid-1980s, when annual rates of growth averaged six percent, compared to about 2.5% in recent years.

Figure I-2 puts Austin's recent growth in the context of south central Texas and peer cities.² Austin's recent growth is significant, especially when compared to peer cities of Portland and Nashville—and even tech-dominated San Jose. Between 2012 and 2017. Austin had the highest percentage growth and was third among the group in numerical growth.

This growth is not just contained within the City of Austin. The Austin-Round Rock Metro Statistical Area (MSA) posted the highest growth rate of the largest 100 metros in the nation from 2010 to 2018.

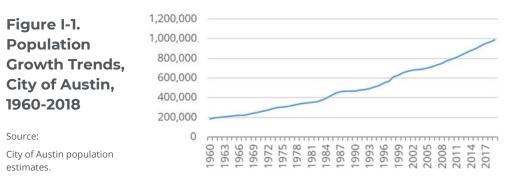


Figure I-2.

Population Growth and Largest City Ranking, 2012 and 2017

	201	2	201	17	2012-2017	2012-2017
City	Population	Size Rank	Population	Size Rank	Percent Growth	Numerical Growth
Houston, TX	2,161,686	4	2,313,230	4	7%	151,544
San Antonio, T	X 1,383,194	7	1,511,913	5	9%	128,719
San Jose, CA	982,783	10	1,035,353	10	5%	52,570
Austin, TX	842,595	11	950,714	11	13%	108,119
Charlotte, NC	775,208	17	859,052	17	11%	83,844
Denver, CO	634,265	23	704,621	19	11%	70,356
Nashville, TN	623,255	25	665,967	24	7%	42,712
Portland, OR	603,650	28	648,121	26	7%	44,471

Source: U.S. Census Bureau.

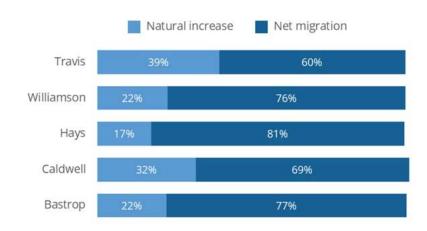
¹ Census Bureau Population Estimates: Annual Estimates of the Resident Population for Incorporated Places of 50,000 or More.

² "Peer" cities are similar in socioeconomic characteristics, industries and/or level of attractiveness for in-migrants.

Drivers of population growth. There are two distinct reasons that a community grows. First is "natural increase," which occurs when the number of births exceeds deaths in a given year; the second reason is in-migration.

Figure I-3 shows the drivers of growth between 2010 and 2018 for Travis County and surrounding counties.³ As the figure demonstrates, in-migration is an important part of growth for Travis County, yet over one-third of the county's recent growth has been driven by natural increase.

Figure I-3.
Components of Population Change, 2010 to 2018



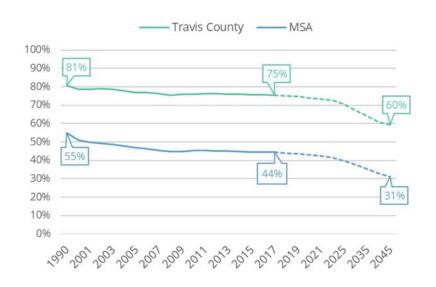
Note: Net federal movement and a residual are not included in the numbers above. Thus, natural increase and net migration do not add to 100%.

Source: Census Population Estimates.

In-migration was also the primary driver of growth for surrounding counties—particularly Hays County, in which 81% of total growth was net migration.

Regional growth. Since 1990, the City of Austin's share of the MSA population has been declining, as shown in Figure I-4. Population projections for the City and MSA suggest that the City's share of the MSA population will drop to 31% by 2045 (based on population forecasting by the City Demographer).

Figure I-4.
City of Austin Share of Travis County and MSA
Population, 1990 to 2045

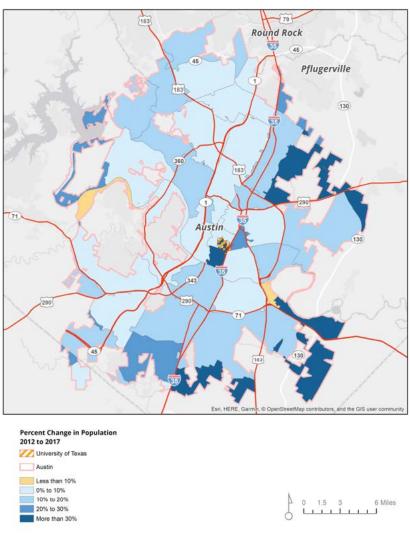


Source: City of Austin City Demographer, January 2019.

³ The Census reports the drivers of population growth at the county level.

Geographic dispersion of growth. Figure I-5 shows population change between 2012 and 2017 by zip code. As the map demonstrates, population growth varied considerably throughout Austin, with many zip codes experiencing more than 20% growth in the past five years, while several zip codes had little to no growth. The strongest growth occurred on the eastern and southern periphery of the City.

Figure I-5.
Population Change by Zip Code, 2012 to 2017



Source: 2012 and 2017 5-year ACS and Root Policy Research.

HOUSEHOLD COMPOSITION

Austin's demographics are similar to those in 2000, with a few notable exceptions, which are discussed below. Most demographics shifts took place in the earlier part of the decade, between 2000 and 2007.

Race and ethnicity. As shown in Figure I-6, the number and proportion of African Americans in the City declined between 2000 and 2012 but has since rebounded, showing cumulative increase of about 7,500 between 2000 and 2017.

Over the same period, the City experienced substantial growth in the Asian population, which now represents the same population proportion as African American residents which are both eight percent.

No single racial or ethnic group exists as a majority of the City's population. This is mostly due to growth in residents who are of Hispanic descent, who account for about one-third of the City's overall population. Non-Hispanic white residents account for just less than half of the total population (48%).

Age. The median age of Austin residents increased during the past 17 years, from 29.6 to 33.4. This was due to a shift away from college-age residents toward young adults (ages 25 to 34) and seniors (ages 65 and up).

As shown in Figure I-7, the proportion of City residents age 18 to 24 dropped from 17 to 11% between 2000 and 2017. The decline reflects slow growth in that age group between 2000

and 2012 and then a numerical decline between 2012 and 2017.

Between 2012 and 2017 there was also a drop in the proportion of the Austin population under 18, from 22 to 20%. Declines of both children and college aged adults were offset by increases in the young adult population (from 21 to 23%) and the senior population (7 to 9%). These shifts likely reflect in-migration of young adults and aging of middle-aged adults into senior status.

Household type. According to the City Demographer, the share of family-with-children households in the urban core declined between 1970 and 2012, from 32 to 25%. This proportion (25%) remained constant between 2012 and 2017, with offsetting shifts between married couples with children and single parent households.

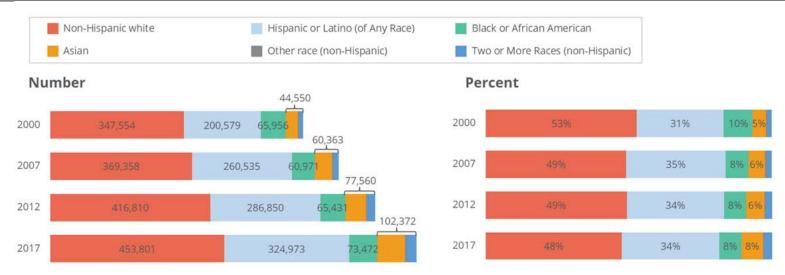
Over the past 20 years, growth in Hispanic households in the City, which generally have larger families with children, has helped the City maintain a share of family-with-children households.

As shown in Figure I-8, household composition has stayed fairly stable between 2000 and 2012.

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Figure I-6. Residents by Race and Ethnicity and Change, City of Austin, 2000, 2007, 2012 and 2017

	2000)	200	7	201:	2	2017	,	2000-2012 Numerical	2000-2012 Percent	2012-2017 Numerical	2012-2017 Percent
Race/Ethnicity	Num.	Pct.	Num.	Pct.	Num.	Pct.	Num.	Pct.	Change	Change	Change	Change
Non-Hispanic white	347,554	53%	369,358	49%	416,810	49%	453,801	48%	69,256	20%	36,991	9%
Hispanic or Latino (of any race)	200,579	31%	260,535	35%	286,850	34%	324,973	34%	86,271	43%	38,123	13%
Black or African American	65,956	10%	60,971	8%	65,431	8%	73,472	8%	-525	-1%	8,041	12%
Asian	30,960	5%	42,818	6%	54,084	6%	71,831	8%	23,124	75%	17,747	33%
Am. Indian and Alaska Native	3,889	1%	4,810	1%	5,272	1%	7,793	1%	1,383	36%	2,521	48%
Native Hawaiian and Other Pac. Isl.	469	0%	818	0%	776	0%	208	0%	307	65%	-568	-73%
Some other race (non-Hispanic)	1,243	0%	2,688	0%	1,351	0%	2,407	0%	108	9%	1,056	78%
Two or More Races (non-Hispanic)	10,158	2%	11,833	2%	20,222	2%	26,093	3%	10,064	99%	5,871	29%



Note: Sum of race/ethnicity categories exceeds total population due to double-counting of Black, Asian, American Indian, and Native Hawaiians who also identify as being of Hispanic descent (about 1% of the total population in 2017). In the table "some other race" is the Census category "Some other race"; in the bar chart "Other race (non-Hispanic)" includes non-Hispanic American Indian and Alaska Native, Native Hawaiian and other Pacific Islander and Some other race.

Source: 2000 U.S. Census and 2007, 2012 and 2017 ACS and Root Policy Research.

Figure I-7.
Residents by Age Cohort and
Change, City of Austin, 2000, 2012
and 2017

Source:

 $2000\,$ U.S. Census and $2012\,$ and $2017\,$ ACS and Root Policy Research.

Figure I-8. Household Type and Change, City of Austin, 2000, 2012 and 2017

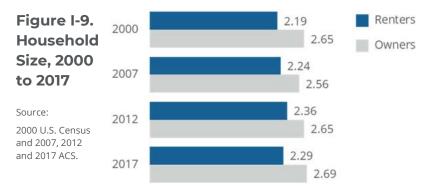
Source:

2000 U.S. Census and 2012 and 2017 ACS and Root Policy Research.

Population by Age	2000	2012	2017	2012-2017 Change
Total population	656,562	842,595	950,714	294,152
Number of Population				
Children (Under 18)	147,548	182,530	193,286	45,738
College-Aged Adults (18-24)	109,256	111,596	97,776	-11,480
Young Adults (25-34)	138,643	178,982	214,060	75,417
Middle Adults (35 to 64)	217,210	308,388	356,194	138,984
Seniors (65 and older)	43,905	61,099	89,398	45,493
Percent of Population				
Children (Under 18)	22%	22%	20%	-1.3%
College-Aged Adults (18-24)	17%	13%	10%	-3.0%
Young Adults (25-34)	21%	21%	23%	1.3%
Middle Adults (35 to 64)	33%	37%	37%	0.9%
Seniors (65 and older)	7%	7%	9%	2.2%

Household Type	2000	2012	2017	2012-2017 Change
Total Households	265,649	330,838	376,509	45,671
Number of Households				
Married without Children	51,950	62,254	78,503	16,249
Married with Children	49,148	53,105	67,292	14,187
Single Parent Household	22,132	30,362	24,671	-5,691
Living Alone	87,026	112,092	129,927	17,835
Other Household Types	55,393	73,025	76,116	3,091
Percent of Households				
Married without Children	20%	19%	21%	2.0%
Married with Children	19%	16%	18%	1.8%
Single Parent Household	8%	9%	7%	-2.6%
Living Alone	33%	34%	35%	0.6%
Other Household Types	21%	22%	20%	-1.9%

Household size. According to the Census Bureau's American Community Survey (ACS), average household size is 2.3 for renters and 2.7 for owners in the City of Austin. This reflects a slight downward shift for renters and a slight upward shift for owners since 2012, but broadly speaking household sizes haven't changed dramatically since 2000 (see Figure I-9).



INCOME AND POVERTY

Family and household income. Housing programs generally use percentages of "median family income" (MFI) as benchmarks for targeting housing assistance and affordability programs.⁴ Households earning less than 30% of MFI (roughly at the poverty level and below) are characterized as "extremely lowincome." Households earning between 30 and 50% of MFI are considered to be "very low-income;" households between 50 and 80% MFI are considered "low income;" and those 80% MFI and above are considered "moderate" to "high" income.

Figure I-10 shows the MFI levels for Austin according to household size. It is important to note that these are based on the MFI for the Austin-Round Rock-San Marcos MSA (MFI is not calculated at the city level) and provided by the U.S. Department of Housing and Urban Development (HUD).

Figure I-10. HUD Median Family Income Categories, Austin-Round Rock-San Marcos MSA, 2019

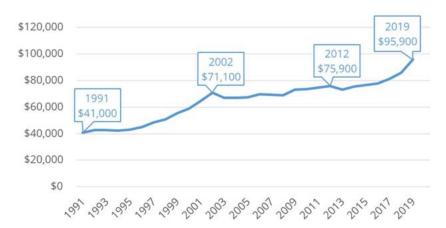
Percent MFI	Income Limit	Percent MFI	Income Limit
30% MFI		100% MFI	
1 person HH	\$19,900	1 person HH	\$66,300
2 person HH	\$22,750	2 person HH	\$75,700
3 person HH	\$25,600	3 person HH	\$85,200
4 person HH	\$28,400	4 person HH	\$95,900
50% MFI		120% MFI	
1 person HH	\$33,150	1 person HH	\$79,560
2 person HH	\$37,850	2 person HH	\$90,840
3 person HH	\$42,600	3 person HH	\$102,240
4 person HH	\$47,300	4 person HH	\$113,520
80% MFI		150% MFI	
1 person HH	\$52,850	1 person HH	\$99,450
2 person HH	\$60,400	2 person HH	\$113,550
3 person HH	\$67,950	3 person HH	\$127,800
4 person HH	\$75,500	4 person HH	\$141,900
95% MFI			
1 person HH	\$62,985	2019 HUD	Median
2 person HH	\$71,915	Income O	
3 person HH	\$80,940		
4 person HH	\$89,870	\$95,9	00

Source: www.huduser.org.

⁴ Also referred to as Area Median Income or AMI.

Figure I-11 highlights the changes in the HUD MFI for the Austin metro overall between 1998 and 2019. As shown in the figure, HUD overall MFI has more than doubled in the past 30 years with notable annual increases in recent years. Since 2012, the HUD MFI income limits have increased by 26%, from \$76,000 to \$96,000. The jump from \$86,000 to \$96,000 between 2018 and 2019 accounts for about half of that eight-year increase.

Figure I-11. HUD Median Family Income Trends, Austin-Round Rock-San Marcos MSA, 1991-2017



Source: www.huduser.org.

Median *household* income for the City overall was \$67,755 in 2017, a 29% increase from the 2012 median of \$52,453.⁵ This increase in incomes exceeded inflation over the same period: according to the Consumer Price Index (CPI), the price of consumer goods rose seven percent between 2012 and 2017.

In other words, the median Austin household gained purchasing power during the past five years. This marks a change from the previous decade (2000 to 2012) and the last market study during which Austin households lost purchasing power (incomes rose 23% and CPI rose 38%). This is also true when examined by family income.

It is important to note that a rise in median income is not necessarily an indicator of rising incomes for all residents. It could reflect rising incomes for the top group of earners, which can "pull up" the median. It can also reflect displacement of lower income households who may be pushed outside the City due to rising housing costs.

Figures I-12 and I-13 show changes in Austin's income distribution. The first distribution is based on socioeconomic cohorts, and the second based on nominal income brackets.

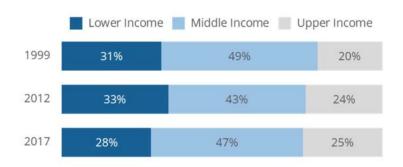
In Austin's last housing market study, income trends showed a contracting middle class with proportionately more lower- and

⁵ Household income includes single individuals living alone and roommates, which family income does not. Median household income is lower than median family income because it represents more single earners.

upper-income households based on income shifts between 1999 and 2012 (Figure I-12).

However, since 2012, the middle-income cohort has rebounded, though not quite to 1999 levels. The upper income cohort has continued to increase proportionately, but lower income households have declined to 28% of all households compared to 33% in 2012 and 31% in 2017.

Figure I-12. Lower, Middle, and Upper Income Households, City of Austin, 1999, 2012, and 2017



Note: Lower income roughly approximates less than two-thirds of the national median income and upper income roughly approximates twice the national median income. These income thresholds are consistent with the way that Americans self-identify as members of socio-economic classes. (See Pew Research report, "The Rise of Residential Segregation by Income.")

Per the above, in 2017, middle income is defined as households earning between \$40,000 to \$121,000. In 1999, the middle income range is \$28,000 to \$84,000 and in 2012 it is \$35,000 to \$100,000.

Source: 2000 U.S. Census, and 2012 and 2017 ACS and Root Policy Research.

The previous figure (I-12) showed shifts in socioeconomic cohorts, where "middle-income" is defined as \$28,000 to

\$84,000 in 1999; \$35,000 to \$100,000 in 2012; and \$40,000 to \$121,000 in 2017. The next figure (I-13) displays shifts in nominal income ranges between 1999 and 2017.

As shown in Figure I-13, the greatest shifts in income distribution occurred in the \$100,000+ category. The proportion of Austin residents earning more than \$100,000 grew by six percentage points between 2012 and 2017 (after growing by 10 percentage points between 1999 and 2012).

The proportion of households earning less than \$50,000 declined in number and proportion. That income group declined by about 15,000 households and dropped by eight percentage points (from 47 to 39%).

Figure 1-13. Household Income by Range, 1999, 2012, and 2017



Source: 2000 U.S. Census, and 2012 and 2017 ACS.

Renters and owners both experienced income growth, but the change was far more significant for renters. Median renter income increased by 34% while median owner income increased by 24% from 2012 to 2017.

As shown in Figure I-14, the number of renters earning more than \$75,000 living in Austin in 2017 rose by about 14,000 from 2012. The number of renters earning less than \$25,000 declined by nearly 11,000 households.

The implications of these income shifts on the housing market and on affordability for both renters and owners are discussed in detail in Section III. Housing Market Gaps.

