

MAR.03.2008 11:46 9199680569

YORKSIMPSONUNDERWOOD

#0918 P.002 /002



Joe Patterson
7 Cobb Terrace
Chapel Hill, NC 27514
March 3, 2008

Dear Joe,

One of the most notable features of Central Park is its low density.

The number of condominium homes on the approximately 9 acre site is much lower than that of the proposed Ram development on the adjacent Town House Apartments site.

Thus, I'm sure, the name, Central Park.

Based on my thirty years of active participation in the local residential real estate market, both as professional and private investor, the lower density and privacy are extremely important to the value of this property.

I encourage the town to consider your request that it require the redevelopment of the Town House property to include effective fencing to help Central Park retain its current status as "urban oasis".

It is a gem, and deserves to be allowed to stay that way.

When I first saw Central Park before its conversion, the first phrase that came to my mind was "park-like".


Having served on the town's Merrit's Pasture Task Force, I am familiar with how lack of effective fencing can cause inappropriate access even to public spaces.

As your photos illustrate, Central Park is already being used as a shortcut to town and campus by non-residents who cut holes in the fence.

If, enabled, if not encouraged by inadequate fencing, a pattern of habitual trespassing occurs at Central Park, I believe you will lose an important part of its value.

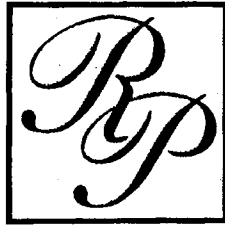
In my opinion, its value as a unique opportunity for private, pastoral, in-town living will be damaged if the town ignores personal property rights having to do with both safety and equity.

I hope you succeed in your effort to protect your property and its residents.


Fred Stevens
Vice-President

404 Mcadownmont Village Circle - Chapel Hill, NC 27517 - 919/929-7100 - 800/752-5006 - 919/968-0569 Fax

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The Planning Board and Town Council of Chapel Hill
Town of Chapel Hill
405 Martin Luther King Jr. Boulevard
Chapel Hill, North Carolina 27516

Dear Board and Council Members:

My name is Lucia Cooke, and I have been an active real estate broker in the Chapel Hill area for over 20 years. During those years I have earned many honors and awards two of which include: the Prudential Carolinas Realty Legend Award recognizing the top 1% of all real estate agents nationally; and the Re/Max a Hall of Fame Award. Before becoming a "top selling" broker, I began my studies in real estate by taking residential appraisal classes from the American Institute of Real Estate Appraisers. Both the MAI and RM designations are the most respected in the industry. I did not complete a designation, opting for a sales career instead. However, I have found the courses that I took through their educational program to be an excellent foundation and their tenets accurate when valuing properties.

From their textbook on residential appraisal I quote,
" the same fundamental principles underlie all site valuation procedures; however, the key factors that influence the utility and value of a given site vary with the type of property being appraised. For example, heavy pedestrian traffic would tend to increase value in a retail business site but would lower value in a residential area".

I find this an accurate statement for valuation purposes. Heavy pedestrian traffic through a residential area raises concerns for both privacy and safety. It also restricts the ability to enjoy common recreational green space.

It is my opinion that if pedestrian traffic is permitted through Central Park, that the value of Central Park will decline.

If there are any questions, please feel free to contact me at 919.225.3181.

Sincerely,

Lucia Cooke
Broker
REALTOR®

RE/MAX Winning Edge

1526 East Franklin Street • Suite 101 • Chapel Hill, North Carolina 27514 • Cell: (919) 225-3181 • Office: (919) 869-8400
Fax: (877) 833-1652 • Web site: www.LuciaCooke.com

Each Office Independently Owned and Operated

February 29, 2008

Mr. Joe Patterson
7 Cobb Terrace
Chapel Hill, NC 27514

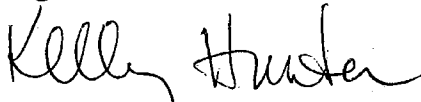
Dear Joe,

We read with interest your note describing the Ram Development project that will be located just to the north of Central Park Condos. We believe you are correct in your concerns regarding the potential that these many tenants (perhaps 1000) may choose to "take a short cut" and trespass across your property.

