



Learning from Houston's Townhouse Reforms

Emily Hamilton

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Housing affordability is a growing problem for American households, a problem that the pandemic has only exacerbated. Local land use restrictions, rules that determine the type and quantity of housing that can be built in a given area, are the primary causes of the country's housing affordability problem. By constraining the supply of housing in a given area, these rules limit the extent to which homebuilders can meet the increasing demand for housing.

Minimum lot size requirements, which require each house to have a yard of a certain size, are one of the most important zoning rules that drive up the cost of housing, because they prevent developers from economizing on land by building more houses on a given site. These requirements also lead homebuilders to build larger, expensive houses because few buyers want a small, basic house with a high land cost.

Policymakers in states across the country have introduced bills that would limit local governments' authority to determine how large residential lots must be. Some states now require local governments to permit lots to be split in certain cases. Legalizing small-lot construction opens up opportunities for less expensive greenfield construction at the outskirts of urban areas as well as for new infill construction by subdividing existing residential lots into smaller ones, which would provide housing for more people in existing neighborhoods.

Reforms passed years ago in Houston, Texas, provide evidence for what we can expect from state bills that legalize small-lot construction. In Houston, nearly 80,000 houses have been built on small lots made possible by minimum lot size requirements. This increase in construction, along with the city's general openness to housing growth, contribute to the city's impressive level of housing affordability compared to other US cities.

In this policy brief, I offer a short summary of academic research examining the impact of land use restrictions on housing supply and housing affordability. I explain the general framework of land use regulations in Houston, the most liberally regulated large city in the United States. I then describe the details of Houston's lot size reforms and the resulting housing construction. Finally, I discuss housing affordability in Houston relative to other large metropolitan areas in the Sunbelt.

LOCAL LAND USE RESTRICTIONS AND HOUSING AFFORDABILITY

In his 1972 book, Bernard Siegan wrote:

All zoning is exclusionary, and is expected to be exclusionary; that is its purpose and intent. The provisions governing almost every zoning district operate to exclude certain uses of property from certain portions of the land, and thereby in the case of housing, the people who would occupy the housing excluded.¹

Today, a growing body of empirical evidence backs up Siegan's assertion that the more land use regulations constrain housing construction, the more expensive housing in a market will be, making housing out of reach for people with low incomes or even middle incomes in the country's most constrained housing markets. Joseph Gyourko and Raven Molloy, in a review of research on the relationship between local land use regulations and housing affordability, explain that "regulation appears to be the single most important influence on the supply of homes."² They point out that, across the country, labor and material costs vary much less than house prices, because in places where housing supply is more constrained by regulations, increases in demand lead to prices being bid up. Research on the causal effect of land use regulations finds that they reduce the supply of developable land.³

A study of home values in the Boston region finds that, in this highly constrained housing market, houses with larger yards do not sell for substantial premia than houses with smaller yards.⁴ In this context, the right to build a house on a lot contributes much more to land value than the size of the lot.

Another study on the costs of minimum lot sizes, using data from Harris County and Dallas County,⁵ finds that larger yards add little value to houses. A study of minimum lot sizes in the fast-growing Texas suburbs finds evidence that, in some of these localities, actual lot sizes bunch to the required minimum lot sizes, indicating that lot size requirements are likely binding and drive up house prices relative to what they would be if development were permitted on smaller lots.⁶

LAND USE REGULATION IN HOUSTON

Houston is the only large US city without use zoning, which identifies areas within a locality where certain land uses are permitted or banned. Zoning proposals have been on the ballot three times, and each time residents have voted against adopting a zoning ordinance.

While other US cities ban apartment construction on all but a small share of their land area, Houston does not, and the city permits extensive multifamily construction. According to the US Census Bureau's American Community Survey, from 2010 to 2020, Houston's total housing stock increased by 10.8 percent, while its stock of multifamily housing in buildings with five or more units increased by 14.8 percent. Across the country, there was a 6.5 percent increase in the total stock of housing and an 11.5 percent increase in the stock of multifamily housing. Perhaps the most salient difference between Houston and other US cities is Houston's prevalence of low-rise garden apartments in many locations that likely would have been restricted to single-family or commercial development if it were under zoning ordinance.⁷

