



ORANGE
DURHAM

LaSalle Street

15

DukeVA
Medical Centers

Ninth
Street

Dillard Street

Co
vallis Road

Alston

Patterson Place

pel
ll

P

Gateway

Patte

Appendix **B**

*Leig

Farrington Road

Meadowmont
Lane

Leigh Village

P

Road

Woodmont

Friday Center
Drive

rm

40

Appendix B: Glossary of Terms

Durham-Orange Light Rail Transit Project



August 2015

Glossary of Terms

100-Year Floodplain: The area along or adjacent to a stream or body of water that is capable of storing or conveying floodwaters during a 100-year flood event. In any given year, a 100-year flood event has the probability of occurring 1% of the time.

100-Year Floodplain Impacts: Refers to the acres of land within the 100-year floodplain that would be affected by a particular alternative.

Accessibility: A measure of how reachable locations or activities are from a given site; it is influenced by changes in travel time, safety, vehicle operating costs, and transportation choice.

Acquisitions and Displacements: The process of obtaining right-of-way to construct a project. A Full Acquisition is the acquisition entire parcel of land, which would thus displace the entire current use of the land. Parcels that are needed in their entirety for the project would be subject to be acquired in full, as would parcels that may not be fully needed, but would be affected to such an extent that the current uses would be substantially impaired (e.g. a parcel is acquired for a park and ride). A Partial Acquisition is the acquisition of a portion of a parcel of land, with the remaining portion being untouched. The acquisition would not prevent the continued use of the property (e.g. a portion of a parcel is acquired for a lane widening, but access is maintained and the use of the property is not prevented).

Adverse Effect: Defined in Section 106 of the National Historic Preservation Act (36 CFR 800.5(a)(1)). An adverse effect to a historic property occurs when the project under consideration alters any characteristic that qualifies the property for inclusion in the National Register of Historic Places in a manner that would diminish the integrity of the property.

Advisory Council on Historic Preservation (AHP): An independent federal agency established by the National Historic Preservation Act of 1966 that is the only entity with the legal responsibility to balance historic preservation concerns with federal program requirements.

Affected Environment: Ambient conditions at the time an Environmental Impact Statement (EIS) is prepared.

Alight: To descend and settle or rest to get off of or dismount from a vehicle.

Alignment: The horizontal and vertical location of a roadway, railway or other fixed route.

Alternatives: The set of transportation improvements that are compared in the Environmental Impact Statement (EIS). Alternatives may consist of different configurations, service plans, transportation modes and strategies.

Alternatives Analysis: A planning study conducted under the guidance of federal agencies (in this case the Federal Transit Administration) that helps determine the best solution for transportation problems in a study corridor. It requires the examination of all reasonable transportation alternatives to meet local transportation needs, and it requires a fair and impartial evaluation of those alternatives.

Ambient Air: A physical and chemical measure of the concentration of various chemicals in the outside air, usually determined over a specific time period (e.g., one hour, eight hours).

Ambient Background Noise: The existing cumulative noise that is characteristic of an area based on current activity levels.

Americans with Disabilities Act (ADA): A federal civil rights law that mandates access to public facilities for all persons with disabilities. Enacted in 1990, it specifically addresses transportation facilities in Title 2.

Aquatic: Pertaining to, consisting of, or relating to species living in the water. Aquatic communities/habitats within the project study area consist of many small intermittent and perennial streams, as well as a few larger perennial streams (e.g., New Hope Creek, Little Creek) and their associated wetlands.

Archeological Resources: Within a given study area, the prehistoric and historic deposits of artifacts and physical remains of human activities.

Area of Potential Effects (APE): The study area that is used to study and assess potential effects to historic resources. The Area of Potential Effects is issued by the FTA after consultation with the State Historic Preservation Office (SHPO) and any applicable local historic entities.

Arterial: A roadway designed to connect two distant areas at higher speeds and higher capacity travel than a local road.

At-Grade: Typically refers to an intersection of two roadways, or a rail line and a roadway that are at the same level (on the ground).

At-grade Alignment: An alignment that is on the ground, at surface level.

At-grade Crossing: A crossing on rail tracks at the ground level. Vehicles cross at the same level intersection for all modes traveling through the intersection.

Attainment Area: An area where the quality of air is good or, in some cases, better than the national ambient air quality standards that are defined in the Clean Air Act. An area may be an attainment area for one pollutant and a non-attainment area for others.

Baseline Alternative: An alternative studied as part of the project that would make no significant additional capital investment, and incorporate only enhanced bus service in the proposed future roadway network. The Baseline Alternative is used to compare against the more expensive Build (in this case, Commuter Rail) Alternative.

