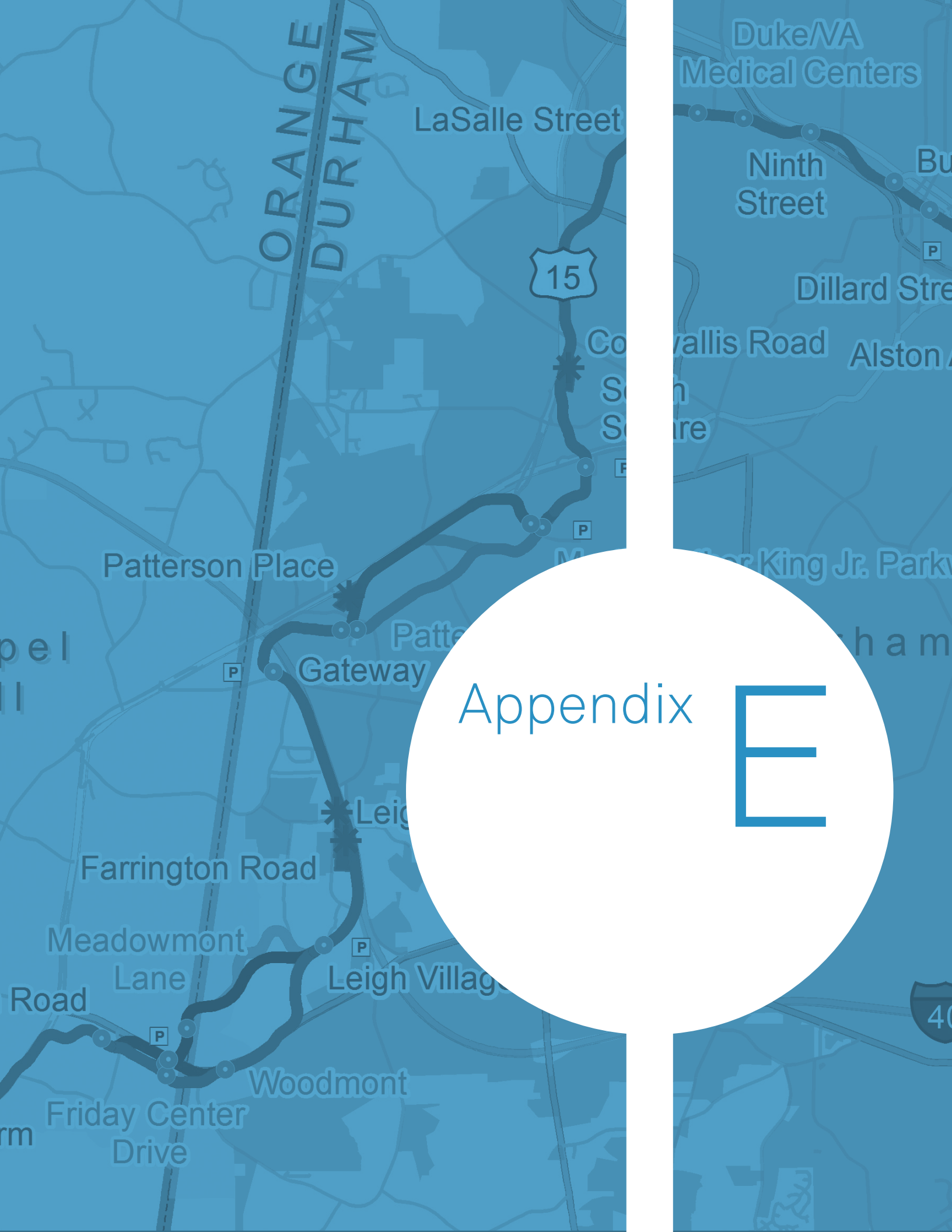
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LaSalle Street
Duke/VA
Medical Centers
Ninth
Street
15
Dillard Stre
Alston
Patterson Place
Gateway
Farrington Road
Meadowmont
Lane
Road
Leigh Village
Woodmont
Friday Center
Drive

Appendix E

Appendix E: Legal and Regulatory Context

Durham-Orange Light Rail Transit Project

August 2015

Table of Contents

The purpose of this appendix is to provide the reader of the Draft Environmental Impact Statement (DEIS) for the proposed Durham-Orange Light Rail Transit (D-O LRT) Project with information about the key laws and regulations upon which this DEIS is based. For consistency and ease of reference, the appendix follows the same chapter and section numbering as the DEIS.

Research Triangle Regional Public Transportation Authority d/b/a Triangle Transit d/b/a GoTriangle (Triangle Transit) derives its authority from legislation enacted by the North Carolina General Assembly. *See, e.g.*, N.C.G.S. §S 160A-600 – 625; N.C.G.S. §§ 40A-1 – 85.

Chapter 1: Purpose and Need

The D-O LRT Project is governed by, and this DEIS is being prepared in compliance with, the National Environmental Policy Act (NEPA), 42 U.S.C. § 4321 *et seq*. NEPA is a statute that applies to any project by a federal agency using federal funds. (NEPA applies because Triangle Transit is seeking federal funding to build the proposed D-O LRT Project and is working with the Federal Transit Administration (FTA), the responsible federal agency under NEPA.) NEPA established procedural requirements with two principal aims: (i) the agency will carefully consider detailed information regarding significant environmental impacts of the proposed action; and (ii) relevant information will be broadly disseminated to state and federal regulatory and resource agencies and the public.

