Room to Grow: Housing for a New Economy

Change is Inevitable
Room to Grow: Housing for a New Economy
Change is Inevitable

"I welcome change, as long as nothing is altered or different."

Quotesaday.com
Job Growth by CBSA
Ranking based on Annual Job Growth – TTM December 2019

<table>
<thead>
<tr>
<th>Rank</th>
<th>MSA</th>
<th>Total Employment</th>
<th>Annual Job Growth</th>
<th>Annual Job Growth %</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Dallas-Fort Worth-Arlington, TX</td>
<td>3,886,800</td>
<td>127,600</td>
<td>3.4%</td>
</tr>
<tr>
<td>2</td>
<td>New York-Newark-Jersey City, NY-NJ-PA</td>
<td>10,083,000</td>
<td>97,300</td>
<td>1.0%</td>
</tr>
<tr>
<td>3</td>
<td>Los Angeles-Long Beach-Anaheim, CA</td>
<td>6,344,200</td>
<td>93,200</td>
<td>1.5%</td>
</tr>
<tr>
<td>4</td>
<td>Houston-The Woodlands-Sugar Land, TX</td>
<td>3,225,700</td>
<td>88,000</td>
<td>2.8%</td>
</tr>
<tr>
<td>5</td>
<td>Phoenix-Mesa-Scottsdale, AZ</td>
<td>2,238,300</td>
<td>68,800</td>
<td>3.2%</td>
</tr>
<tr>
<td>6</td>
<td>Atlanta-Sandy Springs-Roswell, GA</td>
<td>2,902,000</td>
<td>66,700</td>
<td>2.4%</td>
</tr>
<tr>
<td>7</td>
<td>Seattle-Tacoma-Bellevue, WA</td>
<td>2,142,100</td>
<td>65,400</td>
<td>3.1%</td>
</tr>
<tr>
<td>8</td>
<td>Washington-Arlington-Alexandria, DC-VA-MD-WV</td>
<td>3,377,200</td>
<td>52,600</td>
<td>1.6%</td>
</tr>
<tr>
<td>9</td>
<td>San Francisco-Oakland-Hayward, CA</td>
<td>2,541,600</td>
<td>51,300</td>
<td>2.1%</td>
</tr>
<tr>
<td>10</td>
<td>Miami-Fort Lauderdale-West Palm Beach, FL</td>
<td>2,785,600</td>
<td>44,900</td>
<td>1.6%</td>
</tr>
<tr>
<td>11</td>
<td>Orlando-Kissimmee-Sanford, FL</td>
<td>1,372,800</td>
<td>43,300</td>
<td>3.3%</td>
</tr>
<tr>
<td>12</td>
<td>Austin-Round Rock, TX</td>
<td>1,119,800</td>
<td>37,800</td>
<td>3.5%</td>
</tr>
<tr>
<td>13</td>
<td>Chicago-Naperville-Elgin, IL-IN-WI</td>
<td>4,839,200</td>
<td>36,000</td>
<td>0.7%</td>
</tr>
<tr>
<td>14</td>
<td>Denver-Aurora-Lakewood, CO</td>
<td>1,551,100</td>
<td>35,100</td>
<td>2.3%</td>
</tr>
<tr>
<td>15</td>
<td>San Diego-Carlsbad, CA</td>
<td>1,540,700</td>
<td>34,800</td>
<td>2.3%</td>
</tr>
<tr>
<td>16</td>
<td>San Antonio-New Braunfels, TX</td>
<td>1,104,600</td>
<td>34,200</td>
<td>3.2%</td>
</tr>
<tr>
<td>17</td>
<td>Charlotte-Concord-Gastonia, NC-SC</td>
<td>1,255,800</td>
<td>33,600</td>
<td>2.7%</td>
</tr>
<tr>
<td>18</td>
<td>San Jose-Sunnyvale-Santa Clara, CA</td>
<td>1,176,800</td>
<td>32,900</td>
<td>2.9%</td>
</tr>
<tr>
<td>19</td>
<td>Tampa-St. Petersburg-Clearwater, FL</td>
<td>1,406,800</td>
<td>31,000</td>
<td>2.3%</td>
</tr>
<tr>
<td>20</td>
<td>Riverside-San Bernardino-Ontario, CA</td>
<td>1,570,400</td>
<td>30,900</td>
<td>2.0%</td>
</tr>
<tr>
<td>21</td>
<td>Baltimore-Columbia-Towson, MD</td>
<td>1,461,800</td>
<td>27,800</td>
<td>1.9%</td>
</tr>
<tr>
<td>22</td>
<td>Las Vegas-Henderson-Paradise, NV</td>
<td>1,048,500</td>
<td>25,200</td>
<td>2.5%</td>
</tr>
<tr>
<td>23</td>
<td>Cincinnati, OH-KY-IN</td>
<td>1,146,600</td>
<td>24,000</td>
<td>2.1%</td>
</tr>
<tr>
<td>24</td>
<td>Portland-Vancouver-Hillsboro, OR-WA</td>
<td>1,236,900</td>
<td>23,200</td>
<td>1.9%</td>
</tr>
<tr>
<td>25</td>
<td>Raleigh, NC</td>
<td>658,600</td>
<td>23,200</td>
<td>3.7%</td>
</tr>
</tbody>
</table>