We believe that it is essential that a fence be erected and maintained by Ram to prevent the unauthorized usage of your land by pedestrians and bikers. The kind of traffic that the Ram development could generate would be detrimental to your property value and to its present and future uses. Such large numbers of walkers and bikers would have a negative impact on the health, safety and welfare of the residents of Central Park Condos.

The town of Chapel Hill has a long history of protecting older neighborhoods from the potential negative impact of new development. We are glad you are bringing this problem to the attention of the town. As real estate brokers who have worked in the area of development and new construction for over 20 years, we believe this trespass problem needs to be remedied.

Regards,



Kelley Hunter, CRS, GRI
Broker, Coldwell Banker/Howard Perry and Walston



Tommy Watts, CRS, GRI
Broker, Coldwell Banker/Howard Perry and Walston

Honorable Mayor of Chapel Hill, and Town Council
Roger L. Stancil, Town Manager
Gene Poveromo, Coordinator Current Development

My neighbors and I received notice last month for a land use management ordinance text amendment, rezoning and special use permit applications for the projected re-development of the Townhouse Apartment at 425 Hillsborough Street (to be renamed "The Residences at Grove Park"). We were unable to attend the informal public information meeting on Thursday, March 29th due to personal reasons. We wish to express some concerns over the developer's new proposal, particularly over the number of parking spaces, the access to Hillsborough Street, and the request to apply for a rezoning of the site.

Parking Spaces

When the concept plan came under review in front of the Town Council on September 18th, 2007, 524 parking spaces were planned for this project. My neighbors and I opposed the number of parking spaces as excessive, and asked the developer (John Florian), both privately and during Citizens' Comments in the Town Meeting, to reconsider the number of parking spaces. We felt that since most of these vehicles would be going through the Historic District, the addition of so many vehicles would worsen the traffic congestion on our street and in our part of town. This time, the notice we received mentions 601 parking spaces, an increase of 87 parking spaces since the previous concept plan. We find the increase in parking space number puzzling in view of the fact that the developer is well aware of our concerns.

Access to Hillsborough Street

During previous conversations with John Florian, and during Citizens' Comments, we expressed the wish that all traffic to and from the proposed apartment complex be directed to Martin Luther King Boulevard. We explained to the developer that we were greatly worried about the added traffic volume to Hillsborough Street, a small road whose traffic will, in the near future, bear the brunt of the Carolina North development. The proposed concept plan for the re-development of the Town House apartments site as unveiled during the Town Meeting in September showed two distinct types of buildings: one, consisting of taller buildings, nearest MLK Boulevard. The second, consisting of town houses, facing Hillsborough Street. We suggested that the traffic flow to and from the buildings be directed toward MLK Boulevard, while the town houses' traffic could use Hillsborough as their access road. Mr. Florian explained that he wanted "connectivity" between the two sides, allowing traffic to flow

between MLK and Hillsborough Street through the development. We feel that there is no reason to allow *all* traffic to have access to Hillsborough Street, especially in view of the staggering 601 new parking spaces that the developer intends to build for the residents of the complex. Hillsborough Street is not meant to accommodate this kind of traffic volume. We therefore renew our request that the developers reconsider their plan to give access to Hillsborough Street from all units in the proposed complex. We also would like to respectfully reiterate our request that a comprehensive traffic study for Hillsborough Street (in which projected Carolina North traffic would be factored in) be done to evaluate the impact of this project on adjacent neighborhoods.

Rezoning

In their new Concept Plan for “The Residences at Grove Park” the developer is applying for a rezoning for the site from medium density (Residential-4) to a high-density residential district. We are very concerned by the consequences of a change of zoning on the adjacent Historic District, where we live. We believe that the goal of the developer by applying for a rezoning, is to benefit from R-13 Zoning’s building regulations, which allow for greater building height for the projected development, and therefore to increase the number of units he plans to build. The developer’s request for a Special Use Permit is another cause for concern, as it seems to have a similar goal. We would like to point out that the proposed development is geographically closer to the Historic District (an R-4), than to the center of Town (an R-13). In effect, a change to high-density zoning would assimilate the re-development site to the center of town, instead of the Historic District, which it directly abuts. We fear that, should high density zoning be granted, the proposed development would not fit in with its environment in terms of its scope, look and feel, and would create additional traffic volume, due to the increased number of residents and cars. The proposed development will not, “maintain or enhance the value of contiguous properties” in the Historic District, as stated in the guidelines for the Council to approve a Special Use Permit application. We therefore oppose the proposed rezoning, and the Special Use Permit application for the Residences at Grove Park on 425 Hillsborough Street.

