HOUSING ANALYSIS

Student and Market-Rate Apartment Analysis

City of Greenville , NC

JANUARY 2018

Kimley»Horn

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EXECUTIVE SUMMARY

Kimley-Horn and Associates was retained by the City of Greenville to prepare a student and market-rate apartment housing analysis. The purpose of this analysis is to determine whether the supply of private, off-campus student and market-rate apartment communities, both existing properties and those approved for construction, could saturate the housing market in Greenville. It should be noted that this analysis does not forecast future demand for affordable housing in Greenville. It also does not provide policy or land use recommendations based on the results.

Two higher-education facilities are located in or near Greenville, each with students that drive demand for student and market-rate apartments.

- **East Carolina University (ECU)** has a total enrollment of 29,131 students as of the fall of 2017. This includes 23,265 undergraduates and 5,331 graduate students. As of Fall 2017, approximately 76.3% of the students were classified as 'on-campus,' meaning that they regularly attend classes at campus facilities. The remaining 6,909 students are considered distance learning, leveraging primarily online resources.
- **Pitt Community College (PCC)** is a two-year technical training college located just south of the Greenville city limits. The college reported having 11,678 students enrolled in curriculum programs, with 10,344 enrolled in continuing education classes. About 32% of those students enrolled in curriculum programs attend school full-time.

STUDENT APARTMENT PERFORMANCE

Student apartment performance trends for Greenville focus on 16 active properties specifically targeting students. The communities all lease by the bedroom, and primarily offer furnished units. There are over 11,000 bedrooms targeting student renters in the City of Greenville, with nearly one-third located in communities more than three miles from campus, relying heavily on bus transit system.

The estimated vacancy rate of off-campus, student-targeted housing is currently 11.6%, equating to 1,276 available bedrooms. Vacancy rates in off-campus student communities in Greenville increase the farther away from campus the communities are located. The three communities located less than 0.5 miles from ECU's campus have an aggregate 2.1% vacancy rate, while those more than three miles have the highest rate at 18.7%. Demonstrating an inverse trend, communities located less than 0.5 miles from campus have the highest average rents per bedroom at $645, while those more than three miles away have the lowest at $484.

MARKET-RATE APARTMENT PERFORMANCE

For the purpose of this analysis, market-rate apartments include communities that lease on a per unit basis, and do not target specific age or income groups. Affordable or income-restricted units are excluded from this analysis. Students can be residents of these communities, often requiring a parent to sign as a co-leaser. Greenville hosts nearly 5,200 market-rate apartments in communities containing 25 or more units.

The market-rate apartment vacancy rate in Greenville peaked in 2012 at 5.9%. With only two communities completed since 2012, vacancy has been on a continuous decline every year since, reaching a period-low of 2.6% in the third-quarter of 2017. The average monthly rent of $761 per unit for the City of Greenville in the third-quarter of 2017 represented a gradual increase from 2011. Average monthly rents in Greenville have increased every year, equating to 16.4% growth over a nearly seven-year period. The last two years have experienced a more notable annual increase, largely due to the declining available supply in the current inventory.

NEW APARTMENT SUPPLY

There are four student-targeted communities currently being constructed and scheduled to be completed between 2018 and 2019, totaling 1,930 new bedrooms. Another 656 bedrooms are proposed in one community, with no start date currently identified. Market-rate apartments are expected to increase by nearly 800 units including projects that are currently under construction and proposed for future development.

FORECASTED APARTMENT DEMAND

Student apartment demand is based on enrollment forecasts for ECU and Pitt Community College, while market-rate demand considers overall household growth in the community.

- **Student Demand**: Based on feedback from the local higher-education facilities, and considering recent trends, total enrollment could grow to 33,099 students at ECU and 4,437 full-time curriculum enrollees at Pitt by 2027. Ultimately forecasts net out students that participate in distance learning, live on-campus, and seek housing options that are not student targeted or professionally-managed. Based on assumed capture rates detailed in the full report, there is a ten-year demand total for nearly 1,600 bedrooms of off-campus student apartments in Greenville.
- **Market-Rate Demand**: Demand for market-rate apartments has been forecasted by analyzing household growth in Greenville between 2017 and 2022. The City of Greenville could reach 47,772 households by 2027, an increase of 8,825, or 22.7%. The 2010 U.S. Census reported a 62.8% renter share in the city. This analysis relies on a 20% market-rate renter capture, notably lower than the 62.8% overall measure (intended to net out households that would gravitate to other product types, including student-, income-, and age-targeted communities). Applying the estimated 20% share to forecasted household growth indicates that approximately 1,765 net new market-rate rental units could be supported in the City of Greenville through 2027.

SUPPLY AND DEMAND RECONCILIATION

There are over 2,500 student-targeted bedrooms in the development pipeline in Greenville. This new supply is greater than the forecasted demand of approximately 1,600 off-campus beds. Based on the forecasted student growth and the approved student apartment pipeline, the Greenville market is expected to experience saturation, especially in the next five years as most of the expected new supply comes online. Vacancy rates at communities in the market will be impacted, continuing to remain above the industry-standard for a healthy market.

There are 789 market-rate apartment units currently in the development pipeline in Greenville. The pipeline is split between 281 units currently under construction and targeting 2018 deliveries, and 508 units proposed. Unlike the existing student communities, market-rate product in Greenville has an extremely low aggregate vacancy rate of approximately 2.6%. Demonstrating an opposite projection from the student-targeted demand, market-rate product is expected to experience a deficit of nearly 1,000 units through 2027.

CONCLUSION

The following considerations are offered as it relates to the reconciliation of future supply and demand in student and market-rate apartments:

- For student housing, proximity to campus has been clearly highlighted in trend data, both nationally and In Greenville
    - Occupancy at student-targeted apartment communities located further from ECU's campus have been impacted more noticeably than newer ones closer to Uptown and campus
    - Communities further from campus have been adjusting pricing to stay competitive
- Offering a variety of price points for student tenants is critical; student finances vary significantly
- Although some non-students do live at the existing off-campus communities, the design of student-targeted communities limit the target market; it can be challenging to repurpose larger three- and four-bedroom units for families/households
- New market-rate apartments have gravitated to job centers, primarily Vidant, as well as along corridors that offer easy access to retail goods and services; to-date Greenville has not attracted a significant amount of market-rate housing with pedestrian access to Uptown, a trend that diverges from national momentum

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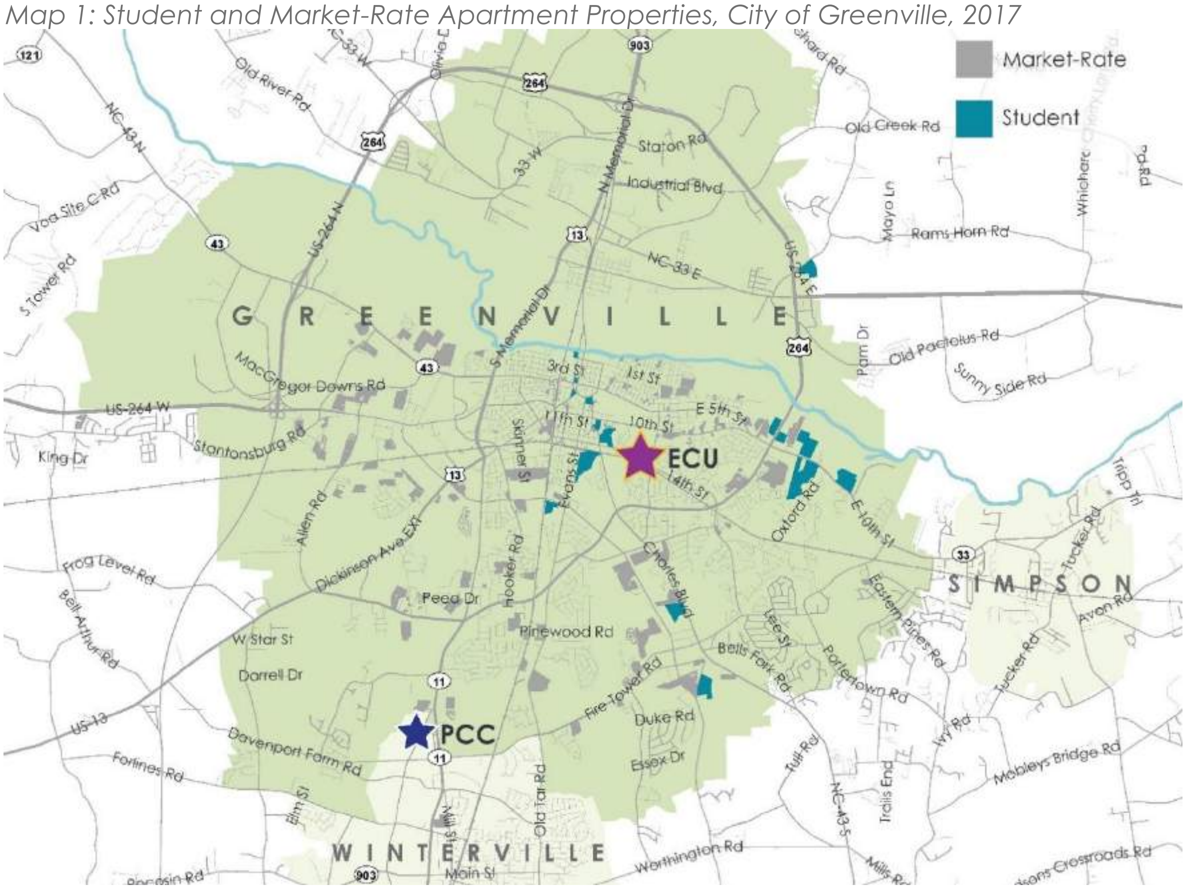
1. INTRODUCTION

Kimley-Horn and Associates was retained by the City of Greenville to prepare a student and market-rate apartment housing analysis. The purpose of this analysis is to determine whether the supply of private, off-campus student and market-rate apartment communities, both existing properties and those approved for construction, could saturate the housing market in Greenville. It should be noted that this analysis does not forecast future demand for affordable housing in Greenville. It also does not provide policy or land use recommendations based on the results.

This analysis was identified as an important action item in Greenville's *Horizons 2026 Comprehensive Plan*, which outlines goals related to strengthening existing neighborhoods and improving relations with student residents, addressing disinvestment occurring at off-campus student housing complexes, and continuing to provide a balanced supply of housing that meets the needs of a variety of household types and income levels. The report includes analyses of employment, demographics, apartment market performance metrics, comparable case studies, and national trends in student housing.

Located in Pitt County, the City of Greenville is approximately 85 miles east of Raleigh. As the county-seat, Greenville represents the largest concentration of residents and commercial services in the county (*Map 1*). It is also home to East Carolina University. According to the U.S. Census Bureau, the city has a total area of 34.6 miles, served primarily by US-264 and US-13

Map 1: Student and Market-Rate Apartment Properties, City of Greenville, 2017



2. ECONOMIC DRIVERS AND COMMUNITY ANCHORS

This section describes major economic drivers and community anchors that could impact the demand for student and market-rate apartments in Greenville. It should be noted that the area's two higher education facilities, East Carolina University and Pitt Community College, are profiled separately in the next section.

2.1 UPTOWN GREENVILLE

Uptown Greenville encompasses a roughly 5 x 5 block area south of the Tar River, adjacent to the northwest portion of ECU's main campus. Businesses are a mix of small scale urban varieties, including banks, professional and medical offices, boutique shops, and restaurants. Uptown Greenville hosts a significant concentration of the County's government jobs, with office space for both Pitt County and the City of Greenville located in the urban core. Nightlife and entertainment businesses at the core of Uptown serve college students at nearby ECU.

Uptown Greenville has experienced a resurgence in recent years, partially catalyzed by public investment to update streetscape elements and construct a large parking deck. Along with this revitalization, there has been an increase in residential development capitalizing on proximity to a walkable, urban core and the East Carolina University campus. First Street Place Apartments, The Boundary at West End, and The Province are all located within walking distance to Uptown, and all have been built since 2010. These properties cater towards the student population, providing individual bedroom leasing, furnishings, and comprehensive utility packages.

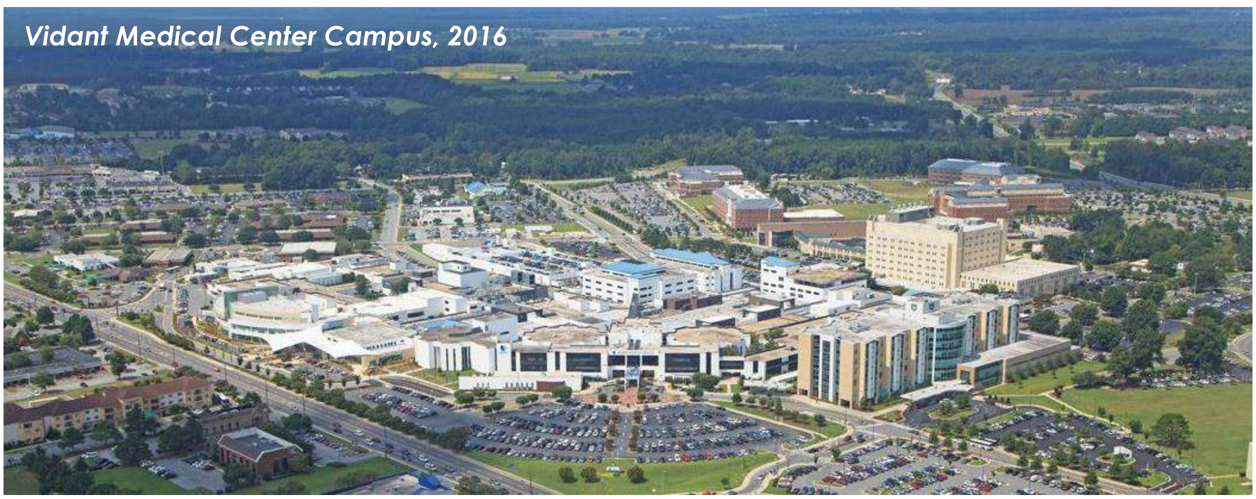
Uptown Greenville, 2017

Uptown Greenville has experienced a surge in residential development in recent years, with four communities currently under construction in or near the urban core of the community. Totaling 1,930 bedrooms, the four communities target students, offering walkability to East Carolina University.

2.2 VIDANT MEDICAL CENTER

Located on the west side of the City of Greenville, Vidant Medical Center is the largest non-military employer in eastern North Carolina, and the 20th largest employer in the state, according to the NC Labor Market Information Division. The facility is a Level 1 Trauma Center, one of only six in the State of North Carolina and the only one east of Raleigh. The medical center acts as the teaching hospital for the Brody School of Medicine, and is directly adjacent to the ECU Health Sciences Campus, as noted above. Founded in 1923, the hospital is licensed for 861 beds. Of the 861 beds, 734 are general beds, 75 are rehab beds, and 52 are psychiatric beds. The hospital has 35 operating rooms: 26 rooms are Shared Inpatient/Ambulatory Surgery; four rooms are C-Section; three rooms are Other Inpatient; two rooms are Endoscopy. Employment at the campus is estimated at approximately 7,000 doctors, nurses, and other staff.

In May 2014, Vidant Health announced plans for a new 6-story, 96-bed cancer facility set to open in 2018. The facility, which in all will encompass over 400,000 square feet, broke ground in March 2015. Some of the major features of the facility include 96 inpatient rooms with nurse, patient and family zones; an imaging center; infusion and radiation treatment clinics; and pharmacy and laboratory facilities. The facility will also include courtyards, gardens, and other natural areas, as well as research and conference space.


Vidant Medical Center Campus, 2016

2.3 NORTH GREENVILLE INDUSTRIAL DISTRICT

While healthcare and education have grown to be Greenville's dominant industries, the City's longstanding tradition of manufacturing has persisted. What was once home to North Carolina's largest tobacco market and the manufacturing of guns, carriages, cottons gins, and silk, now features operations focused on chemicals, pharmaceuticals, transportation equipment, ag and food products, and machinery.

There is a cluster of industrial and manufacturing facilities straddling the Greenville city limits north of the Tar River. Firms with facilities in the area include Grady-White Boats, Hyster-Yale Group, Patheon, and Mayne-Pharma. CSX operates a rail line that runs north-south through this industrial district and intersects a rail line leased by Carolina Coastal Railway from Norfolk-Southern in Greenville that runs 142-miles from Raleigh to Plymouth. Also located in this area is the Pitt-Greenville Airport, the Eastern Carolina Vocational Center, and the Pitt County Development Commission's Technology Enterprise Center, which offers office, laboratory and light manufacturing space to technology-based companies on a short-term lease basis.

3. PROFILE OF LOCAL HIGHER EDUCATION FACILITIES

3.1 EAST CAROLINA UNIVERSITY

East Carolina University (ECU) is a public university that represents one of the largest economic drivers in the region, along with Vidant Medical Center. The main portion of the campus is bounded on the north and south by 5th Street and 14th Street, respectively, and on the east and west by Charles Boulevard/Cotanche Street and College Hill Drive.

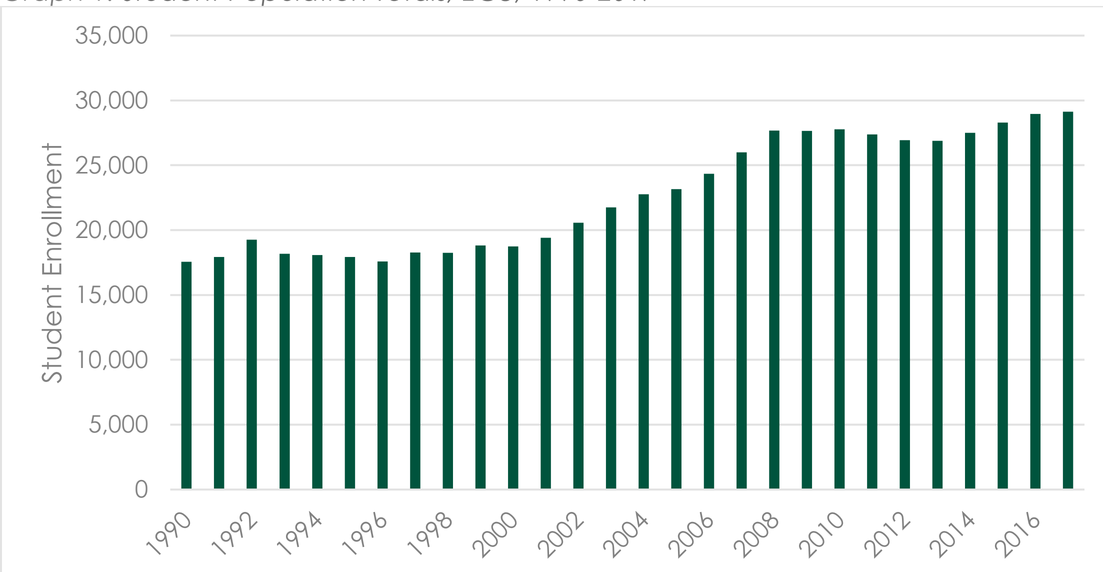
As described in the previous section, Greenville's downtown area, referred to as "Uptown," is directly adjacent to the western side of the campus. Uptown Greenville sits south of the Tar River, which runs west to east through the northern portion of the City. Greenville Boulevard, which acts as a major retail corridor for the area, is south of the university campus, and runs generally southwest to northeast. The areas directly adjacent to the north and east of the campus are primarily composed of single-family neighborhoods.

Vidant Medical Center is approximately 2.5 miles west of the university campus, and is also the home of the East Carolina Health Sciences Campus. The Health Sciences Campus, along with the Brody School of Medicine, is separated from the main portion of the university, and is located on the western side of the city, directly adjacent to Vidant Medical Center. There is some off-campus student housing located near this area to accommodate students who primarily attend classes there. Combined, all campus sections of the university area totals almost 1,600 acres. Currently, expansions are being made to the main campus to build a new student union building with a parking deck adjacent to the library, along 10th street.


Residential Dorm Construction, East Carolina University, 2015

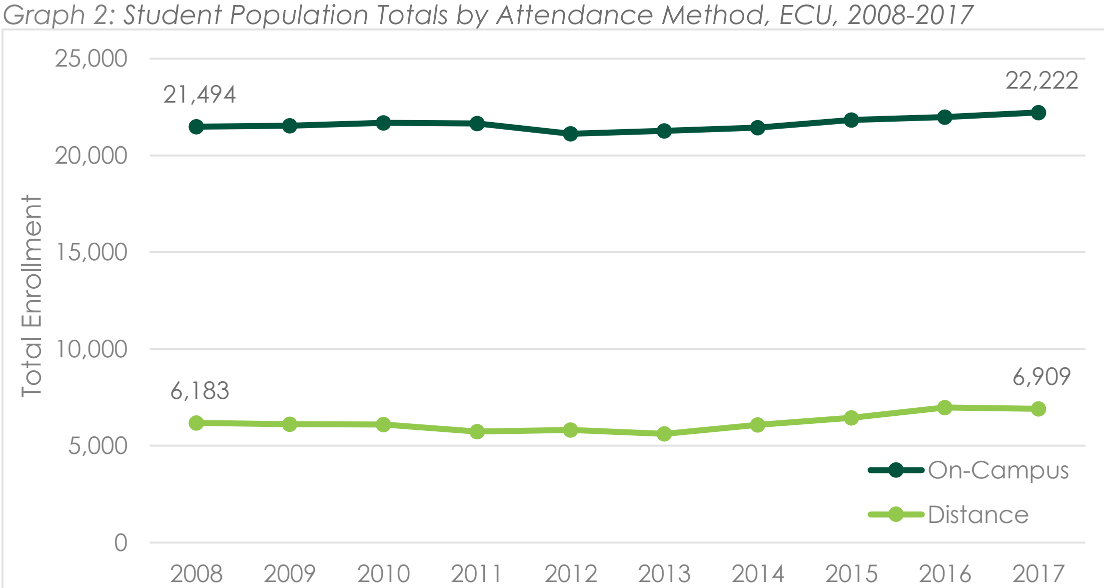
The university has a total enrollment of 29,131 students as of the fall of 2017. This includes 23,265 undergraduates and 5,331 graduate students. The Brody School of Medicine has 322 medical students and 213 dental students. In terms of total student growth, East Carolina University has been fairly level since 2008. In the ten years prior to the recession, from 1998 to 2008, the university grew roughly 34%, from 18,263 students to 27,677 students (Graph 1). Since then, the university has only seen a 4.5% percent growth in total student population. However, it's worth noting that a slight uptick in student totals in the past few years shows an 8% growth since 2013.

Graph 1: Student Population Totals, ECU, 1990-2017



As of Fall 2017, approximately 76.3% of the students were classified as 'on-campus,' meaning that they regularly attend classes at campus facilities. The remaining 6,909 students are considered distance learning, leveraging primarily online resources. Since 2008, on-campus student enrollment has increased by 728 students, while distance education has grown by 771. This distinction is important when considering demand for off-campus student housing in Greenville, as distance learning students would not generate housing needs locally.

Graph 2: Student Population Totals by Attendance Method, ECU, 2008-2017



Enrollment distribution has been fairly similar since 2010, with undergraduates having the largest total change from 21,663 students in 2010 to 23,265 in 2017. This is an increase of about 1,600 students or roughly 7%. The level of graduate students shrunk by over 1,000 students from 2010 to 2015, but since then the total has rebounded to be about 9% lower than 2010 levels. Graduate student enrollment growth was targeted in the *2015 Report on Enrollment Management*, as targeted to cap at approximately 5,300 students. The dental and medical programs have stayed relatively constant since 2010.

Table 1: Enrollment Trends by Type, ECU, 2010-2017

	Student Enrollment			
Year	Undergraduate	Graduate	Dental	Medical
2010	21,663	5,812	-	308
2011	21,589	5,437	52	308
2012	21,298	5,226	104	319
2013	21,508	4,902	154	323
2014	22,252	4,740	206	313
2015	23,039	4,731	206	313
2016	22,969	5,468	208	317
2017	23,265	5,331	213	322

Source: East Carolina University

Approximately 20% of students live on-campus or in college-owned housing, while the rest live off campus. Freshman at ECU are required to live on campus in one of the provided dorm facilities.

On-campus facilities are clustered in two main locations, the first being the "West End" of campus and the second being on "College Hill" which is to the south of the main portion of campus. West End and College Hill both feature a variety of dorm options, with most being a hall or suite style layout. Both clusters of dorms are easily walkable to other parts of campus.

There are also options for housing in the central part of campus, that feature smaller buildings with hall and suite style layouts. These facilities are generally occupied by upperclassmen, honors college, and graduate students. College Hill Suites, located on the College Hill section of campus, is a high-rise dorm that is reserved only for upperclassmen. Layouts are suite-style, with two rooms in each suite adjoined by a central living/kitchen space, and each room, which is shared by two students, has its own bathroom. The majority of students move to off-campus locations after their first year at school.

ECU **– BY THE NUMBERS**

Total Students........................**29,131**

Undergraduate.....................**22,969**

Growth (since 2013) **8%**

Living off Campus....................**80%**

Male/Female...................**43%/57%**

In State Enrollment **87%**

Faculty **2,053**

Staff **5,832**

Off-campus student living is primarily concentrated in two different options, single-family housing and small-scale apartment community rentals located in "The Grid," a residential area just north of campus, and in student-targeted apartment communities. The Grid is primarily comprised of single-family detached housing, and reports from local residents say that over 80% of the area is occupied by renters. Houses within The Grid are walkable to campus and downtown, making them ideal places for students to live. They are extremely competitive to gain access to, and most are "passed down" from a previous renter to a friend or acquaintance.

The majority of off-campus students live in large, student-targeted apartment communities that are spread throughout the City of Greenville. These properties exist in three main clusters – east of the university down the 10th Street corridor, south of the university down the Charles Boulevard corridor, and those within an immediate radius of the university and Uptown. In total, there are currently 16 active properties that are specifically targeting student renters in Greenville. These are:

- The Davis
- Copper Beech
- 33 East
- Campus Pointe
- Campus Towers
- Sunchase
- Paramount 3800 (Captain's Quarters)
- First Street Place
- The Boundary
- The Province
- The Bower
- University Suites
- University Park
- The Landing
- The Bellamy
- The District at Tar River

Rents for the communities vary based on location and quality, with most rents ranging between $400 and $700 per bedroom. Higher rents are quoted at The Boundary and The Province, due to their location close to downtown and the university, and it's expected that the four student-targeted properties currently under construction will follow a similar trend. A recent shift in students wanting to live in better quality apartments that are potentially closer to campus has led to lower occupancy at some of the outlying communities. Paramount 3800, formerly Captain's Quarters, has been hit hardest by this shift, given its isolated location on the north side of the Tar River and the lower construction quality of the units.

3.2 PITT COMMUNITY COLLEGE

Pitt Community College (PCC) is a two-year technical training college located just south of the Greenville city limits. The campus, which is the school's only location, sits at the prominent intersection of two major corridors, Fire Tower Road and Memorial Drive. The college is technically located just within the limits of Winterville, NC, a suburb of about 9,000 residents that shares Greenville's southern border.

PCC is at the end of the prominent retail corridor of Memorial Drive. Because of this, uses in the immediate vicinity, to the north, south, and east, of the campus are mostly commercial. To the west of the campus, the land is

PCC **– BY THE NUMBERS (2016)**

Curriculum Total	**11,678**
Cont. Education Total	**10,344**
Male/Female	**40%/60%**
Faculty	**236**
Staff	**223**

largely occupied by rural/agricultural areas and some single-family housing. Some multi-family apartments can be found in the surrounding area as well.

