Durham-Orange
Light Rail Transit Project

Draft
Environmental Impact Statement

Chapters 1 – 9

August 2015

Durham-Orange Light Rail Transit Project

Draft Environmental Impact Statement

Draft Section 4(f) Evaluation

Prepared for:

U.S. Department of Transportation, Federal Transit Administration

and

Research Triangle Regional Public Transportation Authority d/b/a Triangle Transit d/b/a GoTriangle

Prepared by:

AECOM

August 2015

Title of Proposed Action

Draft Environmental Impact Statement (DEIS) for the Durham-Orange Light Rail Transit (D-O LRT) Project

Comments

All Comments on the DEIS are due by **October 12, 2015**.

Written comments may be sent:

Via U.S. Mail: D-O LRT Project – DEIS, c/o Triangle Transit, Post Office Box 530, Morrisville, NC 27560

Via Email: info@ourtransitfuture.org

Via the D-O LRT Project's website: http://ourtransitfuture.com

Verbal comments may be provided at the public hearings. **Two public hearings** will be held on:

- **September 29, 2015, from 4:00 p.m. to 7:00 p.m.**
  William and Ida Friday Center for Continuing Education
  100 Friday Center Drive
  Chapel Hill, NC 27599-1020

- **October 1, 2015, from 4:00 p.m. to 7:00 p.m.**
  Durham County Commissioners' Chambers
  200 East Main Street
  Old Courthouse – Second Floor
  Durham, NC 27701

Additional information regarding the public hearings will be posted on the D-O LRT Project website: http://ourtransitfuture.com. Notices will be mailed to interested parties and published in newspapers of general circulation.

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Abstract

The Research Triangle Regional Public Transportation Authority d/b/a Triangle Transit d/b/a GoTriangle (Triangle Transit), in cooperation with the Federal Transit Administration (FTA), prepared this Draft Environmental Impact Statement (DEIS) and Draft Section 4(f) Evaluation to evaluate the proposed Durham-Orange Light Rail Transit (D-O LRT) Project. The DEIS evaluates the environmental, transportation, social, and economic impacts associated with the transportation improvements in the Durham-Orange (D-O) Corridor serving the cities of Chapel Hill and Durham in the Research Triangle region of North Carolina. After addressing comments to this document, FTA can determine whether the project would issue a combined FEIS and ROD based on the criteria outlined in the Final Guidance on MAP-21 Section 1319 Accelerated Decision Making in Environmental Reviews (US DOT; November 12, 2014), which reads: “Section 1319(b) directs the lead agency, to the maximum extent practicable, to expeditiously develop a single document that consists of an FEIS and ROD, unless certain conditions exist. The Council on Environmental Quality (CEQ) regulations (40 C.F.R. §§ 1508.7 and 1508.8) define the impacts and effects that must be addressed and considered by federal agencies in satisfying the requirements of the National Environmental Policy Act (NEPA) process, which includes the following direct, indirect, and cumulative impacts:

- Direct impacts or effects are caused by the action (D-O LRT Project) and occur at the same time and place. Direct impacts are discussed in each section of chapter 4.
- Indirect impacts or effects are caused by the action and are later in time or farther removed in distance, but are still reasonably foreseeable. Indirect effects may include growth inducing effects and other effects related to induced changes in the pattern of land use, population density or growth rate, and related effects on air, water, and other natural systems, including ecosystems. Indirect effects are discussed in section 4.17.
- Cumulative impacts are the impacts on the environment which result from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time. Cumulative impacts are discussed in section 4.17.

The Research Triangle is anchored by the University of North Carolina at Chapel Hill (UNC), Duke University (Duke), North Carolina Central University (NCCU), North Carolina State University, and the municipalities of Chapel Hill, Durham, Cary, and Raleigh (the state capital). This DEIS documents the evaluation of the No Build Alternative and the NEPA Preferred and Project Element Alternatives. The No Build Alternative is defined and analyzed to provide the base against which the NEPA Preferred and Project Element Alternatives can be compared. The proposed undertaking consists of a 17-mile light rail project from southwest Chapel Hill to eastern Durham and includes several educational, medical, and other key activity centers which generate a large number of trips each day. The D-O LRT Project would include 17 stations and has Project Element Alternatives including two sections with alignment alternatives (i.e., Little Creek with four alignment options and New Hope Creek with three alignment options). Additionally, there are five Rail Operations and Maintenance Facility (ROMF) options under consideration. The NEPA Preferred Alternative contains the preferred alignment options, one ROMF option, and station selections in each area where alignment and station alternatives exist. Planning for high-capacity transit in the Research Triangle

region began more than 20 years ago, and a number of studies have been conducted to advance major transit investments in the area including the *US 15-501 Major Investment Study* (MIS) (1998 and 2001), the *Regional Transit Vision Plan* (2008), the *2035 Long Range Transportation Plan* (LRTP) (2009), *2040 Metropolitan Transportation Plan* (MTP) (2013), and the *Alternatives Analysis Final Report* (2012).