Base Year: The planning year of a project for which all data is gathered and compared.

Below-Grade: Placed below the ground level, as in a roadway depressed under rail tracks or a subway that is underground or in a tunnel.

Below Poverty: Percentage of persons who live in households that make at or below the U.S. federal level (in 2015, \$11,770 for a one-person household, \$28,410 for a five-person household).

Best Management Practices (BMPs): Specific standards utilized during construction to minimize the impact on surrounding resources.

Boardings, passenger: The count of passengers embarking onto a transit vehicle or route for the purposes of measuring

Build Year: The year for which the projections traffic, population, and land use are used to determine travel demand in the project corridor.

Bus Rapid Transit (BRT): A transit technology that combines the efficiency of rail transit and the flexibility of buses. It can operate on exclusive transit ways.

Capital Cost: The cost to plan and build a project. For a light-rail system, this includes the cost of engineering and design, the land on which the system is built (right-of-way), site preparation work, and all physical elements of the system including track, ballast, catenary (overhead wires), station platforms, any needed street reconstruction, utility relocations, wetland mitigation, park-and-ride lots, light rail vehicles, a Rail Operations and Maintenance Facility, pedestrian bridges. It also includes associated “soft” costs such as insurance and professional services (such as attorneys).

Census Tract: A small statistical subdivision of a county defined by a local committee of census data users for the purpose of presenting census information every ten years. The census tract boundaries, which are nested within counties, generally follow visible features and often follow governmental unit boundaries or nonvisible feature.

Centerline: The line corresponding to the central geometric axis of a railroad track, road, trail, or other transportation corridor. It is typically used as the reference point for measurements of track dimensions and location.

Civil Rights Act of 1964: Title VI of this federal law provides that no person shall, on the grounds of race, color, national origin, or sex, be discriminated against in federally funded programs or activities.

Clean Air Act (CAA): A federal law designed to control air pollution on a national level. It requires the U.S. Environmental Protection Agency to develop and enforce regulation to protect the public from airborne contaminants that are known to be hazardous to human health.

Clean Air Act Amendments (CAA) of 1990: A strategy for the U.S. to address the problem of the urban smog. It requires states and the Federal government to reduce emissions from automobiles, trucks, buses, ship, barges, and consumer products and to meet air quality standards. It particularly addresses the urban problem of ozone, carbon monoxide (CO), and particulate matter (PM). It defines how areas are designated “attainment” and allows the EPA to classify “nonattainment” areas as those that do not meet the federal air quality standards.

Clean Water Act (CWA): Federal law that establishes basic structure for regulating discharges of pollutants in to the waters of the US. The act also continued requirements to set water quality standards for all contaminants in surface waters. It is codified at 33 U.S.C. §1251, et seq.

Code of Federal Regulations (C.F.R.): The codification of the general and permanent rules published in the Federal Register by the departments and agencies of the federal government. The CFR is published annually.

Community Facility: Public or publicly-funded facilities, such as police and fire protection facilities, emergency medical response facilities, hospitals, schools, and libraries, as well as private facilities such as hospitals and schools.

Commuter Rail (CR): A transit mode that is an electric or diesel propelled railway for urban passenger train service consisting of local short distance travel operating between a central city and adjacent suburbs. Service must be operated on a regular basis by or under contract with a transit operator for the purpose of transporting passengers within urbanized areas (UZAs), or between urbanized areas and outlying areas. Such rail service, using either locomotive hauled or self-propelled railroad passenger cars, is generally characterized by multi-trip tickets, specific station to station fares, railroad employment practices, and usually only on or two stations in the central business district.

Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA): Commonly known as Superfund, this law was passed in 1980 to create a tax on the chemical and petroleum

industries and provide broad federal authority to respond directly to releases or hazardous substances that may endanger public health or the environment.

Consist: The composition of cars that comprise a train set.

Construction Impact: The temporary impact that occurs over short period of time while a project is under construction.

Council on Environmental Quality (CEQ): The federal office that oversees implementation of the National Environmental Policy Act of 1969 (see below) and coordinates other federal environmental efforts.

Critical Habitat: Defined under the Endangered Species Act as areas within a listed species' current range (at the time of listing) that contain the physical or biological features that are essential to that species' conservation or that for some reason require special management and areas outside the species' current range that the Secretary of the Interior determines to be essential to its conversation.

Cross Section: The cross-sectional configuration of a transportation corridor (railway, trail, roadway, etc.) that specifies typical widths for tracks/travel lanes, related facilities, buffer areas, and total rights-of-way.

