24th ANNUAL
DELTA ASSOCIATES’
Market Overview & Awards For Excellence

10.21.20

DELTA ASSOCIATES
TRANSWESTERN
Altus Group
DISRUPTIVE EPIDEMICS AND THE U.S. ECONOMY
U.S. Annual GDP Growth and Epidemic Deaths 1910 - 2020

*estimated
Source: Bureau of Economic Analysis, CDC, University of Groningen, Delta Associates; October 2020.
QUARTERLY GDP PERCENT CHANGE
United States

Note: Seasonally adjusted at annual rates; change in chained 2012 dollars.
Source: Bureau of Economic Analysis, Delta Associates; October 2020.

20-Year Average = 2.0%
Q2 2020 = -31.4%
INITIAL UNEMPLOYMENT CLAIMS
United States | Four-Week Moving Average in Millions

Note: Data are seasonally adjusted.
Source: Federal Reserve Bank of St. Louis, Delta Associates; October 2020.
PAYROLL JOB GROWTH
United States | Monthly in Thousands

Note: Data is seasonally adjusted.
PAYROLL JOB GROWTH
Selected Large Metro Areas | 12 Months Ending August 2020


NET CHANGE IN EMPLOYMENT (THOUSANDS)

UNEMPLOYMENT RATE
Selected Large Metro Areas | August 2019 vs. August 2020


National Rate

August 2019
August 2020

Basis Point Change

Phx  +170
Atl  +280
DFW  +280
Den  +370
Hou  +440
S Fla +390
SF Bay +550
Bos  +620
Chi  +820
NY   +790
LA   +910

PAYROLL JOB GROWTH
Washington Metro Area


20-Year Annual Average = 37,600/Year

3-Year Projected Avg = 12,000/Year

THOUSANDS OF NEW PAYROLL JOBS
(ANNUAL AVERAGE)

-160 -140 -120 -100 -80 -60 -40 -20 0 20 40 60 80 100 120 140 160


District  Sub. MD  No. Virginia

PAYROLL JOB GROWTH
Washington Metro Area | 12 Months Ending August 2020


JOB CHANGE

Federal Government
Wholesale Trade
Construction/Mining
Manufacturing
Information
Financial Activities
Other Services
Transportation/Utilities
State and Local Government
Retail Trade
Professional/Business Services
Education/Health
Leisure/Hospitality

-120,000 -100,000 -80,000 -60,000 -40,000 -20,000 0 20,000


Washington/Baltimore
COVID-19 RELATIVE ECONOMIC IMPACT BY SECTOR
Washington Metro Area

Note: Primary demand sources for Class A multifamily units, office, and for-sale housing highlighted in orange. Source: Delta Associates; October 2020.
COVID-19 RELATIVE ECONOMIC IMPACT BY SECTOR
Washington Metro Area

Note: Primary demand sources for multifamily units highlighted in blue.
Source: Delta Associates; October 2020.

Duration and Severity Chart:
- Leisure/Hospitality: High, Long
- Retail Trade: High, Long
- Construction/Mining: High, Medium
- Manufacturing: High, Medium
- Other Services: High, Medium
- Transportation/Utilities: High, Medium
- Education/Health Services: Medium, Long
- Wholesale Trade: Medium, Long
- Professional/Business Services: Medium, Long
- Information: Medium, Long
- Financial Activities: Medium, Long
- State/Local Govt.: Medium, Long
- Federal Govt.: Medium, Long

Washington/Baltimore
MARKET RESILIENCE INDEX
30 Largest Metropolitan Statistical Areas

Source: Delta Associates; October 2020.

Avg. = 50.0

Very High
High
Medium
Low

Austin
San Antonio
Boston
Houston
Pittsburgh
Baltimore
Dallas/Fort Worth
Minneapolis
San Diego
St. Louis
Denver
Seattle
Cincinnati
Orlando
Phoenix
New York
Chicago
Miami/Ft. Lauderdale
San Francisco
Charlotte
Atlanta
Philadelphia
Portland
Los Angeles
Tampa
Sacramento
Las Vegas
Detroit
Inland Empire
THE WASHINGTON METRO AREA APARTMENT MARKET
LARGEST APARTMENT MARKETS
Selected Metro Areas | 2018

Source: U.S. Census Bureau, Delta Associates; October 2020.
ANNUAL CLASS A APARTMENT ABSORPTION AND DELIVERIES
Washington Metro Area

Note: Shaded bars represent recession periods.
Source: Delta Associates; October 2020.

