Feasibility Analysis Part II

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5. Supply Analysis

5a. Existing and Proposed Supply

There is a substantial amount of new supply planned for both the general Durham area and the Downtown Durham area (Figure 20). **There are 3,957 new Class A apartment units planned for construction (2013 onward) in Durham.** As of 2012-2013, Durham has 3,373 existing Class A apartment units. The new amount of Class A supply for the general Durham area is 1.17x greater than the already existing Class A supply for the general Durham area.

There are 2,114 new Class A apartment units planned for construction in Downtown Durham (subject property's submarket and location). As of 2012-2013, Downtown Durham has 1,782 existing Class A apartment units. The new amount of Class A supply for Downtown Durham is 1.19x greater than the already existing Class A supply for Downtown Durham.

This substantial amount of new supply may be a cause of worry. The Durham area and specifically the Downtown Durham area may be overbuilt by the time the subject property is completed. Also, most of the new housing supply is coming from the Downtown Durham submarket. Downtown Durham's submarket will make up 53.42% of Durham's planned supply. The amount of new supply will be significantly greater than the existing supply in this subject property's neighborhood. It's possible that new supply will be greater than new demand, which will put downward pressure on rents. This may hurt the project's financial assumptions and feasibility.

***Calculations

<u>Multiples for Durham Area</u>

(3957 New Class A units/ 3373 Existing Class A units) = 1.17

<u>Multiples for Downtown Durham</u>

(2114 New Class A units/ 1782 Existing Class A units) = 1.19

<u>Downtown Durham's Share of New Durham Supply</u>

(2114 New Downtown Durham Class A Units/ 3957 New Class A units) = 53.42%

Figure 20 (Existing and Proposed Supply for Research Triangle Cities)

Note: Studios + 1bdrms + 2bdrms + 3bdrms + 4bdrms doesn't necessarily equal total units since there is no information on the unit breakdown for some apartment complexes