Crossing Cases: Metal boxes that contain switches to manually control the track crossings for rail applications.

Cultural Resources: Within a study area, the historic and archaeological resources.

Cumulative Impact: The impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions.

Decibels (dB): A scale to measure sound levels.

De Minimis: A legal term that means of insufficient significance. A de minimus impact means that condition would essentially be the same whether or not the proposed project is implemented. The term is used when evaluating impacts to Section 4(f) resources for transportation projects.

Design Speed: The speed used to design and relationship of the physical features of a highway or rail that influence vehicle operation. It is the maximum safe speed that can be maintained over specified section of roadway or rail when conditions are favorable (i.e. – clear, dry, daylight).

Design Year: The year for which the facility is designed.

Determination of Eligibility: The decision made by the State Historic Preservation Office (SHPO) regarding whether historic buildings or district are eligible for or listed in the National Register of Historic Places.

Direct Effects: Effects that occur as a direct result of the project and occur at the same time and place.

Double Track: Two sets of tracks side by side, most often used for travel in opposite direction.

Draft Environmental Impact Statement (Draft EIS or DEIS): A detailed written statement, required by the National Environmental Policy Act, that is required for projects that involve a federal action such as funding. The Draft EIS serves to provide information about significant environmental impacts and informs decision-makers and the public of practical alternatives that would prevent or minimize adverse impacts or improve the quality of the human environment.

Dwell Time: The amount of time a transit vehicle spends at each stop waiting for passengers to board and alight.

Easement: A permanent or temporary right to use the land of another for a specific purpose. Easements may be purchased from the property owner or donated from the property owner to an agency.

Effects: Synonymous with impact includes the result actions that may have a beneficial or detrimental outcome. Direct effects are caused by the action and occur at the same time and place. Indirect effects are caused by the action and are later in time or farther removed in distance but are still reasonable and foreseeable.

Eminent Domain: Authority of a public agency to acquire property at fair market value for public purposes. Also known as condemnation.

Endangered: A species whose prospects for survival within the state are in immediate danger based on a loss of habitat, over-exploitation, predation, competition, or disease. An endangered species requires immediate attention or extinction will likely follow.

Environmental Justice (EJ): The fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies. EPA has this goal for all communities and persons across this Nation. It will be achieved when everyone enjoys the same degree of protection from environmental and health hazards and equal access to the decision-making process to have a healthy environment in which to live, learn, and work.

Environmental Site Assessment (ESA) Phase 1: Involves researching a property's potential for contamination on a cursory level from known database and reports. An ESA, Phase 1 involves limited site reconnaissance and historical research.

Environmental Site Assessment (ESA) Phase 2: Involves gathering primary data based on information gathered in Phase 2. Phase 2 ESA's include testing for contamination and determination of its historical duration.

Ephemeral Stream: Streams that have water flowing only during and shortly after precipitation events in a typical year. Groundwater is not a source of water for the stream.

Feasible: Capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, social, engineering and technological factors.

Federal Lead Agency: A federal agency that takes the primary responsibility for preparing the Environmental Impact Statement. The Federal Transit Administration is the federal lead agency for the Durham-Orange Light Rail Transit Project.

Feeder Bus Service: A bus service that connects residential areas, points of interest, or other primary locations in a town or city to the nearest transfer facility such as a bus station or a light rail station.

Final Design: The final engineering phase of a project's design process. During final design, contract plans and specifications necessary for bidding are prepared. These contract documents provide all the necessary information needed by suppliers and contractors to construct the project.

Final Environmental Impact Statement (Final EIS): The document that is published following a Draft Environmental Impact Statement (Draft EIS) that addresses revisions in the design of the proposed

project and incorporates public and agency comments received during the public circulation period of the Draft EIS and during the Draft EIS public hearing.

Fiscally Constrained Long Range Plan (FCLRP): The regional long range plan that has funding sources identified for all strategies and improvements included in the plan.

Fixed Guideway Transit: An exclusive travel way used by a particular mode of public transportation.

Flood Insurance Rate Map (FIRM): The official map of a community on which the Federal Emergency Management Agency (FEMA) has delineated both the special hazard areas and the risk premium zones applicable to the community.

Floodplain: The riverside land that is periodically inundated by a river's floodwaters is called a floodplain. Floodplains serve important purposes. They temporarily store water during flooding events, improve water quality, provide important habitat for river wildlife, and create opportunities for recreation.

Fugitive Dust: Dust that leaves a property during construction, demolition, or other induced activity that can alter the air quality at a given location.