We intend to voice our concerns when the developer presents its plan to Town Council.

Most respectfully,
Elisabeth Benfey

Elisabeth Benfey
benfeye@duke.edu

Dear Kay,
Dear Mr. Stencil,
Honorable members of the Planning Commission,

I am sorry I will have to miss the meeting tonight. I have a few comments regarding your favorable recommendation for rezoning and special use permit for the building of The Residences at Grove Park:

First, I am surprised that no mention is made of the traffic issue, which was discussed at length two weeks ago. Is it OK now to 500+ cars travel up and down Hillsborough street each day? The head of the commission had expressly recommended that Ram bring down the number of parking spaces projected for this development.

Secondly, when the discussion of access to the Residences was discussed last year, I remember that the planning board had recommended that Ram request a red light on MLK. Yet no mention was made of this at the last meeting, or in your recommendations. Has access suddenly become safer on MLK? How will the cars be able to cross MLK to get in or exit the property? Will they instead use Hillsborough to avoid the dangerous move? How will pedestrians navigate the dangerous crossing to and from the projected bus stop?

Finally, I do not understand how, at this time of great drought, you are only recommending that the units be equipped with OWASA sub-meters. This seems like such a half-hearted step toward solving water restriction issues. The question is why you are letting so many new units to be built in Chapel Hill, when we are all wondering if we will have enough water as it is? Now is the time for responsible growth. Building so many units will put tremendous pressure on our natural resources, not to mention on traffic and pollution.

I hope that you will be able to communicate these thoughts on my behalf tonight.

Again, I am sorry I will not be able to attend due to personal reasons.

Best,
Elisabeth Benfey

3/4/2008

	2008	2009	2010
East 54	0	25	30
Greenbridge	0	5	10
Lot 5	0	5	16
Homestead Twins	0	6	6
Chancellor's View	0	0	3
Claremont	6	6	0
Ballentine	0	7	10
Waterstone	0	6	18
Carrboro Condos	0	6	0
Resales	13	14	15
Scattered Site	9	4	4
Totals:	28	84	116

TRAFFIC IMPACT ANALYSIS THE RESIDENCES AT GROVE PARK 2008 MODIFICATION

Chapel Hill, North Carolina

Executive Summary



Prepared for:
The Town of Chapel Hill, NC

prepared by:



Architects-Engineers-Planners, Inc.

May 2008

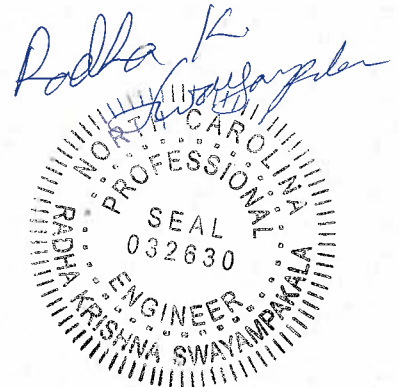


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E.0 EXECUTIVE SUMMARY

E.1 Project Overview

The Residences at Grove Park is a proposed condominium project at 425 Hillsborough Street with entrances on Martin Luther King, Jr. Boulevard and Hillsborough Street in Chapel Hill, North Carolina. The proposed project will replace the existing 111 apartment units with 306 residential condominium dwelling units and 40 townhomes in two phases. Phase I of the development which includes 40 town homes and 148 apartments is expected to be completed by 2012. Phase II is expected to be completed by 2015 and includes 158 apartments. The proposed development will have access/egress to and from Martin Luther King, Jr. Boulevard and Hillsborough Street. The Project Site Plan is shown in Figure E-1. This report discusses the overall impact of the modified Residences at Grove Park Phase I and II developments on local travel conditions by comparing the future travel conditions without the proposed development (the No Build Conditions) and future travel conditions with the construction of the proposed development is constructed (the Build Conditions). The future No Build and Build Conditions for this project are defined as 2013 for Phase I and 2016 for Phase II (a year after the proposed project is built). The existing site is zoned as Residential 4 (R-4) and is shown in Figure E-2.