Source: Metrostudy-MetroUSA
Where are people moving from?

564K Domestic In-migration
102K Net Domestic In-migration
202K International In-migration

Source: U.S. Census
U-Haul One Way Rental Rates – 26’ Truck

$3,790 United States

$758
Redfin Austin Migration Map

Percentage of Austin, TX Redfin users searching from...
- Austin, TX: 66.0%
- Elsewhere: 32.0%

Origin as % of Destination
Incomers
Out-of-state metros only
- Bay Area: 18.6%
- Los Angeles, CA: 10.3%
- New York, NY: 5.2%
- Seattle, WA: 5.1%
- Chicago, IL: 3.8%
- Washington, DC: 3.8%
- San Diego, CA: 2.7%
- Boston, MA: 1.7%
- Denver, CO: 1.7%
- Portland, OR: 1.5%

Source: Redfin user search data for Q3 2019

COPYRIGHT 2019
Texas is the Most Active Homebuilding State... by a long shot

- More than double California
- More than AZ, NC, and GA combined

Source: Metrostudy Housing Analysis
## Top Homebuilding Markets by Annual Starts

<table>
<thead>
<tr>
<th>Rank</th>
<th>Market</th>
<th>Annual Starts</th>
<th>Annual Change</th>
<th>% Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Dallas/Ft. Worth</td>
<td>34,718</td>
<td>1,117</td>
<td>3.3%</td>
</tr>
<tr>
<td>2</td>
<td>Houston</td>
<td>30,547</td>
<td>2,872</td>
<td>10.4%</td>
</tr>
<tr>
<td>3</td>
<td>Central Florida</td>
<td>26,632</td>
<td>1,674</td>
<td>6.7%</td>
</tr>
<tr>
<td>4</td>
<td>Phoenix/Tucson</td>
<td>25,877</td>
<td>2,755</td>
<td>11.9%</td>
</tr>
<tr>
<td>5</td>
<td>Atlanta</td>
<td>24,416</td>
<td>-35</td>
<td>-0.1%</td>
</tr>
<tr>
<td>6</td>
<td>Denver/Colorado Springs</td>
<td>19,287</td>
<td>-820</td>
<td>-4.1%</td>
</tr>
<tr>
<td>7</td>
<td>Austin</td>
<td>18,905</td>
<td>2,448</td>
<td>14.9%</td>
</tr>
<tr>
<td>8</td>
<td>Southern California</td>
<td>16,794</td>
<td>-3,596</td>
<td>-17.6%</td>
</tr>
<tr>
<td>9</td>
<td>Northern California</td>
<td>14,580</td>
<td>-2,742</td>
<td>-15.8%</td>
</tr>
<tr>
<td>10</td>
<td>San Antonio</td>
<td>13,748</td>
<td>2,626</td>
<td>23.6%</td>
</tr>
<tr>
<td>11</td>
<td>Raleigh/Durham</td>
<td>13,080</td>
<td>881</td>
<td>7.2%</td>
</tr>
<tr>
<td>12</td>
<td>Salt Lake City</td>
<td>12,860</td>
<td>-182</td>
<td>-1.4%</td>
</tr>
<tr>
<td>13</td>
<td>Tampa</td>
<td>12,754</td>
<td>2,131</td>
<td>20.1%</td>
</tr>
<tr>
<td>14</td>
<td>Charlotte</td>
<td>12,543</td>
<td>249</td>
<td>2.0%</td>
</tr>
<tr>
<td>15</td>
<td>Philadelphia Region</td>
<td>11,846</td>
<td>956</td>
<td>8.8%</td>
</tr>
<tr>
<td>16</td>
<td>Seattle</td>
<td>10,888</td>
<td>784</td>
<td>7.8%</td>
</tr>
<tr>
<td>17</td>
<td>Central California</td>
<td>10,843</td>
<td>130</td>
<td>1.2%</td>
</tr>
<tr>
<td>18</td>
<td>Suburban Maryland</td>
<td>10,710</td>
<td>421</td>
<td>4.1%</td>
</tr>
<tr>
<td>19</td>
<td>Las Vegas</td>
<td>10,635</td>
<td>-60</td>
<td>-0.6%</td>
</tr>
<tr>
<td>20</td>
<td>South Florida</td>
<td>9,150</td>
<td>1,188</td>
<td>14.9%</td>
</tr>
</tbody>
</table>