Geographic Information System (GIS): A computer system capable of storing and manipulating spatial data.

Grade: Refers to a rise in elevation within a specified distance.

Grade Crossing: See at-grade crossing.

Grade-Separated Crossing: The separation of the elevations where different roads or railroad tracks intersect one another in order to avoid traffic conflicts.

Greenfield: Land that has not been previously developed or land that was previously developed but turned back to its natural state with few, if any, signs of previous development.

Greenway: A linear parcel of land set aside to preserve open space. Greenways are generally located in flood plain areas, along wooded stream corridors unsuitable for development. Greenways provide a recreational amenity for walking, jogging, and bicycling that is separated from vehicular traffic; preserve open space; linked neighborhoods with parks, schools, community centers, and other neighborhoods; can help control storm water runoff, curb erosion, and minimize flooding which can damage our property; and can improve water quality by buffering streams, filtering pollutants, and recharging our ground water.

Ground-borne vibration and noise: The vibration-induced levels that propagate over ground between the source and a receptor such as a building; typically assessed indoors.

Habitat – The area or environment where an organism or ecological community normally lives or occurs.

Hazardous, Contaminated and Regulated Materials:

- **High Risk Sites:** Properties that are within 500 feet of a Light Rail Alternative and are closed leaking underground storage tank (LUST) sites with no documented cleanup; are active LUST sites, historic dry cleaners, or auto stations (i.e., gas stations); or have open spill incidents.
- **Medium Risk Sites:** Properties that are within 500 feet of a Light Rail Alternative and are closed LUST sites, aboveground storage tank/underground storage tank (AST/UST) sites, vehicle repair sites, or junk yards or have closed spill incidents.

- **Low Risk Sites:** Properties that are greater than 500 feet away from the Light Rail Alternatives.

Headway: The scheduled time between transit vehicles operating on a particular transit route.

Historic Resources: Within a given study area, the built environment – including buildings, industrial structures, bridges and culverts – with an estimated age of at least 50 years old.

Household Income: The amount of money income received in the preceding calendar year by all household members 15 years old and over, including all household members not related to the householder.

Hydric: Having high water content.

Independent Utility: A project is said to have independent utility if it will provide functional improvements that can stand alone and serve a major purpose, even if no other improvements are made in the region.

Indirect Effects: Effects that are caused by an action and are later in time or farther removed in distance, but are still reasonably foreseeable.

Infill Development: Development that occurs within an area that is already urbanized.

Intermittent Stream: Streams that have flowing water during certain times of the year. Ground water driven; run off from rainfall or snow melt is a supplemental source of water.

Intermodal: The ability to connect between different modes of transportation.

Invasive Species: A species that is non-native to the ecosystem under consideration and whose introduction causes or is likely to cause economic harm, environmental harm, or harm to human health.

Joint Development: Development activities that occur in partnership with two or more parties in areas near transit nodes or stations and that supports the use of transit.

Jurisdictional "waters of the United States": The term used in the Clean Water Act to refer to bodies of water which are under the jurisdiction of the Clean Water Act. It is defined at 40 C.F.R. § 122.2.

Kiss-and-Ride: A dedicated area of a mass transit facility where a person is driven to and dropped off by a family member or friend.

Land Use: Classification providing information on land cover and the types of human activity occurring on a parcel of land, such as “commercial,” “industrial,” “residential,” or “open space.”

Level of Service (LOS): A qualitative assessment describing the characteristics of transportation service provided; generally described in terms of such factors as speed and travel time, freedom to maneuver, traffic interruptions, comfort and convenience, and safety.

Light Rail or Light Rail Transit (LRT): An electric-powered rail system characterized by its ability to operate single or multiple car trains along exclusive right-of-way, in subways, on aerial structures, or on streets with mixed traffic.

Limited English Proficiency (LEP): Percentage of households where no one older than 14 who lives there speaks English at home as a primary language, or speaks English “very well”.

Limits of Construction: The likely “footprint” or physical extent of the construction area of the proposed project.

Limits of Disturbance: The horizontal boundary where soil will be exposed during construction activities. The limits of disturbance includes, but is not limited to the limits of excavation, borrow areas, storage areas, staging areas, areas to be cleared and grubbed, and roadways.

Local Lead Agency: A local sponsor of a proposed project requesting federal funding.

Locally Preferred Alternative (LPA): The alternative chosen at the conclusion of a Major Investment Study (MIS) or an Alternatives Analysis (AA) process period. It is the alternative that has local consensus and that meets the purpose and need for transportation improvement, as defined during the study processes.

