RESEARCH **3Q 2018**

Newmark Knight Frank

WASHINGTON METRO AREA ECONOMY AND MULTIHOUSING MARKET

REGIONAL ECONOMY STURDY THROUGH THIRD QUARTER 2018, SUPPORTING A STRONG MULTIHOUSING MARKET

The Washington metro area economy sustained its pace of growth through the third quarter while multihousing metrics remained strong. For the 12 months ending in August, the region added 64,900 jobs, up from the 2017 annual average of 50,900 jobs and higher than the metro area's 20-year average growth of 43,300 jobs per annum. Regional economic indicators remain sturdy, and job growth is likely to continue at or near the current pace of growth through 2019.

Apartment absorption remained strong during the third quarter of 2018, as the region absorbed 5,018 multihousing units. The region's year-to-date absorption total to 12,178 units. Third quarter absorption is higher than the previous year, when the region absorbed 4,177 units during the third quarter of 2017. The region's occupancy rate registered 95.9%, up just 60 basis points from one year ago in spite of robust construction activity. At the end of the third quarter, 28,058 units were under construction after 3,678 units delivered in the region during the third quarter. An additional 7,568 units are planned and likely to deliver within the next three years, bringing the region's development pipeline to 35,626 units.

Region-wide, rents increased 2.6% over the past twelve months, with growth during this period strongest in Suburban Maryland at 3.0% and weakest in the District of Columbia at 1.9%. Northern Virginia registered growth of 2.5%. The region's five-year average effective rent growth is 2.2%. These rent growth figures are remarkable considering nearly 70,000 new units have delivered in the region over the past five years. A few submarkets in Suburban Maryland saw 12-month rent growth exceeding 4.0%. These include: Frederick County at 6.7%, Suitland/District Heights/Capitol Heights at 6.0%, and Laurel/Beltsville at 4.9%.

The Washington area multihousing market registered $7.1 billion in annual sales volume for the 12 months ending September 2018, an increase of over $500 million from the same period a year prior. After declining in 2017, sales increased significantly beginning in first-quarter 2018, helping year-to-date totals grow.

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ECONOMY

Payroll Employment: 3.33 million at August 2018

Historical Job Change: 64,900 jobs added in the 12 months ending August 2018

Projected Job Growth: NKF forecasts an average increase of 39,500 jobs per annum from 2018 through 2022.

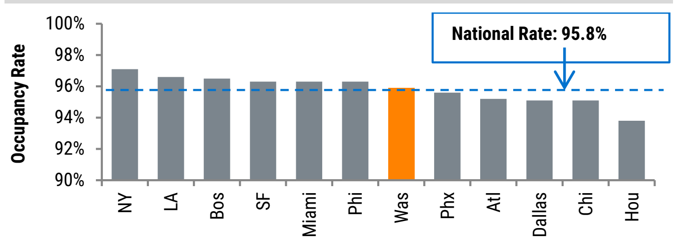
Unemployment Rate: 3.5% in August 2018, down 30 basis points from August 2017.

Average Household Income: $129,503 in 2018

Source: Dr. Stephen Fuller, U.S. Bureau of Labor Statistics, Esri, NKF Research; October 2018

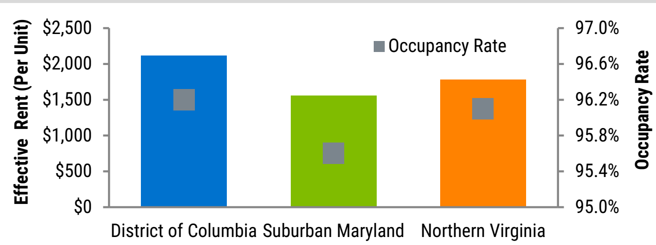
MARKET ANALYSIS

Occupancy Rate in Major Metros – 3Q 2018



Source: Axiometrics, NKF Research; October 2018

Effective Rent and Occupancy Rate – 3Q 2018



Source: Axiometrics, NKF Research; October 2018

3Q18 MULTIHOUSING MARKET SUMMARY

	District of Columbia	Suburban Maryland	Northern Virginia	Metro Region
Total Inventory (Units)	68,268	164,460	182,629	415,537
Occupancy Rate	96.2%	95.6%	96.1%	95.9%
3Q18 Net Absorption (Units)	2,199	700	2,119	5,018
12-Mo. Effective Rent Change	1.9%	3.0%	2.5%	2.6%
Pipeline (Units)	14,966	7,095	11,192	35,626
3Q18 Deliveries (Units)	1,422	665	1,591	3,678

Source: Axiometrics, NKF Research; October 2018
For definitions of these terms, see glossary on Page 3

3Q 2018 **WASHINGTON METRO ECONOMY AND MULTIHOUSING MARKET**

A CLOSER LOOK AT EMERGING SUBMARKETS

Two emerging submarkets in the District of Columbia have the most multihousing units in the pipeline. Navy Yard/Capitol Hill/Southwest and Northeast DC/NoMa/H Street have 6,261 units and 4,983 units in the pipeline, respectively. Both submarkets show impressive rent growth even with thousands of units delivering in the past 12 months.