The campus area occupies a space of roughly 125 acres, although it is not entirely built out. About ¼ of the area on the western edge of the campus remains open to future development. A new 75,000 square foot science and technology training facility, called the Walter and Marie Williams Building, was dedicated in August 2017 and available for use during the fall 2017 semester after construction began in 2015. The building will house the Industrial Systems Technology program and allow PCC to move the biotechnology program back to campus.

Pitt Community College, 2017

The college reported having 11,678 students enrolled in curriculum programs, with 10,344 enrolled in continuing education classes. About 32% of those students enrolled in curriculum programs attend school full-time. According to the 2016 PCC Community Report, students enrolled in curriculum classes averaged about 26.7 years of age, while those students enrolled in Continuing Education classes averaged 39.1 years of age, and each group makes up about roughly half of the student population. PCC offers a wide variety of online and in the classroom options to support a diverse student group, 63% of which receive some kind of financial aid.

Pitt Community College does not have any on-campus housing, so all students live off campus in a wide variety of housing choices that best fit their needs. Because of the diversity of student types, it's likely that most of the student population at PCC is scattered throughout the Greenville and Winterville areas at these many housing options.

There are anecdotal reports that PCC students now occupy a more significant portion of the population at outlying student-target properties south of the university, such as The Landing or The Bellamy. This makes some sense given the proximity of these locations to PCC, relative to that of other student-targeted properties. But for students of PCC that do not seek the college lifestyle, it is most likely that they occupy more affordable, traditionally styled single-family or multi-family units somewhere in the region, presumably within a relative driving distance to the college campus.

4. COMPARABLE UNIVERSITY CASE STUDIES

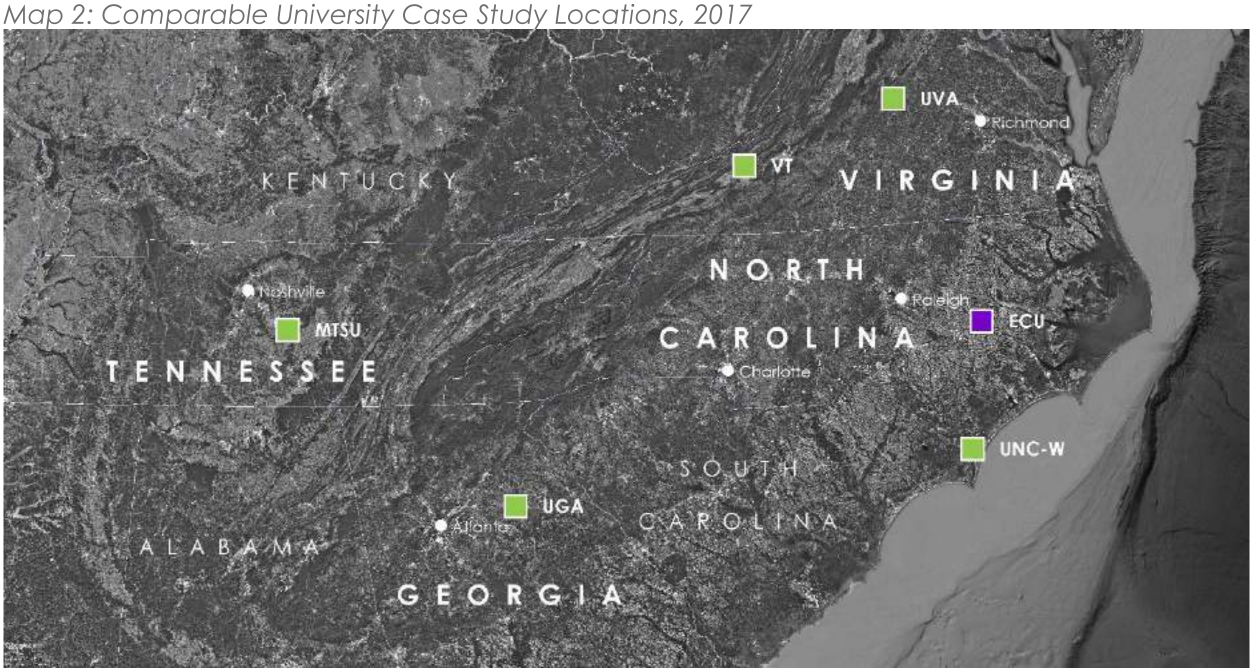
This section profiles five other universities and cities in the Southeast United States that are comparable to ECU and Greenville. Each profile will focus on the student population and campus trends, options and trends for on and off campus housing, and will look at the facility's location within the community and region, related to the surrounding land uses. These profiles are important to understanding similarities to the student housing situation for ECU and in the larger Greenville community. The university case studies were selected based on a variety of factors, including (but not limited to):

- Geographical location
- Proximity to major metropolitan areas
- Student population and demographics
- City/metro population
- Housing trends and options

The five university case studies identified by this study are:

- University of North Carolina at Wilmington (Wilmington, NC)
- Virginia Polytechnic Institute & State University (Blacksburg, VA)
- University of Virginia (Charlottesville, VA)
- University of Georgia (Athens, GA)
- Middle Tennessee State University (Murfreesboro, TN)

Map 2: Comparable University Case Study Locations, 2017

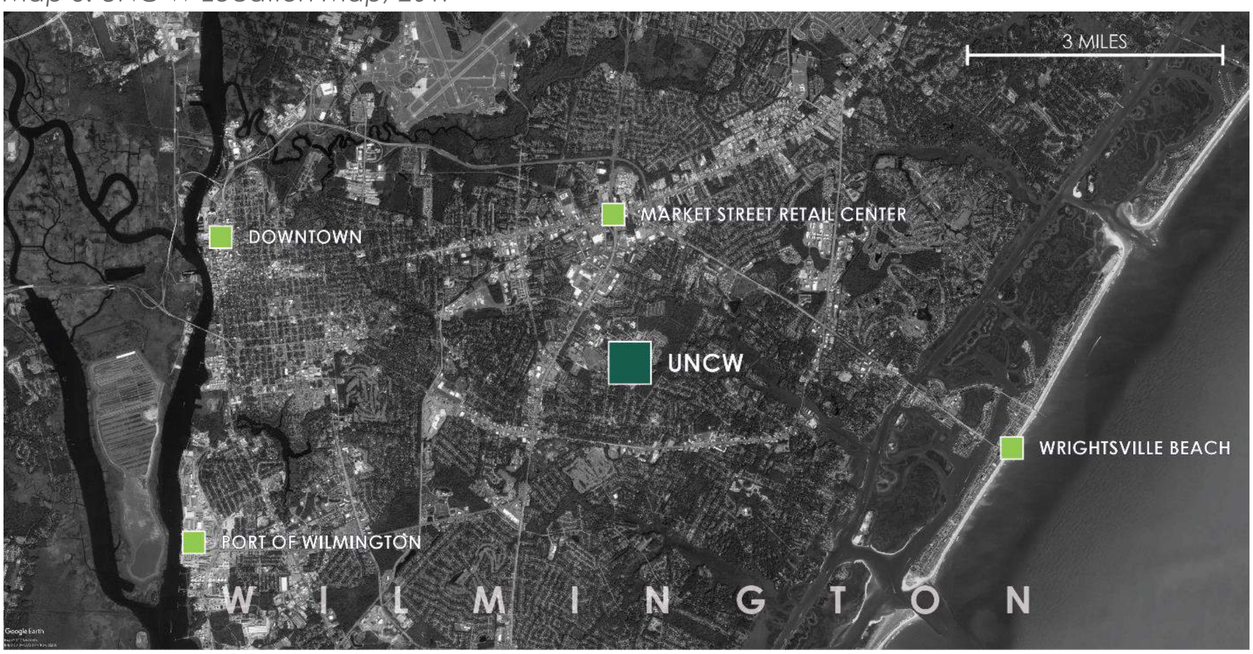


4.1 UNIVERSITY OF NORTH CAROLINA AT WILMINGTON

The University of North Carolina at Wilmington (UNCW) is located in Wilmington, NC, near the Atlantic Ocean. The City of Wilmington is in New Hanover County, which has roughly 223,483 people and is approximately 80 miles from Pitt County, along the North Carolina coast. The population estimates include students residing both on campus in dorms (group quarters facilities), as well as off campus in other housing options. In relation to large metro areas, Wilmington is roughly 115 miles south of Raleigh, NC, and about 150 miles north of Charleston, SC. Wilmington and New Hanover County have a strong tourism economy, due to the plethora of beach destinations along the coastline, as well as successful industrial sectors, anchored by the Port of Wilmington along the Cape Fear River.

UNCW is centrally located in Wilmington, and is roughly equidistant between the downtown urban core to the east, and the popular Wrightsville Beach to the west. The Port of Wilmington is to the southwest. A prominent retail node and corridor sits just north of the campus, centered around the major intersection of Market Street and S College Road. To the immediate south, east, and west of the campus, the majority of land uses are made up of single- and multi-family residences.

Map 3: UNC-W Location Map, 2017



The university reports as having a total enrollment of roughly 16,487 total students and offers 52 undergraduate, 36 master's degree, and four doctoral programs. More than 13% of all students are from southeastern North Carolina. UNCW has grown from 13,937 students in 2013 to 16,487 in the Fall of 2017. This is roughly a 16% growth since 2013. The ratio of undergraduate to graduate students has remained relatively stable over time.

An estimated 26% of the student body lives on campus. New full-time freshmen are required to live on campus during their first year. On-campus dorm facilities are typically located on the eastern side of the campus close to the dining hall and recreation center amenities. These facilities offer common campus dorm amenities and quality, and are typically hall or suite style in their layouts.

The campus features three apartment-style facilities, called Seahawk Landing, Seahawk Village, and Seahawk Crossing, that are only available to those students who are sophomore year or above. The complexes are on-campus, university run facilities that offer all the amenities and layouts of apartment living, but in an on campus setting. These apartments are furnished, come with individual leases, and include utilities in the rent.

UNCW – **BY THE NUMBERS**

Total Students	**16,487**
Undergraduate	**14,502**
Growth (since 2013)	**16%**
Living off Campus	**74%**
Male/Female	**36%/64%**
In State Enrollment	**83%**
Faculty	**965**
Staff	**1,333**

Off-campus housing options are mainly found in a variety of student-targeted and market-rate apartment communities. There are two main clusters of student apartment communities near the campus, the first of which is located to the north of campus, along the Racine Drive corridor. These apartments tend to be a bit older and feature a variety of 1-4 bedroom layouts. These apartments are attractive to students because they are relatively affordable (rents are generally $350 - $500 per person) and because of the proximity to campus. Students living in this area can easily walk from their apartment to the campus. Apartments in this area are mostly unfurnished, and most do not offer individual leases, meaning that students will put just one name on an apartment lease, and split the total cost amongst themselves. However, oftentimes, utilities are included as part of the rents.

The second cluster of student apartment communities is northwest of campus, north of Randall Parkway and in closer proximity to the major retail corridors and nodes along Market Street and South College Road. This area features some of the newer communities for students with more modern amenities seen in other off-campus student housing. This includes: pools, study centers, game rooms, and individual leases. These communities tend to be a bit more expensive on average ($400 - $600 per person). The adjacent single-family neighborhoods to the south, east, and west do report as having some student renters, but these houses are mainly populated by graduate students and aren't highly coveted.

In order to balance parking demands between those who live, attend class, and work on campus, any student that resides within one mile of the university campus is not granted a parking permit. The majority of students who live off campus tend to walk, if they are within a mile or so of campus, or drive and then park somewhere on campus. There are also some park and ride shuttles for lots on the periphery of campus.

4.2 VIRGINIA POLYTECHNIC INSTITUTE & STATE UNIVERSITY (VIRGINIA TECH)

Virginia Polytechnic Institute & State University, more colloquially referred to as "Virginia Tech (VT)", is located in the City of Blacksburg, along the Appalachian Mountains, in southwestern Virginia. Blacksburg is the largest city in Montgomery County, VA, and the county has a total population of 98,602 people. As noted with UNCW, population estimates include students residing both on campus in dorms (group quarters facilities), as well as off campus in other housing options. In relation to larger metro regions, Blacksburg is quite isolated for a region of its size. It is about 165 miles west of Richmond, VA, and about 100 miles southeast of Charleston, WV.

The City of Blacksburg is largely focused around the university, which is the largest employer in the County. The Carilion New River Valley Medical Center, in the southern portion of the County, also acts a strong economic anchor for the area.

Virginia Tech's campus is centrally located within the City of Blacksburg and is well integrated into the fabric of the existing city. The urban core, featuring classic main street forms and uses, is directly adjacent to the main portion of campus. A prominent retail node, the University Mall Shopping Center, sits just north of the campus. There are some smaller retail areas to the south of campus, with single-family residential neighborhoods and rural farmland making up the remainder of adjacent land uses.

Map 4: Virginia Tech Location Map, 2017

Virginia Tech reports having 34,440 students, which makes its student body about 22% larger than that of ECU's. The university offers roughly 110 bachelor's degree programs and 170 graduate programs. The university has increased it's student body population from 31,906 in 2013 to 34,440 in fall of 2017. This represents a growth about 7.5% since 2013.

An estimated 27% of the student body lives on campus, and the university reports having 47 on-campus residence halls. The majority of the larger residence halls are located on the south/southwest portion of the campus, close to large commuter lots on the periphery and the more rural edge of the campus. The majority of residence halls feature either a suite-style or traditional hall style builing layout, with most rooms occupying two students apiece. The university does offer a few residence halls specifically for upperclassmen or graduate students. These facilities are typically geared towards single rooms (occupying one individual) and cater to those students looking for apartment style living in an on-campus setting.

Virginia Tech – **BY THE NUMBERS**	
Total Students	**34,440**
Undergraduate	**27,173**
Growth (since 2013)	**7.5%**
Living off Campus	**73%**
Male/Female	**57%/43%**
In State Enrollment	**71%**
Faculty	**4,288**
Staff	**3,394**

Off-campus student housing in Blacksburg is generally concentrated in various multi-family apartment communities and buildings. The largest cluster of student-specific apartment communities is located north of campus, along the Patrick Henry Drive corridor. These apartment communities typically have four beds/four bathrooms, are furnished, and most provide individual leases for students. Rents at these communities tend to average roughly $400 per person. The majority of these communities are 10+ years old; however, there have been a few newer communities built in the past five years, including "The Retreat at Blacksburg," which is a cottage-style student apartment community located on the fringe of the urban area.

There are reports of students renting single-family homes, as well as apartments in smaller, single buildings in some of the surrounding residential neighborhoods. These properties and houses are typically occupied by upperclassmen or graduate students, and tend to be passed down from student to student, meaning that they aren't usually listed in any official capacity.

There is a campus bus system that circulates down the Patrick Henry Drive corridor, which is concentrated with student apartment communities. However, unlike ECU, the buses don't actually enter the apartment complexes. The buses ride down the corridor and stop at predetermined locations where students living in various communities can walk to in order to access the bus. Students who don't live along the corridor will typically drive, or walk if they live close enough to campus.

4.3 UNIVERSITY OF VIRGINIA

The University of Virginia (UVA) is located in the City of Charlottesville, Virginia, which is in Albemarle County. Charlottesville is in the northwestern portion of the state, along the base of the Appalachian Mountains. The City is roughly 100 miles to the southwest of Washington D.C., and about 70 miles northwest of Richmond. Albemarle County has a population of 106,878 people, including students. Charlottesville has a vibrant and active urban core, centered around a pedestrian-only main street.

The economy in Charlottesville is largely centered around the university and its associated uses, like the UVA Health Campus. Tourism also has a significant impact on the local economy. People travel to Charlottesville for the history of the City and region, to visit the historic downtown, and to enjoy the region's numerous wineries, vineyards, and agricultural landmarks.

The university campus is on the western side of the city, roughly a half mile west of the downtown area. The campus itself is well integrated into the surrounding neighborhoods. A major retail corridor along US 29 sits 1.5 miles north of the university, which is one of the heavier traveled corridors in the area due to the high density of retail and commercial use. Residential uses occupy the areas directly to the north and south of campus, which holds much of the off-campus student living options for UVA students. The western edge of the campus gives way to a mix of agricultural, rural, and natural areas.

Map 5: University of Virginia Location Map, 2017

The University of Virginia reported having 23,898 students in 2016, which makes it about 12% smaller than ECU in terms of student population. About 69% of students come from within the state of Virginia. The university has shown minimal growth in recent years, with growth from 2015 being negligible. The ratio of undergraduate to graduate students has remained relatively the same.

Roughly 30% of students at the University of Virginia live on-campus (or "on-grounds" as it is referred to at UVA), which is similar to the majority of the other case studies. The largest cluster of dorms on campus are on the western side of the campus, near the football stadium. Dorms on campus are a mix of traditional hall and suite style layouts. Most of the housing on campus is occupied by underclassmen, specifically freshman, which is typical of most other college campuses. However, there are options for upperclassmen and graduate students that feature more desired amenities such as single rooms, more study areas, better quality facilities, etc. Some of these options mimic some of the apartment-style living seen off-campus.

About 70% of the student population is living off-campus, within close proximity (about a mile radius from the campus). Housing for off-campus students is a wide mix of options that cater to many different age groups and types of students. Various off-campus apartments can be found scattered throughout the neighborhoods surrounding the campus, these apartments include smaller garden-style buildings, and larger, student-targeted facilities. Typically, the smaller garden-style buildings tend to be older than the larger communities, and are more likely to contain graduate students, or even some faculty or non-students.

House rentals are also quite common in these areas as well, with the 14th Street corridor, to the north of campus, being a prime location for some of these houses. The neighborhoods to the north and south commonly contain the student rental houses and smaller garden-style apartments.

UVA **– BY THE NUMBERS**

Total Students	**23,898**
Undergraduate	**16,331**
Growth (since 2015)	**0.1%**
Living off Campus	**70%**
Male/Female	**43%/57%**
In State Enrollment	**69%**
Faculty	**2,830**
Staff	**10,532**

In recent years, additional large, student-targeted apartment communities have been being built. These can mostly be found within a 0.5 – 1.0-mile radius of the campus, with many of them being located on and around the Jefferson Park Avenue corridor to the south of campus. The more recently built of these communities tend to feature more of the typical student amenities that national student housing trends have shown. These include: individual leases, pools, 4 bed/4 bath layouts, access to transit for students, etc. There are 3-5 of these more prominent, larger apartment communities, but the integration of the campus and the density of the neighborhood development campus prevent them from overbuilding in the area.

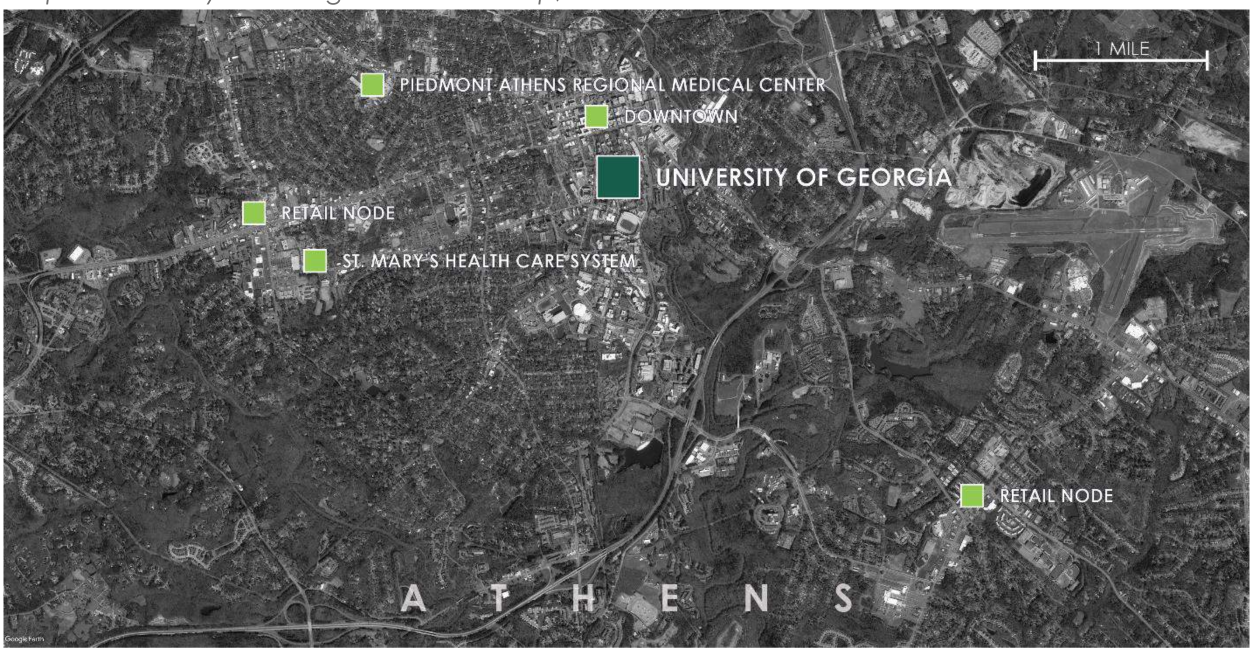
Currently, there are no major clusters of off-campus student housing that are a significant distance from the campus. This could be due to the unique historic character of the surrounding neighborhoods that make it desirable for students and non-students alike. There is a transit system that the campus uses to help get students to campus, but because of how close-by most students are, it is not heavily used, like that of the East Carolina Transit System. The buses circulate along main corridors in the neighborhoods surrounding the campus, but do not actually enter into any apartment complexes specifically. Most students who do not ride the bus tend to walk or bike into campus.

4.4 UNIVERSITY OF GEORGIA

The University of Georgia (UGA) is located in the City of Athens, which is in Clarke County, Georgia. Clarke County has a total population of roughly 124,707 people, including students. Athens is in the northwest portion of the state and is about 60 miles east of Atlanta and 130 miles west of Columbia, SC. Like Charlottesville, Athens is known for having a vibrant and eclectic downtown urban core, as well as some smaller, arts district neighborhoods throughout the city. The economy is largely driven by the university and its associated uses; however, there are two large medical facilities within the city that employ a few thousand people in the area.

The campus itself is located in the central area of the city and has been largely developed in a north-south orientation that roughly parallels the North Occonee river, which splits the city geographically. The University sits just south of and adjacent to the downtown core, making the flow of students from the university to downtown quite easy and frequent. Larger retail nodes exist to the west and southeast. The areas immediately to the west and south of campus largely consist of residential neighborhoods that contain a mix of historic single-family homes and garden-style apartment buildings. The river and associated natural areas occupy the space immediately to the east of campus.

Map 6: University of Georgia Location Map, 2017



The University of Georgia was reported to have 36,574 students in 2016, which makes its student body about 27% larger than that of ECU, in terms of student population. The university offers roughly 143 bachelor's degree programs and over 200 graduate degree programs. The university has increased its student body population from 34,536 in 2013 to 36,574 in 2016. This represents growth of about 6% in that time span.

Approximately 26% of the student body lives on campus in a variety of dorm types that are distributed across the campus. Several of these dorms, especially those that house first-year students, are high-rise buildings that hold up to 1,000 students. These specific buildings are all hall style with community shared bathroom facilities on each floor. Suite- and apartment-style living options exist for upperclassmen and graduate students that offer a more

UGA **– BY THE NUMBERS**

Total Students	**36,574**
Undergraduate	**27,951**
Growth (since 2013)	**6%**
Living off Campus	**74%**
Male/Female	**42%/58%**
In State Enrollment	**79%**
Faculty	**3,009**
Staff	**7,605**

private style of on-campus living. However, most undergraduate and graduate students typically live off campus after their first year of school.

The University of Georgia off-campus student housing situation appears to be most similar to that of East Carolina, in relation to the other five case studies. The majority of the off-campus student living in the area is located in a variety of larger, student-targeted apartment communities that feature typical student amenities. In particular, there are several "cottage-style" rental communities where students can live in cottage-style houses that can have up to 7 bedrooms, and students can pay individual leases for each bedroom. Most of these communities, and the larger, complex-style student apartments are located across the river to the east of the campus. Specific clusters are located to the southeast, across the river but within quick driving distance to the southern edge of campus, and to the northeast, across the river from downtown Athens. All of these communities are too far for walking and most biking, and most students typically drive or take the campus bus system which comes to many of the different communities.

In recent years, there have been some new off-campus student developments being built in the downtown area, directly adjacent to campus. These are denser, single building developments as opposed to the complex or cottage-style communities seen in other parts of campus. Downtown is an obvious entertainment draw for students, and many have shown the desire to pay higher premiums for housing in order to be in the downtown area.

Students who do not live in the larger apartment communities, but still live off-campus, typically live within the neighborhoods immediately to the west of campus. Students here are mostly upperclassmen and graduate-level and rent houses, duplexes, or smaller garden-style apartment units. These apartments are typically older than the larger student-target communities to the west. Additionally, trendy artsy neighborhoods farther west of downtown and the campus are home to some students as well.

Local city buses are free for students to ride but are not heavily utilized. Students who do not live close enough to campus to walk or bike to class typically drive themselves or utilize the campus bus system. The bus system serves most of the larger apartment communities on the west side of the campus and shuttles students back and forth to the university.

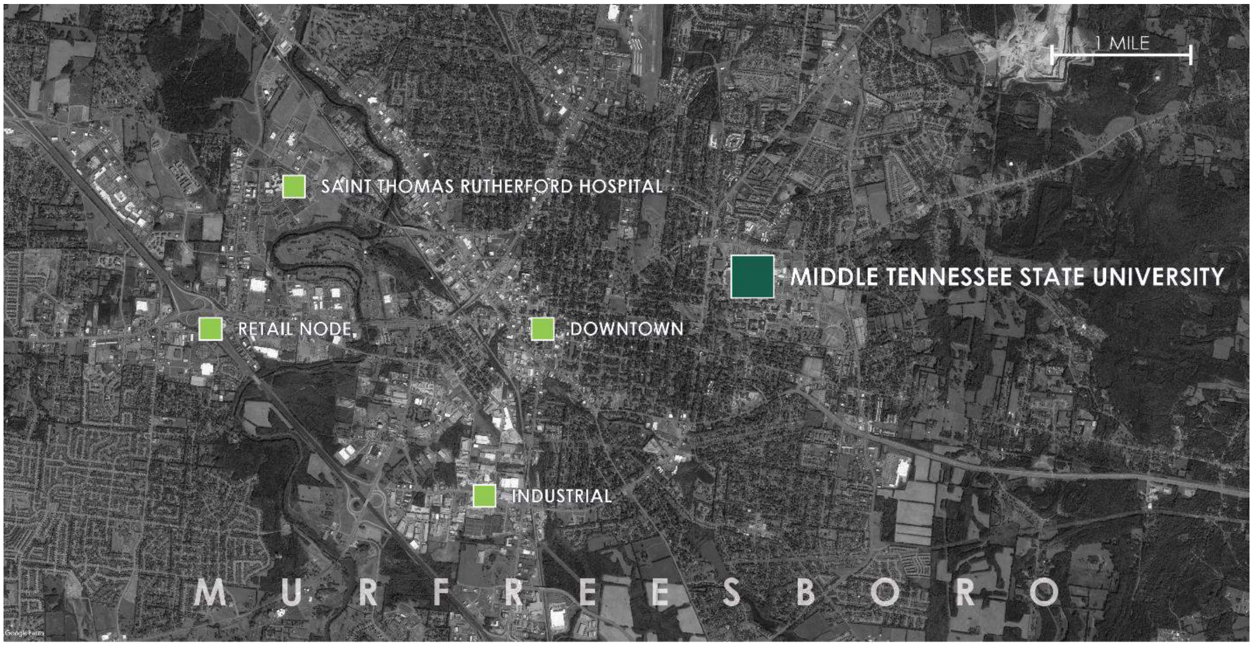
4.5 MIDDLE TENNESSEE STATE UNIVERSITY

Middle Tennessee State University (MTSU) is located in the City of Murfreesboro, which is in Rutherford County, Tennessee. Rutherford County has a population of 308,251 people, includinig students, which makes it the largest of the five case study areas. This has much to do with its proximity to the Nashville metro area, which is just 30 miles away to the northwest. Murfreesboro is also about 140 miles west of Knoxville, TN.

