

# Housing, Transportation, and Commuter Study Highlights

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Supplemental materials for discussion on  
Carrboro's Affordable Housing

6/1/2013

This document gives some of the pertinent highlights from two studies conducted by graduate students from the UNC Department of City and Regional Planning. The first overview comes from the Housing and Transportation Affordability in Carrboro study that was presented to the Board of Alderman on April 16, 2013. The second synopsis comes from the 2009 UNC Commuter Study: Examining the Changing Commute to UNC.

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# Housing and Transportation Affordability in Carrboro Study

(Presented by graduate students from the UNC Department of City and Regional Planning in April 2013)

## 1 Introduction

On April 16, 2013, students from the UNC Department of City and Regional Planning presented a report to the Board of Alderman on a study they conducted on housing and transportation affordability in Carrboro. Their research took place during the 2013 Spring semester. The students conduct four different assessments. Their first assessment focused on rental affordability for Carrboro apartment complexes. They surveyed 16 Carrboro complexes to determine rental costs and the subsequent affordability of rental units. Second, they analyzed homeowner affordability by collecting housing sales figures for attached and detached single family homes that sold between August 2012 and February 2013. Third, they surveyed city records to determine the number of affordable housing units that will be supplied through developments that are either planned or under construction. Fourth, the students researched the relationship between parking supply and demand by looking at the parking rates at peak hours for four Carrboro multi-family developments.

### 1.1 Definitions

**Housing Affordability:** Households spending less than 30 percent of their income on housing costs (based on US Department of Housing and Urban Development standards).

**Housing and Transportation Affordability:** Households that spend less than 45 percent on combined costs (based on research by Dr. Todd Litman of the Victoria Transport Policy Institute).

**Area Media Income (AMI):** The amount which divides the income distribution into two equal groups, half having income above that amount, and half having income below that amount. AMI is the benchmark used for the study's analysis for affordability of housing and transportation. In 2010, Carrboro's AMI was \$51,630.

## 2 Housing Affordability

### 2.1 Rental Units

According to 2010 Census data, 51 percent of Carrboro's renters were spending more than 30 percent of their income on housing. The students surveyed 16 Carrboro complexes. Those complexes include: the Crest Apartments; Autumn Woods; Carolina Apartments; Poplar Place Apartments; Ashbrook Apartments; Chambers Ridge Apartments; The Villages of Chapel Hill; Chateau Apartments; Berkshire Manor; Landmark at Chelsea Commons; Royal Park; Collins Crossing; Ridgewood Apartments; the Bridges at Chapel Hill; Rock Creek; Estes Park Apartments. The average monthly rental rates are in the table below.

Apartment Size	Average Rate	# of Vacant Units	Affordable to
Studio	\$767.00	0	
1 Bedroom, 1 Bath	\$741.15	10	57% AMI or higher
2 Bedroom, 1 Bath	\$801.55	6	62% AMI or higher (avg. for 2 bedroom)
2 Bedroom, 2 Bath	\$690.00	2	
3 Bedroom, 2 Bath	\$1,035.00	1	80% AMI or higher

## 2.2 Homeownership

According to the 2010 Census, about 35 percent of homeowners with a mortgage in Carrboro are living in “unaffordable housing.”

Location	Median Home Value
Town of Carrboro	\$345,700
North Carolina	\$152,700
Nationally	\$186,200

Based on homes sales between August 2012 and February 2013 and calculating housing costs based on a 10% down payment and a 30-year fixed rate mortgage with a 3.6% interest rate, the students found:

House Type	Sample Size	Range of Sale Prices	Average Sale Price	Average Monthly Cost	Minimum Annual Income Needed	Percentage of Carrboro AMI
2 Bedroom (Condo)	10	\$30,000 – \$ 255,000	\$144,110	\$954	\$38,151	99%
2 Bedroom (single family)	1	\$210,000	\$210,000	\$1,335	\$53,412	123%
3 Bedroom	14	\$160,000 - \$395,000	\$248,571	\$1,561	\$62,441	144%
4 Bedroom	7	\$230,000 - \$395,000	\$309,214	\$1,909	\$76,378	176%

## 2.3 Current or Planned Residential Developments

According to town records, there are 11 residential development projects either in the planning or construction phase. These units are expected to produce between 312 and 387 single family homes; between 166 and 267 multifamily homes; between 125 and 152 condominiums; and up to 27 apartments. Four of these units are taking advantage of the affordable housing density bonus and they are expected to produce 79 affordable housing units. An additional four developments are considering taking advantage of the affordable housing density bonus.

## 3 Housing and Transportation

### 3.1 Carrboro Transportation Profile

Commuting In/Out of Carrboro for Work:

Average Monthly Earnings	Work in Carrboro/ Commute in	Work and Live in Carrboro	Live in Carrboro/ Commute out
<\$1,250	872	177	1,334
\$1,251 - \$3,333	1,618	222	2,837
>\$3,333	1,120	144	3,710

Source: Longitudinal Employer Household Dynamics' OnTheMap 2010 Data

Commuting distance for lowest income bracket (<\$1,250 per month) working in Carrboro:

Distance	# of Workers	% of Workers
< 10 miles	461	43.9
10 – 24	202	19.3
25 – 50	139	13.3
>50	247	23.5

Source: Longitudinal Employer Household Dynamics' OnTheMap 2010 Data

Modes of Transportation:

In 2010, 70% of Carrboro residents commuted by car. An additional 16.3% commuted by public transit, which increased from 9.1% in 2000.