Navy Yard/Capitol Hill/Southwest has seen 3,397 units deliver since the beginning of 2017 and the strongest 5-year average effective rent growth in the District of Columbia at 4.1%. A 334-unit apartment building called Agora at the Collective II delivered its final 112 units in the third quarter bringing the year-to-date deliveries to 669 units. Another contributing factor to the strong rent growth and continuing multihousing construction is the addition of new office and retail developments. The Wharf is continuing its phased opening of new restaurants like Officina and Potomac Distilling while Navy Yard had the opening of the submarket's first 35,000-square-foot Whole Foods.

Northeast DC/NoMa/H Street has seen 1,941 units deliver since the beginning of 2017 and has had a 2.9% increase in effective rents over the last 12 months. Three new developments delivered units in the third quarter including 100K, Coda on H and The Belgard for a total of 444 units. Northeast DC/NoMa/H Street has seen almost 30% of its existing inventory come online in the past 2 years. The NoMa and Union Market area has grown rapidly over the past several years with a plethora new office and multihousing supply.

THE AMENITIES WAR RAGES ON WITH NEW FOCUS ON SERVICES AND SOCIALIZATION

Developers, owners and managers are constantly trying to differentiate their properties to make them more marketable and decrease turnover. Physical amenities were the go-to for a long time in the industry. Rooftop pools, gym facilities, club rooms and onsite storage are just some examples of physical amenities added to entice renters. Recently there has been a swing towards less tangible amenities like concierge services, phone apps, and in-house workout classes.

On-site fitness centers are now being revamped with state-of-the-art equipment such as Peloton bikes and the addition of rooms for group-based activities like yoga, Pilates, or barre classes. Another new gym amenity that some luxury apartments are installing is a virtual personal trainer that offers on-demand fitness workouts with just the touch of a button. Another trend in multihousing amenities is centered around pets. Developers and owners are now installing pet spas, dog parks and hosting "yappy hours" where residents and their pets can mingle and get to know one another. The concierge business is not just limited to humans either. Apartment communities are now starting to offer pet concierge services that provide grooming, pet sitting, dog walking, and even training.

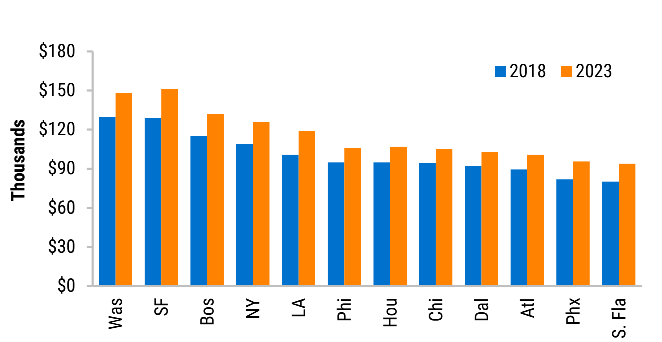
Technology has become a main focus of the multihousing sector. Management companies can now use apps to help them manage renters' needs, and owners and developers are now offering "smart apartments". There are a number of companies that can help manage renters' needs and provide services usually only seen in the hotel industry. Valet Living offers apartment renters various services at the touch of a button. The service provides dog walking, apartment cleaning, and even partners with local retailers to provide discounts. Doorbell allows renters to book amenities, curates building events based on renters interests, and uses analytics to help management companies attract new renters and optimize retention of existing residents. This increasing use of technology is expected to continue as the rental housing market in the Washington Metro Area remains one of the strongest in the country.

WASHINGTON AREA ECONOMIC OUTLOOK

The region added 64,900 jobs in the 12 months ending August 2018, as the Washington Leading Index continued its positive trajectory through third-quarter 2018, suggesting that the regional economy still has room to run. Washington will likely continue to add jobs at a similar rate of growth over the next year, as the economic cycle enters its mature phase. In consultation with Dr. Stephen Fuller of George Mason University, Newmark Knight Frank forecasts job growth of 39,500 jobs per annum over the five-year period from 2018 to 2022, close to the region's 20-year historic average of 43,300 jobs per annum.

AVERAGE HOUSEHOLD INCOME

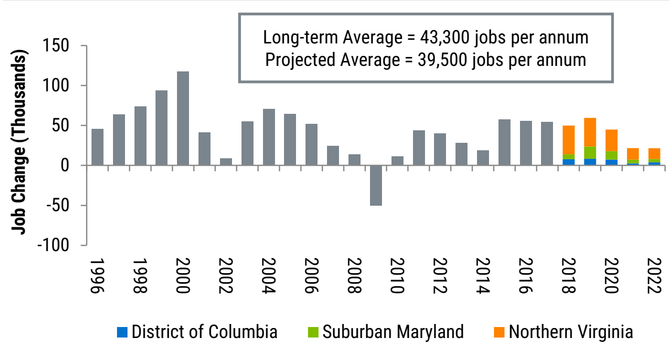
Largest U.S. Metro Areas | 2018 and Projections for 2023



Source: Esri, NKF Research; October 2018

PAYROLL JOB GROWTH FORECAST

Washington Metro Area



Source: U.S. Bureau of Labor Statistics, Stephen S. Fuller Institute, NKF Research; October 2018

MARKET POSTS STRONG OCCUPANCY, STEADY RENT GROWTH

Absorption remained strong during the third quarter of 2018, as the region absorbed 5,018 multihousing units. The region's year-to-date absorption total to 12,178 units. Third quarter absorption is higher than the previous year, when the region absorbed 4,177 units during the third quarter of 2017. Absorption was strongest in the District of Columbia with 2,199 units absorbed during the quarter. Absorption was also robust in Northern Virginia with 2,119 units absorbed, followed by Suburban Maryland with absorption of 700 units. Occupancy was highest in the District of Columbia at 96.2%, followed closely by Northern Virginia at 96.1% and Suburban Maryland at 95.6%.