Compared to other US cities, Houston's land use restrictions are permissive. But its many other government policies nonetheless shape urban development, and these policies promote low-density development relative to what the market might otherwise prescribe.⁸ Subdivision limits, including minimum lot size requirements and setback requirements, along with parking requirements and other limits on land use—all shape what builders can build. Furthermore, transportation policy has had important effects on land use development patterns in Houston, which has more freeway lane miles compared to some other US cities.⁹

In addition to citywide land use restrictions, private deed restrictions and homeowner associations play an important role in regulating Houston's development.¹⁰ Homebuyers who wish to purchase in a neighborhood with density and use restrictions that are tighter than those mandated by the city can purchase in a neighborhood with deed restrictions. City policymakers have used deed restrictions to assuage homeowners in high-income neighborhoods who prefer to prevent denser redevelopment.¹¹ While a renewal of deed restrictions typically would require a near unanimous vote among property owners, the Texas legislature, at the behest of the city council, passed a law that gave residents the option to renew with a simple majority vote.

HOUSTON'S MINIMUM LOT SIZE REFORMS

With house prices increasingly rising faster than incomes, along with a strengthening consensus that local land use regulations are the cause, growing numbers of state and local governments are looking for reforms that will allow more lower-cost housing to be built. Perhaps the reform that has received the most attention from the media and housing advocates is Minneapolis's 2019 reform legalizing triplex construction in the city's neighborhoods where previously only detached single-family houses had been allowed.

Prior to this recent wave of reforms, policymakers in Houston took a different approach to liberalizing the city's already relatively loose land use regulations. In 1998, they reduced the by-right minimum lot size from 5,000 to 3,500 square feet within the city's I-610 Loop and permitted even smaller lots (down to an average of 1,400 square feet) for subdivisions that meet certain conditions. Then, in 2013, they extended the reform to cover all the land in the city with wastewater collection services.

Because Houston does not have use zoning, duplexes and other small multiunit structures have always been permitted on lots developed with single-family houses—although its parking requirements make it difficult to build more than two units on the 50 feet by 100 feet lots that are common within the I-610 Loop. The reforms make it feasible to achieve much smaller lot sizes in subdivisions of larger parcels, where homebuilders can create shallower lots. Unlike townhouses, duplexes and other types of multiunit buildings have to be a condominium structure for separate units to be owned by multiple parties. While some buyers seek out small multiunit properties like duplexes to live in one and rent out the other, most buyers prefer to own just one unit without being part of a condominium.

Houston's 1998 lot size reform created an opportunity to build three fee-simple free-standing houses where previously only one single-family house would have been permitted. While Minneapolis's 2019 triplex reform was an important symbolic change to replace single-family zoning with a more inclusive regulation, there were only 104 duplex or triplex units built the first two years following the reform.¹² In contrast, thousands of small-lot single-family houses are built in Houston each year. The city's small lot-size requirements have facilitated a vernacular architecture of houses that are taller than they are wide (known locally as townhouses) but with small side setbacks. In addition to fee-simple ownership, part of the reason Houston's townhouse construction is delivering more units than Minneapolis's triplex construction is that Houston's height and setback requirements allow for much more square footage across three townhouses than a duplex or triplex in Minneapolis.

Prior to 1998, Houston had a minimum lot size requirement of 5,000 square feet for detached single-family houses and 2,500 square feet for townhouses. One analysis points out that such regulations encouraged large townhouse construction and precluded smaller, lower-cost townhouse construction.¹³ The 1998 reform permitted subdivisions down to an average lot size of 1,400 square feet if they include 600 square feet of compensating open space per lot that is less than 3,500 square feet, or alternatively by meeting "performance standards." These standards include having adequate wastewater collection service, buildings that cover no more than 40 percent of the lot, and at least 150 square feet of permeable area on each lot.¹⁴

Starting with the 1998 reform, houses on lots less than 5,000 square feet were permitted inside as well as outside the I-610 Loop, but outside the Loop, small-lot construction required more compensating open space. The reform legalized lots as small as 1,400 square feet with 720 square feet of compensating open space per lot. Prior to the 2013 reform, all small-lot development outside