Murfreesboro is technically part of the larger Nashville metropolitan region, although it is on the edge of that boundary. Murfreesboro's economy is also different from the other case studies in that it is not as largely focused on the university in the area. Nissan North America, Inc. has a large facility north of the city that has roughly 8,000 employees. In addition, Amazon has a fulfillment warehouse south of the city generating another concentration of employment. These large regional draws in employment are similar to the pull that Vidant Medical has in the

Greenville region. The MTSU campus is on the eastern edge of the city, surrounded by residential neighborhoods and communities on the north, south, and west. The eastern side of the campus is adjacent to agricultural and rural areas. Downtown Murfreesboro is roughly 1.5 miles to the west of the campus, and larger retail nodes exist farther west. A large industrial sector is southwest of the university.

Map 7: Middle Tennessee State University Location Map, 2017



The university reported having 22,050 students in 2016, which makes its student population about 19% smaller than that of East Carolina. The university's student body population has slightly decreased in recent years, from 23,814 in 2013 to 22,050 in fall of 2016. This represents a decrease of about 8% in that time span.

MTSU **– BY THE NUMBERS**

Total Students	**22,050**
Undergraduate	**19,693**
Growth (since 2013)	**-8%**
Living off Campus	**87%**
Male/Female	**45%/55%**
In State Enrollment	**90%**
Faculty	**955**
Staff	**2,132**

Students at Middle Tennessee State University are not required to live on campus for their freshman year of school, which is atypical of most universities. This makes sense given that a higher percentage of the student body are commuters, due to the proximity to the larger Nashville metro region. Because of this, only about 13% of students live on campus. Most of these on-campus residence facilities are in the central portion of the campus, mainly consisting of larger, hall-style buildings. These are typical dorm facilities that are seen on most college campuses. There are also two apartment-style buildings that use four-bed/two-bath layouts for undergraduate and graduate students who want the convenience of living on campus with the flexibility of apartment living. They offer amenities typical to most apartment facilities.

With 87% of the student body living off campus, there are a wide variety of housing options that can accommodate them. Neighborhoods to the north, west, and south contain single-family houses that graduate students and those not wanting the lifestyle found at student apartment complexes typically rent. Most of these rentals are within walking distance of the campus.

Larger, student-targeted apartment facilities are common to the north and south of the main campus. These communities feature furnished apartments with individual leases and typically utilize a four-bed/four-bath layout. Rents would generally be between $400 and $600 per bed, which would include utilities in that price. These properties are popular with students because of their proximity to the campus, affordable rates, and the lifestyle amenities common with student apartments (pools, study facilities, etc.).

Transportation options for students who live in these larger communities are fairly open. Those students who live in communities within walking distance to campus tend to walk or bike. Students who live in communities that are too far for walking will typically drive to campus. There is a large variety of peripheral parking facilities on the campus that students can easily utilize with paid permits. Easy access to campus parking means that the off-campus students do not widely utilize the campus bus system.

5. EMPLOYMENT

This section analyzes annual employment and wage trends by industry over the last five years for Pitt County, describing overall growth and shifts between sectors. As available, economic momentum in the City of Greenville has also been captured. While student housing demand is not directly related to job growth, supply of market-rate apartments is reactive to an increased economic base.

5.1 MAJOR PITT COUNTY EMPLOYERS

Table 2 inventories major public and private employers operating in Pitt County. Vidant Medical Center is the largest employer in Pitt County hosting over 6,500 jobs. Many of Vidant's positions are located at the main medical campus, immediately west of Uptown Greenville. East Carolina University, Pitt County Public Schools, and Pitt Community College are all included in the ten largest employers in Pitt County, demonstrating the strong influence the education sector has on the local economy. Combined, these three employers host approximately 10,500 jobs. Hyster-Yale, a producer of lift trucks, is the largest manufacturing employer with 1,173 jobs.

Table 2: Major Employers, Pitt County, 2017

Employer	Product/Sector	Estimated Employment	Established
Vidant Medical Center	Healthcare	6,560	1951
East Carolina University	Education	5,750	1907
Pitt County Public Schools	Education	3,650	1885
City of Greenville*	Government	1,183	1956
Hyster-Yale	Lift Trucks	1,173	1974
Pitt Community College	Education	1,100	1961
Patheon, Inc.	Pharmaceuticals	1,040	2000
County of Pitt	Government	901	1760
Allicance One International	Tobacco processing	850	1907
ASMO Greenville of North Carolina	Small Electric Motors	624	1995

Note: City of Greenv ille employment estimate includes full- and part-time employees.

Source: Pitt County Dev elopment Commission

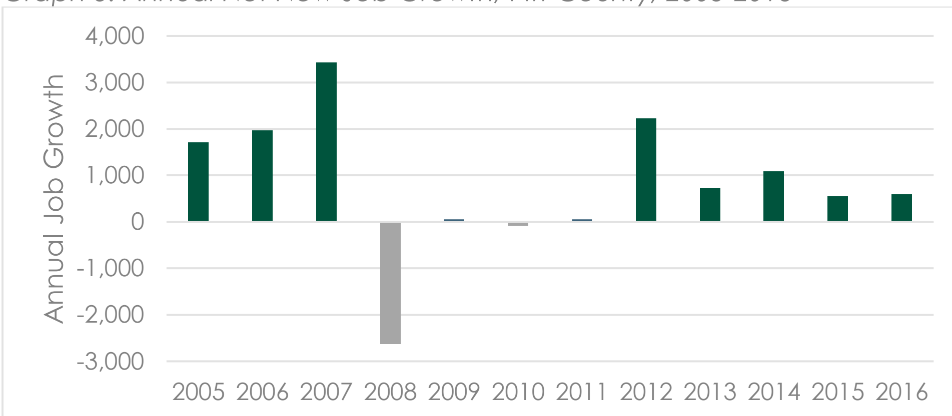
5.2 ANNUALIZED EMPLOYMENT BY INDUSTRY

5.2.1 PITT COUNTY

Annual net new job growth in Pitt County peaked in 2007, adding over 3,400 new jobs to the economy in a one-year period. Pitt County experienced a strong decline between 2007 and 2008 at the peak of the Recession, losing 2,600 positions. Following that, employment in the County remained stagnant, while many other metropolitan areas continued to experience a decline. While the high shares of Healthcare, Education, and Government jobs insulated Pitt from continued declines following the Recession, it also has resulted in slower growth in recovery.

As shown in *Graph 3*, the Pitt County economy has added between 500 and 1,000 jobs per year in the last three years. Although recent growth has been positive, it has not consistently exceeded pre-Recession levels.

Graph 3: Annual Net New Job Growth, Pitt County, 2005-2016



As shown in *Table 3*, employment in Pitt County increased by 4,662 jobs, or 6.7%, between 2011 and 2016. The available data shows total annual employment in 2016 was 74,960, representing the largest economic base in the last decade. Healthcare and Social Assistance is the largest industry in the County, driven by Vidant, followed by Educational Services and Retail Trade. Together, these three sectors comprise 49.2% of the total employment.

Table 3: Annualized Employment by Industry, Pitt County, 2011-2016

			2011-2016 Δ	
Industry	**2011**	**2016**	**#**	**%**
Accommodation and Food Services	7,498	9,003	1,505	20.1%
Health Care and Social Assistance	15,833	16,519	686	4.3%
Construction	2,382	3,035	653	27.4%
Retail Trade	8,382	9,025	643	7.7%
Administrative and Waste Services	4,185	4,607	422	10.1%
Professional and Technical Services	1,516	1,806	290	19.1%
Educational Services	10,823	11,044	221	2.0%
Real Estate and Rental and Leasing	627	823	196	31.3%
Management of Companies and Enterprises	759	932	173	22.8%
Manufacturing	6,085	6,249	164	2.7%
Finance and Insurance	1,800	1,954	154	8.6%
Other Services, Ex. Public Admin	1,386	1,516	130	9.4%
Wholesale Trade	1,695	1,743	48	2.8%
Utilities	499	519	20	4.0%
Transportation and Warehousing	891	894	3	0.3%
Mining	23	16	-7	-30.4%
Arts, Entertainment, and Recreation	605	597	-8	-1.3%
Agriculture, Forestry, Fishing & Hunting	599	591	-8	-1.3%
Information	972	924	-48	-4.9%
Public Administration	3,226	3,163	-63	-2.0%
Total	**69,786**	**74,960**	**5,174**	**7.4%**

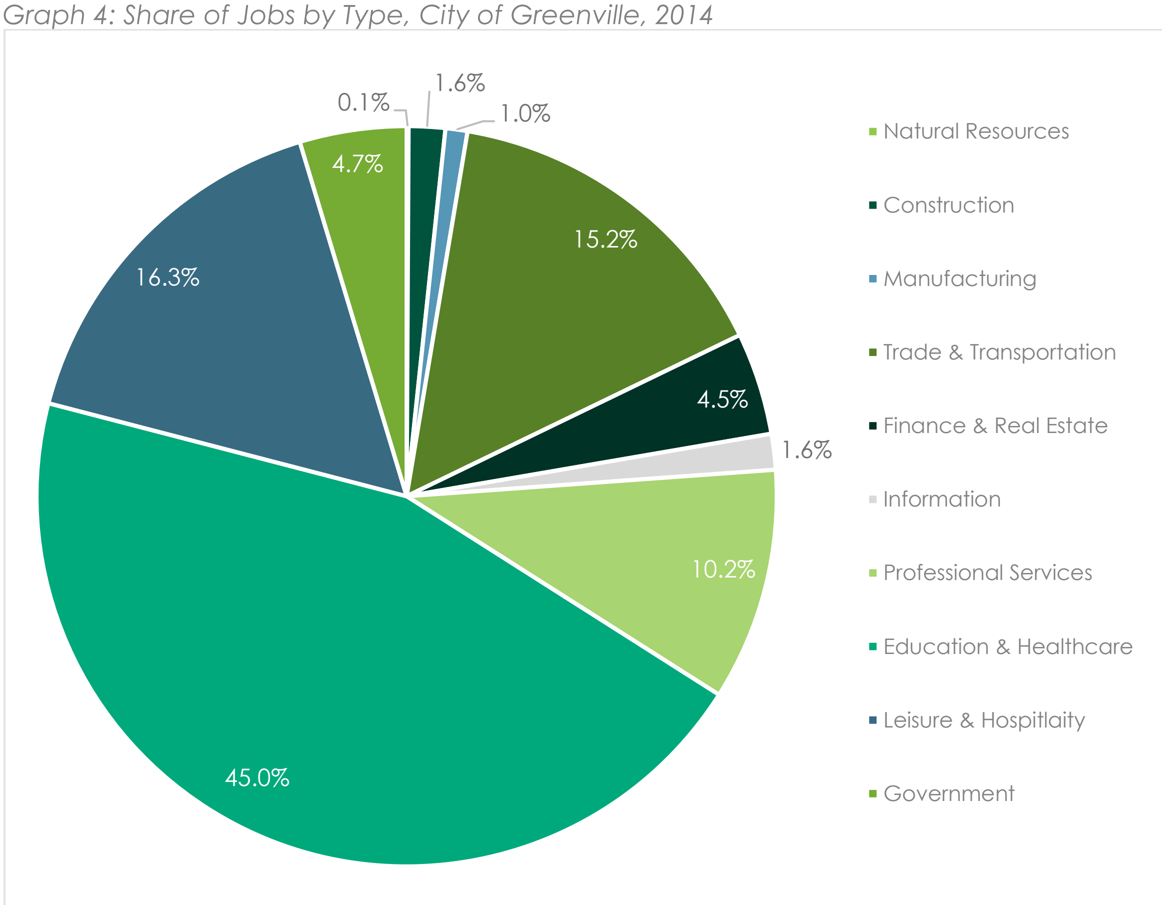
Source: NC Labor and Economic Analysis Div ision; Kimley-Horn

The gain in jobs in Pitt County was largely attributable to growth in Accommodation and Food Services, which accounted for nearly one-third of all jobs added from 2011 to 2016. Other strong growth sectors include Healthcare and Social Assistance, Construction, and Retail Trade.

5.2.2 CITY OF GREENVILLE

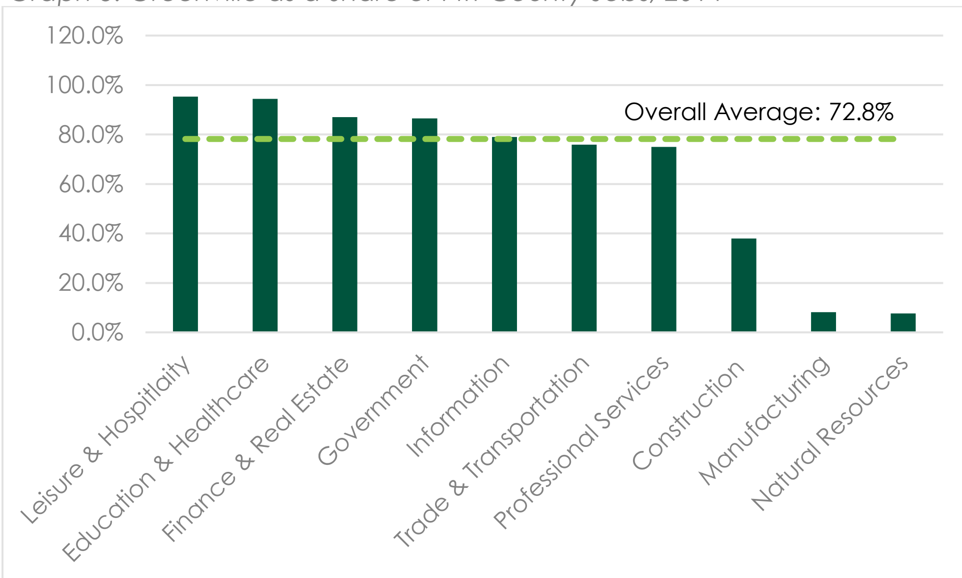
Based on the most recent place-of-work employment data available for Greenville, there were an estimated 52,735 jobs in 2014, representing a 33.9% increase over five years. The industry with the greatest number of employees was Health Care and Social Assistance, the second largest was Educational Services, and Accommodation and Food Services was third. Together, these three super-sectors comprise nearly 60% of the total employment in the city. The trends in employment highlight the strong impact of Vidant and higher education facilities in Greenville and Pitt County.

Graph 4: Share of Jobs by Type, City of Greenville, 2014



As shown in *Graph 5*, Greenville comprises 72.8% of the total jobs in Pitt County. The City has higher than average shares in five out of the 10 industry super-sectors. The industries with the largest share of total jobs are Education and Healthcare, Leisure and Hospitality, and Finance and Real Estate. It should be noted that low-share sectors, like Construction, Manufacturing, and Natural Resources, typically gravitate to areas with large quantities of available land, often outside urban centers.

Graph 5: Greenville as a Share of Pitt County Jobs, 2014

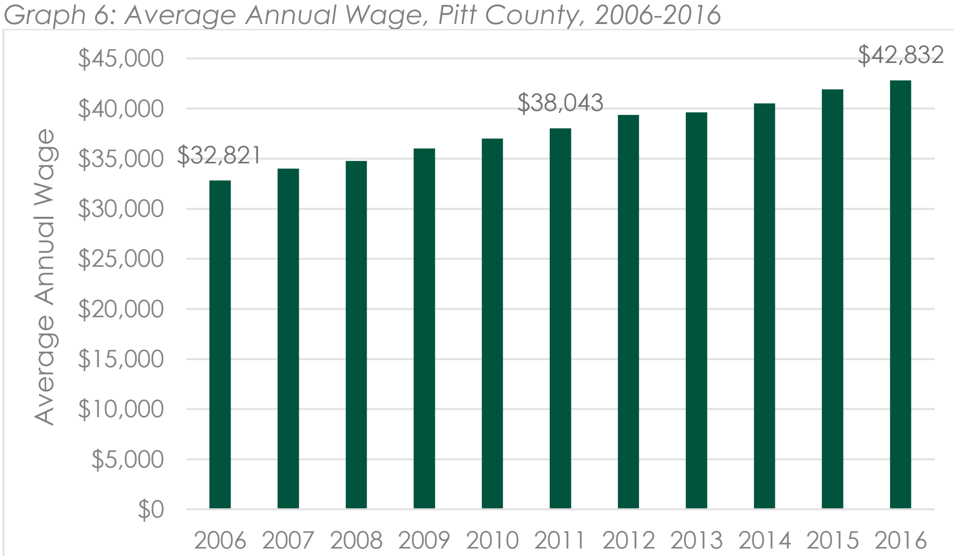


5.3 WAGES

5.3.1 PITT COUNTY

As shown in *Graph 6*, the average annual wage in Pitt County in 2016 was $42,832, a 30.5% increase from the $32,821 measure one decade earlier. Unlike many other metropolitan regions, average wages in Pitt County were not noticeably impacted by the 2007-2009 Recession, demonstrating 2.5% to 3.5% growth each year over the last decade, with the exception of 2012-2013 when there was a modest 0.7% increase. This is likely due to the higher share of healthcare and education jobs in the County, which were largely immune from larger-scale wage impacts. As a point of comparison, the state-wide wage average in 2016 was estimated at $47,259.

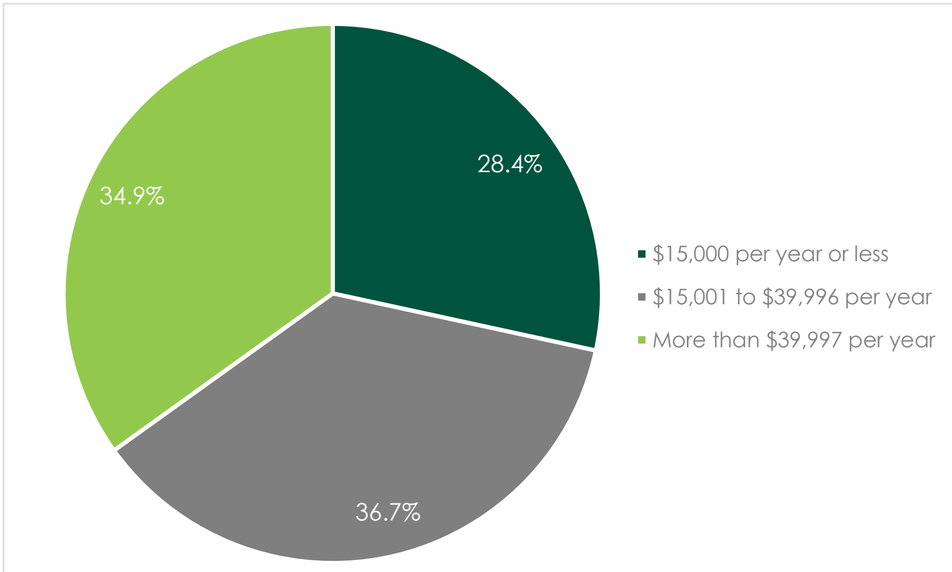
Graph 6: Average Annual Wage, Pitt County, 2006-2016



5.3.2 CITY OF GREENVILLE

Based on data provided from the US Census, approximately 36.7% of the jobs in Greenville have an average annual wage between $15,001 and $39,996 (*Graph 7*). Wage distribution, based on the ranges available from the US Census, are relatively evenly divided, although middle-income wages represented the highest share in 2014.

Graph 7: Share of Jobs by Average Annual Wage, City of Greenville, 2014



6. DEMOGRAPHICS

This section analyzes population and household trends by age, income, and tenure for Greenville and Pitt County. Five-year population and household forecasts are also provided.

6.1 POPULATION

As shown in *Table 4*, the population of Greenville in 2017 is 91,005 people, an increase of nearly 6,300, or 7.4%, from the 2010 Census. In comparison, Pitt County grew at a lower rate of 5.8% between 2010 and 2017, equating to an absolute increase of 9,747 residents. Much of the growth in Pitt County occurred in Greenville, which captured 64.5% of the County's total population increase since 2010. The compound annual growth rates (CAGR) between 2010 and 2017 for Greenville was 1.0% and Pitt County was 0.8%.

Table 4: Comparison of Population Trends, 2010-2017

				2010-2017 Δ		
Area	**2000**	**2010**	**2017**	**#**	**%**	**CAGR**
Greenville	66,978	84,715	91,005	6,290	7.4%	1.0%
Pitt County	133,798	168,148	177,895	9,747	5.8%	0.8%
City % County	**50.1%**	**50.4%**	**51.2%**	**64.5%**		

Source: ESRI Business Analyst; Kimley-Horn

Table 5 demonstrates Greenville's population change between 2010 and 2017 by age cohort. Residents over age 55 experienced the strongest absolute growth in the last seven years, as Baby Boomers seek to age in place upon retirement. The 25 to 34 age cohort, representing the older segment of the Millennial generation, also demonstrated strong growth. These residents, which are strong drivers of demand for apartments, typically identify as young professionals and are likely working in Greenville's robust education or healthcare industries. Minor losses were noted in the younger segment of the Millennials, including those enrolled in high school and college.

Table 5: Population by Age Cohort, City of Greenville, 2010-2017

			2010-2017 Δ	
Cohort	**2010**	**2017**	**#**	**%**
0 - 14	13,470	14,106	636	4.7%
15 - 24	26,855	25,572	-1,282	-4.8%
25 - 34	13,724	15,289	1,565	11.4%
35 - 44	8,810	9,647	836	9.5%
45 - 54	8,133	8,736	604	7.4%
55 - 64	6,692	8,099	1,407	21.0%
65 - 74	3,473	5,460	1,987	57.2%
75 - 84	2,457	2,730	273	11.1%
85+	1,186	1,365	179	15.1%
Total	**84,715**	**91,005**	**6,290**	**7.4%**

Source: ESRI Business Analyst; Kimley-Horn

6.2 HOUSEHOLDS

Households in Greenville increased 7.6% from 2010 to 2017, while Pitt County experienced 5.9% growth (*Table 6*). The compound annual growth rates (CAGR) for Greenville and Pitt County were 1.1% and 0.8%, respectively. Households in both geographies increased at a more rapid pace than population, indicating a declining household size over time. This is consistent with national trends, driven by smaller household sizes in the Millennial and Baby Boomer generations.

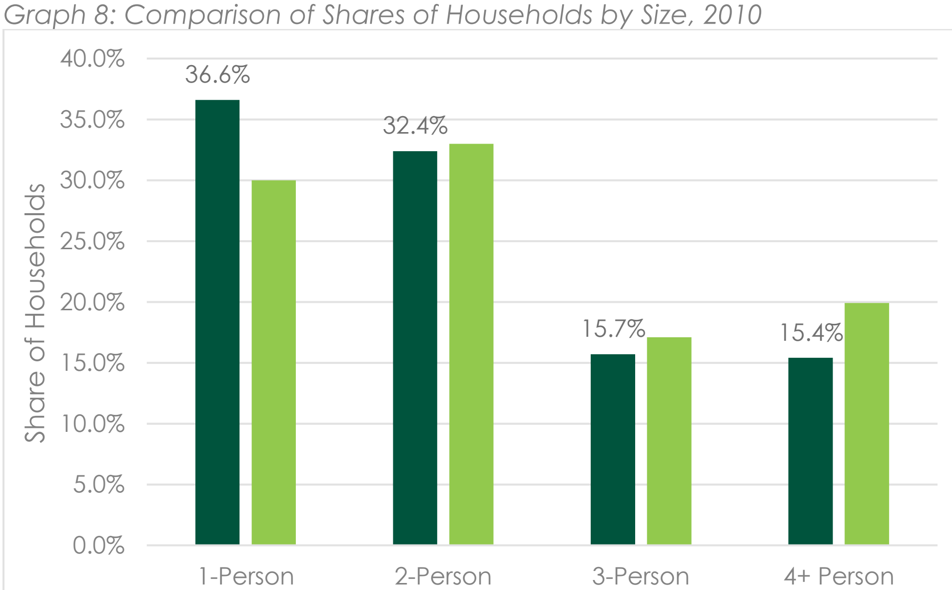
Table 6: Comparison of Household Trends, 2010-2017

				2010-2017 Δ		
Area	**2000**	**2010**	**2017**	**#**	**%**	**CAGR**
Greenville	27,696	36,139	38,897	2,758	7.6%	1.1%
Pitt County	52,539	67,577	71,553	3,976	5.9%	0.8%
City % County	**52.7%**	**53.5%**	**54.4%**	**69.4%**		

Source: ESRI Business Analyst; Kimley-Horn

In 2017, Greenville and Pitt County reported average household sizes of 2.19 and 2.40, respectively. As shown in *Graph 8*, one- and two-person households comprise more than two-thirds of Greenville, higher than the demonstrated share in Pitt County (63.0%). The higher share of small household sizes in Greenville is largely influenced by the prominence of Millennial and Baby Boomer generations, many of whom do not have related children living at home. The share of larger household sizes is higher elsewhere in Pitt County, driven by families.

Graph 8: Comparison of Shares of Households by Size, 2010



As of 2017, households earning less than $15,000 represent the most prevalent cohort in Greenville, at 20.7% of the total (*Graph 9*). Households earning $15,000 to $24,999 annually comprises the second largest cohort, followed by equal shares of those with an annual income of $35,000 to $49,999 and $50,000 to $74,999.

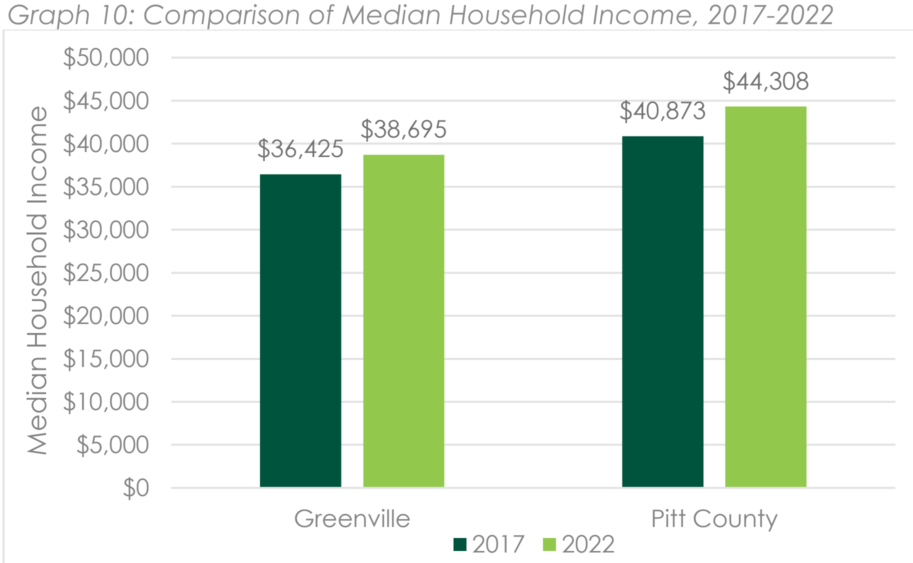
Graph 9: Comparison of Shares of Households by Income, 2017

The shares of low income households in Greenville, and throughout Pitt County, are influenced by the presence of East Carolina University and its more than 29,000-student body living both on- and off-campus. Overall, Pitt County represents higher shares of households earning over $50,000 annually when compared with Greenville. In fact, 42.6% of the households in the County earn more than $50,000 annually, compared to 37.7% in Greenville.