The region-wide occupancy rate registered 95.9%, up just 60 basis points from one year ago in spite of robust construction activity. At the end of the third quarter, 28,058 units were under construction after 3,678 units delivered in the region during the third quarter. An additional 7,568 units are planned and likely to deliver within the next three years, bringing the region's development pipeline to 35,626 units. The District of Columbia has the largest pipeline at 14,966 units, followed closely by Northern Virginia at 13,565 units. Suburban Maryland's pipeline is more constrained after a period of unprecedented deliveries, particularly in Montgomery County. Its pipeline stands at 7,095 units.

Region-wide, rents increased 2.6% over the past twelve months, with growth during this period strongest in Suburban Maryland at 3.0% and weakest in the District of Columbia at 1.9%. Northern Virginia registered growth of 2.5%. The region's five-year average effective rent growth is 2.2%. These rent growth figures are remarkable considering nearly 70,000 new units have delivered in the region over the past five years. A few submarkets in Suburban Maryland saw 12-month rent growth exceeding 4.0%. These include: Frederick County at 6.7%, Suitland/District Heights/Capitol Heights at 6.0%, and Laurel/Beltsville at 4.9%.

GLOSSARY

Absorption: Net change in occupied units over a specific period.

Effective Rent: The price at which a unit leases after factoring in all concessions and discounts, calculated over the lease period.

Inventory: Professionally managed, investment-grade apartment buildings with 40 or more units.

Occupancy Rate: The number of physically occupied units, expressed as a percentage of total inventory.

Pipeline: Units under construction, plus those planned and likely to deliver within the next 36 months.

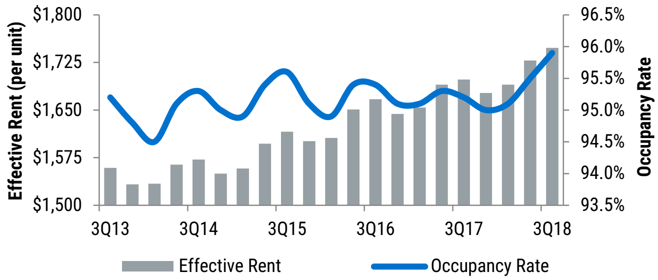
Note: *Submarkets were redistricted as of third quarter 2018. As a result, comparison to historical versions of this report is not possible. Please see contact info on page 11 should you need historical data.*

CURRENT CONDITIONS

- The region absorbed 5,018 units during the third quarter, bringing the year-to-date absorption total to 12,178 units.
- The region's occupancy increased 60 basis points over the past year to 95.9%.
- Average effective rents have risen 2.6% over the past 12 months, and have averaged a 2.2% annual increase over the past five years.

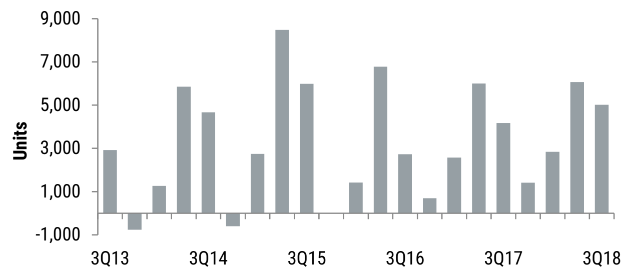
MARKET ANALYSIS

Effective Rent and Occupancy Rate



Source: Axiometrics, NKF Research; October 2018

Net Absorption



Source: Axiometrics, NKF Research; October 2018

MARKET SUMMARY

	Current Quarter	Year Ago Period	36-Month Forecast
Total Inventory (Units)	415,357	402,222	↑
Occupancy Rate	95.9%	95.3%	↓
Quarterly Net Absorption (Units)	5,018	4,177	↓
12-Month Effective Rent Change	2.6%	1.0%	↓
Quarterly Deliveries (Units)	3,678	4,855	↓

Source: Axiometrics, NKF Research; October 2018

3Q 2018 **WASHINGTON METRO MULTIHOUSING MARKET**

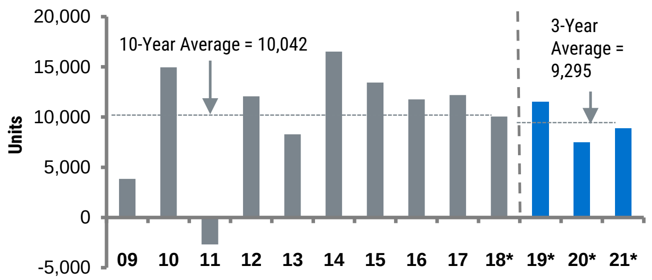
MULTIHOUSING OUTLOOK

Strong growth in high-paying jobs—particularly in the Professional and Business Services (PBS) sector—is projected to spearhead Class A multihousing demand over the next five years, as a large pipeline of product is brought to market. The region is projected to add 39,500 jobs per annum through 2022, with a significant portion of these jobs in Professional and Business Services (PBS). This sector added 23,200 jobs in the 12 months ending August 2018, or 35.7% of the total jobs added. In the 5-year period from 2018-2022 we project that PBS sector jobs will make up 61.7% of total jobs added. This will further support sturdy demand for Class A multihousing product.