		Total							Median								Median Asking Rent				Median Number of					Median Square Feet of			
Class	City	Total Units	Studios	1 Bedrooms	2 Bedrooms	3 Bedrooms	4 Bedrooms	Rentable Building Area	Year Built	Stories	Land Area (Acres)	Vacancy Rate%	Floor Size	Asking Rent/ Unit	Total Parking Spaces	Parking Spaces per Unit	Studios	1 Bedrooms	2 Bedrooms	3 Bedrooms	Studios	1 Bdrms	2 Bdrms	3 Bdrms	4 Bdrms	Studios	1 Bedrooms	2 Bedrooms	3 Bedrooms
Existing Apartments																													
A	Cary	2,792	0	1,179	1,244	369	0	3,385,026	2007	4	22.39	3.3	87288	1073	600	2	NMF	$958	$1,187	$1,379	0	120	132	33	0	NMF	838	1,182	1,361
A	Chapel Hill	908	22	378	380	128	0	992,922	2000	3	16.851	7.25	65408	1408	275.5	1	$1,100	$1,152	$1,495	$2,030	0	98	92	28	0	567	876	1,235	1,583
A	Durham	3,373	27	1,773	1,376	193	4	4,020,486	2006	3	22.076	2.7	93098	1124	682	1	$1,200	$978	$1,352	$1,789	2	192	136	11	0	639	823	1,176	1,411
A	Raleigh	6,997	103	2,942	3,149	626	177	8,142,828	2005	3	22.44	3.25	85638	1133	669	1	$1,031	$1,030	$1,153	$1,363	0	124	148	32	0	675	800	1,116	1,301
A	**Subtotal**	**14,070**	**152**	**6,272**	**6,149**	**1,316**	**181**	**16,541,262**	**2006**	**3**	**22**	**3**	**86463**	**1129**	**635**	**1**	**$1,100**	**$1,004**	**$1,270**	**$1,584**	**0**	**122**	**134**	**30**	**0**	**639**	**831**	**1,179**	**1,386**
B & C	Cary	9,207	10	3,383	4,795	993	26	10,410,352	1993	3	18	4	114649	1072	391	2	$917	$925	$1,080	$1,309	5	103	127	37	13	506	789	1,063	1,354
B & C	Chapel Hill	5,130	5	1,521	2,444	525	78	5,241,656	1989	3	13	4	114174	987	460	1	$615	$858	$1,084	$1,346	0	77	132	37	0	420	767	1,027	1,427
B & C	Durham	19,850	173	7,657	10,038	1,982	0	20,902,577	1996	3	26	2	109832	904	488	1	$670	$802	$944	$1,100	38	124	124	32	0	451	750	1,092	1,268
B & C	Raleigh	40,762	1,073	16,055	18,930	3,925	779	44,059,059	1996	3	17	3	90578	922	462	1	$718	$837	$967	$1,211	30	92	119	37	0	504	801	1,059	1,329
B & C	**Subtotal**	**74,949**	**1,261**	**28,616**	**36,207**	**7,425**	**883**	**80,613,644**	**1995**	**3**	**18**	**3**	**112003**	**954**	**461**	**1**	**$694**	**$847**	**$1,023**	**$1,260**	**18**	**98**	**125**	**37**	**0**	**478**	**778**	**1,061**	**1,341**
All	**TOTAL**	**89,019**	**1,413**	**34,888**	**42,356**	**8,741**	**1,064**	**97,154,906**																					
Coming on Line/Proposed (Year 2013+)																													
A	Cary	1,592	109	875	418	190	0	2,033,218		4	14		51453	1196	197	0	$910	$1,052	$1,321	$1,679	27	112	78	19	0	558	769	1,154	1,489
A	Chapel Hill	1,441	0	0	0	154	0	2,541,600		6	3		33333	2325	463	1	NMF	NMF	NMF	$2,325	NMF	NMF	NMF	NMF	NMF	NMF	NMF	NMF	1,400
A	Durham	3,957	896	1,394	1,187	160	0	4,467,774		4	18		95421	1301	425	1	$1,082	$1,119	$1,397	$1,546	54	129	121	24	0	621	821	1,102	1,430
A	Raleigh	9,717	1,576	3,737	2,159	325	100	11,156,215		4	13		48421	1262	288	1	$1,065	$1,106	$1,549	$1,733	33	150	108	18	0	626	803	1,145	1,403
A	**Subtotal**	**16,707**	**2,581**	**6,006**	**3,764**	**829**	**100**	**20,198,807**		**4**	**13**		**49,937**	**1,282**	**356**	**1**	**$1,065**	**$1,106**	**$1,397**	**$1,706**	**33**	**129**	**108**	**19**	**0**	**621**	**803**	**1145**	**1417**
B & C	Cary	1,099	0	248	252	96	0	1,114,837		3	29		111931	1108	271	1	NMF	976	1218	1442	0	124	126	48	0	NMF	796	1137	1354
B & C	Chapel Hill	194	0	18	48	64	64	405,270		6	9.13		59440	829	NMF	NMF	NMF	829	884	1009	0	18	48	64	64	NMF	536	995	1076
B & C	Durham	385	135	193	57	0	0	452,002		6	NMF		35447	1433.5	NMF	NMF	980	1336.5	2212	NMF	67.5	96.5	57	0	0	553	769.5	1267	NMF
B & C	Raleigh	1,449	726	243	388	92	0	1,478,315		3	18		125000	1159	413	2	NMF	946	1209	1360	335	72	144	20	0	NMF	796	1112	1338
B & C	**Subtotal**	**3,127**	**861**	**702**	**745**	**252**	**64**	**3,450,424**		**5**	**18**		**85,686**	**1,133**	**342**	**2**	**$980**	**$961**	**$1,213**	**$1,360**	**34**	**84**	**92**	**34**	**0**	**553**	**783**	**1124**	**1338**
All	**TOTAL**	**19,834**	**3,442**	**6,708**	**4,509**	**1,081**	**164**	**23,649,231**																					

5b. Unit Mix

The subject property's unit mix is more consistent with the new supply than it is with existing supply. This subject property's unit mix should be compared with the new and old supply's unit mix (Figure 21). This subject property will be directly competing with the new properties that will also come on-line in the future. Since the subject property has a unit mix that's relatively more similar to the new properties', then this subject property will have to work harder in differentiating itself (ie. Marketing itself). If the market demands the new supply's unit mix, then buyers will consider this new property since it is comparable to the other desirable apartments and fits their needs. If this property has different unit mixes from the other new properties, then this subject property may be more differentiated. But if it's too far off from what the market wants (and what the other new apartments are offering), then this could hurt the demand for this subject property.