The law requires that, for major federal actions "significantly affecting the quality of the human environment," the responsible agency must prepare a detailed statement on:

(i) the proposed action's environmental impacts;

(ii) any adverse environmental effects that cannot be avoided should the proposal be implemented;

(iii) alternatives to the proposed action;

(iv) the interrelatedness between local short-term uses of man's environment and the maintenance and enhancement of long-term productivity; and

(v) any irreversible and irretrievable commitments of resources that would be involved in the proposed actions should it be implemented.

The Council on Environmental Quality (CEQ) promulgates the regulations that implement NEPA. *See* 40 C.F.R. Parts 1500-1508.

The "detailed information" that NEPA requires is provided in an environmental impact statement (EIS). The main purpose of an EIS is to ensure that the agency has environmental information before it at the time of its decision making so that an informed decision can be made. However, NEPA does not require an EIS to be an omniscient document which resolves all uncertainties. The EIS "shall briefly specify the underlying purpose and need to which the agency is responding in proposing the alternatives including the proposed action." 40 C.F.R. § 1502.13.

Chapter 2: Alternatives Considered

Under NEPA, the "heart" of an EIS is the alternatives analysis, which "should present the environmental impacts of the proposal and the alternatives in comparative form." 40 C.F.R. § 1502.14. The CEQ regulations require agencies to "evaluate all reasonable alternatives," briefly discuss the reasons for the

elimination of alternatives from the study, include a no-action alterative, identify the agency's preferred alternative, and include mitigation measures as appropriate. *Id.*

The Moving Ahead for Progress in the 21st Century Act (MAP-21), 49 U.S.C. § 5301 *et seq*., was signed into law by President Obama on July 6, 2012. MAP-21 creates a streamlined and performance-based surface transportation program and builds on many of the highway, transit, bike, and pedestrian programs and policies established in 1991. Provisions of MAP-21 govern fixed guideway capital investment grant programs, including the New Starts Program in which the proposed D-O LRT Project is participating. *See* 49 U.S.C. § 5309.

Chapter 3: Transportation

3.1 Public Transportation

No federal laws, regulations, or executive orders specifically regulate how impacts to public transportation resulting from transit projects should be evaluated. However, NEPA provides the general legal framework for considering these potential impacts. In addition, the CEQ regulations include requirements for describing the affected environment and environmental consequences for general resources, including public transportation facilities. *See* 40 C.F.R. § 1502.15.

3.2 Roadways

No federal laws, regulations, or executive orders specifically regulate how impacts to roadways resulting from transit projects are evaluated; however, NEPA provides the general legal framework for considering these potential impacts. In addition, the CEQ regulations include requirements for describing the affected environment and environmental consequences for general resources, including roadways. *See* 40 C.F.R. § 1502.15.

3.3 Parking

No federal laws, regulations, or executive orders specifically regulate how impacts to parking resulting from transit projects are evaluated. However, NEPA provides the general legal framework for considering these potential impacts. In addition, the CEQ regulations include requirements for describing the affected environment and environmental consequences for general resources, including parking. *See* 40 C.F.R. § 1502.15.

The local jurisdictions in both Orange and Durham Counties impose parking requirements. The local ordinances implementing parking requirements for each jurisdiction are as follows:

- Town of Chapel Hill:

  Code of Ordinances Appendix A – Land Management, Article 5 – Design and Development Standards, Section 5.9 – Parking and Loading

- City of Durham/Durham County:

  Unified Development Ordinances – Article 6, District Intensity Standards, Section 6.12 – Design Districts; Article 10, Parking and Loading, Section 10.3 – Required Parking

3.4 Freight and Passenger Railroads

The Federal Railroad Administration (FRA) derives its authority from the Federal Railroad Safety Act of 1970 (Safety Act), 49 U.S.C. § 20101 *et seq*. and its implementing regulations. The purpose of the Safety Act is "to promote safety in every area of railroad operations and reduce railroad-related accidents and incidents." 49 U.S.C. § 20101. Railroad safety laws apply to all "railroad carriers," which are defined as persons providing railroad transportation. *Id.* at § 20102(3).

"Railroad" is broadly defined and "means any form of non-highway ground transportation that run on rails or electromagnetic guideways." "Railroad" includes "commuter or other short-haul rail passenger service in a metropolitan or suburban area," and "high speed ground transportation systems that connect metropolitan areas, without regard to whether they use new technologies not associated with traditional railroads." 49 U.S.C. §20101(2)(A)(i)-(ii). Within the limits imposed by this authority, FRA exercises jurisdiction over all intercity passenger operations (i.e., commuter rail or short-haul passenger service). Thus, under the broad definitions in the federal railroad safety laws, FRA has jurisdiction over all railroads except ''rapid transit operations in an urban area that are not connected to the general railroad system of transportation.'' 49 U.S.C. § 20102(2)(B) (emphasis added).

FRA developed the "Statement of Agency Policy Concerning Jurisdiction Over the Safety of Passenger Operations and Waivers Related to Shared Use of the Tracks of the General Railroad System by Light Rail and Conventional Equipment," 65 Fed. Reg. 42,529 (July 10, 2000) (promulgated at 49 C.F.R. Part 209, Appendix A) ("Policy Statement") to determine how the terms "commuter and other short-haul railroads" and "urban rapid transit systems" are applied.