However, the region still faces a significant pipeline of new product. Throughout the metro area, 28,058 multihousing units are under construction, with an additional 7,568 units planned and likely to deliver within the next three years. As the region becomes fully supplied, and multihousing development becomes more difficult to pencil, we expect the pipeline to taper, but not in time to avoid modest oversupply of product. NKF's supply and demand forecast projects demand of 27,884 units from the fourth quarter of 2018 through the third quarter of 2021, or 9,295 units per annum. This is a more sustainable level of absorption than the three year period from 2015 – 2017, which registered 14,855 units of absorption per annum. Expect regional occupancy to tick down to 94.5% by September 2021. As a result of the modest decline in occupancy between now and then, effective rent growth is expected to average 1.4% over this three-year period, slightly below its long-term average growth rate of 2.2%.

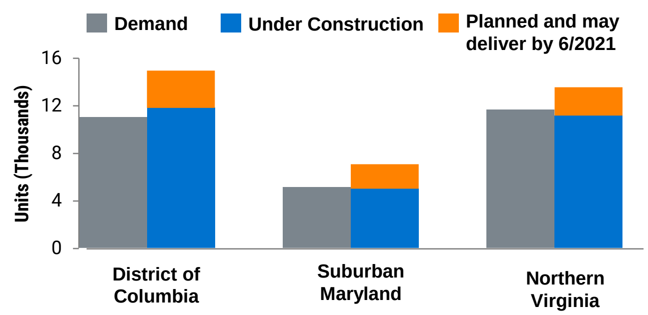
MARKET OUTLOOK

Absorption Projection



*12 months ending in the second quarter
Source: Axiometrics, NKF Research; October 2018

Multihousing Demand and Delivery Projections: 4Q18-3Q21



Source: Axiometrics, NKF Research; October 2018

MARKET STATISTICS: OCCUPANCY AND ABSORPTION

	Total Inventory (Units)	Overall Occupancy Rate	2015 Absorption (Units)	2016 Absorption (Units)	2017 Absorption (Units)	3Q 2018 Absorption (Units)	YTD 2018 Absorption (Units)
Washington Metro Area	**415,357**	**95.9%**	**13,736**	**11,437**	**12,341**	**5,018**	**12,178**
District of Columbia	68,268	96.2%	3,985	2,646	5,113	2,199	4,311
Suburban Maryland	164,460	95.6%	3,683	3,917	3,560	700	1,462
Northern Virginia	182,629	96.1%	6,068	4,874	3,668	2,119	6,405

MARKET STATISTICS: EFFECTIVE RENT AND DELIVERIES

	Total Inventory (Units)	Effective Rent (Per Unit)	Effective Rent (Per SF)	1-Year Effective Rent Change	5-Year Average Effective Rent Change	2017 Deliveries (Units)	YTD 2018 Deliveries (Units)	Under Construction (Units)	Pipeline* (Units)
Washington Metro Area	**415,357**	**$1,748**	**$2.00**	**2.6%**	**2.2%**	**13,618**	**9,605**	**28,058**	**35,626**
District of Columbia	68,268	$2,113	$2.79	1.9%	1.7%	5,691	2,857	11,827	14,966
Suburban Maryland	164,460	$1,557	$1.72	3.0%	2.5%	4,061	1,441	5,039	7,095
Northern Virginia	182,629	$1,785	$1.96	2.5%	2.1%	3,866	5,307	11,192	13,565

*Units under construction plus those planned and likely to deliver within the next 36 months
Note: Column totals may not be exact due to rounding. For definitions of these terms, see glossary on Page 3
Source: Axiometrics, NKF Research; October 2018

DISTRICT RENTS AND OCCUPANCY UP

The District of Columbia experienced strong mulithousing fundamentals during the third quarter of 2018. Effective rents averaged $2,113 per unit, or $2.79 per square foot. This represents a 1.9% increase from one year ago. The District of Columbia's overall occupancy rate rose 80 basis points from the second quarter to 96.2%. The District absorbed 2,199 units during the third quarter of 2018, down slightly from 2,612 units absorbed during the third quarter of 2017.

Rent growth over the past year of 1.9% is close to the five-year average annual growth rate of 1.7%. 12-month rent growth was strongest in the submarkets with significant recent deliveries. Navy Yard/Capitol Hill/Southwest has delivered 669 units so far in 2018 and registered effective rent growth of 3.8% over the past year. Northeast DC/NoMa/H Street has delivered 615 units in 2018 through the third-quarter and has seen effective rent growth of 2.9% over the past 12 months.

CONSTRUCTION ACTIVITY

While multihousing construction activity across the District of Columbia remains elevated, deliveries slowed in the third quarter of 2018 with 1,422 units delivered—a decrease of 35.8% from the previous year. Approximately 31.2% of third quarter deliveries were in the Northeast DC submarket, which saw 444 units among three projects come online this quarter. Barry Place Partners' *Trellis House* represented the largest delivery in the District during the quarter with a total of 319 units delivered. Wood Partners' *The Belgard* represented the second largest delivery of the quarter in the District with a total of 259 units delivered.

