


Charlotte Department of Transportation

Memorandum

Date: April 3, 2007

To: Keith MacVean
Planning Commission

From: Scott L. Putnam 
Development Services Division

Subject: Rezoning Petition 06-155: Located on the northeast corner of I-85 and
City Boulevard (revised 3/16/07)

We previously commented on this petition in our February 13, 2007 and September 28, 2006 memoranda to you. This site could generate approximately 9,200 trips per day as currently zoned. Under the proposed zoning the site could generate 8,600 trips per weekday. This petition will have a significant impact on the surrounding thoroughfare system.

Therefore, we have requested that the developer submit a Traffic Impact Study (TIS) in order to evaluate the effect that site generated traffic will have on the thoroughfare system in the vicinity. A draft TIS has been submitted to CDOT for review and we have returned comments to the petitioner's traffic consultant. Since access is proposed to an NCDOT-maintained roadway, they may also require a TIS as part of their driveway permit approval process. They may have additional or different requirements for their approval than what is identified in this rezoning process. The developer/petitioner is recommended to meet with NCDOT early in the development process to identify any issues that they may have.

We have the following specific comments that are critical to CDOT's support of the rezoning petition:

1. The project report document for the City's US 29/NC 49 "Weave" reconstruction project based the design of the improvements on land use assumptions that included a total of approximately 1,000,000 square feet of retail in the 4 quadrants of the new and realigned North Tryon/University City intersection. Of the total, 190,000 square feet (19%) was allocated to this site's quadrant. This rezoning and a proposed Super Wal-Mart (existing development right) on North Tryon Street at Shopping Center Drive will result in a total of 575,000 square feet of retail in this quadrant and comprise nearly 58% of the total allocated retail square footage. Concentrating this amount of retail in one quadrant results in additional turning movements at intersections than would have otherwise occurred and has the potential to have an adverse impact on planned roadway capacity. The TIS will help us to evaluate any impact to planned improvements.
2. The design of the internal circulation is important for providing both reasonable levels of traffic flow and ensuring safety for bicyclists and pedestrians. We are concerned about the operational impacts of the design of the internal circulation, site access, and the planned

transportation network. Of particular concern are the free-flow dual right-turn lanes on IKEA Way. CDOT requests a meeting with the petitioner's site planners and traffic consultants to further discuss these items. Please contact Matt Magnasco at 704.336.3368 to schedule this meeting. (*Previous review comment*)

3. 8-foot planting strips and 8-foot sidewalks need to be constructed along City Boulevard and the proposed Collector Road to support future transit use. Sidewalk on City Boulevard needs to extend to a point between the I-85 Northbound ramps and the bridge over I-85. (2 *Previous review comments*)
4. The proposed left-over located north of the Collector Road/IKEA Way intersection will provide less benefit than having it south of the Collector/IKEA intersection. Having the first main access to IKEA being the major signalized intersection will create conditions similar to Highway 51 at Carolina Place Mall or Speedway Boulevard in front of Concord Mills, where the majority of customers use the first access and few people use subsequent accesses such as Carolina Place Parkway or the second and third driveways to Concord Mills. Locating the left-over in advance of the signalized main entrance will improve the capacity at the Collector/IKEA Way intersection.
5. In order to provide a higher pedestrian level of service given the sizes of intersections, pedestrian refuge islands and medians need to be provided at the signalized intersections of City Boulevard/Collector Road and Collector Road/IKEA Way. Positive-offset left-turn lanes with double medians, such as what has recently been constructed at the South Boulevard/Woodlawn Road intersection, should be used.
6. At least 150 feet of internal channelization is required on all driveways before any internal access point. Internal channelization is measured from the right-of-way line of the abutting public street. (2 *Previous review comments*)
7. CDOT does not support the use of free-flow right-turn lanes. A channelized dual right-turn lane operating under signal control will be required in lieu of the proposed free-flow right-turn lane on westbound City Boulevard with an add lane on the I-85 Northbound on-ramp. The storage for this dual right needs to be 300 feet (each lane for a total of 600 feet). The amount of receiving length on the on-ramp has not yet been determined and will be resolved prior to the approval of the corresponding Land Development permit containing this road improvement. The developer/petitioner will be responsible for the design and construction of these improvements, including the design/installation of traffic signals and interconnect cable to an existing signalized intersection. All improvements must be designed in accordance with applicable CDOT, NCDOT, and Federal Highway Administration (FHWA) standards as determined by CDOT/NCDOT.
8. The direct connection from the IKEA site to City Boulevard referenced in Note 15 needs to be constructed concurrently with the IKEA site and not after 10,000 square feet of additional development. This connection is needed to reduce the amount of exiting traffic from unnecessarily using the City Boulevard/Collector intersection to reach I-85 and Neal Road.

9. The development will have traffic impacts that are not sufficiently addressed by the proposed mitigation package presented in the draft TIS. Although the NCDOT and FHWA will need to concur with any interchange improvements, the following improvements are also necessary.
 - a. The developer is responsible for funding the traffic signals at both I-85 ramps. The City's City Boulevard or US 29/NC 49 projects do not include funding for signals at the interchange or propose to do any work at the interchange.
 - b. The existing exit ramps from I-85 have 30 to 50-foot turn lanes. 2011 background traffic alone will cause the queues to extend beyond the existing turn lanes and will be further impacted by the projected IKEA traffic. The TIS projects traffic volumes on these exit ramps over 700 vehicles in peak hour, the majority of which will be site generated traffic. These volumes warrant dual left- or dual right-turn lanes. The developer needs to construct the following:
 - I-85 Southbound exit ramp: Extend the right-turn lane to westbound City Boulevard to 300 feet. Change the pavement markings on the ramp to allow for a dedicated left-turn lane and a shared left/through/right lane, creating dual lefts.
 - I-85 Northbound exit ramp: Extend the left-turn lane to westbound City Boulevard to 300 feet. Change the pavement marking on the ramp to allow for a shared left/through/right lane and a dedicated right-turn lane, creating dual rights.
 - c. Provide a westbound right-turn lane from City Boulevard onto the Collector Road with a minimum of 150 feet of storage (or as otherwise determined by NCDOT, whichever is greater).
 - d. The southbound Collector Road approach to City Boulevard needs to be designed to allow for a future extension to the south. This approach needs to allow for a future 5-lane approach plus bike lanes. The pavement markings can be determined at a later date.

If we can be of further assistance, please advise.

SLP

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