

*Connecting all points of the Triangle*

MEMORANDUM

TO: GoTriangle Board of Trustees Planning and Legislative Committee
FROM: Capital Development: D-O LRT Project Team
DATE: June 13, 2018
SUBJECT: **D-O LRT Project Request for Design Change Approval:
Modification of the Erwin Road Alignment**

Strategic Objective or Initiative Supported

This item supports Strategic Objective 1.1: Increase number of customers served with Sustainable Transportation Services.

Action Requested

Staff requests that the Planning and Legislative Committee recommend the proposed change to the Erwin Road alignment to the GoTriangle Board of Trustees for approval at their July meeting.

Background and Purpose

At the July 26, 2017 meeting, the Board of Trustees approved the Design Change Approval Policy (Policy) for the D-O LRT Project. The Policy established three Categories of changes:

- Category 1 includes changes which would require approval by each signatory board of the Transit Plans: the Durham Board of County Commissioners, the Orange Board of County Commissioners, the DCHC-MPO Policy Board, and the GoTriangle Board of Trustees.
- Category 2, includes changes which would require approval by the GoTriangle Board of Trustees. For changes in this category, GoTriangle staff will provide the Durham and Orange Boards of County Commissioners and the DCHC-MPO Policy Board with the opportunity to review and provide input on the change prior to bringing the change to the GoTriangle Board of Trustees for final approval.
- Category 3, generally includes all other proposed design changes and establishes that the D-O LRT Project Director has approval authority for design changes within this Category. However, the D-O LRT Project Director and/or Executive Oversight Team may choose to recommend that design changes in Category 3 should be elevated to the GoTriangle Board of Trustees for approval.



Request to Modify the Erwin Road Alignment.

In the baseline scope of the D-O LRT Project as defined in the Record of Decision (ROD) and Amended ROD issued by the Federal Transit Administration (FTA) in February 2016 and December 2016, respectively, the light rail alignment is median-running at-grade in Erwin Road. The proposed change would shift the alignment to side-running at-grade between Cameron Boulevard and LaSalle Street, and a mix of side-running and median-running aerial alignment between LaSalle Street and NC 147.

Because this design change is substantial, GoTriangle staff recommends that the change be elevated from Category 3 to Category 2 which requires approval by the GoTriangle Board of Trustees. As part of the Board review and approval process, GoTriangle staff will solicit input regarding the modification from the Durham County Board of Commissioners, the Orange County Board of Commissioners, and the DCHC MPO Policy Board.

Following are some of the key issues related to this proposed change.

Why is staff recommending this change?

- Unique utilities beneath Erwin Road present challenges for the median at-grade design. In particular, coordination with key 3rd party stakeholders has revealed underground 44kv power cables that must be avoided due to their strategic importance to Duke University Hospital. An aerial guideway would significantly minimize the impacts to this critical power source.
- Emergency access to Duke University Hospital is a top priority. An aerial guideway would help ensure that access to Duke's Level 1 Trauma Center remains unimpeded during and after construction.
- Coordination with Duke University, Duke University Health System, and the Durham VA Medical Center revealed concerns regarding impacts related to the magnitude of the road-widening required by an at-grade median alignment along Erwin Road. For instance, with the median at-grade alignment Duke University's John Hope Franklin Building would have to be relocated – that is no longer needed due to the proposed alignment change. An aerial guideway would reduce impacts related to road-widening.
- Coordination with key 3rd party stakeholders exhibited concerns with traffic impacts due to an at-grade median alignment along Erwin Road. Elevating the light rail alignment in the median decreases the impacts to traffic. One of the traffic mitigation measures in the initial design included a roundabout at the Elba Street interchange off of NC 147. Due to the aerial structure alignment that mitigation is no longer needed as part of the D-O LRT Project.



- Duke University Health System expressed significant concerns with the impacts to the Global Health Research Building on the south side of Erwin Road due to the magnitude of the road-widening caused by an at-grade median alignment along Erwin Road. This facility is part of Duke University's collaboration with the National Institutes of Health, and is under strict grant requirements. Changing to an aerial structure in the median decreases the required widening of the roadway, minimizing the impacts to this important research facility.

GoTriangle staff has submitted an environmental re-evaluation to the FTA to compare the environmental effects of the proposed refinement to the effects previously disclosed in the Draft Environmental Impact Statement (DEIS) and determine if the commitments outlined in the Amended Record of Decision mitigate the effects. FTA directed GoTriangle to prepare a Supplemental EA including this and other proposed project refinements for public review.

Financial Impact

The cost estimate for the proposed change is approximately \$90,000,000 more than the baseline design.

As part of FTA-required cost management practices, changes to the base cost estimate (both savings and increases) associated with changes in the project design are tracked throughout Engineering (final design) and considered together. Although the overall project budget is set at entry into Engineering at \$2.476 billion, it is typical to shift expenditures between FTA cost categories to meet the needs of the project. In other words, savings in one area can cover for additional expenditures in another area. This allows the agency and the project team to use the final design process to better align spending with goals and values.

Attachments

- Map showing the Previous Design
- Map showing the Proposed Project Refinements

Staff Contact

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