6.3 MEDIAN HOUSEHOLD INCOME

Pitt County currently has a median household income that is 12.2% higher than Greenville (*Graph 10*). Greenville's median income in 2017 was estimated at $36,425, with a forecast of $38,695 by 2022. The median household income in both geographies is expected to grow over the next five years, although Greenville's 6.2% increase is lower than 8.4% for the County.

Graph 10: Comparison of Median Household Income, 2017-2022

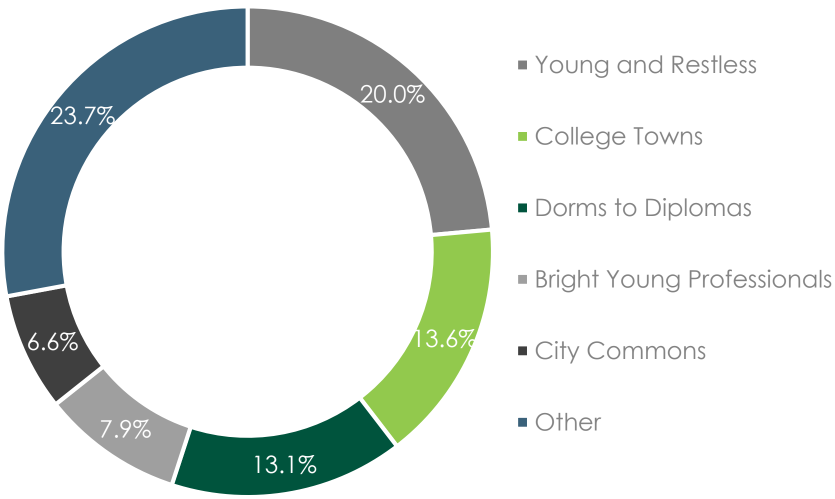


6.4 TAPESTRY SEGMENTATION

Tapestry segmentation, provided by Environmental Systems Research Institute (ESRI), divides households into 67 groups based on consumer spending patterns and lifestyle attributes. Data provided in this type of analysis is increasingly being used by developers, builders, and retail tenants in the site selection and due diligence process.

As demonstrated in *Graph 11*, the five most commonly represented tapestry segments in Greenville comprise 61.2% of the total household inventory. The top three segment classifications each capture more than 10% of the households in Greenville. Brief descriptions of the top segments representing the area are provided below.

Graph 11: Share of Households by Tapestry Segment, City of Greenville, 2017



YOUNG AND RESTLESS (20.0%)

This segment is typically comprised of well-educated young professionals, some of whom are still completing their education. They are regularly employed in professional or technical occupations. This segment ranks in the top five for renters, movers, college enrollment, and labor participation.

Housing Preference: Multi-family

Defining Traits

- One of the youngest markets in the United States; half are less than 35
- Primarily single-person households
- Highly mobile as they begin their careers, changing addresses frequently
- Apartment rentals are popular with over 70% seeking buildings containing five+ units
- High labor force participation at over 75%
- Two out of three have some college

COLLEGE TOWNS (13.6%)

About 50% of the residents living in a College Towns market are enrolled in college, and the remaining balance work there. Many households are non-family, with college students often seeking to live alone or with roommates. This is a younger segment with a median age of 24.3.

Housing Preference: Multi-family

Defining Traits

- Areas have a mix of densely developed on- and off-campus housing targeted at students
- Off-campus, low rent housing stock comprises about half of the inventory
- Over three-quarters of the households are renter-occupied
- Bike and pedestrian friendly
- Typically have limited incomes, resulting in thrifty spending habits

DORMS TO DIPLOMAS (13.1%)

On their own for the first time, this segment is just learning about finance and cooking. This is the first online generation, having had lifelong use of computers, the Internet, and cell phones. A mix of dorms, on-campus and off-campus housing cater to young renters. They're the youngest market with half of the population aged 20–24.

Housing Preference: Multi-family

Defining Traits

- 80% of the housing are apartments; many older homes in town have been converted into multifamily living units. Only one in ten homes are owner occupied.
- The average rent, $990, is the same as the US average.
- Vehicles are just a means of transportation—economy and environmental impact are factors in purchases; used, imported subcompact cars are a popular choice.
- They value socializing, having fun, and learning new things.

It is important to note the strong influence students have in the City of Greenville from a demographic perspective. The top three tapestries are directly related to students, their spending potential, and their desires for where they want to live and recreate. As demonstrated above, the three largest segments represent households with a strong propensity for primarily multi-family rental residential product.

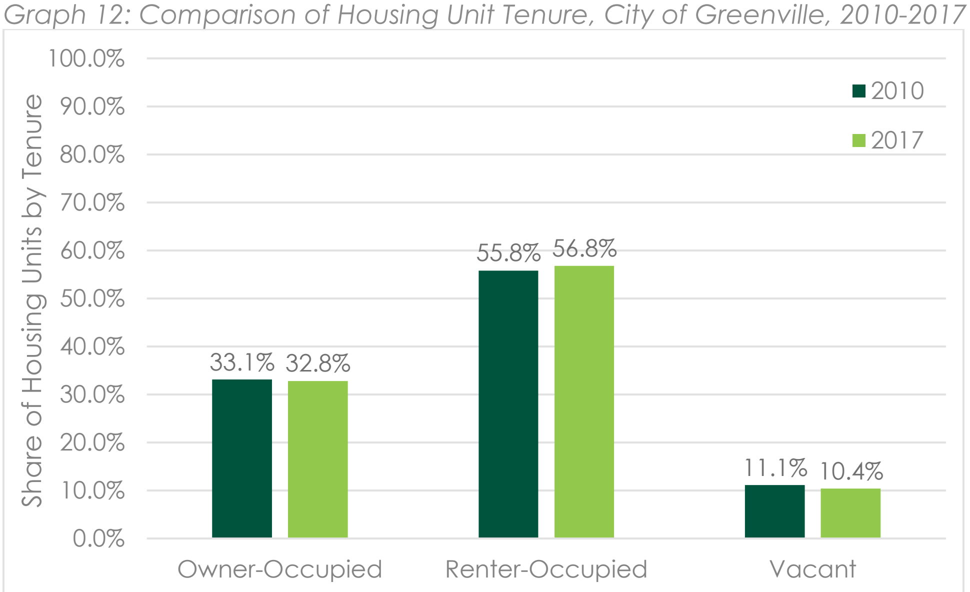
6.5 HOUSING TENURE

Tenure trends and forecasts have been prepared for both housing units and households. Housing unit tenures take into consideration occupied and vacant structures. Tenure is defined as the financial agreements under which someone has the right to reside in a housing unit, most commonly owning or renting. Household tenure excludes vacant housing units, focusing only on occupied dwellings.

6.5.1 HOUSING UNIT TENURE

As shown in *Graph 12*, Greenville's shares of vacant, renter-, and owner-occupied housing have remained relatively stable since 2010. More than one-half of the city's housing units are renter-occupied, catering to the large student population.

Graph 12: Comparison of Housing Unit Tenure, City of Greenville, 2010-2017



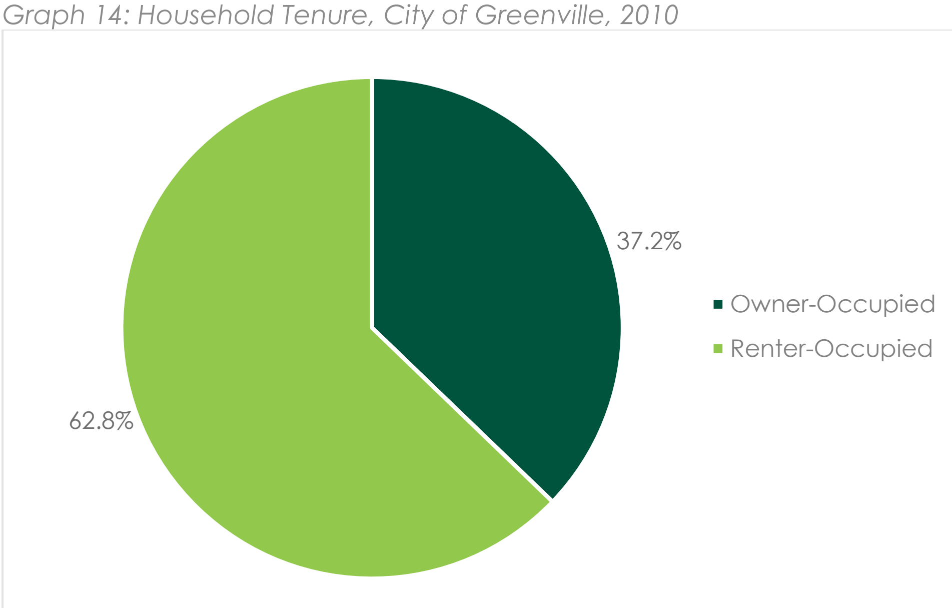
As demonstrated in *Graph 13*, Greenville has a greater renter-occupied share than Pitt County, due to the presence of the East Carolina University campus and immediately surrounding housing to serve it. The renter-occupied shares of both geographies grew between 2010 and 2017, with Greenville experiencing a larger increase. Renter shares in both geographies have increased since 2000, consistent with national trends. Increases between 2010 and 2017 are largely influenced by the Great Recession and mortgage crisis, which shifted many households to a renter tenure. Increased propensity to rent for longer periods of time by Millennials has also impacted this trend.

Graph 13: Comparison of Renter-Occupied Housing Unit Tenure, 2000-2017

6.5.2 HOUSEHOLD TENURE

Excluding vacant housing units, the household tenure in Greenville in 2010 was 37.2% owner-occupied and 62.8% renter-occupied (*Graph 14*). These measures are important when equating household growth to rental unit demand.

Graph 14: Household Tenure, City of Greenville, 2010

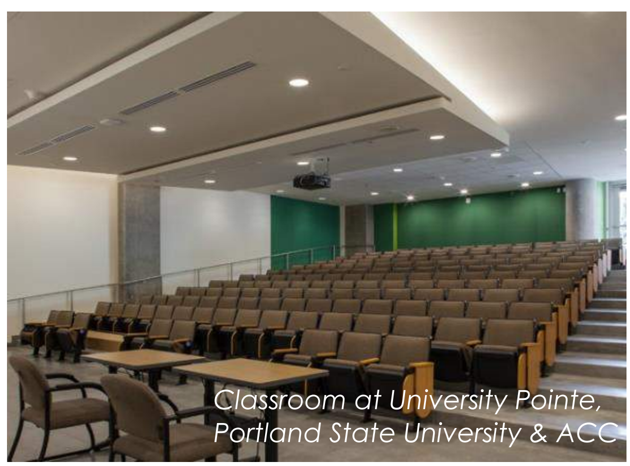


7. STUDENT-TARGETED APARTMENT PERFORMANCE

7.1 NATIONAL TRENDS IN STUDENT HOUSING

Investment in student housing has increased dramatically in recent years as new players, such as conventional multifamily players, large pension funds, and private equity investors, have entered the landscape. The share of total sales of student housing properties to foreign investors has increased from 3% in 2013 to more than 40% in 2017. The introduction of the public-private partnership (P3) model has become an attractive way for schools to address the need for upgrading facilities and growing demand of increasing enrollment without shouldering the risk and cost burden on their own. Investors and developers are similarly attracted to student housing as a result of the predictability of cash flows and recession resilience. Typical key terms of P3's include long-term ground lease exceeding 50 years with multiple 10-year renewal options, non-compete provisions, collaborative marketing efforts, and ground lease payments that are adjusted based on how much non-revenue generating space, such as classrooms or faculty offices, the university wants in the structure.

The national inventory of off-campus student housing has grown by 56% over the past decade. This expansion of student housing development has been unevenly distributed across the country. While some markets are beginning to experience excess supply, housing marketed explicitly to students is still non-existent in others, especially Tier 2 schools (smaller than flagship state schools). From 2015-2017, purpose-built student housing was constructed for the first time at more than 40 universities. States in the Sun Belt, which tend to have greater availability of buildable lots, have led the way in the development of student housing, while the Midwest and Northeast are beginning to catch up. Much of the newer product coming online is replacing old, obsolete housing rather than expanding the existing supply, and is being built closer to campus.


Classroom at University Pointe, Portland State University & ACC

Student housing developments are following the trend of other apartment developments in being highly amenitized, with fitness centers and yoga studios, pools, and in-unit laundry. The non-revenue generating spaces, however, often differ from non-student communities as some include classrooms, dining halls, and study rooms. Some units have kitchens, while others are "dorm" style with communal kitchen areas. Other noteworthy amenities include a shuttle bus to campus, extra internet bandwidth to handle numerous devices, and fully-furnished options. Unit mixes are weighted towards multiple bedrooms (two, three, or four), but some communities offer single units also.

Location, primarily proximity to campus, plays an even more significant role with student housing communities. While the national average monthly rent per bed is $618, *Table 7* demonstrates the 9% premium commanded by properties located less than 0.5 mile away from campus. The greater growth rate for properties 0.5 to one-mile away signals higher demand for less-expensive but still well-located communities.

Table 7: National Avg. Rents by Distance from Campus, 2017

Distance from Campus (mi)	Avg Rent	Rent Growth
< 0.5	$672	2.3%
0.5 - 1.0	$553	2.7%
> 1.0	$537	1.7%

Source: Axiometrics

According to Axiometrics, 60.1% of all off-campus student-targeted bedrooms on a nation-wide basis were preleased for the 2016/2017 academic year, up from 55.5% for the same period the previous year. Student enrollment was expected to grow by 2.2% throughout 2017. Over the next five years, student enrollment is expected to grow at a rate of 1.6% per year at public universities. Private universities are expected to grow at a slightly lower rate of 1.2% per year.

It is important to note that continuation of recent positive trends is uncertain due to the expected slight decline in the enrollment growth rates from 2018 through 2022. Individual property performance will largely depend on the local market dynamics and the overall health of the university being serviced by the community.

7.2 GREENVILLE STUDENT APARTMENT PERFORMANCE

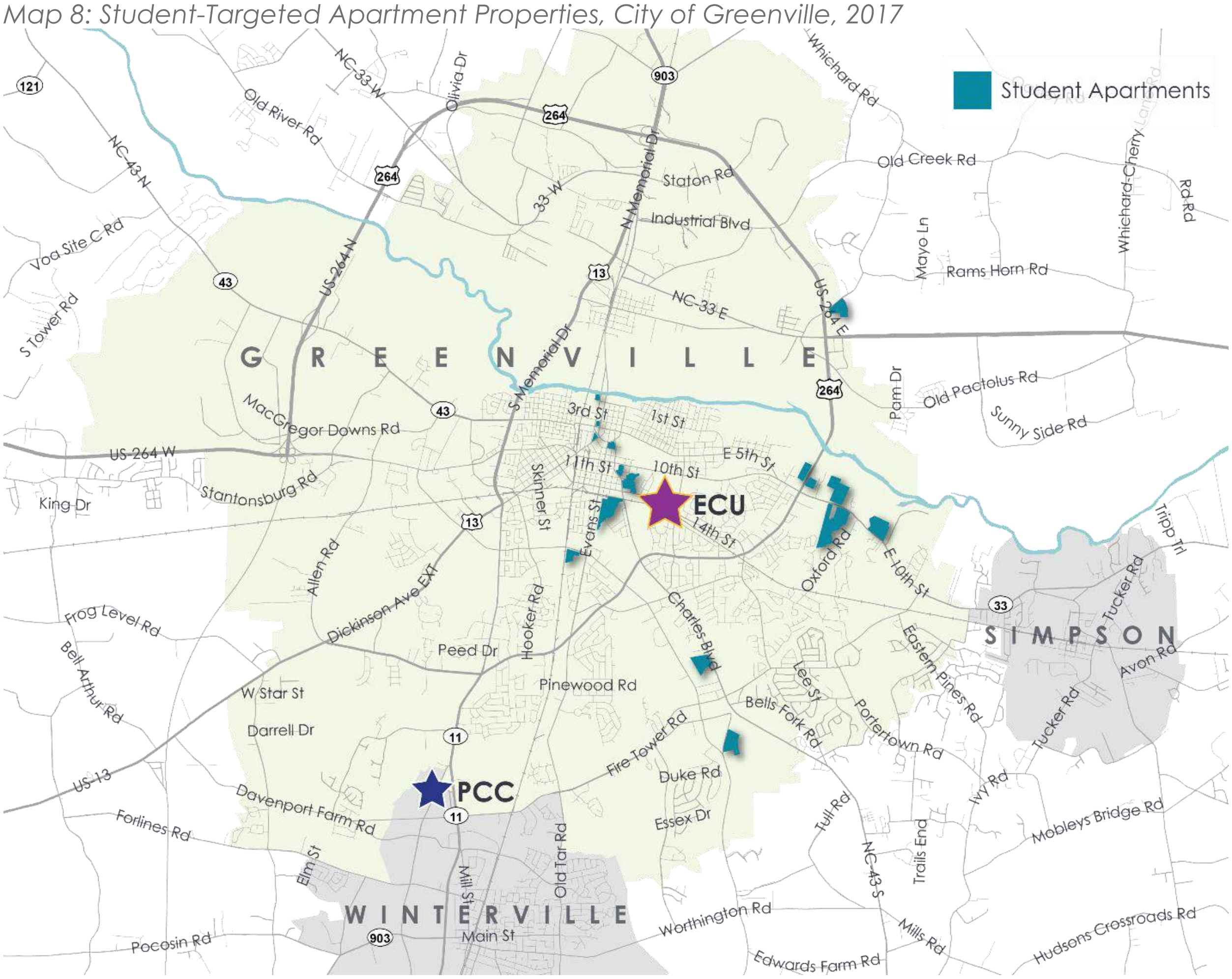
Student apartment performance trends for Greenville are based on data provided by REIS, a third-party commercial real estate data source. Data on the large off-campus student housing communities was also verified through ECU's data system. Trends presented in this section focus on the larger, professionally-managed, off-campus student communities in Greenville. The communities all lease by the bedroom, and primarily offer furnished units. While they exclusively target students based on the floorplans and leasing arrangements, anybody can technically rent a bedroom. Based on data provided by REIS, most of the identified communities are comprised of 90-95% (or more) students.

The majority of ECU's off-campus students live in large, student-targeted apartment communities that are spread throughout the City of Greenville. These communities offer student amenities such as four-bed/four-bath layouts, pools, study facilities, activity clubhouses, and more. There is far more variation in where Pitt Community College students live, given a wider age and experience range of the students when compared to ECU.

In total, there are currently 16 active properties that are specifically targeting student renters in Greenville. These properties exist in three main clusters – east of the university down the 10th Street corridor, south of the university down the Charles Boulevard corridor, and those within an immediate radius of the university and Uptown. The performance trends exclude smaller, individually-owned units, as well as apartment communities with less than 25 units, many located in the Grid. Communities inventoried include:

- The Davis
- Copper Beech
- 33 East
- Campus Pointe
- Campus Towers
- Sunchase
- Paramount 3800 (Captain's Quarters)
- First Street Place
- The Boundary
- The Province
- The Bower
- University Suites
- University Park
- The Landing
- The Bellamy
- The District at Tar River

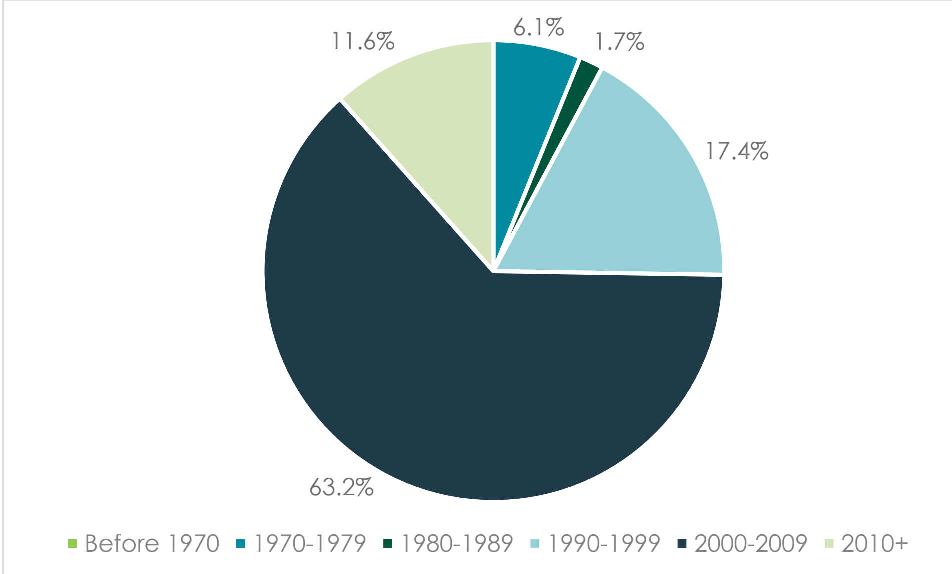
Map 8: Student-Targeted Apartment Properties, City of Greenville, 2017



7.2.1 INVENTORY

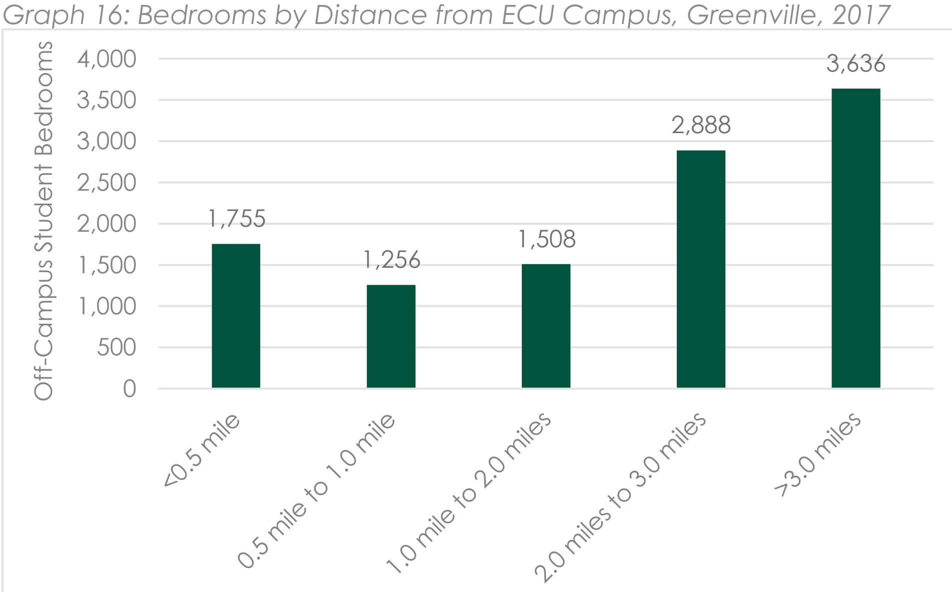
Focusing on professionally managed communities with more than 25 units, there are over 11,000 bedrooms targeting student renters in the City of Greenville. As shown in Graph 15, nearly two-thirds of the off-campus student-targeted housing was completed between 2000 and 2009. The 6,979 bedrooms completed in this decade are contained in nine individual communities. Student communities completed between 1990 and 1999 represent the next most active decade, at 17.4% of the inventory. It should be noted that no student communities were completed prior to 1970.

Graph 15: Share of Student Bedrooms by Decade Completed, Greenville, 2017



Nearly one-third of the off-campus student bedrooms in Greenville are located more than three miles from campus, relying heavily on bus transit system (Graph 16). Another 26.2%, or 2,888 bedrooms, are located between two and three miles from campus. This is due to the larger development size exhibited in the communities located farther from the urban core of Greenville. In total, nearly 60% of the off-campus inventory is located more than two miles from ECU's campus.

Graph 16: Bedrooms by Distance from ECU Campus, Greenville, 2017



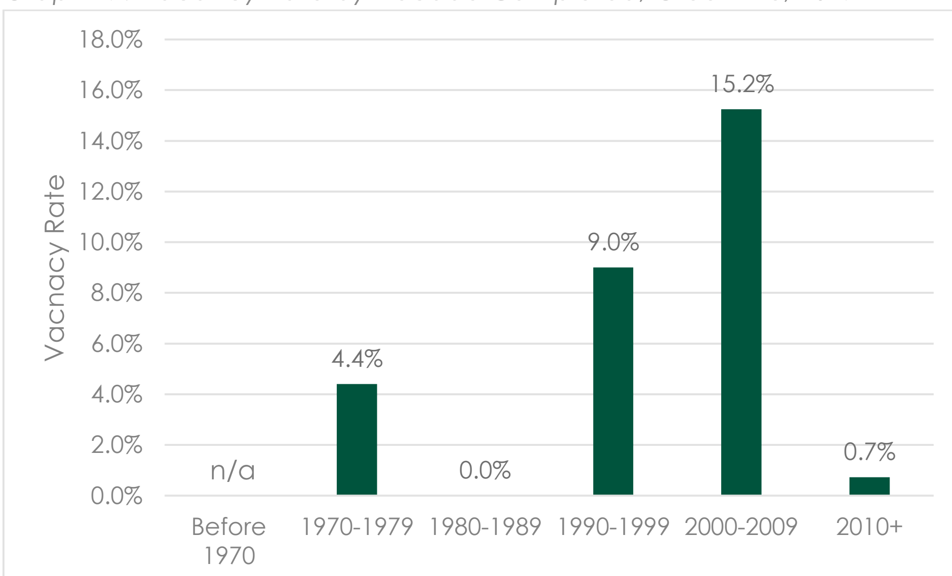
7.2.2 VACANCY

The estimated vacancy rate of off-campus, student-targeted housing is currently 11.6%, equating to 1,276 available bedrooms. Rates by bedroom vary widely with eight of the 15 communities reporting current vacancies at 5.0% or less, three with 5% to 10%, and the remaining five have vacancies higher than 10%.

Based on data provided by REIS, aggregate vacancy rate in Greenville's off-campus student housing communities is 6% higher than the United States average, estimated at 95.0%. It should be noted that nationally, the student housing vacancy is balanced. Industry experts typically quote 95% as a good target for vacancy, allowing students the ability to move between bedrooms, as necessary, during the school year.

As shown in *Graph 17*, the 2,888 bedrooms completed between 2000 and 2009 have the highest vacancy rate of 15.2%. Bedrooms completed between 1990 and 1999 have an aggregate vacancy rate of 9.0%.

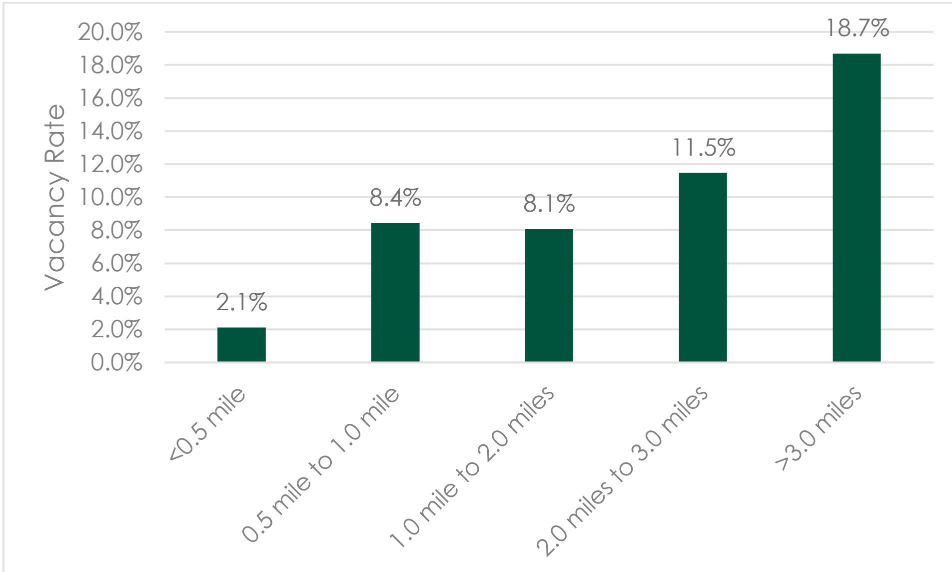
Graph 17: Vacancy Rate by Decade Completed, Greenville, 2017



It should be noted that the 2000-2009 decade of completion includes Paramount 3800 (formerly Captain's Quarters, North Campus Crossing), located on the north side of the Tar River, four miles from the ECU campus. This community has struggled financially, filing for foreclosure in 2016 and recently changing ownership. The community has a current vacancy rate of over 21%, resulting in 360 available bedrooms. This represents the largest concentration of available units in the off-campus Greenville inventory. In fact, of the 1,276 available bedrooms in Greenville, Paramount 3800 makes up approximately one-quarter.