Logical Termini: Rational endpoints for consideration of transportation improvements for review of environmental impacts.

Low Income: Any household with income at or below the U.S. Bureau of the Census poverty thresholds.

Major Investment Study (MIS): See Alternatives Analysis (AA).

Mass Transportation: Transportation that provides regular and continuing general or special transportation to the public; it does not include school buses, charters, or sightseeing transportation.

Metropolitan Planning Organization (MPO): A federally sanctioned regional transportation planning body that is required to approve transportation improvement plans for major infrastructure projects, to ensure that they are consistent with federal environmental legislation and that they are fiscally sound.

Milepost (MP): A post or marker along a railroad right-of-way indicating the distance in miles to or from a given point.

Minimum Operable Segment (MOS): A smaller, cost-effective portion of the locally preferred alternative with independent utility and logical termini.

Minority Population: Percentage of persons who classify themselves as minorities. “Minorities, as defined by the U.S. Census Bureau, are composed of several different race categories—Black, American Indian, Asian, Pacific Islander, Other, and Two or More races. Hispanics are also considered a minority, through Hispanic, or Latino, is defined by the U.S. Census Bureau as an ethnicity rather than race.”

Mitigation: The measures undertaken when impacts remain after efforts to avoid or minimize the impacts have been exhausted.

Mixed Traffic: The operation of rail vehicles on public roads with car and truck traffic. Where rail tracks are embedded in the road, rail vehicles and cars can share the same road. Rail vehicles must obey all traffic laws, such as speed restrictions and traffic lights, when operating in areas of mixed traffic.

Mixed-Use Development: Development with multiple categories of land use typically included residential, commercial, retail and entertainment. Mixed-use areas generally have higher population densities and are pedestrian friendly.

Mobility: The ability to move or be moved from place to place.

Mode: A specific form of transportation, such as automated subway, bus, rail or air.

Modal Split: The division of travel into different transportation modes can be defined by the percent of trips made by certain modes or by using the number of miles traveled.

Moving Ahead for Progress in the 21st Century Act (MAP-21): A funding and authorization bill to govern federal surface transportation spending.

National Ambient Air Quality Standards (NAAQS): Limitations on levels of pollutant in the air regulated by the Environmental Protection Agency.

National Environmental Policy Act of 1969 (NEPA): An Act of Congress passed and signed into law in 1970 that requires any federal agencies to consider the environmental impacts of any action, prior to taking any “major” or “significant” action. Consideration of those impacts may take the form of various environmental reviews and types of documentation.

National Historic Landmark: A place that is designated by the U.S. Department of the Interior as possessing exceptional value or quality in illustrating and interpreting the heritage of the United States. The National Park Service (NPS) administers the National Historic Landmarks program for the Secretary of the Interior. Only 3% of properties listed in the National Register of Historic Places are designated as National Historic Landmarks.

National Historic Preservation Act: Federal legislation intended to preserve historical and archaeological sites in the United States.

National Pollution Discharge Elimination System (NPDES): A program, as authorized by the Clean Water Act (CWA), that controls water pollution by regulating point sources that discharge pollutants into the waters of the United States.

National Register Eligible: Cultural resources eligible for inclusion in the National Register of Historic Places. Eligible resources do not have the full designation of National Register Listed properties but are afforded the same protection under the National Historic Preservation Act.

National Register Listed: Cultural resources include in the National Register of Historic Places.

National Register of Historic Places (NRHP or National Register): A federal list of buildings, sites, district or other properties that have a historic significance. The National Register of Historic Places is maintained by the Keeper of the National Register.

Natural Resources:

- **Biotic:** The interacting organisms living together in a specific habitat.
- **Terrestrial:** Pertaining to, consisting of, or relating to species living on the earth. Four Terrestrial communities/habitats were identified in the study area: bottomland hardwood forest, alluvial hardwood forest, mesic mixed forest, and maintained/disturbed areas.
- **Bottomland Forest:** Deciduous, wetlands forested areas dominated by mesic hardwood tree species that occur within the 100-year floodplain. Bottomland forests are commonly found wherever streams or rivers (at least occasionally) cause flooding beyond the channel confines. Bottomland hardwood forests are distinguished from the alluvial hardwood forest by the presence of larger streams and the landforms created from the sediment deposits that occur within the large floodplain areas.
- **Alluvial Hardwood Forest:** Formed by the action of running water; of or related to river and stream deposits. Alluvial hardwood forests occur throughout the study area along small streams. This community has a significant component of wetland species, particularly in the herb layer. These areas are intermittently flooded, and may contain standing water for extended periods in the winter and spring.