The Policy Statement includes specific presumptions established by FRA regarding rail operations. The Policy Statement also includes FRA's presumption that a system is an urban rapid transit operation if: (i) the system is not presumptively a commuter railroad; (ii) the operation is a subway or elevated operation with its own track system on which no other railroad may operate; (iii) the operation has no highway-rail grade crossings; (iv) the system operates within an urban area; and (v) the operation moves passengers from station to station, within the urban area, as one of its major functions. *See id.* at 42,545.

Where neither the commuter railroad nor the urban rapid transit presumption applies to a transit system, FRA will look at "all of the facts pertinent to a particular transit system to determine its proper characterization." *Id.* at 42,544-45. The Policy Statement notes three general factors upon which FRA relies when classifying a system as commuter rail or urban rapid transit: (i) the geographic scope of the transit service; (ii) the primary function of the service; and (iii) the frequency of the transit service. Id. As explained in the Policy Statement, FRA evaluates commuter railroads and urban rapid transit operations as follows:

> Commuter Railroad
>
> (i) the system serves an urban area, its suburbs, and more distant outlying communities in the greater metropolitan area;
>
> (ii) the system's primary function is moving passengers back and forth between their places of employment in the city and their homes within the greater metropolitan area, and moving passengers from station to station within the immediate urban area is, at most, an incidental function; and
>
> (iii) the vast bulk of the system's trains are operated in the morning and evening peak periods with few trains at other hours.

Urban Rapid Transit

(i) the operation serves an urban area (it may also serve its suburbs);

(ii) moving passengers from station to station within the urban boundaries is a major function of the system and there are multiple station stops within the city for that purpose (such an operation could still have the transportation of commuters as one of its major functions without being considered a commuter railroad); and

(iii) the system provides frequent train service even outside the morning and evening peak periods.

Id. at 42,545.

Even if a determination is made by FRA that a system is an urban rapid transit operation, pursuant to the Policy Statement, FRA will exercise jurisdiction over such a system to the extent that it is connected to the general railroad system. (49 C.F.R. Part 209, Appendix A). Where an urban rapid transit system has a minor connection to the general railroad system, FRA will exercise limited jurisdiction over the urban rapid transit system and only to the extent necessary to ensure public safety at the points of connection for that system, the general railroad, and the public.

3.5 Airports

The Federal Aviation Administration (FAA) regulates how the navigable airspace may be safely and efficiently used and preserved, 14 C.F.R. §§ 77.1-77.41. These FAA regulations establish:

i. the requirements to provide notice to the FAA of certain proposed construction;

ii. the standards used to determine obstructions to air navigation, and navigational and communication facilities;

iii. the process for aeronautical studies of obstructions to air navigation or navigational facilities to determine the effect on the safe and efficient use of navigable air space, air navigation facilities or equipment; and

iv. the process to petition the FAA for discretionary review of determinations, revisions, and extension of determinations.

See 14 C.F.R. § 77.1.

FAA Order 1050.1E, Environmental Impacts: Policies and Procedures (2004) updates the FAA agency-wide policies and procedures for compliance with NEPA and consistently with implementing regulations issued by the CEQ (40 C.F.R. Parts 1500-1508). FAA Order 5050.4B (2006) supplements Order 1050.1E and advises personnel with the FAA Office of Airports (ARP) on implementing NEPA requirements for airport actions under FAA's authority. This Order is part of FAA's effort to ensure its personnel have clear instructions to address potential environmental effects resulting from major airport actions.

FAA Advisory Circular 150/5300-13A - Airport Design, contains the FAA's standards and recommendations for the geometric layout and engineering design of runways, taxiways, aprons, and other facilities at civil airports.

FAA Advisory Circular 150/5200-33B, Hazardous Wildlife Attractants On or Near Airports (2007 provides guidance to land use planners and developers of projects, facilities, and activities on or near airports. In particular, planners and developers must take into account whether proposed land uses would increase

wildlife hazards for the airport facilities. The FAA recommends varying separation distances of 5,000 feet, 10,000 feet, and 5 miles depending on the type of aircraft served at the airport and the extent of the approach, departure, and circling airspace. In particular, the land use practices that could potentially attract hazard wildlife and thus impact airports include retention ponds, storm water treatment facilities, artificial marshes, and constructed wetlands.

3.6 Pedestrian and Bicycle Facilities

No federal laws, regulations, or executive orders specifically regulate how impacts to pedestrian and bicycle facilities resulting from transit projects should be evaluated. However, NEPA provides the general legal framework for considering these potential impacts. In addition, the CEQ regulations include requirements for describing the affected environment and environmental consequences for general resources, including pedestrian and bicycle facilities. *See* 40 C.F.R. § 1502.15.

Chapter 4: Environmental Resources

4.1 Land Use and Zoning

No federal laws, regulations, or executive orders specifically regulate the consideration of land use impacts as part of the environmental process. NEPA forms the general legal framework for the consideration of impacts to the social environment, which would include land use issues. *See* 40 C.F.R. §§ 1502.15 – 1502.16.

Local municipalities have land use controls available to them in the form of comprehensive plans guiding land use and city zoning codes guiding development.

