Appendix A - Tier 1 FEIS/ Section 4(f) Technical Memorandum

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ATLANTA BELTLINE CORRIDOR ENVIRONMENTAL STUDY

TIER 1 FINAL ENVIRONMENTAL IMPACT STATEMENT/ SECTION 4(F) TECHNICAL MEMORANDUM

Prepared for:

Atlanta BeltLine, Inc.
and
Metropolitan Atlanta Rapid Transit Authority

Prepared by:

AECOM/JJG Joint Venture

Atlanta, GA

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1.0 PURPOSE AND NEED

1.1 Introduction

The Federal Transit Administration (FTA), an administration of the U.S. Department of Transportation (USDOT), has prepared this Tier 1 Final Environmental Impact Statement (FEIS) Technical Memorandum for the Atlanta BeltLine in the City of Atlanta, Fulton County, Georgia, in cooperation with the Metropolitan Atlanta Rapid Transit Authority (MARTA), which operates and maintains bus and rail transit service in the Atlanta region.

The Atlanta BeltLine is a proposed fixed guideway transit and multi-use trails system with a corridor of approximately 22 miles encircling central Atlanta. The Atlanta BeltLine study area is defined as a ¼-mile on each side of the proposed corridor, considered a comfortable walking distance. The study area is comprised of four zones: northeast, southeast, southwest, and northwest. Figure 1-1 illustrates the Atlanta BeltLine study area.

This FEIS/ 4(f) Technical Memorandum is an appendix (Appendix A) to the main Tier 1 FEIS/ Section 4(f) Evaluation. It presents the technical data and evaluation methodologies used in assessing the No-Build and Preferred Alternatives. Preparation of this FEIS/ 4(f) Technical Memorandum is in accord with the National Environmental Policy Act (NEPA), as amended and implemented by:

- the Council on Environmental Quality (CEQ) regulations (40 CFR parts 1500-1508);
- FTA regulations (23 CFR part 771);
- FTA Statewide Planning and Metropolitan Planning regulations (23 CFR part 450);
- regulations of the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU) (Public Law 109-59);
- regulations of Section 106 of the National Historic Preservation Act of 1966;
- the Clean Air Act Amendments of 1990;
- Executive Order 12898 on Environmental Justice; and,
- other applicable statutes, rules, and regulations.

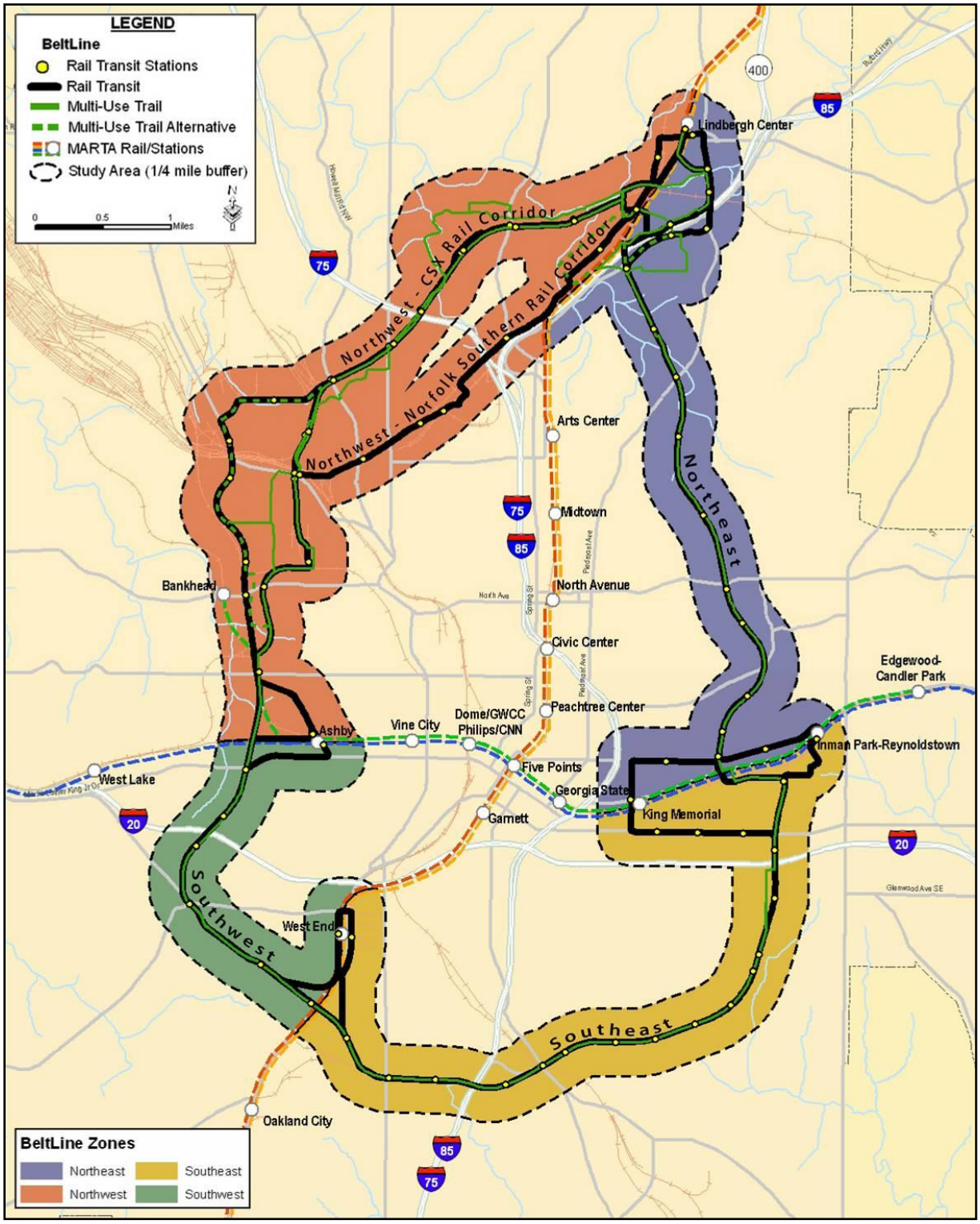
Tiering of the EIS allowed FTA and MARTA to focus on those decisions that are ready for this level of NEPA analysis to support future right-of-way (ROW) preservation, local master planning, and project development activities. These decisions included the following:

- identification of either Modern Streetcar (SC) or Light Rail Transit (LRT) technology as the transit mode;
- identification of a general alignment of new transit and trails; and,
- establishment of ROW requirements.

Following the Tier 1 EIS process, subsequent analysis in a Tier 2 NEPA process as a separate action will refine the preferred transit and trail alignments to achieve the most cost-effective investment while avoiding or minimizing potential adverse environmental effects; identify and evaluate transit station locations, vehicle types, maintenance and

storage facilities, site-specific impacts, trail design elements, and mitigation measures for unavoidable adverse affects.

Figure 1-1: Atlanta BeltLine Study Area and Zones



Source: AECOM/JJG Joint Venture

1.2 Problem Statement

The City of Atlanta is challenged to meet its mobility, housing, and economic development needs by its uneven and low-density growth patterns, a lack of affordable housing, deficiencies of transportation connectivity across all modes, underutilization of existing transportation resources, and limited transit, bicycle, and pedestrian options to address travel needs. Individually, each of these issues contributes to reduced quality of life, mobility, and economic competitiveness. Together, they are a severe impediment to creating sustainable growth and a vibrant livable community in the years to come. If the City is to address these problems proactively, a comprehensive and progressive solution is required to integrate land use, economic development, social, and transportation needs holistically.

Mobility and access in the study area are challenged by a fragmented and discontinuous transportation network and a lack of transit, bicycle, and pedestrian options as follows:

- The existing transportation network is frequently fragmented by major physical barriers including active and abandoned railroad lines and yards and interstate highways. It is also characterized by discontinuous local roadway, bicycle, and pedestrian networks and superblock development patterns. These deficiencies are particularly acute adjacent to the proposed Atlanta BeltLine railroad corridors, where the continuity of the transportation network is broken by: 1) the numerous large tracts of underutilized industrial land that lack an urban transportation grid; and 2) the high density of railroad ROW and related facilities that have few existing crossings (Please refer to Chapter 3.2 for a detailed description of the transportation system in the study area)
- There is a lack of connections between these limited transit options in the study area. The existing rail and bus transit network provides limited coverage and connectivity in the study area and is focused primarily on providing service to the Central Business District (CBD) rather than circulation within the study area or to other activity centers in the City. (Chapter 3.2.5 see railroad facilities map and Chapter 3.3.4 see Atlanta BeltLine Subarea Master Plans and Connect Atlanta Plan).
- Stops on the existing rail service are infrequent within the study area forcing most study area residents to access rail via a bus transfer or walking (Please refer to Chapter 3.2.6 for details on the passenger rail service in the study area).
- Non-motorized access options are also limited as a result of discontinuous or absent links in the City's pedestrian and bicycle network, making walk access to activity centers and the rail and bus system challenging (Please refer to Chapter 3.2.7 for further details on the pedestrian and bicycle network in the study area).

These transit and non-motorized conditions are particularly evident when travel between communities and neighborhoods within the City is attempted. These so-called local trips are the dominant type of travel in the City and are most often accomplished by personal automobile (Chapter 1.4.4). Transportation-related problems caused by the deficiencies listed above include limited access and mobility, increased travel times, and roadway congestion (Chapter 1.4.4 and Chapter 3.2). These problems also contribute to a lack of economic opportunity at the individual, communitywide, and citywide levels.

1.3 Project Purpose

The transportation purpose of the Atlanta BeltLine project is to improve access and mobility for existing and future residents and workers by increasing in-city transit and

bicycle/pedestrian options, and providing links in and between those networks. In addition, the Atlanta BeltLine has a land use and economic development component that is intended to stimulate economic activity and structure growth. The combined purpose of the transportation and land use components of the Atlanta BeltLine is to encourage balanced growth in all study area zones by increasing transportation options, greenspace, affordable housing, and improving livability and economic opportunities.

1.4 Project Needs

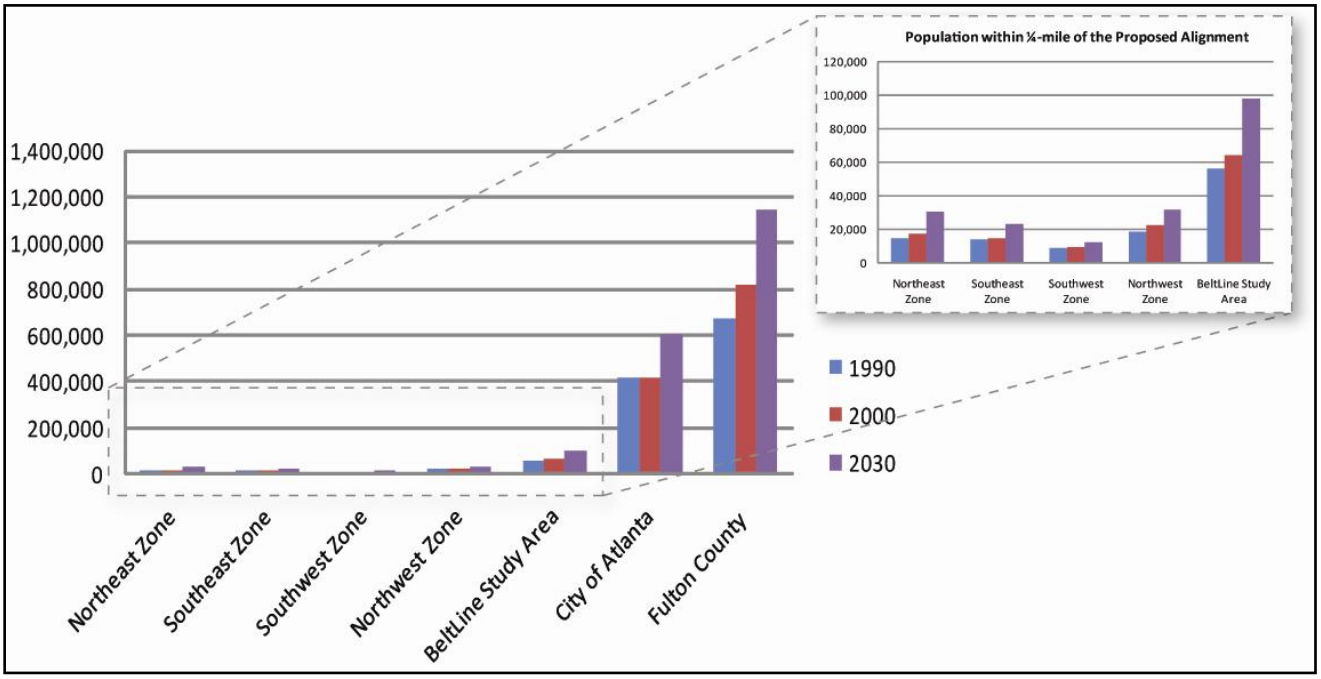
This section summarizes the project needs for the Atlanta BeltLine project. More detail on the issues described in this section may be found in Chapters 3.2, 3.3, 3.5 and 3.8 of this FEIS/ 4(f) Technical Memorandum.

1.4.1 Population and Employment Growth

In 2030, population in the City of Atlanta is projected to increase to 602,700, a 26 percent increase. The study area population is projected to increase by 26 percent to a population of 97,900 during the same period. The percentage increases in population by zone by 2030 are: 41 percent in the northeast; 37 percent in the southeast; 13 percent in the southwest; and 20 percent in northwest. In the City, employment is projected to increase by about 136,000 jobs, or 34 percent by 2030. Employment growth in the zones by 2030 will range from a 6 percent increase in the southwest to a 77 percent increase in the northeast.