Figure 21 (Unit Mix for Research Triangle, Durham and Downtown Durham)

			Research Triangle															
			Existing Supply				New Supply				Existing & New Supply							
	Subject Property		Class A		Classes ABC		Class A		Classes ABC		Class A		Classes ABC					
	Number of Units	Percent	Number of Units	Percent	Number of Units	Percent	Number of Units	Percent	Number of Units	Percent	Number of Units	Percent	Number of Units	Percent				
Studios	45	14%	152	1%	1,413	2%	2,581	19%	3,442	22%	2,733	10%	4,855	5%				
1 Bedrooms	197	63%	6,272	45%	34,888	39%	6,006	45%	6,708	42%	12,278	45%	41,596	40%				
2 Bedrooms	68	22%	6,149	44%	42,356	48%	3,764	28%	4,509	28%	9,913	36%	46,865	45%				
3 Bedrooms	5	2%	1,316	9%	8,741	10%	829	6%	1,081	7%	2,145	8%	9,822	9%		New Supply	Existing Suppy	
4 Bedrooms	0	0%	181	1%	1,064	1%	100	1%	164	1%	281	1%	1,228	1%		Class A		Class A
Total Units	315	100%	14,070	100%	88,462	100%	13,280	100%	15,904	100%	27,350	100%	104,366	100%	Market Share	2.3%	Vacancy Rate (%)	3%

			Durham															
			Existing Supply				New Supply				Existing & New Supply							
	Subject Property		Class A		Classes ABC		Class A		Classes ABC		Class A		Classes ABC					
	Number of Units	Percent	Number of Units	Percent	Number of Units	Percent	Number of Units	Percent	Number of Units	Percent	Number of Units	Percent	Number of Units	Percent				
Studios	45	14%	27	1%	200	1%	896	25%	1,031	26%	923	13%	1,231	5%				
1 Bedrooms	197	63%	1,773	53%	9,430	41%	1,394	38%	1,587	39%	3,167	45%	11,017	40%				
2 Bedrooms	68	22%	1,376	41%	11,414	49%	1,187	33%	1,244	31%	2,563	37%	12,658	46%				
3 Bedrooms	5	2%	193	6%	2,175	9%	160	4%	160	4%	353	5%	2,335	9%		New Supply	Existing Suppy	
4 Bedrooms	0	0%	4	0%	4	0%	0	0%	0	0%	4	0%	4	0%		Class A		Class A
Total Units	315	100%	3,373	100%	23,223	100%	3,637	100%	4,022	100%	7,010	100%	27,245	100%	Market Share	8.0%	Vacancy Rate (%)	3%

			Downtown Durham															
			Existing Supply				New Supply				Existing & New Supply							
	Subject Property		Class A		Classes ABC		Class A		Classes ABC		Class A		Classes ABC					
	Number of Units	Percent	Number of Units	Percent	Number of Units	Percent	Number of Units	Percent	Number of Units	Percent	Number of Units	Percent	Number of Units	Percent				
Studios	45	14%	25	1%	114	1%	488	27%	623	29%	513	14%	737	5%				
1 Bedrooms	197	63%	1,009	57%	5,296	39%	714	40%	907	42%	1,723	48%	6,203	39%				
2 Bedrooms	68	22%	723	41%	7,282	53%	574	32%	631	29%	1,297	36%	7,913	50%				
3 Bedrooms	5	2%	21	1%	1,044	8%	18	1%	18	1%	39	1%	1,062	7%		New Supply	Existing Suppy	
4 Bedrooms	0	0%	4	0%	4	0%	0	0%	0	0%	4	0%	4	0%		Class A		Class A
Total Units	315	100%	1,782	100%	13,740	100%	1,794	100%	2,179	100%	3,576	100%	15,919	100%	Market Share	14.9%	Vacancy Rate (%)	5.7%

You also want to compare both new supply (including subject property) and old supply to see where the market is headed. It's useful to see if existing building patterns are maintained into the future (ie. unit mixes). Currently, there isn't a large amount of Class A studios in the Triangle, Durham or Downtown Durham markets. This subject property and new properties will add a substantial amount of new Class A studios to these markets. This shows that new supply is starting to emphasize studios. New supply has reduced its mix of Class A 1 and 2 bedroom apartments (although still sizeable) to make room for more Class A studio apartments. Compared to the new Class A studio mix in the Research Triangle and Durham, new Downtown Durham supply is adopting this tilt the most with a studio unit mix of 27%. By adding substantial amounts of new Class A studios, this subject property and new supply run the risking of overbuilding the inventory of studios on the Class A market.