E.2 Proposed Project Traffic

In the Phase I (2013) modified plan, the Residences at Grove Park development will generate approximately 517 additional vehicle trips per day. Of these additional trips, 43 vehicle trips will occur during the AM peak hour, 49 vehicle trips during Mid-day peak hour, and 49 vehicle trips during the PM peak hour.

In the Phase II (2016) modified plan, the Residences at Grove Park development will generate approximately 1,100 additional vehicle trips per day. Of these additional trips, 81 vehicle trips will occur during the AM peak hour, 105 vehicle trips during Mid-day peak hour, and 105 vehicle trips during the PM peak hour.

Tables E-1 and E-2 summarize the Phase I and II trip generation rates and the number of trips generated by the proposed land use categories during the AM, Mid-day and PM peak hours of the day.





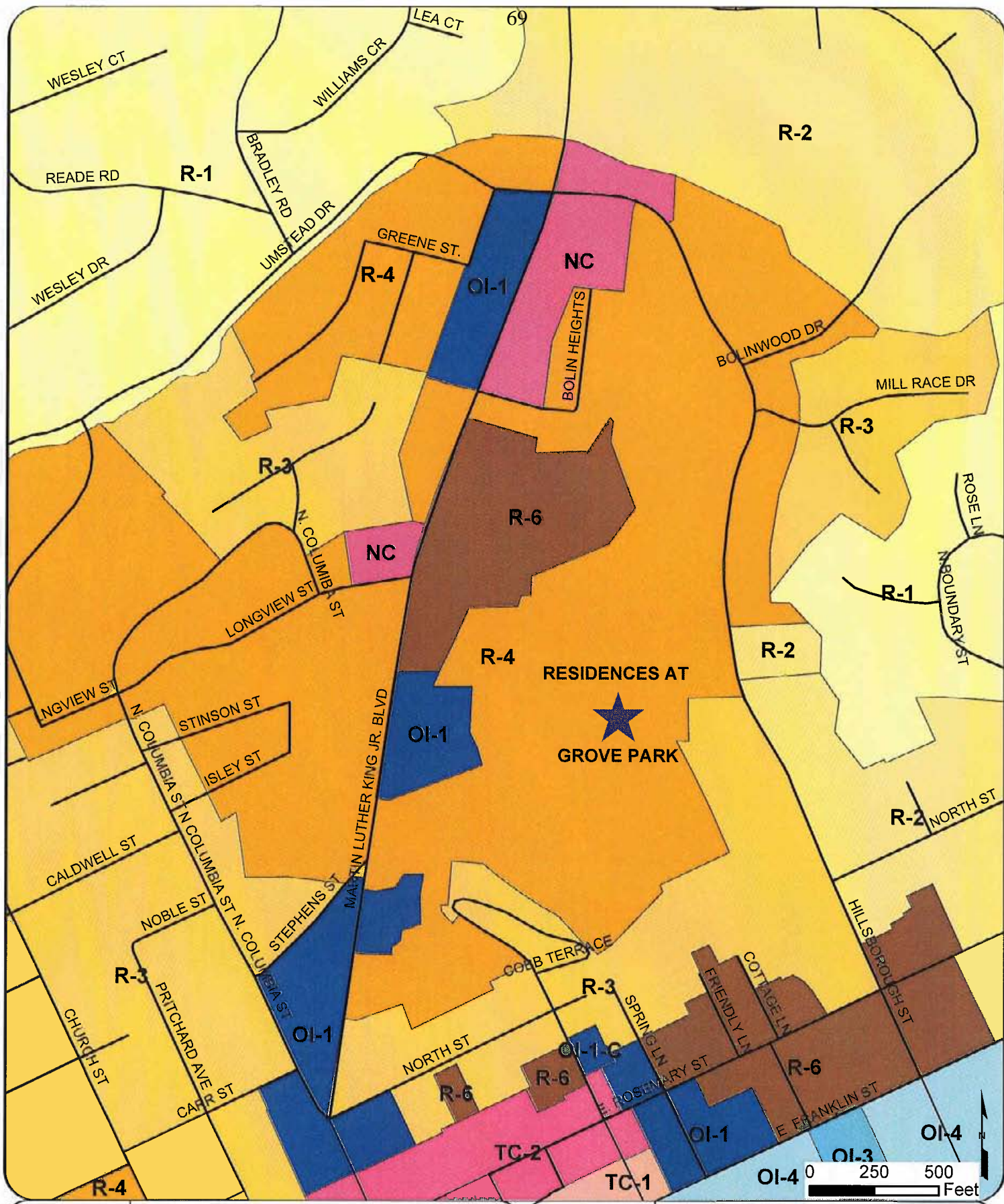
THE RESIDENCES AT GROVE PARK
2008 MODIFICATION
TRAFFIC IMPACT ANALYSIS

RS&H ARCHITECTS-ENGINEERS-PLANNERS, INC
CHARLOTTE, NORTH CAROLINA



PROJECT SITE PLAN

Figure E-1



THE RESIDENCES AT GROVE PARK
2008 MODIFICATION
TRAFFIC IMPACT ANALYSIS



PROJECT LOCATION

FIGURE E-2

Table E-1
Phase I Site Trip Generation Rates and Volumes
The Residences at Grove Park

Trip Generation Rates									
Land Use	Size	Weekday (veh. per dwelling unit per day)		AM Peak Hour (veh. per dwelling unit per hour)		Mid-day Peak Hour (veh. per dwelling unit per hour)		PM Peak Hour (veh. per dwelling unit per hour)	
		Inbound	Outbound	Inbound	Outbound	Inbound	Outbound	Inbound	Outbound
Residential Dwelling Units (To Be Removed)	111 Units	3.68	3.68	0.10	0.42	0.35	0.35	0.46	0.25
Residential Condominium Dwelling Units (New)	148 Units	3.51	3.51	0.10	0.41	0.33	0.33	0.44	0.23
Residential Townhomes (New)	40 Units	3.68	3.68	0.11	0.51	0.35	0.35	0.47	0.23

Traffic Volumes									
Land Use	Size	Weekday (veh. per day)		AM Peak Hour (veh. per hour)		Mid-day Peak Hour (veh. per hour)		PM Peak Hour (veh. per hour)	
		Inbound	Outbound	Inbound	Outbound	Inbound	Outbound	Inbound	Outbound
Residential Dwelling Units (To Be Removed)	111 Units	409	409	12	46	39	39	51	28
Residential Condominium Dwelling Units (New)	148 Units	520	520	15	61	50	50	64	35