- Town of Chapel Hill, North Carolina, Code of Ordinances
- City of Durham, North Carolina, Code of Ordinances

4.2 Socioeconomic and Demographic Conditions

The measurement of a project's impacts on socioeconomic conditions is an element of the NEPA evaluation. *See* 40 C.F.R. §§ 1502.15 – 1502.16. MAP-21 also requires project sponsors to document the degree to which a transit project would impact local economic development as part of the NEPA review process.

4.3 Neighborhoods and Community Resources

No specific federal laws, regulations, or executive orders specifically regulate how impacts to community character, cohesion, and/or community facilities resulting from transit projects are evaluated; however, NEPA forms the general legal framework for the consideration of these potential social impacts. *See* 40 C.F.R. §§ 1502.15 – 1502.16.

Local ordinances regulate parking, noise, building codes, litter, public safety, traffic, zoning, and general welfare.

- Town of Chapel Hill, North Carolina, Code of Ordinances
- City of Durham, North Carolina, Code of Ordinances

4.4 Visual and Aesthetic Considerations

NEPA forms the general legal framework for the consideration of impacts to the human environment. CEQ regulations require a description of the affected environment and the environmental consequences for general resources, including visual and aesthetic considerations. *See* 40 C.F.R. §§ 1502.15 – 1502.16. Further, Section 106 of the National Historic Preservation Act of 1966 (NHPA), 54 U.S.C. § 306108 *et seq*., and Section 4(f) of the U.S. Department of Transportation Act of 1966, 49 U.S.C. § 303 and 23 U.S.C. § 138 (Section 4(f)), require that visual impacts be addressed for the protection of publicly owned parks, recreational areas, wildlife and waterfowl refuges, or public and private historical sites.

4.5 Cultural Resources

Congress established a program to preserve the historical and cultural foundations of the United States through the NHPA, 54 U.S.C. § 306108 *et seq*. As the regulations make clear, Section 106 of the NHPA requires federal agencies to consider the effects on historic properties of projects they carry out, approve, or fund. *See* 36 C.F.R. Part 800. While Section 106 does not mandate preservation, review (known as "Section 106 review") takes place to ensure that preservation values are considered in federal agency planning and decisions.

Federal agencies are responsible for initiating Section 106 review. This review takes place between the lead federal agency – in the case of the D-O LRT Project, the FTA – and state and tribal officials. The State Historic Preservation Officer (SHPO) coordinates the state's historic preservation program and consults with agencies during the Section 106 review. Officials of federally recognized Indian tribes are also consulted when a project has the potential to affect historic properties on tribal lands or historic properties of significance to such tribes located off tribal lands.

4.6 Parklands and Recreational Areas

Section 4(f) provides for consideration of park and recreation lands, wildlife and waterfowl refuges, and any publicly or privately owned historical site listed or eligible for listing on the National Register of Historic Places during transportation project development. The law only applies to the USDO); it is implemented by the FTA and the Federal Highway Administration (FHWA) through regulations found at 23 C.F.R. Part 774. Section 4(f) applies to projects that receive funding from or require approval by an agency of the USDOT.

Section 6(f) is included in the Land and Water Conservation Fund (LWCF) Act of 1965 (16 U.S.C. §§ 460l4-460l11; 54 U.S.C. §§ 200301-200310). The LWCF is a federal program established by Congress to provide funds and matching grants to federal, state, and local governments for the acquisition of land and water, and easements on land and water, for the benefit of all recreating Americans. The income for the LWCF comes largely from Outer Continental Shelf mineral receipts. The LWCF is administered by the National Park Service (NPS).

The NPS oversight pertains to projects that would cause impacts on or the permanent conversion of recreational property acquired with LWCF monies. Under Section 6(f), it is prohibited to convert property acquired or developed with LWCF grant money to non-recreational purposes without approval from the NPS. Section 6(f) of the LWCF stipulates that any land or facility planned, developed, or improved with LWCF funds cannot be converted to uses other than parks, recreation, or open space unless land of at least equal fair market value and reasonably equivalent usefulness is provided. If a transportation project would cause such a conversion, regardless of funding sources, such replacement land must be provided.

4.7 Natural Resources

A cornerstone of the environmental analysis is the evaluation of natural resources. Several laws and regulations intersect with NEPA throughout the evaluation process.

The Endangered Species Act (ESA) of 1973, 16 U.S.C. § 1531 *et seq*., regulates endangered and threatened species through administering permits, implementing recovery plans, and monitoring listed endangered and threatened species. The U.S. Fish and Wildlife Service (USFWS) and the National Marine Fisheries Service (NMFS) administer the ESA.

North Carolina protects locally or regionally rare species in addition to federally listed species. Protection for animals and plants in North Carolina is recognized under two separate laws. The protection of animals is addressed by the North Carolina Endangered Species Act, N.C.G.S. § 113-331 *et seq*., which is administered by the North Carolina Wildlife Resources Commission (NCWRC). Endangered, threatened, and rare plants are protected by the North Carolina Plant Protection and Conservation Act, N.C.G.S. § 106-202.12 *et seq*. This law is administered by the Plant Conservation Program in the North Carolina Department of Agriculture (NCDA).

The Farmland Protection Policy Act (FPPA) states that federal agencies must "minimize the extent to which federal programs contribute to the unnecessary conversion of farmland to nonagricultural uses…". 7 U.S.C. § 4201 *et seq*.