This property should be primarily compared to other Class A supply, but it should also be compared to Class B & C supply depending on the state of the economy. The higher paid professionals in this subject property's target market would prefer apartment buildings that are high quality and offer lifestyle amenities. During economic good times, the target market would spend more of its disposable income and would primarily consider Class A apartments. During economic bad times (layoffs and salary freezes), the target market may try to save on money. As a result, this target market would consider more affordable Class B and C apartments in addition to Class A apartments.

It makes a difference whether our spatial unit is the Research Triangle, Durham or Downtown Durham. Just because a broader market is doing well doesn't mean that its submarkets are doing well (and vice versa). The addition of certain unit mixes can also vary by how broadly or narrowly you define the market. For example, certain markets can be more overbuilt than others. Specifically, the addition of Class A studio apartments will vary by the scale of the market. Out of the three markets, new Class A studio apartments will have their largest appearance in Downtown Durham's new supply (27%), second largest in Durham's (25%) and third largest in the Research Triangle's (19%). This shows that Downtown Durham's new supply is adopting this trend of adding more studios more intensively than Durham and the Triangle Area. This could mean that Downtown Durham's supply of studios could be overbuilt relative to Durham's and the Triangle's supply of studios.

To see if this proposed building is consistent with the market depends on how you define the market. With regards to studio apartments, this building is the most consistent with Downtown Durham's existing and new Class A supply market. This proposed building has a studio mix of 14% while Downtown Durham also has a 14% studio mix. Durham's existing and new Class A supply market comes in a close second where it has a 13% studio mix.

With regards to 1 bedroom units, our subject property is inconsistent with every Class A market (both existing and new supply markets). Our subject property has the largest mix of 1 Bedrooms at 63%. Our subject property and these markets disagree because our property says that 1 bedrooms will be more popular than what these markets say. Our subject property is very inconsistent with the Research Triangle's existing supply Class A market. Our subject property's studio mix (14%) is significantly greater than the Triangle's existing studio mix (1%). Our subject property's 1 Bedroom mix (63%) is also larger than Triangle's (45%) (Durham's 1 Bedroom Mix Existing Supply Class A- 53%, Downtown Durham's 1 Bedroom Mix Existing Supply Class A-57%). Finally, our subject property's 2 bedroom mix (22%) is significantly smaller than the Triangle's respective 2 bedroom mix (44%). (Durham's 2 Bedroom Mix Existing Supply Class A- 41%, Downtown Durham's 2 Bedroom Mix Existing Supply Class A-41%).

The developer is tilting towards one bedroom apartments. One bedroom apartments make up the largest mix (63%) out of his property. Based on this subject property's target market of young medical professionals and urban professionals, this strategy seems appropriate. The young medical professionals who work at Duke Medical Center would appreciate this building. It's close to work and it offers a lot of 1-bedroom apartments that fit their individual space needs. The urban professionals who work in the Research Triangle Park would appreciate this building's access to bus lines. They are most likely starting out in their careers, and they need a small but sizeable space to start out with.

5c. Market Share

Our project's market share depends on how you define the market. Our project has its largest market share in Downtown Durham's New Supply Class A Market at 14.9% (Figure 21; page 26). Our property also has an 8% market share in Durham's New Supply Class A Market and 2.3% in the Research Triangle's New Supply Class A Market. Since this subject property is adding new space (while other new space is also coming online) to each of the Research Triangle's, Durham's and Downtown Durham's Existing Supply Class A Markets, it should increase these markets' respective vacancy rates.

In comparison to the other Durham submarkets, Downtown Durham has the highest vacancy at 5.7% (Figure 22). If the developer pursues this project now when a large amount of new Class A supply is coming online, he will only increase this vacancy rate even more in the future. This large amount of future supply may overshadow future demand. This will put downward pressure on future market rents. The developer should pursue this project on a later date when there is less competition.