Figure 1-14. Income by Tenure and Change, 2012 and 2017

	2012		201	17	2012-2017	Change
	Number	Percent	Number	Percent	Number	Pct Pt
Owners						
Less than \$10,000	3,719	3%	4,507	3%	788	0%
\$10,000 to \$14,999	2,860	2%	2,670	2%	-190	0%
\$15,000 to \$19,999	3,240	2%	2,573	2%	-667	-1%
\$20,000 to \$24,999	6,217	4%	3,459	2%	-2,758	-2%
\$25,000 to \$34,999	10,068	7%	8,443	5%	-1,625	-2%
\$35,000 to \$49,999	16,424	11%	13,704	8%	-2,720	-3%
\$50,000 to \$74,999	25,434	17%	25,397	16%	-37	-2%
\$75,000 to \$99,999	20,757	14%	23,293	14%	2,536	0%
\$100,000 to \$149,999	28,897	20%	34,404	21%	5,507	1%
\$150,000 or more	30,142	20%	45,036	28%	14,894	7%
Total Owners	147,758	100%	163,486	100%		
Renters						
Less than \$10,000	24,155	13%	18,754	9%	-5,401	-4%
\$10,000 to \$14,999	12,024	7%	9,855	5%	-2,169	-2%
\$15,000 to \$19,999	12,699	7%	9,432	5%	-3,267	-2%
\$20,000 to \$24,999	12,297	7%	12,525	6%	228	0%
\$25,000 to \$34,999	22,757	12%	22,553	11%	-204	-1%
\$35,000 to \$49,999	32,639	18%	32,740	17%	101	-1%
\$50,000 to \$74,999	29,338	16%	40,785	21%	11,447	5%
\$75,000 to \$99,999	17,262	9%	20,753	10%	3,491	1%
\$100,000 to \$149,999	13,241	7%	20,256	10%	7,015	3%
\$150,000 or more	6,668	4%	10,118	5%	3,450	1%
Total Renters	183,080	100%	197,771	100%		
Subtotals for specific	ed incom	e categori	es			
Change in owners earn	ing < \$25,0	000			-2,827	-3%
Change in owners earn	ing > \$75,0	000			22,937	9%
Change in renters earn	ing < \$25,0	000			-10,609	-8%
Change in renters earn	ing > \$75,0	000			13,956	6%

Source: 2012 and 2017 ACS.

Poverty. Between 2000 and 2012, the number of Austin residents living in poverty increased dramatically, likely due to the impacts of the recession. However, since 2012 the poverty rate has dropped to 13% for individuals and nine percent for families—similar to poverty rates in 1999.

As shown in Figure I-15, poverty rates for most age cohorts was similar in 1999 and 2017. The notable exception is seniors, whose poverty rate increased from nine percent in 1999 to 12% in 2017. That shift is a relatively recent trend, occurring between 2012 and 2017.

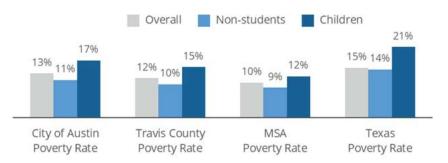
Residents aged 18 to 24 have the highest poverty rate (35%) followed by children (17%).

High poverty among 18 to 24-year-olds is driven by college and graduate students. Students affect the poverty rate because of their relatively low incomes; however, they generally have strong earnings potential and, as such, are only temporarily low-income. Figure I-15 also shows the poverty rate for Austin adjusted for students. The overall poverty rate for non-students in Austin is 11%.

The figure also compares Austin's overall, non-student, and child poverty rates with Travis County, the Austin Metro and the State of Texas overall. On each measure, Austin's poverty is slightly higher than surrounding areas but lower than the state overall.

Figure I-15.
Poverty Rate by Age and Change, City of Austin, 1999 and 2012

	1999	2012	2017	1999-2017 Percentage Point Change
Families living in Poverty	9%	14%	9%	0%
People living in Poverty	14%	20%	13%	-1%
Poverty By Age				
Under 18 Years	17%	30%	17%	0%
18 to 24 Years	33%	43%	35%	2%
25 to 64 Years	9%	13%	9%	0%
65 Years and Over	9%	9%	12%	3%
Poverty By School Enrollm	ent			
Student population	n/a	43%	36%	n/a
Non-student population	n/a	17%	11%	n/a



Note: Student population reflects residents of any age currently enrolled in undergraduate, graduate or professional school.

Source: U.S. Census, 2000, 2012 ACS, 2017 ACS, and Root Policy Research.

In addition to age (and student status), poverty also varies by race and ethnicity. Figure I-16 reports poverty level by race and ethnicity. As the figure shows, poverty is highest for African American (20%) and Hispanic (19%) residents. Those groups also experienced the greatest increases in poverty between 1999 and 2012. Since that time, poverty has moderated back to 1999 levels.

Asian residents were the only group that experienced a decline in poverty between 1999 and 2012. That trend continued through 2017, dropping to 13% in 2017 from 20% in 1999 and 16% in 2012.

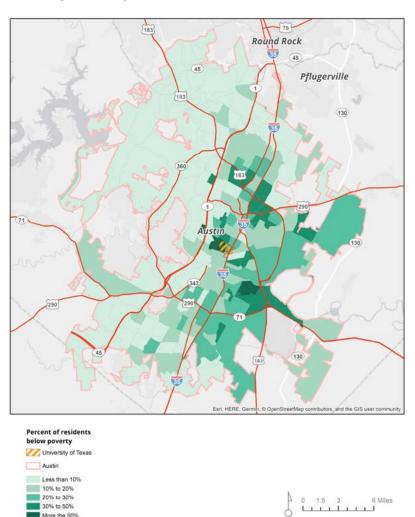
Figure I-16.
Poverty by Race or Ethnicity and Change, City of Austin, 1999 and 2012

	1999	2012	2017	1999-2017 Percentage Point Change
African American	20%	31%	20%	0%
Asian	20%	16%	13%	-7%
Hispanic	21%	31%	19%	-2%
Two or More Races	16%	21%	16%	0%
White, Non-Hispanic	9%	12%	8%	-1%

Source: U.S. Census, 2000, 2012 ACS and 2017 ACS.

Figure I-17 shows the poverty rate by Census tract. High poverty areas are very concentrated in east Austin and along I-35. Note that the high poverty neighborhoods adjacent to the University are likely reflecting student poverty.

Figure I-17.
Poverty Rate by Census Tract, 2017



Source: 2017 5-year ACS.

EDUCATION AND EMPLOYMENT

Education is an important part of mitigating poverty. Austin's overall educational attainment increased during the past five years, as discussed below. Unemployment declined and wages increased (though not on pace with housing costs) as the economy recovered from the effects of the recession.

Educational attainment. Austin residents are well educated—and became even better educated during the past five years, continuing a trend of rising educational attainment over the previous decade.

The ACS estimates that 32% of Austinites had a bachelor's degree and 19% had a graduate or professional degree in 2017 (51% total with a bachelor's degree or higher). This compares to 19% of Texans with a bachelor's degree and 10% with a graduate/professional degree (30% total with a bachelor's degree or higher).

The City's educational attainment has increased since 2000, when 26% had a Bachelor's degree and 15% had a graduate/professional degree (41%).

As shown in Figure I-18, in 2017, 10% of Austin's residents had less than a high school degree and 17% had a high school degree but had not attended college—that is, 27% of residents had no college. This is slightly improved from 2012, when 13% of residents had less than a high school degree and another 17% had a high school degree but no college (30%). Although growth has been strongest for highly educated residents, the City has 14,000 more residents with a high school degree or less than in 2012.

Figure I-18. Educational Attainment, City of Austin, 2000, 2012, and 2017

Source:

2000 U.S. Census and 2012 and 2017 ACS.

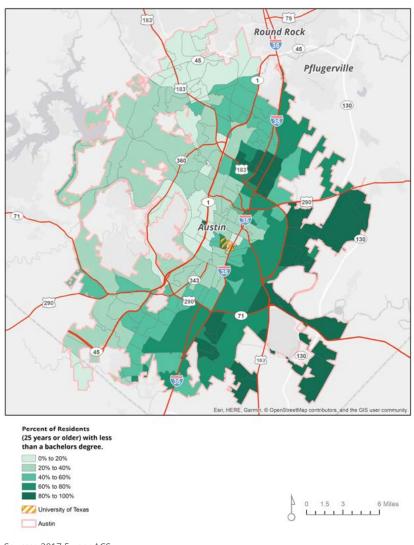
	2000		2012		2017		2012-2017 Change	
	Number	Percent	Number	Percent	Number	Percent	Number	Pct. Pt.
Less than a High School Degree	66,511	17%	72,823	13%	65,526	10%	-7,297	-3%
High School Degree or GED	68,316	17%	91,797	17%	113,134	17%	21,337	0%
Some College, No Degree	84,486	21%	108,529	20%	108,644	16%	115	-3%
Associates Degree	19,887	5%	26,084	5%	35,996	5%	9,912	1%
Bachelor's Degree	103,111	26%	162,033	30%	211,554	32%	49,521	3%
Graduate or Professional Degree	58,826	15%	87,203	16%	124,798	19%	37,595	3%

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As shown in Figure I-19, educational attainment is correlated with areas of high poverty, although not perfectly. Many areas in north and south-central Austin have relatively high levels of residents with less than a college degree—but are not areas of concentrated poverty. Figure I-21, a map of where unemployed residents are located, is more closely aligned with areas of high poverty.

Figure I-19. Educational Attainment by Census Tract, 2008-2012



Source: 2017 5-year ACS.

Employment. According to City of Austin data⁶, there were about 725,000 jobs located in the City of Austin in 2019 Q1, up from 579,000 in 2012. That reflects an increase of 3.3% per year.

The Austin metro area was recently ranked as one of the fastest growing metro areas in terms of nonfarm payroll jobs added—ranking second of the largest fifty metro areas (behind the Orlando MSA). According to Bureau of Labor Statistics (BLS) data, the Austin metro added over 40,000 jobs between October 2017 and October 2019, a 3.9% bump.⁷

Forty-five percent of Austin workers both live and work in the City; the other 55% are in-commuters, living outside the City but are employed in Austin.

In March 2019, there were about 15,000 Austin residents actively looking for work but unable to find employment. The March unemployment rate was just 2.5%. Unemployment dropped to 2.5% in several months of 2018, but otherwise has not been that low since December of 2000.

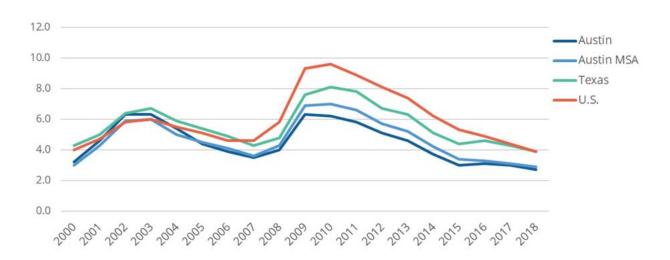
Figure I-20 shows the annual unemployment rates for Austin, the MSA, Texas and the United States. Austin and the MSA as a whole maintained low unemployment, even through the recent recession and are now experiencing historically low rates of unemployment.

Despite this overall trend, the City has pockets of very high unemployment rates, as shown in the map on the following page.

Figure I-20. Unemployment Rate, 2000 through 2018

Source:

Bureau of Labor Statistics.

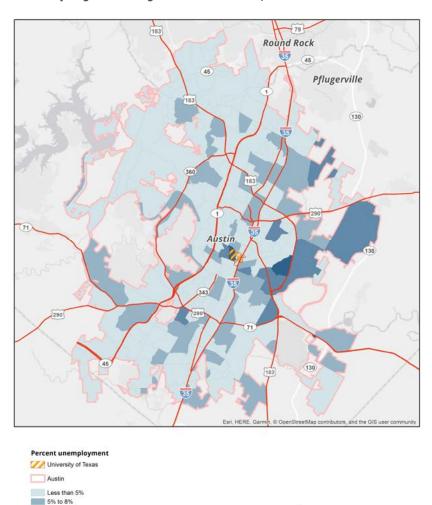


 $^{^{\}rm 6}$ City of Austin Occupation Snapshot , 2019Q1, City of Austin Economic Development Department.

⁷ Austin Chamber of Commerce, Job Growth & Unemployment, 11/20/18; available online at https://www.austinchamber.com/blog.

Figure I-21 shows 2013-2017 unemployment rates by Census tract (using ACS data). Residents living in the north and east portions of the City are more likely to experience high levels of unemployment, some more than four times the citywide rate. High unemployment rates are closely aligned with areas of high poverty.

Figure I-21.
Unemployment by Census Tract, 2017



Source: 2017 5-year ACS.

8% to 13%
More than 13%

The average weekly wage for all Austin-Round Rock workers is \$1,200, or about \$62,000 annually.

Figure I-22 displays employment and wages by industry for the Austin-Round Rock MSA in 2000, 2013 and 2018. The metro added 127,000 new jobs between 2013 and 2018 but lost 68,000 jobs in education and health services for a net gain of about 60,000 jobs. The biggest gains were in Professional and Business Services and in Leisure and Hospitality.

Average weekly wages increased in most industries with the highest gains in Professional and Business Services and Natural Resources and Mining—both industries with already high The Leisure wages. and Hospitality industry also had higher-than-average wage growth but remains the lowest wage industry with average weekly wages of \$462 (equivalent to \$24,180 per year, assuming 52 work weeks in a year).

Figure I-22. Employment and Average Weekly Wages, Austin MSA, 2000, 2013 and 2018

Note:

Detailed industry and wage data are not available at the municipal level.

Source:

Texas Workforce Commission, QCEW.

	Employment							
	Recent Growth							
_	N	umber of Jo	bs	2013 to	2018			
Industry	2000	2013	2018	Number	Percent			
Natural Resources and Mining	2,144	4,687	4,848	160	3%			
Construction	43,888	46,171	59,589	13,418	29%			
Manufacturing	81,897	52,321	60,133	7,812	15%			
Trade, Transportation and Utilities	120,178	159,938	173,582	13,645	9%			
Information	24,430	24,155	31,038	6,883	28%			
Financial Activities	36,319	50,176	60,626	10,450	21%			
Professional and Business Services	92,276	135,457	175,138	39,681	29%			
Education and Health Services	125,445	187,896	120,128	-67,768	-36%			
Leisure and Hospitality	63,330	102,285	129,823	27,538	27%			
Other Services	20,865	30,795	34,765	3,970	13%			
Public Administration	51,213	56,763	59,693	2,930	5%			
Unclassified	205	314	1,276	962	306%			
Total	662,190	850,956	910,637	59,681	7%			

	Wages				
	Average Weekly Wages			Recent Growth: 2013 to 2018	
Industry	2000	2013	2018	Dollars	Percent
Natural Resources and Mining	\$683	\$1,989	\$2,513	\$524	26%
Construction	\$672	\$979	\$1,221	\$242	25%
Manufacturing	\$1,169	\$1,728	\$1,917	\$189	11%
Trade, Transportation and Utilities	\$896	\$920	\$1,070	\$149	16%
Information	\$1,319	\$1,491	\$1,875	\$383	26%
Financial Activities	\$767	\$1,411	\$1,697	\$286	20%
Professional and Business Services	\$774	\$1,241	\$1,605	\$364	29%
Education and Health Services	\$551	\$850	\$993	\$143	17%
Leisure and Hospitality	\$268	\$379	\$462	\$83	22%
Other Services	\$497	\$765	\$839	\$74	10%
Public Administration	\$712	\$1,087	\$1,269	\$183	17%
Unclassified	\$617	\$762	\$886	\$124	16%

SECTION II.

Housing Market Profile

This section examines how the City of Austin's housing market has changed since the City of Austin's 2014 Comprehensive Housing Market Study. Areas of focus include:

- Growth in residential permits and housing units;
- Shifts in unit type;
- Changes in home values, rental costs, and the impact on homeownership, and
- Geographic distribution of housing by affordability range.

Financial data in this report (including home prices) are discussed in nominal dollars (not adjusted for inflation) but the disparities in changes in income vs changes in housing costs are discussed in detail in Section III, Housing Gaps. Section III is dedicated to affordability and identifying housing needs and examines changes in affordability, how the City's investments have accommodated needs, and identifies current housing gaps.

HOUSING SUPPLY

At the time the last housing study was conducted, residential building was in a period of recovery after plummeting during the Great Recession (2007-2009). Since that time, permits for single family detached homes have steadily increased, averaging 3,700 per year in the past three years.

The turnaround in multifamily permitting has been more dramatic: Multifamily permits hit a high of 8,664 in 2018, a

significant increase from the low of 398 in 2010. Permits for single-family attached homes (du-/tri-/four-plexes) have been relatively constant. As such, single-family attached products continue to represent a small share of the residential construction market, based on the number of permitted homes.

Residential Permits

Figure II-1 shows residential units permitted since 1993 by type.

Historically, single family detached permits have averaged 2,800 per year. Permits were highest in 2005 (4,648 single family units), right before the Great Recession, and lowest in 2010 (1,586), during the recession. Building in recent years resembles higher growth periods from the late 1990s and early 2000s.

According to City of Austin data, permitted multifamily units have averaged 4,186 per year since 1993. Over the past five years multifamily permitting has been relatively high—averaging nearly 6,500 units per year between 2013 and 2018. This recent trend reflects a strong reversal from the low point in 2009 and 2010, when multifamily permits averaged 600 units per year.

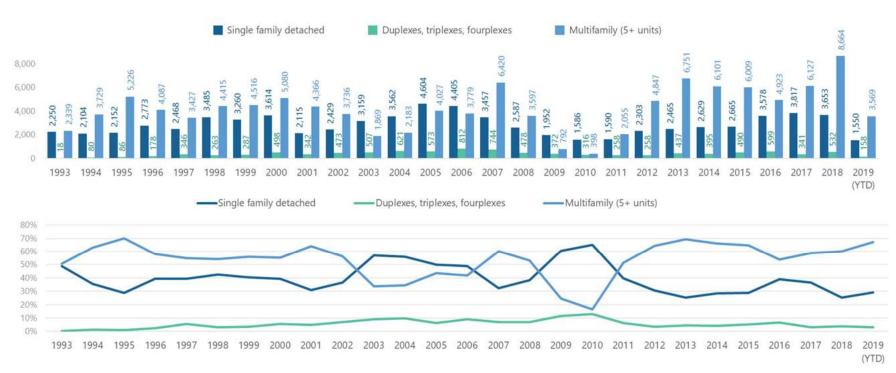
Single-family attached housing (du-/tri-/four-plexes) permits have averaged just 13% of the volume of single-family permits. The largest number of permitted single-family attached units (812) occurred pre-recession in 2006. Single-family attached

permits have experienced less fluctuation than both single-family detached and multifamily permits (5+ units).