Residential Townhomes (New)	40 Units	147	147	4	21	14	14	19	9
New Trips Added to the Road Network		258	258	7	36	25	25	32	16



Table E-2
Phase II Site Trip Generation Rates and Volumes
The Residences at Grove Park

Trip Generation Rates									
Land Use	Size	Weekday (veh. per dwelling unit per day)		AM Peak Hour (veh. per dwelling unit per hour)		Mid-day Peak Hour (veh. per dwelling unit per hour)		PM Peak Hour (veh. per dwelling unit per hour)	
		Inbound	Outbound	Inbound	Outbound	Inbound	Outbound	Inbound	Outbound
Residential Dwelling Units (New)	158 Units	3.48	3.48	0.10	0.41	0.33	0.33	0.43	0.23

Traffic Volumes									
Land Use	Size	Weekday (veh. per day)		AM Peak Hour (veh. per hour)		Mid-day Peak Hour (veh. per hour)		PM Peak Hour (veh. per hour)	
		Inbound	Outbound	Inbound	Outbound	Inbound	Outbound	Inbound	Outbound
Residential Dwelling Units (New)	158 Units	550	550	16	65	52	52	68	37
New Trips Added to the Road Network		550	550	16	65	52	52	68	37



E.3 Project Impacts

To determine the traffic impacts of the proposed site development on nearby roadways, traffic flow conditions were analyzed at the following three arterial segments and eight intersections for the 2008 Existing Conditions, 2013 No Build and Build Conditions, and 2016 No Build and Build Conditions:

Arterial Segments:

- Martin Luther King, Jr. Boulevard/Columbia Street between Rosemary Street and Hillsborough Street
- Hillsborough Street between Rosemary Street and Martin Luther King, Jr. Boulevard
- Rosemary Street between Columbia Street and Hillsborough Street

Intersections

- Hillsborough Street at Rosemary Street
- Hillsborough Street at North Street
- Hillsborough Street at Site Driveway #1
- Hillsborough Street at Site Driveway #2
- Martin Luther King, Jr. Boulevard at Hillsborough Street/Umstead Drive
- Martin Luther King, Jr. Boulevard at Site Driveway #3
- Martin Luther King, Jr. Boulevard at North Street
- Columbia Street at Rosemary Street

Tables E-3 and E-4 compare the arterial and intersection capacity analysis results for all of the scenarios analyzed in this study. Table E-5 summarizes the overall impacts of the proposed project.