- **Mesic Mixed Forest:** Characterized, or related to, or requiring a moderate amount of moisture. This community, if undisturbed, would most resemble mature, stable forests in this region that are usually characterized by a hardwood canopy. However, this community is characterized by a mixture of pine and hardwood species, with pines occasionally comprising greater than 30 percent of the canopy. The community in the study area occurs primarily as a buffer around roads, residential and other developed areas, and as secondary growth forest on previously-timbered or otherwise disturbed land.
- **Maintained/Disturbed Areas:** A general land use category contained in environmental documents that includes lawns, parking lots, cleared areas, and other properties which have been substantially altered or developed. It does not include terrestrial forests, wetlands, prime farmlands, and other specific natural resource uses.

Neighborhood: An area that shares homogeneous or similar characteristics.

New Starts: Discretionary federal funding program for the construction of new fixed guideway systems or extensions of fixed guideway systems, based on cost-effective, alternatives analysis results and the degree of local financial commitment.

No-Build Alternative: The future condition of an area in the absence of a project; it assumes no improvements will be made with the exception of other committed projects and periodic maintenance and minor enhancements needed to maintain safe operations. The No-Build Alternative serves as a benchmark against which the potential impacts of other alternatives can be compared.

Off-Peak Period: Used to describe times where travel is not at its peak, or highest level, during the day. Off-peak travel usually occurs in the midday and evenings in most cities.

Operating Cost: Generally referred to as “Operating and Maintenance Costs,” this is the cost to operate a transit system, typically calculated on an annual basis. These figures include all costs to operate a transit system, including the labor of operators, maintenance personnel, and managers; general vehicle maintenance; electricity to power vehicles and other facilities; and administrative costs. Operating costs do not include vehicle depreciation or the cost of capital projects such as vehicle replacement.

Operating plan: An operating plan details the service plan for a transit service. The plan details characteristics such as running times, service frequency, required number of vehicles, changes in frequency throughout the day, and assumptions pertaining to stations.

Ozone (O₃): A colorless gas. The most chemically active form of oxygen having three atoms. It is naturally formed in the “ozone layer” of the stratosphere and filters out the most harmful ultraviolet light and high-energy radiation preventing it from reaching the earth’s surface.

Park-and-Ride Facilities: Parking lots or parking garages where people park their vehicle and board a bus, train, or ferry to complete their remaining journey.

Passenger Boardings: The number of revenue passengers embarking a transit vehicle.

Passenger Miles: A factor that determines the number of miles a transit vehicle carries passengers; one passenger transported one mile.

Peak Hour: The time of day when the greatest amount of travel occurs; the period of highest transportation service demand. Most cities experience a morning peak and an evening peak period associated with home-to-work and work-to-home trips, also called rush hour.

Perennial Streams: Streams that flow year-round during a typical year. The water table is located above the stream bed for most of the year. Groundwater is the primary source of water for stream flow.

Pond: A small self-contained bodies of water.

Pond Impact: Refers to the acreage of ponds that are considered Waters of the United States that would be affected by a particular alternative.

Preliminary Engineering: The development of 15 and 30 percent design plans for which the Draft and Final Environmental Impact Statements are based.

Profile: The vertical alignment of a transit alignment, which typically shows the elevation of the alignment as it relates to ground level.

Protected Species: An organism that is legally protected because it is considered endangered or threatened to become endangered, or one of special concern. Protection may be granted at the federal, state, or local levels.

Public Parklands: Parks, recreational lands, wildlife refuges, and waterfowl refuges, as determined under Section 4(f) of the Department of Transportation Act of 1966.

Rail Operations Maintenance Facility (ROMF): see Vehicle Maintenance Facility.

Record of Decision (ROD): The final step in the Environmental Impact Statement (EIS) process. The ROD identifies the selected alternative, presents the basis for the decision, identifies all the alternatives considered, specifies the environmentally preferable alternative, and provides information on the adopted means to avoid, minimize, and compensate for environmental impacts. The ROD allows a project to move forward into more detailed engineering and design, and allows a project to qualify for federal funding assistance.

Ridership: The number of people using a public transportation system during a given time period.

Right-of-Way (ROW): The area over which a legal right of passage exists; land used for public purposes in association with the construction or provision of public facilities, transportation projects, or other infrastructure.