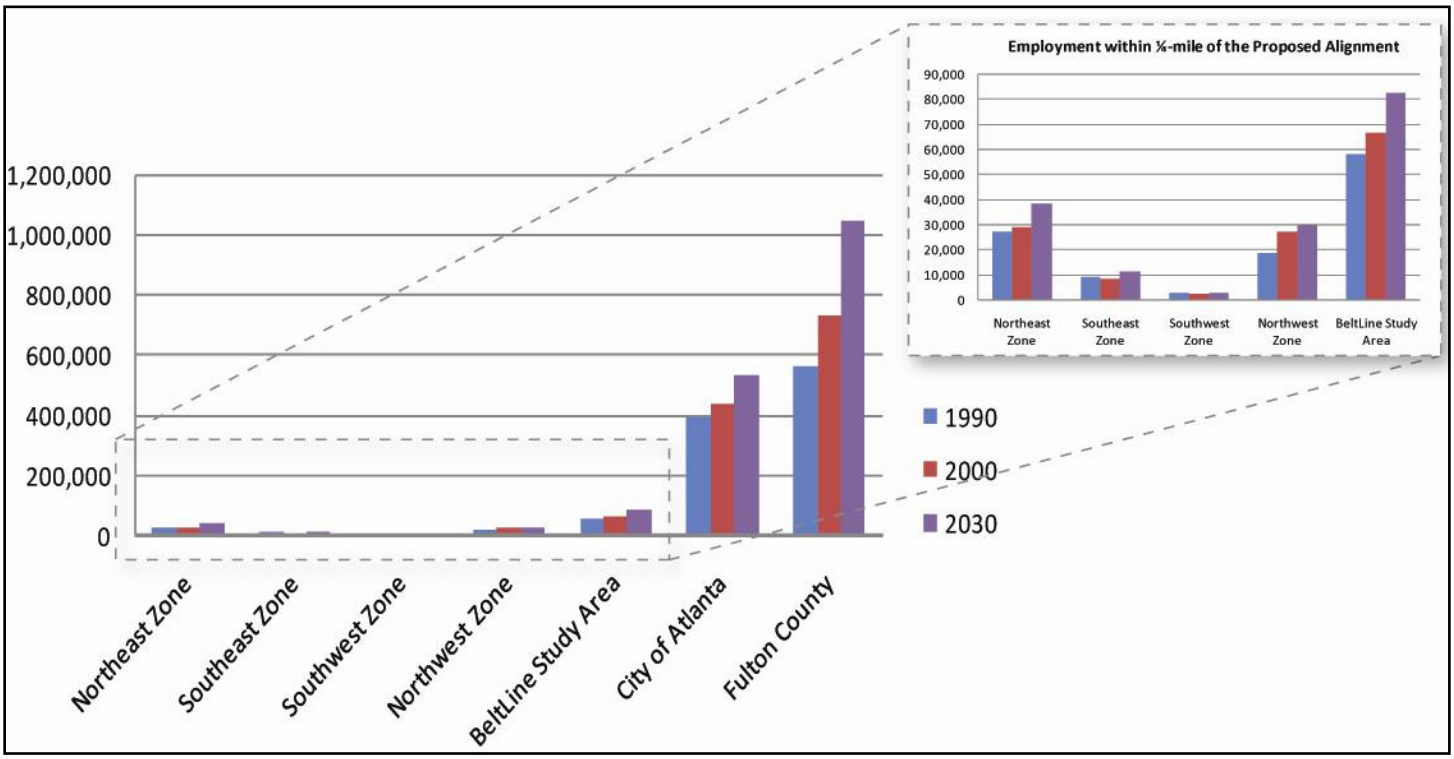
Figure 1-2 and Figure 1-3 present the growth rates for years 1990 to 2000 and projections for the year 2030 for population and employment, respectively. These data point to a need to provide public transit improvements to accommodate growing population and employment in the study area.

Figure 1-2: Population Growth 1990 to 2030



Source: U.S. Census Bureau and Atlanta Regional Commission (ARC)

Figure 1-3: Employment Growth 1990 to 2030



Source: U.S. Census Bureau and ARC

1.4.2 Environmental Justice and Transit-Dependent Populations

Compared to Fulton County, the study area contains relatively high percentages of minority and low-income populations that qualify as environmental justice populations, as well as populations without access to automobiles, the latter known herein as zero-car populations as defined by the U.S. Census Bureau. Public transportation options are often critical to the mobility of these population groups. Table 1-1 presents 2000 U.S. Census percentages for environmental justice and zero-car populations within the Atlanta BeltLine study area zones, the entire study area, the City, and Fulton County. These data show the southwest and southeast zones are environmental justice areas with a higher percentage of people living below the poverty level, minority populations, and transit–dependent[1] populations in 2000 compared to the other Atlanta BeltLine study area zones, city, and county. These data indicate a need to provide public transit and bicycle/pedestrian options in those areas in which environmental justice populations have been identified in the study area.

[1] Transit-dependent populations are defined by the U.S. Census Bureau in the Census 2000 as individuals in zero-car households and workers over 16 reporting the use of transit to get to work.

Table 1-1: Environmental Justice and Transit-Dependent Populations (2000)

Area	Percent Below Poverty	Percent Minority Population	Percent Transit Dependent Population
Northeast Zone of the Study Area	19.4%	44.9%	14.5%
Southeast Zone of the Study Area	28.0%	72.1%	15.5%
Southwest Zone of the Study Area	33.9%	98.9%	26.1%
Northwest Zone of the Study Area	19.8%	50.1%	12.4%
Atlanta BeltLine Study Area*	23.8%	60.9%	15.0%
Atlanta	24.4%	68.7%	15.0%
Fulton County	15.7%	54.7%	9.3%

* Includes the northeast, southeast, southwest, and northwest zones.
Source: U.S. Census Bureau, Summary File 3, 2000
Note: The U.S. Census Bureau determines poverty status for all people except institutionalized people, people in military group quarters, people in college dormitories, and unrelated individuals under 15 years old.

1.4.3 Land Use and Economic Development

Over the past 30 years, Atlanta's real estate development pattern has been skewed to the northern and eastern zones of the City. Much of this activity has been dominated by low-density, auto-centric development, such as single-family and townhouse residential development. Meanwhile, in the southeast and southwest zones, little to no development occurred during the same period. Losses in population and employment occurred in the southeast and southwest zones during a period of exceptionally strong growth in the Atlanta region. Market and demographic analyses show that without intervention these trends are set to continue into the future (see Chapter 3.5.2 for a description of the demographic trends in the study area).

The effect of this development pattern has been to generate a large number of both work and non-work vehicle trips to and within the northeast and northwest zones, creating congestion and impaired mobility that reduces quality of life and limits the potential of the available development sites to be re-purposed to a higher intensity use (see Chapter 3.2 for a description of the existing traffic conditions). In these zones, the existing transportation infrastructure is ROW constrained leaving limited opportunities to provide additional capacity improvements through the establishment of new corridors or expansion of existing facilities.

In the southeast and southwest zones, development patterns have generated relatively stable or declining travel demands. This has resulted in low congestion levels (see Chapter 3.2), reduced job opportunities and economic vitality (see Chapter 3.5 for a description of the employment growth patterns in the study area), and a large number of prime redevelopment sites that are impaired by the low level of market demand and surrounding blight (see Chapter 3.3 for a description of existing land uses). For example, 15 percent of land in the southeast zone is vacant compared with an overall study area average of 13 percent and a low of 11 percent in the northeast zone.

If the existing low-density land use patterns and skewed development trends continue this may lead to increased roadway congestion, decreased mobility, and a reduced quality of life in the northwest and northeast zones, while doing nothing to address the

economic opportunities and quality of life issues, or make use of infrastructure capacity, and take advantage of redevelopment opportunities in the southeast and southwest zones. Thus, there is a need to increase transportation options in parallel with making changes in land use and development patterns in the study area to improve economic opportunities and quality of life.

1.4.4 Effects of Projected Growth on Transportation

The Transit Planning Board (TPB) *Concept 3 Creating and Realizing the Regional Transit Vision Final Technical Report* (2008) states, "Congestion is the greatest threat to Atlanta's continued economic growth." Planned improvement of transportation facilities could contribute to the reduction of congestion when implemented in conjunction with greater density of development within central Atlanta, as discussed in Chapter 2 of *Connect Atlanta,* the City of Atlanta's Comprehensive Transportation Plan (CTP), and in the Atlanta Development Authority's (ADA's), *Atlanta BeltLine Five Year Work Plan* (2007).

Connect Atlanta found the average car trip originating in the City is only 5.5 miles and that 35 percent of these trips have destinations in the City. Travel patterns within the study area are expected to remain primarily short trips between neighborhoods, commercial, and employment activity centers, and MARTA rail stations. These trips include a combination of home-to-work based trips and non-work trips. The study area includes more than 45 residential neighborhoods and many existing and proposed commercial and office developments. Non-work trips include tourism, recreation, and shopping trips.

Envision6, the Regional Development Plan (RDP) and the Regional Transportation Plan (RTP) / FY 2008-2013 Transportation Improvement Program (TIP), found that projected 2030 work trips to the CBD originate in dense clusters immediately around the CBD. These growth forecasts and travel patterns present a need to expand public transit and bicycle/pedestrian options in the study area in the foreseeable future. (Please refer to section 3.2.2 for further travel pattern details.)

1.4.4.1 Roadways

The City's roadway network includes arterial and surface streets and the convergence of Atlanta's major interstates, including I-20, I-75, and I-85. Highway interchanges in the study area and central Atlanta are important links in the interstate system and contribute to Atlanta's role as a transportation hub for the southeastern United States. These interstates serve as the primary routes for commuters traveling between Atlanta and the suburban counties in the region and currently operate at Level of Service (LOS) F during the peak hours, meaning severe congestion. Projections to 2030 for I-20, I-75, and I-85 indicate a continuation of this heavy congestion and LOS F.

The geographic extent and the duration of local traffic congestion, primarily in the northeast and northwest zones, also are likely to increase with more vehicles using local streets in 2030. Peak period traffic on local streets will include a higher proportion of motorists seeking relief from interstate congestion by using local streets, in addition to the burden of more locally generated traffic. Atlanta Regional Commission (ARC) projections indicate the number of non-interstate roadway segments experiencing high levels of congestion will double between 2010 and 2030 (see Chapter 3.2).

These data point to a need to increase transportation options in the study area that will provide more travel connections, greater efficiency, and potentially reduce roadway congestion.

1.4.4.2 Transit

Currently, there are limited transportation options to the automobile for many trips because of the absence of direct transit connections between many neighborhoods and major activity centers in the City. Increased roadway congestion in the future will further limit access to freeways, major streets, and MARTA rail stations, and reduce the reliability of bus service, particularly route running times (see Chapter 3.2). Thus, there is a need to increase rail transit options between neighborhoods and activity centers in the study area and provide connections to MARTA.

1.4.4.3 Multi-Use Trails and Recreational Opportunities

Bicycle and pedestrian connections between neighborhoods, major activity centers, and other bicycle and pedestrian facilities in the City are often lacking or discontinuous. Poor or lacking infrastructure, combined with land use barriers, inhibit the ability for non-motorized travel (see Chapter 3.2). Thus, there is a need to improve bicycle and pedestrian access to and connections between neighborhoods and activity centers.

The City recognizes there is a relatively small amount of public greenspace available to its residents and poor interconnectivity among the City's parks for bicyclists and pedestrians. Atlanta's existing park system accounts for approximately 4 percent of the City's total land area, or about 3,400 acres. The City's planning goal is to provide 10.5 acres per 1,000 residents. In 2030, that goal will require a total of approximately 6,330 acres, producing a need for approximately 2,930 additional acres by 2030 (see Chapter 3.8). These data point to a need to increase the amount of public greenspace in the study area as well as provide connections to and between parks.

1.5 Planning Context

This FEIS/ 4(f) Technical Memorandum has emerged from various planning efforts beginning in 1992 that sought to provide alternative means of transportation serving the City of Atlanta, additional park space, and the redevelopment of underutilized or derelict areas. These planning efforts are described in Chapter 2.1 of this FEIS/ 4(f) Technical Memorandum.

1.5.1 Transportation Vision Plans

A number of plans currently guide the Atlanta regional transportation vision. Elements of each plan support the Atlanta BeltLine. They are described in the following sections.

1.5.1.1 *Envision6* Regional Transportation Plan (RTP)

Adopted in December 2007 by the ARC Board, the RTP[2] recognizes both the transit and multi-use trails elements of the Atlanta BeltLine plan as key components of the future multi-modal transportation system in the region. The ARC is the Metropolitan Planning

[2] The updated version of the RTP was adopted in part by ARC in late 2011 and includes all trail and transit elements of the BeltLine.

Organization (MPO) for the Atlanta area. The website is: www.atlantaregional.com/html/3791.aspx.

1.5.1.2 Fiscal Years 2008-2013 Transportation Improvement Program (TIP)

The current TIP, adopted by the ARC, ranks RTP projects based on the long-range objectives and the availability of funds. The TIP includes $18 million for Atlanta BeltLine trail ROW acquisition and construction. The TIP website is: www.atlantaregional.com/html/359.aspx.

1.5.1.3 Atlanta Region Bicycle Transportation and Pedestrian Walkways Plan

Completed in 2007, this ARC plan examined pedestrian and bicycle conditions throughout the 18-county metropolitan area. The Plan measured bicycle and pedestrian conditions for safety and comfort. The findings indicate generally poor bicycle and pedestrian conditions. The Plan establishes objectives and makes recommendations for regional pedestrian and bicycle planning. The Atlanta BeltLine contributes to these objectives by providing a safe and effective bicycle network with access to high demand destinations, transportation options for those unable or unwilling to use an automobile, and potential improvement in the health of area residents. The Plan website is: www.atlantaregional.com/html/1769.aspx.

1.5.1.4 Concept 3: Creating and Realizing the Regional Transit Vision

Adopted in 2008 by the Transit Implementation Board (then the Transit Planning Board), a regional organization established to coordinate transit planning initiatives, *Concept 3* is a long-range plan that envisions an integrated transit network including the Atlanta BeltLine. The Plan website is: www.atlantaregional.com/html/4660.htm.