Table E-3
 Arterial Capacity Analysis Summary
 The Residences at Grove Park

Facility Type	Segment	Direction of Travel	No. of Lanes (both directions)	Threshold Capacity (vehicles per hour per direction)*	2008 Existing Conditions			2013 No Build Conditions			2016 No Build Conditions			2013 Build Conditions			2016 Build Conditions		
					AM Peak	Mid-day Peak	PM Peak	AM Peak	Mid-day Peak	PM Peak	AM Peak	Mid-day Peak	PM Peak	AM Peak	Mid-day Peak	PM Peak			
Major Arterial	MLK, Jr. Boulevard	Northbound	4	1,600	0.59	0.41	0.92	0.73	0.57	1.18	0.79	0.61	1.26	0.74	0.57	1.18	0.80	0.62	1.27
		Southbound	4	1,600	0.76	0.44	0.58	0.99	0.60	0.75	1.06	0.64	0.81	0.99	0.60	0.75	1.07	0.65	0.81
Minor Arterial	Hillsborough Street	Northbound	2	550	0.68	0.69	0.94	0.79	0.81	1.11	0.86	0.89	1.21	0.80	0.82	1.12	0.88	0.90	1.23
		Southbound	2	550	0.70	0.69	0.86	0.84	0.81	1.00	0.93	0.87	1.09	0.87	0.81	1.01	0.98	0.89	1.09
Minor Arterial	Rosemary Street	Eastbound	2	550	0.84	0.69	1.35	1.17	1.11	1.89	1.25	1.17	2.02	1.17	1.11	1.90	1.25	1.18	2.03
		Westbound	2	550	0.78	0.67	0.97	1.03	1.01	1.38	1.11	1.07	1.47	1.03	1.01	1.39	1.12	1.08	1.48

* Guidelines for Traffic Impact Analysis, Town of Chapel Hill, October, 2007.

Table E-4
 Intersection Capacity Analysis Summary
 The Residences at Grove Park

Intersection	Traffic Movement	2008 Existing Conditions			2013 No-Build Conditions			2016 No-Build Conditions			2013 Build Conditions			2016 Build Conditions			2013 Build Conditions with Recommended Improvements			2016 Build Conditions with Recommended Improvements			
		AM Peak	Mid-day Peak	PM Peak	AM Peak	Mid-day Peak	PM Peak	AM Peak	Mid-day Peak	PM Peak	AM Peak	Mid-day Peak	PM Peak	AM Peak	Mid-day Peak	PM Peak	AM Peak	Mid-day Peak	PM Peak	AM Peak	Mid-day Peak	PM Peak	
E. Rosemary Street at Hillsborough Street (Signalized Intersection)	Overall Intersection	B	C	C	B	C	C	B	C	C	B	C	C	B	C	C	B	C	C	B	C	C	
	Eastbound	LTR	B	B	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
	Westbound	LTR	C	B	A	C	B	C	C	B	C	C	B	C	C	B	C	C	B	C	C	B	C
	Northbound	L	B	C	D	D	D	C	C	E	B	C	D	D	E	B	C	D	D	E	B	C	D
	Southbound	TR	B	C	C	B	C	C	B	C	C	B	C	C	B	C	C	B	C	C	B	C	C
	TR	B	C	C	C	B	C	C	B	C	C	B	C	C	B	C	C	B	C	C	B	C	C
Hillsborough Street at North Street (East - West Stop Controlled)	Westbound	LR	A	A	B	A	A	B	A	A	B	A	A	B	A	A	B	A	A	B	A	A	
	Southbound	LT	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A
	Eastbound	LR	B	A	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B
Hillsborough Street at Site Driveway #1 (East - West Stop Controlled)	Eastbound	LR	A	B	B	A	B	B	A	B	B	A	B	B	A	B	B	A	B	B	B	B	
	Northbound	LT	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A
	Southbound	LT	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A
Hillsborough Street at Site Driveway #2 (East - West Stop Controlled)	Eastbound	LR	A	B	B	A	B	B	A	B	B	A	B	B	A	B	B	A	B	B	B	B	
	Northbound	LT	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A
	Southbound	LT	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A
Hillsborough Street at Martin Luther King, Jr. Boulevard (Signalized Intersection)	Northbound	L	B	B	C	C	B	B	C	C	B	C	C	B	C	C	B	C	C	B	C	C	
	Southbound	TR	C	B	C	C	C	B	D	C	C	E	C	C	E	C	C	E	C	C	E	C	C
	Westbound	LR	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A
Martin Luther King, Jr. Boulevard at Site Driveway #3 (East - West Stop Controlled)	Southbound	L	A	A	B	A	A	B	A	A	D	C	E	E	A	B	E	E	A	B	E	E	
	Eastbound	LTR	C	B	B	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
	Westbound	LTR	C	B	B	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
Martin Luther King, Jr. Boulevard at North Street (East - West Stop Controlled)	Northbound	L	B	A	A	A	A	B	A	A	B	A	A	B	A	A	B	A	A	B	A	A	
	Southbound	L	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A
	Overall Intersection	L	C	C	D	D	D	C	C	E	B	C	D	D	E	B	C	D	D	E	B	C	D
N. Columbia Street at E. Rosemary Street (Signalized Intersection)	Eastbound	L	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
	Westbound	TR	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
	Northbound	TR	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
Southbound	L	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
	TR	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
	T	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
Southbound	R	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A

