



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

ROY COOPER
GOVERNOR

JAMES H. TROGDON, III
SECRETARY

August 12, 2019

Mr. Earl Lewellyn, PE
Kimley-Horn and Associates, Inc.
300 West Morgan St.
Suite 1500
Durham, NC 27701

Subject: Proposed Eubanks Road Mixed Use Development
Located on SR 1727, Eubanks Road at SR 1009, Old NC 86
Review of Traffic Impact Analysis (TIA)

Dear Mr. Lewellyn,

District staff has reviewed the TIA and concept plan for the above development. Based on the information provided, we offer the following comments.

General:

The proposed site is a mixed-use development consisting of 50 single family homes, 175 multi-family homes, a 75-bed assisted living facility, a 10,000 SF daycare, 60,000 SF of general office and 17,000 SF of general retail. Upon buildout, projected to occur in 2025, the site is expected to generate approximately 4600 unadjusted daily trips. No phased construction is proposed. The site is accessed via three proposed driveways as follows: A full movement access at the existing roundabout on Eubanks Road, a proposed full movement access to Eubanks Road directly across from Dromoland Road and a full movement access to Eubanks Road located approximately 330' east of Old NC 86.

Analysis and Required Improvements:

Eubanks Road and Old NC 86 Intersection:

The TIA indicates that with the addition of site traffic, delays and queuing at this intersection will degrade to unacceptable levels. Based on the analysis provided, we concur with the recommendation of installation of a traffic signal at this intersection if determined to be adequately warranted per MUTCD guidelines. However, the TIA did not provide signal warrant analysis or information on expected queues for the signalized

intersection scenario to determine adequacy of existing storage lengths. It will be necessary for you to provide this information to verify justification and acceptable operation of the recommended traffic signal.

Subject to review of the requested information and as a condition of the pending driveway permit, the Applicant will be required to provide the following improvements.

- Install a traffic signal at this intersection
- Extend existing left and right turn lanes if necessary, to accommodate expected queues as determined by additional analysis

Eubanks Road and West Site Access Intersection:

The TIA indicates that this access is located approximately 330' east of Old NC 86. Given the relatively short spacing, there is concern that this access may be located within the functional area of the proposed adjacent signalized intersection. Queuing information for the signalized intersection scenario, as requested above, is needed to assess operation of this access as a full movement. If the analysis indicates queues extending back from the signal beyond the access location, then a right in-right out access may be necessary to ensure acceptable operation. If full access is allowed, then a westbound turn lane on Eubanks Road will be required. See narrative below.

Eubanks Road and Dromoland Drive/Central Site Drive Intersection:

The TIA recommends no improvements at this intersection, however, an eastbound left turn lane on Eubanks Road is sufficiently warranted utilizing the NCDOT turn lane warrant nomograph.

As a condition of the pending driveway permit, the applicant will be required to provide the following improvements.

- Construct a three-lane section from Old NC 86 to Dromoland/Central Site Access intersection
- Assess intersection sight lines and provide easements, clearing and grading as needed to provide minimum required intersection sight lines per NCDOT requirements.

Eubanks Road Roundabout:

We concur with the TIA findings that the roundabout is expected to operate acceptably upon 2025 site buildout. No improvements are necessary to mitigate anticipated site traffic.

Eubanks Road and Rogers Road Intersection:

The TIA indicates a significant degradation of LOS and extended queues as a direct result of addition of the site traffic. However, no recommendations for improvement are provided.

- Consistent with NCDOT guidelines, the Applicant will need to provide recommendations for mitigation of impacts attributable to the addition of site traffic, such as exclusive right and left turn lanes on the northbound approach and construct the improvements as a condition of the pending driveway permit.

Multi-Modal Enhancements:

Though the TIA does not provide analysis or specific recommendations, any proposed or locally stipulated multi-modal enhancements including but not limited to sidewalk, bike lanes, bus pull offs, lighting, landscaping etc. on State maintained routes are subject to NCDOT design and encroachment requirements.

General Requirements:

It is necessary to obtain an approved driveway permit and/or encroachment agreement(s) prior to performing work on the NCDOT right of way. As a condition of the permit, the applicant shall be responsible for design and construction of the above stipulated improvements in accordance with NCDOT requirements. An approved permit will be issued upon receipt of approved roadway and signal construction plans, inspection fee, and any necessary performance and indemnity bonds.

The applicant shall dedicate any additional right of way necessary to accommodate the required road improvements or future improvements as stipulated.

Intersection radii and geometry shall be designed to accommodate turning movements of the largest anticipated vehicle.

All pavement markings shall be long life thermoplastic. Pavement markers shall be installed if they previously existed on the roadway.

The applicant shall be responsible for the installation and relocation of any additional highway signs that may be necessary due to these improvements and shall comply with the requirements of the MUTCD.

Feel free to contact me if you have any questions.

Sincerely,



C. N. Edwards Jr., PE
District Engineer

Cc: J. M. Mills, PE, Division Engineer
D.M. McPherson, Division Traffic Engineer
Town of Carrboro