The Rivers and Harbors Appropriation Act, 33 U.S.C. § 403 *et seq*., is administered by the U.S. Army Corps of Engineers (USACE). Section 9 prohibits the construction of any bridge, dam, dike, or causeway over or in navigable waterways of the U.S. without Congressional approval. The USACE has delegated the administration of Section 9 to the Coast Guard. Under Section 10 of the Act, Congressional approval is required to build certain structures, and excavation or fill within navigable waters requires the arrival of the USACE.

The Bald Eagle and Golden Eagle Protection Act, 16 U.S.C. § 668 *et seq.*, provides for the protection of the bald eagle and the golden eagle by prohibiting, except under certain specified conditions, the taking, possession, and commerce of such birds.

The Migratory Bird Treaty Act of 1918, 16 U.S.C. §§ 703-712, was intended to end the commercial trade in birds and their feathers. The law affirms, or implements, the commitment of the U.S. to four international conventions (with Canada, Japan, Mexico, and Russia) for the protection of a shared migratory bird resource. Each convention protects select species of birds that are common to both countries.

The Magnuson-Stevens Fishery Conservation and Management Act, 16 U.S.C. §§ 1801-1882, established a 200-mile fishery conservation zone, effective March 1, 1977, and established Regional Fishery Management Councils. As amended, the law requires national fishery conservation and management standards, and the identification and procedures to rebuild over-fished stocks.

4.8 Water Resources

4.8.1 Groundwater

The North Carolina Environmental Management Commission has established groundwater standards for the protection of water supplies. Groundwater standards are directed by N.C.G.S. § 143-214.1 (1987). These standards are intended to maintain and preserve the quality of groundwater, prevent and abate pollution and contamination of the waters of the state, protect public health, and permit management of the groundwater for its best usage by the citizens of North Carolina. In North Carolina, the Department of Environment and Natural Resources (NCDENR) Division of Water Resources (DWR) is responsible for administering several

groundwater programs and carrying out enforcement actions for violations of environmental regulations. NCDENR DWR regulates groundwater by preventing pollution, managing and restoring degraded groundwater, and protecting groundwater resources.

4.8.2 Surface Waters and Wetlands

The Clean Water Act (CWA), 33 U.S.C. § 1251 *et seq*., establishes the basic framework for regulating discharges of pollutants into waters of the United States. "Jurisdictional waters of the United States," including wetlands, streams, and open waters, are defined in 33 C.F.R. § 328.3, and are protected by Section 404 of the CWA (33 U.S.C. § 1344), which is administered and enforced in North Carolina by the USACE, Wilmington District. Section 404 regulates the discharge of dredged or fill material in waters of the United States through the USACE permitting program. Fill material can be pipes, culverts, soil, rock, concrete, riprap, asphalt, brick, or other building materials. Section 401 of the CWA regulates water quality through the NCDENR DWR water quality certification program. The permit review and issuance process first encourages avoidance of impacts, followed by minimizing impacts and lastly through mitigating unavoidable impacts.

4.8.3 Floodplains and Floodways

Floodplain management ordinance requirements are listed in 44 C.F.R. § 9. These regulations establish how Executive Order 11988, 42 Fed. Reg. 26951 (May 24, 1977) and Executive Order 11990, 42 Fed. Reg. 26961 (May 24, 1977) are implemented and enforced. These regulations apply to all federal agency actions that have the potential to affect or harm floodplains or wetlands. The Federal Emergency Management Agency (FEMA), in cooperation with federal, state, and local governments, has developed floodway and floodplain boundaries and flood insurance rate maps (FIRM) for Durham and Orange counties.

USDOT Order 5650.2, *Floodplain Management and Protection* (1979), prescribes additional policies and procedures for transportation projects. The intent of Order 5650.2 is to ensure that a detailed floodplain analysis is included in the environmental documents and that proper consideration is given to the avoidance and mitigation of adverse floodplain effects. This analysis must discuss any risk to, or resulting from, the proposed project including the impacts on mutual and beneficial floodplain values, the degree to which the proposed project provides direct or indirect support for development in the floodplain, and measures to minimize harm or restore or preserve the natural and beneficial floodplain values affected by the project.

4.9 Air Quality

The Clean Air Act (CAA), 42 U.S.C. § 7401 *et seq*., enacted in 1970 and amended several times, is the overarching federal statute regulating air quality in the United States. Regulations have been promulgated by the Environmental Protection Agency (EPA) to implement the CAA, 40 C.F.R. § 51 *et seq*., including the Federal Transportation Conformity Rule, 40 C.F.R. § 93 *et seq*., which requires that transportation projects conform to state-level air quality plans.

4.9.1 Air Quality Standards

The CAA establishes two types of national air quality standards. Primary standards are limits set to protect public health, including the health of sensitive populations such as asthmatics, children, and the elderly. Secondary standards are limits set to protect public welfare, including protection against decreased visibility and damage to animals, crops, vegetation, and buildings. The EPA classifies urban environments as being either in "attainment" or "nonattainment." An urban area that exceeds the National Ambient Air Quality Standards (NAAQS) for one or more pollutants is said to be in nonattainment of the NAAQS. In accordance with federal regulations, FHWA and FTA projects are closely monitored to ensure that they do not cause or contribute to the frequency or severity of certain types of air pollutants, including particulate matter and carbon monoxide. 40 C.F.R. §§ 93.116, 118-119.

The State of North Carolina has also established air quality standards that are either the same or more stringent than the corresponding federal standards. For more information on National and North Carolina Ambient Air Quality Standards, see *2011 Ambient Air Quality Report*, Table 3.1 (NCDENR 2013).