1.5.1.5 Connect Atlanta

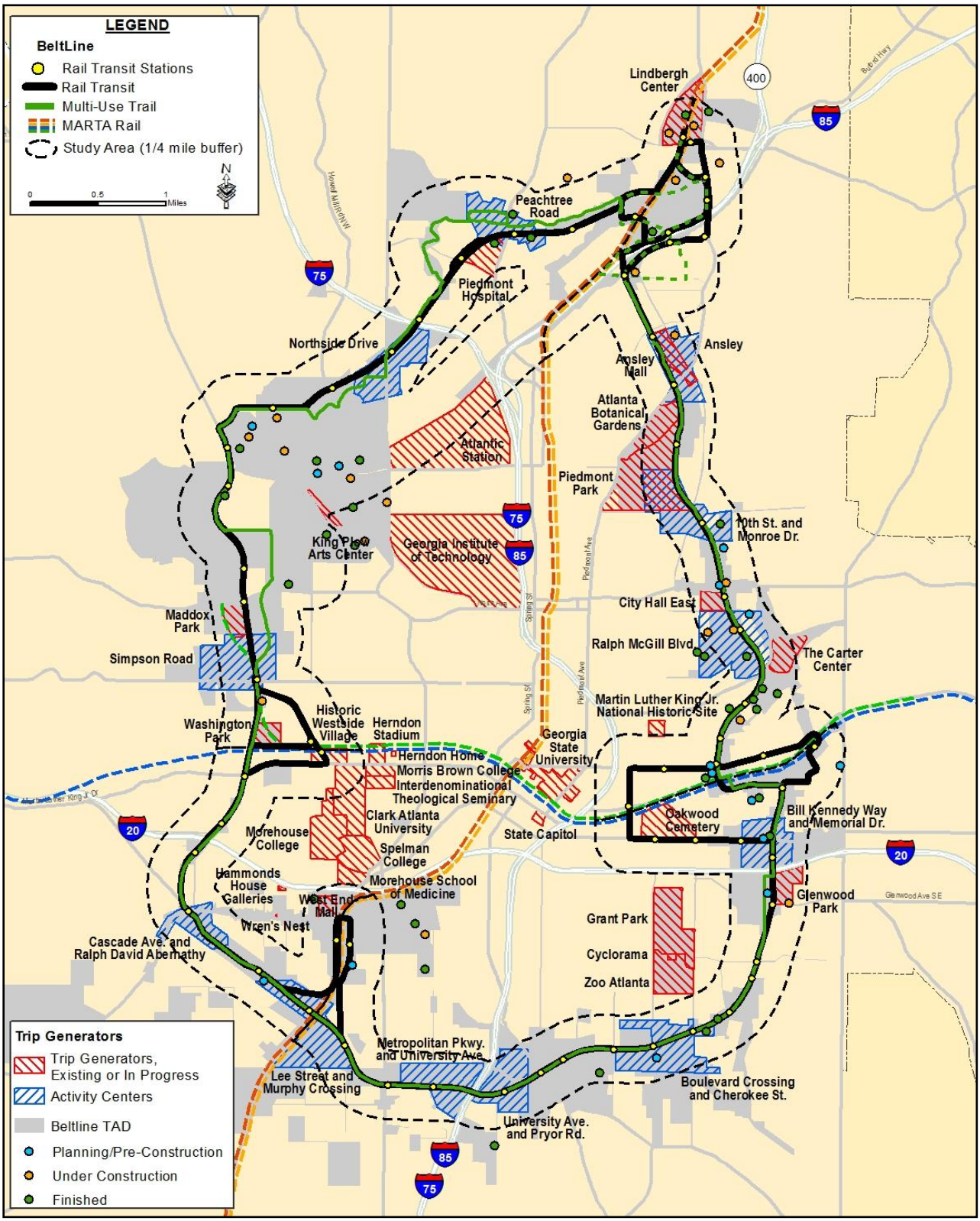
Adopted in 2008, *Connect Atlanta* is the City's Comprehensive Transportation Plan (CTP), which emphasizes improved mobility, economic growth, and enhanced quality of life. The Atlanta BeltLine is ranked as the highest priority and is included in the transit and bicycle elements. The Plan website is: www.connectatlantaplan.com.

1.5.2 Planned Development

Central Atlanta has seen pronounced changes in its real estate market and land use in recent history beginning in the 1990s in preparation for the 1996 Centennial Olympic Games. A new awareness by investors and developers of the potential of central Atlanta has kindled numerous investments there.

While growth continues in the suburban counties, there is a growing demand for living, working, and the pursuit of leisure activities in central Atlanta as evidenced by the growth in housing construction and the reversal in the population decline documented in Chapter 3.5 of this FEIS/ 4(f) Technical Memorandum. The various existing developments and those proposed in the studies and plans discussed here represent important trip generators for the Atlanta BeltLine. Figure 1-4 illustrates the location and extent of these trip generators and indicates whether they are included in one of the development plans discussed here. Additional detail regarding these trip generators and activity centers from a land use perspective is found in Chapter 3.3.

Figure 1-4: Existing and Proposed Activity Centers and Trip Generators



Sources: ARC and Atlanta BeltLine, Inc. (ABI)

1.5.2.1 Atlanta Strategic Action Plan (also known as the Comprehensive Development Plan) and Atlanta BeltLine Subarea Master Plans

The *Atlanta Strategic Action Plan* functions as the City's Comprehensive Development Plan (CDP) and is the policy guide for land use decisions. Adopted by the Atlanta City Council in 2008, the Plan updates the City of Atlanta's Future Land Use Map (FLUM), which is reviewed quarterly to consider applications that propose changes in policy or the rezoning of specific parcels. The *Atlanta Strategic Action Plan* will be referred to as the CDP for the remainder of this FEIS/ 4(f) Technical Memorandum.

In addition to the CDP, ABI is undertaking a Subarea Master Planning process for the entire Atlanta BeltLine study area. Each Atlanta BeltLine Subarea Master Plan includes a recommended FLUM for its study area. The City adopted five of the Atlanta BeltLine Subarea Master Plans changes in 2009. The other Subarea Master Plans are underway. The FLUM in the Atlanta BeltLine study area is illustrated in Chapter 3.3. The Plan website is: www.atlantaga.gov/government/planning/asap.aspx.

1.5.2.2 Atlanta BeltLine Five-Year Work Plan

This plan was issued by the ADA in July 2006 and outlines the following goals for the first five years of the Atlanta BeltLine implementation period:

- Acquire land for ten new parks, including Westside Park; develop two fully and four partially;
- Acquire and construct the trails element of the Atlanta BeltLine in the northeast and southwest totaling five to seven miles, and three spur trails, connecting the Atlanta BeltLine to parks totaling five to nine miles;
- Prepare for transit construction by completing the NEPA process, selecting the transit route in the northwest, and completing the engineering design and acquiring the ROW for the first phase of transit development;
- Complete master planning studies to establish a foundation for the elements of the 25-year project;
- Provide for economic development incentives in the southeast and southwest;
- Provide for affordable workforce housing incentives in all Atlanta BeltLine zones; and
- Construct roadway, bicycle, and pedestrian improvements to enhance mobility and access to the Atlanta BeltLine.

The Plan website is:
www.beltline.org/Portals/26/Media/PDF/Final%20WorkPlan20July05.pdf.

The following describes three related economic development plans, initiated before the *Atlanta BeltLine Five-Year Work Plan*, that correlate directly to the Atlanta BeltLine and economic development initiatives within or near the study area.

1.5.2.3 New Century Economic Development Plan

Adopted in December 2004 by the Atlanta City Council, the Plan specifically addresses the need to develop the Atlanta BeltLine and calls for creation of a Tax Allocation District (TAD) to provide a source of local funding for Atlanta BeltLine improvements. This Plan also calls for improved transit and trails in the study area to connect communities with the existing MARTA system and the activity centers in central Atlanta. As population and employment increase in the region, the Plan also seeks to attract these growth increases into the study area and to provide the necessary supporting transportation infrastructure. Since adoption a TAD has been established (see Chapter 3.3). The Plan website is: www.atlantada.com/media/EDPRevisionAugust05.pdf.

1.5.2.4 Atlanta BeltLine Tax Allocation District Feasibility Study

This Study was prepared by ADA in March 2005 to evaluate the feasibility of a TAD. The findings indicated development in association with the Atlanta BeltLine could add more than $20 billion over 25 years to the tax bases of the City of Atlanta, Fulton County, and the Atlanta Board of Education. Other benefits could include 48,000 construction jobs; 37,500 permanent jobs; 28,000 new residential units, including 5,600 affordable units (20 percent of new residential units); and, nine million square feet of retail, office, and light industrial space. Later in 2005, the taxing authorities approved the TAD based on the *Atlanta BeltLine Redevelopment Plan* (ABI 2005) as described below. The Study website is:
www.atlantaga.gov/client_resources/government/development%20authority/beltlinefeasibilitystudy_final.pdf.

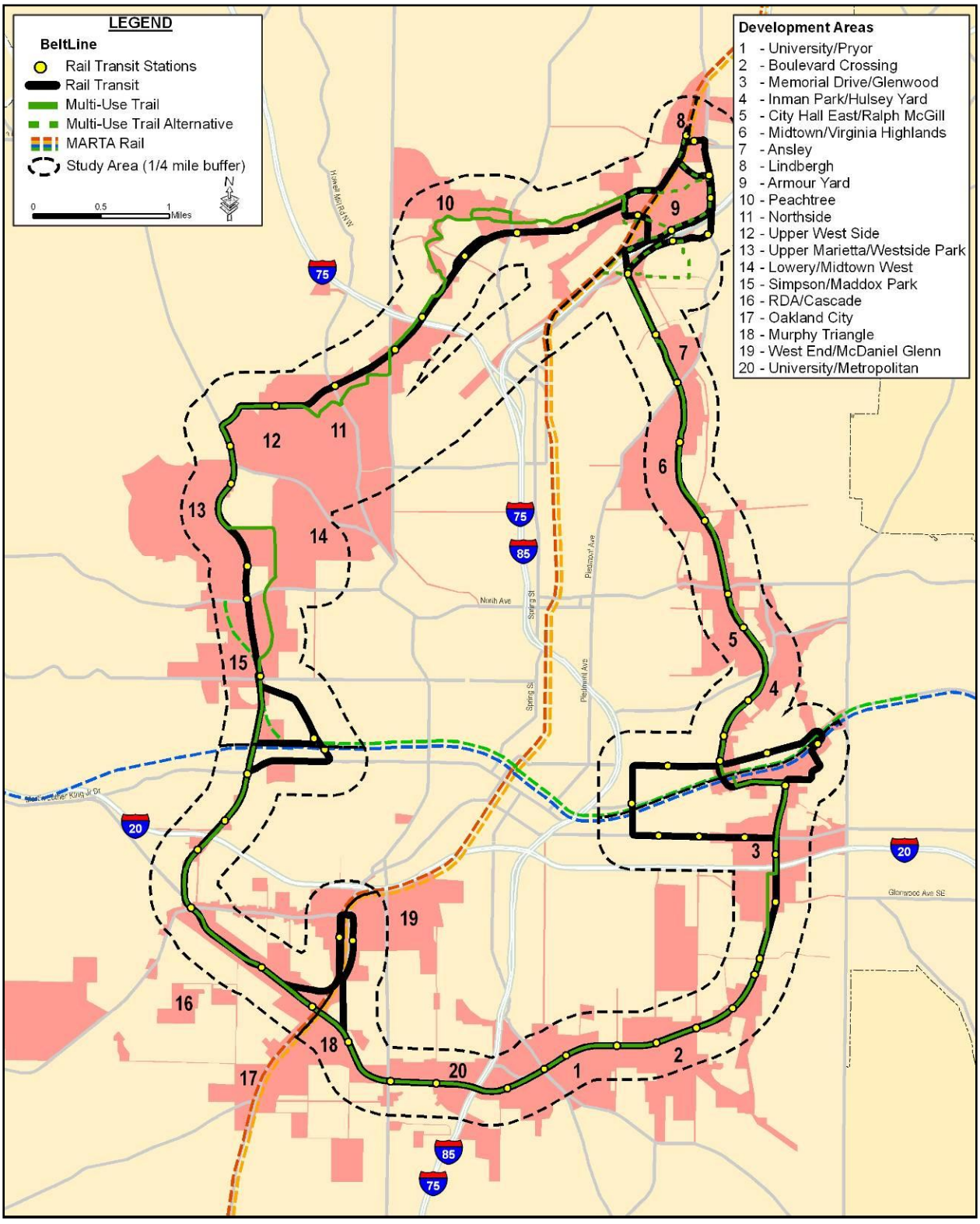
1.5.2.5 Atlanta BeltLine Redevelopment Plan

Completed by the ADA in November 2005, based on the *TAD Feasibility Study*, the Plan recommends transit, trails, greenspace, pedestrian and roadway improvements, and affordable workforce housing. The Plan specifically identifies 12 activity centers of existing and potential development as the critical anchors of the study area to stimulate economic activity and structure growth. While much recent development has occurred in the northeast and northwest, the Plan encourages growth in all zones. The distribution of activity centers is intended to spread travel demand over a wide area. These activity centers are illustrated on Figure 1-4. The Plan website is:
www.atlantada.com/adaInitiatives/BeltLineRedevelopmentPlanA.jsp.

The Economic Development Focus Areas, shown on Figure 1-5, identified in the Plan constitute a total of approximately 2,500 acres of developable land, exclusive of the Atlanta BeltLine greenspace system. According to the Plan, the total redevelopment area could absorb 50,000 new residents and generate over 30,000 new, permanent jobs over the next 25 years. These projected numbers vary from those in the *Atlanta BeltLine Tax Allocation District Feasibility Study* because the adopted TAD differed from the study area of the TAD feasibility study. Also, the *Atlanta BeltLine Redevelopment Plan* used different development assumptions based on updated market and planning information for the 25-year timeframe of the TAD.

Currently, redevelopment is ongoing or planned within or adjacent to the study area. Many projects are currently in planning stages, under construction or recently completed, as illustrated previously in Figure 1-4.

Figure 1-5: Economic Development Focus Areas



Sources: ARC and ABI

1.6 Project Goals and Objectives

Goals and objectives for the project were developed in consultation with the Technical Advisory Committee (TAC) and Stakeholder Advisory Committee (SAC) established for the project and the public. The goals and objectives provide the basis for identifying project alternatives and the benchmarks for evaluating them to select a mode technology, alignment, and ROW requirements. The project goals and objectives are listed in Table 1-2.

The project alternatives are described in Chapter 2.0; Chapters 3.0 through 6.0 describe the affected environment and potential consequences of the project alternatives. More detail on the activities of the committees and the public in this FEIS/ 4(f) Technical Memorandum may be found in Chapter 7.0.