Generally, vacancy rates in off-campus student communities in Greenville increase the farther away from campus the communities are located. The three communities located less than 0.5 miles from ECU's campus have an aggregate 2.1% vacancy rate, while those more than three miles have the highest rate at 18.7% (*Graph 18*). Recall that the industry standard for a healthy student community is approximately 5.0%.

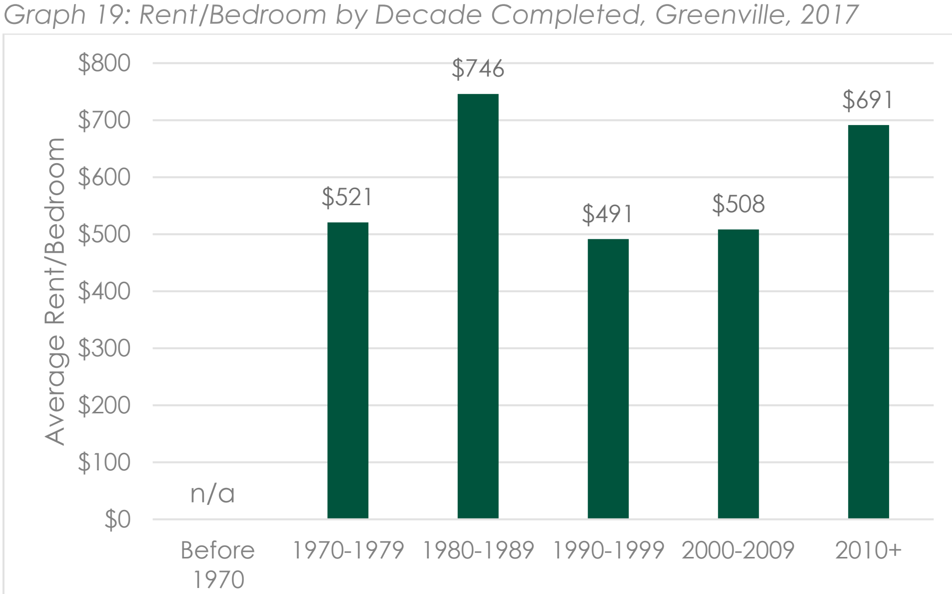
Graph 18: Vacancy by Distance from ECU Campus, Greenville, 2017



7.2.3 AVERAGE MONTHLY RENTS/BEDROOM

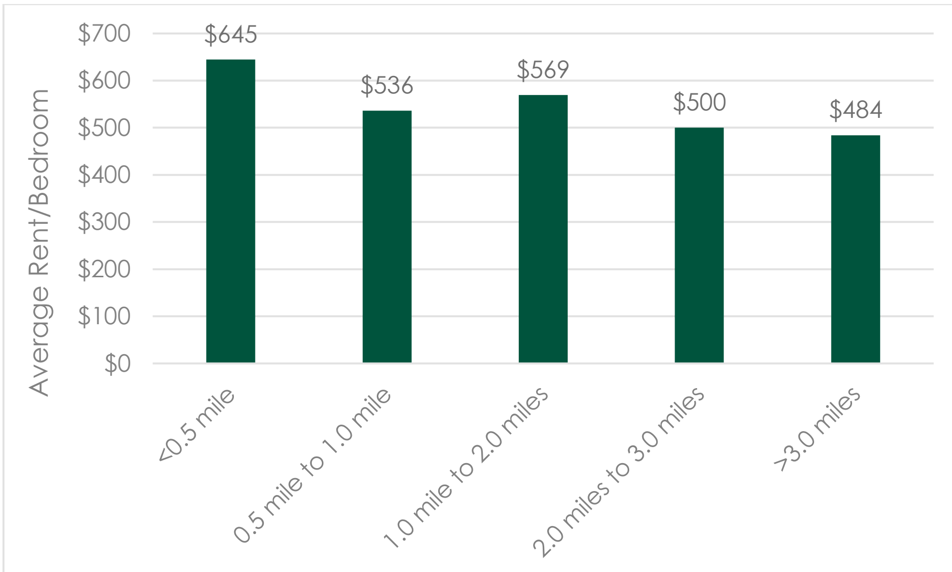
The average monthly lease rate per bedroom in the 16 professionally managed off-campus student communities is currently estimated at $531 per month. There appears to be limited correlation between decade completed and average rent per bedroom. Communities completed between 1990 and 1999 have the lowest average rent per bedroom at $491, while those completed between 1980 and 1989 have the highest at $746 (Graph 19). There was only one community completed between 1980 and 1989, Campus Towers, which is located less than one-half mile from campus. Campus Tower only offers one- and two-bedroom floorplans, skewing the average lease rates higher.

Graph 19: Rent/Bedroom by Decade Completed, Greenville, 2017



Measuring average rents per bedroom by distance from the ECU campus provides a clearer indicator of correlation. As shown in *Graph 20*, communities located less than 0.5 miles from campus have the highest average rents per bedroom at $645, while those more than three miles away have the lowest at $484.

Graph 20: Rent/Bedroom by Distance from ECU Campus, Greenville, 2017



7.3 COMPARABLE STUDENT COMMUNITY PERFORMANCE

This section analyzes vacancy rates and rents by unit type for six comparable student communities in the City of Greenville. The comparables, shown on *Map 9*, were selected based on age and quality of product. It should be noted that the selection of comparable student communities also focused on profiling developments that are less than a mile from campus, and greater than a mile from campus. Three communities were selected to represent each proximity range.

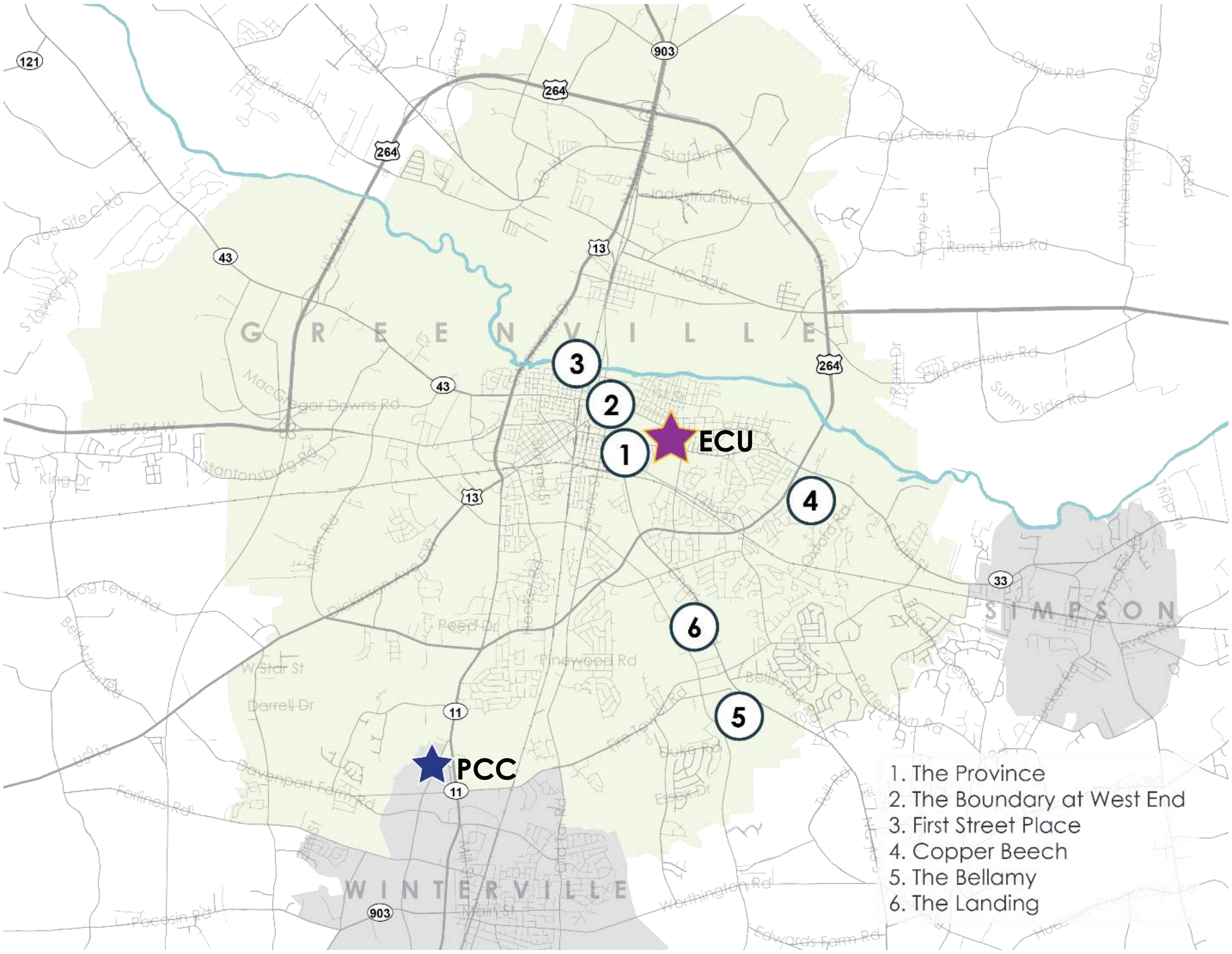
The six comparable communities contain a total of 4,742 bedrooms (*Table 8*). The identified bedrooms currently have a quoted monthly rent of $573. The 1,566 bedrooms identified as comparable student product within one mile of campus have an average monthly rent per bedroom of $694, compared to $514 for the three farther away, a 35% premium.

Table 8: Comparable Off-Campus Student Communities, City of Greenville, 2017

Map Key	Community	Location	Management	Year Open	Bedrooms by Floorplan 1BR	2BR	3BR	4BR	Total Bedrooms	Avg. Rent/ Bedroom
1	The Province	1920 Exchange Drive	EDR	2010	31	62	171	464	728	$611
2	The Boundary at West End	630 Cotanche Street	Preiss	2015	71	172	135	172	550	$797
3	First Street Place	400 West 1st Street	Campus Advantage	2009	113	130	45	0	288	$708
Subtotal/Avg. <1.0 Mile from Campus					215	364	351	636	1,566	$694
4	Copper Beech	2001 Copper Beach Way	ACH	2008	72	178	390	592	1,232	$517
5	The Bellamy	2200 Bellamy Circle	Caliber Living	2008	0	176	0	880	1,056	$439
6	The Landing	1920 Exchange Drive	Pierce	2007	0	216	144	528	888	$597
Subtotal/Avg. >1.0 Mile from Campus					72	570	534	2000	3,176	$514
Total/Avg.					**287**	**934**	**885**	**3,272**	**4,742**	**$573**
Share					**6.1%**	**19.7%**	**18.7%**	**69.0%**		

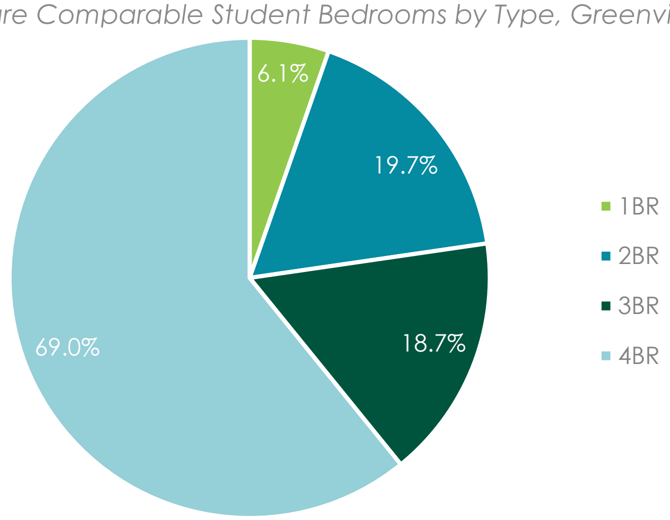
Source: ECU; REIS; Kimley-Horn

Map 9: Comparable Student-Targeted Communities, City of Greenville, 2017



The aggregate unit mix for the six communities is 6.1% one-bedrooms, 19.7% two-bedrooms, 18.7% three-bedrooms, and 69.0% four-bedrooms (*Graph 21*). Being the most common floorplan type in the student communities, four-bedroom options are available in all but one of the comparable communities.

Graph 21: Share Comparable Student Bedrooms by Type, Greenville, 2017



The Landing is the oldest comparable student property, completed in 2007; The Boundary, completed in 2015, is the newest. Communities range in size from 288 bedrooms at First Street Place to 1,232 bedrooms at Copper Beech.

7.3.1 COMPARABLE STUDENT VACANCY RATES

As indicated in *Table 9*, the comparable student communities have an aggregate vacancy rate of 9.6%. The Boundary has the lowest vacancy rate at 0.4%; The Bellamy has the highest vacancy rate of 29.0%. The comparable communities located within one mile of campus have a lower vacancy rate of 1.3%, while those farther away have a higher vacancy at 13.7%, driven by performance at The Bellamy. The average vacancy rate equates to 455 available rooms in the six comparable communities.

Table 9: Comparable Off-Campus Student Community Vacancy Rates, City of Greenville, 2017

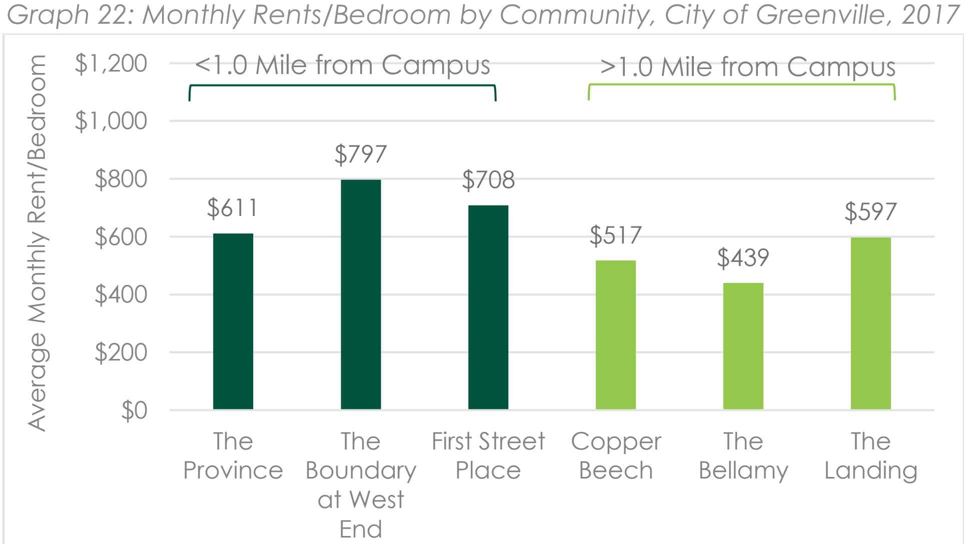
Community	Location	Owner/ Manager	Year Open	Total Bdrms	Vac. Bdrms	Vac. Rate
The Province	1920 Exchange Drive	EDR	2010	728	7	1.0%
The Boundary at West End	630 Cotanche Street	Preiss	2015	550	2	0.4%
First Street Place	400 West 1st Street	Campus Advantage	2009	288	11	3.9%
Subtotal/Avg. <1.0 Mile from Campus				1,566	20	1.3%
Copper Beech	2001 Copper Beach Way	ACH	2008	1,232	116	9.4%
The Bellamy	2200 Bellamy Circle	Caliber Living	2008	1,056	306	29.0%
The Landing	1920 Exchange Drive	Pierce	2007	888	12	1.4%
Subtotal/Avg. >1.0 Mile from Campus				3,176	434	13.7%
Total/Average				**4,742**	**455**	**9.6%**

Source: ECU; REIS; Kimley-Horn

7.3.2 COMPARABLE STUDENT MONTHLY RENTS

As previously noted, The Boundary has the highest average monthly rent by bedroom at $797, while The Bellamy has the lowest at $439 (*Graph 22*). The comparable student communities closer to campus have higher average lease rates than those farther away.

Graph 22: Monthly Rents/Bedroom by Community, City of Greenville, 2017



Graph 23 compares average monthly rents between floorplans. Single-unit floorplans achieve the highest rents at $916 for communities within one mile of the ECU campus and $760 for those farther away. Rents decline as the floorplan increases in bedrooms, reaching $615 and $486 per resident for a four-bedroom unit. On average, communities with proximity to ECU generate a 25% premium over those farther away.

Graph 23: Monthly Rents/Bedroom by Community, City of Greenville, 2017

7.3.3 STUDENT FEATURES AND AMENITIES

The six student comparable communities all offer fully furnished units, individual leases/contracts for each bedroom, private bathrooms, and include utilities in the base monthly rent. Washers and dryer units are also included in each unit at no extra charge.

As shown in *Table 10*, interior features are varied between the six communities, but are all focused on options that are durable and can withstand wear and tear. Appliance finishes are mixed with white, black, and stainless steel all offered. Built-in microwaves are a common feature, incorporated into kitchen designs for all but one community. All six comparable student properties have laminate countertops in the kitchen and bathrooms.

Flooring options are a mixture of carpeting, vinyl/linoleum tile, and faux hardwood. Faux hardwood is a popular option, offering a modern look that is durable for students and easy to clean. Other common interior features include ceiling fans and private unit patios or balconies. All six of the comparable communities have nine-foot ceiling heights.

Table 10: Comparable Off-Campus Student Community Unit Features, City of Greenville, 2017

Interior Feature	The Province	Boundary at West End	First Street Place	Copper Beech	The Bellamy	The Landing
Unit Overview						
Fully Furnished	x	x	x	x*	x	x
Bedroom Leases	x	x	x	x	x	x
Utilities Included	x	x	x	x	x	x
Private Bathrooms	x	x	x	x	x	x
Appliances						
White	x			x		
Black			x		x	
Stainless Steel		x				x
Built-In Microwave	x	x	x	x		x
W/D Units	x	x	x	x	x	x
W/D Connections						
Countertop Finishes						
Granite/Solid Surface						
Laminate	x	x	x	x	x	x
Flooring						
Carpeting	x		x	x		
Stained Concrete						
Faux Hardwood	x	x			x	x
Hardwood						
Ceramic Tile	x					x
Vinyl Tile			x	x		
Other						
Ceiling Fan	x	x	x	x	x	x
Crown Molding	x					
Patio/Balcony	x*		x	x	x	x
Tile Kitchen Backsplash						
Exposed Brick Walls						
9' Ceilings	x	x	x	x	x	x

Note: Available in some units.

Source: Kimley Horn

Student amenities in the six comparable communities are consistent, with most offering:

- Swimming pool
- Community grills
- Fitness center
- Club house
- Theater/game room
- Computer labs
- Tanning booths/salon
- Café/coffee bar

Outdoor amenities are also popular, with many of the communities offering a sports court, most commonly volleyball. Some communities also offer basketball courts (Table 11).

Table 11: Comparable Off-Campus Student Community Amenities, City of Greenville, 2017

Community Amenity	The Province	Boundary at West End	First Street Place	Copper Beech	The Bellamy	The Landing
Swimming Pool	x	x	x	x	x	x
Community Grills	x	x	x	x		x
Fitness Center	x	x	x	x	x	x
Club House	x	x	x	x	x	x
Theater/Game Room	x	x	x	x	x	x
Computer Lab	x	x	x	x	x	x
Group Study Lounges	x					x
Tanning Salon	x	x	x	x	x	x
Café/Coffee Bar	x	x	x	x	x	x
Volleyball Courts		x		x	x	x
Basketball Courts				x		x
Tennis Courts						
Bike Storage		x				
ECU Transit				x	x	x

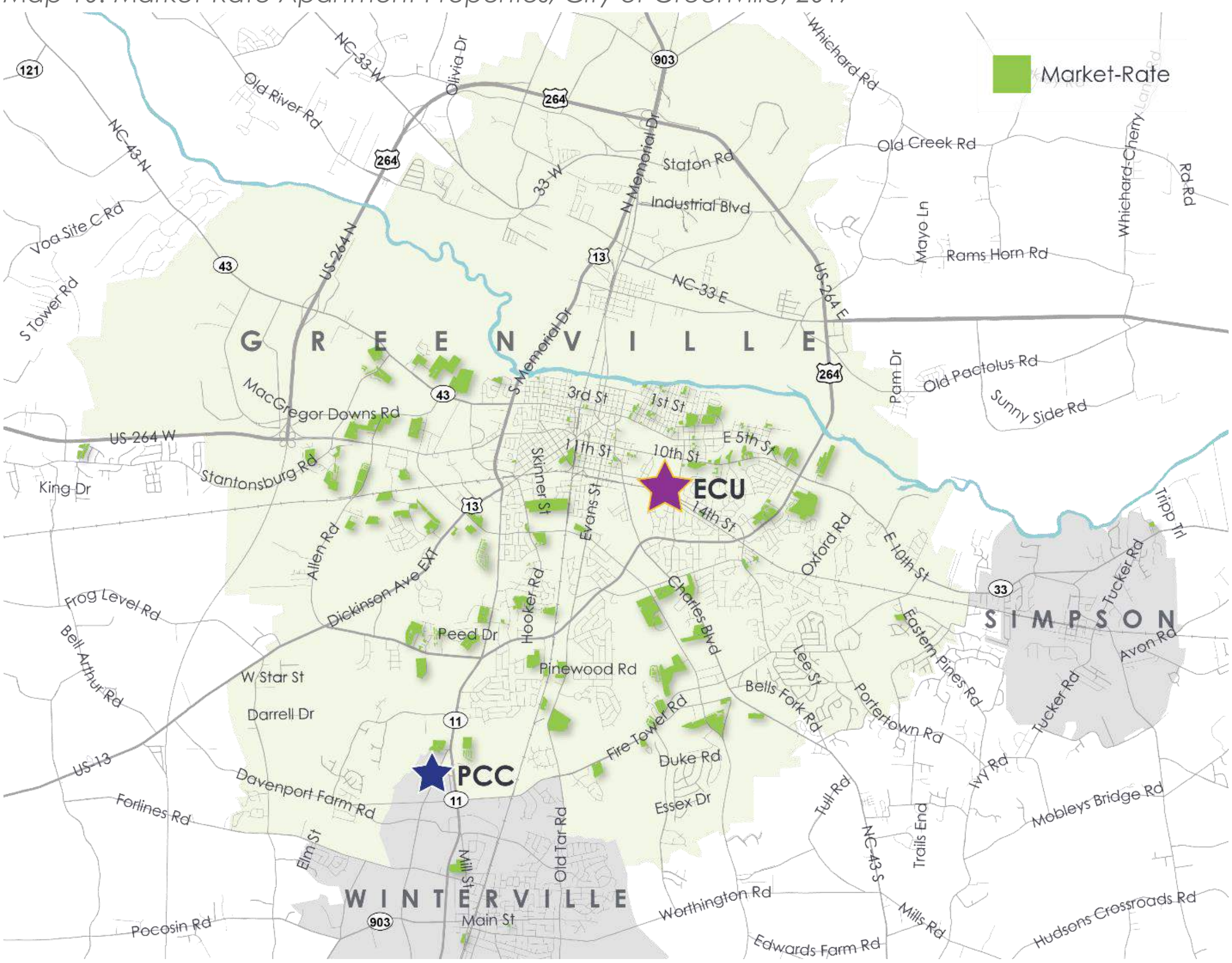
Source: Kimley Horn

8. MARKET-RATE APARTMENT PERFORMANCE

This section analyzes market-rate apartment conditions and trends for the City of Greenville. Given the tertiary nature of Greenville's apartment market, third-party data sources are limited in this area. This analysis includes inventory, vacancy rates, and rents trends for Pitt County, as well as current estimates for the Submarket.

Map 10 demonstrates the distribution of market-rate apartment properties in the City of Greenville. For the purpose of this analysis, market-rate apartments include communities lease on a per unit basis, and do not target specific age or income groups. Affordable units are excluded for analysis in this section. Students can be residents of these communities, often requiring a parent to sign as a co-leaser. The newest market-rate product has more commonly been located in the northeastern quadrant of the city, with access to Vidant Medical Center. However, recent entitlements have been more evenly dispersed, seeking locations with proximity to shopping and dining.

Map 10: Market-Rate Apartment Properties, City of Greenville, 2017

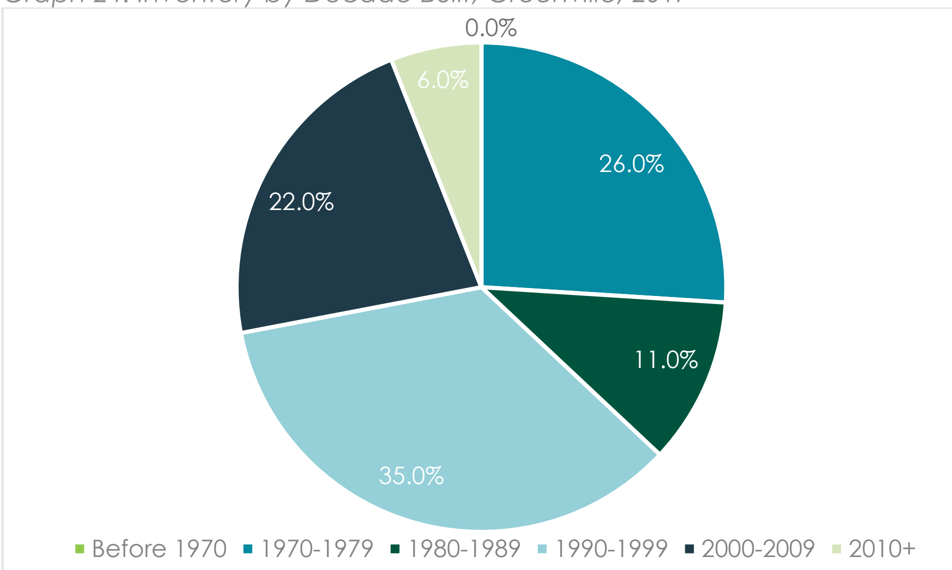


8.1 MARKET-RATE PERFORMANCE TRENDS

8.1.1 CITY OF GREENVILLE INVENTORY

Greenville hosts nearly 5,200 market-rate apartments in communities containing 25 or more units (*Graph 24*). Approximately one-quarter of the units were completed in the 1970s, with another 35.0% of the total inventory built in the 1990s. Generally, the newest market-rate product in Greenville has been concentrated west of Uptown, near the Vidant Medical Center campus. Only 6.0% of the total market-rate apartment inventory has been completed since 2010.

