



**CITY OF DURHAM | DURHAM COUNTY
NORTH CAROLINA**



Zoning Map Change Report

Meeting Date: February 2, 2009

Reference Name	Duke University Lemur Center (Z0800029)	Jurisdiction	City
Request	Proposed Zoning	University and College with a development plan (UC (D))	
	Existing Zoning	University College (UC)	
	Proposed Use	Duke Lemur Center/Duke Forest	
	Existing Use	Duke Lemur Center/Duke Forest	
Site Characteristics	Tier	Suburban	
	Land Use Designation	Recreation/Open Space	
	Overlays	None	
	Site Acreage	262.636	
Applicant	Tallman Trask III, Duke University	Submittal Date	August 11, 2008
Location	East side of Erwin Road between NC 751 and West Cornwallis Road		
PINs	0801-13-88-3948.SPL		
Recommendations/ Comments	Staff	Approval, based on consistency with the <i>Comprehensive Plan</i> and considering the information contained in this report.	
	Planning Commission	Approval, 14-0, on December 9, 2008. The Planning Commission finds that the ordinance request is consistent with the adopted <i>Comprehensive Plan</i> . The Commission believes the request is reasonable and in the public interest and recommends approval based on the information in the staff report and comments received during the public hearing.	
	DOST	See attached memo	

A. Summary

The site, on the east side of Erwin Road between NC 751 and West Cornwallis Road, is zoned UC and in the Suburban Tier. This zoning request would attach a development plan with a committed element to limit land disturbance activity on the site. Although not committed, the development plan does not show any improvements at this time. The request is consistent with the future land use designation of the *Comprehensive Plan* which designates the site for Recreation/Open Space.

A development plan is required with this request and indicates the general physical layout of the property. If this plan were approved, any significant deviation from the

plan would require a new zoning petition for the property. The development plan submitted with this request includes the following committed element:

Development Plan Committed Elements
1. No land disturbance activity as defined in Section 16.3 of the UDO shall occur within the 150' TUA excluding existing and future roadways, driveways, infrastructure, trails, forestry program practices, as well as existing development. This committed element excludes the TUA that is located on the border between the UC(D) and RS-20 zoning east of survey line L9.

B. Site History

The current UC zoning designation of this property was approved with Case #Z0800012A, Duke Lemur Center Initial, in June 2008. The proposal under consideration would attach a development plan to this site that limits land disturbance activities. This development plan was submitted to provide a buffer in the Transitional Use Area (TUA), which was an agreement between the applicant and the adjacent neighborhood made at the time of initial zoning. A site plan is currently under review for additions and improvements to the Lemur Center.

C. Area Characteristics

The site is part of Duke University and has been developed and used for a Lemur Center. US 15-501 borders the property to the east and separates this site from other University property developed as a golf course. There are single-family homes to the south and across Erwin Road to the west is Duke School for Children, vacant land, and a single-family home. This site is within the *New Hope Corridor Open Space Master Plan* and is encumbered by two inventory sites listed in the *Durham County Inventory of Natural Areas Plants and Wildlife*; The Durham Division of Duke Forest and Erwin Road Cypress Swamp.

The *New Hope Corridor Open Space Master Plan*, Component 8 and Component 9, show a proposed Bicycle and Pedestrian Trail along Mud Creek and NC 751 and makes recommendations as follows:

Recommendations for the Protection and Use of Component 8
<ul style="list-style-type: none">• Create a bicycle and pedestrian trail along Mud Creek through the floodplain to connect with the trail at NC 751• Negotiate with Duke University to preserve as open space Duke Forest land at the intersection of Cornwallis Road and Erwin Road. Negotiate an agreement with Duke University so that if Duke considers selling this land, the local governments will have the right of first refusal to purchase it for use as a natural area.• In the event the land becomes available through acquisition of rights of through outright purchase, the City of Durham should consider building facilities to meet those active recreational needs already identified by the City as being present in this area.

Recommendations for the Protection and Use of Component 9

- Encourage Duke University to retain its Category 1 classification of Component 9 lands in Duke Forest, thereby providing sufficient protection of the forested lands along the NC 751 Scenic Road.
- Should Duke decide to sell all of part of this land, negotiate to obtain by purchase of easement a corridor 500 feet to 1000 feet wide on each side of NC 751 for a wide scenic and pedestrian corridor.
- Extend the NC 751 Scenic Road corridor protection eastward to and beyond the US 15-501 Bypass interchange to meet the northern terminus of the Sandy Creek Urban Greenway and continue with an entrance to the Duke University West Campus.
- Because NC 751 can continue to be a scenic road and to serve high-volume traffic needs as a two-lane road, prohibit additional cross streets and driveway entrances.

The *Durham County Inventory of Natural Areas Plants and Wildlife*, for Durham Division of Duke Forest and Erwin Road Cypress Swamp, identifies conservation recommendations to preserve wildlife movements by the preservation or creation of wooded buffers along the Mud Creek corridor between Duke property and residential areas. The development of unauthorized foot and bike trails is also discouraged.