Though not shown in the figure, residential accessory use permits, which include accessory dwelling units, averaged about 100 permits per year between 2008 and 2017 but increased significantly (to 1,521) in 2018.

Figure II-1.

Number and Percentage of Housing Units Permitted by Type, City of Austin, 1993 to YTD 2019



 $Note: Data\ reflect\ New\ Construction\ Building\ Permits\ issued\ between\ 1993\ through\ April\ 2019.$

Source: City of Austin.

Housing Unit Growth

The development of housing units lags permitting, and this lag can vary from months to years depending on the unit type, ability to secure financing, zoning variances, permitting, length of construction, and perceived market demand.

Figure II-2 shows trends in development of housing units. According to 2017 American Community Survey (ACS) data, Austin has nearly 400,000 residential units.

As shown in the figure, the growth rate of residential units was highest during the 1970s, when the City's housing stock increased 70%. Growth was fairly consistent between 1990 and 2010 at about 25% per decade, or 2.5% per year (compound annual growth rate).

Contrary to perceptions about growth, housing unit growth between 2010 and 2017 reflects a slowdown to 1.5% per year.

Figure II-2. Housing Unit Growth, City of Austin, 1970 to 2017

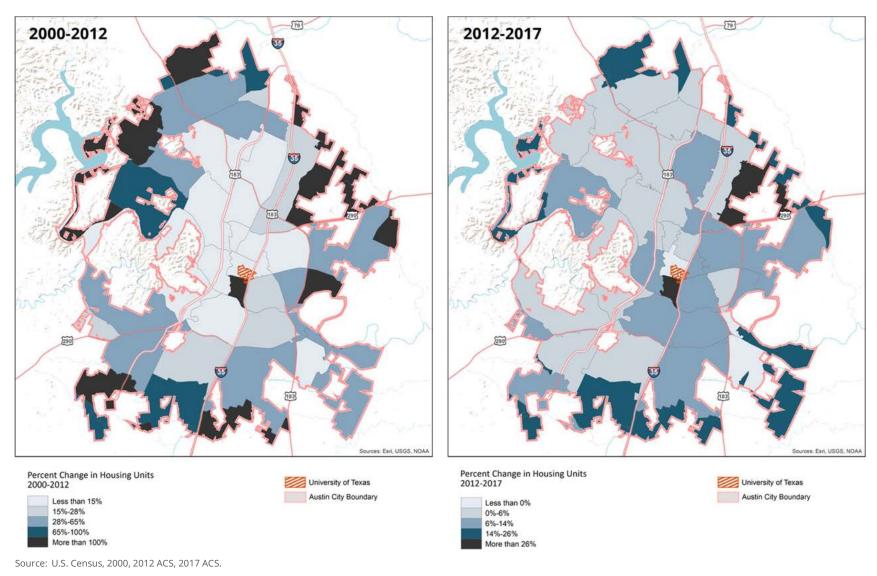
	Number of Units	Numerical Growth per Decade	Percent Growth per Decade	Compound Annual Growth
1970	85,456			
1980	146,503	61,047	71%	5.54%
1990	216,939	70,436	48%	4.00%
2000	276,611	59,672	28%	2.46%
2010	354,211	77,600	28%	2.50%
2017	393,616	39,405	11%	1.52%

Source: City of Austin and 2017 ACS.

Growth by zip code. Figure II-3 shows the spatial distribution of growth between 2000 and 2012, and between 2012 and 2017. Note that the two maps show changes over different intervals; as such the percent change breaks differ between the maps to highlight areas of highest growth in each period.

Compared to the 12-year period of growth examined in the last study, current growth has been more evenly spread throughout the City. The highest growth areas are in downtown and east Austin, as well as the outskirts of the City.

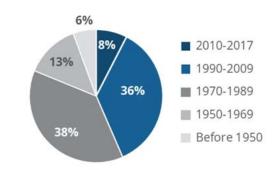
Figure II-3.
Change in Housing Units by Zip code, 2000 to 2012 and 2012 to 2017



Year built. Thirty-eight percent of Austin's housing stock was built between 1970 and 1990—which was a period of high population growth (as discussed in Section I) and associated housing unit growth. Another 36% of homes were built between 1990 and 2009. Just 8% of the housing stock was built between 2010 to 2017. In all, 74% of the City's housing units were built between 1970 and 2009—an average of 1.85% per year. This compares to an average of 1.14% between 2010 and 2017.

Figure II-4. Year Housing Units were Built, City of Austin, 2017

Source: 2017 ACS.



Impact of Growth on Affordability. The rate of housing unit growth plays a key role in affordability: when growth cannot accommodate demand, prices rise. The way in which a city grows also affects affordability. Some housing types are less expensive to construct than others, are oriented toward affordability, utilize land more efficiently, and have lower market cost. These factors are examined in this and the following section on market pricing.

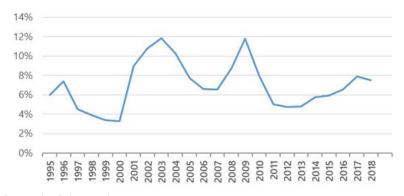
Rental vacancy rates. The rise in multifamily development after 2010 is closely related to declining rental vacancies. As discussed earlier, multifamily permitting was at

historically low levels during the recession in 2009 and 2010, then rebounded, and increased starting in 2012.

Rental vacancy rates (shown in Figure II-5) were low as the supply of rental units caught up with demand. However, since 2014, the vacancy rate has been increasing steadily and now hovers just below eight percent.

Despite the slight uptick in vacancy rates, more apartments are likely to hit the market soon, based on the large number of multifamily units being permitted (Figure II-2) and under construction. These should help further stabilize the rental market and increase affordability for middle income renters. As discussed below, vacancy rates remain very low for the most affordable rental units.

Figure II-5. Multifamily Vacancy Rates, Austin MSA, 1995 to 2018



Source: Austin Investor Interests.

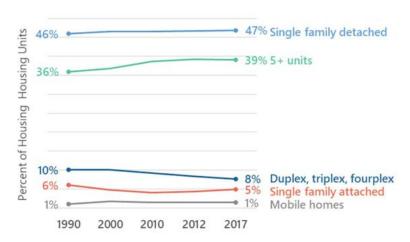
Vacancy rates differ by property "class." According to Austin Investor Interests, vacancies are lowest for non-luxury units (Class B and C properties) which had an average vacancy rate of five percent in Q1 2019. Rents differ little between the two, both averaging \$1.41/square foot (\$1,128 per month for an 800 square foot unit).

Class A luxury rentals average \$1.85/square foot (\$1,480 per month for 800 square feet) and have a much higher vacancy rate of 10%. B and C class properties are the primary reason that rental vacancy rates have remained low overall. Competition among low-and-moderate-income renters for non-luxury rentals has increased, keeping vacancy rates at consistently low levels.

Class A rents may drop over time as more Class A units are added to the market. Yet a drop in such rents is unlikely to be low enough to make a difference in the shortage of very affordable rental units (discussed in detail in Section III of this report). Instead, the dominance of Class A apartments in high-demand neighborhoods (e.g., downtown Austin) could raise demand and rents of Class B units in surrounding areas. In other words, Class B units may raise rents as Class A units signal high demand and a higher willingness to pay among renters.

Unit type. As demonstrated by Figure II-6, the City is experiencing a very modest shift in unit type. Even since 1990, the City's unit types have stayed relatively consistent, with slight increases in single-family detached and multifamily units with five or more units. This has been offset by similar decreases in single family attached (townhomes) and du/tri/fourplexes.

Figure II-6. Type of Housing Units, City of Austin, 1990 to 2017



Source: U.S. Census, 2000, and 2017 ACS.

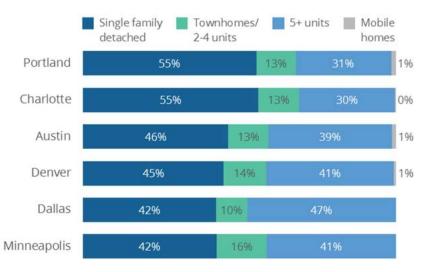
The slight upward shift in multifamily structures with five or more units in Austin is likely to continue in the future with the infusion of multifamily units. As discussed earlier, multifamily permitting has outpaced single-family permitting in the City since 2011 (see Figure II-1). Even so, change will continue to be modest. Changing the overall distribution of housing units requires a significant infusion of one product type.

For example, an addition of 15,000 multifamily units to Austin's market (the number permitted in 2017 and 2018), without any other types of development, would shift the multifamily proportion by just two percentage points—up to 41%, from 39% now.

Austin's housing unit composition is similar to peer cities, as shown in Figure II-7. Austin's housing distribution most closely matches that of Denver. Denver and Minneapolis have higher proportions of single-family alternative products (townhomes, duplexes, etc.), but Austin is not far behind. Charlotte and Portland have the largest proportions of single-family detached housing. Dallas has the highest proportion of multifamily units.

Figure II-7.

Type of Housing Units, Austin and Peer Cities, 2017



Source: 2017 ACS.

The City of Minneapolis, which has taken steps to remove single family detached zoning as an allowed use in its zoning code, has a lower percentage of units that are single-family detached **Rental unit size.** The most significant impact of Austin's recent growth is a change in unit size. Except for 5-bedroom rental units, the City experienced an increase in rental units of all sizes between 2007 and 2017. The City now has 10,500 more studio rentals, 12,000 more one-bedroom rentals, 12,000 two-bedroom rentals, and 7,500 more rental units with three and four bedrooms. The number of five-bedroom rentals declined.

The City's studios have tripled since 2007, when just 3,300 units, or two percent of all rental units, were studios. This growth dramatically increased the proportion of the City's rentals made up of studios, although the overall proportion remains much smaller than the proportion of one- and two-bedroom units.

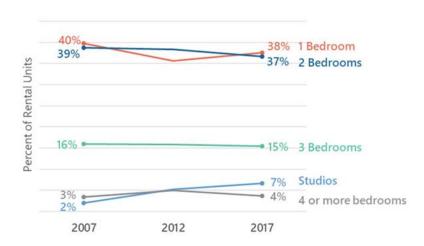
attached product even before the city removed single family zoning in its comprehensive plan.

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than Austin or any of the peer cities (except Dallas) at 42% as of 2017. Minneapolis' portion of townhomes and duplex-to-fourplexes is the highest of the peer cities at 16%.¹

¹ Minneapolis was not part of Austin's peer city cohort used in the past housing study. It is included in this figure to illustrate the City's relatively high share of

Figure II-8. Number of Bedrooms, Rental Units, Austin, 2007-2017



Source: 2007, 2012, and 2017 ACS.

In sum, residential growth since the last market study has differed slightly from past years. The residential landscape has more, and somewhat smaller, multifamily units, in amenity-rich developments which can lead to greater affordability for some segments of the market—small to moderate size households, young adults, and moderate-wage workers. That said, development of these units alone will not dramatically change rental affordability.

PRICING

This section begins with shifts in home values, examines the costs of ownership housing, and concludes with a discussion of the costs of renting.

Overall home values. According to the ACS, the median value of a home in Austin was \$332,700 in 2017—up 50% from the 2012 value of \$222,100 and 167% from the 2000 value of \$124,700. As shown below, recent home value increases in Austin exceed growth in Travis County and Texas overall, particularly when Travis County's value excludes Austin boundaries.² Prior to 2012, however, Austin's home values were in line with Travis County and in 2000 Austin's homes values were below home values in Travis County.

Figure II-9. Home Values and Increases, Austin, Travis County and State of Texas, 2000 to 2017

Austin	Travis County	Excluding Austin	State of Texas
\$124,700	\$134,700	\$162,313	\$82,500
\$200,000	\$200,300	\$200,504	\$123,500
\$222,100	\$217,600	N/A	\$129,200
\$332,700	\$275,800	\$251,031	\$172,200
167% 50%	105% 27%	55% N/A	109% 33%
	\$124,700 \$200,000 \$222,100 \$332,700	\$124,700 \$134,700 \$200,000 \$200,300 \$222,100 \$217,600 \$332,700 \$275,800 167% 105%	\$124,700 \$134,700 \$162,313 \$200,000 \$200,300 \$200,504 \$222,100 \$217,600 <i>N/A</i> \$332,700 \$275,800 \$251,031 <i>167% 105% 55%</i>

Source: U.S. Census, 2000, 2010 ACS, 2012 ACS, and 2017 ACS.

² Home values are self-reported on the Census long form survey. They do not necessarily reflect units that are available for purchase. Values are a general indicator of the distribution of home prices.

Figure II-10 shows how values have shifted among value categories. In 2000, more than one-third of homes in Austin had values of less than \$100,000; by 2012, just 10% of units have values less than \$100,000 and by 2017 that proportion dropped to seven percent.

The figure shows a significant movement away from moderately priced homes toward higher priced units.

Figure II-11 compares the 2010 and 2017 median home values in Austin with peer communities. Among the communities shown, Denver and Austin experienced the largest percentage change in median values between 2010 and 2017 (58% and 55% increase, respectively). Even so, their median values remain below Portland and San Jose.



Figure II-11. Median Home Values, Austin and Peer Cities, 2010 and 2017



Homes for sale. The Austin Board of Realtors recently reported, in their May 2019 Market Report, that the median price of a single-family detached home in the City hit an all-time high of \$407,400. The report also noted that "the decline of middle market housing is driving demand to the suburbs"—a trend demonstrated by the for-sale maps later in this section.

Figure II-12 compares the median prices of attached and detached homes over the past 21 years. Percentage-wise, price increases were strongest for attached units. Numerically, price increases were largest for detached units (this occurs because the prices for detached homes are substantively higher than attached units).

Figure II-12. Median List/Sale Price, Austin, 1997 to 2018

	Attached Homes		Detached Homes		All Homes	
	Median List/Sale Price	Compound Annual Increase	Median List/Sale Price	Compound Annual Increase	Median List/Sale Price	Compound Annual Increase
1997	\$78,000		\$125,000		\$118,990	
2000	\$115,000	14%	\$169,000	11%	\$159,900	10%
2005	\$142,000	4%	\$193,000	3%	\$181,500	3%
2010	\$164,000	3%	\$245,000	5%	\$229,000	5%
2013	\$205,000	8%	\$285,100	5%	\$269,000	6%
2018	\$324,000	10%	\$414,900	8%	\$393,000	8%
1997- 2018	\$246,000	7%	\$289,900	6%	\$274,010	6%

Source: Austin Board of Realtors and Root Policy Research analysis of ABOR data.

For all units, prices rose the most between 1997 and 2000, measured by the compound annual growth rate. The increase in prices during this period was nearly twice that between 2010 and 2013. Since 2013, price increases have accelerated for both attached and detached units, from about six percent per year between 2010 and 2013 to eight percent per year between 2013 and 2018. Compound annual growth for attached homes exceeds that of detached homes for all periods except 2005 to 2010.

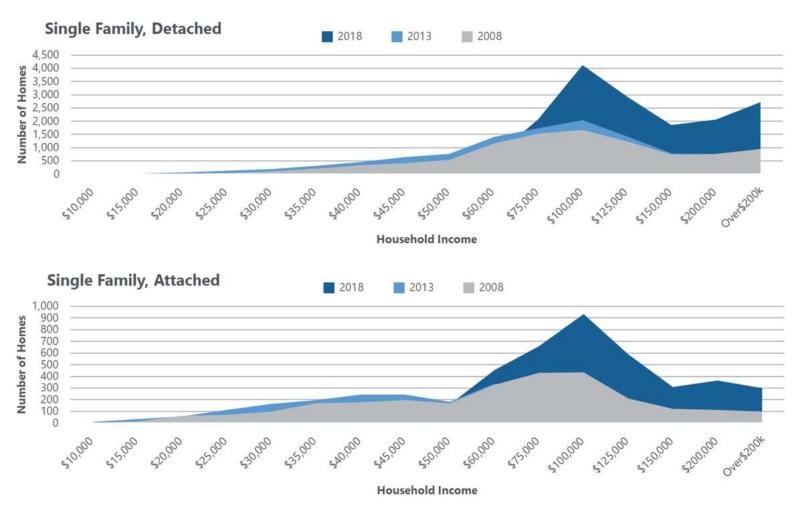
Price distribution shifts. Figure II-13 demonstrates where peaks and valleys exist in the 2018 for-sale market. It charts the number of single family detached and attached homes by the incomes at which they are affordable.

The distribution of detached homes for sale in 2013 was similar to 2008 with the market primarily serving households earning between \$60,000 and \$125,000. However, a strong shift is evident in 2018 toward higher incomes—and higher priced homes. Today, the market primarily serves households earning over \$100,000 per year.

The total number of homes listed/sold in Austin increased between 2013 and 2018 from 14,000 homes to 21,000. In both of those years, 80% of homes listed/sold were single-family detached.

Figure II-13.

Distribution of Housing Units Available to Buy by Income and Housing Type, 2008, 2013 and 2018



Source: Austin Board of Realtors and Root Policy Research analysis of ABOR data.

Geographic changes. Over the past few years, median home prices in Austin (for all homes including attached and detached) increased by 46% (from \$269,000 in 2013 to \$393,000 in 2018). Figure II-14 maps the change in home price by zip code. Rapid increases in home price are a typical indicator of gentrification.

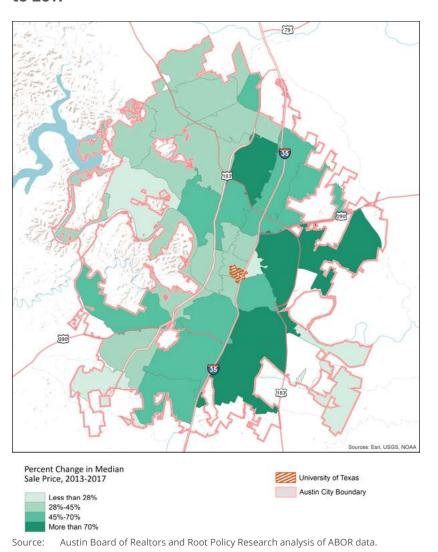
In zip codes 78721 and 78741 the median list/sale price doubled between 2013 and 2017 (over 100% increase). The median price in zip codes 78702, 78704 78723, 78728, 78731, 78735, 78745, and 78753 increased by 50% or more.

As demonstrated by the map, neighborhoods on the eastern crescent of the City are experiencing some of the most dramatic price increases within the Austin for-sale market.

Rapidly increasing home prices are not just a concern for residents looking to purchase a home. Current homeowners in neighborhoods with valuation increases can be subject to substantial increases in their property tax burden. For low income owners and those on a fixed income such increases can be an impediment to keeping their homes. State law allows property tax exemption based on a variety of factors but does not allow exemptions based on income.