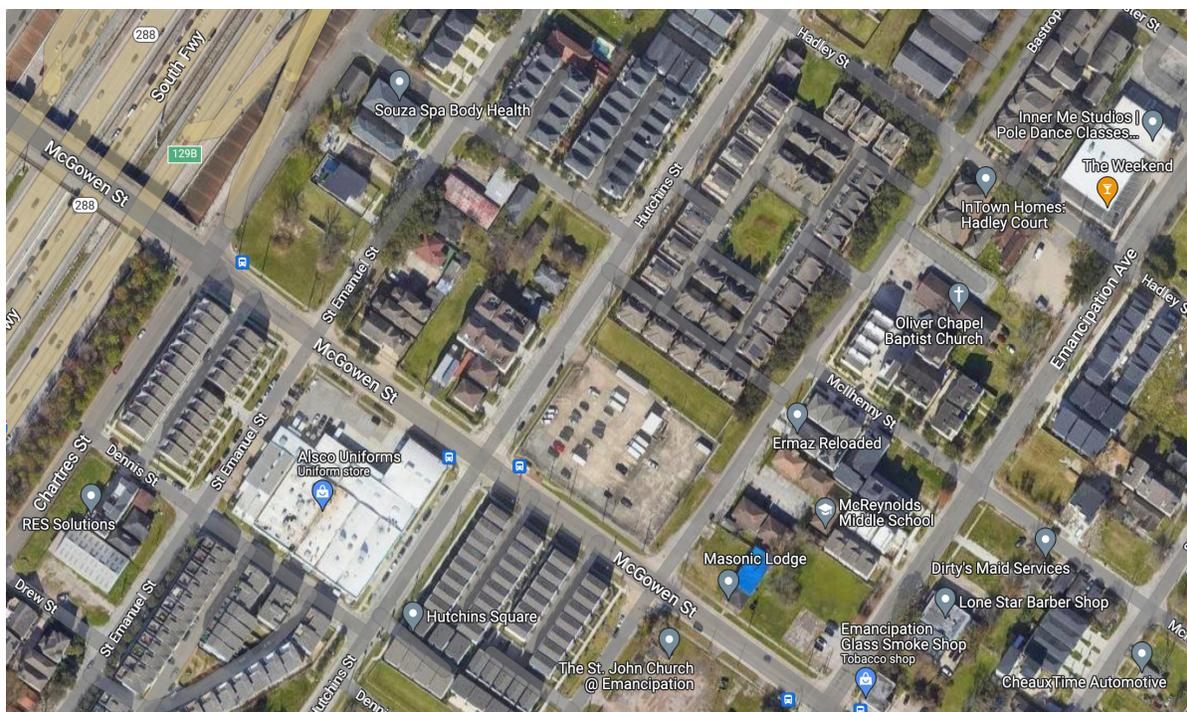
the I-610 Loop was permitted with the compensating open space requirement rather than through performance standards, and variances were not issued for minimum lot size outside the Inner Loop.¹⁵

The intent of the open space requirement was to create pocket parks throughout the city. But in many cases, small-lot developments are gated, preventing the public from accessing the open space.¹⁶ This was part of the policymakers’ reasoning for using the performance standards to extend the opportunity to subdivide outside the Inner Loop. Furthermore, the rule change was viewed as a way to open up more land for redevelopment, reducing gentrification pressures and protecting Houston’s affordability.¹⁷

The 2013 reform extended the 1998 rules to all the land in the city of Houston with wastewater collection services, reducing the compensating open space requirements for small-lot subdivisions outside the I-610 Loop and creating the option for subdivisions that qualify based on the performance standards. The new subdivision rules passed with a 13-3 vote among council members.

Figure 1 shows a subdivision west of Hutchins Street that is built to the performance standards. This configuration is commonly referred to as “shared driveway” townhouses. The performance standards encourage this development pattern because the driveway contributes to the 60 percent

Figure 1. Small-Lot Subdivisions Outside the I-610 Loop Built Before and After 2013



Source: Copyright 2002 CNES/Airbus, Houston-Galveston Area Council, Maxar Technologies, Texas General Land Office, U.S. Geological Survey, USDA/FPAC/GEO, Google Map data 2022.

of open space required on each lot. Older small-lot houses with the compensating open space required outside the I-610 Loop prior to 2013 are pictured east of Hutchins Street. One prolific Houston townhouse builder explained that under the compensating open space standards outside the Inner Loop prior to 2013, he could have built four houses on a 16,000-square-foot lot. The 2013 reform has made it feasible to build six or seven houses on the same lot with one shared driveway providing access to all of them.¹⁸