The Long Range Bicycle Plan, Map 4.5 shows a greenway along NC 15-501 and a proposed bicycle lane along Cameron Boulevard (NC 751).

The zoning districts include Residential Suburban-20 (RS-20), Residential Rural (RR), and UC(D).

Adjoining Uses, Zoning Districts and Overlays			
	Existing Uses	Zoning Districts	Overlays
North	Vacant	RS-20	None
East	Public right-of-way, outdoor recreation	UC (D)	None
South	Vacant, single-family residential	RS-20	None
West	Single-family residential, educational facility, vacant	RR	None

Staff Analysis and Conclusion. No development is proposed at this time. However, should development occur meeting the standards of this development plan’s committed element of limiting land disturbing activity, it would be consistent with the recommendation of the *The Durham County Inventory of Natural Areas Plants and Wildlife*, for Durham Division of Duke Forest and Erwin Road Cypress Swamp, for this site. However, no land is being dedicated for the creation of proposed trails (New Hope Corridor Open Space Master Plan and Long Range Bicycle Plan).

D. Site Characteristics

This 262.636 acre site is located at 4251 Erwin Road. 2005 aerial photography shows the site mostly tree-covered with several areas of development associated with the Lemur Center including buildings and lemur containment areas. There are several perennial and intermittent streams with associated floodplain and wetlands; as well as steep slopes on the site. The *Inventory of Important Natural Areas, Plants and Wildlife* shows a large portion of this site within the areas designated as the Durham Division of Duke Forest and the Erwin Road Cypress Swamp. The property also listed in the *Durham County Historic Inventory* for the # 327 Rigsbee Road House.

Code Requirements				
Resource Feature	Code Provision	Required	Proposed	Consistent
Tree Coverage (minimum)	8.3.1.C	10% (26.26 acres)	10.26% (26.79 acres) (illustrative)	Yes

Staff Analysis and Conclusion. There are no identified environmental or physical constraints, other than the stream buffers, that could prevent this site from being developed under ordinance standards. The development plan demonstrates conformance with UDO standards.

E. Requested Zoning District Characteristics

UC (University and College) – the UC district is established to allow for growth and development of colleges and universities, while protecting the larger community, nearby neighborhoods, and the environment from impacts accompanying major new development. Development should be a mix of integrated university-related uses, linked by pedestrian ways, bikeways, and other transportation systems.

Zoning District Development Standards – UC (Section 6.11.4)		
	Requirements	Consistent
Transitional Use Area (TUA)	150-foot wide area adjacent to non-university properties, except if public right-of-way is wider than 200 and has no existing or planned structures	Yes
Height (feet)	In TUA – not to exceed 150% of the average height of buildings on adjacent properties to a maximum of 100 feet, increased to 145 feet with Major Special Use Permit	Yes. The committed element prohibits buildings in the TUA.
	In Internal Campus – maximum of 120 feet, increased to 145 feet with Major Special Use Permit	Yes

Staff Analysis and Conclusion. The site meets the dimensional requirements of the Unified Development Ordinance (UDO). Full compliance with all development standards will be required at the time of site plan approval.

F. Infrastructure Impacts

The impact of the requested change has been evaluated to suggest its potential impact on the transportation system, water and sewer systems, and schools. In each case, the impact of the change is evaluated based upon a change from the most intense development using the existing land use and zoning to the most intense use allowed under the request.

1. Road Impacts

Erwin Road and NC 751 are the major roads impacted by the proposed zoning change. There are no NCDOT projects scheduled for this area.

Road Impacts			
Affected Segments	Erwin Road	NC 751	Cornwallis Road
Current Roadway Capacity (LOS D) (ADT)	11,700	14,600	11,700
Latest Traffic Volume (AADT)	11,000	14,000	3,300
Traffic Generated by Present Designation (average 24 hour)*	31,977		
Traffic Generated by Proposed Designation (average 24 hour)**	31,977		
Impact of Proposed Designation	none		

Source of LOS Capacity: FDOT Generalized Level of Service Volume Table 4-1 (2002)

Erwin Road: 2-lane Major City/County roadway without left-turn lanes

NC 751: 2-lane Major City/County roadway with left-turn lanes

Cornwallis Road: 2-lane Major City/County roadway without left-turn lanes

Source of Latest Traffic Volume: 2007 NCDOT Traffic Count Map

*Assumption- (Max Use of Existing Zoning) – UC: 3,300,000 SF per City of Durham Major University Rate

** Assumption- (Max Use of Proposed Zoning) – UC(D): 3,300,000 SF per City of Durham Major University Rate

2. Transit Impacts

Transit service is not provided within one-quarter mile of this site.

3. Utility Impacts

The site will be served by public water and sewer.