Figure 22 (Durham Submarket Vacancies from "CoStar (Supply Calc) Worksheet")

Class	City	Submarket Cluster	Vacancy Rate%
A	**Durham**	**Downtown Durham**	**5.7**
A	Durham	East Durham	2.7
A	Durham	South Durham	2.3

5d. Validating the Developer's Cash Flow Assumptions

The developer's rent per unit is larger than both the existing and proposed Class A apartments for Durham. It is outside of the ballpark for both existing and proposed Class A apartments (Figure 23). The subject property's rent per unit is closest to the market with regards to studios. Each of the subject property's studios have a rent of $1,250 per unit. This is slightly outside the ballpark because it is a little bit larger than the existing apartments' rent of $1,200 per studio unit. **The project will have difficulty being rented up** because this subject property has relatively more expensive rents (above market). Thus, it will face tough competition from cheaper comparable Class A apartments. Also, there is an influx of new supply into the Durham market, and this possible excess supply will put downward pressure on future rents.

Depending on the apartment unit, this subject property's units are both comparable and not comparable to existing and proposed Class A Durham apartments. The subject property's studios and 2 bedroom apartments are comparable to the existing and proposed apartments'. The square footage of the subject property's studios (630 SF) is within the proposed apartment's (621 SF) and existing apartment's (639 SF) respective square footage. Also, the square footage of the subject property's 2 bedroom apartments (1,121 SF) is within the proposed apartment's (1,102 SF) and existing apartment's (1,176 SF) square footage. The subject property's 3 bedroom apartments (1,528 SF) are not comparable and are instead

Figure 23 (Developer's Cash Flow Assumptions)

Validating the Developer's Assumptions				
Proposed Rent				
			Class A (Durham)	
	Subject Property		Existing Apts	Proposed Apts
	Number of Units	Proposed Rent per Unit	Asking Rent per Unit	Asking Rent per Unit
Studios	45	$1,250	$1,200	$1,082
1 Bedrooms	197	$1,485	$978	$1,119
2 Bedrooms	68	$2,145	$1,352	$1,397
3 Bedrooms	5	$2,725	$1,789	$1,546
Total Units	315			
Proposed Size Per Unit				
			Class A (Durham)	
	Subject Property		Existing Apts	Proposed Apts
	Number of Units	Square Feet per Unit	Square Feet per Unit	Square Feet per Unit
Studios	45	630	639	621
1 Bedrooms	197	753	823	821
2 Bedrooms	68	1,121	1,176	1,102
3 Bedrooms	5	1,528	1,411	1,430
Growth Rate in Rent				
			Class A (Durham)	
	Subject Property		Existing Apts	Proposed Apts
Rent Growth Rate		2.00%	2.45%	
Estimated Vacancy Upon Stabilization				
			Class A (Durham)	
	Subject Property		Existing Apts	Proposed Apts
Vacancy		5.36%	2.70%	

larger than the existing (1411 SF) and proposed (1430 SF) 3 bedroom Class A apartments in Durham. **It's a cause for concern that the subject property's one bedroom apartments (753 SF) are smaller than the existing (823 SF) and the other proposed (821 SF) one bedroom apartments.** This subject property is tilting towards 1 bedroom apartments (197 out of 315 units), but it is offering them at an above market rate ($1,485/ month) with less square footage than other 1 bedroom apartments in the market. **Ultimately, this will hurt in renting up the subject property.** Potential renters can find comparable existing and prospective Class A 1 bedroom apartments with more space for a cheaper rate. The size of this subject property's studios and 2 bedrooms make this property comparable to other properties. This property's larger 3 bedroom apartments may be an extra selling point in renting up the building. However, these three other apartment units won't have much power in renting up the subject property. The property's studios, 2 bedroom and 3 bedroom apartments are vastly outnumbered by the property's undersized and overpriced one bedroom apartments—which renters would find unappealing.

The developer's assumed growth rate (2%) is lower than the historical yearly growth rate for Class A apartments in the north Durham area (2.45%). The developer's assumed growth rate should be lower because he is charging more expensive rents (above market) than the existing apartments are charging. This makes the subject property less price competitive, and as a result, its rental rates will grow slower than the other apartment's will. The significant addition of new supply in north Durham may be greater than new demand. This will put downward pressure on future apartment rents. As a result, this will cause the subject property's future rental growth rates to slow down.