Graph 24: Inventory by Decade Built, Greenville, 2017

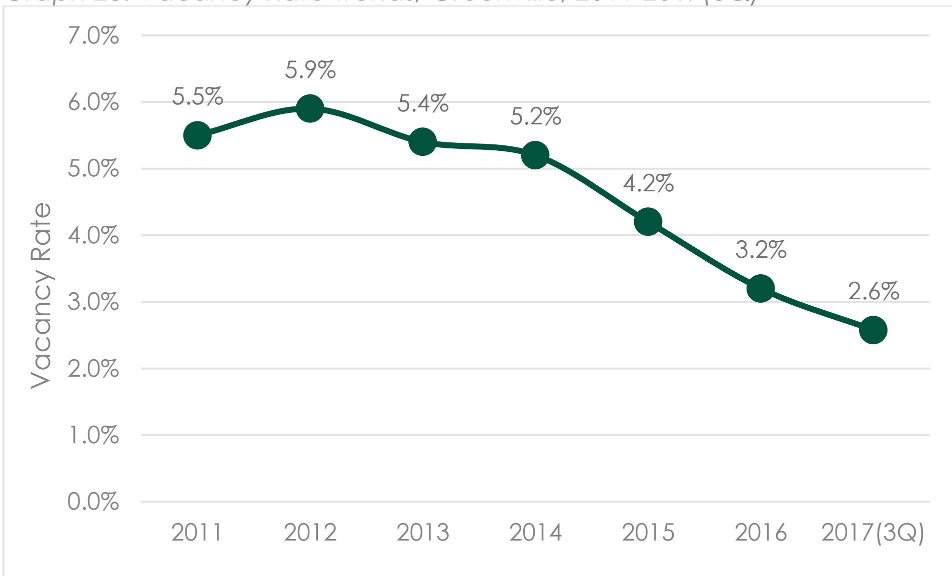


This analysis excludes income-targeted properties; a niche residential sector that has experienced some growth in recent years. Centre Court is the newest affordable community completed in Greenville, delivering earlier this year. Residents are restricted at this community by income.

8.1.2 VACANCY

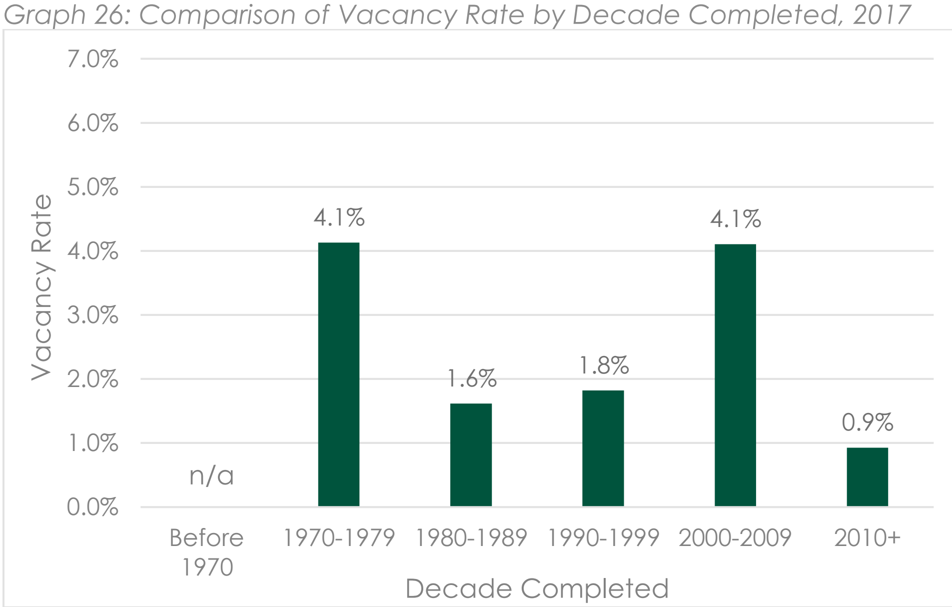
The market-rate apartment vacancy rate in Greenville peaked in 2012 at 5.9% (*Graph 25*). With only two communities completed since 2012, vacancy has been on a continuous decline every year since, reaching a period-low of 2.6% in third-quarter 2017. It should be noted that since 2011, market-rate product in Greenville has remained well below the industry standard 7.0% equilibrium rate, representing a market that can best accommodate both inter- and intra-market moves.

Graph 25: Vacancy Rate Trends, Greenville, 2011-2017(3Q)



Graph 26 demonstrates current vacancy rates in Greenville by decade completed. The highest vacancy rates in the city are measured in product completed between 1970 and 1979, as well as 2000 and 2009. Both decades represent a vacancy rate of 4.1%. Only two communities have been completed since 2010, The Heritage at Arlington and The Berkeley at Medford Pointe. Recent reports by REIS indicate that the two communities currently have an aggregate vacancy rate of only 0.9%.

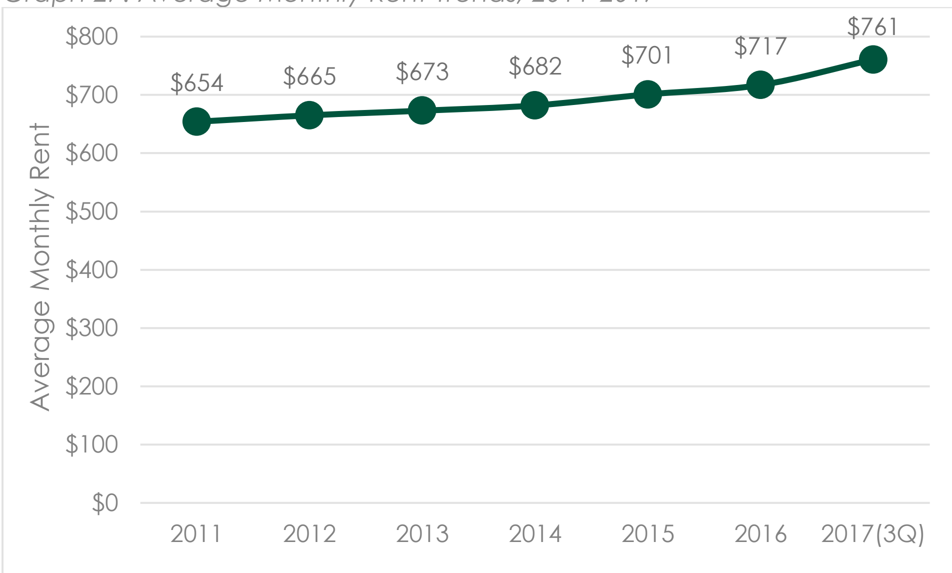
Graph 26: Comparison of Vacancy Rate by Decade Completed, 2017



8.1.3 AVERAGE MONTHLY RENTS PER UNIT

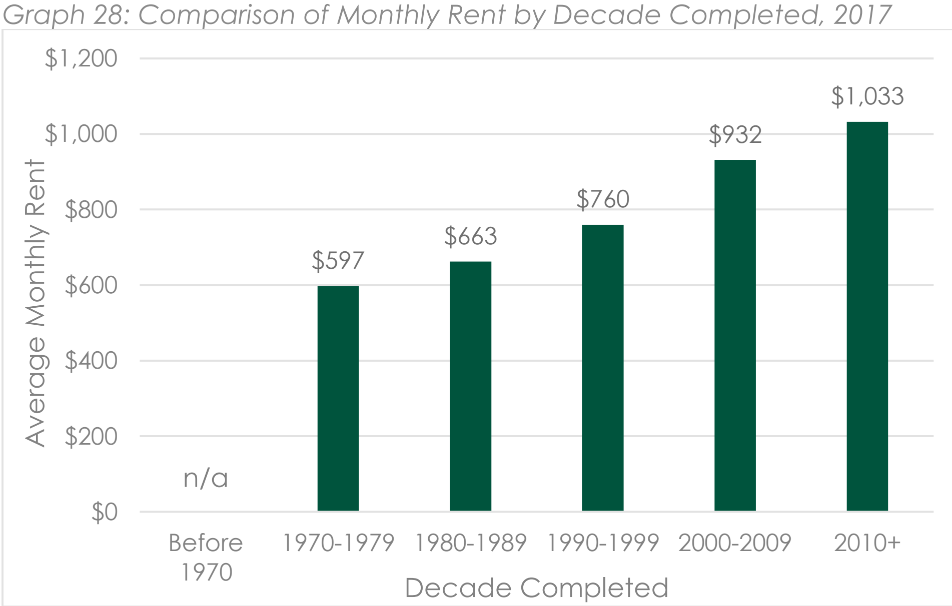
The average monthly rent of $761 for the City of Greenville in the third-quarter of 2017 represented a gradual increase from 2011 (*Graph 27*). Average monthly rents in Greenville increased in every year, equating to 16.4% growth over the nearly seven-year period. The last two years have experienced a more notable annual increase, largely due to the declining available supply in the current inventory.

Graph 27: Average Monthly Rent Trends, 2011-2017



Average monthly rents in the City of Greenville increase by each decade completed, with the newest communities achieving the highest rents. (*Graph 28*). Older communities, completed in the 1970s, have the lowest average rents at less than $600 per month, while the newest communities, completed since 2010, have an aggregate monthly lease rate of $1,033.

Graph 28: Comparison of Monthly Rent by Decade Completed, 2017



8.2 COMPARABLE MARKET-RATE COMMUNITY PERFORMANCE

8.2.1 COMPARABLE COMMUNITY OVERVIEW

This section analyzes current vacancy rates and rents by bedroom type for six comparable market-rate communities in Greenville. The comparables, which are shown on *Map 11*, were selected based on age, location, and construction quality and represent the most competitive market-rate product available for lease.

The six comparable communities contain a total of 1,842 units (*Table 12*). The average 1,022-square-foot unit currently rents for $939, or $0.92 per square foot. The Madison Apartments is the oldest comparable community, completed in 1990, while The Berkeley at Medford Pointe is the newest, completed in 2016. Following initial delivery in 2003, Waterford Place also opened a new phase of units in 2012. Communities range in size from 432 units at Waterford Place to 216 units at The Berkeley and The Madison Apartments. The aggregate unit mix is 31.6% one-bedrooms, 63.5% two-bedrooms, and 4.9% three-bedrooms (*Graph 29*).

Graph 29: Share of Units by Bedroom Type, 2017

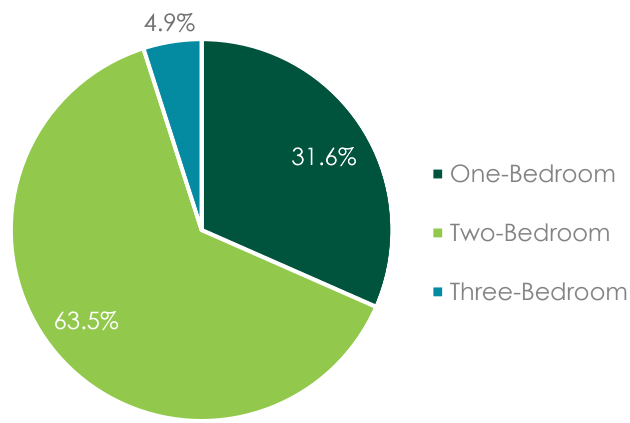


Table 12: Comparable Market-Rate Communities, City of Greenville, 2017

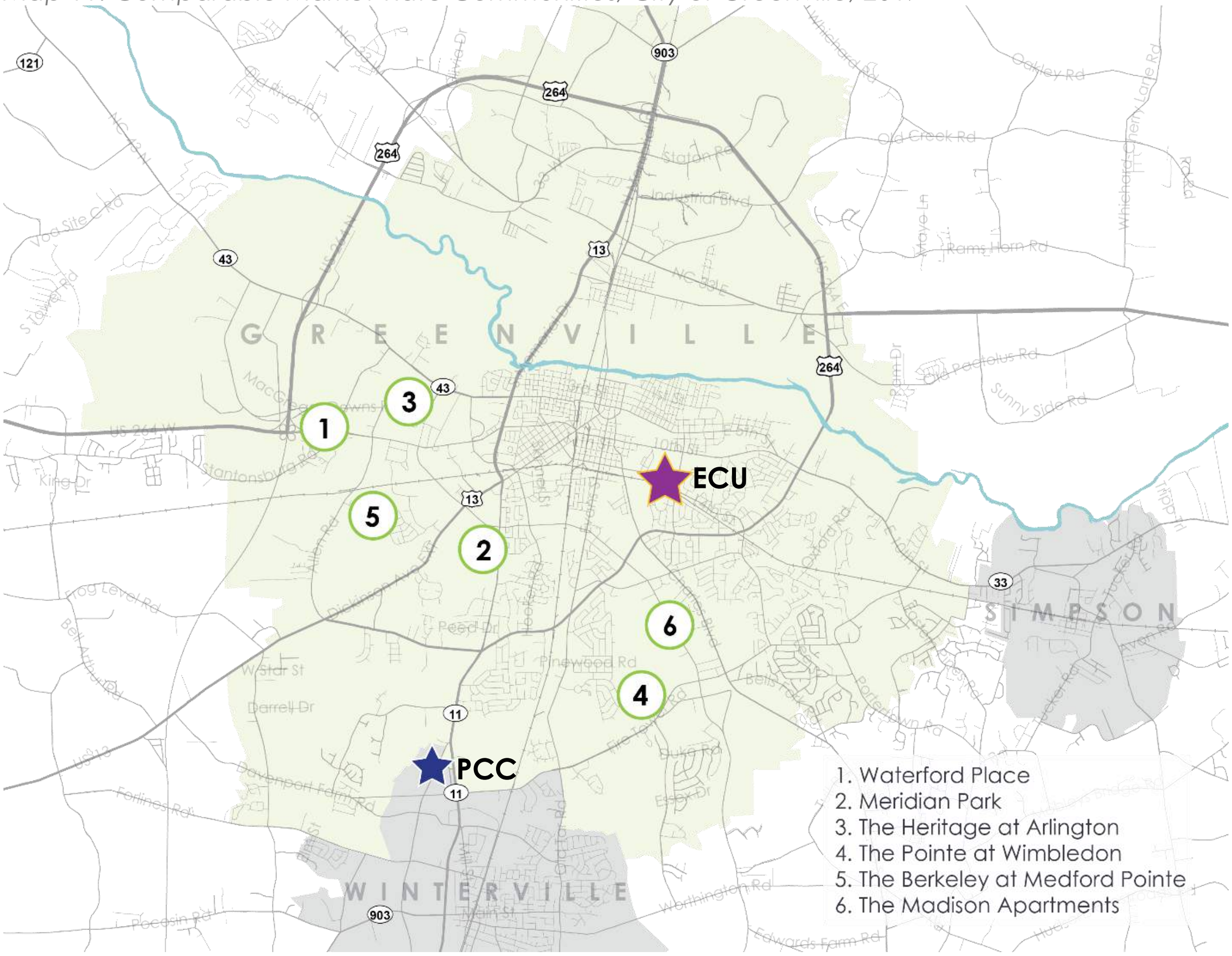
Map Key	Community	Location	Management	Year Open	Unit Mix 1BR	2BR	3BR	Total	Avg. Sq. Ft.	Avg. Rent	Rent/ Sq.Ft.
1	Waterford Place	2792 Stantonsburg Road	Consolidated Management	2003	42	348	42	432	1,022	$965	$0.94
2	Meridian Park	2707 Meridian Drive	Meridan Park Apartments	1994	190	184	0	374	1,006	$829	$0.82
3	The Heritage at Arlington	2700 W Arlington Boulevard	Consolidated Management	2012	117	176	31	324	1,031	$1,077	$1.04
4	The Pointe at Wimbledon	153 Wimbledon Drive	Synco Properties	2001	53	209	18	280	928	$882	$0.95
5	The Berkeley at Medford Pointe	3400 Briarcliff Drive	Eastern Property Management	2016	108	108	0	216	957	$971	$1.01
6	The Madison Apartments	8 Hyde Drive	Synco Properties	1990	72	144	0	216	1,222	$912	$0.75
Total/Avg.					**582**	**1,169**	**91**	**1,842**	**1,022**	**$939**	**$0.92**
Share					**31.6%**	**63.5%**	**4.9%**				

Source: REIS; Kimley-Horn

Waterford Place, The Berkeley at Medford Pointe, and The Heritage at Arlington, which represent some of the newest product in Pitt County, are located west of Uptown Greenville near the Vidant Medical Center campus. Meridian Park is located on the west side of NC 11, south of Arlington Boulevard. The Pointe at Wimbledon and The Madison are both located towards the southern boundary of Greenville, with access to Firetower Road and Charles Boulevard.

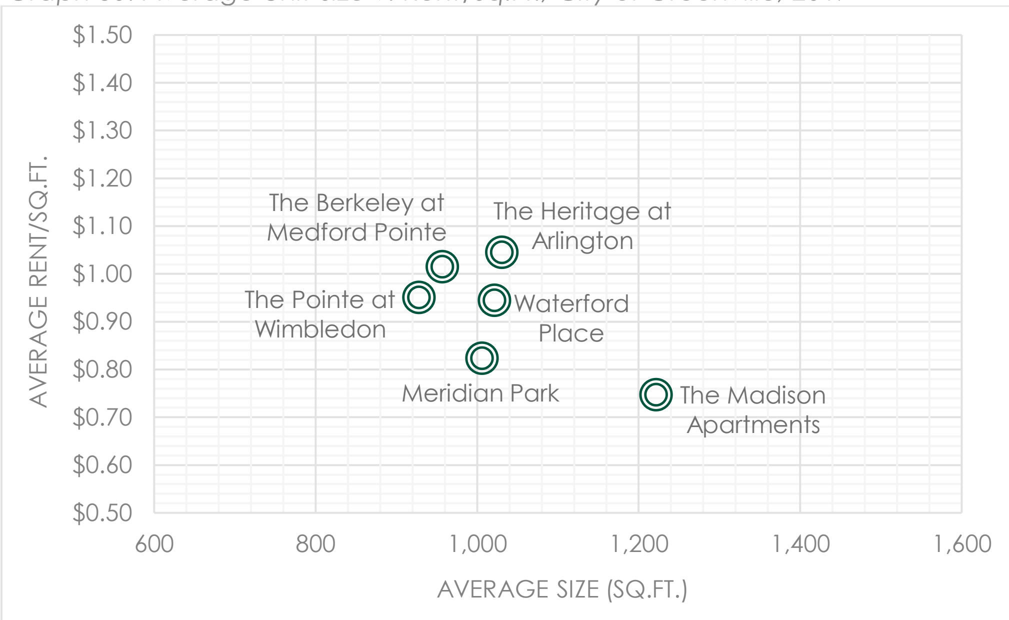
The comparable apartments are all single-use properties, offering varying levels of pedestrian accessibility to retail services. The Pointe at Wimbledon is adjacent to a movie theater and less than one mile from a Walmart Neighborhood Market grocery store. Waterford Park and the Heritage at Arlington are both less than 1.5 miles from the Vidant Medical Center campus and surrounding activity node. Residents at all the comparable properties would be largely auto-dependent.

Map 11: Comparable Market-Rate Communities, City of Greenville, 2017



As demonstrated in *Graph 30*, The Pointe at Wimbledon has the smallest average unit size of 928 square feet, offering only one- and two-bedroom floorplans. The Madison Apartments has the largest average unit size of 1,222 square feet. The newest comparable community, the Heritage at Arlington, has the highest rent per square foot at $1.04, a 14.3% premium over $0.91, the comparable community average. Offering older product with fewer interior upgrades and community amenities, Meridian Park and The Madison have the lowest average rent per square foot, roughly between $0.75 and $0.80.

Graph 30: Average Unit Size v. Rent/Sq.Ft., City of Greenville, 2017



8.2.2 COMPARABLE MARKET-RATE COMMUNITY VACANCY RATE

The overall vacancy rate in the six comparable communities is estimated at an extremely low 1.4% (*Table 13*). Quoted vacancy rates range from no available units at Meridian Park and The Heritage at Arlington to 7.5% for The Pointe at Wimbledon. The vacancy rate equated to 28 of 1,842 total completed units in the six communities.

Table 13: Comparable Community Vacancy Rates, City of Greenville, 2017

Community	Location	Owner/ Manager	Year Open	Total Units	Vac. Units	Vac. Rate
Waterford Place	2792 Stantonsburg Road	Consolidated Management	2003	432	8	1.9%
Meridian Park	2707 Meridian Drive	Meridan Park Apartments	1994	374	0	0.0%
The Heritage at Arlington	2700 W Arlington Boulevard	Consolidated Management	2012	324	0	0.0%
The Pointe at Wimbledon	153 Wimbledon Drive	Synco Properties	2001	280	5	7.5%
The Berkeley at Medford Pointe	3400 Briarcliff Drive	Eastern Property Management	2016	216	5	2.4%
The Madison Apartments	8 Hyde Drive	Synco Properties	1990	216	9	4.2%
Total/Average				**1,842**	**28**	**1.5%**

Source: REIS; Kimley-Horn

8.2.3 MARKET-RATE FEATURES AND AMENITIES

As shown in *Table 14*, all six communities offer washer/dryer connections, but none offer units as part of the base rent. All communities also offered built-in microwaves. Appliance finish varied between the communities, but Waterford Place was the only one to offer a stainless-steel finish. Countertop finishes also varied between granite/solid surface and laminate countertops. Some amount of carpeting was available in all communities, but none of the communities offered real hardwood flooring, although faux hardwood is available at all communities except for Waterford Place. All communities had a patio/balcony available with each unit.

Table 14: Comparable Community Interior Features, City of Greenville, 2017

Interior Feature	Waterford Place	Meridian Park	The Heritage at Arlington	The Pointe at Wimbledon	Berkeley at Medford	The Madison Apartments
Appliances						
White		x		x		
Black		x	x			x
Stainless Steel	x				x	
Built-In Microwave	x	x	x	x	x	x
W/D Units						
W/D Connections	x	x	x	x	x	x
Countertop Finishes						
Granite/Solid Surface	x	x*	x		x	
Laminate		x		x		x
Flooring						
Carpeting	x	x	x	x	x	x
Stained Concrete						
Faux Hardwood		x*	x	x*	x	x*
Hardwood						
Ceramic Tile	x	x				x
Vinyl Tile						
Other						
Ceiling Fan				x	x	
Crown Molding	x					
Patio/Balcony	x	x	x	x	x	x
Tile Kitchen Backsplash			x	x		
Exposed Brick Walls						
9' Ceilings	x				x	

Note: Asterisk denotes features that are available in select units.

Source: Kimley Horn

All of the comparable communities contain a high level of community amenities, including a pool, club house, and fitness center. As shown in *Table 15*, other common amenities include a theater/game room and business center. Unassigned surface parking was common among all of the comparable communities, with only the Heritage at Arlington and The Berkeley offering private garages as an amenity. Notable features not present at any of the comparable communities include private storage, firepit/outdoor fireplaces, and playgrounds.

Table 15: Comparable Community Amenities, City of Greenville, 2017

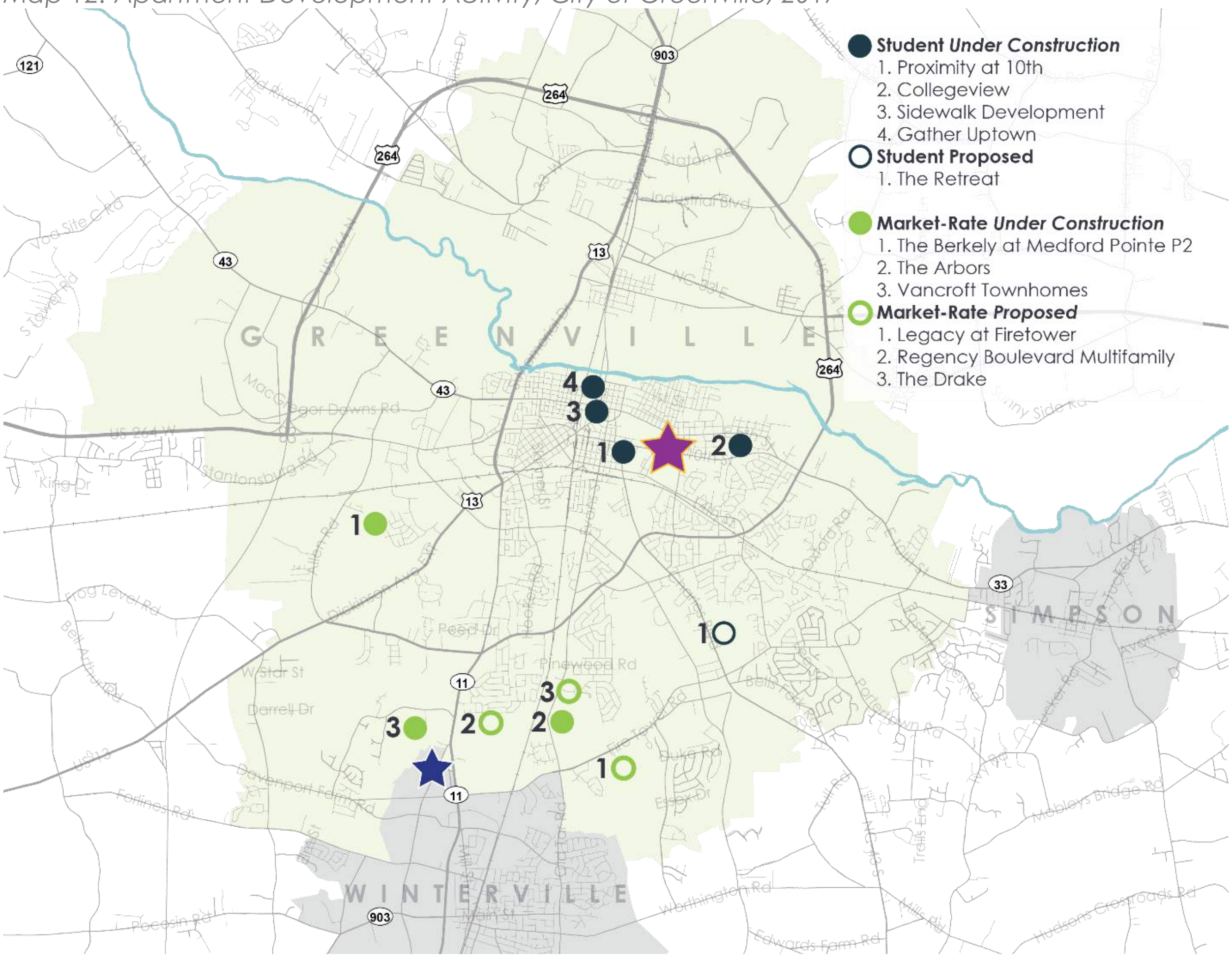
Community Amenity	Waterford Place	Meridian Park	The Heritage at Arlington	The Pointe at Wimbledon	Berkeley at Medford	The Madison Apartments
Swimming Pool	x	x	x	x	x	x
Grilling Stations			x		x	
Fitness Center	x	x	x	x	x	x
Club House	x	x	x	x	x	x
Theater/Game Room	x	x	x	x		
Business Center	x	x	x			x
Private Storage						
Outdoor Living Spaces					x	
Firepit/Outdoor Fireplace						
Dog Park	x	x				
Controlled Access/Gated	x		x		x	
Surface Parking	x	x	x	x	x	x
Private Garages			x		x	

Source: Kimley Horn

9. STUDENT AND MARKET-RATE DEVELOPMENT ACTIVITY

This section identifies student and market-rate apartment communities that are either under construction or proposed in the City of Greenville. It should be noted that, generally, recent multi-family construction activity has been focused on student-targeted communities. There has been very little market-rate product completed in the last five years, with The Berkeley at Medford Pointe, Heritage at Arlington, and a second phase of Waterford Place representing the newest market-rate development in the city. Identified projects are shown on *Map 12*.