Table E-5
Summary of the Proposed Projects Impacts

Analyses	Impacts
Peak Hour Arterial Capacity	Traffic demand on the three arterial segments analyzed would exceed the roadway capacity limits during at least one peak hour of the day for the 2013 and 2016 No Build and Build Conditions.
Site Access	The two driveways shown in the proposed site plan should be sufficient to accommodate the site traffic as estimated for the proposed development.
New Signal Location	A signal warrant analysis for the intersection of Martin Luther King, Jr. Boulevard and Site Driveway #3 indicated that a signal may not be warranted but that the intersection should be monitored to determine if warrants are met in the future.
Traffic Signal Phasing	The intersections analyzed for this study have multi-phase signal controllers that can accommodate variations in traffic flow. According to this analysis, the traffic demand on one or more approaches at the three signalized intersections analyzed in this study exceeds the intersection capacity. In order to improve the traffic flow, this study recommends improvements to the intersections of Martin Luther King, Jr. Boulevard/Hillsborough Street, Columbia Street/Rosemary Street and Rosemary Street/Hillsborough Street.
High Crash Locations	Crash data were obtained from the North Carolina Department of Transportation (NCDOT) for 36-month period for locations most likely to be impacted by the proposed development. This crash data indicated that the travel conditions in the study area are relatively safe under current conditions.
Traffic Signal Progression	The signalized intersections in the study area were analyzed as isolated intersections, therefore, no progression analysis was conducted part of this study.
Peak Hour Intersection Capacity	The peak hour intersection capacity analysis indicates that traffic demand on one or more approaches at the three signalized intersections analyzed in this study exceeds the intersection capacities. A detailed description of the proposed mitigation measures for these intersections is provided in Section E-4.
Turn Lane Storage Requirements	The capacity analysis indicates that no additional turn lanes are needed at the Site Driveways.
Intersection Sight Distance	At the intersection of Martin Luther King, Jr. Boulevard with Driveway #3, roadway improvements are recommended to provide a safe sight distance as recommended by AASHTO Green Book. At the intersection of Hillsborough Street with Driveway #1, there is no sight distance problem.
Appropriateness of Acceleration/Deceleration Lanes	The speed limit on Martin Luther King, Jr. Boulevard is 35 miles per hour and Hillsborough Street is 25 miles per hour. Since the speed limits for the roadways are low, acceleration/ deceleration lanes are not needed at the proposed site driveways.
Pedestrian and Bicycle Facilities	In the study area, there are sidewalks on Martin Luther King, Jr. Boulevard, Columbia Street, Rosemary Street, and North Street on either one or both sides of the roadway. In the study area, there are no exclusive bicycle lanes along any of the major/minor thoroughfares. However, on Martin Luther King, Jr. Boulevard, between Site Driveway #3 and Hillsborough Street, the width of the outside lane is wider than the standard twelve foot lane; therefore, bicycle use is possible even though bicycle use is not clearly marked. The Bolin Creek Bike Route is a 6.9 mile loop utilizing the Carrboro Bike Path, Bolin Creek Greenway, and the streets of Carrboro and Chapel Hill.
Public Transportation Facilities	The study area is well served by the Chapel Hill Transit and The Triangle Transit Authority with several mid-block bus stops in the study area. No additional bus stop will be added as part of this project.