Table 1-2: Atlanta BeltLine Goals, Objectives, and Performance Measures

Goals/Objectives	Performance Measures
Goal 1: Contribute to an integrated regional multi-modal transportation network that promotes seamless intermodal connectivity, increases community access to existing transit and trails networks, and improves reliability of personal travel.	
Increase access to the existing regional transit system.	Maximize number of connections to peak period express buses per hour
Improve transit and trail connections to the existing rail and bus network.	Maximize number of direct connections to MARTA rail stations
	Maximize number of direct connections to peak hour local buses
	Maximize number of direct connections to other trails
Minimize travel times to points accessible from the rail and bus network.	Maximize improvement in travel times for typical trips between various major trip generators, economic development focus areas, and communities
Improve accessibility and connectivity among existing neighborhoods and to major destinations and employment centers.	Maximize population within ½-mile of proposed transit station locations
	Maximize employment within ½-mile of proposed transit station locations
	Maximize number of Atlanta BeltLine activity centers within ½-mile of proposed transit station locations
Minimize transfers and mode changes per trip.	Minimize number of transfers required for a typical trip between major trip origin and destination points
Increase transit options for transit-dependent, low-income, and minority populations.	Maximize service to low-income population within ½-mile of proposed transit stations
	Maximize service to minority population within ½-mile of proposed transit stations
	Maximize service to zero-car households within ½-mile of proposed transit stations
	Maximize service to population over 65 within ½-mile of proposed transit stations
	Maximize service to disabled population within ½-mile of proposed transit stations
	Minimize potential for disproportionate adverse impacts to low-income, minority, and zero-car populations
Goal 2: Manage and encourage the growth and economic development of the City, region, and state by providing transit and transportation improvements to areas designated for growth.	
Support redevelopment and revitalization efforts in the Atlanta BeltLine Tax Allocation District (TAD).	Maximize areas of TAD land within ½-mile of proposed transit station locations
	Maximize service to *Atlanta BeltLine Five-Year Work Plan's* 20 economic development focus areas
	Maximize compatibility with the Atlanta BeltLine Subarea Master Plans and *Atlanta BeltLine Redevelopment Plan* based on urban design character, station locations, alignments, and connection points
Support the City of Atlanta's and other regional economic development initiatives as well as growth management policies.	Maximize consistency with future land use plans
	Maximize connections with *Connect Atlanta* Comprehensive Transportation Plan (all modes) and TPB *Concept 3* regional transit vision
Support the redevelopment of Brownfields sites for transit-oriented development.	Maximize service to areas of underutilized industrial land within ½-mile of proposed transit station locations (potential Brownfields)

Table 1-2 continued: Atlanta BeltLine Goals, Objectives, and Performance Measures

Goals/Objectives	Performance Measures
Goal 3: Preserve and revitalize neighborhoods and business districts through context sensitive design of transit and trails, increased accessibility to mobility options and provision of affordable housing and transportation, and other community benefits.	
Minimize impact of existing residents and businesses.	Minimize potential right-of-way needed (acres potentially affected)
Encourage high quality, dense, and sustainable residential mixed-use and mixed-income urban development.	Maximize service to TAD areas with higher development capacity of underutilized or undeveloped land as defined by the Atlanta BeltLine Subarea Master Plans and/or the *Atlanta BeltLine Redevelopment Plan* within ½-mile of proposed transit station locations
Enhance the human and natural environment through context sensitive design of transit and trails.	Optimize appropriateness of the scale of transit mode and stop requirements for existing neighborhoods and communities
	Maximize positive human health impacts
Maintain or enhance the character and cohesion of neighborhoods and historic districts.	Minimize potential for adverse impacts to significant cultural resources
Goal 4: Provide a cost-effective and efficient transportation investment.	
Minimize project costs, but not at the expense of quality design and materials.	Minimize capital cost
	Minimize annual operating and maintenance costs
Support existing and planned transit infrastructure investments.	Maximize number of connections to planned streetcar, light rail, bus rapid transit, and commuter rail projects
Maximize operating and cost-efficiency.	Minimize capital costs per alignment mile
Goal 5: Provide a transit, bicycle, and pedestrian friendly environment.	
Provide transit and trails in the Atlanta BeltLine Corridor that fully accommodate bicycle and pedestrian transportation modes with direct links to activity centers, recreational facilities, and residential areas located within the Atlanta BeltLine study area.	Maximize number of economic development focus areas and activity centers within ½-mile of proposed trail access points
	Maximize number of recreational facilities within ½-mile of proposed trail access points
	Maximize housing units within ½-mile of proposed trail access points
	Maximize employment within ½-mile of proposed trail access points
Develop transit and trails that are safe and attractive.	Maximize miles of exclusive trails separated from automobile traffic
	Maximize number of proposed trail access points
Provide bicycle amenities, such as parking and storage, at transit stations in the project corridor.	Maximize number of locations where full and partial trail amenities can be provided

Table 1-2 cont.: Atlanta BeltLine Goals, Objectives, and Performance Measures

Goals/Objectives	Performance Measures
Goal 6: Provide transit, bicycle, and pedestrian connectivity among communities, and between communities and existing and planned recreational opportunities.	
Provide transit and trails that enhances connectivity between communities separated by the historic railroad corridor and other constraints.	Maximize number of proposed trail access points
Supports existing and planned park programming, including event venues, through access to transit and trail facilities.	Maximize compatibility with the Atlanta BeltLine Subarea Master Plans, *Atlanta BeltLine Redevelopment Plan*, and 2009 *Project Greenspace Technical Report*
Provide trail and transit connectivity to schools, community facilities, and cultural and historic destinations along the project corridor.	Maximize number of community facilities and significant cultural/historic sites within ½-mile of proposed transit station locations and trail access points
Goal 7: Minimize adverse impacts to the environment and foster positive environmental impacts.	
Avoid or minimize impacts to cultural and historic resources.	Minimize number of significant cultural resources potentially affected
Avoid or minimize impacts to water resources, protected species, critical habitats, and other sensitive natural resources.	Minimize number of stream crossings potentially affected Minimize presence of critical habitats along the alignment
Provide opportunities to improve the quality of the natural environment, such as air and water quality.	Maximize the potential for air quality benefits Minimize number of acres potentially impacted by increased stormwater runoff Minimize number of noise sensitive receptor sites potentially impacted
Develop viable transportation alternatives to the use of single-occupant motorized vehicles.	Maximize improvement in travel times for typical trips between various major trip generators, economic development focus areas, and communities
Avoid or minimize impacts to existing parklands.	Minimize number of parks with potential right-of-way effects
Goal 8: Ensure consideration of public input throughout project planning and development.	
Consider amount and content of comments pertaining to the various proposed Alternatives.	Number of public and SAC comments favoring a particular Alternative

2.0 ALTERNATIVES CONSIDERED

This chapter describes the development of the Atlanta BeltLine Transit and Multi-Use Trail Alternatives as well as FTA and MARTA's selection of the Preferred Alternatives. This chapter is organized into five sections:

- Section 2.1 summarizes the Transit and Multi-Use Trail Alternatives developed and considered from the origin of the Atlanta BeltLine through the selection of Alternatives considered in the Tier 1 DEIS;
- Section 2.2 describes the Transit Build Alternatives and technologies considered in the Tier 1 DEIS;
- Section 2.3 describes the Trail Build Alternatives considered in the Tier 1 DEIS;
- Section 2.4 describes the Preferred Alternatives and the No-Build Alternative considered in this FEIS/ 4(f) Technical Memorandum; and
- Section 2.5 discusses the conceptual planning for stations, operational characteristics, and storage and maintenance facilities.

2.1 Alternatives Development Process

2.1.1 Study Area Definition

The ½-mile wide Atlanta BeltLine study area is centered on the proposed Transit and Multi-Use Trail Alternatives considered in the Tier 1 DEIS. It contains many of Atlanta's residential neighborhoods, employment centers, a majority of the parks and greenspace, and a significant number of major attractions and points of interest. The study area width represents the maximum comfortable walking distance of ¼ mile on each side, and in some cases a ½ mile around the potential station locations. As described in Chapter 1.1 and illustrated in Figure 1-1, the study area is divided into four geographic zones defined by intersections of the proposed alignment with the existing MARTA rail lines.

2.1.2 Background and Initial Screening of Alternatives

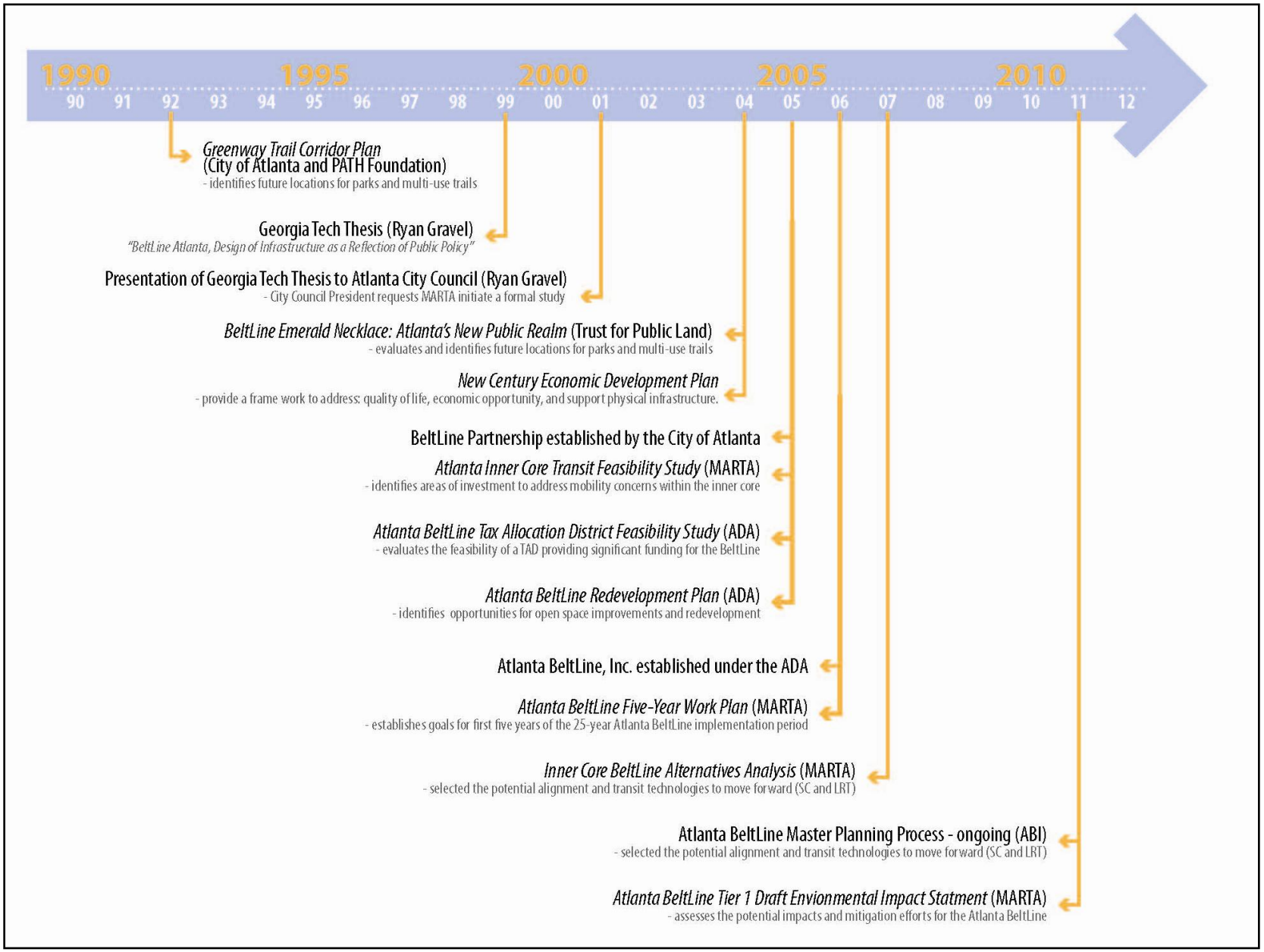
A timeline highlighting the development of the Atlanta BeltLine Alternatives is illustrated in Figure 2-1. The following subsections summarize key events in the alternatives development process.

2.1.2.1 Inner Core BeltLine Alternatives Analysis

In 2007, MARTA completed the *Inner Core BeltLine Alternatives Analysis Detailed Screening Results* designed to identify and evaluate transit improvements within the Inner Core. The *Inner Core BeltLine Alternatives Analysis Detailed Screening Results* served a dual purpose: to examine transit alternatives to improve local and regional mobility, accessibility, and connectivity, and support the City of Atlanta's plan to add mixed-use developments, bicycle and pedestrian greenway trails, and neighborhood connectivity.

The analysis prescreened five candidate transit mode technologies to operate on the Atlanta BeltLine including: Bus, Bus Rapid Transit (BRT), LRT, Modern Streetcar (SC),

Figure 2-1: Atlanta BeltLine Timeline



and Diesel Multiple Unit (DMU), and identified BRT, SC, and LRT as potential applicable technologies with 4 potential alignments (Alternative B1 through B4) generating 12 different Build Alternatives. Initially, B3 LRT was eliminated in a fatal flaw analysis; however, subsequent engineering/design analysis revealed that B3 LRT would be acceptable and should be carried forward in the planning process. B3 is the predecessor of the Preferred Alternative. A map of the B3 Build Alternative can be found in Figure 2.1-1 of Appendix D.

2.1.3 Public Involvement and Conceptual Engineering

2.1.3.1 Scoping

Following the screening phase, MARTA advanced the development and evaluation of alternatives for the Atlanta BeltLine by initiating the NEPA process. This included Scoping and Public Involvement and Agency Coordination. The formal Public Scoping Process for the Atlanta BeltLine Corridor Environmental Study began with the publication on July 24, 2008 in the Federal Register of a Notice of Intent (NOI) to prepare a Tier 1 EIS and ended September 22, 2008.