With an additional 11,827 units under construction, development activity in the District remains robust. Navy Yard/Capitol Hill/Southwest and Northeast DC/NoMa/H Street, in particular, are undergoing rapid growth with 5,877 and 3,402 units under construction, respectively, as of the third quarter. Throughout the District, an additional 3,139 units are planned and likely to deliver within the next three years, yielding a pipeline of 14,966 units.

DISTRICT OF COLUMBIA SUBMARKET STATISTICS – ALL CLASSES

	Total Inventory (Units)	Overall Occupancy Rate	Effective Rent (Per Unit)	Effective Rent (Per SF)	1-Year Effective Rent Change	5-Year Average Effective Rent Change	YTD 2018 Deliveries (Units)	Under Construction (Units)	Pipeline* (Units)
District of Columbia	**68,268**	**96.2%**	**$2,113**	**$2.79**	**1.9%**	**1.7%**	**2,857**	**11,827**	**14,966**
Central DC/West End/Shaw/Mt. Vernon Triangle	24,319	96.3%	$2,455	$3.35	2.2%	0.9%	1,248	1,546	1,737
Navy Yard/Capitol Hill/Southwest	5,946	96.2%	$2,361	$2.96	3.8%	4.1%	669	5,877	6,261
North Central DC/Columbia Heights/Petworth	6,669	97.0%	$1,788	$2.51	0.2%	2.1%	176	513	664
Northeast DC/NoMa/H Street	8,356	95.5%	$2,215	$2.75	2.9%	0.2%	615	3,402	4,983
Northwest DC/Georgetown/Friendship Heights	13,143	95.2%	$2,164	$2.84	0.1%	1.3%	149	226	934
Southeast DC	9,835	97.2%	$1,185	$1.47	2.9%	3.5%	-	263	389

*Units under construction plus those planned and likely to deliver within the next 36 months
Note: Column totals may not be exact due to rounding. For definitions of these terms, see glossary on Page 3
Source: Axiometrics, NKF Research; October 2018

3Q 2018 **SUBURBAN MARYLAND MULTIHOUSING MARKET**

Newmark Knight Frank
George Mason University Center for Real Estate Entrepreneurship

SUBURBAN MARYLAND SEES DECREASED ABSORPTION, ROBUST RENT GROWTH

The occupancy rate in Suburban Maryland is up slightly from one year ago, measuring 95.6% in the third quarter of 2018. Absorption decreased slightly during the third quarter of 2018 with 700 units absorbed compared with 1,130 units absorbed in the third quarter of 2017. Average effective rents registered $1,557 per unit or $1.72 per square foot during the third quarter. This represents a 3.0% increase over the past year and a five-year average growth rate of 2.5%.

CONSTRUCTION ACTIVITY

A total of 665 units delivered in the Suburban Maryland market during the third quarter of 2018. The largest project to deliver in Suburban Maryland in the third quarter was Fore Property Company's *The Edition*, located at 3401 East-West Highway in the Hyattsville/Riverdale submarket. The project delivered 351 units. Suburban Maryland's construction pipeline is robust—5,039 units are currently under construction with an additional 2,056 units planned and likely to deliver over the next three years, bringing the pipeline total to 7,095 units. Bethesda/Chevy Chase and Downtown Silver Spring had the most construction activity as of the third quarter, with 1,622 and 753 units under construction, respectively.

SUBURBAN MARYLAND SUBMARKET STATISTICS – ALL CLASSES

	Total Inventory (Units)	Overall Occupancy Rate	Effective Rent (Per Unit)	Effective Rent (Per SF)	1-Year Effective Rent Change	5-Year Average Effective Rent Change	YTD 2018 Deliveries (Units)	Under Construction (Units)	Pipeline* (Units)
Suburban Maryland	**164,460**	**95.6%**	**$1,557**	**$1.72**	**3.0%**	**2.5%**	**1,441**	**5,039**	**7,095**
Bethesda/ Chevy Chase	8,469	95.1%	$2,198	$2.29	3.0%	1.1%	132	1,622	2,144
College Park/ Greenbelt	7,777	94.3%	$1,564	$1.66	3.2%	2.7%	-	513	930
Downtown Silver Spring	10,818	95.6%	$1,802	$2.04	1.0%	1.0%	-	753	842
East Silver Spring/Takoma Park/Adelphi	12,510	96.7%	$1,363	$1.71	1.7%	2.0%	-	-	-
Frederick	6,559	95.1%	$1,377	$1.43	6.7%	4.5%	54	-	204
Gaithersburg	11,034	95.7%	$1,564	$1.65	3.1%	2.0%	201	365	365
Germantown	6,516	95.5%	$1,514	$1.57	2.9%	2.4%	-	-	-
Hyattsville/Riverdale	12,897	97.1%	$1,367	$1.68	3.2%	3.4%	223	582	1,007
Landover/Bowie	12,923	95.4%	$1,513	$1.66	2.0%	3.4%	-	-	-
Laurel/Beltsville	11,043	95.5%	$1,467	$1.63	4.9%	3.1%	-	-	-
Northeast Montgomery County	6,779	95.6%	$1,513	$1.61	2.3%	1.6%	-	-	-
Rockville/North Bethesda	16,436	95.4%	$1,880	$1.92	0.6%	0.5%	642	633	833
South Prince George's County/St. Charles	17,370	95.5%	$1,361	$1.58	3.6%	2.8%	-	187	387
Suitland/District Heights/Capitol Heights	14,749	95.5%	$1,398	$1.57	6.0%	4.4%	-	384	384
Wheaton/Aspen Hill	8,580	95.7%	$1,601	$1.74	2.0%	2.4%	189	-	-