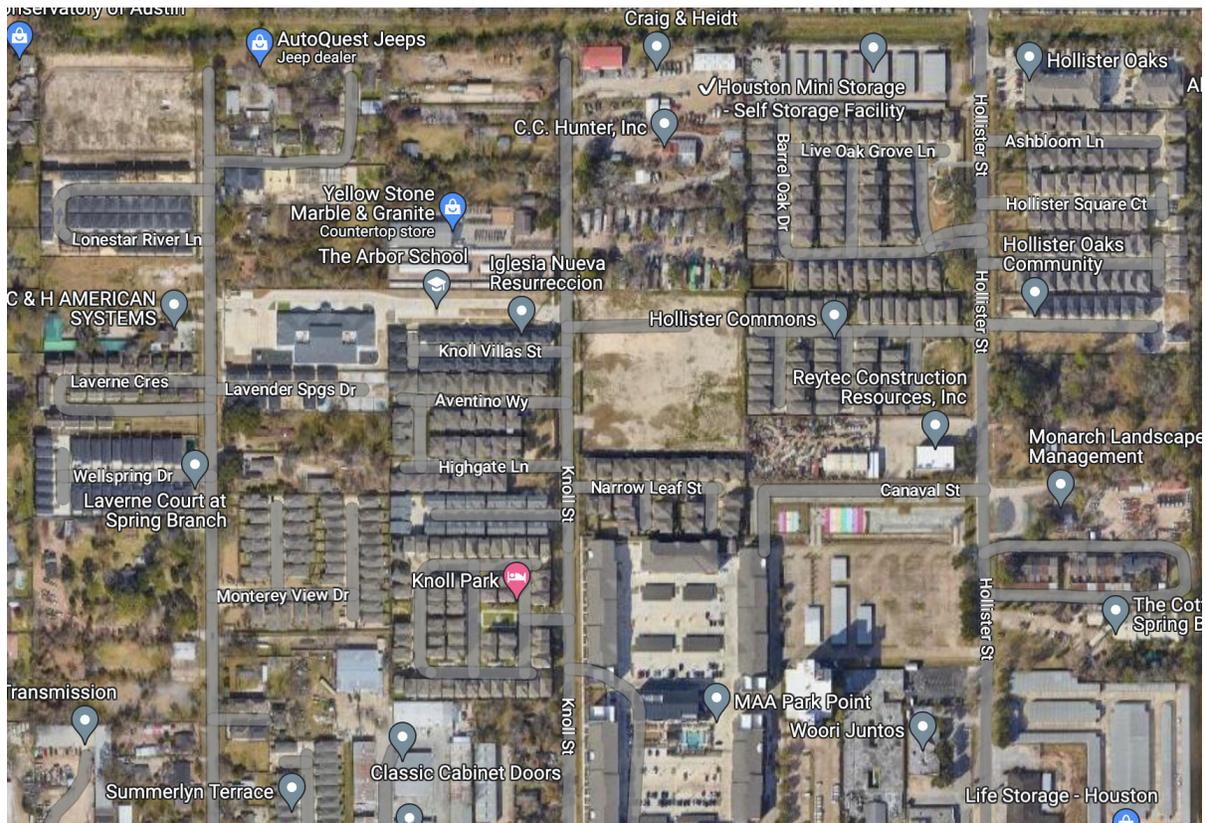
The only restriction in Houston's subdivision requirements that distinguishes attached from detached townhouses is that detached townhouses must have a three-foot side setback. If homebuilders secure a "maintenance agreement" with the adjacent property owner and use fire-rated building materials, they can build with smaller setbacks.¹⁹ Maintenance agreements are easy to secure in the case of a subdivision if the newly subdivided lots are owned by a single homebuilder at the time of construction. Regardless of the reforms, single-family houses, including small-lot single-family houses, are required to have two parking spots. Their front setback requirements range from 0 to 25 feet, depending on the type of street the house sits on. Houston's height limits permit structures as tall as 75-feet adjacent to single-family houses, so townhouses theoretically can be as tall as six stories (though most are three stories).²⁰

Prior to the 1998 reform, small-lot construction became commonplace, permitted through a variance process. One study finds that small-lot construction permitted through the variance process took place primarily within low-income neighborhoods.²¹ The by-right reform led to more small-lot construction in middle-income neighborhoods within the I-610 Loop, providing support for Houston policymakers' approach of using lot-size reform to direct development in middle- and high-income neighborhoods to reduce pressure for more development and potential displacement of people living in lower-income neighborhoods.²²