2.1.3.2 Transit and Trail Alignments Workshops

From April 13, 2009 to May 4, 2009, five workshops were held, one in each of the Atlanta BeltLine study area zones: the southeast, northeast, and southwest zones, and two distinct areas of the northwest zone (westside and northside) to engage the general public in identifying alternative transit and multi-use trail alignments and service characteristics for the Atlanta BeltLine. Chapter 7.0 provides a detailed description of the workshops and other public involvement efforts and the comments received during these efforts. The B3 Alternative served as the basis for these discussions regarding transit. Multi-use trails proposed by previous studies[3] within the Atlanta BeltLine Corridor were the basis for discussions of the trails. The workshops enabled the project team to refine the service characteristics, alignments, potential station locations, and possible connections to existing MARTA rail stations found in the B3 Alternative. Common themes heard at the workshops included the following:

- Transit should provide enhanced and frequent accessibility rather than favoring high mobility and transit travel speeds;
- Service should allow for expansive coverage providing the maximum number of stations and accessibility to neighborhoods and other destinations;
- Stations should be spaced to provide enhanced access to origins and destinations;
- Transit and trail alignments should run parallel to each other to the maximum extent possible to both minimize impacts and to form a complementary system;
- Transit alignments should connect to MARTA rail stations as well as other planned transit services;
- Transit and trail design should include pedestrian access and accommodate special transportation needs (i.e., Americans with Disabilities Act compliance); and
- All transit and trail design should include provisions for ensuring the safety of users.

[3] City of Atlanta's 1993 Parks, Open Space and Greenways Plan; the *Connect Atlanta Plan*, Atlanta's Comprehensive Plan; and the BeltLine Redevelopment Plan.

2.1.3.3 Technology and Transit Service Characteristics Workshops

MARTA, in partnership with ABI, consulted the public through the five previously mentioned formal public workshops, as well as an additional 12 public and community organization presentations in the Spring and Summer of 2009 to determine the type of transit service most suitable for the Atlanta BeltLine. The public and stakeholders were presented with two service concepts.

The first, an "expanded service" concept, emphasized access using a higher number of Atlanta BeltLine transit stops and more direct operations within communities, where feasible, thereby minimizing walking and bicycling distances.

The second concept, an "express service" concept, focused on minimizing travel time through the Atlanta BeltLine Corridor, with fewer stops supported by a greater number of connecting pedestrian, bicycle, and transit services.

Consensus from public and stakeholder representatives suggested a preference for the "expanded service" concept. However, recognizing the potential role of transit services in the Atlanta BeltLine Corridor in improving regional mobility, many respondents supported a hybrid of the "express" and "expanded" services that would provide service flexibility, particularly during peak travel periods.

The comments received during Scoping, public workshops, and other public involvement efforts (described in Chapter 7.0) helped to refine the transit and trail alternatives carried forward from the *Inner Core BeltLine Alternatives Analysis.* Additionally, the comments helped to identify additional alternatives to evaluate in the feasibility screening.

2.1.4 Feasibility Screening of Initial Build Alternatives

The information gained through public involvement activities identified alternatives for consideration, in addition to the B3 Alternative. These Transit and Multi-Use Trail Alternatives vary within several portions of the Atlanta BeltLine and include different potential station locations. Sections 2.2.2 and 2.3 discuss the full range of Transit and Multi-Use Trail Build Alternatives identified during Scoping (Appendix D provides detail on each alternative by zone). These Alternatives were screened for their ability to meet the purpose and need statement discussed in Chapter 1.0 and feasibility to determine which should be considered further in the Tier 1 DEIS.

The focus of the feasibility screening was the locations where the Transit and Multi-Use Trail Build Alternatives may have to depart from the existing railroad ROW. Sixty total transit and multi-use trail alignment options were considered in the feasibility screening process. The full range of transit and multi-use trail alignments are listed in the 2009 *Atlanta BeltLine Feasibility Screening Technical Memorandum.* The nine screening criteria employed during the feasibility are listed below in Table 2-1. They are described in detail in the *Atlanta BeltLine Feasibility Screening Technical Memorandum*.

In addition to the feasibility criteria, a key factor in alignment screening was the geographic location of Alternatives within a TAD, as described by the *Atlanta BeltLine Tax Allocation District Feasibility Study*. As described in Section 1.5.2.4, the TAD provides a critical mechanism for economic development as well as funding and policy for transit, trails, and land use implementation.

Table 2-1: Feasibility Screening of Initial Build Alternatives

Criteria	Screening Issues by Mode	
	Transit	Trail
Engineering Feasibility	Avoid vertical geometry with grades greater than six percent Avoid horizontal geometry with turn radii less than 100 feet	Separate trail from roadway Path width and clearance Horizontal alignments Grades, sight distances, and vertical curves
Security and Safety	Safe interaction between modes Remoteness from activity centers Number and distance between access points Visual access	
Service Effectiveness and Efficiency	Serve destinations within shortest travel time and minimal service disruptions Minimize meandering between destinations	Access between residential neighborhoods, commercial and employment centers, schools and parks
Avoidance of Negative Impacts to Environmental Features	Avoid adverse impacts to water resources and noise-sensitive land uses	
Avoidance of Negative Impacts to Historical and Community Resources	Avoid National Register of Historic Places resources Avoid Georgia State Historic Preservation office resources Avoid City of Atlanta designated resources	
Assessment of Transit and Traffic Operations and Parking	On-street alignments subjected to geometric and traffic conditions assessment; traffic signal delays	
Minimization of Potential Impacts to Utilities and Other Infrastructure	Utility features including: overhead and underground wires and pipes Other infrastructure including: bridges, abutments, and retaining walls	
Minimization of Potential Impacts to Private ROW	Evaluate impacts to existing structures and private ROW including: buildings, utility easements, and existing railroad ROW	
Order of Magnitude Capital Costs	Evaluate relative costs and benefits	

2.1.4.1 Screening Results

The feasibility screening eliminated various alignment options based on poor performance relative to one or more of the criteria described above. Alignments were eliminated primarily because of the following (see *Atlanta BeltLine Feasibility Screening Technical Memorandum* for a detailed description of each alternative and reason for elimination of further evaluation):

- Failure to meet the Atlanta BeltLine's purpose and need;
- Safety and security concerns;
- Significant ROW and/or parking impacts;
- Operational efficiencies;
- Redundancy with other planned transit projects; or,
- Location outside the Atlanta BeltLine TAD, an area expressly intended to encompass and promote economic development by means of land use policy and funding for transit.

The feasibility screening process yielded three transit and three trail alignment concepts for advancement to the Tier 1 DEIS. The options retained after screening were subsequently renamed as Build Alternatives and refined. Each surviving Build Alternative is described in Section 2.2 below.

2.2 Tier 1 DEIS Transit Alternatives

The FTA and MARTA considered transit and multi-use trail alignment concepts as well as the No-Build Alternative in the Tier 1 DEIS. This section describes those alternatives and the results of the DEIS analysis. More detail may be found in the Tier 1 DEIS.[4]

2.2.1 No-Build Alternative

In addition to the Build Alternatives, the Tier 1 DEIS assessed a No-Build Alternative in order to provide a basis of comparison with the Build Alternatives. The No-Build Alternative is comprised of the following:

- The existing transportation system including roadways, transit service, and trails;
- All programmed transportation projects in the cost constrained ARC's *Envision6* RTP and the Fiscal Years 2008-2013 TIP, except for the Atlanta BeltLine transit and trails; and
- The trail improvements that the City of Atlanta and ABI have committed would be constructed, although some are elements of the Build Alternatives.

2.2.2 Transit Build Alternatives

The Transit Build Alternatives that survived the screening analysis, discussed in Section 2.1.4, were considered potentially viable and were assessed in the Tier 1 DEIS. The Transit Build Alternatives were all approximately 22-miles long and would accommodate approximately 50 proposed station locations with an average spacing of slightly less than a ½-mile. The Transit Build Alternatives were identical in the northeast, southeast, and southwest zones as described in the Tier 1 DEIS, and shown in Figure 2-2 through Figure 2-4.

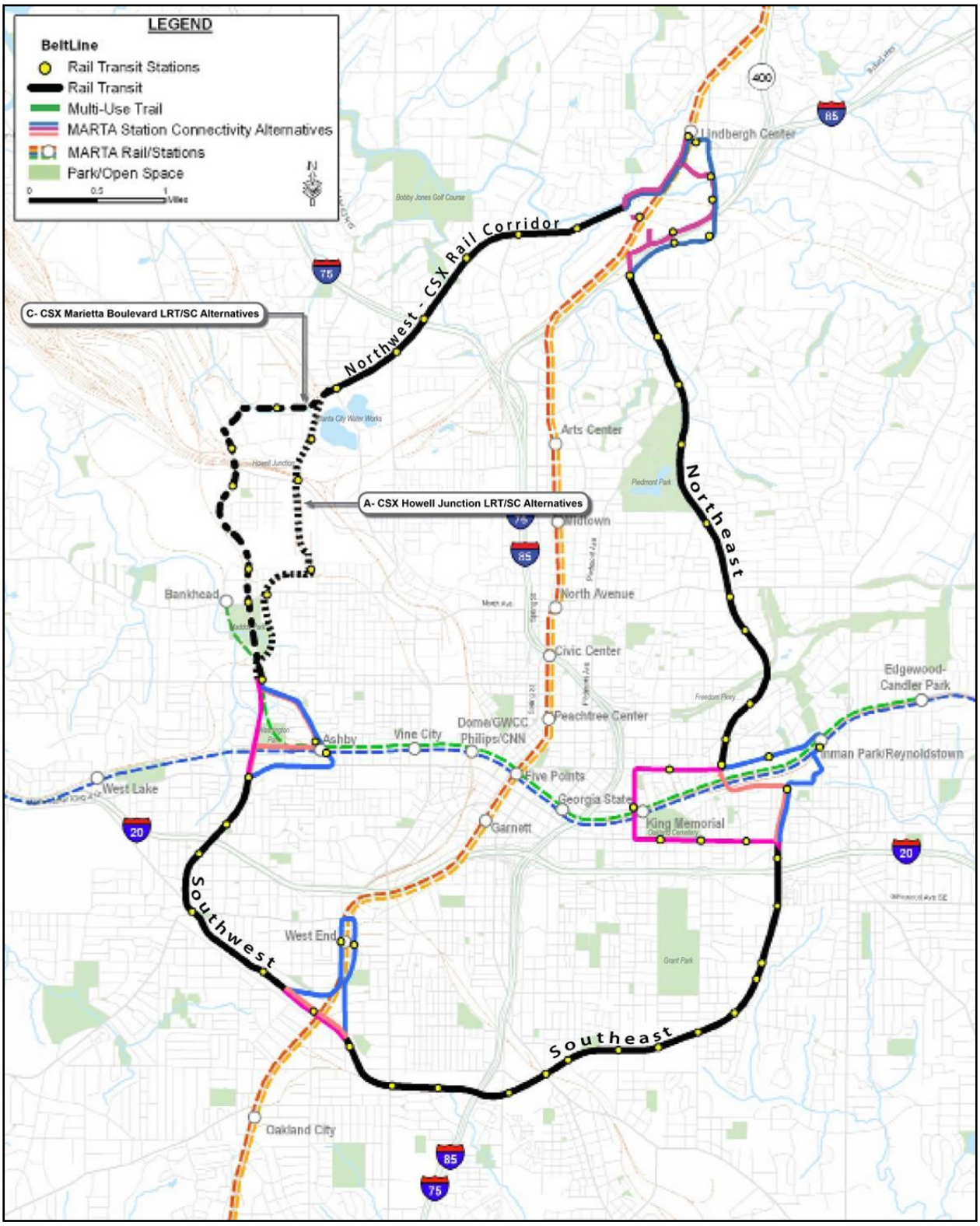
There were four Transit Build Alternatives that would use portions of the existing CSX freight rail ROW in the northwest zone. They include:

- A- CSX Howell Junction LRT Transit Alternative
- A- CSX Howell Junction SC Transit Alternative
- C- CSX Marietta Boulevard LRT Transit Alternative
- C- CSX Marietta Boulevard SC Transit Alternative

The four Transit Build Alternatives that would use the CSX corridor are illustrated in Figure 2-2.

[4] FTA and MARTA, June 2011. Atlanta BeltLine Corridor Environmental Study, Tier 1 Draft Environmental Impact Statement/Draft Section 4(f) Evaluation.