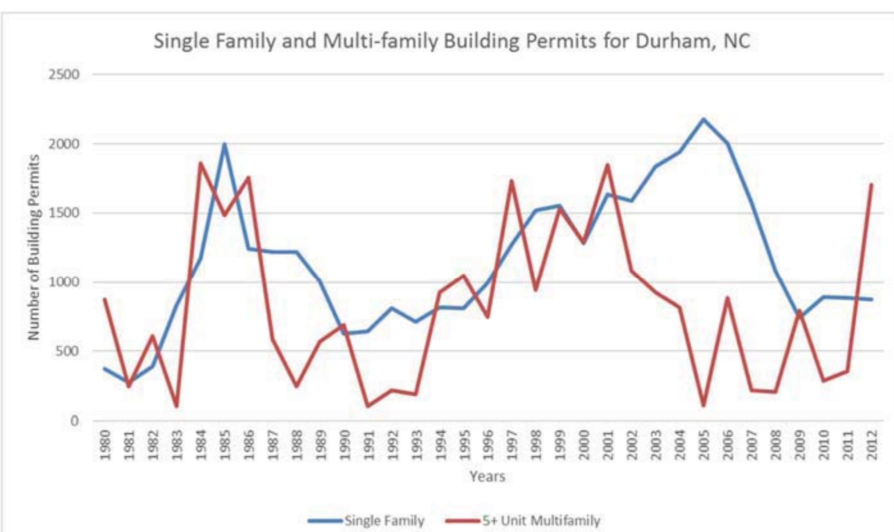
The developer's projected vacancy (5.36%) is within reason. Since the subject property's rents for each of its apartment units (studios, 1 BR, 2BR and 3BR) are relatively higher and above market (existing and proposed), the developer should have a harder time renting up his building. It's known that higher (lower) rents will lead to higher (lower) vacancies. As a result, the developer's higher rents (above market and existing apartment rents) will give his building a vacancy that is above the existing apartment's vacancy (2.70%).

5e. Additions to Supply

From 1980 to 2001, single family and multi-family permits co-moved together (Figure 24). From 2002 to 2012, single family and multi-family permits for Durham are inversely related. From 2002 to 2005, multi-family building permits decreased and then went bust in 2005. During this same time period, single family permits showed continued growth from the 90s and peaked in 2005. From 2005 to 2010, multi-family permits fluctuated around 500 annual building permits. During this same time period, single family housing went from its 2005 peak and went bust around 2009/2010. From 2010 to 2012, there was a dramatic boom in multi-family permits. Single family permits have leveled off and there is only stabilized single-family building activity.

The most recent trend in multi-family permits hurts this proposed project. A dramatic increase in the number of multi-family permits shows that there is a large future addition to multi-family supply in Durham. This may mean that the Durham apartment market may be overbuilt by the time this subject property is completed. This will create more competition for this subject property, and the excess supply will create downward pressure on future rents. This subject property will have trouble competing since it has above market rents.

Figure 24 (Single Family and Multi-family Building Permits for Durham, NC)



5f. Alternative to Apartments: Single Family Houses

We are interested in looking at single-family detached home trends even though we're developing multi-family properties because these two property types are substitutes (Figure 25) (Appendix 5F). For example, if single family housing prices are increasing and become unaffordable, then there will be increased demand for apartments since they're cheaper. From 2008 to 2011, single-family detached home prices for Durham-Chapel Hill and Raleigh decreased dramatically going from the upper confidence limit to the lower confidence limit of housing prices (bottoming out). With this dramatic decrease in price, potential home buyers who could afford upfront housing costs treated single-family homes and apartments as substitutes. If the upfront housing cost was now the same as a month's worth of apartment rent, then the homebuyer would choose to buy the house because he could get some equity appreciation eventually. If the monthly apartment rent was still cheaper than the upfront housing costs, the homebuyer would choose the apartment because it was cheaper.

The most recent trend (ending in 2012/ beginning of 2013) shows that single-family housing's standardized unexpected price is increasing for both Durham-Chapel Hill and Raleigh. This shows that single-family home property values for both Durham-Chapel Hill and Raleigh are increasing quickly at a similar rate. For these potential buyers that can afford the upfront housing costs, they may strongly consider purchasing single family detached homes at this time. They should make this purchase decision sooner rather than later (while they can still afford the upfront housing costs). These homes are now relatively affordable and their property values will increase. If this trend continues into the future (past 2013), then single-family housing may become unaffordable and people can't afford the upfront housing costs. As a result, they would rather opt to rent apartments in the future because they would be cheaper.

Figure 25 (Single Family and Multi-family Building Permits for Durham, NC)