In addition to deed restrictions that limit development in parts of Houston, property owners have the option to seek a special minimum lot size, which allows for a lot size larger than the city's requirements if 70 percent of the existing houses in the area (60 percent in historic districts) comply with the special minimum lot size requirement that the residents are seeking to implement. This policy, which limits development only in the neighborhoods where residents choose to adopt it, may have helped make Houston's minimum lot size reductions politically feasible.²³

Since the 2013 reform was implemented, some neighborhoods that sit just outside the Inner Loop, particularly those northwest of it, have been transformed by shared driveway townhouse development. The townhouses shown in figure 2 replaced single-family houses, light industrial uses, and strip malls. Houston's lack of use zoning has made it possible for townhouses to be built on land that was not previously residential; in fact, the majority of townhouses have been built on land that was previously commercial or light industrial.²⁴

Figure 2. Townhouses in Spring Branch Central



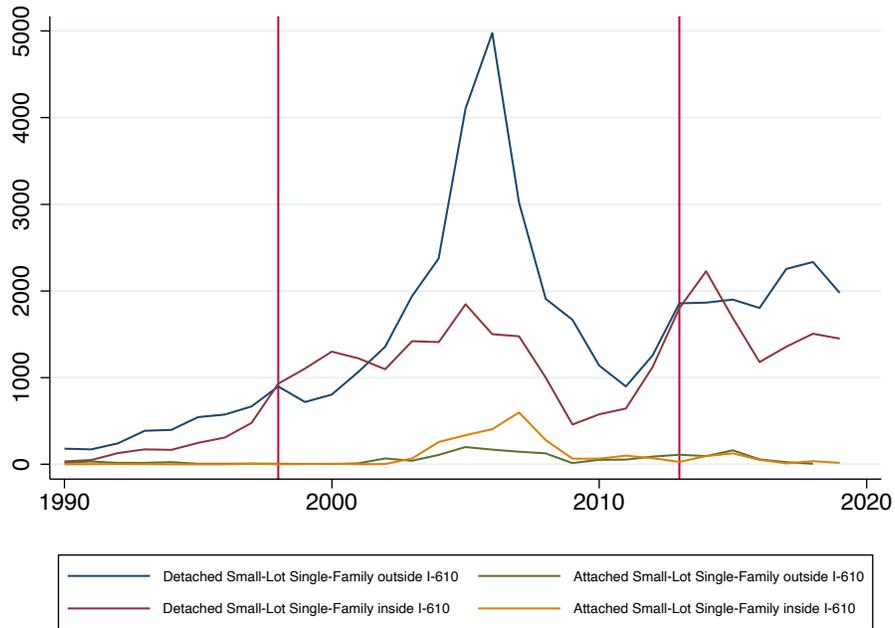
Source: Copyright 2002 CNES/Airbus, Houston-Galveston Area Council, Maxar Technologies, Texas General Land Office, U.S. Geological Survey, USDA/FPAC/GEO, Google Map data 2022.

Figures 3 and 4 show the increase in the number of small-lot construction in Houston from 1990 to 2019, in raw numbers and as a percent of all single-family and townhouse development inside and outside the I-610 Loop. Both figures show that small-lot construction began increasing inside the I-610 Loop prior to the 1998 reform and outside the I-610 Loop prior to the 2013 reform.

Figure 5 provides more granularity to Houston’s residential lot sizes over time, broken down by the 25th, 50th, and 75th percentile of single-family lot size inside and outside the I-610 Loop. In 1998, when the minimum lot size reform was adopted within the I-610 Loop, the 25th percentile lot size for new residential construction reached 2,000 square feet. While lot sizes outside the I-610 Loop were unsurprisingly larger, the 25th percentile lot size fell below 5,000 square feet several years before the 2013 reform increased opportunities for small-lot development.

Houston’s shrinking lot sizes for new construction houses reflect national trends. From 2010 to 2020, the median lot size for new construction fell from 10,500 to 8,700 square feet in the country as a whole.²⁵ Both inside and outside the I-610 Loop, Houston’s lot sizes have long been well