Figure 2-2: Transit Build Alternatives Using CSX Corridor



Source: AECOM 2011

Four Transit Build Alternatives would be located adjacent to, but outside, the existing CSX freight rail ROW in the northwest zone. They include:

- B- Howell Junction LRT Transit Alternative
- B- Howell Junction SC Transit Alternative
- D- Marietta Boulevard LRT Transit Alternative
- D- Marietta Boulevard SC Transit Alternative

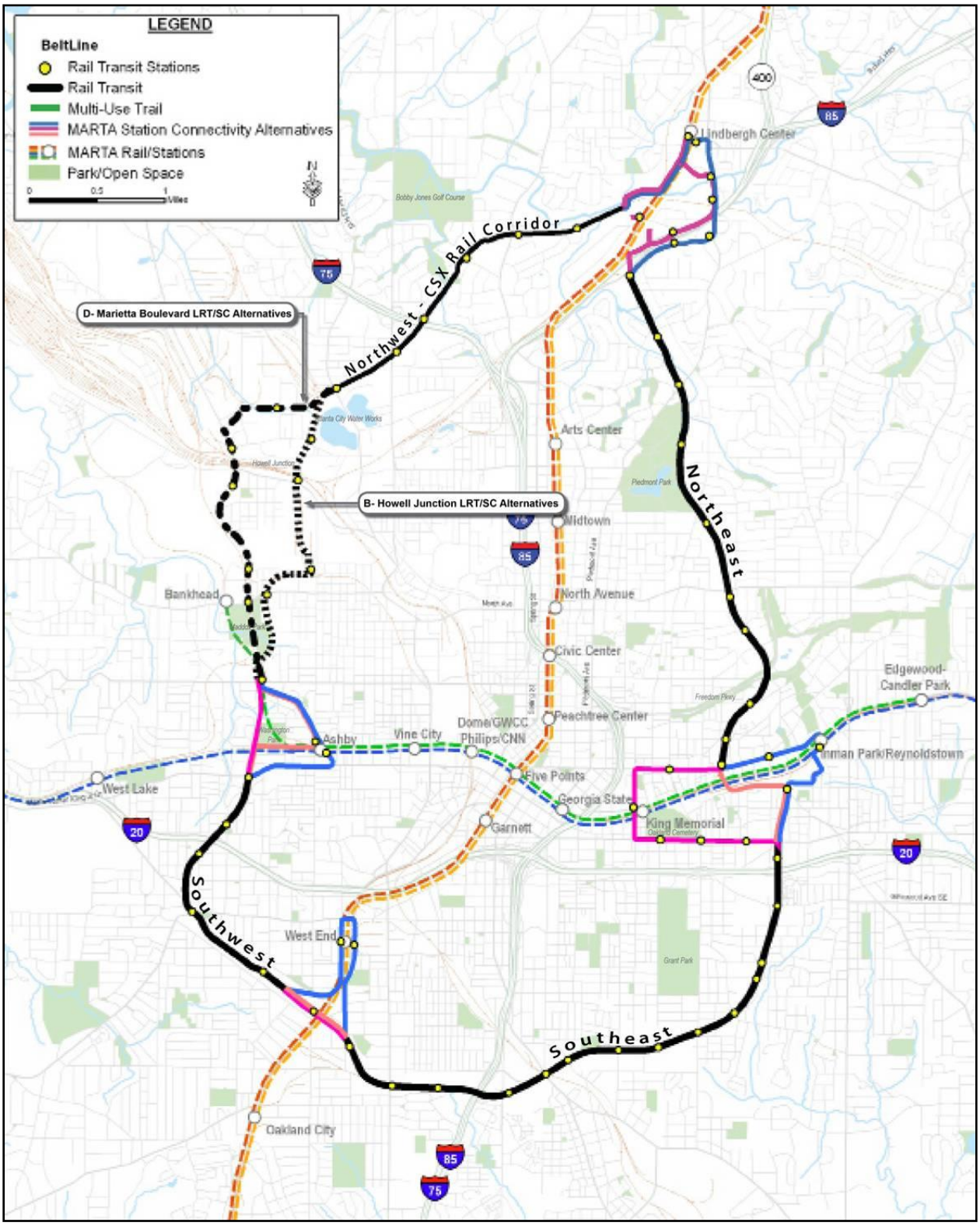
The four Transit Build Alternatives adjacent to the CSX corridor are illustrated in Figure 2-3.

Two Transit Build Alternatives would be located adjacent to, but outside, the existing Norfolk Southern freight rail corridor in the northwest zone. They include:

- F- Atlantic Station LRT Alternative
- F- Atlantic Station SC Alternative

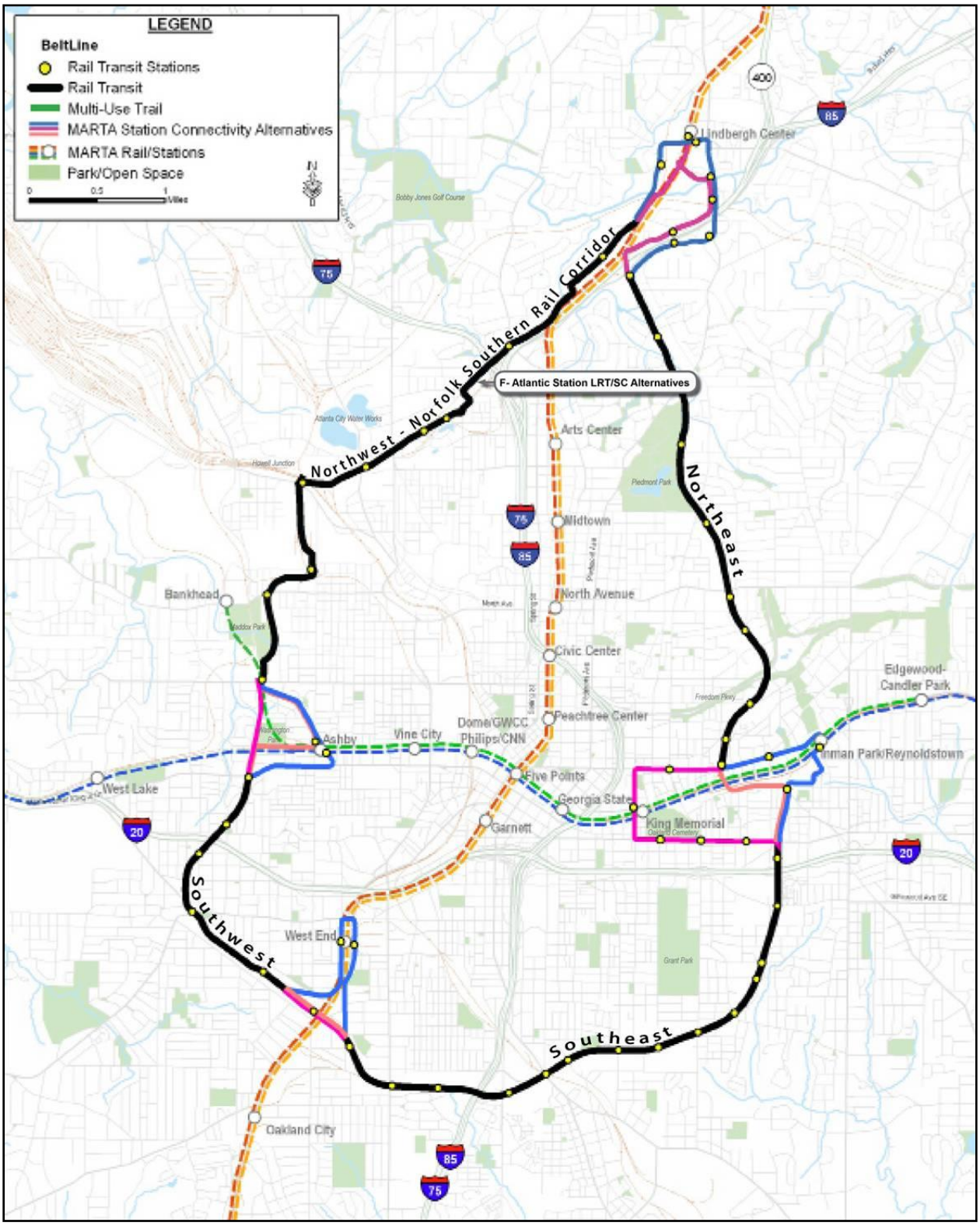
The two Transit Build Alternatives adjacent to the Norfolk Southern corridor are illustrated in Figure 2-4.

Figure 2-3: Transit Build Alternatives Adjacent to but Outside the CSX Corridor



Source: AECOM 2011

Figure 2-4: Transit Build Alternatives Adjacent to the Norfolk Southern Corridor



Source: AECOM 2011

2.2.3 Evaluation of Transit Alternatives

Table 2-2 provides a comparison of the distinguishing characteristics and constraints of the Transit Build Alternatives identified in the Tier 1 DEIS. Factors include engineering, operational, and environmental considerations as well as public observations. Some, or all, Transit Build Alternatives share certain characteristics, such as the need for coordination with the freight railroads; however, other characteristics or constraints, such as connections to key destinations or the amount of in-street running alignment, set the alternatives apart from one another.

The Tier 1 DEIS evaluated each Transit Build Alternative to compare their responsiveness to project goals and objectives set forth in the purpose and need found in Section 0 and in Table 1-2. As the Transit Build Alternatives differed from one another only in the northwest zone, this evaluation examined the alternatives only within the northwest zone. Table 2-3 summarizes the final scores for each alternative, including the highest performer, D- Marietta Boulevard SC Transit Build Alternative. The first number in each box is the total “high performing” score for that alternative, while the second number is the total “moderately performing” score for that alternative.

Table 2-2: Transit Alternative Characteristics and Constraints in Northwest Zone

Transit Alignment Alternative	Required Agreements with Freight Railroads			Requires New Structure Across Howell Junction	Connections to Key Destinations				Northerly Access to Peachtree	In-street Running (Percent)[1]	Number of Parcels Potentially Impacted[2]	SAC/TAC/Public Input			Other Key Differences
	Transit Corridor Inside Existing ROW	ROW as Needed for Construction or to Overcome Localized Spatial Constraint	Permission for Grade Separated Crossings		Bankhead MARTA rail station	Westside Park	Atlantic Station	Piedmont Hospital				Consistent with the project Vision[3]	Reaches an Area Underserved by Rail Transit	Preserves Ability to Keep Transit and Trail Together	
A- CSX Howell Jct. Alternatives	✓		✓	✓				✓	✓	0%	60	✓	✓	✓	High performing - connection to the TAD Consistent with current plans
B- Howell Jct. Alternatives		✓	✓	✓				✓	✓	0%	71	✓	✓	✓	High performing - connection to the TAD Consistent with current plans
C- CSX Marietta Blvd. Alternatives	✓		✓		✓	✓		✓	✓	26%	61	✓	✓	✓	Connects to most neighborhoods and commercial facilities Connects to most parks Connects to other transit services High performing - connection to the TAD Consistent with current plans Adds the least amount of runoff during a storm
D- Marietta Blvd. Alternatives		✓	✓		✓	✓		✓	✓	27%	68	✓	✓	✓	Connects to most neighborhoods and commercial facilities Connects to most parks Connects to other transit services High performing - connection to the TAD Consistent with current plans Adds the least amount of runoff during a storm
F- Atlantic Station Alternatives		✓	✓	✓			✓			32%	56				Moderate performing - connection to the TAD Low performing - potential impacts on cultural resources High performing - low number of ecological impacts High performing - low number of noise, vibration, and biological effects Low performing - high number of at-grade crossings Serves one less economic development focus area

[1] Percentages are of in-street running in the northwest zone only, excluding MARTA Connectivity Areas and Infill Station Alternatives which will be studied in future phases of analysis.
[2] Totals include the number of parcels in the northwest zone only, excluding MARTA Connectivity Areas and Infill Station Alternatives which will be studied in future phases of analysis; includes partial impacts and total impacts; calculations were obtained from the *Analysis of Potential Right-of-Way Needs Technical Memorandum*.
[3] Consistency with the project vision includes location relative to the Atlanta BeltLine Tax Allocation District (TAD) and proximity to areas of potential future development.

Table 2-3: Summary of Performance Measure Results By Alignments for All Goals

Goal		Transit Alternative					Trail Alternative	
		A- CSX Howell Jct.	B- Howell Jct.	C- CSX Marietta Blvd.	D- Marietta Blvd.	F- Atlantic Station	Marietta Blvd./ Howell Jct.	On-Street
1	Contribute to an integrated regional multi-modal transportation network that promotes seamless intermodal connectivity, increases community access to the existing transit and trails networks, and improves reliability of personal travel.	10/2	10/2	10/2	10/2	6/3	1/0	1/0
2	Manage and encourage the growth and economic development of the City, region, and state by providing transit and transportation improvements to areas designated for growth.	3/1	3/2	3/1	3/2	1/2	1/0	1/0
3	Preserve and revitalize neighborhoods and business districts through context sensitive design of transit and trails, increased accessibility to mobility options and provision of affordable housing and transportation, and other community benefits.	2/1	4/1	2/2	5/1	5/0	5/0	3/0
4	Provide a cost-effective and efficient transportation investment.	6/2	6/2	6/2	6/2	6/2	2/0	2/0
5	Provide a transit, bicycle, and pedestrian friendly environment.	0/0	0/0	0/0	0/0	0/0	5/1	5/0
6	Provide transit, bicycle, and pedestrian connectivity among communities, and between communities and existing and planned recreational opportunities.	1/0	1/0	0/0	0/0	0/1	1/0	2/0
7	Minimize adverse impacts to the environment and foster positive environmental impacts.	4/1	5/0	5/0	5/1	7/1	8/0	4/0
8	Ensure consideration of public input throughout project planning and development.	2/0	2/0	2/0	2/0	0/2	2/0	0/0
Total Number of High/Moderate Ratings		28/7	31/7	28/7	31/8	25/11	25/1	18/0

Note: The gray table cells indicate the best performing Build Alternative(s) for each measure and goal. The first number is the total "high performing" score for that alternative and the second number is the total "moderately performing" score for that alternative.

Source: FTA and MARTA, June 2011. *Atlanta BeltLine Corridor Environmental Study, Tier 1 Draft Environmental Impact Statement/Draft Section 4(f) Evaluation*

2.2.3.1 Preliminary Cost Estimates for Transit Alternatives

Preliminary cost estimates in 2009 dollars were calculated during the Tier 1 DEIS in order to evaluate the ability of each Build Alternative to meet the goals of the project. Two estimates were created for each Build Alternative, the capital costs and the operations and maintenance (O&M) costs. Capital cost estimates include all elements of construction including rights-of-way, grading, excavation, and similar needs. O&M cost estimates include those elements associated with running the proposed system on an annual basis.

Table 2-4 below provides a summary of preliminary capital cost estimates for each of the Transit Build Alternatives reviewed during the DEIS.

The current preliminary transit and trail capital cost estimates will be further refined in subsequent stages of project planning and engineering design as project elements are rendered in greater detail. The format of the estimates, as it makes use of FTA Standard

Cost Categories with clearly documented assumptions, lends itself to updates throughout the project development process.

Table 2-4: Summary of Preliminary Transit Capital Cost Estimates

Zone	Zone	Low Cost Transit (millions, $2009)	Length (route miles)	Cost (per Mile)	High Cost Transit (millions, $2009)	Length (route miles)	Cost (per mile)
Light Rail Transit (LRT) Capital Cost Estimates							
Northeast	All Build Alternatives	$424	6.51	$65	$482	6.50	$74
Southeast	All Build Alternatives	$363	6.02	$60	$542	6.50	$83
Southwest	All Build Alternatives	$180	3.13	$58	$250	3.87	$65
Northwest	A or B- CSX Howell Jct. Alternatives	$481	6.56	$73	$490	6.80	$72
	C or D- CSX Marietta Blvd. Alternatives	$483	6.86	$70	$496	7.17	$69
	(E- Norfolk Southern Alternatives)*	$445	6.22	$72	$481	6.55	$73
Totals (assuming C or D- CSX Marietta Blvd.)**		**$1,450**	**22.52**		**$1,770**	**24.04**	
Per mile		$65			$74		
Modern Streetcar (SC) Capital Cost Estimates							
Northeast	All Build Alternatives	$372	6.51	$57	$428	6.50	$66
Southeast	All Build Alternatives	$321	6.02	$53	$487	6.50	$75
Southwest	All Build Alternatives	$164	3.13	$52	$225	3.87	$58
Northwest	A or B- CSX Howell Jct. Alternatives	$418	6.56	$64	$431	6.80	$63
	C or D- CSX Marietta Blvd. Alternatives	$421	6.86	$61	$439	7.17	$61
	(E- Norfolk Southern Alternatives)*	$392	6.22	$63	$427	6.55	$65
Totals (assuming C or D- CSX Marietta Blvd.)**		**$1,278**	**22.52**		**$1,611**	**24.04**	
Per mile		$57			$66		

Source: AECOM 2010

* The E- Norfolk Southern Alternatives are compared in this table for informational purposes only. These Transit Alternatives have since been removed from consideration.