Expansion Period
Average = 9,054

Expansion Period
Average = 8,001
Source: Delta Associates; October 2020.

ABSORPTION PACE
Class A Projects in Initial Lease-Up | Washington Metro Area

Absorption Pace vs. Number of Projects in Active Lease Up

- Absorption Pace
- Number of Projects

<table>
<thead>
<tr>
<th>Date</th>
<th>Units per Project per Month</th>
<th>Number of Projects</th>
</tr>
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<tbody>
<tr>
<td>9/13</td>
<td>16</td>
<td>20</td>
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<td>9/14</td>
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<td>9/20</td>
<td>16</td>
<td>20</td>
</tr>
</tbody>
</table>

Source: Delta Associates; October 2020.
STABILIZED APARTMENT VACANCY RATES
Major Apartment Markets | Third Quarter 2020

National Vacancy Rate = 4.9%

VACANCY RATE (ALL CLASSES)

LA  Phi  NY  Wash  Phx  Balt  Atl  Chi  DFW  Hou

Source: Axiometrics, Delta Associates; October 2020.

Washington/Baltimore
ANNUAL EFFECTIVE RENT GROWTH
Class A Apartments | Washington Metro Area | 2007 - 2020

Source: Delta Associates; October 2020.

-8%
-6%
-4%
-2%
0%
2%
4%
6%
8%
10%


Long-Term Average Rent Growth = 3.5%

*12 months ending September 2020.
36-MONTH APARTMENT DEVELOPMENT PIPELINE*
Washington Metro Area | 2007 - 2020

**As of Third Quarter.
Projected Class A Quarterly Absorption = 2,229
36-MONTH APARTMENT DEVELOPMENT PIPELINE*
Top 10 Submarkets in Washington Metro Area | Third Quarter 2020

DEMAND AND SUPPLY PROJECTIONS
Washington Metro Area Class A Apartments | 36 Mo. Ending September 2023

Source: Delta Associates; October 2020.

DEMAND
- Net Absorption: 8,917/Year = 26,750

SUPPLY
- Planned and may deliver by 9/23: 2,681 units
- Under construction: 38,961 units
- Total = 41,642 units

Projected Stabilized Vacancy % at September 2023
- No VA: 3.9%
- Sub MD: 4.1%
- The District: 5.5%
- Metro-Wide: 4.4%

1 Probable supply after projected attrition.
2 Includes unleased units at projects in lease-up.
ANNUAL CLASS A APARTMENT EFFECTIVE RENT GROWTH
Washington Metro Area | 2007 - 2023

Source: Delta Associates; October 2020.

Long-Term Average = 3.5%

* Annual rent growth at Third Quarter 2020 is -7.0%.
THE BALTIMORE METRO AREA APARTMENT MARKET
CLASS A APARTMENT ABSORPTION
Baltimore Metro Area | 2011 - 2023


10-Year Average = 2,241
Annual Average ~ 1,808

MARKET-RATE UNITS


2,332
EFFECTIVE RENT AND VACANCY RATE
Class A Apartments | Baltimore Metro Area | 2002 - 2020

Source: Delta Associates; October 2020.

Average Effective Base Rent
Stabilized Vacancy

LONG-TERM RENT GROWTH
3.6% / YEAR

STABILIZED VACANCY RATE
0% 1% 2% 3% 4% 5% 6%

AVERAGE EFFECTIVE BASE RENT
$800 $900 $1,000 $1,100 $1,200 $1,300 $1,400 $1,500 $1,600 $1,700 $1,800

Source: Delta Associates; October 2020.
* As of Third Quarter.
36-MONTH APARTMENT DEVELOPMENT PIPELINE*
Baltimore Metro Area | 2007 - 2020

Source: Delta Associates; October 2020.