Riparian: Means pertaining to anything connected with or immediately adjacent to the banks of a stream; in other words, the land on the margins of streams, rivers and other bodies of water

Riparian Areas/Buffers: Riparian areas are lands adjacent to water bodies. The vegetation in the riparian areas filter nutrients and pollutants from runoff and is thus referred to as “buffers.” Overall, riparian areas perform a variety of ecological functions that help to improve or maintain local water quality and maintain the health of both the stream and the adjoining land.

Riparian Habitat: A habitat type associated with riparian land. In non-desert areas, riparian habitats typically are characterized by dense vegetation consisting primarily of willow, alder, and cottonwood species which support a wide variety of waterfowl, songbirds, amphibians, and small mammals.

Riparian Zone 1 and 2: NCDNR DWR has implemented special rules to protect the water quality of streams in the Neuse River Basin, which extends into Durham and Orange Counties and into the D-O Corridor. The rules protect a 50-foot riparian buffer around all surface waters in the Neuse River Basin, such as ponds and streams but excluding wetlands. Land in the riparian buffer may not be distributed by a project such as D-O LRT without permission from DWR, and any disturbances caused by the project must be mitigated elsewhere. The mitigation requirements for disturbance to land located in Riparian

Zone 1 is higher than the mitigation requirements for disturbances to land located in Riparian Zone 2. Riparian Zone 1 includes land within the 30-foot buffer closest to the water's edge, while Zone 2 includes land within the remaining 20 feet of buffer.

Secondary Impact: The secondary, or indirect, effect of an action that takes place sometime after a primary event has occurred.

Safety and Security Certification (SSC): The series of processes that collectively verify the safety and security readiness of a project for public use.

Safety and Security Management Plan (SSMP): A plan required by the Federal Transit Administration (FTA) for major capital transit projects as a condition for federal financial assistance. The SSMP explains how the funding recipient will perform safety and management activities defined in FTA guidelines.

Scoping: The effort taken at the beginning of a study to consider all issues that should be addressed in the study. It is the first phase of activity to prepare an Environmental Impact Statement.

Section 4(f): A section of the USDOT Act of 1966 which stipulates that the U. S. Department of Transportation (USDOT) agencies (e.g. FTA) will not approve any program or project which requires the "use" of any publically owned park, recreation area, or wildlife or waterfowl refuge, or any land form an historic site of national, state or local significance unless 1) there is no feasible and prudent alternative to the use, and 2) all possible planning to minimize harm resulting from such use is included. Section 4(f) is currently codified into law at 49 U.S.C. §303 and 23 U.S.C. §138.

Section 6(f): A section of the Land and Water Conservation Fund Act of 1965, which becomes effective when parkland developed with funds from the Land and Water Conservation Fund Act of 1965 is required for roadway improvements.

Section 106: From the National Historic Preservation Act (NHPA): Requires federal agencies to take into account the effects of their undertakings (projects) on historic properties, and to afford the Advisory Council on Historic Preservation (ACHP) a reasonable opportunity to comment. The historic preservation review process mandated by Section 106 is outlined in 36 CFR 800 "Protection of Historic Properties," the regulations issued by the ACHP.

Section 401: Regulates water quality through the North Carolina Department of Natural Resources Division of Water Resources (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.

Section 404: Regulates the discharge of dredged or fill material in waters of the United States through USACE permitting program.

Sensitive Receiver/Receptor: A land use that would receive noise or vibration caused by a project. The type of the land use in question (e.g., residences, schools, libraries, laboratories, etc.) is generally sensitive to noise and vibration effects.

Signal Houses: Buildings where signals are located along a rail line.

Significantly: Describes the effects or impacts of a project in an Environmental Impact Statement (EIS). An action is considered in both context and intensity to determine whether or not the action significantly impacts a habitat, neighborhood, species or other item being assessed.

Smart Growth: A set of policies and programs design to protect, preserve, and economically develop established communities and valuable natural and cultural resources.

State Historic Preservation Office (SHPO): A state administrative agency responsible for carrying out consultation in accordance with the National Historic Preservation Act of 1966, as amended and other state historic preservation regulations.

Station Platform: The area where passengers board and disembark a train or subway.

Stormwater: Runoff water that is generated by a rain event. Stormwater discharges include runoff from land, pavements, building rooftops, and other surfaces. Stormwater runoff can accumulate a variety of pollutants such as oil and grease, chemicals, nutrients, metals, and bacteria as it travels across land before discharging into surface and other receiving waters. Heavy surges in stormwater runoff can cause other negative effects, including flooding and erosion, to streams and adjacent low-lying areas, especially in urbanized watersheds.

Stream Impacts: Refer to direct impacts to “jurisdictional streams,” which are streams delineated by the USACE and which are Waters of the United States.