** Total cost for the complete Atlanta BeltLine corridor using the C or D- CSX Marietta Blvd. Alternatives are reported for simplicity. Total cost using the other northwest zone alignment may be obtained by summing the northeast, southeast, and southwest zones with the desired northwest zone alternative.

During the DEIS process, the O&M costs for each of the alternatives were calculated and compared. The differences in O&M costs between alternatives result from the differences in the estimated run time of each alternative and the number of vehicles needed in service to meet the required headway. However, it was found that among all the alternatives, the main difference that affected the O&M costs was the mode technology. Although each alternative varies in length, this did not significantly affect the overall O&M estimates.

The low O&M estimate for all SC alternatives is $14,082,054 and the high estimate is $14,865,235. Similarly, the low O&M cost estimate for the LRT is $10,953,331 and the

high estimate is $11,735,712. The difference between O&M costs for SC and LRT are driven by the fact that a LRT vehicle typically has a larger passenger capacity; therefore, fewer cars and operators are required to meet the projected demand and headways for the Atlanta BeltLine.

2.2.3.2 Tier 1 DEIS Conclusions

Based on the analysis presented in the Tier 1 DEIS and from the comments received during the DEIS public comment period, FTA and MARTA have determined that the D-Marietta Boulevard SC Transit Build Alternative (adjacent to but outside of CSX ROW) is the best performing and Preferred Transit Alternative. Figure 2-5 shows the location of the Preferred Transit Alternative.

The Preferred Transit Alternative (D-Marietta Boulevard SC Transit Build Alternative) performs distinctly better than the other transit alternatives in response to the Atlanta BeltLine's purpose and need as expressed through the goals and objectives listed below. The Tier 1 DEIS analysis indicates that the Preferred Transit Alternative is the most effective in improving access and mobility for existing and future residents and workers, increasing in-city transit options, and providing links in and between the transit network. In tandem with the land use and economic development component of the Atlanta BeltLine, the Preferred Transit Alternative will stimulate economic activity, structure growth, and address livability and economic opportunity.

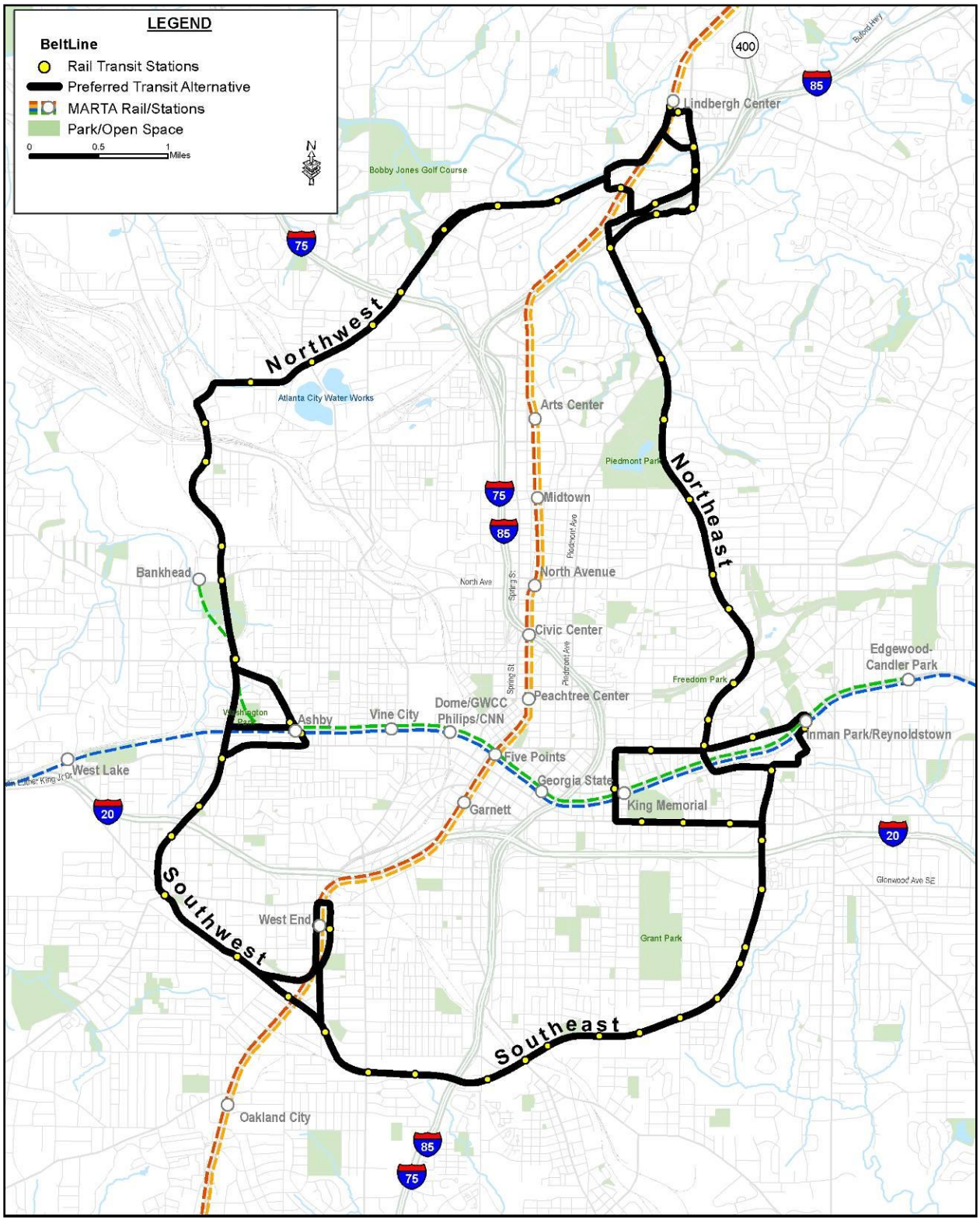
The project sponsors considered the input heard from the TAC and SAC committees and the public during the DEIS as well as the results of the DEIS analysis of the Build and No-Build Alternatives prior to selecting the Preferred Alternatives. The committee and public input played a particularly strong role in the decision-making process as it emphasized some of the differences observed among the alternatives in the DEIS analysis and highlighted the importance of those differences to the community The factors weighting the decision to select the Preferred Transit and Trails Alternatives included the fact that the use of Railroad ROW in the northwest zone is uncertain in the Tier 1 phase and that the Preferred Alternatives would:

- Provide connectivity to the most parks, neighborhoods, other transit and trails, BeltLine Tax Allocation District (TAD) acreage, and key destinations in the northwest zone such as Bankhead MARTA Rail Station, Westside Park, Atlantic Station, and Piedmont Hospital;
- Provide the most northerly access to Peachtree Street;
- Minimize private property impacts by placing alignments in existing transportation rights-of-way; and
- Reach the largest area underserved by rail transit.

The factors weighting the decision to select the modern streetcar mode included:

- Desire for operating plan with frequent stops;
- Lower potential operating noise, vibration and visual impacts; and
- Potentially fewer land use impacts, appropriate scale and community fit with smaller vehicles and infrastructure.

Figure 2-5: Preferred Transit Alternative



Source: AECOM 2011

2.2.3.3 Purpose and Need Met by Preferred Transit Alternative

The Preferred Transit Alternative distinguishes itself by responding to the Atlanta BeltLine goals and objectives as follows:

Goal 1 – Contribute to an integrated regional multi-modal transportation network that promotes seamless intermodal connectivity, increases community access to the existing transit and trails networks, and improves reliability of personal travel.

- The most desired connections to major employment centers and activity areas, such as Piedmont Hospital and a northern portion of Peachtree Street, can be made from the Preferred Transit Alternative (also applies to Goal 5).
- The Preferred Transit Alternative more effectively contributes to a multi-modal transportation network and provides an additional access point to existing transit, both heavy rail and bus service, by connecting to a fifth MARTA rail station (the Bankhead MARTA rail station) (also applies to Goal 5).
- The Preferred Transit Alternative does not rely on freight rail ROW in the northwest zone; it also avoids the contentious crossing of Howell Junction.

Goal 2 – Manage and encourage the growth and economic development of the city, region, and state by providing transit and transportation improvements to areas designated for growth.

- The adjacency of the Preferred Transit Alternative to underutilized industrial land, much of which is within the Atlanta BeltLine TAD, creates the greatest opportunity for redevelopment benefits (also applies to Goal 3).
- The Preferred Transit Alternative provides a connection to a major recreation asset and adjacent redevelopment opportunity with the redevelopment of Westside Reservoir Park.

Goal 3 – Preserve and revitalize neighborhoods and business districts through context sensitive design of transit and trails, increased accessibility to mobility options and provision of affordable housing and transportation, and other community benefits.

- The adjacency of the Preferred Transit Alternative to underutilized industrial land, much of which is within the TAD, creates the greatest opportunity for redevelopment benefits (also applies to Goal 2).
- Due to its high use of on-street ROW, the Preferred Transit Alternative adds the least amount of runoff during a storm (also applies to Goal 7).

Goal 4 – Provide a cost-effective and efficient transportation investment.

- There is no distinguishing rationale among all transit alignment alternatives considered.

Goal 5 – Provide a transit, bicycle, and pedestrian friendly environment.

- Goal 1 rationale bullets apply equally to Goal 5.

Goal 6 – Provide transit, bicycle, and pedestrian connectivity among communities, and between communities and existing and planned recreational opportunities.

- Goal 1 and 2 rationales apply equally to Goal 6 for the Preferred Transit Alternative.

Goal 7 – Minimize adverse impacts to the environment and foster positive environmental impacts.

- Due to its high use of on-street ROW, the Preferred Transit Alternative adds the least amount of runoff during a storm (also applies to Goal 3).

Goal 8 – Ensure consideration of public input throughout project planning and development.

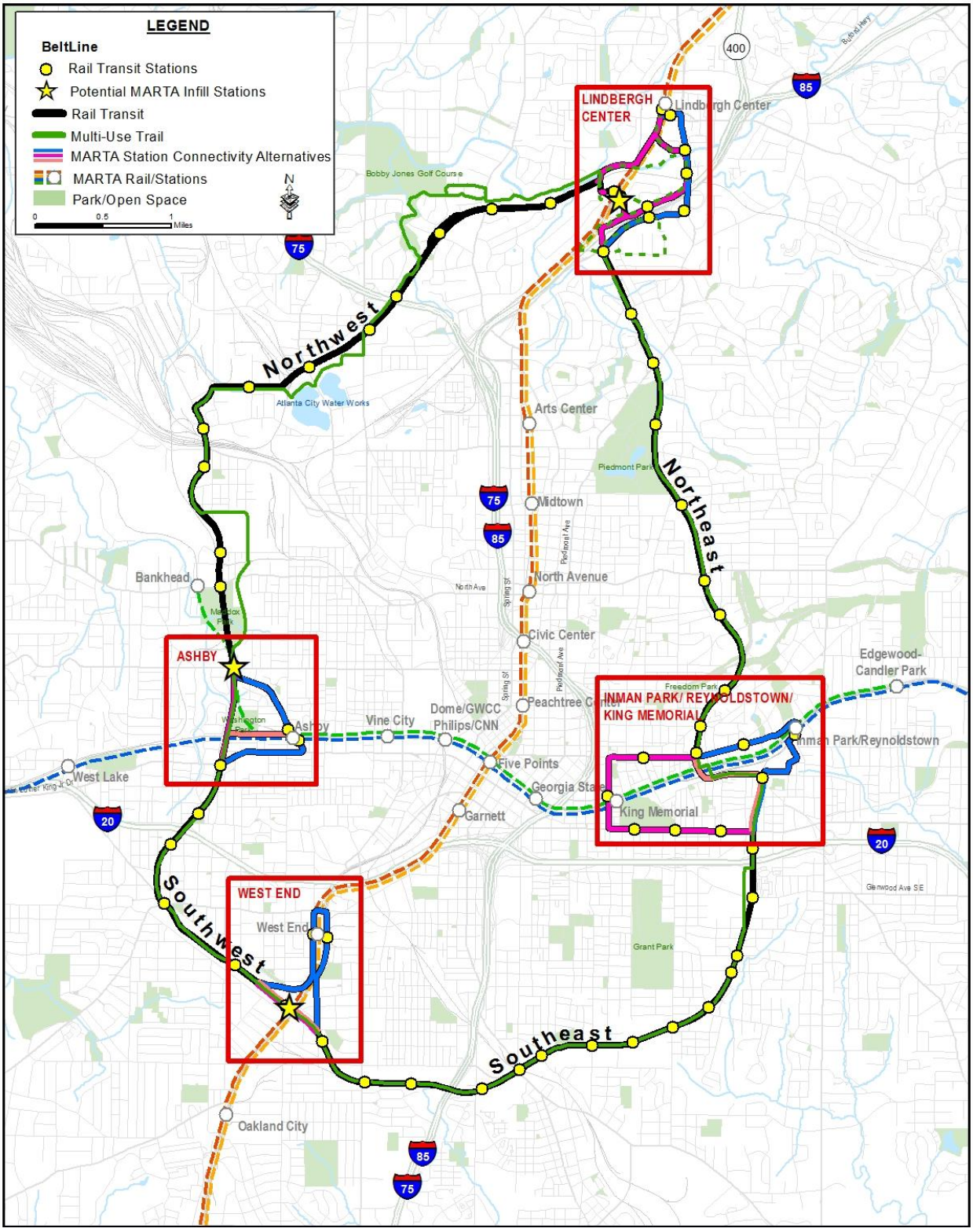
- Public comment cited concerns regarding congestion around Atlantic Station, Deering Road, and the proximity of activities to Brookwood Hills, which the Preferred Transit Alternative avoids.