Consider, for example, a senior resident of zip code 78702 (where the home prices increased by 46% between 2010 and 2013). Even with the senior tax exemption, property taxes are likely to have doubled, rising from \$1,860 to \$3,600.

Figure II-14.
Percent Change in Median Sale Price by ZIP Code, 2013 to 2017



Figures II-15a. and b. illustrate the geographic variation in median sale price across Austin zip codes for both 2013 and 2017-2018.

A comparison of the maps demonstrates how for-sale affordability has been lost in the City. In 2013, at least half of the zip codes in the City carried median sales prices of \$300,000 and less. Only a handful of zip codes had medians exceeding \$400,000. The national median in 2017-2018 was \$220,000.³

Now, at least one-third of zip codes have median sales prices exceeding \$400,000; many of the areas surrounding downtown Austin that were moderately affordable are no longer; and very affordable homes can only be found on the eastern periphery of the City.

In 2017 and 2018, among Austin zip codes that had at least 10 home sales, the lowest median sale price was \$226,585 (in zip code 78724) and the highest was \$970,000 (in zip code 78746).

 $^{^{\}rm 3}$ Derived from monthly reported national sale price medians from Zillow Data.

Figure II-15a. Median Sale Price by Zip Code, Austin, 2013

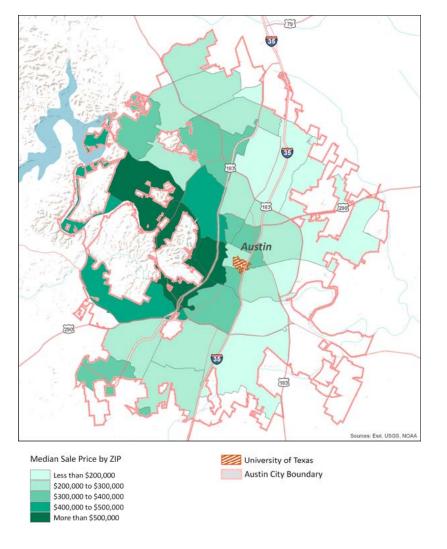
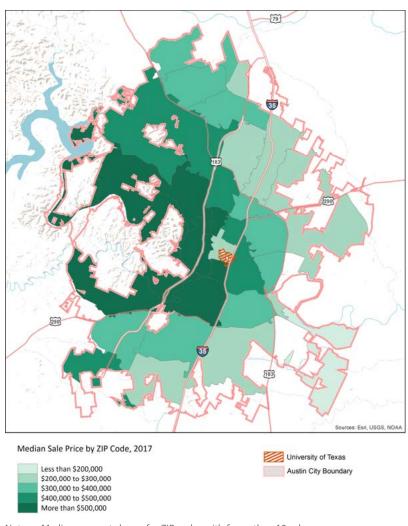


Figure II-15b. Median Sale Price by Zip Code, 2017-2018



Note: Medians are not shown for ZIP codes with fewer than 10 sales.

Source: Austin Board of Realtors and Root Policy Research analysis of ABOR data.

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Condo affordability. Although condos are more affordable than single family detached homes, Austin's recent condo development has not alleviated unmet demand for affordable for-sale homes. Condos sold in 2017 or 2018 and constructed in 2010 or later had a median listing/sale price of \$388,000, compared to \$305,000 for all condos.

The inventory of condos on the for-sale market in Austin has increased slightly faster than homes overall: between 2013 and 2018, condo inventory increased by 57% (from 2,600 to 4,100 listings) compared to for-sale inventory of about 45% (from 14,000 listings to 21,000 listings).

Figure II-16.
Price Distribution of For-Sale Condos, Austin, 1998, 2008, 2013, 2018

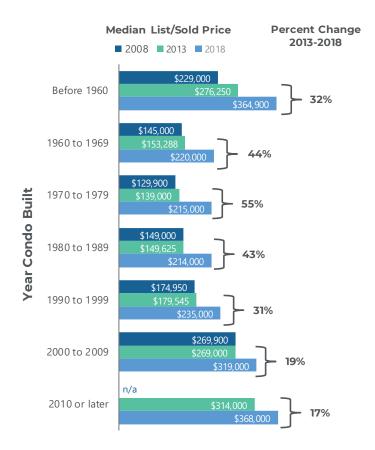


Source: Austin Board of Realtors and Root Policy Research analysis of ABOR data.

Condo units built between 1960 and 1999 offer the most affordability, with median prices in the low \$200,000s. However, the value of these condos is increasing faster than that of newer condos, indicating they are being remodeled and that demand for these affordable units is very strong. Figure II-

17 shows median prices of condos by year built and compares those medians over time (between 2008 and 2018).

Figure II-17. Median Price of Condos by Year Built, 2008, 2013, 2018



Source: Austin Board of Realtors and Root Policy Research analysis of ABOR data.

For sale unit condition. Some markets appear affordable but only because the housing affordable to buy is in poor condition. According to data from the Austin Board of Realtors, 30% of homes for sale to lower income owners (earning less than \$50,000 per year) are in poor or fair conditions, with 14% in poor condition. A little more than one-third are in good to excellent condition.

For moderate income buyers (\$50,000 to \$75,000 income cohort), 15% are in poor or fair condition and nearly three-quarters are in good to excellent condition. Units priced for higher income buyers are much more likely to be in good condition, with just six percent in poor or fair condition and 83% in good to excellent condition.

Figure II-18.
Condition of For Sale Homes, Austin, 2017-18

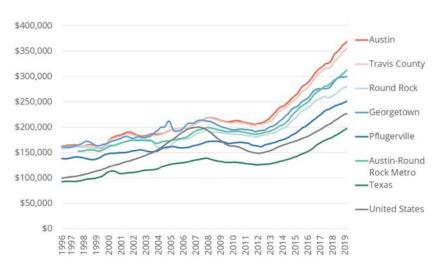


Source: Austin Board of Realtors and Root Policy Research analysis of ABOR data.

Regional affordability. Figure II-19 compares the median home value trends (as measured by the Zillow Median Home Value Index) in Austin with surrounding communities, the State of Texas and the United States. The figure illustrates

the sharp increases in home values in Austin—and surrounding areas—since 2013.

Figure II-19.
Zillow Median Home Value Trends 1996 to 2019



Source: Zillow Research.

As demonstrated in the above graphic, the Austin region fared better than the U.S. overall during the Great Recession: the region's "bubble" was less pronounced than that of the U.S. overall, and the recessionary price adjustment was softer.

The series of figures on the following pages shows the geographic distribution of for-sale homes in Austin and immediately adjacent areas.

Very little inventory is available for the lowest income buyers, those earning \$35,000 and less per year. For households

earning up to \$50,000, attached homes in the central part of the City are affordable, as are detached homes in southeast Austin, east Austin, and some areas in the northern part of the City.

Except for areas in west Austin, households earning \$75,000, households have more buying options in Austin compared to lower income cohorts. However, households earning \$75,000 have even more buying options in the northern suburbs along the I-35 corridor.

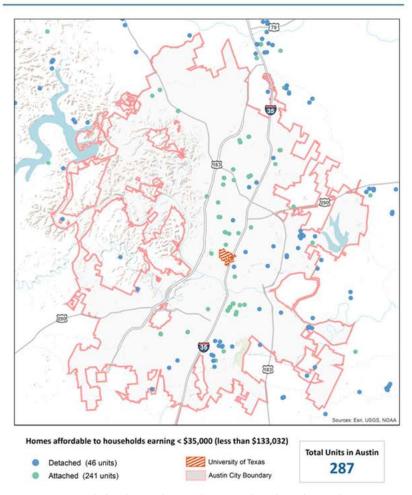
Households must earn \$150,000 before they have a wide variety of geographic choices for buying a home in the City.

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Figure II-20. Affordable Homes by Income Level, Listed/Sold in 2017-2018

Affordable to Households Earning Less than \$35,000



Source: Austin Board of Realtors and Root Policy Research analysis of ABOR data.

Affordable to Households Earning Less than \$50,000

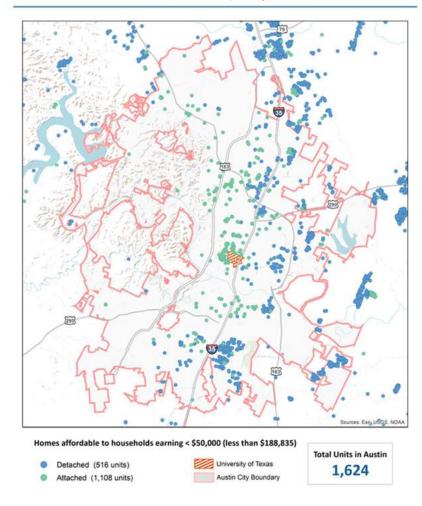
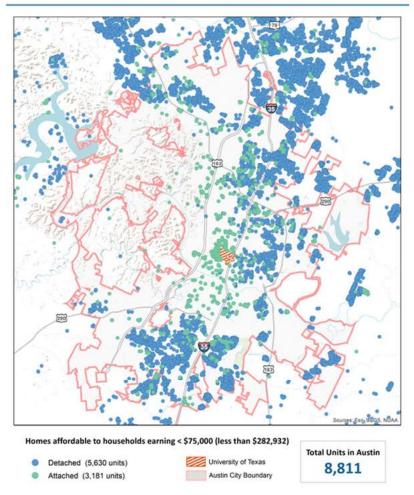


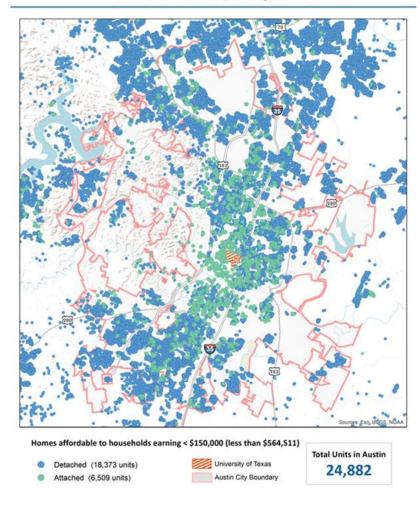
Figure II-20 (continued). Affordable Homes by Income Level, Listed/Sold in 2017-2018





Source: Austin Board of Realtors and Root Policy Research analysis of ABOR data.

Affordable to Households Earning Less than \$150,000



Rental costs. Median rent in Austin, according to the 2017 ACS, is \$1,244 per month including utilities. That reflects a 28% increase from 2012 when median rent was \$974. As shown below, median rent in Austin increased more quickly than both Travis County and the State of Texas between 2000 and 2017 and, since then, has been on par with the county. Rental increases in the City and County since 2012 are higher than in the State of Texas overall.

Figure II-21.

Median Rents and Increases, Austin, Travis County and State of Texas, 2000 to 2017

	Austin	Travis County	State of Texas
2000 Median 2010 Median 2012 Median 2017 Median	\$574 \$901 \$974	\$727 \$918 \$981	\$574 \$801 \$831
% Change 2000-2017 % Change 2012-2017	\$1,244 117% 28%	\$1,245 71% 27%	\$987 72% 19%

Source: U.S. Census, 2000, 2010 ACS, 2012 ACS, and 2017 ACS.

Figure II-22 illustrates the shift in Austin rents between 2000 and 2017. In 2000, 82% of all rentals were less than \$1,000 per month. And in 2010 and 2012 those units comprised a majority of all rentals in the City. However, by 2017, just one third of units were priced below \$1,000 per month.

Figure II-22. Shifts in Gross Rents, 2000 to 2017



Source: 2000 Census and 2010, 2012, and 2017 ACS.

Figure II-23 compares median rent in Austin in 2010 and 2017 to peer cities. Austin had the second highest median rent among the peer cities in 2010 (\$901) but experienced a more moderate rental increase than many communities through 2017. As of 2017, Austin's median rent was very similar to that of Denver and Portland.

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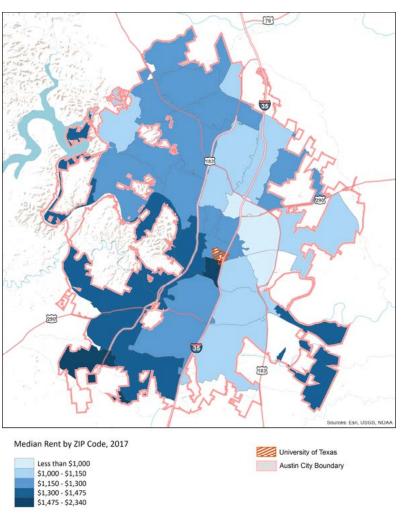
Figure II-23.
Median Rent, Austin and Peer Cities, 2010 and 2017



Source: 2017 ACS Gross Rent.

Figure II-24 shows median rent by Zip code using 2017 ACS data. The highest rents are near downtown and the southwest side of the City, as well as the far southeast.

Figure II-24. Median Rent by Zip code



Source: 2017 ACS.

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Purpose-built student housing. According to data from Apartment Trends by Austin Investor Interests, student-specific rentals account for about four percent of all market-rate apartments in the City of Austin.

Their data, which focus only on developments with at least 50 units, also indicate that student housing developments have higher average rents than conventional developments even after accounting for the larger average size of student rentals: \$2.29 average rent per square foot for student rentals compared to \$1.53 per square foot for conventional. Figure II-25 compares prices and characteristics of conventional and student-specific apartments in Austin.

In addition to being more expensive, student apartments also tend to be larger and have more bedrooms than conventional apartments.

The relatively low proportion of conventional apartments with three or more bedrooms (just four percent) indicates it may be difficult for families with children to find available rentals in the area. Larger units that are being developed appear to be designed for student occupancy and carry rents that are higher than what a low, and even moderate, income family could afford.

Figure II-25.
Conventional and Student Apartments, Austin, 2019

	Conventional Apartments	Student Apartments
Number of Units	153,956	6,638
Average Rent per Unit	\$1,300	\$2,347
Average Rent per Sq Ft	\$1.53	\$2.29
Average Size of Units (Sq Ft)	851	1,023
% of units that are 3+ bedrooms	4%	49%
% change in rent 2013 to 2018	25%	24%

Source: ApartmentTrends.com by Austin Investor Interests and Root Policy Research.

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SECTION III.

Housing Market Gaps

This section builds upon the Housing Market Profile, connecting changes in affordability to housing needs. This includes:

- How changes in the market have affected renters' "purchasing power";
- The impact of rent increases on low-income households, including those who have left the City and those who have stayed but experienced neighborhood displacement;
- How changes in the market have affected attainment of homeownership;
- An updated rental gap, adjusted for the City's student population and compared to past gaps; and
- The impact of the City's investments on sustaining affordability.

CHANGING INCOMES AND RENTS

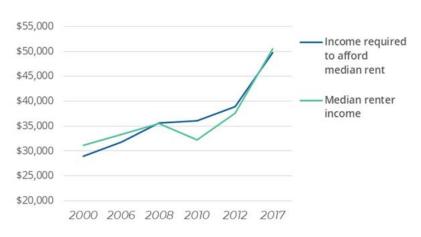
Between 2012 and 2017, the median rent in Austin increased from \$974 per month to \$1,244—a \$270 per month increase, or 28%. Since 2000, the median rent increased from \$724 per month to \$1,244—a \$520 per month, and 72%, increase.

Absorbing rent increases. To absorb the median rent increase from 2000, Austin renters would need to earn \$20,720 more per year. Over that time, renter median income almost kept pace with what was needed to absorb rent increases: overall renter income increased by \$19,262 between 2000 and 2017, compared to the \$20,720 needed.

This is a different finding from the last market study, which concluded that renter incomes had not kept pace with rising rents. In 2012, the change in renter median income was \$6,700, compared to the \$10,160 needed to absorb rising rents from 2000.

Figure III-1 summarizes the changes in renter median income vs median rent. As of 2017, renter income was slightly higher than what is needed to afford the median rent which had not been the case since 2006.

Figure III-1.
Change in Median Income vs Median Rent, 2000-2017



Source: 2000 Census and 2006, 2008, 2010, 2012, and 2017 ACS.

The median income vs median rent comparison provides a macro view of how well renters are able to manage changes in the rental market. This measure suggests that the stronger

economy has helped the median income renter keep pace with rent increases since 2012.

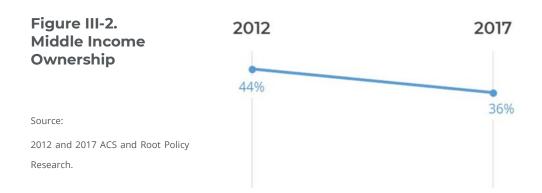
However, renters are far from "getting ahead" by renting; instead, the median renter is making just enough to manage increasing rents.

As discussed below, these trends are affecting ownership and access to affordable rentals for the City's lowest income renters.

Effect on homeownership. One consequence of this market dynamic is decreased homeownership among middle market households in Austin.

Between 2012 and 2017, renters earning between \$35,000 and \$100,000:

- Grew by 28,600 households;
- Became much more likely to rent: 74% of the middle market growth in the City was in renters; and
- As a result, ownership among these households dropped from 44% in 2012 to 36% in 2017 (see Figure III-2).



Governing Magazine recently conducted an analysis of changes in rentership and ownership between 2000 and 2017 for medium- and large-sized cities in the United States. Austin grew by 143,994 renter households during this period (a 46% increase), and 115,930 owner households (36%). Figure III-3 compares this growth with cities similar to Austin in size, composition, and resident demand.

Figure III-3. Change in Renters and Owners, Austin and Peer Cities, 2000-17

	All	All Household	Change in I	Renters	Change in	Change in Owners		
	Households	Change	#	%	#	%		
Austin	361,257	259,924	143,994	46%	115,930	36%		
Charlotte	316,481	283,545	158,342	77%	125,203	38%		
Denver	287,262	121,606	75,731	35%	45,875	15%		
Nashville	263,527	111,402	70,145	33%	41,257	13%		
Portland	260,949	99,840	53,936	26%	45,904	15%		
San Antonio	494,260	317,621	175,120	42%	142,501	20%		
San Jose	319,558	125,122	84,962	26%	40,160	7%		
Dallas	513,084	115,203	75,467	12%	39,736	7%		

Source: Governing Magazine: What the Rise in Rents Means for Cities, April 22, 2019 and 2012-2017 5-year ACS.

As demonstrated in the data, Austin had the second highest percentage growth (after Charlotte) and the third highest numerical growth (after Charlotte and San Antonio) in both renters and owners.