Map 12: Apartment Development Activity, City of Greenville, 2017



9.1 STUDENT DEVELOPMENT ACTIVITY

9.1.1 UNDER CONSTRUCTION

There are four student-targeted communities currently being constructed and scheduled to be completed in 2018 or 2019. As shown in *Table 16*, the four communities are approved for a total of 1,930 bedrooms. Three communities will open in time for the 2018 school year, and Proximity at 10th will be completed the following year. The 1,930 new bedrooms in these four communities represent a 17.4% increase from the 11,043-bedroom inventory of larger, professionally-managed communities in Greenville today.

Table 16: Under Construction Student Communities, City of Greenville, 2017

Map Key	Community	Location	Beds	Estimated Completion
1	Proximity at 10th	10th Street	690	2019
2	Collegeview	10th Street	423	2018
3	University Edge/Dickinson Lofts	Greene Street	413	2018
4	Gather Uptown	Greene Street	404	2018
Total			**1,930**	

Sources: City of Greenville; Kimley-Horn

All of the identified under construction communities are being built closer to Uptown and the ECU campus than the large majority of existing apartment options, but The Gather and Sidewalk are especially notable because they are being built in Uptown. Those properties will be the second and third to follow that model, after The Boundary opened in 2015 on the edge of the Uptown area.

9.1.2 PROPOSED

Proposed projects are those with entitlement, or active rezoning or site plan applications. While there are no other student projects officially entitled in the City of Greenville, it should be noted that one project, The Retreat, recently came through for approval. The project was denied for the Special Use Permit required for developments that allow more than three unrelated residents in a unit. The developer of The Retreat has appealed the ruling, and the project is currently in litigation. As proposed, The Retreat would include 656 bedrooms on Charles Boulevard (*Table 17*). No start date is available given the uncertainty of the approval.

Table 17: Proposed Student Communities, City of Greenville, 2017

Map Key	Community	Location	Beds	Expected Start
1	The Retreat	Charles Boulevard	656	n/a
Total			**656**	

Sources: City of Greenville; Kimley-Horn

9.2 MARKET-RATE COMMUNITIES

9.2.1 UNDER CONSTRUCTION

There are three market-rate apartment communities currently under construction in Greenville containing 281 units (*Table 18*). The Berkeley at Medford Pointe represents a second phase to an existing development that delivered earlier this year. Completion on all three projects is expected in 2018. Based on unit mixes provided by the City of Greenville, this represents 416 bedrooms.

Table 18: Under Construction Market-Rate Communities, Greenville, 2017

Map Key	Community	Location	Units	Estimated Completion
1	The Berkeley at Medford Pointe	Briarcliff Drive	96	2018
2	The Arbors	Oaktowne Drive	96	2018
3	Vancroft Townhomes	Bellfair Drive	89	2018
Total			**281**	

Sources: City of Greenville; Kimley-Horn

9.2.2 PROPOSED

According to the City of Greenville, there are three apartment communities actively entitled in Greenville (*Table 19*). Combined, the three projects contain a total of 508 units. Legacy at Firetower, located on Bayswater Road, could begin construction in 2018, and the Regency Boulevard site is likely to start in 2019. It should be noted that no start dates are definitive.

Table 19: Proposed Market-Rate Communities, Greenville, 2017

Map Key	Community	Location	Units	Expected Start
1	Legacy at Firetower	Bayswater Road	288	2018
2	Regency Boulevard Multifamily	Blazer Drive	160	2019
3	The Drake	Evans Street	60	Unknown
Total			**508**	

Sources: City of Greenville; Kimley-Horn

In addition to the three projects identified above, it is possible that multifamily residential could be incorporated into the Imperial Site outside of the Uptown area of Greenville. A conceptual plan was approved by the City Council in June that allows for a mixture of residential, retail, and office uses on the 8.6-acre site that formerly hosted the Imperial Tobacco facility. The developer's concept incorporates 316 housing units, 20,177 square feet of retail space, 66,000 square feet of office space, and 1,094 parking spots. The concept plan is not definitive; as the project moves forward, uses could shift.

10. FORECASTED APARTMENT DEMAND

This section provides 10-year population and household forecasts for the City of Greenville. Enrollment projections for ECU and Pitt Community College are also provided and are based on feedback obtained during stakeholder interviews with each institution. Ultimately, this section reconciles expected future supply profiled in Section 9 with potential demand to indicate if the market is or could reach saturation in the next decade.

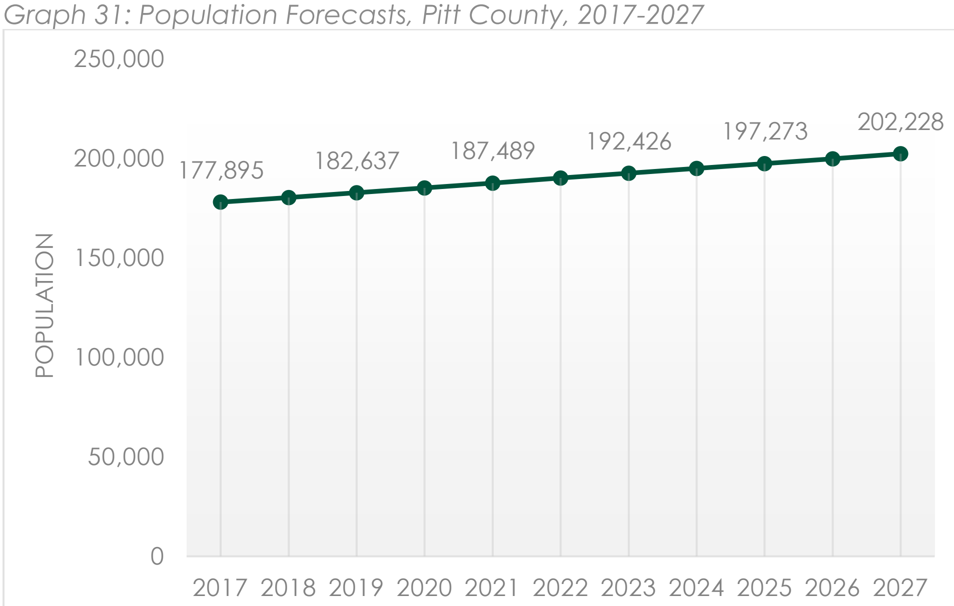
10.1 POPULATION AND HOUSEHOLD FORECASTS

The starting point for the population forecasts presented in this analysis are 2017 population estimates, provided by ESRI. Population forecasts have been prepared for both Pitt County and the City of Greenville through 2027.

10.1.1 PITT COUNTY

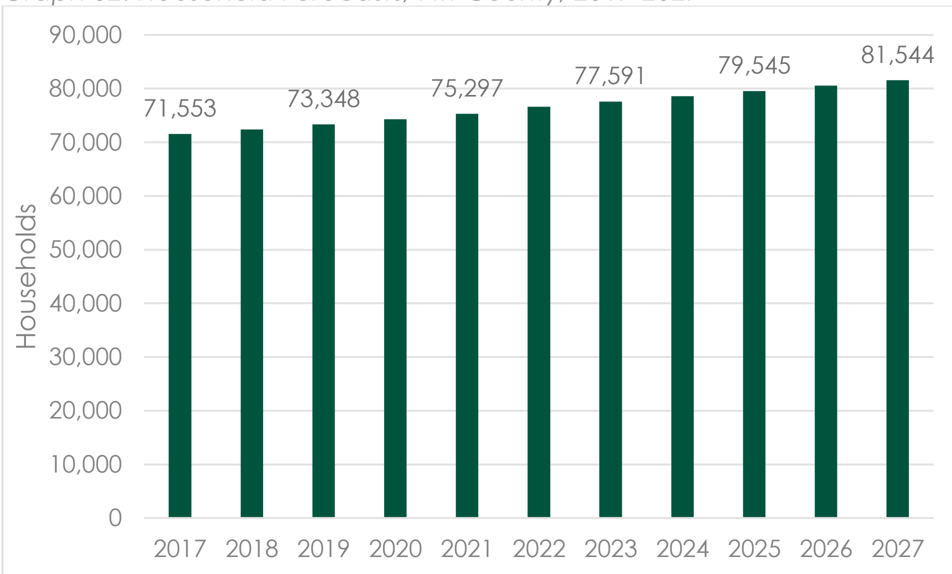
Based on data provided by ESRI, Pitt County had an estimated 177,895 residents in 2016. Forecasts are based on interpretation of projections provided by the State of North Carolina, ESRI, and Woods & Poole, a third-party population and employment forecasting firm. As shown in Graph 31, the projections for Pitt County show population increasing moderately through 2027, resulting in an increase of 24,333 people.

Graph 31: Population Forecasts, Pitt County, 2017-2027



As shown in Graph 32**Error! Reference source not found.**, Pitt County had an estimated 71,553 households in 2017. This analysis forecasts the addition of approximately 9,991 households over the forecast period, reaching a total of 81,544 households in 2027. Based on ESRI data, the average household size in Pitt County is expected to remain relatively constant through 2027, declining by only one-hundredth of a point from 2.49 to 2.48 over the 10-year period.

Graph 32: Household Forecasts, Pitt County, 2017-2027

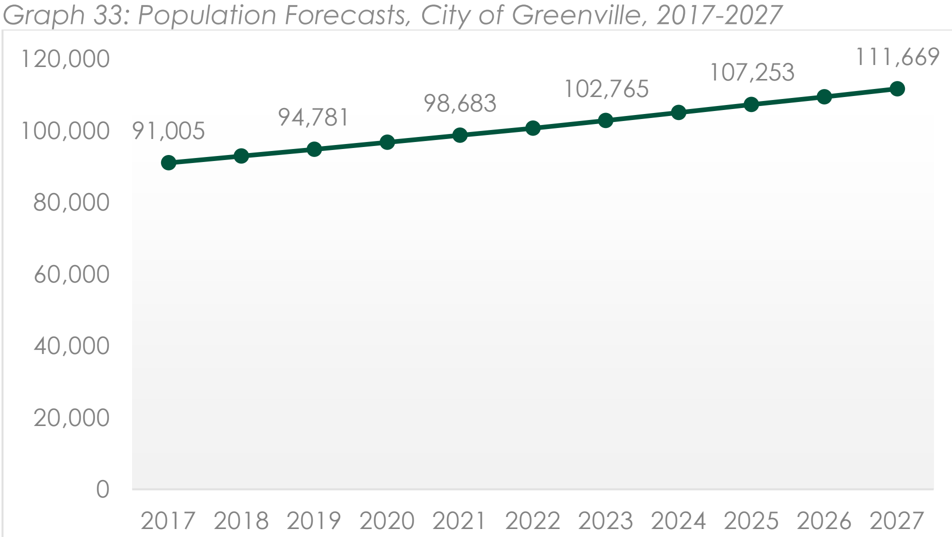


10.1.2 CITY OF GREENVILLE

Residents in the city currently make up approximately 51.2% of Pitt County's total population. The city's share of the total population has increased slightly since 2000, as the major anchors drive demand for new residential product. Population forecasts for the city consider future forecast rates, as well as entitlements and announcements that could impact growth in the future.

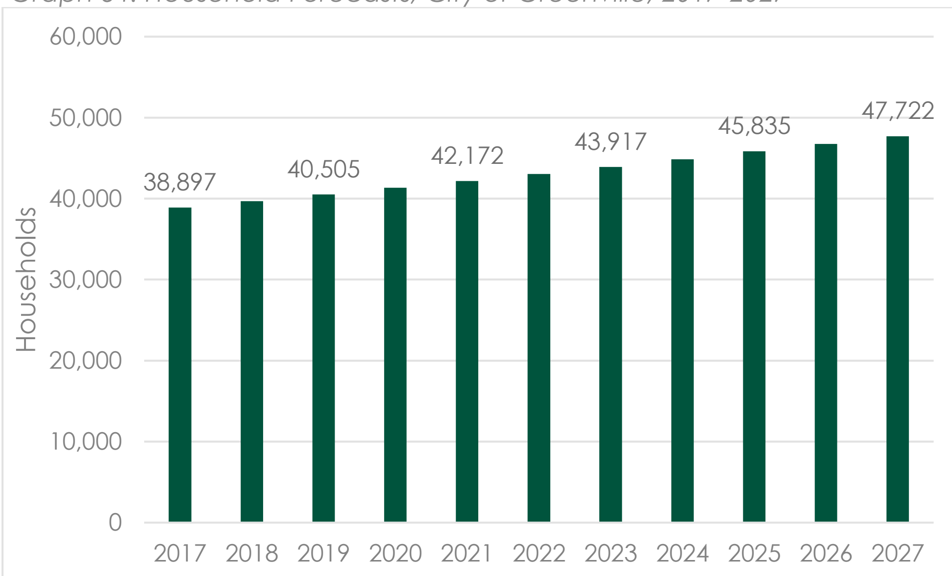
The City of Greenville had an estimated 91,005 residents in 2017 (*Graph 33*). Based on projected growth in the county, this analysis forecasts a total population of 111,669 residents by 2027, a 22.8% increase. This analysis assumes that residential growth in the city is likely to continue, driven partially by a resurgence of living in areas offering proximity to services, entertainment, and transportation options.

Graph 33: Population Forecasts, City of Greenville, 2017-2027



Anchored by an urban core, the City of Greenville has smaller current and projected average household sizes than Pitt County. However, projections demonstrate limited change in the current 2.34 persons per household measure. Based on this assumption, the City of Greenville could reach 47,772 households by 2027, an increase of 8,825, or 22.7% (Graph 34).

Graph 34: Household Forecasts, City of Greenville, 2017-2027

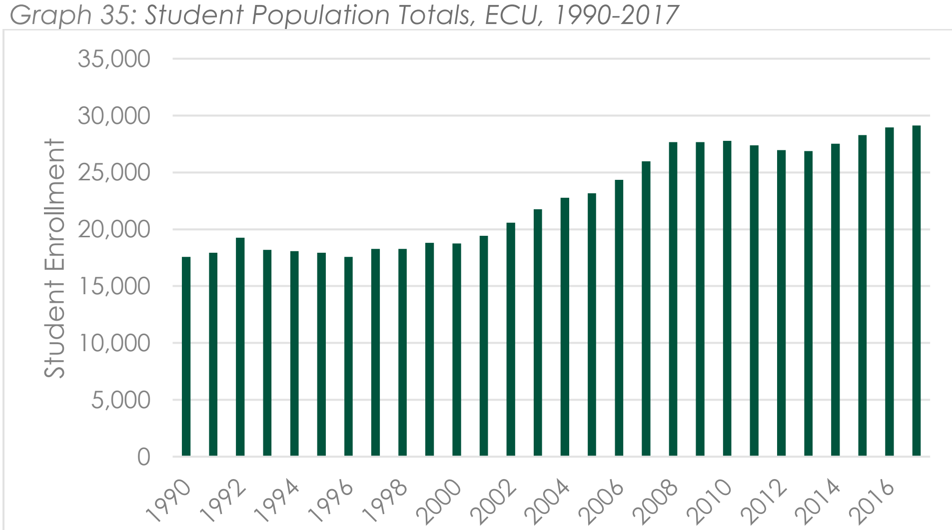


10.2 STUDENT GROWTH FORECASTS

10.2.1 ECU

ECU had a total enrollment of 29,131 students as of the fall of 2017. This includes 23,265 undergraduates and 5,331 graduate students. In terms of student growth, ECU has been fairly level since 2008 (Graph 35). In the ten years prior to the recession, from 1998 to 2008, the university grew roughly 34%, from 18,263 students to 27,677 students. Since that time, ECU has only seen a 4.5% percent growth in total student population.

Graph 35: Student Population Totals, ECU, 1990-2017



A 2015 ECU report on *Enrollment Management*, completed in mid-2015, indicated that enrollment up to approximately 30,000 students could be reasonably accommodated with resources currently available to the university. Beyond that size, the university will need to consider construction of new facilities, including laboratories, a new residence hall, and/or dining facilities.

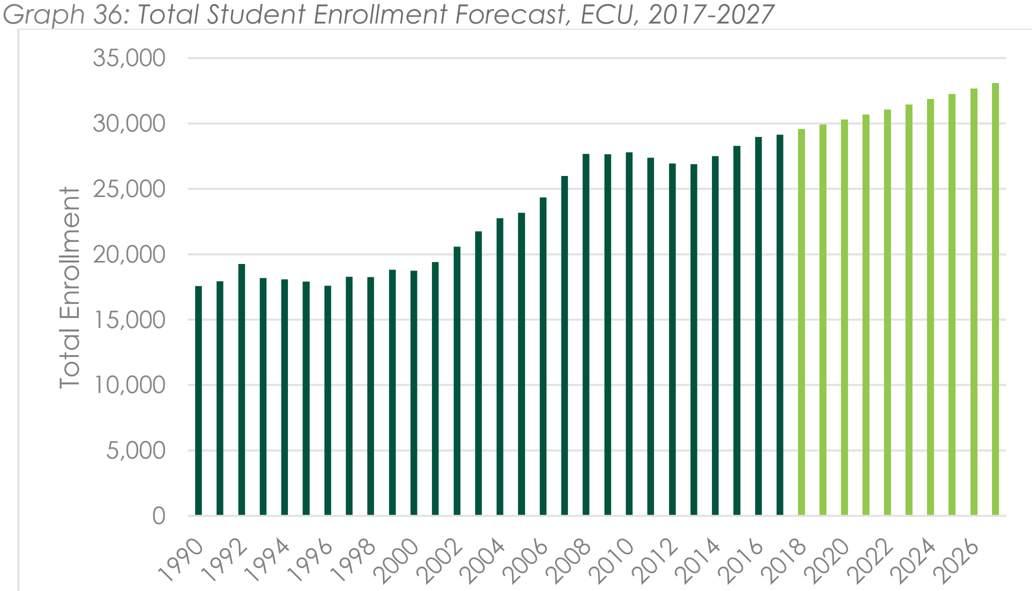
Between 2010 and 2015, ECU targeted a managed growth rate of 1.0% per year for undergraduates, focusing on honors students, traditionally underrepresented student populations, and maintaining a balance of in-state and out-of-state students. A similar growth rate was carried forward for the forecasts presented in this analysis. Currently, out-of-state students make up 15% of undergraduate enrollment.

A variety of factors impact future enrollment totals at state universities, including funding provisions from North Carolina. As such, some of the factors that influence potential for student growth are out of control of the local jurisdiction, or even the university itself. Growth forecasts, presented in a range, are based on feedback from ECU. It is possible that these projections could change over the 10-year forecast period.

Generally, ECU's growth strategy reflects a desire to modestly grow freshman enrollment, while increasing transfer students and strengthening retention rates. Distance education, or online programs, are not included in the forecasts, as these students are unlikely to generate demand for housing on or near ECU's campus.

Based on feedback from ECU, and considering recent trends, total enrollment could grow to 33,099 students by 2027 (Graph 37). The dark green bars in the graph below are actual student counts, while the light green represent forecasts over the next ten years.

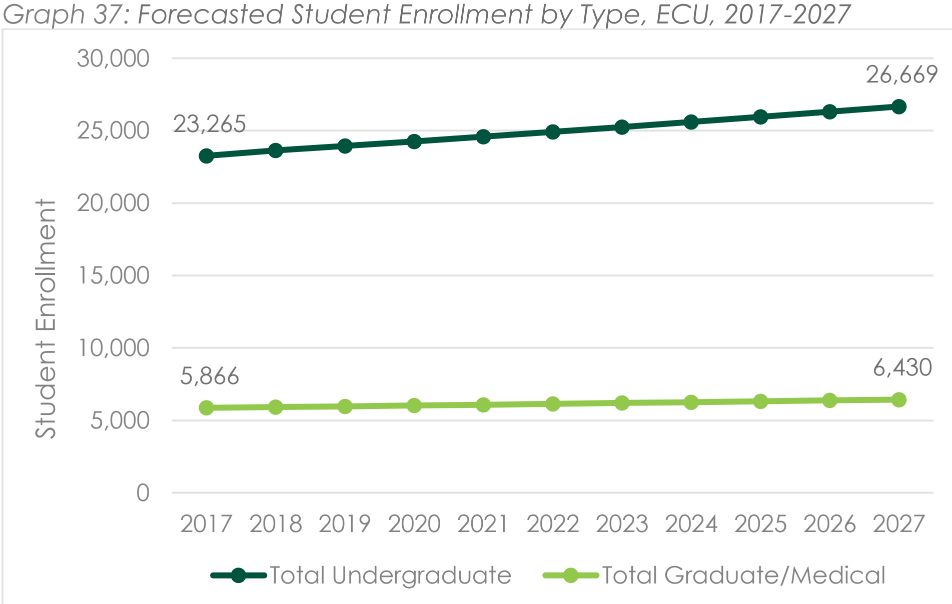
Graph 36: Total Student Enrollment Forecast, ECU, 2017-2027



Total enrollment projections include both on-campus and distance (online) learning students. Growth in online learning has not demonstrated a clear pattern in the last ten years, with some annual periods showing growth and others decline. This analysis grows online students by the ten-year average of approximately 75 new enrollees per year, accounting for peaks and troughs in growth annually. Ultimately, online learning students are netted out of the net new projections presented in Section 10.3 because these students do not generate housing demand locally.

Undergraduate enrollment, including new freshmen, transfers, and increases in retention, are expected to increase by 3,404 students over the ten-year period (Graph 37). During the same time period, graduate enrollment could grow by approximately 564 students. The numbers below include online, or distance, learners.

Graph 37: Forecasted Student Enrollment by Type, ECU, 2017-2027



10.2.2 PITT COMMUNITY COLLEGE

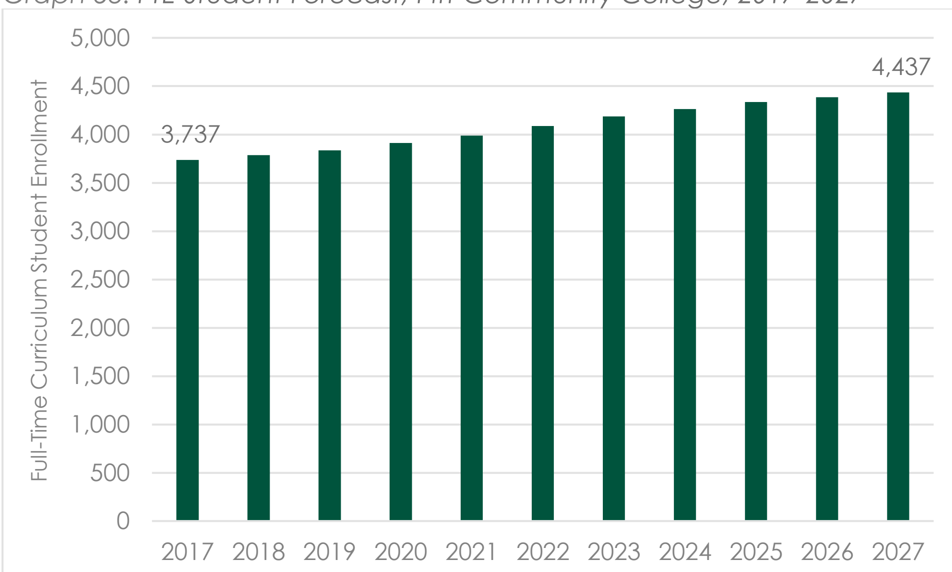
Pitt Community College provided extremely limited information in terms of enrollment trends and growth. Community college enrollment is significantly impacted by the health in the economy. Often, in recessionary times enrollment at community colleges increases, and, conversely when the economy is strong, enrollment typically slows. Based on feedback from stakeholder interviews with the institution, full-time equivalent enrollment in recent years has grown by approximately 50 students per year after stagnation between 2014 and 2017.

Full-time equivalent students are the target for this analysis, as they would be the primary generators of housing to attend Pitt Community College. Community colleges do not host on-campus housing, so all full-time students reside elsewhere. The challenge is that many students live at home, seeking to commute farther distances to save money. No feedback was given by Pitt Community College to help assess the number of students that would seek housing options in Greenville. Assumptions for off-campus housing capture are based on the percent of full-time students when compared to the curriculum degree program total, as well as age groupings.

Total enrollment is estimated at over 22,000, including curriculum and continuing education groupings. Curriculum enrollment is estimated at 53% of the total enrollment, or approximately 11,700 students. Of that estimate, 32% currently attend full-time, offering the most potential to generate demand for off-campus housing in Greenville.

As shown in Graph 38, full-time student enrollment at Pitt Community College is expected to increase to over 4,400 students by 2027, representing a 700-student increase. Annual increases range from 50 to 100 students to incorporate the potential for an economic slowdown in the next ten years that could have the effect of boosting enrollment totals at the community college. On average, approximately 70 new full-time students are expected to be enrolled each year at Pitt Community College over the next ten years, or 700 total.

Graph 38: FTE Student Forecast, Pitt Community College, 2017-2027



10.3 APARTMENT DEMAND

10.3.1 STUDENT APARTMENT DEMAND

Table 20 demonstrates the potential demand for off-campus living arrangements based on the expected student growth projections for undergraduates and graduates, as well as current trends towards housing preferences. It should be noted that the assumed increase in online education students has been netted out of the net new demand estimated presented in the following sets of tables.

Freshmen undergraduates at ECU are required to live on campus for one year. Approximately 75% of transfer students and 85% of retained upperclassmen are assumed to live off campus. This supports the current trend of approximately 80% of the institution's undergraduates living off campus. Additionally, 100% of graduate, dental, and medical students are assumed to live off campus. This equates to ten-year off-campus housing demand of approximately 2,200 bedrooms.

Table 20: Off-Campus Housing Forecast, ECU, 2017-2027

	Net New Enrollment			Off-Campus	
Classification	**2017-2022**	**2022-2027**	**Total**	**Capture**	**Demand**
Undergraduates					
Freshmen	625	625	1,250	0%	0
Transfer	550	686	1,236	75%	927
Retained Upper-Classmen	429	439	868	85%	738
Undergraduate Subtotal	1,603	1,750	3,354		1,664
Graduate/Medical					
Graduates	209	250	459	100%	459
Dental	25	25	50	100%	50
Medical	15	15	30	100%	30
Graduate Subtotal	249	290	539		539
ECU Total	**1,852**	**2,040**	**3,893**		**2,203**

Source: ECU, Kimley-Horn

A similar exercise was completed for Pitt Community College. Student housing demand from Pitt Community College is driven by full-time curriculum students, 100% of which would live off campus (*Table 21*). The high capture of off-campus living is due to the complete lack of on-campus housing options available at any community college, Pitt included. This equates to potential demand for 700 bedrooms over the ten-year period.

Table 21: Off-Campus Housing Forecast, Pitt Community College, 2017-2027

	Net New Enrollment			Off-Campus	
Classification	**2017-2022**	**2022-2027**	**Total**	**Capture**	**Demand**
Curriculum Students					
Full-Time Equivalent	350	350	700	100%	700
Pitt Community College Total	**350**	**350**	**700**		**700**

Source: Pitt Community College, Kimley-Horn

Since not all students who live off campus choose to live in a professionally managed student apartment community, an additional capture was applied to demonstrate the potential to live in single-family houses or market-rate apartment communities. As shown in *Table 22*, approximately 75% of the off-campus undergraduates are assumed to live in student apartments, and 25% of graduates. The share of graduate, dental, and medical students is lower because these cohorts are likely less interested in residing in a traditional student apartment floorplan, or need to identify housing locations that are primarily market-rate (for example, those around Vidant). Based on these captures, there is a ten-year demand total for nearly 1,400 bedrooms of off-campus student apartments in Greenville.