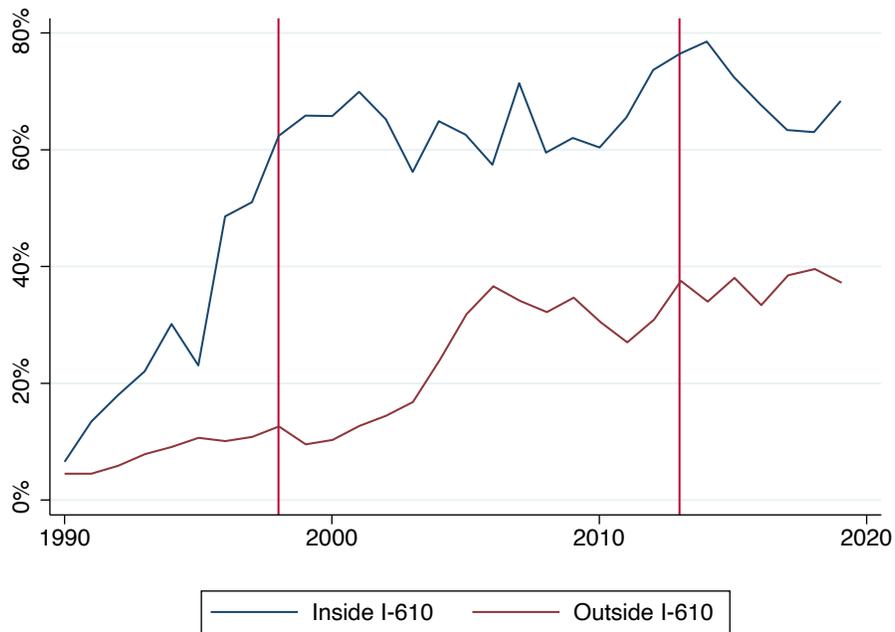
Figure 3. Units on Lots Less than 5,000 Square Feet by Year Built



Source: Harris Central Appraisal District, Property Data (database), last updated March 19, 2023, <https://hcad.org/pdata/pdata-property-downloads.html>.

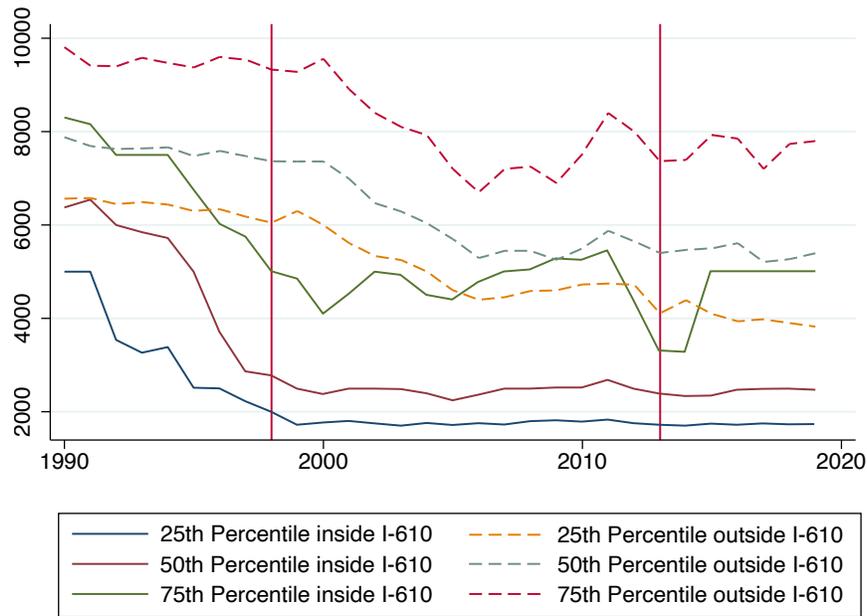
Note: Both small-lot single-family houses and attached single-family houses are generally referred to colloquially as townhouses in Houston.

Figure 4. Single-Family Houses and Townhouses on Lots Less than 5,000 Square Feet as a Percentage of All Single-Family Houses and Townhouses by Year Built



Source: Harris Central Appraisal District, Property Data (database), last updated March 19, 2023, <https://hcad.org/pdata/pdata-property-downloads.html>.

Figure 5. Lot Size Percentiles by Square Feet in the City of Houston by Year Built



Source: Harris Central Appraisal District, Property Data (database), last updated March 19, 2023, <https://hcad.org/pdata/pdata-property-downloads.html>.

under the national norm, with the country’s new lots typically being six times larger than the 1,400-square-foot lots allowed in Houston.

