Amazon in the Washington Region: Context & Forecast of Housing Demand

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Amazon in the Washington Region: Context
Density by Metro Area: Jobs Per Land Square Mile

Sources: U.S. Bureau of Labor Statistics; The Stephen S. Fuller Institute at the Schar School, GMU
# Density: Arlington County vs. City of Seattle

<table>
<thead>
<tr>
<th></th>
<th>Arlington County</th>
<th>Seattle City</th>
<th>Arlington as a % of Seattle</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sq. Mi.</td>
<td>26</td>
<td>83</td>
<td>31%</td>
</tr>
<tr>
<td>Residents</td>
<td>234,965</td>
<td>724,745</td>
<td>32%</td>
</tr>
<tr>
<td>--- Per Sq. Mi.</td>
<td>9,037</td>
<td>8,732</td>
<td>103%</td>
</tr>
<tr>
<td>Private Office Space (MMs SF)</td>
<td>32</td>
<td>55</td>
<td>58%</td>
</tr>
<tr>
<td>--- Per Sq. Mi.</td>
<td>1.2</td>
<td>0.7</td>
<td>186%</td>
</tr>
</tbody>
</table>

Sources: U.S. Census; Cushman & Wakefield; The Stephen S. Fuller Institute at the Schar School, GMU
HQ2 Employment Schedule

Sources: Commonwealth of Virginia MOU; The Stephen S. Fuller Institute at the Schar School, GMU
Job Change in the Washington Region
2000 – 2018 (in thousands)

HQ2 Avg: +2,366 over 16 years
( = 7% of 2002-2017 net change)

Sources: U.S. Bureau of Labor Statistics (Not Seasonally Adjusted), The Stephen S. Fuller Institute at the Schar School, GMU
*First ten months
Job Change in Arlington County*
2000 – 2017 (in thousands)

HQ2 Avg: +2,366 over 16 years

Sources: U.S. Bureau of Labor Statistics (QCEW), The Stephen S. Fuller Institute at the Schar School, GMU
*Excludes military jobs
Amazon in the Washington Region: Housing Forecasts
Amazon-Related Household at Full Build-Out
Assumes 37,850 HQ2 jobs

<table>
<thead>
<tr>
<th></th>
<th>Household w/ an HQ2 Job</th>
<th>Households w/ a Job Supported by HQ2 Spending (1)</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arlington County, VA</td>
<td>6,097</td>
<td>766</td>
<td>6,862</td>
</tr>
<tr>
<td>Rest of Northern Virginia</td>
<td>19,219</td>
<td>14,104</td>
<td>33,323</td>
</tr>
<tr>
<td>Rest of Virginia</td>
<td>642</td>
<td>14,967</td>
<td>15,609</td>
</tr>
<tr>
<td>D.C.</td>
<td>4,909</td>
<td>469</td>
<td>5,377</td>
</tr>
<tr>
<td>Maryland</td>
<td>6,047</td>
<td>1,515</td>
<td>7,562</td>
</tr>
<tr>
<td>Elsewhere</td>
<td>363</td>
<td>508</td>
<td>871</td>
</tr>
<tr>
<td><strong>Total (2)</strong></td>
<td><strong>37,276</strong></td>
<td><strong>32,328</strong></td>
<td><strong>69,604</strong></td>
</tr>
</tbody>
</table>

Source: The Stephen S. Fuller Institute at the Schar School, GMU
(1) Includes payroll and operations expenditures
(2) A small share of the workers holding HQ2-related jobs are anticipated to cohabitate either with another HQ2-related worker or become part of an existing household. Therefore, the number of households is projected to be fewer than the number of jobs. Only the indirect and induced jobs located in the Commonwealth were analyzed.
Where HQ2 Workers Would Live: Distribution of HQ2 Households

- 0.2% - 0.6%
- 0.7% - 2.0%
- 2.1% - 7.0%
- 7.1% - 33.0%

Source: The Stephen S. Fuller Institute at the Schar School of Policy and Government, George Mason University

*inc. cities of Fairfax & Falls Church
**inc. cities of Manassas and Manassas Park
Amazon-Related Owners in Select Jurisdictions  
Assumes 37,850 HQ2 jobs, includes indirect & induced effects