Streetcar: See trolley.

Streetscape: The space between the buildings on either side of a street that defines its character. Elements of a streetscape can include buildings, set back of buildings, sidewalks, signs, public furnishings, trees, landscaping, street lights, above-ground utilities, bus stop shelters and street furniture.

Terminus: An end point on a transportation line or the town in which it is located.

Threatened: A species that may become endangered if surrounding conditions begin or continue to deteriorate.

Topography: The surface features of a place or region.

Traction Power Substation (TPSS): Substations converting alternating current from the power grid to the voltage and type of current needed for a light rail vehicle.

Transit-Dependent Population: Defined by the FTA as persons in one or more of the following categories: without private transportation; elderly (over the age of 65); youths (under age 18); or persons below poverty or median income levels defined by the U.S. Census Bureau.

Travel Demand Forecasting: A technique of estimating the number and travel times of potentials users of a transportation system.

Transit-Oriented Development (TOD): A land use designation intended to encourage the use of transit. Measures employed in areas with TOD designations include increased densities, clustered development, pedestrian amenities, parking restrictions, and urban design enhancements.

Transportation Demand Management (TDM): Programs designed to reduce demand for transportation through various means, such as the use of transit and of alternative work hours.

Transportation System Management (TSM): A set of strategies that largely to make an existing transportation system more efficient - primarily by improving transportation system capacity and efficiency. TSM strategies may also address a wide range of other externalities associated with driving such as pedestrian/driver safety, efficiency, congestion, travel time, and driver satisfaction.

Travel Demand Forecasting: A technique of estimating the number and travel times of potential users of a transportation system.

Travel Time: The time that it takes to travel from one location to another.

Trolley: Also called a streetcar, a trolley is a transit vehicle that obtains power from an overhead source and runs on a rail track. Trolleys historically operated within city streets and mostly operate in mixed traffic. Light Rail is the modern day technology of trolley, but mostly runs in an exclusive right-of-way.

Turbidity: A cloudy water quality condition due to suspended silt or organic matter.

USACE (US Army Corps of Engineers): The federal agency which has jurisdiction over and manages the extensive water resource management lands of the United States. Also, the federal agency that delineates “Waters of the United States.” and issues Section 404 and Section 401 permit.

Uplands: Land other than wetlands that are well-drained and rarely, if ever, inundated.

Vegetated/Vegetative Buffer: A vegetated upland or wetland area next to rivers, streams, lakes, or other open waters which separates the open water from developed areas and agricultural land. Vegetated buffers provide a variety of aquatic habitat functions and help improve or maintain local water quality. A vegetated buffer can be established by maintaining an existing vegetated area or by restoring a cleared or degraded area.

Vehicle Maintenance Facility: A site with facilities and buildings for the storage, maintenance, and cleaning of transit vehicles. May also include crew facilities such as locker rooms and break facilities.

Vehicle Miles Traveled (VMT): The number of miles traveled by an automobile per individual within a given area, usually one year.

Viewshed: The area that can be seen from the proposed Light Rail Alternatives and the area from where the Light Rail Alternatives can be seen. In other words, what people on the light rail vehicles can see, and where anyone else can see the vehicles and associated facilities

Visual and Aesthetic: The aesthetic quality of a community is comprised of visual resources, or the physical features that make up its visible landscape. National Environmental Policy Act (NEPA) identifies aesthetics as one of the factors in the human environment that must be considered in determining the effects of a project. Federal regulations require that visual impacts be addressed for Section 106 and Section 4(f) resource properties.

Waterfowl: Any birds, such as ducks and geese that frequent the water, or live about rivers or lakes.

Water Resources: The physical elements of the aquatic environment, such as streams, rivers, lakes, and shorelands, as well as life forms such as aquatic plants and fish that live within the aquatic environment. Water resources include the following features: groundwater, surface waters, wetlands, floodplains, floodways, and water quality.

Wetland: A wetland is defined by the USACE as those areas that are inundated or saturated by surface or ground water at a frequency or duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs and similar areas that do not typically dry out.

Wetland Impact: Refers to the acreage of wetlands that are considered Waters of the United States that would be affected by a particular alternative.



Appendix B: Glossary of Terms

Zero-Vehicle Households: Percentage of households that do not have a vehicle kept at home that's available for the personal use of household members.

Zoning Ordinance: A local land use ordinance that identifies and regulates the use of property within a given municipality. Zoning ordinances prescribe land use type, relationships to nearby uses, densities, height and setback requirements, parking requirements and related elements.