E.4 Mitigation Measures and Recommendations

For purposes of this analysis, roadway improvements are divided into four categories: 1) improvements already planned by the Town of Chapel Hill or the North Carolina Department of Transportation; 2) improvements required regardless of development at the proposed site; 3) improvements proposed as part of the site development; 4) and any additional improvements required as a result of site development.

Planned Improvements

There are no planned improvements to roadways in the study area.

Background Committed Improvements

No other roadway improvements that directly impact this analysis are committed by other development projects in the area.

Applicant Committed Improvements

The Residences at Grove Park development will consolidate the three existing driveways into two driveways: one with Martin Luther King, Jr. Boulevard and the second with Hillsborough Street. Improvements required to accommodate site traffic are limited to one approach lane and one exit lane at each of the site driveways.

Recommended Improvements

This study proposed improvements at the following four intersections:

- Martin Luther King, Jr. Boulevard at Hillsborough Street
- Columbia Street at Rosemary Street
- Rosemary Street at Hillsborough Street
- Martin Luther King, Jr. Boulevard at Site Driveway #3

Martin Luther King, Jr. Boulevard at Hillsborough Street: The intersection capacity analysis indicates that the eastbound left-turning movement and the westbound through movement would function either at Level of Service E or F during at least one peak hour of the day under both the 2013 and 2016 No Build/Build Conditions. Hence, regardless of whether the proposed project is built, improvements should be considered at this intersection. Under the 2013 No Build Conditions, the traffic demand on the westbound right-turning movement would be 373 during the PM peak hour. The proposed project would add a maximum of ten vehicles per hour to this movement. Adding an exclusive right-turn lane for this movement would improve the traffic flow conditions for both the eastbound and westbound approaches at this intersection.

Columbia Street at Rosemary Street: The intersection capacity analysis indicates that several approaches would function at Level of Service E or F during at least one peak hour of the day under both the 2013 and 2016 No Build and Build Conditions. Hence, regardless of whether the proposed project is built, improvements should be considered at this intersection. Under the 2013 No Build Conditions, the eastbound left-turning movement would function with a volume-to-capacity ratio of 1.41 (with 434 vehicles per hour during the PM peak hour). The proposed project would add a maximum of three vehicles per hour under Phase I and a maximum of seven vehicles per hour under Phase II to this movement thereby increasing the volume-to-capacity ratio to 1.53. This clearly indicates a need for a dual left-turn lane for this approach regardless of the proposed project.



By adding a dual left-turn lane and adjusting the signal timing plan, this intersection as a whole would function at Level of Service D or better throughout the day with one exception, an acceptable rate of traffic flow. The exception is under the 2016 Build Conditions PM peak hour, the overall intersection would function at Level of Service E (approaching the intersection capacity limits) indicating a need for further improvements.

Rosemary Street at Hillsborough Street: The intersection capacity analysis indicates that the northbound left-turning movement would function either at Level of Service E or F during at least one peak hour of the day under both the 2013 and 2016 No Build/Build Conditions. Hence, regardless of whether the proposed project is built, improvements should be considered at this intersection. By adjusting the signal timing plan, the northbound left-turn movement would function at Level of Service C or better throughout the day, which is a good rate of traffic flow for peak hour conditions.

The intersection capacity analyses for the 2013 and 2016 Build Conditions with the proposed changes for the above three intersections are summarized in Tables 16 and 17, respectively. Detailed SYNCHRO capacity analysis reports are included in the Appendix.

Martin Luther King, Jr. Boulevard at Site Driveway #3: During the field visit, it was observed that the vertical curve along the site driveway and vegetation in the southeastern quadrant of the intersection create obstructions to the driver's left-side view. To improve the sight distance at this intersection, roadway improvements such as the re-grading of the driveway approach and removal of vegetation in the southeastern quadrant along Martin Luther King, Jr. Boulevard should be considered.

A signal warrant analysis for the 2013 and 2016 Build Conditions indicates that a signal may not be warranted, however, but that the intersection should be monitored to determine if warrants are met in the future.