This growth resulted in no change in Austin's overall homeownership rate, as shown below. In fact, the City's ownership rate has not changed since 2000, when it was 45%. This followed a significant increase from 1990, when the ownership rate was 41%.

Figure III-4. Change in Ownership, Austin and Peer Cities, 2010 to 2017

Source: 2010 Census and 2017 ACS.

	2010 Ownership	2017 Ownership	Percentage Point Change
Charlotte	59%	53%	-5%
Dallas	43%	39%	-4%
San Jose	58%	57%	-1%
San Antonio	56%	55%	-1%
Nashville	54%	53%	-1%
Austin	45%	45%	0%
Denver	50%	50%	0%
Portland	53%	54%	1%

Given that Austin's middle income household growth was largely in renters, the stabilization of overall ownership was possible because of an influx of higher income owners. Overall ownership did not change but owners are now relatively higher income.

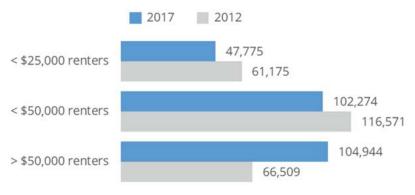
RISING RENTS, DISPLACEMENT, AND HOUSING ALTERNATIVES

The effect of rental price changes is most challenging for lower income renters, who have few alternatives for managing rising rents. Rising rents have led to the displacement of extremely low-income renters, as well as an increased need for publicly-supported housing.

Declining numbers of < \$25,000 renters.

Compared to 2012, there are 13,400 fewer renter households earning less than \$25,000, and another 14,300 fewer renter households earning between \$25,000 and \$50,000. These declines are offset by an additional 38,400 renter households earning more than \$50,000. Note that declines in low income renters can reflect displacement and/or rising incomes.

Figure III-5.
Change in Number of Renters by Income Cohort, 2012-2017

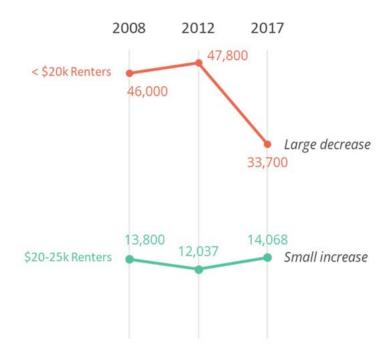


Source: 2012 and 2017 ACS and Root Policy Research.

Of the < \$25,000 income cohort, the decline was driven by renter households earning less than \$20,000. There are 14,100 fewer of these households than in 2012. Renter households earning between \$20,000 and \$25,000 increased slightly.

Figure III-6 shows the change in these renter households during the past 10 years.

Figure III-6. Change In Renters, 2008-2017



Source: 2008, 2012, and 2017 ACS and Root Policy Research.

It is important to note that not all of the change above is due to low income renters leaving the City; some renters are earning higher incomes than in 2012. Data are not available to determine how much of the change was due to displacement and how much was due to renters moving into higher-income cohorts.

Growing reliance on publicly-supported housing. Lower income renters who could once access "naturally occurring affordable housing" in the private market are increasingly reliant on publicly-supported housing. In 2012, 38% of rental units were in the \$625 and \$875 range, affordable to households earning \$35,000 and less. That compares to just 14% in 2017.

Figure III-7 on the following page, compares the change in low-income renters to the change in affordable rental units, both public and private, for these households. As the graphic demonstrates, the loss of affordable rentals has been most significant for households in the \$20,000 to \$25,000 income range. Units that are affordable to households earning less than \$20,000 per year—deeply subsidized rentals—have been relatively stable.

These data reveal a curious outcome. The number of renters earning less than \$20,000 declined, despite a stable market for units affordable to them, while renters earning \$20,000 to \$25,000 increased, despite a significant loss in affordable units.

Figure III-7.
Change In Renters and Affordable Units, 2008-2017



Source: 2008, 2012, and 2017 ACS and Root Policy Research.

As discussed in the following rental gaps analysis, maintaining an inventory of publicly subsidized, affordable rentals in Austin has been key for preserving rental opportunities for the City's lowest income households. Without the City's commitment to preservation, the rental gap would be much larger—and many more low-income residents would be cost burdened or leave the City for affordable housing elsewhere.

Geographic narrowing in the rental market. Affordable rental options in the region are increasingly limited to southeast Austin, Taylor, Georgetown, and parts of rural Williamson County. This narrowing of the market affects all lower income renters and particularly Housing Choice Voucher holders, whose subsidy is capped by HUD's fair market rent.

The Housing Choice Voucher program, also known as Section 8, provides subsidies to low income renters based on their monthly incomes. The federal program is managed locally by the Housing Authority of the City of Austin (HACA). More than 5,000 vouchers are available to eligible low-income renters in Austin, although funding is subject to federal authorization.

Housing Choice Voucher holders may rent market-rate units that meet housing quality standards. Once they find a unit to rent, voucher holders receive a subsidy based on their income and a "fair market rent" (FMR) standard that is set at the federal level for each market area. If a voucher holder finds a unit that is priced higher than the FMR, they must absorb the difference in cost between the FMR and the actual rent through their own financial means.

HUD sets FMRs at the regional level (for the MSA overall), which can affect where voucher holders can find affordable units. Areas with higher market-rate rents, which are typically areas with strong access to opportunity, are often cost prohibitive for voucher holders because the rent in that area far exceeds the FMR.

To help expand where voucher holders can live, HUD now allows the use of zip code level FMRs to broaden the market area in by providing higher subsidies in higher priced zip codes. In this case, rental subsidies are set at the zip code level FMR rather than the MSA FMR.

Figure III-8 shows the range of market rents (red shading) and where the zip code level FMRs are higher than the market rent (crosshatch). In 2012, those neighborhoods with rents exceeding the FMR were located in the western and northwestern portion of the Central Texas region. By 2019, the crosshatch has become more pronounced: Only the eastern neighborhoods within Austin, and Taylor and parts of Georgetown and Williamson County have rents low enough to fall below the regional FMR.

holders who find housing in high rent zip codes and those who offset that increase by choosing housing in lower rent zip codes.

¹ The downside is that fewer voucher holders may be served by the program (without an increase in overall funding for vouchers) because the cost per voucher is higher. The actual impact on funding is determined by the number of voucher

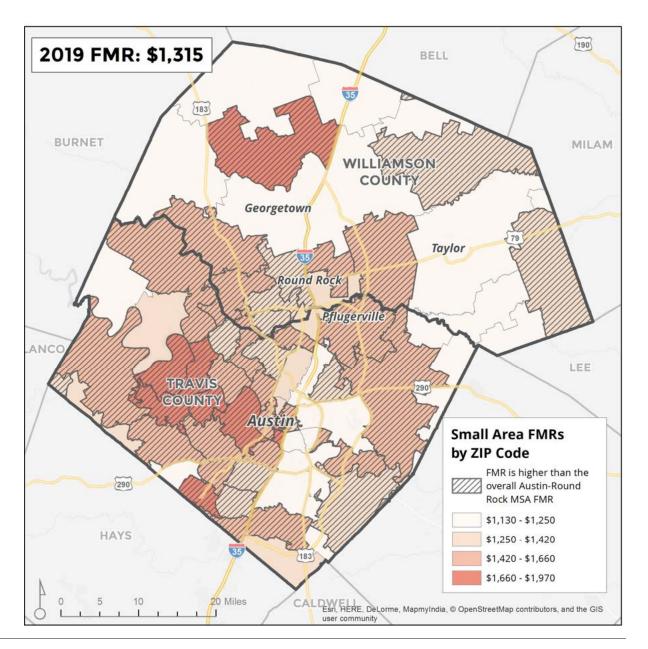
Figure III-8. Small Area FMRs for the Austin-Round Rock MSA, 2019

Note:

The 2019 2-bedroom FMR for the Austin-Round Rock area is \$1,315. The crosshatch indicates a ZIP code where the zip code FMR is higher than metro wide FMR.

Source:

www.huduser.org; Fair Market Rent database.



ATTAINING HOMEOWNERSHIP

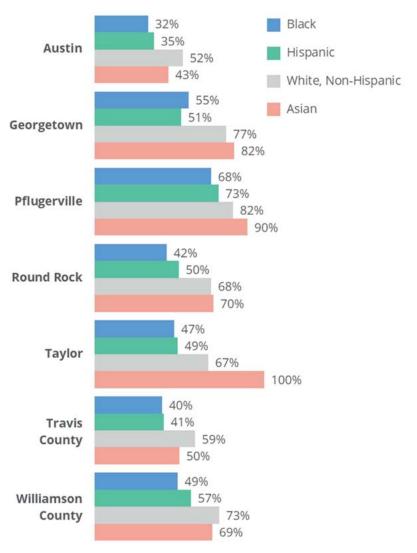
As discussed earlier in this section, the homeownership rate in Austin has been unchanged at 45% since the year 2000. Homeownership in Austin has been about this level for more than a decade, after rising from 41% in 1990.

Homeownership rates vary dramatically by race and ethnicity, however. In the City of Austin,

- Black homeownership rate is 32%;
- Hispanic homeownership rate is 35%;
- Asian homeownership rate is 43%; and
- Non-Hispanic White homeownership rate is 52%.

As shown in Figure III-9, surrounding communities offer much better access to homeownership: Black and Hispanic ownership in Pflugerville is higher than Non-Hispanic White ownership in Austin.

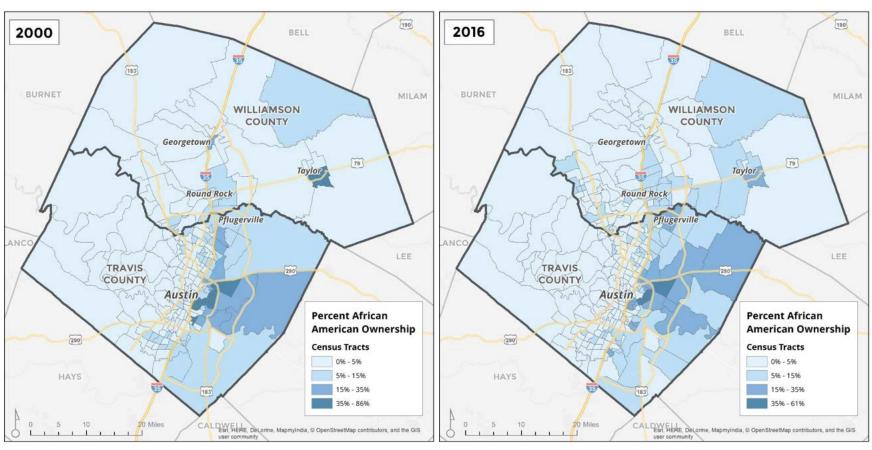
Figure III-9. Homeownership Rates by Race and Ethnicity



Source: 2012-2016 5-year ACS.

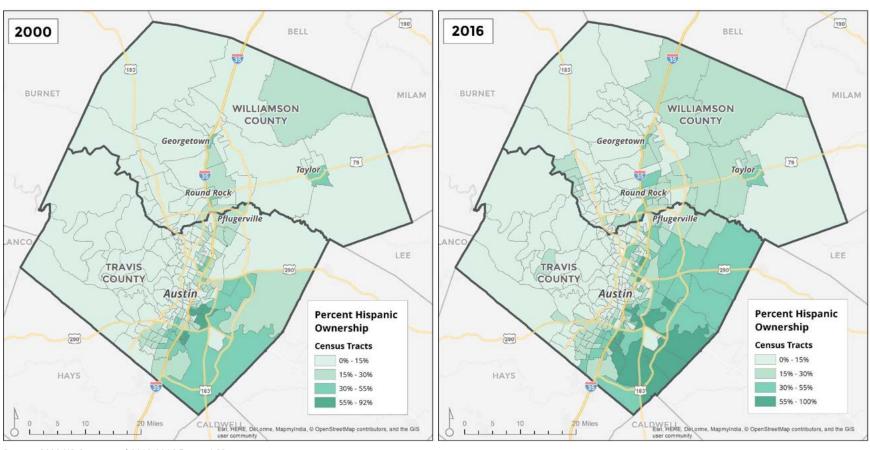
As the following maps demonstrate, African American homeownership has increased in many areas of southeastern and northeastern Travis County and Williamson County and changed little in the City of Austin. Hispanic ownership has broadened considerably, both outside and within City of Austin boundaries.

Figure III-10.
African American Ownership by Census Tract In Region, 2000 and 2016



Source: 2000 US Census and 2012-2016 5-year ACS.

Figure III-11. Hispanic Ownership by Census Tract In Region, 2000 and 2016



Source: 2000 US Census and 2012-2016 5-year ACS.

Who is most affected by housing needs. Households are considered to be "cost burdened" when they pay more than 30% of their gross household income in housing costs. These costs include rent, mortgage payment, basic utilities, property taxes and homeowners insurance. This is an industry standard, and also used to assess overall housing affordability.

Cost burden shows how well households can manage housing costs. Severe cost burden (paying more than 50% of monthly gross income on a household rent or mortgage plus basic utilities) helps determine which households may be at-risk of losing their housing. This measure of need can also help identify which residents are disproportionately affected by lack of affordable housing.

In Austin, non-Hispanic White households face severe cost burden 15% of the time. This compares to 25% of the time for African American households; 23% for Hispanic households; and 20% for Asian households. As such, people of color in the City are much more vulnerable to the negative consequences of rapidly rising housing costs.

Cost burden also varies by income, with low income households having higher rates of cost burden. This reflects the

shortage of affordable housing units to serve those households. In a recent study by the National Low Income Housing Coalition, extremely low-income households, earning approximately less than \$25,000 per year, were found to be cost burdened 92% of the time and severely cost burdened 84% of the time.

As discussed in the gaps analysis that follows, households earning less than \$25,000 per year represent the income cohort where affordable rental units are lacking. Figure III-12 shows the types of residents who make up the households with the greatest needs. These are mostly single-person households, some of whom are seniors. Almost equally represented are households with a member with a disability; households with children; and students, who are discussed in more detail in the rental gaps section.

Figure III-12. Characteristics of < \$25,000 Households, 2012-2017

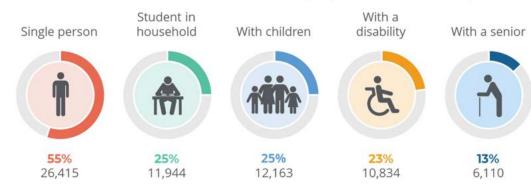
Note:

Household types are duplicated across some categories. For example, a senior may be in a single person household, seniors may also have disabilities, children may be living with a parent who is a student.

Source:

2012-2017 ACS from Public Use Microsample Data (PUMS) and Root Policy Research.

Total Renter Households with < \$25,000 incomes: 47,775



HOUSING GAPS

This section presents the results of a housing "gaps analysis" conducted as part of the housing study. A housing gaps analysis identifies where the housing market is under- or oversupplying housing, by comparing demand for rental and ownership housing to existing supply.

The gaps analysis includes an adjustment for full-time students to provide a more precise count of the shortage of affordable rental units for low-income rental households.

For the purposes of this analysis, affordability is determined by the criteria that a household should pay no more than 30% of gross monthly income toward housing costs. This includes utilities, homeowner's insurance and property taxes.

Rental gaps. The rental gaps model is shown in Figure III-13a and 13b. Households in each income cohort are compared with the number of rental units in their affordability range:

- Where the number of households exceeds the number of units, there is a shortage of affordable rentals to serve those households—a rental "gap".
- Where the number of units exceeds the number of households, there is an excess number of rental units for those income categories.

Figure III-13a depicts the rental gap graphically. Renter households (i.e., demand) is indicated by the blue line and

rental units (i.e., supply) is indicated by the green line. Housing gaps (shortage of affordable rentals) is highlighted by red shading.

Figure III-13b, on the following page, shows the underlying data for the rental gaps analysis in a table format. The table also includes a gaps analysis by Area Median Income (AMI). It compares the number of renter households in each category to the number of units in their affordability range. The "Gap" column on the far right is the difference between units and renters; negative numbers reflect shortages and are shown in parentheses.

It is important to note that the analysis does not reflect how much each household is actually paying for rent but reflects what would be an affordable rent based on their income. Renter households who face a rental gap are not homeless; they are cost burdened, occupying units that are more expensive than they can afford. Because most of the City's rental units fall into the \$875 to \$1,250 price range which is 40%, or nearly 83,000 units, low-income, as well as moderate-income, renters are likely to be living in these units.

It is important to note that renters earning less than \$20,000 find the vast majority of units they can afford in publicly subsidized housing, rather than market rate units, as well as through Housing Choice Vouchers. The rental supply column in the gaps model accounts for affordable units found in publicly supported housing and through Housing Choice Vouchers. In sum, this column shows what households pay for rent.

As illustrated by the figure, rental supply is concentrated in the affordability range of households earning between \$35,000 and \$75,000 (rents of \$875 to \$1,875). There is a shortage of units for all incomes below \$25,000.

Overall, the rental gaps model identified a shortage of **36,374 rental units** for households earning \$25,000 and less. This gap is largest for households earning less than \$20,000.

Figure III-13a. Rental Gaps Analysis, Income Level, 2017

Note:

The model excludes renters who do not pay rent but instead receive boarding for exchange of goods or services. The model does not control for households renting outside their affordability range (up or down).

Source:

Root Policy Research.

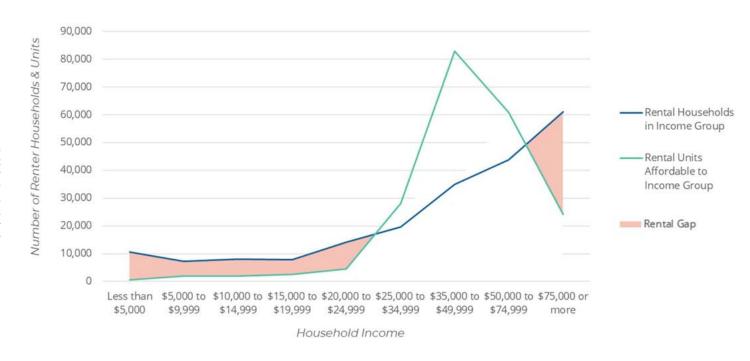


Figure III-13b.
Data Table for
Rental Gaps
Analysis,
Income Level
and AMI, 2017

Note:

The model excludes renters who do not pay rent but instead receive boarding for exchange of goods or services. The model does not control for households renting outside their affordability range (up or down).

Source:

Root Policy Research.