4. Drainage/Stormwater Impacts

The plan as submitted conceptually meets the minimum ordinance standards for a zoning map change request. Final approval of the stormwater impact analysis will occur at the time of site plan approval.

5. School Impacts

The proposed request is not estimated to have any impacts on student generation. Durham Public Schools serving the site are Forest View Elementary School, Githens Middle School, and Jordan High School.

School Impacts-System Totals			
	Elementary School	Middle School	High School
Current Building Capacity	15,968	8,063	9,670
Maximum Building Capacity (120% of Building Capacity)	19,162	9,676	11,604
20th Day Attendance (2008-09 School Year)	16,260	6,553	9,928
Committed to Date (October 2005 – September 2008)	134	55	(125)
Available Capacity	2,768	3,068	1,801
Potential Students Generated – Current Zoning*	0	0	0
Potential Students Generated – Proposed Zoning**	0	0	0
Impact of Proposed Zoning	0	0	0

*Assumption- (Max Use of Existing Zoning) – UC: residential uses not permitted

** Assumption- (Max Use of Proposed Zoning) – UC (D): residential uses not permitted

6. Water Supply Impacts

The proposed use associated with this zoning request is estimated to generate a demand for water of 373.87 gallons per day (GPD). This does not represent a change compared with the estimated existing water usage of the site.

Water Supply Impacts	
Current Water Supply Capacity	37.00 MGD
Present Usage	28.71 MGD
Approved Zoning Map Changes (October 2005 – September 2008)	2.47 MGD
Available Capacity	5.82 MGD
Estimated Water Demand Under Present Zoning	3,739 GPD
Potential Water Demand Under Proposed Zoning	3,739 GPD
Impact of Zoning Map Change	none
Notes: MGD = Million gallons per day	

*Assumption- (Max Use of Existing Zoning) – UC: 37,387 SF Institutional, non-school use

** Assumption- (Max Use of Proposed Zoning) –UC (D): 37,387 SF Institutional, non-school use

Staff Analysis and Conclusion. Infrastructure is available to serve development pursuant to the zoning request.

G. Plan Consistency

Plan Requirements			
	Policy	Requirement(s) (LOS = Level of Service)	Consistent
<i>Comprehensive Plan</i>	Future Land Use Map	Recreation/Open Space	Yes
	7.2.2a	Recreation/Open Space	Yes
	8.1.2m	Transportation LOS	Yes
	9.4.1a and c	Water Quantity and Quality LOS	Yes
	11.1.1a	School LOS	Yes

Staff Analysis and Conclusion. This request is consistent with the policies of the *Comprehensive Plan* that are applicable to the development.

H. Notification

Staff certifies that newspaper advertisements, letters to property owners within 600 feet of the site and the posting of a zoning sign on the property has been carried out in accordance with Section 3.2.5 of the UDO. In addition, the following neighborhood organizations were mailed notices:

- Arrowhead Homeowners Association
- Colony Park Homeowners Association
- Durham Justice & Fairness Inter-Neighborhood Association
- Friends of Durham
- Erwin Area Neighborhood Group
- Inter-Neighborhood Council
- New Hope Advisory Committee
- North Garrett Road Committee

I. Recommendation

Staff recommends approval, based on consistency with the *Comprehensive Plan*, and considering the information provided in this report.

Planning Commission recommends approval. The Planning Commission finds that the ordinance request is consistent with the adopted *Comprehensive Plan*. The Commission believes the request is reasonable and in the public interest and recommends approval based on the information in the staff report and comments received during the public hearing.

J. Summary of Planning Commission Minutes December 9, 2008

Location: East side of Erwin Road between NC 751 and West Cornwallis Road

Request: UC to UC(D)

Staff Recommendation: Approval, Mr. Whiteman presented the staff report.

Public Hearing: Chair Brine opened the public hearing. One person spoke in favor of the request. Four people who signed up to speak in opposition declined to comment.

Commission Discussion: Commission discussion centered around the removal of the entry point at Evans Drive, bike and pedestrian issues, and the 150 foot buffer proffered by the applicant.

Findings: The Planning Commission finds that the ordinance request is consistent with the adopted *Comprehensive Plan*. The Commission believes the request is reasonable and in the public interest and recommends approval based on the information in the staff report and comments received during the public hearing.

Motion: To approve, (Ms. Brown, Ms. Giles 2nd)

Action: Motion carried, 14-0.

K. Staff Contact

Scott Whiteman, AICP, Planning Supervisor, 560-4137 ext. 253 or scott.whiteman@durhamnc.gov

L. Applicant Contact

Robert Shunk Jr., HadenStanziale, 919-286-7440 or rshunk@hadenstanziale.com

M. Attachments

1. Context Map
2. Future Land Use Map
3. Aerial Photograph
4. Development Plan Reduction
5. Application
6. DOST Comments
7. Planning Commission Written Comments
8. Ordinance Form