HOUSING SUPPLY AND AFFORDABILITY IN HOUSTON

Houston’s minimum lot size reductions and generally liberal land use regulations contribute to the city’s unusually high rate of infill construction among US cities:

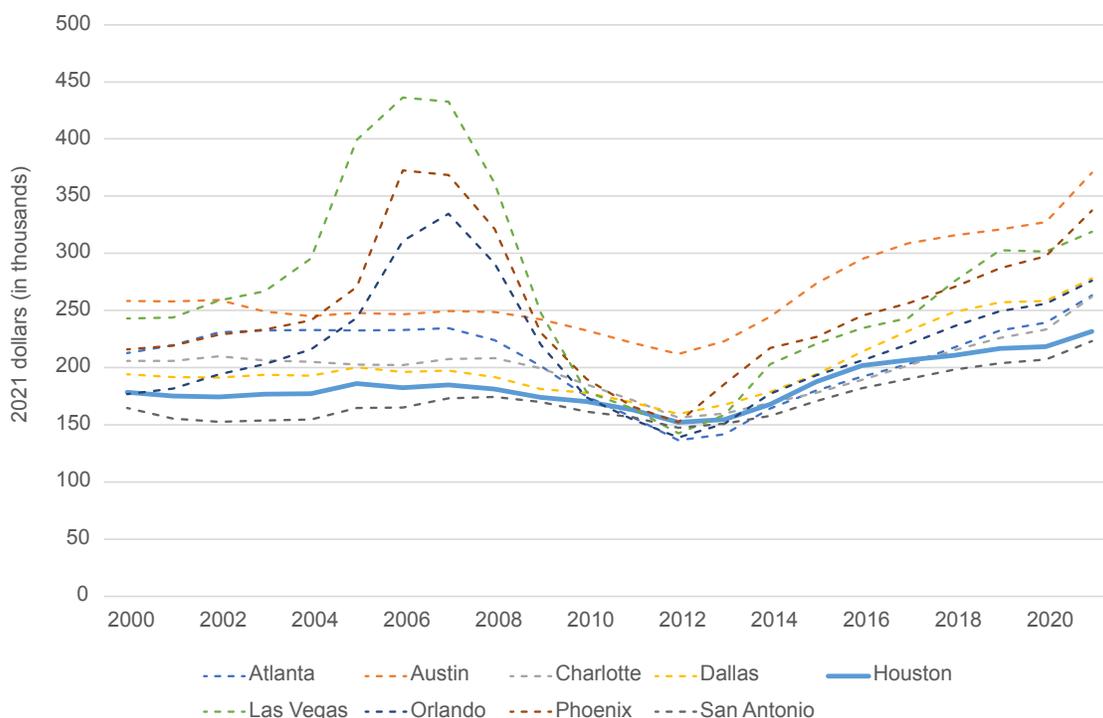
Housing production in the urban core of American cities has been a growing challenge due to restrictive land-use policies. Housing production inside Houston’s Loop 610, which accounts for only about 15% of the city’s total land area, surpasses the entire housing production of Atlanta, San Diego and San Francisco/Oakland, and almost exceeds that of Seattle. Redevelopment trends in Houston validate the argument that relaxed land-use regulations (i.e. lack of use-based zoning and reduced requirements for minimum lot size) can lead to the development of more housing units near major job centers, services and transportation choices.²⁶

Perhaps because Houston’s townhouses often take the form of detached single-family houses with narrow side setbacks, they have received relatively little attention in a policy climate focused on

reforming single-family zoning. Nevertheless, the Houston region has not been spared from recent house price spikes. Local housing-market analysis points out that increased demand for residential space during the pandemic contributed to the city’s highest-ever median sales price of nearly \$350,000 in 2021.²⁷ In turn, a growing number of households in Houston are struggling to purchase houses or find rental housing that fits within their budgets. Despite these challenges, Houston remains affordable relative to other growing regions. According to Zillow, the city’s median home value (lower than sales prices, which are skewed toward new construction) is \$258,055, while the national median is \$327,514.