Gaps by Income Range									
Income Range	Number Percen Rente	t of	Maximum Affordable Rent+Utilities	Number of Rental Units	Percent of Rental Units	Rental Gap	Cumulative Gap		
Less than \$5,000	10,502	7%	\$125	507	0%	(9,995)	(9,995)		
\$5,000 to \$9,999	7,206	6%	\$250	1,894	1%	(5,312)	(15,307)		
\$10,000 to \$14,999	8,079	7%	\$375	1,958	1%	(6,121)	(21,428)		
\$15,000 to \$19,999	7,920	7%	\$500	2,627	1%	(5,293)	(26,721)		
\$20,000 to \$24,999	14,068	7%	\$625	4,415	2%	(9,653)	(36,374)		
\$25,000 to \$34,999	19,624	12%	\$875	28,141	14%	8,517	(27,857)		
\$35,000 to \$49,999	34,875	18%	\$1,250	82,857	40%	47,982	20,125		
\$50,000 to \$74,999	43,816	16%	\$1,875	60,958	29%	17,142	37,266		
\$75,000 to \$99,999	21,638	9%	\$2,500	24,064	12%	2,426	39,692		
\$100,000 to \$149,999	26,285	7%	\$3,750	0	0%	(26,285)	13,407		
\$150,000 or more	13,205	4%		0	0%	(13,205)	202		

Total lowincome gap

Gaps by AMI (2018 Income Limits for 4-Person HH)										
AMI Maximums	Income Upper Bound	Number Percen Rente	t of	Maximum Affordable Rent+Utilities	Number of Rental Units	Percent of Rental Units	Rental Gap	Cumulative Gap		
0-30% AMI	\$25,800	49,345	24%	\$645	13,652	7%	(35,693)	(35,693)		
31-50% AMI	\$43,000	36,655	18%	\$1,075	70,083	34%	33,428	(2,265)		
51-80% AMI	\$68,800	49,225	24%	\$1,720	84,506	41%	35,281	33,016		
81-95% AMI	\$73,566	8,353	4%	\$1,839	11,621	6%	3,268	36,283		
96-120% AMI	\$92,925	18,027	9%	\$2,323	20,750	10%	2,722	39,006		
121-150% AMI	\$116,156	14,616	7%	\$2,904	6,809	3%	(7,807)	31,199		
More than 150% o	f AMI	30,996	15%		0	0%	(30,996)	202		

Figure III-14 shows the change in rental gaps over the past ten years for renters earning less than \$20,000 and those earning between \$20,000 and \$25,000. Compared to 2008 and 2012:

- The gap has declined significantly for renters earning less than \$20,000 per year. In 2008, the gap was 46,000 rental units, compared to 26,700 today.
- However, as demonstrated by Figure III-7, the change in the gap is largely related to a decline in extremely low-income

Figure III-14. Change in Rental Gaps, 2008 to 2017

Notes:

Numbers are rounded to nearest hundred.

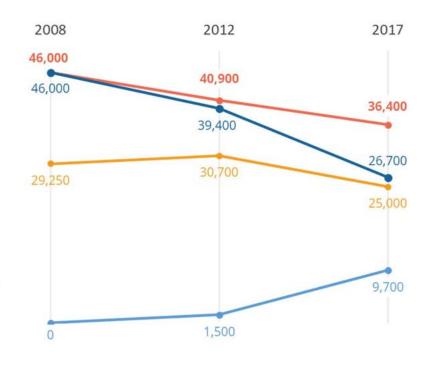
Source:

2008, 2012, and 2017 ACS and Root Policy Research.

- Total Rental Gap for Households Earning <\$25,000</p>
- Rental Gap for Households Earning <\$20,000
- Rental Gap for Households
 Earning between \$20,000 and
 \$25,000
- Student Adjusted Rental Gap for Households Earning <\$25,000</p>

- renters—not due to a change in affordable rental units to serve them.
- The gap for renters earning between \$20,000 and \$25,000 per year has increased. This is due to the growth in renters in this income cohort, as well as a decline in affordable rentals to serve them.

Figure III-14 also presents an "adjusted" gap for students, which is discussed in more detail later in this section.



Ratio of units to renters. An alternative way to examine the gaps is through a ratio of units to renters. In a perfectly balanced market, there would be one unit for every renter who needed it. When a ratio is less than 1, this suggests a shortage of rental units. When the ratio is greater than 1, this suggests a surplus of rental units.

A recent study by the National Low Income Housing Coalition found that, in Austin, there are 21 affordable rental units available for every 100 extremely low-income renters (a ratio of .21). The gaps model estimates this at 24 units per 100 households (ratio of .24). This compares to:

- In Houston, 19 affordable rental units were available for every 100 extremely low-income renters which indicates a less affordable rental market than Austin's;
- In Dallas, 20 affordable rental units were available for every 100 extremely low-income renters which is about the same as Austin's; and
- In San Antonio, 31 affordable rental units were available for every 100 extremely low-income renters—a more affordable market than Austin's.²

The student effect. The City of Austin is home to many institutions of higher education; the largest, by far, is the University of Texas at Austin (UT-Austin). As of fall 2018, the university enrolled more than 50,000 students, with 40,800

undergraduates and 11,000 graduate students. These students are equivalent to roughly five percent of the City's population.

According to UT-Austin, more than 85% of students live off campus. The university does not require students to live on campus at any point during their education, because the university is unable to provide even the incoming freshmen with on campus housing.

Existing residence halls (dorms) accommodate about 7,000 students on campus. University Apartments, with an estimated 1,500 units, provide on-campus housing for families, graduate students, and some undergraduates. Students can live in these apartments for up to seven years. According to the university, these apartments have a wait list of about 1,000 households.

Accounting for this on-campus housing, we estimate that approximately 42,500 students live off campus.³ With an average household size of 2.3 (the average size of renter households in Austin), students could occupy as many as 18,500 rental units in Austin, or about nine percent of all rental units.

Austin Community College (ACC) enrolls approximately 60,000 students through technical and professional education, continuing education, and online classes. ACC has eleven campuses throughout the Central Texas region. For all

² https://reports.nlihc.org/gap/2017/tx

³ This assumes that, of the 51,800 students, 7,000 live on campus in residence halls, and 2,250 live in University Apartments (average of 1.5 students per unit).

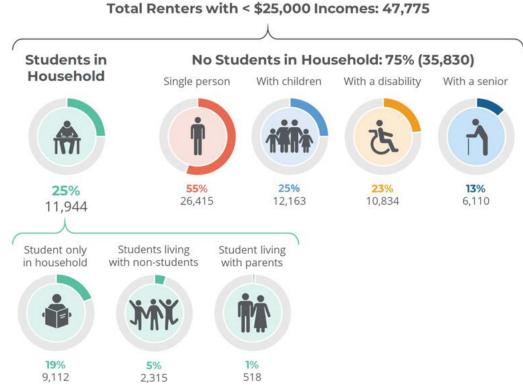
students, off-campus options vary from private dormitory-style housing with common cooking areas to the traditional rental market, where students compete with other renters. Given the nature of ACC's programs, it is difficult to determine how many students reside within City boundaries and occupy rental units.

Student-adjusted rental gap. As discussed above, the rental gap in Austin affects renter households earning \$25,000 and less. Of question is the number of households who fall in the less than \$25,000 household income range due to their limited incomes while in college.

An analysis of 2012-2017 American Community Survey records determined that 19% of renter households earning less than \$25,000 per year were student households (students living alone or with other students); this equals about 9,100 households. Another five percent were living with non-student roommates, or 2,300 households. Just one percent of the less than \$25,000 renter households were made up of students living with parents.

In all, 24% of the less than \$25,000 renter households are students—about 11,500 renter households. This is consistent with the City of Austin 2009 Comprehensive Housing Market study, which estimated the proportion at 25%. Figure III-15 demonstrates how students are represented in less than \$25,000 households based on the above analysis.

Figure III-15.
Student Representation in All Renter Households with <\$25,000 Incomes, 2017



Source: 2017 5-year ACS from Public Use Microsample data applied to 2017 1-year ACS and Root Policy Research.

It is logical to adjust the City's rental gap to account for students under the theory that students' housing needs are temporary and, relative to other types of low income households, students have more resources to manage housing costs (student loans, parent and guardian support, scholarships, institutional housing options such as university-provided housing).

As such, the City's current rental gap is adjusted for students to capture two scenarios:

- 1) No students earning less than \$25,000 per year have the need to reduce their rental payment, even though they are classified as low income. We assume these students are able to manage a higher rent payment than the gaps would suggest because they are drawing on student loans, savings, and/or contributions from family members.
- 2) Half of the students in the less than \$25,000 income range (12% of all households earning less than \$25,000) do not have housing needs and are able to manage higher rents than the model suggests they can afford. The other half cannot manage higher rents than the model suggests. This version of the gaps reduction assumes that half of the students in the less than \$25,000 income category are in need of housing units renting for less than \$625 per month.

Both scenario adjustments place student households into a higher rental price bracket in which the City's rental units are primarily clustered—non-subsidized units renting between \$875 and \$1,250.

With these adjustments, **the student adjusted rental gap** ranges from **25,000 units** (scenario 1) to **30,600 units** (scenario 2) for renter households earning less than \$25,000 per year. This compares to 36,400 in the unadjusted gaps analysis. Figure III-16, on the following page, summarizes the gaps with the student adjustment.

Students affect the rental market in many ways, other than creating demand. They also influence unit pricing in unique ways:

- Students commonly have additional support (parent or guardian) to pay rent. When parents are contributing to the rent payment, they may expect amenity-rich units (security, onsite gym, onsite laundry facilities) that carry higher rents. Recent rental construction in the City of Austin appears to be responding to increased demand for such units. As discussed in Section II, student-oriented apartments have a much higher price per square foot than conventional apartments.
- Students may be perceived by the private sector as higherrisk renters, which is factored into rental pricing.
- Students are frequent movers, which allow property owners to more frequently raise rental prices in response to the wear and tear and transactional costs of tenant moves.

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<\$25,000 Incomes Total Renters with < \$25,000 Incomes 47,775 **Units Affordable** 11,401 Shortage -36,374 Renters with < \$25,000 Incomes Excluding All Student Households 36.309 **Units Affordable** 11.401 Shortage -24,908 Renters with < \$25,000 Incomes Excluding 1/2 of All Student Households 42,042 Units Affordable 11,401 Shortage -30,641

Student-Adjusted Rental Gap for Households with

Figure III-16.

Source: 2017 5-year ACS from Public Use Microsample data applied to 2017 1-year ACS and Root Policy Research.

Solutions to rental gap. It is important to note that the rental gap (for rental units for very low-income renters) is very unlikely to be addressed through new construction of market rate units. The affordability levels that are needed to address the rental gap are so low that market rate units will only reach those price points in extremely weak markets, where vacancy rates exceed 10%. Addressing this shortage requires development of new, deeply affordable units, as well as lowering the price of existing units through rental subsidies.

Homeownership gaps. The homeownership gap compares the number of renters by income cohort to the number of affordable homes to buy. That gap is captured in Figure III-17a (graphic representation) and Figure III-17b (underlying data).

The "renter purchase gap" in this figure shows the difference in proportions between renters and affordable homes on the market in 2017 and 2018, by income cohort and affordability level.

Similar to the rental gaps figures, the table format (Figure III-17b) provides supporting data and some additional detail:

- Percent of homes at each affordability level that are single family detached, attached, and "other" types of homes;
- A "Cumulative Gaps" column, which aggregates the renterpurchase gaps by income level; and
- Gaps by AMI in addition to nominal income categories.

In sum, Austin's for-sale market provides **few affordable homes to buy for renters earning less than \$50,000** per year. There are 8,376 homes to buy (and a little more than 10,000, if homes that are affordable to lower income cohorts are included), compared with 43,816 renters earning \$50,000 to \$75,000 per year.

At \$75,000, the ownership market becomes more balanced, with 10,138 affordable homes to 21,638 renters earning between \$75,000 and \$100,000.

Figure III-17b also demonstrates the importance of attached products for providing deeply affordable ownership units, especially for renters earning less than \$50,000.

Attached homes make up one-third (35%) of for-sale units affordable to renters earning less than \$75,000. Yet they comprise only 20% of all for-sale homes and just 12% of the City's owner-occupied housing stock (and are a very small proportion of annual building permits).

Figure III-17a. Affordability of For-Sale Housing to Austin's Renters, 2017-18

Note:

MFI thresholds are based on 2018 HUD income limits for four-person households in the Austin-Round Rock-San Marcos MSA. Max affordable home price incorporates utilities, insurance, and property taxes and assumes a 30-year fixed rate mortgage with a 4.5% interest rate.

Source:

Root Policy Research.

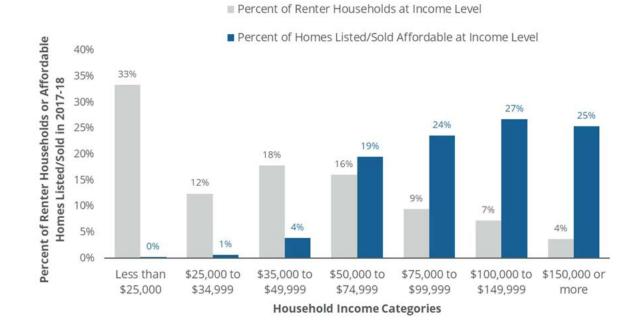


Figure III-17b.

Data Table for Affordability of For-Sale Housing to Austin's Renters, 2017-18

	Rent	ters	Maximum Affordable	Affordabl for Sale ir		Renter Purchase	Cumulative	Percent of Affordable by Type		le Homes
Income Range	Number	Percent	Home Price	Number	Percent	Gap	Gap	Detached	Attached	Other*
Less than \$10,000	17,708	13%	\$39,278	3	0%	-13%	-13%	100%	0%	0%
\$10,000 to \$14,999	8,079	7%	\$58,092	4	0%	-7%	-20%	25%	0%	75%
\$15,000 to \$19,999	7,920	7%	\$76,912	15	0%	-7%	-27%	27%	67%	7%
\$20,000 to \$24,999	14,068	7%	\$95,712	60	0%	-7%	-33%	7%	87%	7%
\$25,000 to \$34,999	19,624	12%	\$133,032	265	1%	-12%	-45%	15%	81%	4%
\$35,000 to \$49,999	34,875	18%	\$188,835	1,669	4%	-14%	-59%	38%	60%	2%
\$50,000 to \$74,999	43,816	16%	\$282,932	8,376	19%	3%	-56%	72%	28%	0%
\$75,000 to \$99,999	21,638	9%	\$376,354	10,138	24%	14%	-41%	81%	19%	0%
\$100,000 to \$149,999	26,285	7%	\$564,511	11,515	27%	20%	-22%	83%	17%	0%
\$150,000 or more	13,205	4%		10,920	25%	22%		87%	12%	0%
Total	207,218	100%		42,965	100%			79%	20%	0%
Income by MFI (Incom	іе Мах)									
0-30% AMI (\$25,800)	49,345	24%	\$95,715	82	0%	-24%	-24%	15%	76%	10%
31-50% AMI (\$43,000)	36,655	18%	\$158,047	765	2%	-16%	-40%	18%	80%	2%
51-80% AMI (\$68,800)	49,225	24%	\$251,371	6,166	14%	-9%	-49%	63%	36%	1%
81-95% AMI (\$73,566)	8,353	4%	\$268,724	1,804	4%	0%	-49%	78%	22%	0%
96-120% AMI (\$92,925)	18,027	9%	\$339,228	7,725	18%	9%	-39%	81%	19%	0%
121-150% AMI (\$116,156)	14,616	7%	\$423,209	7,840	18%	11%	-28%	82%	18%	0%
More than 150% of MFI	30,996	15%		18,583	43%	28%		86%	14%	0%
Total	207,218	100%		42,965	100%			79%	20%	0%

Note: MFI thresholds are based on 2018 HUD income limits for four-person households in the Austin-Round Rock-San Marcos MSA. Max affordable home price incorporates utilities, insurance, and property taxes and assumes a 30-year fixed rate mortgage with a 4.5% interest rate.

Source: Root Policy Research.

^{*}Other includes manufactured and missing information on type.

Figure III-18 shows the number of affordable homes to buy at various income levels in 2017 and 2018 compared to 2008 and 2014. The 2014 Austin Housing Market Study concluded that the market had become more affordable than in 2008, even as home prices rose, due to declining interest rates. Since 2014 interest rates have stayed flat but prices have risen considerably.

In 2008, 16% of homes for sale were affordable to low- and middle-income households, earning between \$35,000 and \$50,000 per year. By 2014, this proportion had risen to 24%, primarily due to low interest rates. Today this proportion is much smaller—just four percent.

The same trends are evident in homes priced for households earning less than \$75,000 per year. In 2008, 49% of for-sale homes were affordable, by 2014, this had risen to 51%. Today, only about one-fifth of homes are affordable.

As discussed earlier in this section, middle-income households (earning \$35,000 to \$100,000) now have lower ownership rate than households in the City overall. Their ownership rate has dropped from 44% in 2012 to 36% in 2017. Changing interest in ownership may be part of why ownership has dropped; however, the lack of affordable, for-sale products has likely also contributed to this change.

Figure III-18. Homeownership Affordability 2008-2018

Source:

Root Policy Research.

Number of Homes	2008		20	14	2017 & 2018		
Affordable by Income	Cum. #	Cum %	Cum. #	Cum %	Cum. #	Cum %	
Income less than \$35,000	635	5%	1,189	8%	218	1%	
Income less than \$50,000	2,650	21%	3,515	24%	1,381	4%	
Income less than \$75,000	6,104	49%	7,366	51%	8,514	22%	

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THE CITY'S RESPONSE

According to the City's Affordable Housing Inventory, more than 26,000 affordable units have been created or preserved with local, state and federal funds. These include housing authority units, developments built with rental tax credits, developments funded by General Obligation (GO) bonds, SMART Housing developments and others.⁴

The database tracks AMI levels for a subset of affordable units. Based on that data, an estimated 1,200 units serve less than 30% AMI (four percent of all units); 6,000 serve 30 to 50% AMI (24%); 15,500 serve 50 to 60% AMI (59%); and 3,300 serve 80% AMI (13%).

Of the units in the database with dates developed or preserved, 63% of the activity occurred between 2013 and 2018, during the period after the last market study was conducted. Construction of these units helped stabilize the rental gap in two ways:

- 1) Deeply affordable units (although a relatively small proportion of the overall units developed or preserved) added inventory to address the rental gap or insured that deeply affordable units were not lost.
- 2) Units targeted to the 50 to 60% AMI level allowed households in these AMI cohorts, as well as lower income (less than 50% AMI) households, to avoid becoming severely

- cost burdened. Extremely low-income households who occupy these units may experience a small level of cost burden, (35% versus. the 30% ideal) yet that is much lower than would be experienced in market rate units (likely upwards of 70%).
- 3) Development and preservation of these units helps broaden the geographic areas of developments that accept Housing Choice Vouchers, which is narrowing, as demonstrated by Figure III-8.