Table 22: Student Apartment Housing Demand Forecast, ECU, 2017-2027

	Net New Off-Campus Growth			Student Apartments	
Classification	**2017-2022**	**2022-2027**	**Total**	**Capture**	**Demand**
Undergraduates					
Freshmen	0	0	0	0%	0
Transfer	412	514	927	75%	695
Retained Upper-Classmen	364	373	738	75%	553
Undergraduate Subtotal	777	888	1,664		1,248
Graduate/Medical					
Graduates	209	250	459	25%	115
Dental	25	25	50	25%	13
Medical	15	15	30	25%	8
Graduate Subtotal	249	290	539		135
ECU Total	**1,026**	**1,178**	**2,203**		**1,383**

Source: ECU, Kimley-Horn

Similarly, approximately 35% of full-time equivalent curriculum students at Pitt Community are assumed to drive demand for off-campus student housing. This equates to demand 245 bedrooms in student-targeted apartment communities over the next ten years (Table 23).

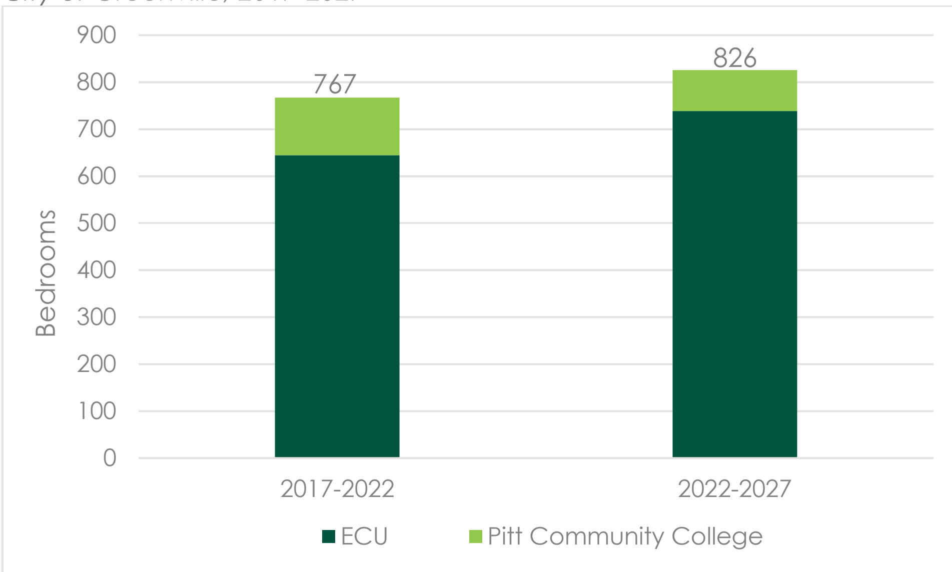
Table 23: Student Apartment Housing Demand Forecast, ECU, 2017-2027

	Net New Enrollment			Student Apartments	
Classification	**2017-2022**	**2022-2027**	**Total**	**Capture**	**Demand**
Curriculum Students					
Full-Time Equivalent	350	350	700	35%	245
Pitt Community College Total	**350**	**350**	**700**		**245**

Source: Pitt Community College, Kimley-Horn

Graph 39 demonstrates the total off-campus student-targeted apartment housing demand forecasted for Greenville between 2017-2027. Combining demand from both ECU (dark green) and Pitt Community College (light green), there is demand for nearly 1,600 new off-campus student bedrooms in the next ten years. The majority of the demand is expected to come from students at ECU.

Graph 39: Student Apartment Housing Demand Forecast, City of Greenville, 2017-2027



10.3.2 MARKET-RATE APARTMENTS

Demand for market-rate apartments has been forecasted by analyzing household growth in Greenville between 2017 and 2022. The 2010 U.S. Census reported a 62.8% renter share in the city. It should be noted that this analysis relies on the measure for household tenure, which excludes vacant housing units.

Between 2010 and 2017, the share of renter households in the Submarket increased by 100 basis points, largely driven by the mortgage crisis during the 2007-2009 Recession and a change in perception of potential risks in homeownership. These conditions have resulted in a renewed appreciation for renting, including increased mobility, choice of housing that better mimics the household budget, and a lower maintenance lifestyle. It should be noted that the limited amount of market-rate product completed in the city has resulted in a declining vacancy rate at existing communities over the last five years.

A common perception is that Millennials are solely responsible for the shift towards rental. In fact, households of all but the oldest age group have experienced increased demand. The largest increase in share is among Americans in their 30s, up by approximately 9% since 2004. With these widespread increases in the shares of age groups opting to rent, this time period marked the strongest decade of growth in renter households over the past half-century. The Baby Boomer segment of the population is expected to demonstrate the strongest growth in Greenville over the next five years. Similarly, this group has also demonstrated strong shifts towards renter occupancy nationally, seeking low-maintenance living in close proximity to family, shopping, church, and amenities.

As shown in *Table 24*, this analysis relies on a 20% market-rate renter capture. This is notably lower than the 62.8% overall measure, intended to net out households that would gravitate to other product types, including student-, income-, and age-targeted communities. The target for this analysis is householders over the age of 24 that earn more than $25,000 per year. Applying the estimated 20% share to forecasted household growth indicates that approximately 1,765 net new market-rate rental units could be supported in the City of Greenville through 2027.

Table 24: Net Market-Rate Renter Household Growth, City of Greenville, 2017-2027

	2017	2027	2017-2022 Δ #	2017-2022 Δ %
Greenville Household Forecast	38,897	47,722	8,825	22.7%
Submarket Household Growth			8,825	
Forecasted Market-Rate Renter Share			20.0%	
Estimated Market-Rate Renter Demand			**1,765**	

Source: Kimley-Horn; ESRI

10.4 APARTMENT SUPPLY AND DEMAND RECONCILIATION

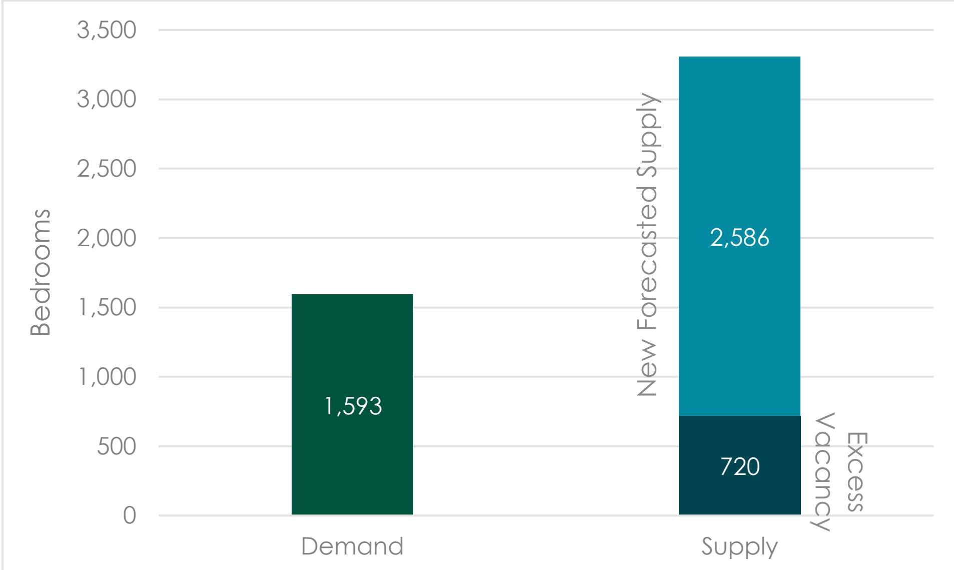
10.4.1 STUDENT SUPPLY AND DEMAND RECONCILIATION

As demonstrated in Section 9, there are over 2,500 student-targeted bedrooms in the development pipeline in Greenville. More than 1,900 are currently under construction, targeting opening dates in 2018 or 2019. The remaining 656 bedrooms are proposed on Charles Boulevard; this project was initially denied by the City of Greenville, but litigation through the appellate court could bring it back to the table again. To offer a conservative measure, it is included in this analysis.

In addition to the pipeline supply, this analysis also considers available inventory above a 95% market-wide occupancy rate that would also represent uninhabited supply. The 1,276 available student apartments represent an 11.6% vacancy rate, higher than the industry-recognized average of 5% for a 'healthy' market. In order to bring the current supply into a more sustainable range, approximately 720 currently vacant units would need to be leased.

As shown in *Graph 40*, the forecasted demand of nearly 1,600 beds over the next ten years is notably less than the expected supply of 2,586 bedrooms. Additionally, in order to reach a stabilized market-wide vacancy rate of approximately 5%, an additional 720 units would also need to be leased. Approximately one-half of the available units are concentrated at two communities: Paramount 3800 and The Bellamy.

Graph 40: Student Apartment Supply and Demand Reconciliation, 2017-2022



It should be noted that it is possible that additional student growth could generate demand not accounted for in the assumptions presented here. Forecasts presented here are for planning purposes only, and are based on verbal conversations with ECU and Pitt Community College. As previously noted, there are factors impacting student enrollment at state schools that are outside of the control of local jurisdictions and education leadership.

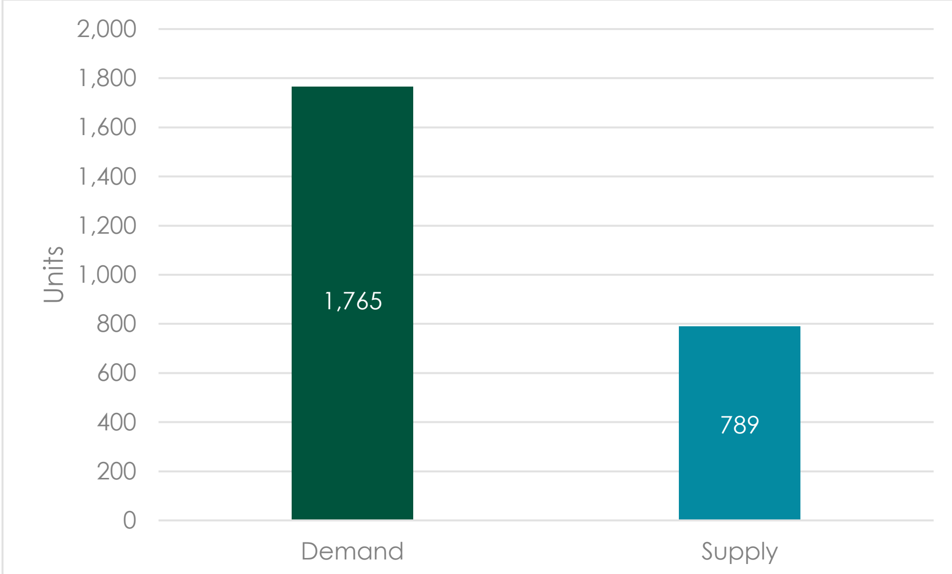
10.4.2 MARKET-RATE SUPPLY AND DEMAND RECONCILIATION

There are 789 market-rate apartment units currently in the development pipeline in Greenville. The pipeline is split between 281 units currently under construction and targeting 2018 deliveries, and 508 units proposed. Estimated completion dates of the proposed units is expected between 2019 and 2021.

Unlike the existing student communities, market-rate product in Greenville has an extremely low aggregate vacancy rate of approximately 2.6%. There is no excess market-rate supply in Greenville. In fact, stakeholder feedback from Vidant and the Chamber of Commerce indicate that finding a quality rental unit is extremely difficult in the Greenville market.

Demonstrating an opposite projection from the student-targeted demand, market-rate product is expected to experience a deficit of nearly 1,000 units through 2027 (*Graph 41*). It should be noted that this analysis only includes pipeline projects that are currently entitled. The majority of this development is expected to be complete in the first five years of the forecast period. It is likely that additional projects will emerge, especially given the increasing rental rates and exceedingly low market-rate vacancy. This may also include residential activity at the Imperial Tobacco site in Uptown Greenville.

Graph 41: Projected Vacancy Rate, Submarket, 2017-2027



10.4.3 CONCLUSION

Based on the forecasted growth and the approved development pipeline, the Greenville student apartment market is expected to experience saturation, especially in the next five years as most of the expected new supply comes online. Vacancy rates at communities in the market will be impacted, continuing to remain well above the industry-standard 5% for a healthy market.

Given the influx of 1,240 new off-campus student bedrooms in the next year alone, it is likely that the market-wide vacancy rate will be elevated beyond the current 11.6% measure. Gradual improvement is expected, but since growth supporting new off-campus bedrooms is forecasted to be moderate at both ECU and Pitt Community College, absorption of the new supply will take time.

Market-rate apartments, on the other hand, have a projected demand that is greater than the known new supply in the pipeline. This indicates that vacancy rates are likely to remain below the industry-standard 7% target that represents a healthy market-rate apartment market.

The following considerations are offered as it relates to the reconciliation of future supply and demand in student and market-rate apartments:

- For student housing, proximity to campus has been clearly highlighted in trend data, both nationally and In Greenville
    - Occupancy at student-targeted apartment communities located further from ECU's campus have been impacted more noticeably than newer ones closer to Uptown and campus
    - Communities further from campus have been adjusting pricing to stay competitive

- Offering a variety of price points for student tenants is critical; student finances vary significantly
- Although some non-students do live at the existing off-campus communities, the design of student-targeted communities limit the target market; it can be challenging to repurpose larger three- and four-bedroom units for families/households
- New market-rate apartments have gravitated to job centers, primarily Vidant, as well as along corridors that offer easy access to retail goods and services; to-date Greenville has not attracted a significant amount of market-rate housing with pedestrian access to Uptown, a trend that diverges from national momentum

APPENDIX

A-1 PUBLIC ENGAGEMENT

This section highlights the public and stakeholder outreach conducted by the study. Gaining input from key stakeholders and members of the public was vital to understanding the facts and perceptions surrounding student apartment housing in Greenville. The consultants worked closely with the City of Greenville to engage the public and create a list of important stakeholders to reach out to for interviews. In addition, an open student forum was conducted on the East Carolina University campus in order to interact with and gain input from the students on campus.

A-1.1 STAKEHOLDER INTERVIEWS

The consultants conducted two phases of stakeholder outreach and interviews. Because of the complexity of the study and the large number of interested parties, it was important to offer key community stakeholders the opportunity to provide their expertise and feedback regarding student and market-rate apartment housing in the area. The first phase of stakeholder outreach involved engaging those stakeholders in the public sector, while the second phase focused on private stakeholders.

Public-Sector

On October 3rd and 4th, 2017, the consultant team spent time in Greenville engaging with stakeholders from the public and non-profit realm. A comprehensive selection of stakeholders was invited to participate in the first round of interviews, including:

- East Carolina University
- Pitt Community College
- Neighborhood Advisory Board
- Planning and Zoning Commission
- Uptown Greenville
- Greenville-Pitt Chamber of Commerce
- City Manager's Office
- Office of Economic Development
- City Council
- ECU Student Government Association
- ECU Transit

The interviews with those who participated were vital to data gathering and establishing public perception in the initial phases of the project.

Private-Sector

On November 6th, 2017, the consultant team returned to Greenville to engage with the stakeholders from the private realm. Again, the consultant team worked closely with the City of Greenville to identify appropriate contacts. A comprehensive selection of stakeholders was invited to participate in interviews, including:

- Vidant Medical Center
- Local engineering firms
    - Baldwin & Associates
    - Rivers and Associates
    - The East Group
- Local developers
    - Overton Group
    - Taft Development Group
    - Landmark Properties
- Property management companies
    - Wainwright properties
    - Russell Property Management
    - Eastern Property Management

A-2.1 PUBLIC INPUT SESSION

Gathering public input for the Greenville Student and Market-Rate Apartment Housing Analysis was a key part of the overall analysis conducted for the study. On the night of Tuesday, October 3rd, 2017, the consultant team, along with key members of the planning staff for the City of Greenville, conducted a public input session that saw 41 attendees. Attendees ranged from private citizens, to students, and elected officials. The purpose of the public input session was to engage the citizens of Greenville and use their intimate knowledge of apartment housing in the city to help inform the study. The study identified six key themes around which to design the public input process. These themes were:

These themes were used as the basis for some of the various exercises conducted at the session. What follows is the results gathered from the public input session:

Priority Pyramid

The Priority Pyramid exercise allowed the public to view their priorities for apartment housing in Greenville through the lenses of our identified themes. They were asked to rank the themes into tiers of importance, with the first tier having one slot, the second having two slots, and the third having three slots, for a total of six slots, one for each theme. The results are show below:

Affordability			Connectivity			Demographics		
3	11	20	6	13	15	6	5	23
9%	32%	59%	18%	38%	44%	18%	15%	68%

Location/Distribution			Quality			Safety		
7	14	13	9	15	10	3	9	22
21%	41%	38%	26%	44%	29%	9%	26%	65%

The first row under each them shows the number of responses, with the orange box showing the number of first tier placings, the gray box showing the number of second tier placings, and the yellow showing the number of third tier placings. The second row under each theme shows the percent of responses that placed the theme in that particular tier. Using these metrics, the study identified this ranking of priorities:

1. Quality
2. Location/Distribution
3. Connectivity
4. Affordability
5. Demographics
6. Safety

Thought Wall

The Thought Wall allowed for the public to place their most important thoughts they had related to apartment housing under one of the identified themes for the study. This exercise acts like a Rorschach test in that the public is asked to put their immediate thoughts down on paper without thinking too hard, and then apply it to a theme. Each participant is given five sheets of paper: one yellow and four blue. The yellow is reserved for the most important thought, or priority thought, while the blue pages are for any general thoughts. Participants were asked to at least provide a priority thought, and then as many general thoughts as they wished, up to four total.

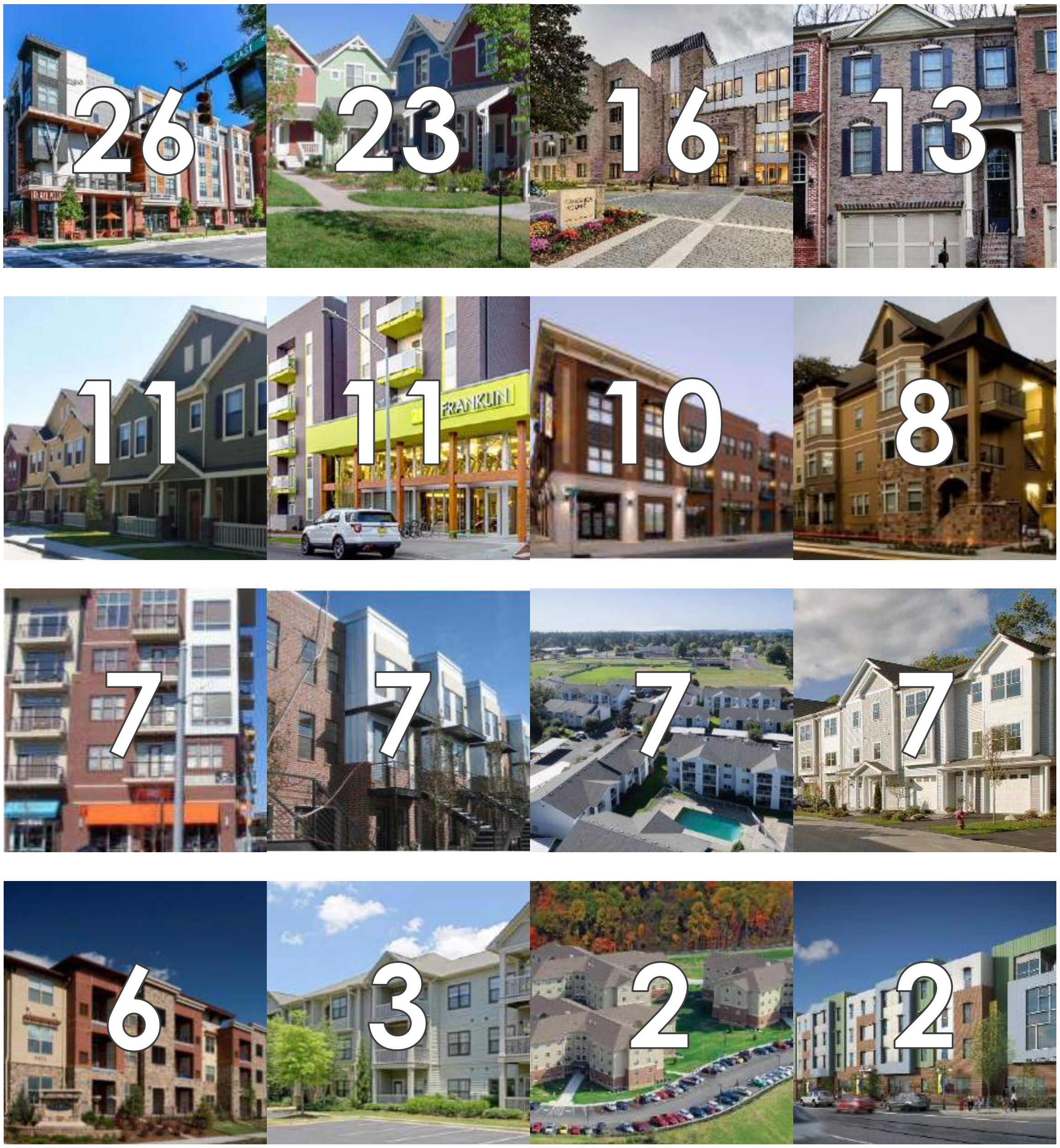
Affordability		Connectivity		Demographics	
Priority	General	Priority	General	Priority	General
3	9	6	14	2	8

Location/Distribution		Quality		Safety	
Priority	General	Priority	General	Priority	General
15	7	4	24	2	7

In this exercise, Location/Distribution had the most priority responses by a large margin. Quality had the most general thoughts. Quality and Distribution were also the top two ranked themes from the Priority Pyramid exercise as well, which identifies those themes as of key importance to the public of Greenville.

Visual Preference Survey

The visual preference survey exercise is a simple way to assess the participants' affinity for specific types of character images. The images used for this particular exercise showed various different types and character of multi-family housing, including townhouses, mixed use, apartment complexes, high-rise, low-rise, etc. Participants were shown the images on several boards and were then given stickers to place on whatever images they felt exemplified how they wanted apartment housing in Greenville to look and/or feel. The following are all of the images that received votes:



Here are the images that received no votes:

Character images for mixed use were fairly popular, along with images that showed smaller scale multi-family developments. Participants did not as much favor the images of larger, taller multi-family developments. In addition, images that showed traditional apartment complex living, that is common in Greenville currently, were not found to be as favorable.

A-2.3 STUDENT INPUT FORUM

On the night of Monday, November 6th, 2017, the consultant team conducted a public input forum on the East Carolina University campus. Given the direct effects that student apartment housing has on the students at ECU, engaging the students to get their feedback was important to the process. With the help of the ECU Student Government Association, a forum event was created to invite students to provide their thoughts on student apartment housing in the area. Attendance to the forum was lower than targeted; however, feedback was obtained from those who participated that helped to inform the results of the study.

As part of the forum, a brief presentation was given to the students as an overview of the study, and then an interactive survey was given that allowed the consultant team to gauge the student response to specific questions, see the results in real-time, and provoke further discussion. Significant questions from the survey, with percentage of responses noted in parentheses, are highlighted below:

- Greenville has…
    - a) A lot of options that make finding housing easy **(17%)**
    - b) Some good options, but they lease-up quickly **(83%)**
    - c) Not enough variety to support housing needs **(0%)**
- If you live off campus, do you live in a…
    - a) Single-family house **(20%)**
    - b) Student-targeted community **(80%)**
    - c) Apartment community that has a mixture of ages/tenants **(0%)**
- What is the most important factor to you in determining where to live?
    - a) Cost **(20%)**
    - b) Location **(60%)**
    - c) Safety/Security **(20%)**
    - d) Design and interior features **(0%)**
    - e) Community amenities **(0%)**
- How much are you willing to spend each month on rent?
    - a) <$500 **(20%)**
    - b) $500-$750 **(80%)**
    - c) $750-$1,000 **(0%)**
    - d) More than $1,000 **(0%)**
- What is the greatest strength of student housing in Greenville?
    - a) Affordability **(0%)**
    - b) Variety **(40%)**
    - c) Location **(0%)**
    - d) Accessibility **(60%)**
    - e) Other **(0%)**

- What is the greatest weakness of student housing in Greenville?
    a) Affordability **(20%)**
    b) Variety **(0%)**
    c) Location **(80%)**
    d) Accessibility **(0%)**
    e) Other **(0%)**

A-2 PROFILES OF LARGE-SCALE STUDENT HOUSING BUILDERS/DEVELOPERS

A.2.1 AMERICAN CAMPUS COMMUNITIES

American Campus Communities is the largest private student housing developer, owner, and manager in the country. It is a publicly-traded real estate investment trust (REIT) based in Austin, TX, that focuses solely on student housing, both on- and off-campus. The company owns and/or manages 206 communities, with over 130,000 beds, servicing 96 campuses in the Sun Belt, northeast, midwest, and west coast. Eighty-six of the communities are on-campus developments.


U Centre on College


Common Area at U Centre on College

U Centre on College is an off-campus student housing community that was built in 2017 and offers 127 units and 418 beds. It is located less than 0.5 miles from Clemson University in Clemson, SC. Unit types include two-, three-, and four-bedrooms that range from 836 to 1,412 square feet. Units feature an in-unit washer and dryer, granite countertops, and stainless steel appliances. Parking in a garage is also available for an extra fee. Community amenities include an academic success center, study lounge, center with computers and free printing, pool and hot tub, clubhouse, game room, pet washing station, fitness center and cardio room, and bike storage.

A.2.2 EDUCATION REALTY

Education Realty, also known as EdR, is a publicly-traded REIT based in Memphis, TN, and has been a leader in student housing since 1964. EdR owns and/or manages 82 communities, including The Province at ECU. The company has more than 45,000 beds serving 52 universities in 25 states.

The District on 5th is one of EdR's off-campus student housing developments that was built in 2012. The five-story community includes 206 units. It is located approximately three miles from the University of Arizona and walking distance to stores and restaurants. Unit types include two-, three-, and four-bedrooms with sizes ranging from 713 to1,271 square feet. Units feature private bathrooms, granite countertops, in-unit washer and dryer, and walk-in closets. Select units offer balconies or patios. Parking in a garage and furnished units are available at a cost. Community amenities include a conference room, pool and hot tub, patio lounge and grilling station, resident lounge, bike storage, fitness center, game room, and computer lab.

The District on Fifth

Conference Room at The District on Fifth

A.2.3 THE SCION GROUP

Scion, which is based in Chicago, is another leader in the student housing industry. The company owns and operates nearly 49,000 beds serving 47 university campus markets across 21 states. Founded in 1999, the company focuses exclusively on student housing, both on- and off-campus.

The Republic at Tallahassee

Pool at The Republic of Tallahassee

One of Scion's communities is The Republic at Tallahassee, which was built in 2012 and serves Florida State University. The community's unique design provides a neighborhood feel with porches, lawns, and sidewalks. It is located approximately three miles from campus. The unit mix includes two-, three-, four-, and five-bedroom units with sizes ranging from 1,398 to 2,363 square feet. There are 710 beds. The cottages feature private bathrooms, in-unit laundry, and a full kitchen with stainless steel appliances and dishwasher. Community amenities include a resort-style swimming pool with tanning ledge and swim-up movie screen, sand volleyball court and basketball courts, grilling areas, clubhouse, 24-hour fitness center, game rooms, computer center, virtual golf simulator, tanning beds, dog park, and free surface parking.