*Market-Rate Units Planned and Under Construction After Attrition.
**As of Third Quarter.
DEMAND AND SUPPLY PROJECTIONS
Baltimore Metro Area Class A Apartments | 36 Mo. Ending September 2023

Projected Stabilized Vacancy % at September 2023
- Metro-Wide: 4.1%
- So Sub: 3.2%
- No Sub: 3.1%
- Balt City: 6.0%

Demand:
- Net Absorption: 1,808/Year = 5,425

Supply:
- Planned and may deliver by 9/23: 385 units
- Under construction: 6,525 units
- Total = 6,910 units

1 Probable supply after projected attrition.
2 Includes unleased units at projects in lease-up.

Source: Delta Associates; October 2020.
ANNUAL CLASS A APARTMENT EFFECTIVE RENT GROWTH

Baltimore Metro Area | 2007 - 2023

Source: Delta Associates; October 2020.

* Annual rent growth at Third Quarter 2020 is -1.0%.

Long-Term Average = 3.6%
THE WASHINGTON/BALTIMORE AREA CAPITAL MARKETS
National Average = 4.2%
CLASS A HIGH-RISE APARTMENT CAP RATES
Washington Metro Area | 2009 - 2019

YEARS OF SUPPLY
Low-Rise Class A Submarkets | Washington Metro Area

Source: Delta Associates; October 2020.
YEARS OF SUPPLY
High-Rise Class A Submarkets | Washington Metro Area

2.1 – 4.0 Years

0 – 2.0 Years

Source: Delta Associates; October 2020.
THE WASHINGTON METRO AREA CONDOMINIUM MARKET
LARGEST CONDOMINIUM MARKETS
Selected Metro Areas | 2018

Source: U.S. Census Bureau, Delta Associates; October 2020.
PRIMARY MORTGAGE INTEREST RATES
National Market Survey | 2010 – 2020*

*As of October 2020
Source: Freddie Mac, Delta Associates; October 2020.
CONDOMINIUM SALES ACTIVITY
Washington Metro Area | 12 Mo. Ending Sept. 2020 Compared to Prior Year

Source: Delta Associates; October 2020.

- Up more than 50%
- Up 1% - 49%
- Down more than 1%
ANNUAL CONDOMINIUM RESALES
Washington Metro Area | 2004 - 2020

Source: MRIS, Delta Associates; October 2020.

*12 months ending September 2020.
ANNUAL CONDOMINIUM RESALES
Washington Metro Area | 2004 - 2020

Source: MRIS, Delta Associates; October 2020.

*12 months ending September 2020.
ANNUAL CONDOMINIUM RESALES
Washington Metro Area | 2004 - 2020

Source: MRIS, Delta Associates; October 2020.

*12 months ending September 2020.

Average Since 2013 = 15,438

UNIT S

22,000
20,000
18,000
16,000
14,000
12,000
10,000
8,000

EFFECTIVE NEW CONDOMINIUM SALES PRICE CHANGE
Washington Metro Area | 2007 - 2021

Source: Delta Associates; October 2020.

*12 months ending September 2020.

Washington/Baltimore
NEW CONDOMINIUM AVERAGE PRICE PER SF
Selected Downtown Areas in the U.S. | Third Quarter 2020

*Third Quarter 2020 except for New York City Submarkets which are as of Second Quarter 2020.
RESALE CONDOMINIUM SALES PRICE CHANGE
Washington Metro Area | 2007 - 2020


* 12 months ending August 2020.
Source: Delta Associates; October 2020.

Note: Number of units are for September of each year.
MONTHS OF NEW CONDOMINIUM SUPPLY
Washington Metro Area | 2007 - 2021

Source: Delta Associates; October 2020.

*as of Third Quarter 2020.
DEMAND AND SUPPLY PROJECTIONS
Washington Metro Area Condominiums | 36 Months Ending September 2023

Source: Delta Associates; October 2020.

**MARKET - RATE UNITS**

**DEMAND**
Net Sales: 1,750/Year = 5,250 units

**SUPPLY**
- Planned and May Begin Marketing by 9/23: 601 units
- Under Construction and/or Marketing: 2,734 units
Total = 3,335 units

1 Probable supply after projected attrition.
2 Includes unsold units at projects selling.
24th Annual Delta Associates’
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Transwestern
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