*Units under construction plus those planned and likely to deliver within the next 36 months
Note: Column totals may not be exact due to rounding. For definitions of these terms, see glossary on Page 3
Source: Axiometrics, NKF Research; October 2018

NORTHERN VIRGINIA ABSORPTION, OCCUPANCY RISE

Northern Virginia posted an occupancy rate of 96.1% during the third quarter. This represents an increase of 50 basis points from 12 months prior. Continuing the trend of steady rent growth in suburban markets seen over the past several years, weighted average effective rents in the Northern Virginia multihousing market grew 2.5% over the 12 months ending September 2018 to $1,785 per unit, or $1.96/SF. Recent rent growth is up from the five-year average annual growth rate of 2.1%. Northern Virginia came in just behind the District of Columbia in absorption with 2,119 units absorbed during the third quarter of 2018, a significant uptick from the 435 units absorbed during the third quarter of 2017.

CONSTRUCTION ACTIVITY

Approximately 1,591 units delivered in Northern Virginia during the third quarter of 2018. The largest delivery of the third quarter was Greystar's Exo Reston located in the Reston/Herndon submarket. The project delivered 457 units during the third quarter of 2018. Another notable delivery was LCOR Residential's Kingston at McLean Crossing, which delivered the final 240 out of a total of 319 units.

A total of 11,192 units remain under construction in Northern Virginia with an additional 2,373 units planned and likely to deliver over the next three years, bringing the pipeline to 13,565 units. The North Arlington submarket has the largest pipeline with 2,764 units under construction and planned.

NORTHERN VIRGINIA SUBMARKET STATISTICS – ALL CLASSES

	Total Inventory (Units)	Overall Occupancy Rate	Effective Rent (Per Unit)	Effective Rent (Per SF)	1-Year Effective Rent Change	5-Year Average Effective Rent Change	YTD 2018 Deliveries (Units)	Under Construction (Units)	Pipeline* (Units)
Northern Virginia	**182,629**	**96.1%**	**$1,785**	**$1.96**	**2.5%**	**2.1%**	**5,307**	**11,192**	**13,565**
Central Alexandria	11,706	95.6%	$1,546	$1.79	1.6%	1.4%	-	302	302
Columbia Pike	11,196	96.3%	$1,782	$2.08	1.7%	1.3%	-	766	766
Crystal City/Pentagon City	11,331	96.2%	$2,279	$2.47	-0.5%	2.0%	-	1,155	1,155
East Alexandria	12,499	95.9%	$1,909	$2.26	0.6%	2.2%	439	1,639	1,952
Fredericksburg/Stafford	8,383	96.3%	$1,292	$1.27	3.6%	3.6%	711	978	1,098
Loudoun County	9,943	96.0%	$1,656	$1.68	3.1%	2.5%	168	318	350
Manassas/Far Southwest Suburbs	11,100	96.6%	$1,412	$1.48	3.5%	2.6%	255	336	336
North Arlington	19,289	96.6%	$2,341	$2.70	4.9%	1.8%	664	2,370	2,764
Reston/Herndon	12,878	95.8%	$1,825	$1.82	2.6%	3.4%	1,576	717	1,062
Seven Corners/Baileys	6,015	96.4%	$1,639	$1.72	4.1%	0.4%	-	0	-
South Fairfax County	14,011	95.6%	$1,650	$1.84	1.3%	1.6%	-	-	200
Tysons Corner/Falls Church/Merrified	19,511	95.8%	$1,934	$2.09	2.5%	2.0%	1,159	1,394	2,162
West Alexandria	8,804	95.4%	$1,627	$1.86	3.4%	1.1%	-	0	-
West Fairfax County	12,533	96.4%	$1,768	$1.88	3.4%	2.1%	-	1,067	1,269
Woodbridge/Dale City	13,430	96.0%	$1,442	$1.59	1.5%	3.1%	335	150	150

*Units under construction plus those planned and likely to deliver within the next 36 months
Note: Column totals may not be exact due to rounding. For definitions of these terms, see glossary on Page 3
Source: Axiometrics, NKF Research; October 2018

3Q 2018 **WASHINGTON METRO MULTIHOUSING CAPITAL MARKETS**

MULTIHOUSING SALES VOLUME UP FROM PREVIOUS YEAR

The Washington area multihousing market registered $7.1 billion in annual sales volume for the 12 months ending September 2018, an increase of over $500 million from the same period a year prior. Four properties that traded for over $130 million helped bolster the third-quarter 2018 transaction totals: Harbor Group and Image Capital acquired Dulles Greene, a 806-unit property, for $93.0 million in the largest deal of the quarter. Over the 12 months preceding the third quarter of 2018, the Washington metropolitan area recorded an average sale price of $213,762 per unit—an increase of 6.1% over the trailing twelve-month total recorded one year ago. The average cap rate measured 5.2% over the past twelve months, the lowest cap rate recorded in the last five years. Northern Virginia led the region with $837.5 million in third-quarter sales volume, or 54.2% of the region's total. Suburban Maryland ranked second in regional sales volume at third-quarter 2018, posting $454.2 million in sales, or 29.41% of the region's third-quarter 2018 sales total.