4.9.2 Project-Level Conformity Determination

The CAA requires each state to develop a plan to ensure that transportation projects in that state will meet federal air quality standards. This is known as a State Implementation Plan (SIP), and the process for demonstrating that projects comply with the SIP is known as "transportation conformity." The USDOT is required to ensure that transportation projects conform to the state's air quality plan in nonattainment and maintenance areas. Conformity to a SIP requires that a proposed project not cause a violation in or delay timely attainment of the NAAQS requirements. As a division of USDOT, the FTA is required to make a transportation conformity determination each time it approves a plan, program, or project in a nonattainment or maintenance area.

In North Carolina, transportation conformity is regulated at 15A N.C.A.C. § 02D.2000 (1999), and as amended and requires planned transportation projects to be included in the Metropolitan Transportation Plan (MTP) that covers the area of the project. The proposed D-O LRT Project is an element of the Joint Capital Area metropolitan Planning Organization (CAMPO) and Durham-Chapel Hill- Carrboro (DCHC) Metropolitan Planning Organization (MPO) 2040 MTP, and is included in the conformity document.

4.10 Noise and Vibration

No federal laws, regulations, or executive orders specifically regulate how impacts to noise and vibration resulting from transit projects are evaluated. However, NEPA forms the general legal framework for the consideration of these potential impacts. In addition, the CEQ regulations contain requirements for the description of the affected environment and environmental consequences for general resources, including noise and vibration.

The local thresholds for noise within the D-O LRT Project Corridor are defined in the text of the relevant sections of the applicable noise ordinances for the Town of Chapel Hill and the City of Durham:

- Town of Chapel Hill, North Carolina, Code of Ordinances, Sections 11-37 – 11-43
- City of Durham, North Carolina, Code of Ordinances, Article II, Noise, Sections 26-23 – 26-25

4.11 Hazardous, Contaminated, and Regulated Materials

Numerous federal and state laws and regulations govern the handling, treatment, storage, and transportation of hazardous and contaminated materials. Key regulations directing the investigation pertinent to hazardous, contaminated, and regulated materials relevant to the proposed D-O LRT Project include:

- The Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) (42 U.S.C. § 9601 *et seq*.) – provides a federal "superfund" to clean up uncontrolled, inactive, or abandoned hazardous waste sites, as well as accidents, spills, and emergency releases of pollutants and contaminants into the environment.
- Superfund Amendments and Reauthorization Act (SARA) (P.L. 99-499) – amended CERCLA in 1986 to provide a program to address abandoned hazardous waste sites.
- Resource Conservation and Recovery Act of 1976 (RCRA) (42 U.S.C. § 6901 *et seq*.) – regulates the safe generation, treatment, storage, transportation, and disposal of solid hazardous wastes from "cradle-to-grave." Subtitle I of RCRA establishes a regulatory program that prevents, detects, and cleans up releases from underground storage tank (UST) systems containing petroleum or hazardous substances.
- Federal Occupational Safety and Health Act (OSHA) (29 U.S.C. § 651 *et seq*.) – provides workers with a place of employment free from recognized hazards to safety and health.
- Toxic Substances Control Act (TSCA) (15 U.S.C. § 2601 *et seq*.) – includes restrictions relating to chemical substances and mixtures, as well as requirements for reporting, record keeping, and testing.
- North Carolina Solid Waste Management Act (N.C.G.S. §§ 130A-290 – 310.80) – provides North Carolina's hazardous waste and solid waste management programs and contains requirements for addressing inactive hazardous substance or waste disposal sites.
- North Carolina Oil Pollution and Hazardous Substances Control (N.C.G.S. §§ 143-215.94 – 215.94ZZ) – establishes the state underground storage tank regulations and, training of underground storage tank operators, along with the cleanup program for leaking petroleum underground storage tanks, including the funding and liability.
- North Carolina Dry-Cleaning Solvent Cleanup Act of 1997 (N.C.G.S. §§ 143-215.104A – 215.104U) – establishes the cleanup program for dry-cleaning facilities or operations, including funding, liability, assessments, and remediation.

4.12 Safety and Security

A Project Management Plan (PMP) is required for projects seeking federal funding from FTA before a project can advance beyond the Engineering phase, pursuant to 49 C.F.R. Part 633. The PMP is required to contain a Safety and Security Management Plan (SSMP) and a Safety and Security Certification Plan (SSCP) that outlines how the proposed project complies with, or plans to comply with, the detailed requirements of 49 C.F.R. § 659, *Rail Fixed Guideway Systems: State Safety Oversight* (SSO). The safety and security process and activities are governed by FTA's requirements in Circular C 5600.1, *Safety and Security Management Guidance for Major Capital Projects* (2007), which identifies specific safety and security activities that a transit agency must perform and document. FTA administers the approval of

the PMP, SSMP, and SSCP, while NCDOT serves as the oversight agency for all operating rail systems within North Carolina.

4.13 Energy

Energy requirements and conservation potential of the various alternatives and mitigation measures are required to be discussed as part of the NEPA process. 40 C.F.R. § 1502.16(e). Further, the FTA's project criteria under the Capital Investment Grants/New Starts program include an evaluation of environmental benefits. The environmental benefits of a transit project are calculated using the dollar value of the anticipated direct and indirect benefits, including an energy use measure (FTA, *New and Small Starts Evaluation and Rating Process Final Policy Guidance*, August 2013).