The following maps show the location of assisted units by location, number of bedrooms, and family amenities overlaid by areas of concentrated poverty. The maps suggest that units developed after 2013 are less likely to be in areas of concentrated poverty. Larger units, and those with family amenities, appear more likely to be in higher poverty areas, along the eastern crescent of the City. Accessible units appear in moderate and higher poverty-concentrated areas.

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⁴ For additional detail and annual tracking, see the Austin Strategic Housing Blueprint (https://austintexas.gov/housingblueprint)

Figure III-19.
Family Poverty Rate by
Census Tract and Income
Restricted Developments by
Year Started

Source:

City of Austin and Root Policy Research.

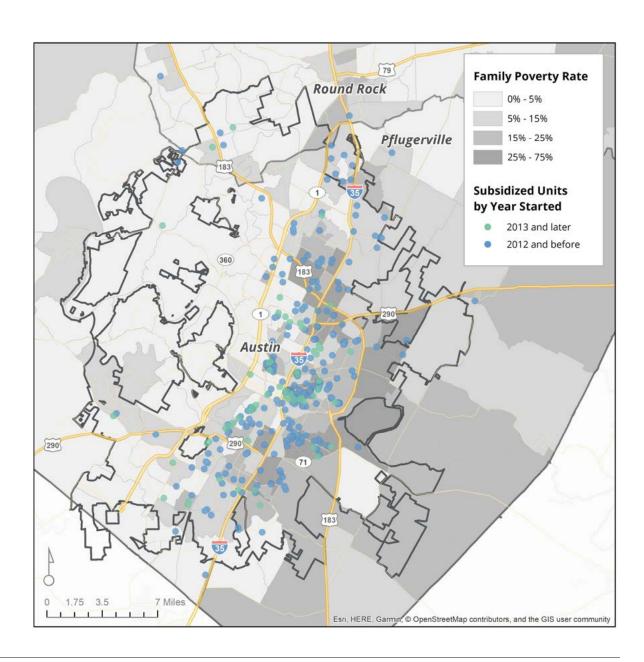


Figure III-20.
Family Poverty Rate by
Census Tract and Income
Restricted Units with 0, 1,
and 2 Bedrooms and
Playgrounds

Source:

City of Austin and Root Policy Research.

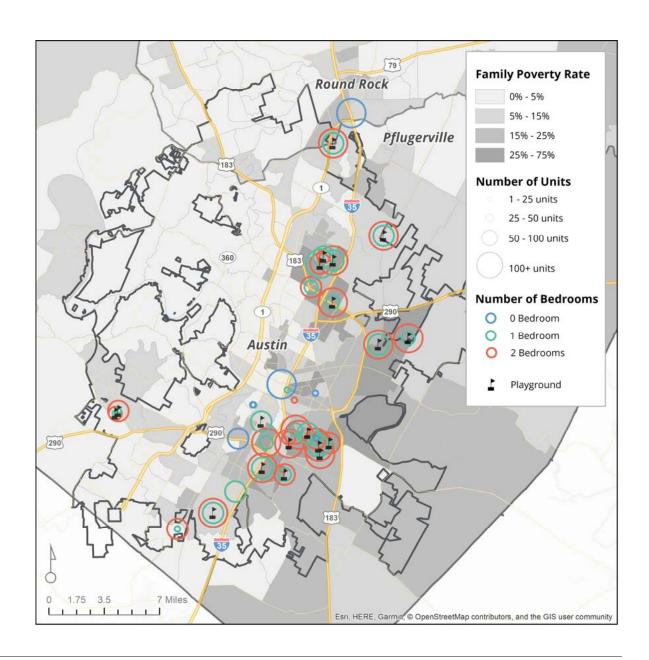
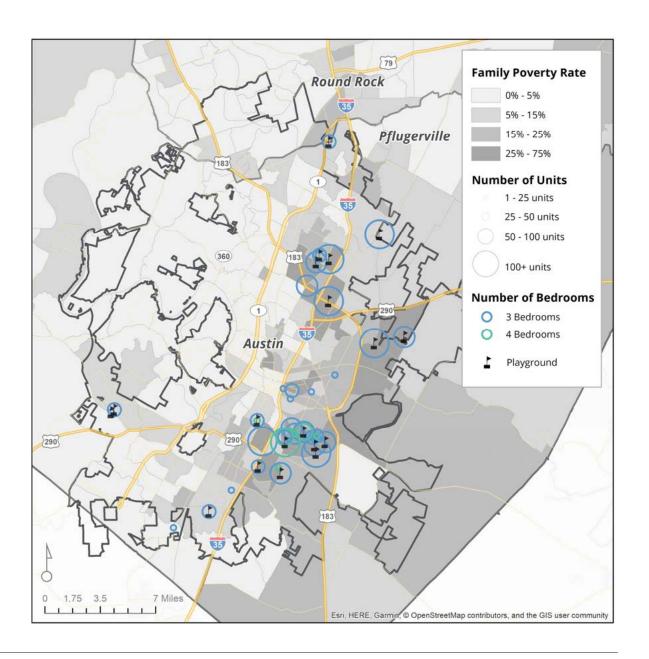


Figure III-21.
Family Poverty Rate by
Census Tract and Income
Restricted Units with 3 and
4 Bedrooms and
Playgrounds

Source:

City of Austin and Root Policy Research.



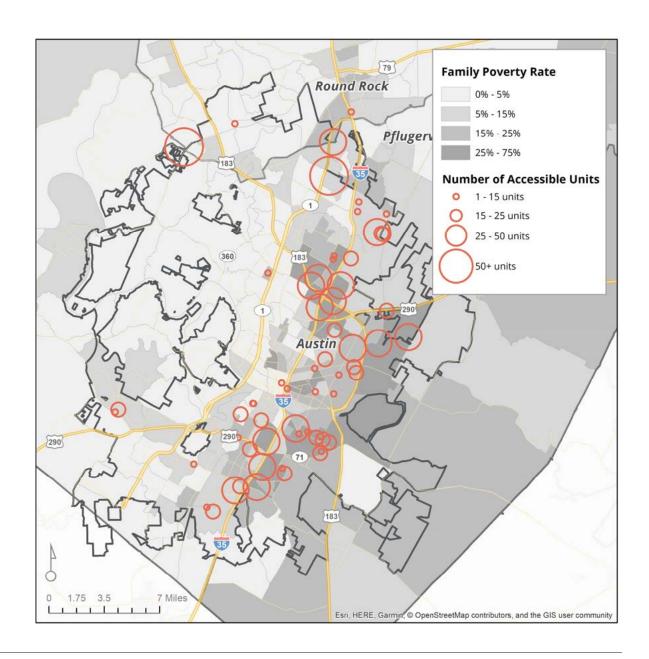
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Figure III-22.
Family Poverty Rate by
Census Tract and Number
of Accessible Subsidized
Units

Source:

City of Austin and Root Policy Research.



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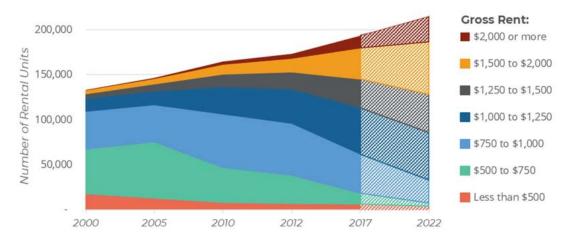
FUTURE NEEDS

As discussed earlier in this section, the number and proportion of rental units priced below \$1,000 declined over the past five years, with the most substantial losses in the \$500 to \$875 range. Figure III-23 shows the trends in rent distribution and then forecasts that distribution through 2022 on the assumption that the trends evident between 2012 and 2017 continue into the future. If current trends persist, the proportion of units priced below \$1,000 will drop from 32 to 15% while the proportion priced above \$2,000 nearly doubles (from 7 to 13%).

In the ownership market, a similar forecasting exercise highlights the decline in entry-level and middle-income housing options in the for-sale market. The proportion affordable to households earning less than \$75,000 per year falls from 21% in 2017-18 to six percent in 2022.

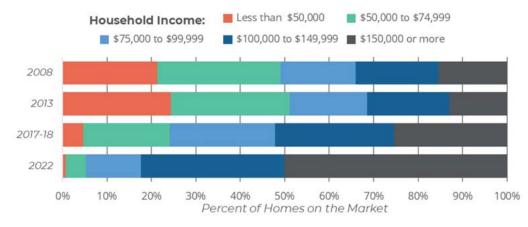
Note that the forecast assumes lending conditions (interest rates, down payment, etc.) are stable between 2017 and 2022.

Figure III-23.
Gross Rent Distribution Forecast, 2022



Source: 2000 Census; 2005, 2010, 2012 and 2017 ACS, and Root Policy Research.

Figure III-24.
Percent of Homes Affordable by Income Level, 2022 Forecast



Source: Root Policy Research.

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SUMMARY OF TOP NEEDS

The top housing needs in Austin, identified through the analysis conducted for this study, include:

Rental Affordability

- Austin's median rent increased 38% from 2010. This is about the same increase as Nashville; less than Portland, San Jose, and Denver (45-59%); and higher than Dallas and San Antonio (17-20%).
- Naturally occurring (market-rate) affordable rentals continued to decline. In 2012, 38% of rental units were priced between \$625 and \$875. This compares to 14% in 2017.
- Overall, renters have been able to manage changes in the rental market due to rising incomes. The City's renters are now comprised of higher income households. Yet, some lowincome renters left the City, assumedly due to rental price increases. Austin has about 12,000 fewer renters earning less than \$25,000 per year than in 2012.
- Today, the rental gap for units renting at less than \$625 per month ranges from a shortage of 36,400 to 25,000 units, after accounting for student households.
- The good news is that the loss of deeply affordable rentals was less than the change in low-income renters. The change in the rental gap from 2012, therefore, was more closely linked to renters leaving the City or moving into higher income brackets than a decline in supply.
- The City of Austin has played a role in this relatively positive outcome: The City's investments in affordable rental units

have helped stabilize the rental market by adding units to assist low-to-moderate-income renters and alleviating high levels of cost burden for a range of low-income renters. The City's investments are also increasingly producing affordable units within mixed-income developments.

Homeownership Affordability

- Austin's median home value (\$333,000 in 2017) rose 55% from 2010, more than peer cities except for Denver (58%).
 Yet Austin is still more affordable than San Jose, Portland, and Denver, and less affordable than Nashville.
- The City's inventory of for-sale units that are affordable to renters earning <\$75,000 to buy has decreased substantially from 49% of all homes listed/sold in 2008 to 22% in 2017-2018. Today, there are 14 times more renters earning <\$75,000 than there are affordable homes to buy.
- Attached homes⁵ make up one-third (35%) of for-sale units affordable to < \$75,000 renters. Yet they comprise only 20% of all for-sale homes and just 12% of the City's owner-occupied housing stock (and are a very small proportion of annual building permits).
- Middle-income households (earning \$35,000 to \$100,000) now have lower ownership rate than households in the City overall and their ownership rate has dropped from 44% in 2012 to 36% in 2017.

Preserving relative affordability of and adding attached¹ homes to the for-sale market will be important for maintaining homeownership opportunities among middle income households.

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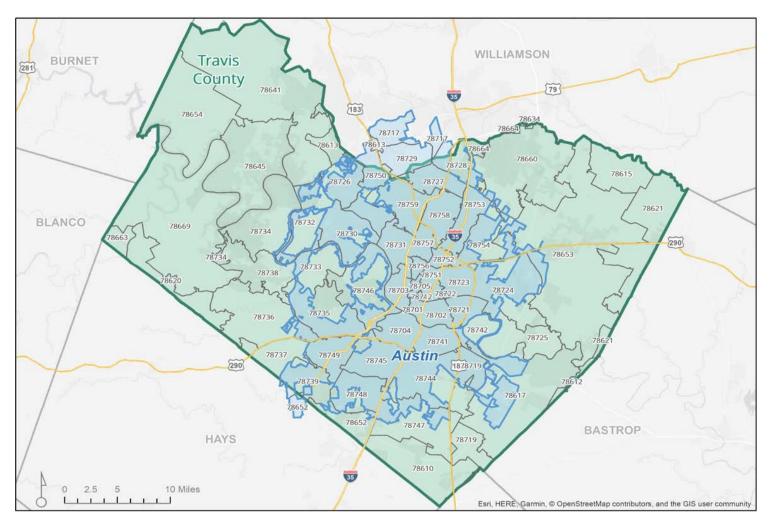
⁵ Single family attached, du-/tri-/four-plexes, townhomes, and condos.

APPENDIX A.

Housing Equity Model

This Appendix presents demographic and housing summary information for each zip code in Austin. The purpose is to provide a snapshot of housing affordability (both rental and ownership) along with indicators of demographic diversity, involuntary displacement, transportation costs and transit access at the neighborhood level. A zip code map is provided below for reference.

Zip Code Reference Map

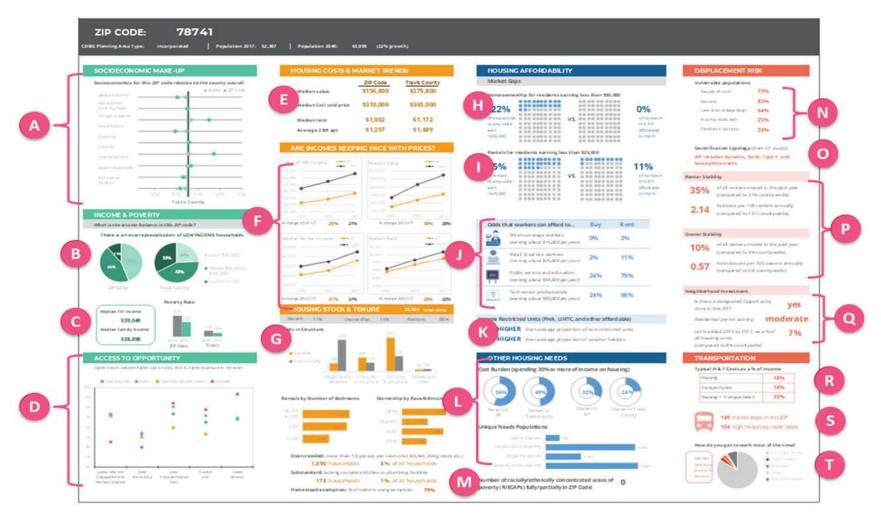


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METHODOLOGY

The figure below is a sample of the housing model output and the following pages describe the methodology and data sources used to generate each component of the zip code reports. Individual reports for each zip code follow, starting on page A-6.



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- The socioeconomic make-up graphic shows the listed variables scaled to the city as a whole. For example, a score of 2.0 for poverty would mean the zip code has twice the poverty rate of the city overall and a score of 0.5 would mean the zip code's poverty rate is half that of the city. All data are from the 2013-2017 5-year American Community Survey (ACS).
- Income balance is a measure of the share of households in the zip that are lower income (less than \$35,000), middle income (\$35,000-\$100,000) and high income (over \$100,000). Similar thresholds were used in a recent Pew study on income segregation and are consistent with the way that Americans self-identify as members of socio-economic classes. We used statistical methods to determine an income balance rating for each zip code: if all income categories were within one standard deviation of the city-wide average, the zip code was considered "mixed income;" when the proportion of a particular income group exceeded one standard deviation above the mean that group was considered to be overrepresented. Pie charts show the distribution of households by income in zip and Travis County. All data are from the 2013-2017 ACS.
- Median household income, median family income, and poverty rates are from the 2013-2017 5-year ACS; Poverty rates from the 2006-2010 and 2013-2017 5-year ACS.
- The following Access to Opportunity Indices are from HUD's AFFHT interactive data site, available online at https://egis.hud.gov/affht/: Labor Market Engagement Index, Jobs Proximity Index, Low Transportation Cost Index, and Transit Use Index. Details on the HUD data sources and calculations are available at the site referenced above. HUD provides the data at the Census tract level. Root Policy Research averaged the opportunity indices by zip (using a weighted average by area). All of these indices range from 0 to 100 by definition and all are structured such that higher scores indicate higher levels of opportunity (or higher exposures to the asset). The Food Access score is based on USDA Food Atlas and reflect the percent of the population that lives within 1 mile of a supermarket for urban areas or 10 miles of a supermarket for rural areas.
- Median home value and median rent (including utilities) are also from the 2013-2017 5-year ACS. Median list/sold price is from Root Policy Research analysis of MLS data for 2017 and 2018 provided by the Austin Board of Realtors (ABoR). Average rent for a 2 bedroom apartment is from Austin Investor Insights data and only includes multifamily buildings with at least 50 units. There were several zip codes in Travis County for which Austin Investor data were unavailable; in those cases ACS data was used to calculate average rent for 2 bedroom units.
- Figures show median household income, median home value, median renter income, and median rent (including utilities) using data from the 2000 Census, the 2012 5-year ACS, and the 2017 5-year ACS. Percent change is based on the change between 2012 and 2017.
- Housing stock and tenure data including total units, vacant, owner/renter, units in structure, rentals by number of bedrooms and ownership by race and ethnicity are from the 2013-2017 5-year ACS. Race categories are non-Hispanic white, Hispanic, Black (non-Hispanic) and Asian (non-Hispanic). Percentage reflects the proportion of householders that identify within each racial/ethnic category. Overcrowded and Substandard data from 2017 5-year ACS; definitions are HUD convention. Percent of owners using Homestead Exemption from Travis County Appraisal District.
- Estimate uses the same affordability methodology as the housing gaps model discussed in Section III of the report (the gaps model compares supply and demand using income as a proxy for demand). Assumes 30% of income is spent on housing costs (including mortgage, utilities, property taxes and insurance), and models a 30 year fixed mortgage with a 5% downpayment and a 4.5% interest rate. Income distribution from the 2013-2017 5-year ACS; for-sale homes from 2017-2018 MLS data provided by ABOR.