FOREIGN INVESTMENT DECREASED

For the twelve months ending third-quarter 2018, foreign investment in multihousing product within the Washington metropolitan area measured $695 million, or 9.74% of total sales volume over the last twelve months. Comparatively, during the same period in 2017, sales volume among foreign buyers represented 13.31% of the region's multihousing transaction volume.

MULTIHOUSING INVESTMENT SALES OUTLOOK

Rising mortgage rates could be a contributing factor the decrease in sales volume the last two quarters, although the trailing 12-month average is still strong. Cap rates continued to decrease this quarter to the lowest value since the housing crisis and should continue to stay below 6%. Well-located properties that offer investors high return potential will continue to draw interest throughout the Washington metropolitan area.

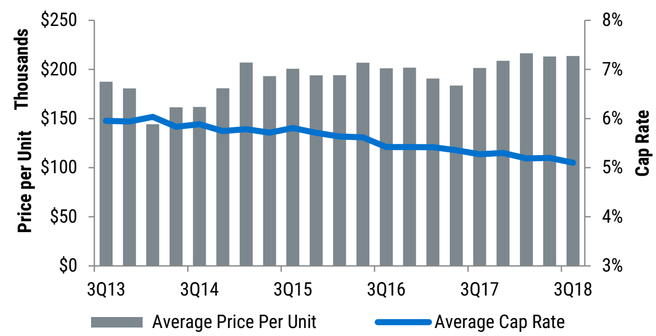
METRO AREA MULTIHOUSING MARKET SUMMARY

	Metro Region
12 Month Transaction Volume at 3Q 2018	$7.1 B
12 Month Transaction Volume at 3Q 2017	$6.6 B
3Q 2018 Average Price Per Unit	$213,762
3Q 2018 Average Cap Rate	5.1%

Note: Averages are for trailing 12-months
Source: Real Capital Analytics, NKF Research

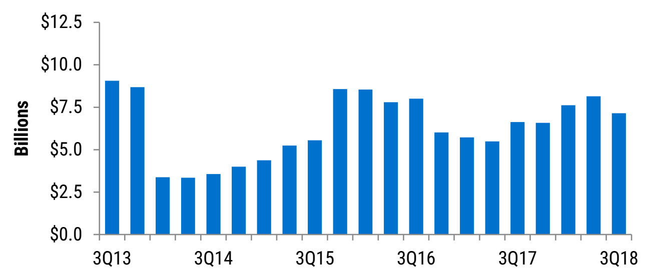
MARKET ANALYSIS

Average Multihousing Cap Rate and Price Per Unit



Note: Values are trailing 12-month averages
Source: Data provided by Real Capital Analytics, analysis by NKF Research

Trailing 12-Month Multihousing Transaction Volume



Source: Data provided by Real Capital Analytics, analysis by NKF Research

RECENT MULTIHOUSING SALES TRANSACTIONS

Project	Sale Price (Millions)	Price/Unit	Buyer	Seller	City
Dulles Greene	$193.0	$239,454	Harbor Group/Image Capital JV	Toll Brothers/Lowe Enterprises JV	Fairfax, VA
Avalon Ballston Place	$169.5	$443,717	Akelius Residential	AvalonBay	Arlington, VA
Trellis House	$128.0	$401,254	CIM Group	Rise Developments/Gateway Investment Partners JV	Washington, DC
Milestone	$118.4	$205,556	Torchlight Investors/Hampshire Properties JV	AEW Capital Management	Germantown, MD
672 Flats	$90.0	$520,231	Chevy Chase Land Company	Penrose Group	Arlington, VA
The Glendale	$83.0	$170,689	Quantum Equities	The Donaldson Group	Glenn Dale, MD

BIOPHILIC DESIGN

BY PHYLLIS HARTMAN, ASID, LEED AP

"Biophilic Design is an innovative way of designing the places where we live, work, and learn. We need nature in a deep and fundamental fashion, but we have often designed our cities and suburbs in ways that both degrade the environment and alienate us from nature. The recent trend in green architecture has decreased the environmental impact of the built environment, but it has accomplished little in the way of reconnecting us to the natural world, the missing piece in the puzzle of sustainable development." —Stephen Kellert, author and professor of social ecology.

Kellert's groundbreaking study is the recognition of our instinctual love of nature as a critical element in architecture and interior design. In it, he draws on earlier studies in biology and psychology that demonstrate our connection to nature and natural elements have a wealth of benefits: We are more creative and productive; children's test scores improve; hospital patients heal faster; and our stress levels and blood pressure come down.

As more of us settle into urban locales and interact daily with technology and artificial light, our senses call out for environments that heal and reduce the pressure of living in a fast-paced world.

Kellert outlines several attributes that connect our need for natural light and fresh air to our emotional yearning to identify with our culture, history and nature. Four of these biophilic design principals are outlined here:

1. Color: Color significantly impacts our mood, motivation, productivity, creativity, and enthusiasm—in both good and bad ways. We strive to find color combinations with the most positive impact to improve the way we feel in our built environment. In a website called Human Spaces the flooring company Interface documented the following connection between color and mood: Blue, green and white improve motivation; blue, green, yellow and white positively impact productivity; yellow, green and white inspire us; green, blue, brown and white contribute to our happiness and enthusiasm; gray alone creates stress.