Source: Metrostudy Housing Analysis
Room to Grow: Housing for a New Economy
Evolution of Homebuilding

1950s

American Dream
Homebuilding
Levittown
Room to Grow: Housing for a New Economy
Evolution of Homebuilding

2019

American Dream  Homebuilding  MPCs
Room to Grow: Housing for a New Economy
Change is Inevitable

Types of Change

1. Organic (Adapt to Market Conditions)
2. Innovation (Technology)
3. Disruption (Outside Forces)
Change is Scary… But Necessary

Organic Change
North Texas Growth Projections

Source: North Texas 2050
## North Texas Growth Projections

<table>
<thead>
<tr>
<th></th>
<th>2000</th>
<th>2030</th>
<th>2050</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Population (millions)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Population</td>
<td>5.31</td>
<td>9.49</td>
<td>11.66</td>
</tr>
<tr>
<td>Total Employment</td>
<td>3.22</td>
<td>5.58</td>
<td>7.17</td>
</tr>
<tr>
<td>Total Households</td>
<td>1.94</td>
<td>3.48</td>
<td>4.38</td>
</tr>
</tbody>
</table>

*Source: North Texas 2050*
Why the need to pivot for affordability?

Source: Metrostudy
Affordability Equation

Density

Square Footage
NIMBY

Square Footage

Affordability Equation
Average Square Feet of New Homes Offered by Market

Source: Metrostudy Housing Analysis
New Home Floor Plans Under 1,800 SF by Share

Source: Metrostudy Housing Analysis
Smaller (40’ wide lot) does not mean inferior product
## Room to Grow: Housing for a New Economy

### Organic Change

<table>
<thead>
<tr>
<th>Product Description</th>
<th>Density (DU/Acre)</th>
<th>Home Avg. Sq.Ft.</th>
<th>Average Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>Apartments - 3-4 story Walk-up</td>
<td>40.0/acre</td>
<td>750sf</td>
<td>$491,400</td>
</tr>
<tr>
<td>Apartments - Podium</td>
<td>50.0/acre</td>
<td>850sf</td>
<td>$568,600</td>
</tr>
<tr>
<td>Stacked Flats - Podium</td>
<td>36.0/acre</td>
<td>838sf</td>
<td>$698,450</td>
</tr>
<tr>
<td>Stacked Flats - At Grade</td>
<td>24.0/acre</td>
<td>1,013sf</td>
<td>$830,725</td>
</tr>
<tr>
<td>Luxury Stacked Flats-Podium</td>
<td>24.0/acre</td>
<td>1,625sf</td>
<td>$1,451,825</td>
</tr>
<tr>
<td>Rowhome</td>
<td>20.0/acre</td>
<td>1,163sf</td>
<td>$947,400</td>
</tr>
<tr>
<td>Townhome w/ Rooftop Deck</td>
<td>16.0/acre</td>
<td>1,438sf</td>
<td>$1,145,150</td>
</tr>
<tr>
<td>Triplex w/ Carriage</td>
<td>14.0/acre</td>
<td>1,550sf</td>
<td>$1,241,633</td>
</tr>
<tr>
<td>Alley/ Cluster - Rooftop Deck</td>
<td>12.0/acre</td>
<td>1,900sf</td>
<td>$1,541,800</td>
</tr>
<tr>
<td>Alley w/ Granny Flat</td>
<td>9.0/acre</td>
<td>2,200sf</td>
<td>$1,766,833</td>
</tr>
<tr>
<td>SFD - 40'x90' Lots</td>
<td>7.3/acre</td>
<td>2,900sf</td>
<td>$2,370,033</td>
</tr>
<tr>
<td>SFD - 50'x90' Lots</td>
<td>5.8/acre</td>
<td>3,700sf</td>
<td>$3,087,800</td>
</tr>
<tr>
<td>SFD - 60' Wide Estate View Lots</td>
<td>4.4/acre</td>
<td>4,500sf</td>
<td>$3,976,433</td>
</tr>
</tbody>
</table>
Change is Scary… But Necessary