This DEIS is organized as follows:

Chapter 1: Purpose and Need

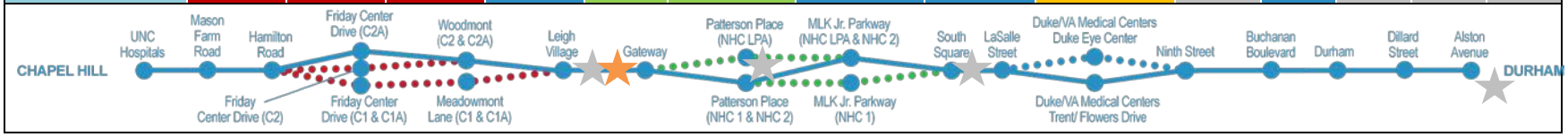
This chapter describes the background, purpose, and need for transportation improvements within the D-O Corridor. In order to address the transportation challenge faced by the region, and more specifically, within the D-O Corridor, and to cultivate a more sustainable cycle of growth for the future, a high-capacity transportation infrastructure solution is required. This transportation solution must address the needs of the D-O Corridor: enhancing mobility, increasing connectivity through expanding transit options, serving major activity and employment centers, and increasing transit operating efficiency. This solution must also support local land use plans that call for compact development to manage and channel future growth along the transportation corridors that can sustainably support growth, promote economic development, and preserve the region's high quality of life.

Chapter 2: Alternatives Considered

This chapter describes the alternatives considered during the planning process, including the alternatives considered and evaluated in the DEIS. This DEIS considers a No-Build Alternative, a NEPA Preferred Alternative, and several Project Element Alternatives.

The footer of this DEIS document is a representation of the NEPA Preferred and the Project Element Alternatives considered in the document. The color schema presented in the graphic is carried through the figures presented in this DEIS. The blue line represents the NEPA Preferred Alternative. The Little Creek Project Element Alternatives (C1, C1A, and C2) are represented with a red dashed line. The New Hope Creek Project Element Alternatives (NHC LPA and NHC 1) are represented with a green dashed line. In the areas where the alignment alternatives are presented, station locations will differ from the NEPA Preferred Alternative. The orange star represents the NEPA Preferred Rail Operations and Maintenance Facility (ROMF). The grey stars represent the Project Element ROMF Alternatives.

Project Elements	Little Creek Alternatives				New Hope Creek Alternatives			Duke/VA Medical Center Alts		ROMF Alts				
	C1	C1A	C2	C2A	NHC LPA	NHC 1	NHC 2	Trent/ Flowers	Duke Eye Center	Leigh Village	Farrington Road	Patterson Place	Cornwallis Road	Alston Avenue
NEPA Preferred Alternative [a]											★			



Chapter 3: Transportation

This chapter describes the projected transportation impacts of the No Build and NEPA Preferred and Project Element Alternatives. The evaluation is based upon projected travel demand, transportation capacity, transportation performance measures, and impacts to the roadway network, parking, freight delivery, and pedestrian and bicycle network. The analysis was developed from travel demand forecasts for the project corridor using the Regional Travel Demand Model and reviewing transportation plans.

Chapter 4: Affected Environment and Environmental Consequences

This chapter summarizes the affected environment and environmental consequences within the D-O LRT study areas. This represents both the existing environmental conditions in the study area prior to construction of the NEPA Preferred Alternative and environmental impacts associated with the construction of the NEPA Preferred and Project Element Alternatives.

Note that Section 106 requires consultation with the North Carolina State Historic Preservation Officer (SHPO), federally recognized Native American tribes with an interest in the area, local governments, and other consulting and interested parties. A consultation meeting was held August 14, 2015, to review FTA's Preliminary Determination of Effects on the undertaking (NEPA Preferred Alternative). Consultation will continue with the consulting parties per Section 106 consultation requirements. The final *Section 106 Assessment of Effects for Historic Properties for Durham-Orange Light Rail Project* will be posted separately for public comment. Triangle Transit will provide notification of the availability of this report for review via the project website, local newspapers, and through the project's email contact list.

Chapter 5: Environmental Justice

This chapter assesses the potential impacts to minority and low income populations along the proposed D-O LRT Project alignment. The purpose is to ensure that these populations do not incur disproportionately high and adverse impacts as a result of the proposed D-O LRT Project. This analysis is in accordance with E.O. 12898, U.S. Department of Transportation (DOT) Order 5610.2(a), and FTA Circular 4703.1 (effective date August 15, 2012).

Chapter 6: Draft Section 4(f) Evaluation

This chapter analyzes the proposed D-O LRT Project pursuant to Section 4(f) of the of the Department of Transportation Act of 1966, which protects publicly-owned parks, recreation areas, wildlife or waterfowl refuges, or any historic sites of national, state, or local significance. This chapter describes the potential uses of those resources and whether such use is permanent, temporary, or constructive use; if a property is used, the potential impacts are also considered.

Chapter 7: Project Costs

This chapter describes the costs associated with the D-O LRT Project, including both the capital costs and ongoing operations and maintenance costs.

Chapter 8: Evaluation of Alternatives

This chapter presents a summary comparison of the alternatives in the D-O LRT Project DEIS/Draft Section 4(f) Evaluation. The intent of this evaluation is to demonstrate the relative effectiveness of the NEPA Preferred Alternative and Project Element Alternatives compared with the No Build Alternative in meeting the project's Purpose and Need statement.

Chapter 9: Public Involvement and Agency Coordination

NEPA regulations require that transportation projects provide a transparent, inclusive mechanism for identifying and engaging stakeholders meaningfully, as well as documenting feedback. This chapter documents the dialogue between Triangle Transit, interested residents, stakeholders, and government agencies regarding issues raised by the proposed D-O LRT Project. It also summarizes public and stakeholder involvement during the Alternatives Analysis, NEPA Scoping, and Project Development phase through the publication of the DEIS.

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