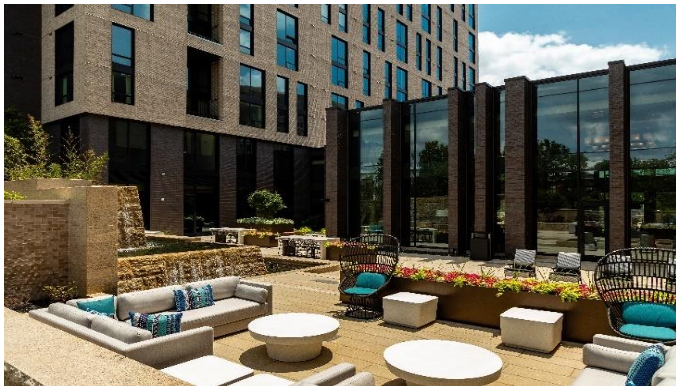
CASE STUDY: THE SIGNATURE AT RESTON TOWN CENTER DEVELOPED BY BOSTON PROPERTIES

At the award-winning Signature in Reston, Virginia, we incorporated these ideas throughout its public spaces, all of which are designed with broad vistas toward the outdoors. In this sunlit corner (photo #1), a grouping of comfy blue chairs looks out toward a courtyard that is animated with a waterfall and reflecting pond. We commissioned abstract artwork in shades of blue, green, brown and white; the colors channel shades that could be found in a forest, while the texture and movement of the patterns echo the rippling waters outside the floor-to-ceiling windows.

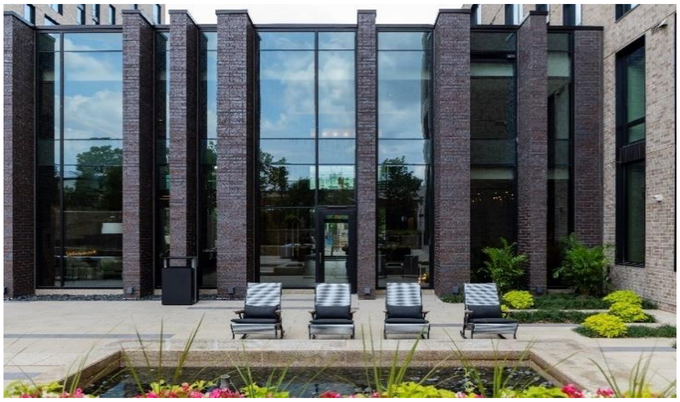
THE SIGNATURE AT RESTON TOWN CENTER (#1)

2. Water: We all notice the calming effect of water. Its sound, touch, and flow create a sense of well-being, connecting us to nature in the most primal way. The presence of water in our built environment has several health benefits, among them lowered blood pressure, lowered heart rate, and memory restoration.

Water plays a large role at The Signature, where in its main courtyard there are tiers of waterfalls that mingle with planting beds (photo #2), and a reflecting pool (photo #3), works with the window walls to mirror the sky, clouds and surrounding trees.



THE SIGNATURE AT RESTON TOWN CENTER (#2)



THE SIGNATURE AT RESTON TOWN CENTER (#3)

3. Light and Air: Blurring the distinction between indoor and outdoor spaces in multi-family communities is not just a design trend; it is driven by the need to seek a natural sanctuary in the built environment. Residents gravitate to any space that allows them to feel, see, touch, and smell the outdoors. Connecting the interior to the exterior brings the health and wellness benefits that are recognized in biophilic design: Light, sunshine, fresh air and the ability to connect to nature have many health benefits including lowered blood pressure, increased creative performance, positive impact on our circadian system and a greater sense of well-being.

CASE STUDY: INSIGNIA ON M DEVELOPED BY DONOHOE DEVELOPMENT

At Insignia on M Street in Washington DC has modern, electronic garage doors that open between the clubroom and the terrace/pool deck. The clubroom thus becomes an integral element to the rooftop. Blending indoor and outdoor air may seem wasteful from an energy standpoint, but the enjoyment and health benefits that residents—and all of us—derive from varied air currents and breezes may offset the challenge of controlling the indoor temperature.

CASE STUDY: THE BARTLETT DEVELOPED BY JBG SMITH

The Bartlett roof deck in Arlington has Nanawalls that open to create a flow between indoor and outdoor space. This amenity also includes another important element in biophilic design: Fire.

4. Fire: In ancient times, fire represented safety, social gatherings, warmth, survival and an ability to cook food. Perhaps for those reasons we remain powerfully drawn to the crackling flames of a fireplace or pit.

CASE STUDY: PARC MERIDIAN AT EISENHOWER DEVELOPED BY PARADIGM COMPANIES

We highlight fire in our projects whenever possible because it is a natural focal point, drawing residents together both inside and out. At Parc Meridian, a long fire table anchors an outdoor living space and provides enough surface area for cocktails.

Rick Fedrizzi, president, CEO and founding chairman of the U.S. Green Building Council, describes biophilic design as “sure to be the next great design journey of our times. … When nature inspires our architecture—not just how it looks but how buildings and communities actually function—we will have made great strides as a society.”

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INSIGNIA ON M


THE BARTLETT


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