### 3.2 Students' Parking Assessment

The students assessed the parking at four residential properties – Ashbrook, Cedar Court, The Flats, and Colonial Village at Highland Hills. The students compared the four complexes' current parking conditions to the Town's suggested parking supply and to national standards defined by the Institute for Transportation Engineers (ITE). The students found that parking was oversupplied at all four complexes.

	Ashbrook	Cedar Court	The Flats	Colonial Village at Highland Hills
Town's suggested parking supply	320	102	64	53
ITE Recommended Parking	209	83	39	34
Actual Parking Supply	315	97	60	51
Supply Versus ITE Standards	51%	17%	52%	48%
Actual Parking Demand	208	59	45	38
Demand Versus ITE Standards	-1%	-29%	14%	10%

### 4 Conclusion

The students maintain that transportation costs are an increasing burden to households and need to be considered when assessing housing affordability. They found that housing is still affordable for many of Carrboro's residents and that there are low-cost public transportation options available. However, to create even more affordable housing options, the students suggest revisiting the current Open Space and parking policies. Some of their recommendations include reducing the 40% Open Space requirement and promoting unbundled parking costs.

# 2009 UNC Commuter Study: “Examining the Changing Commute to UNC”

(Prepared by UNC Department of City and Regional Planning)

## 1 Introduction

In 1997, UNC commissioned the first Commuter study. Since then, the study has been repeated in 2001, 2004, 2007, and 2009. The commuter survey receives feedback from students and employees on their travel modes to commute to campus, as well as their origins and destinations. This study gives perspective on how the university can affect housing and transportation in Carrboro.

### 1.1 Commuter Study Methodology

At the time of the 2009 study, there were 18,302 faculty and staff at the University and UNC hospitals. A random sample of 6,629 employees was chosen from personnel records to receive the survey. Of those selected, 1,603 responded for a response rate of 34%. The researchers reported their data with a confidence level of 95% and a margin of error for employee survey data at an estimated +/-1.9%. In Fall 2009, there were 16,383 undergraduate, graduate, and professional UNC students who lived off-campus. The researchers sent the survey to a random sample of 5,000 students. A total of 504 responses were received for a response rate of 12%. The researchers reported their data with a confidence level of 95% and a margin of error for student survey data at an estimated +/-3.9%.

## 2 Study Findings

### 2.1 Employee Commuter Findings

In 2009, **UNC employees** were commuting from the following origins:

County	Town	Surveyed Employees	Percentage*
Orange		593	38.9%
	Chapel Hill	429	28.1%
	Carrboro	126	8.2%
	Hillsborough	59	3.9%
Durham		331	21.7%
	Durham	317	20.7%
Chatham		179	11.8%
	Pittsboro	89	5.8%
Alamance		169	11.1%
	Graham	50	3.3%
	Mebane	48	3.1%
	Burlington	38	2.5%
	Snow Camp	22	1.5%
Wake		166	10.9%
	Raleigh	70	4.6%
	Cary	55	3.6%
Person		19	1.2%
Other		202	13.2%
Total		1,528	100%

\* Cumulative for counties

## 2.2 Student Commuter Findings

Of those who responded, 50% indicated they were graduate students, 30% were undergraduates, 18% were professional (law, medical, dental, pharmacy, etc.), and 2% were postbaccalaureate. Ninety-three percent were full-time students while 7% were part-time.

County	City	# Surveyed Students	Percentage*
Orange		306	65.8 %
	Chapel Hill	216	44.8%
	Carrboro	111	23%
Durham		89	19.1%
	Durham	79	16.4%
Wake		46	9.9%
	Raleigh	26	5.4%
	Cary	11	2.3%
Chatham		13	2.8%
Other		11	2.4%
Total		465	100%

\* Cumulative for counties

## 2.3 Zip Codes

When assessing the respondents' zip codes, 101 of the respondents or 21.7% live in the 27510 zip code. More respondents lived in Carrboro's 27510 zip code than any one of the Chapel Hill zip codes.

## 2.4 Students' Distance from Home to Nearest Bus Stop

The following table shows how far students live from public transit bus stops.

Less than ¼ mile	57.28%
¼ to ½ mile	11.03%
½ to 1 mile	8.45%
Greater than 1 mile	16.90%
Don't know	6.34%

## 3 Conclusion

There has been greater decentralization. More UNC employees are moving to areas like Raleigh, Durham, and Cary. As the study notes, in 1997, 40% of employees lived in Chapel Hill. By 2009, only about 28% of employees lived in Chapel Hill. Students are also moving further outside of Chapel Hill, especially to Carrboro and Durham. According to the study, in 1997, 61% of students lived in Chapel Hill but by 2009 that number decreased to 45%. Between the 1997 study and 2009 study, Chapel Hill Transit became fare-free. This has led to more students using public transportation and the park and rides. Also, it is important to note that 16% of students enter Chapel Hill and the UNC campus on West Franklin, suggesting that they are coming from Carrboro. The purpose of summarizing this study is to help assess the number of students who live and travel in Carrboro.