Innovation
Room to Grow: Housing for a New Economy

Innovation
Room to Grow: Housing for a New Economy

Innovation

Off-Site Construction

BMC
www.buildwithbmc.com/bmc/s/ready-frame

Entekra
https://www.entekra.com/videos

Ecocor
Ecocor.us

Blu Homes
BluHomes.com

FullStack Modular
FullStackmodular.com
Room to Grow: Housing for a New Economy

Innovation

Off-Site Construction

Source: Entekra
Room to Grow: Housing for a New Economy

Innovation

Off-Site Construction

Source: Entekra
Room to Grow: Housing for a New Economy

Innovation

Off-Site Construction

Source: Entekra
Room to Grow: Housing for a New Economy

Innovation

Off-Site Construction

Source: Entekra
Room to Grow: Housing for a New Economy

Innovation

3D Printing
Room to Grow: Housing for a New Economy

Innovation

3D Printing
Globally, venture-backed real estate tech (PropTech) companies raised $14 billion USD in 2019 Q1-Q2, a 309% increase from 2018 Q1-Q2. Despite the 13.7% decline in total companies funded (deal volume), average deal sizes increased by 50%. Reinvestments, or follow on investments, in early stage to mid-stage companies lead the majority of total companies funded with average check sizes increasing to $6.3 million (USD) per deal.
Fifth Wall Closes New $503 Million Fund
The Largest Real Estate Venture Capital Fund Raised to Date

British Land
CBRE
Cushman & Wakefield
D.R. Horton
Equity Residential
Gecina
GLP
Hines
Host Hotels & Resorts
Hudson Pacific Properties
Lennar
Lowe's Home Improvement
Macerich
Marriott International
MERLIN Properties
MetLife Investment Management
Mitsubishi Estate
News Corp
Prologis
PulteGroup
SEGRO
Starwood Capital
Related Companies
Toll Brothers
Change is Scary… But Necessary

Disruption
Room to Grow: Housing for a New Economy

Disruption

Opendoor

Redfin Now

Zillow Offers

Offerpad

Orchard

knock
Room to Grow: Housing for a New Economy

Disruption
Berkshire Hathaway Agrees To Acquire Clayton Homes

1. **Clayton Homes goes mainstream**
   Since 2003, Berkshire has owned [Clayton Homes](#), a homebuilder with national scope that has traditionally focused on manufactured homes. With the housing market still doing well, Clayton has been on an acquisition spree to broaden its scope and boost its exposure to traditional homebuilding. With the purchase of Oakwood Homes in Colorado and Harris Doyle in Birmingham, Clayton will see big increases in sales of homes built on-site to go with its market-leading share of the manufactured home industry.
Amazon makes splash with game-changing Realogy partnership

Amazon makes first investment in a homebuilder, backing start-up focused on prefabricated houses

Amazon's $7K, do-it-yourself tiny home goes viral, sells out instantly
Silicon Valley might get some relief from high housing prices — Google will build nearly 10,000 homes near its new campus

Google investing $1B to build 20,000 homes in Bay Area

Tech giant pledges 15,000 units on its own land

Facebook Pledges $1 Billion to Ease Housing Crisis Inflamed by Big Tech
Sidewalk Labs is designing a district in Toronto’s Eastern Waterfront to tackle the challenges of urban growth, working in partnership with the tri-government agency Waterfront Toronto and the local community. This joint effort, called Sidewalk Toronto, aims to make Toronto the global hub for urban innovation.

By combining people-centered urban design with cutting-edge technology, we can achieve new standards of sustainability, affordability, mobility, and economic opportunity.
Housing and real estate that is more efficient and thus far more affordable.

New construction methods and flexible building designs enable radical mixed-use, walkable neighborhoods that reduce the cost of housing and retail space.
FAILURE IS NOT FATAL, BUT FAILING TO CHANGE MIGHT BE.

JOHN WOODEN
Paige Shipp
Regional Director,
Dallas – Ft. Worth

Email: pshipp@metrostudy.com
LinkedIn: linkedin.com/in/paigeshipp
Twitter: @paigeshipp
Instagram: paige.shipp
Snapchat: paigeshipp