4.14 Acquisitions, Relocations, and Displacements

The Uniform Relocation Assistance and Real Property Acquisition Policy Act of 1970 (Uniform Act), 42 U.S.C. § 4601 *et seq*., provides for uniform and equitable treatment of persons displaced from their homes, businesses, or farms by federal and federally assisted programs, and establishes uniform and equitable land acquisition policies.

The goal of the Uniform Act is to ensure that property owners receive fair market value for their property, and that affected people receive fair and equitable treatment and do not suffer disproportionate injuries because of programs designed for overall public benefit. Comparable housing that is decent, safe, and sanitary must be available and affordable for displaced persons, and commercial space must be available for displaced businesses. The Uniform Act also prohibits discrimination with regard to appraisals and acquisitions of properties.

Relocation assistance for the proposed D-O LRT Project will follow the relevant procedures set forth in FTA Circular 5010.1D, *Grant Management Requirements* (2008), and the process outlined in 49 C.F.R. § 24 *et seq*., which is the basic regulation governing acquisition and relocation activities on all federal and federally assisted programs and projects.

Several state and local resources are central to the acquisition and relocation process Triangle Transit will follow in conjunction with the proposed D-O LRT Project, including:

- The North Carolina Relocation Assistance Act, N.C.G.S. §§ 133-5 – 133-22
- Research Triangle Regional Public Transportation Authority , power of eminent domain, N.C.G.S. § 160A-619
- North Carolina Eminent Domain, N.C.G.S. §§ 40A-1 – 40A-85
- Town of Chapel Hill Code of Ordinances, Chapter 9 - Housing Code, Articles 1 – 10
- City of Durham Unified Development Ordinances, Chapter 8 - Fair Housing

4.15 Utility Impacts

As a federal transit project, the proposed D-O LRT Project would require integration with existing utility infrastructure that would be subject to the Federal Transit Administration's (FTA) *Project and Construction Management Guidelines*–Appendix C: Utility Agreements (2011). Laws dealing with utility relocation and accommodation are contained in 23 U.S.C. §§ 109(l)(1) and 123. Regulations dealing with utility relocation and accommodation matters are based upon laws contained in 23 C.F.R. §§ 645.101-.119 and § 645.201-.215.

4.16 Construction Impacts

Local, state, and federal regulations apply to construction activities, as do standards or best management practices (BMPs). Applicable regulations, standards, and BMPs include the following:

- Clean Water Act, 33 U.S.C. §§ 1251 – 1387
- Occupational Safety and Health Administration (OSHA) regulations, 29 C.F.R. § 1926
- NC Asbestos Hazard Management Program, N.C.G.S. §§ 130A-444 – 130A 452
- NC Environmental Policy Act (SEPA) of 1971, N.C.G.S. §§ 113A 1 – 113A 13
- NC Temporary Isolated Wetland/Waters Permitting Rules, 15A N.C.A.C. § 2H.1300
- NC Water Quality Certification Rules, 15A N.C.A.C. §§ 2H.0501 – 2H.0507
- NC Classifications and Water Quality Standards Applicable to Surface Waters and Wetlands, 15A N.C.A.C. § 2B.0200
- Activities Deemed to Comply with Wetlands Standards, 15A N.C.A.C. § 2B.0230
- NC Dredge and Fill Law, N.C.G.S. §§ 113-229

4.17 Indirect and Cumulative Impacts

In the process of evaluating the impacts of a project, NEPA requires a discussion of not only all direct impacts of a proposed action, but also the project's indirect and cumulative impacts and the significance of those impacts. *See* 42 U.S.C. § 4332(C); 40 C.F.R. 1502.16.

Chapter 5: Environmental Justice

Executive Order (EO) 12898, 59 Fed. Reg. 7629 (Feb. 11, 1994), *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*, directs federal agencies to take appropriate and necessary steps to identify and address disproportionately high and adverse environmental effects of federal agency actions on minority and low-income populations to the greatest extent practicable and permitted by law. The EO directs federal actions, including transportation projects, to use existing law to avoid discrimination on the basis of race, color, or national origin, and to avoid disproportionately high and adverse impacts on minority and low-income populations.

The 1997 USDOT Order to Address Environmental Justice in Minority Populations and Low-Income Populations, Order 5610.2(a), describes the process for incorporating environmental justice (EJ) principles outlined in EO 12898 into all DOT programs, policies, and activities. In addition to complying with EO 12898 and DOT Order 5610.2, the DOT is committed to Title VI of the Civil Rights Act of 1964, which provides that "no person in the United States shall, on the grounds of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be subject to discrimination under any program or activity receiving federal financial assistance." 42 U.S.C. § 2000d.

FTA Circular 4703.1, *Environmental Justice Policy Guidance for FTA Recipients* (Circular), took effect on August 15, 2012. The purpose of the Circular is to assist FTA funding recipients in fulfilling the intent of EO 12898. The general EJ principles followed by DOT and FTA are summarized as follows:

- To avoid, minimize, or mitigate disproportionately high and adverse human health and environmental effects, including social and economic effects, on minority and low-income populations
- To ensure the full and fair participation by all potentially affected communities in the transportation decision-making process
- To prevent the denial of, reduction in, or significant delay in the receipt of benefits by minority and low-income populations

Chapter 6: Section 4(f)

Section 4(f) of the USDOT Act of 1966, 49 U.S.C. § 303 and 23 U.S.C. § 138, provides for consideration of park and recreation lands, wildlife and waterfowl refuges, and any publicly or privately owned historical site listed or eligible for listing on the National Register of Historic Places during transportation project development. Section 4(f) is generally intended to protect the resources noted above from being converted to transportation uses. It only applies to USDOT and is implemented by the FTA and FHWA through 23 C.F.R. Part 774.