<table>
<thead>
<tr>
<th></th>
<th>Owners at Full Build-Out</th>
<th>Closed Sales in 2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>Virginia</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Arlington County</td>
<td>2,071</td>
<td>3,030</td>
</tr>
<tr>
<td>Alexandria City</td>
<td>1,085</td>
<td>2,580</td>
</tr>
<tr>
<td>Fairfax County*</td>
<td>13,698</td>
<td>16,300</td>
</tr>
<tr>
<td>Prince William County**</td>
<td>4,013</td>
<td>8,330</td>
</tr>
<tr>
<td>Loudoun County</td>
<td>3,665</td>
<td>6,630</td>
</tr>
<tr>
<td>D.C.</td>
<td>2,410</td>
<td>8,900</td>
</tr>
<tr>
<td>Maryland</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Montgomery County</td>
<td>2,737</td>
<td>12,430</td>
</tr>
<tr>
<td>Prince George's County</td>
<td>1,886</td>
<td>10,230</td>
</tr>
</tbody>
</table>

Sources: RealEstate Business Intelligence, LLC; The Stephen S. Fuller Institute at the Schar School, GMU  
*Includes the cities of Fairfax and Falls Church  ** Includes the cities of Manassas and Manassas Park
# Amazon-Related Renters in Select Jurisdictions

Assumes 37,850 HQ2 jobs, includes indirect & induced effects

<table>
<thead>
<tr>
<th></th>
<th>Renters at Full Build-Out</th>
<th>Renters in 2016</th>
<th>Total % Increase from 2016</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Virginia</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Arlington County</td>
<td>4,792</td>
<td>57,133</td>
<td>8.4%</td>
</tr>
<tr>
<td>Alexandria City</td>
<td>1,528</td>
<td>41,808</td>
<td>3.7%</td>
</tr>
<tr>
<td>Fairfax County*</td>
<td>4,893</td>
<td>134,425</td>
<td>3.6%</td>
</tr>
<tr>
<td>Prince William County**</td>
<td>1,087</td>
<td>49,891</td>
<td>2.2%</td>
</tr>
<tr>
<td>Loudoun County</td>
<td>716</td>
<td>25,552</td>
<td>2.8%</td>
</tr>
<tr>
<td><strong>D.C.</strong></td>
<td>2,968</td>
<td>169,875</td>
<td>1.7%</td>
</tr>
<tr>
<td><strong>Maryland</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Montgomery County</td>
<td>625</td>
<td>132,098</td>
<td>0.5%</td>
</tr>
<tr>
<td>Prince George's County</td>
<td>396</td>
<td>121,333</td>
<td>0.3%</td>
</tr>
</tbody>
</table>

Sources: U.S. Census Bureau (2016 ACS Microdata); The Stephen S. Fuller Institute at the Schar School, GMU

*Includes the cities of Fairfax and Falls Church ** Includes the cities of Manassas and Manassas Park
Distribution of Households by Household Income
Washington Region

- Current Households
- HQ2-Related Households

Sources: U.S. Census Bureau (2014-2016 ACS Microdata); The Stephen S. Fuller Institute at the Schar School, GMU
NOTE: in 2016 $s
Average Household Income by Tenure
Washington Region (in thousands of 2016 $s)

- **Current Households**
  - Renter Households: $77.9
  - Owner Households: $153.7

- **HQ2-Related Households**
  - Owner Households: $226.6

Sources: U.S. Census Bureau (2016 ACS Microdata); The Stephen S. Fuller Institute at the Schar School, GMU
*Current owners who moved within the past year.
Amazon-Related Households by Unit Type
Washington Region

Source: The Stephen S. Fuller Institute at the Schar School, GMU
Amazon-Related Increase in Households by Unit Type from 2016 in the Washington Region

Sources: U.S. Census Bureau (2016 ACS Microdata); The Stephen S. Fuller Institute at the Schar School, GMU
% of the Washington Region’s Workers
Born in DC, VA, or MD by Industry

Retail Trade: 44.5%
State & Local Govt: 44.0%
Transp. & Warehousing: 40.9%
Accomm. & Food Svcs: 35.1%
Admin. & Support Svcs: 35.1%
Health Care & Social Svcs: 34.8%
Financial Activities: 34.3%
Information: 33.5%
Construction: 33.3%
Educational Svcs: 33.1%
Other Services: 30.2%
Federal Govt: 28.7%
Prof. & Business Svcs: 28.6%

All = 34.7%

Sources: U.S. Census Bureau (2014-2016 ACS Microdata); The Stephen S. Fuller Institute at the Schar School, GMU
Amazon in the Washington Region

- The Washington region is larger than Seattle:
  - The Amazon-related effects will be more diluted here compared to Seattle.
  - This effect will not directionally change the trends in existing conditions, including current challenges.

- The Amazon-related households will be both similar to and different than existing workers in important ways:
  - Amazon households will have higher average incomes thus
    - be more able to afford new construction and
    - generate relatively more tax revenues compared to existing residents.
  - The region will import many of these workers, as it does now.
Thank You

For monthly reports on the Washington region’s economic performance go to sfullerinstitute.gmu.edu
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