

CONSULTANT MEMORANDUM

To: Chapel Hill Town Council
From: Aaron Cain, DCHC MPO Staff
Re: NC 54 West Corridor Study
Date: October 30, 2019

Summary: In June 2017, the Durham-Chapel Hill-Carrboro Metropolitan Planning Organization (DCHC MPO) conducted a study of NC 54 from Old Fayetteville Road in Carrboro to the I-85 interchange in Graham. After reviewing the initial report in November 2018, the DCHC MPO Board directed staff to conduct further study to address concerns from Board members. That second phase has been completed and the entire study has been released for public comment.

Background: In June 2017 DCHC MPO, in conjunction with the North Carolina Department of Transportation (NCDOT) and the City of Graham, embarked on a study of NC 54 from Old Fayetteville Road in Carrboro to the I-85 interchange in Graham. The initial study report (see Attachment A) recommends a phased widening NC 54 for the length of the corridor to a four-lane divided highway with bicycle and pedestrian accommodations.

Issues: Upon release of the report, concerns were raised by DCHC MPO member governments on a variety of issues, including:

- Correlation between planned development and traffic volumes on NC 54;
- More detailed analysis of origin and destination data, as well as travel demand model results;
- Assess impacts of NC 54 widening on secondary roads, including municipal streets;
- Assess potential for transit alternatives in the corridor; and
- Additional consultation with UNC and UNC Medical Center regarding commuting patterns for employees

Based on these concerns, the DCHC MPO conducted a second phase of the corridor study. The result of the second phase is a memo and set of visuals with additional data and specificity (see Attachments B & C). This second phase of the study supports the original finding to widen NC 54.

Conclusions:

- *UNC/UNC Hospitals:* The second phase of the study delved into the commuting patterns of UNC and UNC Hospitals employees. The study found that while these trips make a significant contribution to traffic on NC 54, they are only part of a wide range of trips between various destinations. As the region grows, the portion of traffic directly attributable to UNC and UNC Hospitals will diminish. Trips generated by new development in eastern Alamance and northern Chatham Counties will comprise a substantial portion of traffic growth along the NC 54 corridor, along with overall growth in Orange County.
- *Transit:* Currently, neither adequate resources nor demand are available to support new fixed-route transit service along the corridor serving unincorporated Orange County. Nor does it appear that enough ridership could be captured to eliminate the need for widening, especially on a 2-lane rural road with limited passing and frequent conflicts and delays.
- *UNC Transportation Demand Management:* The University and Medical Center are trying to reduce parking demand and encourage alternatives to driving alone. However, most of this

potential mode shift will be found in denser, high-volume corridors already served by transit and/or close enough for walking and biking to be viable options. Focusing investment on improvements in these locations seems more productive than initiating new service in a longer corridor with dispersed development.

- *Park-and-Rides*: Commuters appear to prefer park-and-ride lots at Southern Village and Eubanks over lots at Jones Ferry or Carrboro Plaza, due to more direct and frequent service. This suggests that the cost of longer routes to more remote western lots may not be as productive as enhancing services closer in, especially given BRT plans.
- *Secondary Roads*: As growing congestion increases travel times and unpredictability along NC 54, more trips will shift to secondary roads in Orange County, particularly Old NC 86/Hillsborough Road, and Bradshaw Quarry/Arthur Minnis/New Hope Church Roads. Widening attracts an estimated 400 -700 of these daily trips back to a safer, more reliable and efficient NC 54.
- *Traffic Patterns*: The bulk of future traffic travelling east on a widened NC 54 will continue via the NC 54 bypass in Carrboro towards Chapel Hill, consistent with existing traffic patterns. The widening does appear likely to shift several hundred vehicles/day entering central Chapel Hill from Hillsborough Road and MLK, Jr Drive onto the NC 54 Bypass and South Columbia Street. There is also a shift of about 500 trips from I-40 to the NC 54 Bypass.