Under Section 4(f), FTA and other USDOT agencies may approve the use of land from publicly-owned parks, recreational areas, wildlife and waterfowl refuges, or public and private historical sites unless the following conditions apply:

- there is no feasible or prudent alternative that completely avoids the use of the property; and
- the project includes all possible planning to minimize harm to the property resulting from the transportation use

23 C.F.R. § 774.3(a)(1)-(2). Section 4(f) requires the agency to consider:

- Parks and recreational areas of national, state, or local significance that are both publicly owned and open to the public
- Publicly-owned wildlife and waterfowl refuges of national, state, or local significance that are open to the public to the extent that public access does not interfere with the primary purpose of the refuge
- Historic sites of national, state, or local significance in public or private ownership regardless of whether they are open to the public

As defined in 23 C.F.R. § 774.17, there are various “uses” of a Section 4(f) resource that must be evaluated:

- A “direct use” of a Section 4(f) resource takes place when property is permanently incorporated into a proposed transportation facility. This can be done by partial or full acquisition, permanent easements, or temporary easements that exceed regulatory limits.
- A “temporary use” of a Section 4(f) resource occurs when the property is temporarily occupied, for example during construction, and that occupancy is considered adverse in terms of the preservationist purposes of the statute. A temporary occupancy of property does not constitute a use of a Section 4(f) resource when:
  - The occupancy is shorter than the time needed for construction of the project and there is no change in ownership of the property

  - The nature and magnitude of the changes to the Section 4(f) properties are minimal
- "Constructive uses" of a Section 4(f) resource occur when proximity impacts of a project on an adjacent or nearby Section 4(f) property, after incorporation of impact mitigation, are so severe that the activities, features, or attributes that qualify the property for protection under Section 4(f) are substantially impaired.

6.1 *De Minimis* Section 4(f) Findings

In 2005, Section 4(f) was amended by the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU) to simplify the parkland and historical site evaluation process. This revision allows USDOT agencies to make a *de minimis* finding in situations where impacts to Section 4(f) resources would be minimal.

The three criteria thresholds to meet *de minimis* include the following:

- The transportation use of the Section 4(f) resource, together with any impact avoidance, minimization, and mitigation or enhancement measures incorporated into the project, does not adversely affect the activities, features, and attributes that qualify the resource for protection under Section 4(f)
- The public has been afforded an opportunity to review and comment on the effects of the project on the protected activities, features, and attributes of the Section 4(f) resource
- The official(s) with jurisdiction over the property are informed of USDOT's intent to make the *de minimis* impact determination based on their written concurrence that the project will not adversely affect the activities, features, and attributes that qualify the property for protection under Section 4(f)

Guidance and policies pertaining to Section 4(f) include:

- Technical Advisory T 6640.8A, *Guidance for Preparing Environmental and Section 4(f) Documents*, Federal Highway Administration (FHWA) (October 30, 1987)
- Section 4(f) Policy Paper, FHWA (July 20, 2012)
- FTA Use of FHWA Section 4(f) Policy Paper (November 9, 2012, Memorandum)

Chapter 7: Project Costs

The proposed D-O LRT Project is advancing in accordance with the Capital Investment Grant (CIG) program requirements of the FTA, 49 U.S.C. § 5309 and 49 C.F.R. §§ 611.1 - 611.13. The CIG program is commonly referred to as "New Starts." The New Starts program provides discretionary capital funding for major transit investments such as the proposed D-O LRT Project. The FTA evaluates projects that enter the New Starts process at several milestones in the process, and allows projects that meet the FTA's criteria to advance in the New Starts process. The proposed D-O LRT Project is currently in the first phase of the New Starts process, Project Development (PD). The next phase of the New Starts process is Engineering (49 U.S.C. § 5309). Capital cost estimates have been developed in accordance with FTA guidelines. The guidelines call for cost estimates to be prepared and reported using the latest revision of FTA's Standard Cost Categories.

Chapter 8: Evaluation of Alternatives

Under NEPA, once an agency considers a range of reasonable alternatives, the agency is then required to describe the affected environment in sufficient detail "to understand the effects of the alternatives." 40 C.F.R. § 1502.15. In the final step of the alternatives analysis required by the CEQ regulations, the agency must conduct a detailed examination of the environmental consequences on the affected environment, including direct and indirect effects and their significance, the environmental effects of alternatives, and mitigation measures (to the extent they were not covered under the alternatives analysis). 40 C.F.R. § 1502.16.

Public Involvement

Agencies, non-governmental groups, and the public have been engaged throughout the planning process for the proposed D-O LRT Project. NEPA mandates agency and public participation in defining and evaluating the impacts of the project alternatives. 40 C.F.R. §§ 1503.1, 1506.6. The proposed D-O LRT Project has also adhered to Title VI of the Civil Rights Act, coordination activities required under Section 106 of the NHPA, Executive Order 12898, and other pertinent USDOT guidelines for public participation and involvement.