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- Estimate uses the same affordability methodology as the housing gaps model discussed in Section III of the report (the gaps model compares supply and demand using income as a proxy for demand). Assumes 30% of income is spent on rent (including utilities). Income and rent distribution from the 2013-2017 5-year ACS.
- Odds analysis estimates the proportion of for-sale and rental units affordable to the average worker in specified occupations. Estimates use the same affordability methodology as the housing gaps model discussed in Section III of the report, also described above (components I and J). For-sale homes are from 2017-21818 MLS data provided by ABoR, rental distribution from the 2013-2017 5-year ACS. Average annual earnings for all occupations except minimum wage are from the Bureau of Labor Statistics; average earnings for minimum wage assumes workers average about a 40-hour work week for 52 weeks per year at \$7.25 per hour.
- Restricted unit data from the City of Austin's affordable housing database and Housing Choice voucher usage is from HUD's Pictures of Subsidized Households. Comparisons between zip codes are based on the percentage of rental units that are rent-restricted and the percentage of rentals that are occupied by voucher holders.
- Cost burden households are those that spend 30 percent or more of their total household income on housing costs (including utilities, insurance, HOA fees, etc). Figures reflect the percent of renters that are cost burdened and the percent of owners that are cost burdened. Data are from the 2017 5-year ACS. Unique needs populations data also from 2017 5-year ACS.
- Racially/Ethnically Concentrated Areas of Poverty (R/ECAPs) are based on 2014-2017 5-year ACS data. R/ECAPs for Austin and Travis County were identified as part of the Regional Analysis of Impediments to Fair Housing Choice (AI) and are based on HUD's definition. The R/ECAPs were calculated at the Census tract level and the model counts the number of R/ECAP tracts that are located (either fully or partially) in the specified zip code.
- Categories based on vulnerable populations identified in *Uprooted: Residential Displacement in Austin's Gentrifying Neighborhoods and What Can be Done About It*, produced by the University of Texas Center for Sustainable Development in the School of Architecture & the Entrepreneurship and Community Development Clinic in the School of Law (available online at https://sites.utexas.edu/gentrificationproject). Data are from the 2014-2017 5-year ACS.
- Gentrification Typology from the UT Gentrification study referenced above. The study does not categorized areas in Travis County outside the City of Austin. The model reflects whether the specified zip code includes susceptible, dynamic, continued loss, late, and/or early type 1 Census tracts. If none of the above tracts exist in the zip it is categorized as "does not meet gentrification criteria." For Travis County tracts that were not included in the UT Gentrification study, Root applied the same methodology to categorize tracts.
- Percent of owners and renters that moved in the past year from 2013-2017 5-year ACS. Evictions per 100 renters from Princeton University's Eviction Lab. the Eviction rate shown reflects homes that received an eviction judgement in which renters were ordered to leave (per 100 renter-occupied homes in that area). Eviction Lab data are provided by Census tract; Root Policy Research calculated the weighted average eviction rate by zip based on tract-level data. Foreclosure data provided by the City of Austin and Travis County by zip code.

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- Opportunity Zone data from City of Austin and Travis County. Opportunity Zones are designated by the federal government and published in the Federal Register. Residential permit activity based on permits issued in 2018 by the City of Austin, Travis County, the City of Pflugerville, and the City of Manor. The lowest 30% of zips are classified as low and the highest 30% are classified as high; the middle 40% are considered "moderate." Comparisons based on residential permits for new construction, additions, and remodels as a percent of total housing units in zip. Units added 2010 to 2017 reflects year built data from the 2014-2017 5-year ACS.
- Typical H&T Cost data from the Center for Neighborhood Technology H+T Index for 2017. Root Policy Research calculated the weighted average costs by zip based on tract-level data. Data reflect cost for the "regional typical household" meaning a household earning 100% of Area Median Income (AMI).
- Transit stops (bus and rail) from the City of Austin (includes Travis County transit stops).
- Average commute time and mode of transportation to work from 2013-2017 5-year ACS.

ZIP CODE DASHBOARD REPORTS

The remaining pages of this Appendix show the Housing Equity Model output for each zip code in Travis county excluding Austin.

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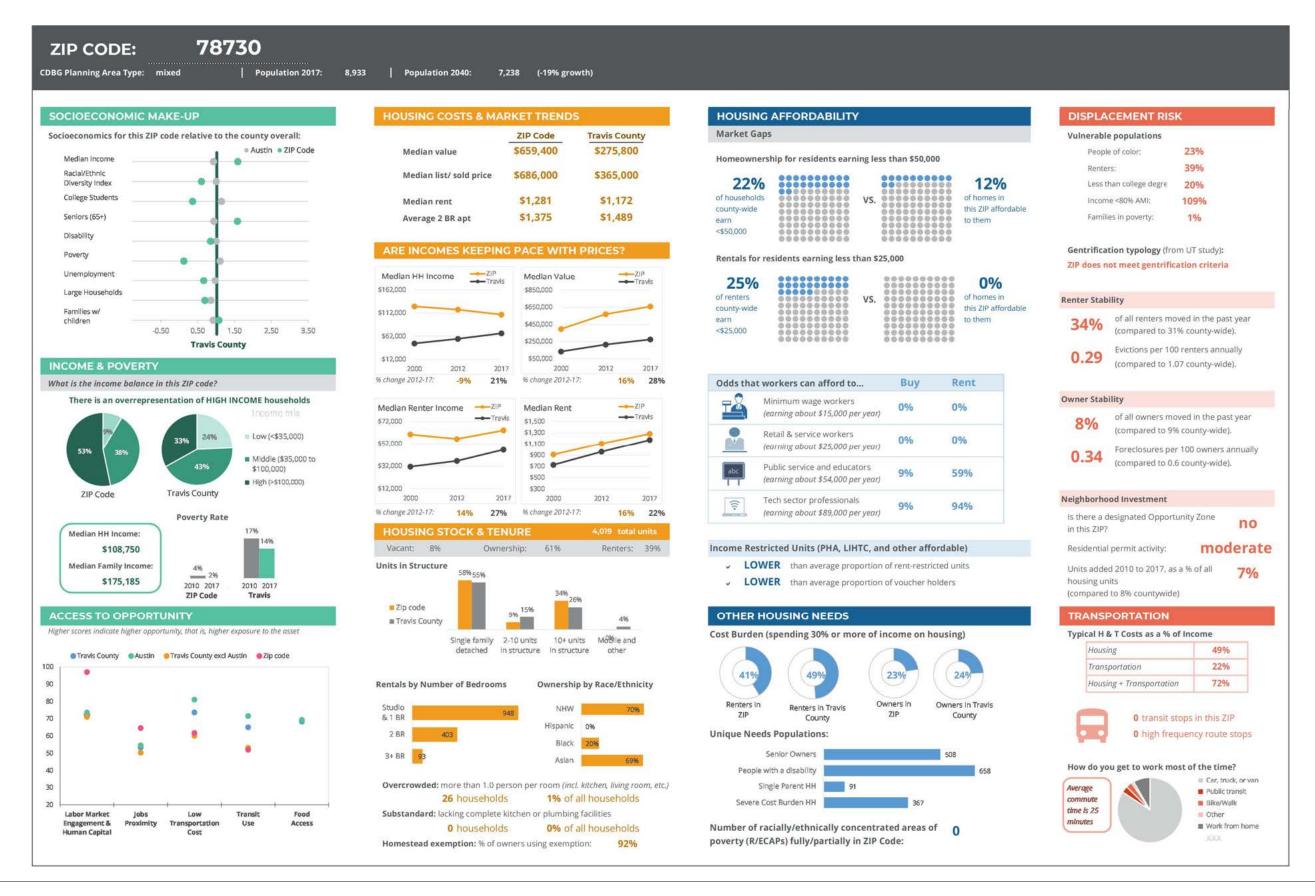




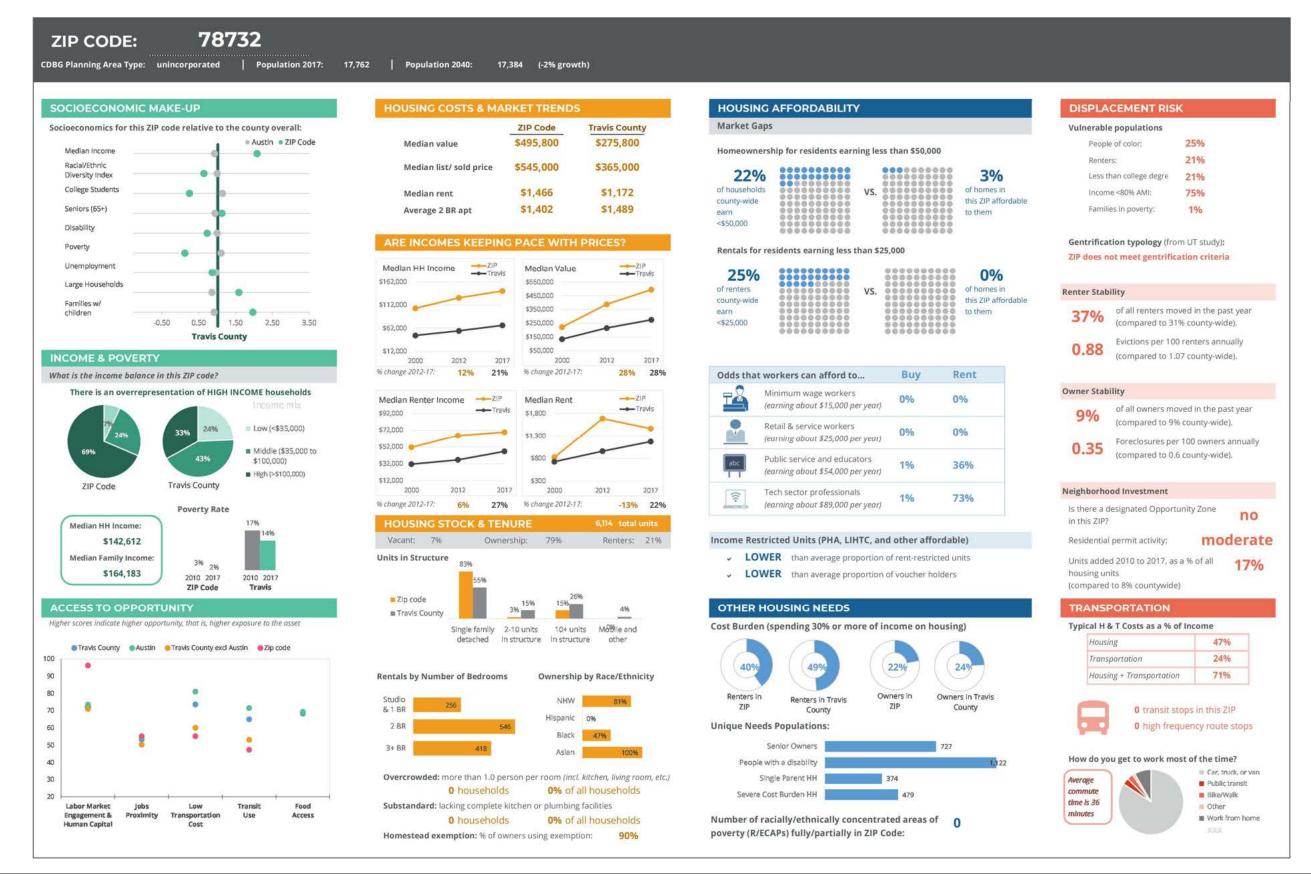


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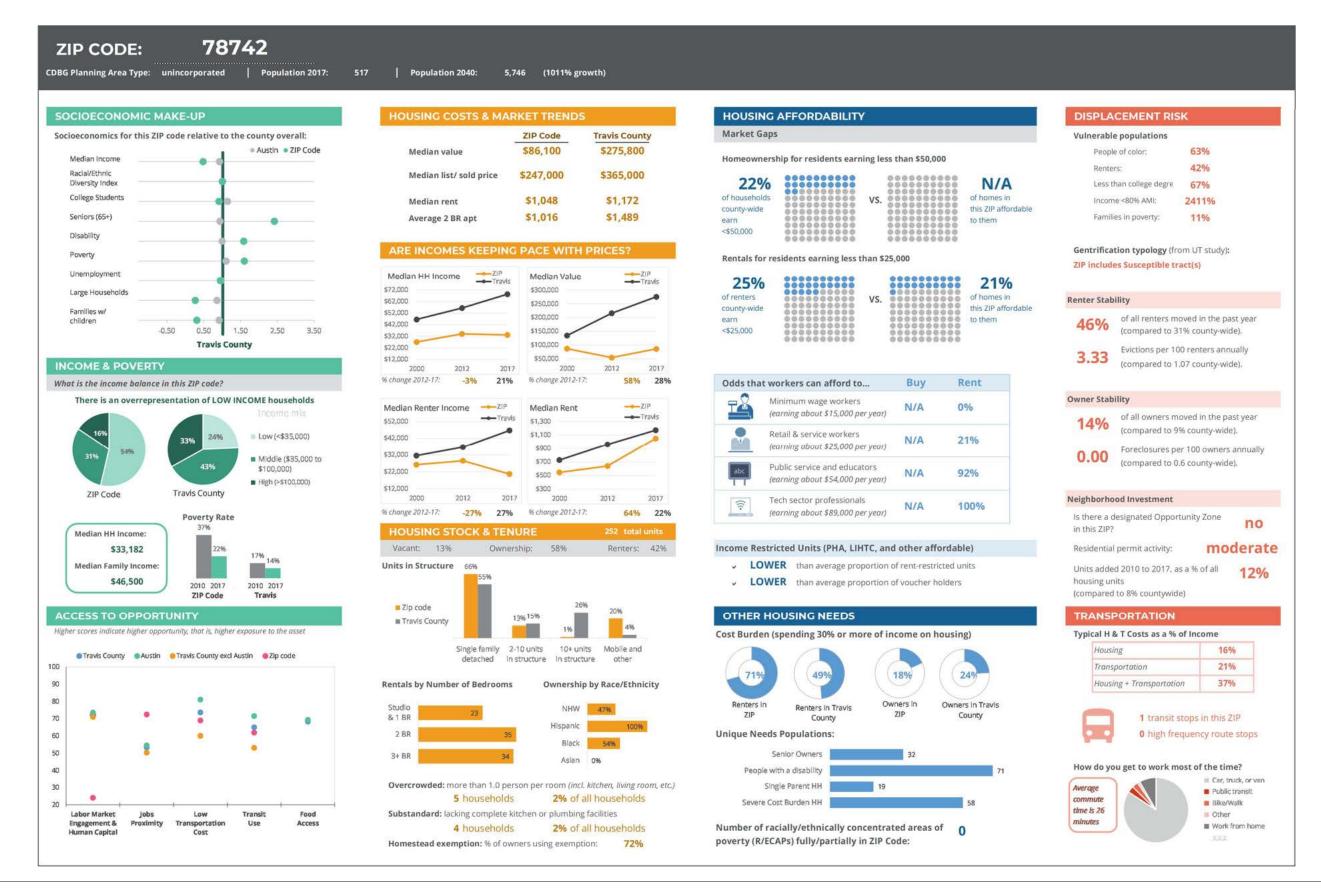




















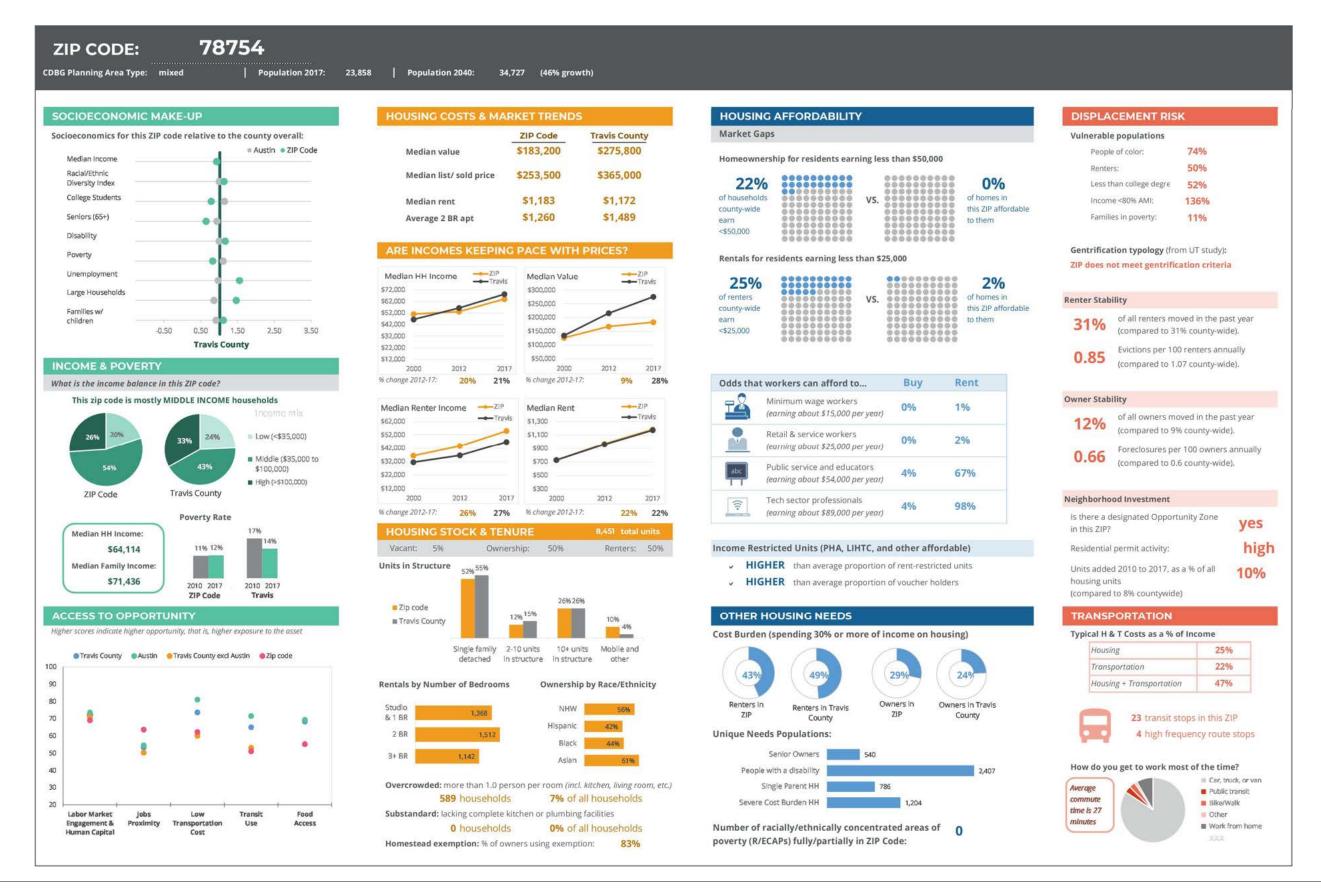












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