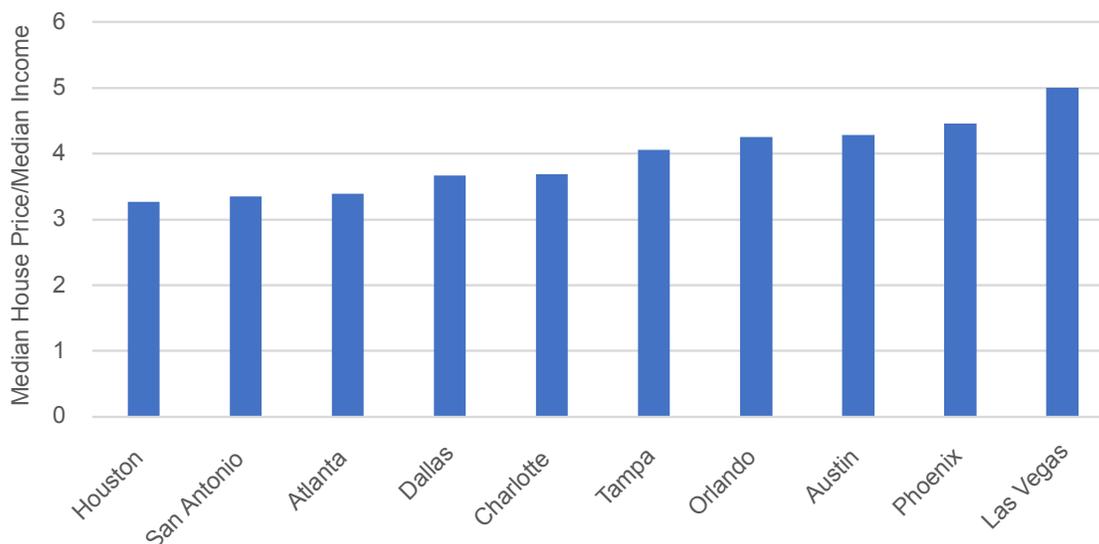
Comparing Houston to other fast-growing Sunbelt metropolitan areas again paints a favorable picture in terms of its relative affordability. Because the city of Houston makes up a disproportionately large share of its metropolitan area relative to other principal cities, I compare prices at the regional level. Houston has a lower median house price than all the other Sunbelt regions with more than two million residents, except San Antonio. In figure 6, I exclude regions with major geographic barriers to development, including Los Angeles, Miami, San Diego, and Tampa.

Figure 6. Median House Price Across Metropolitan Statistical Areas



Source: Zillow Research, Housing Data (database), “ZHVI All Homes Time Series (\$),” accessed March 24, 2023, <https://www.zillow.com/research/data/>.

Figure 7. Household Median Income as a Multiple of Median House Price of Metropolitan Statistical Areas



Source: Zillow Research, Housing Data (database), “ZHVI All Homes Time Series (\$),” accessed March 24, 2023, <https://www.zillow.com/research/data/>; and US Census Bureau, American Community Survey (database), accessed March 24, 2023, <https://www.census.gov/programs-surveys/acs>.

Adjusting for income, Houston is the most affordable of the regions with a median house price 3.3 times its median income. Median house price divided by median income for all the regions is shown in figure 7.

Of course, many factors beyond land use regulations and incomes affect housing construction and drive price differences across cities. One way to compare localities’ openness to construction is through housing supply elasticity, or the responsiveness of housing construction to price changes in a given area. An analysis of housing supply elasticity using rent price data shows that, between 2012 and 2018, only Austin and Las Vegas had more elastic housing supplies than Houston among the Sunbelt cities shown in figure 7.²⁸ The same analysis shows that Houston stands out for permitting new development at every level of density, from greenfield to developed neighborhoods.²⁹

New research indicates that Houston’s lot size reform in 1998 reduced the size of new-construction houses, as expected.³⁰ It also finds that a typical Houston household benefited from the reform by a windfall equivalent to \$18,000, with lower-income households benefiting more than higher-income households.³¹

CONCLUSION

Small-lot development is only one component of Houston’s relative permissiveness toward housing construction. One factor that sets Houston apart from other US cities is the extent to which it makes land-efficient single-family construction possible within existing neighborhoods, particularly single-family neighborhoods, while most cities prevent any increase in density with zoning rules in these neighborhoods. Houston’s overall liberal rules surrounding housing development have contributed to its affordability compared to peer cities and the country as a whole. Small-lot reform in Houston shows that new townhouses provide a less expensive housing option relative to detached housing, opening up opportunities for more people to live in existing neighborhoods. Houston’s experience points all state and local policymakers seeking opportunities to legalize more lower-cost housing construction toward a reform that produces small infill construction at scale.

ABOUT THE AUTHOR

Emily Hamilton is a research fellow at the Mercatus Center at George Mason University. Her research focuses on urban economics and land use policy. Hamilton has authored numerous academic articles and policy papers, and her writing has appeared in *USA Today*, *Christian Science Monitor*, *Economic Affairs*, and *Philadelphia Inquirer*. She also contributes to the blog *Market Urbanism*.

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