2.2.4 MARTA Station Connectivity and Infill Station Alternative Areas

There is a need for the Atlanta BeltLine to interconnect with MARTA rail stations in order to permit travelers to move from one transportation facility to another. However, the existing railroad ROW on which most of the Atlanta BeltLine would operate does not extend to or connect directly with existing MARTA rail stations. The geographic areas in which a connection is needed are referred to as MARTA Station Connectivity and Infill Station Alternative areas. In some instances, these areas present challenges for identifying appropriate connections and the Atlanta BeltLine station sites such as significant grade differences between MARTA and the Atlanta BeltLine or proximity to active rail facilities. Connectivity options occur near six MARTA rail stations as shown in Figure 2-6 at the following locations: Lindbergh Center, Inman Park/Reynoldstown, King Memorial, West End, Bankhead, and Ashby. In three of these areas, there are also opportunities for potential infill stations: West End at Lee Street/Donnelly Avenue; Ashby at Joseph E. Boone Boulevard/MARTA Proctor Creek Line; and Lindbergh at Armour Yard.

The intent is to identify possible connections across these challenge areas. In the Tier 1 DEIS, the alignments within each of the MARTA Station Connectivity and Infill Station Alternative areas and their potential impacts were evaluated as a composite group, not individually. Evaluation of and decisions regarding the selection of preferred MARTA Station Connectivity and Infill Station Alternatives will be made during analyses subsequent to the Tier 1 FEIS. At that time, evaluations and decisions will be made regarding transit and trail alignments and potential infill stations along the MARTA rail corridors.

Figure 2-6: Areas Surrounding MARTA Station Connectivity and Infill Station Alternatives



Source: AECOM 2011

2.2.5 Transit Mode Technologies

As described in Section 2.1.2.1, the *Inner Core BeltLine Alternatives Analysis* included a prescreening of five candidate transit mode technologies to operate on the Atlanta BeltLine with this initial screening finding that either LRT or SC would be a viable transit mode technology. The basic goal of an LRT or SC project is to provide commuters and other travelers with the benefits of improved public transportation in a cost effective, environmentally sensitive, and socially responsible manner.

LRT and SC are in the same transit class, but are typically used differently. SC, a type of light rail vehicle, is substantially smaller than an LRT vehicle and usually operates as a single car train. On the Atlanta BeltLine, streetcars would draw electric power from overhead wires, and are relatively quiet, electrically-powered, zero-emissions vehicles. LRT vehicles look similar to SC and are powered in the same way, but the vehicles are substantially larger and LRT trains are typically operated as sets of two or three vehicles.

SC is most often used in urbanized conditions where it operates at relatively slow speeds in mixed traffic. LRT is typically used in urban and suburban locations where it operates at relatively higher speeds primarily in exclusive ROW. The characteristics of SC and LRT are summarized in Table 2-5.

Table 2-5: Summary of Typical Mode Characteristics

Characteristic	Light Rail Transit (LRT)	Modern Streetcar (SC)
Units per train	One to three cars	One
Vehicle Length/ Train Length	1 vehicle: 77 ft. to 110 ft. 2 vehicles: 154 ft. to 220 ft. 3 vehicles: 231 ft. to 330 ft.	66 to 85 ft.
Passenger capacity per vehicle	180 passengers per vehicle	128 to 133 (41 seated / 87 to 92 standing)
Power source	Overhead catenary	Overhead catenary
ROW / Operations	Exclusive ROW or in-street	Operate in-street
Station spacing	½- to one-mile	Three blocks to ½-mile
Peak hour passenger capacity	1,900 to 7,200 (1 to 3 vehicles)	1,170 to 1,300 (1 vehicle)

Conceptual designs for the Atlanta BeltLine assumed the more conservative LRT geometric standards to assure that either LRT or SC could be used. By using the more conservative LRT design standards, the project sponsors are preserving the option for modal interoperability with other future transit projects.

Because LRT is a larger vehicle than SC, requiring station lengths, track geometry, systems and structures that are typically longer than those of SC, the impacts stemming from LRT design standards in the DEIS are considered to be worst case. Only those parameters that meaningfully differ between the two technologies are described in the DEIS.

The project sponsors performed conceptual engineering analyses to support the DEIS that took into consideration alignments within all four zones as well as MARTA Station Connectivity and Infill Station Alternative Area design considerations. The analysis examined transit geometry (curve radii, grades, and clearances), track configuration, and safety needs. The outcome of these analyses is that either mode can be accommodated throughout the corridor.

Further examination of mode performance in terms of system, vehicle, and infrastructure characteristics as well as community desires determined that SC is better adapted to the

Atlanta BeltLine project. As shown in Table 2-6, LRT and SC are equally adaptable in terms of conceptual design and ability to connect to other planned transit projects. Although LRT has a slightly lower annual O&M cost, SC can be implemented at a generally lower capital cost while its shorter vehicle lengths provide greater flexibility than LRT in navigating the constrained geometry of the alignments, and may result in fewer noise, vibration, and land use impacts. In addition, SC is better adapted to the Atlanta BeltLine operating plan that calls for frequent stops. For these reasons, SC is FTA and MARTA's preferred mode technology for the Atlanta BeltLine project.

Table 2-6: Mode Characteristics and Constraints as Applied to the Atlanta BeltLine Project

Mode Characteristics	Light Rail Transit (LRT)	Modern Streetcar (SC)
System		
Conceptual design for entire Atlanta BeltLine project (main line and connectivity areas) can accommodate mode	✓	✓
Potentially higher operating speed	✓	
Ability to connect with other planned transit projects	✓	✓
Generally lower capital costs for systems		✓
Vehicle and Infrastructure		
Higher single vehicle capacity	✓	
Potentially smaller fleet (total number of vehicles)	✓	
Greater flexibility in constrained track geometry		✓
Generally lower capital costs per vehicle		✓
Community Desires		
Ability to make frequent stops (adaptable to operating plan and Atlanta BeltLine economic development objectives)	✓	✓+
Lower potential for noise, vibration and visual impacts		✓
Small vehicle and infrastructure (potentially fewer land use impacts, appropriate scale and community fit)		✓

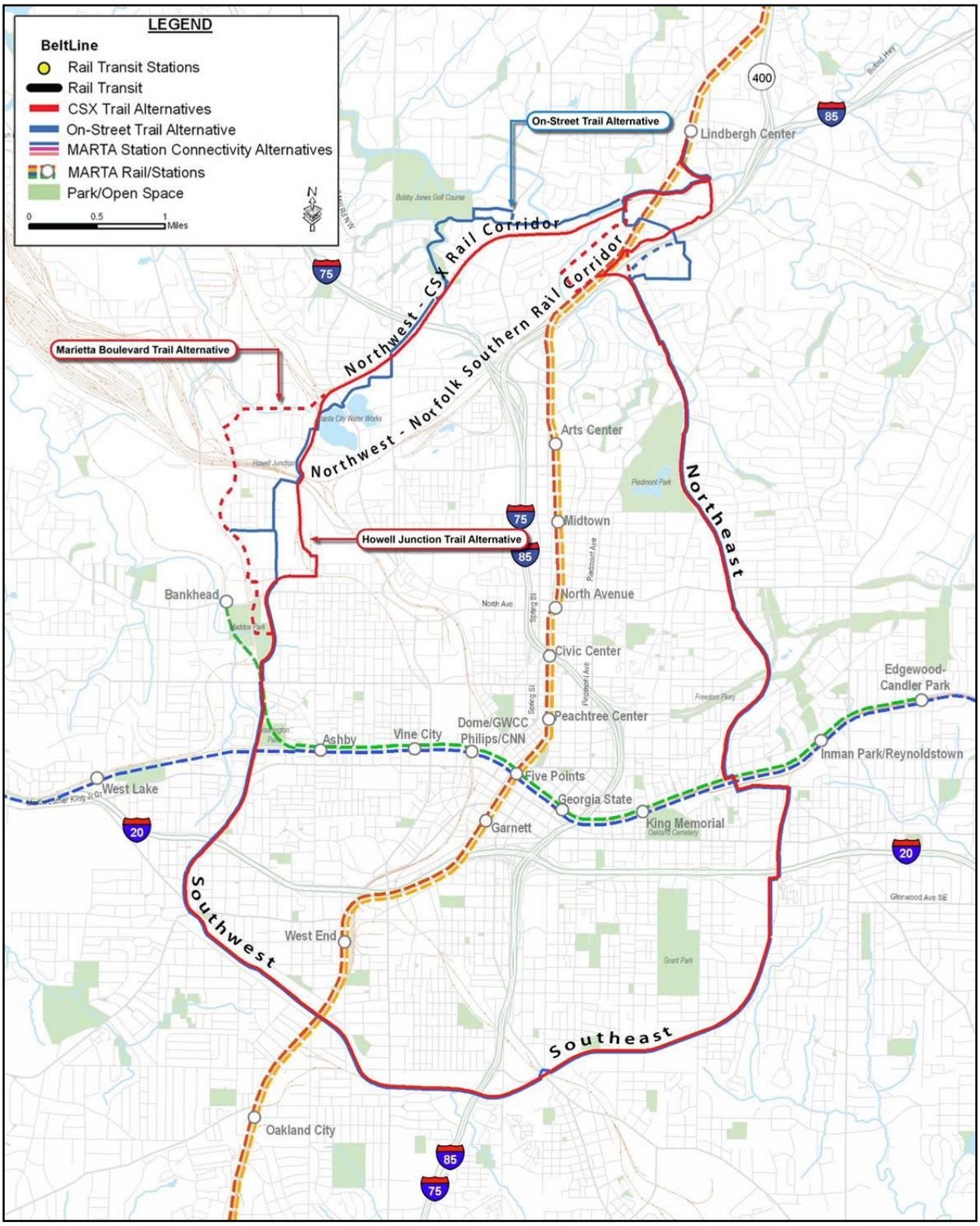
2.3 Tier 1 DEIS Trail Alternatives

In general, the Trail Build Alternatives are alongside the Transit Build Alternatives in the northeast, southeast, and southwest zones, as illustrated in Figure 2-7. The parallel alignment of the Preferred Transit and Trails Alternatives reduces the potential for community and environmental disruption and would be the least costly. In the northwest zone, two of the three Trail Build Alternatives, the Marietta Boulevard and Howell Junction Trail Alternatives, would follow alongside the Transit Build Alternatives that are located within or adjacent to, but outside the CSX freight rail corridor.

The exception is the On-Street Trail Alternative, which is parallel to the CSX railroad corridor in the northwest zone for a portion of its length; however, it would use other parallel streets and ROW for much of its length. The on-street portions of the Preferred Trail Alternative enable access to neighborhoods and parks that are not adjacent to the Preferred Transit Alternative alignment.

Table 2-7 provides a comparison of the distinguishing characteristics and constraints of the Trail Build Alternatives. Factors include engineering, operational, and environmental considerations as well as public observations. Some or all Trail Build Alternatives share certain characteristics, such as consistency with the Atlanta BeltLine vision; however, other characteristics or constraints, such as preserving the ability to keep transit and trails together, set the Trail Build Alternatives apart from each other. Table 2-3 summarizes the final scores for each Trail Build Alternative, including the better performers, the Marietta Boulevard and Howell Junction Trail Alternatives.

Figure 2-7: Trail Build Alternatives



Source: AECOM 2011

Table 2-7: Trail Alternative Characteristics and Constraints in Northwest Zone

Trail Alignment Alternative	Requires New Structure Across Howell Junction	Connections to Key Destinations				Northerly Access to Peachtree	Number of Parcels Potentially Impacted[1]	SAC/TAC/Public Input			Other Key Differences
		Bankhead MARTA rail station	Westside Park	Atlantic Station	Piedmont Hospital			Consistent with the project Vision[2]	Reaches an Area Underserved by Rail Transit	Preserves Ability to Keep Transit and Trail Together	
Howell Jct. Alternative	✓				✓	✓	84[3]	✓	✓	✓	High performing - community benefits Low performing – low number of potential ecological impacts
Marietta Blvd. Alternative		✓	✓		✓	✓	103[3]	✓	✓	✓	High performing - community benefits Low performing – low number of potential ecological impacts Low performing – low number of potential for hazardous waste effects
On-Street Alternative	✓					✓	69[3]	✓	✓		High performing - access to transit and other trails Potentially adds one additional stream impact Has the most runoff during a storm

[1] Totals include the number of parcels in the northwest zone only, excluding MARTA Connectivity Areas and Infill Station Alternatives which will be studied in future phases of analysis; includes partial impacts and total impacts; calculations were obtained from the *Analysis of Potential Right-of-Way Needs Technical Memorandum*.

[2] Consistency with the project vision includes location relative to the Atlanta BeltLine Tax Allocation District (TAD) and proximity to areas of potential future development.

[3] Totals include the number of parcels for transit and trail.

2.3.1 Preliminary Cost Estimates for Trail Alternatives

Table 2-8 summarizes the preliminary capital costs for the Trail Build Alternatives reviewed during the DEIS.

Table 2-8: Summary of Preliminary Capital Cost Estimates for Trails

Trail Alternative	Preliminary Capital Cost Estimates (millions of 2009 dollars)				
	Construction Cost	Potential Right-of-Way (ROW) Cost	Total Cost	Length (miles)	Total Cost per Mile
Howell Jct.	$98.5	$30.1	$128.6	20.9	$6.15
Marietta Blvd.	$99.1	$29.3	$128.4	21.4	$6.00
On-Street	$106.0	$28.7	$134.7	21.8	$6.18

Source: AECOM 2010

The current preliminary transit and trail capital cost estimates will be further refined in subsequent stages of project planning and engineering design as project elements are rendered in greater detail. The format of the estimates, as it makes use of FTA Standard Cost Categories with clearly documented assumptions, lends itself to updates throughout the project development process.

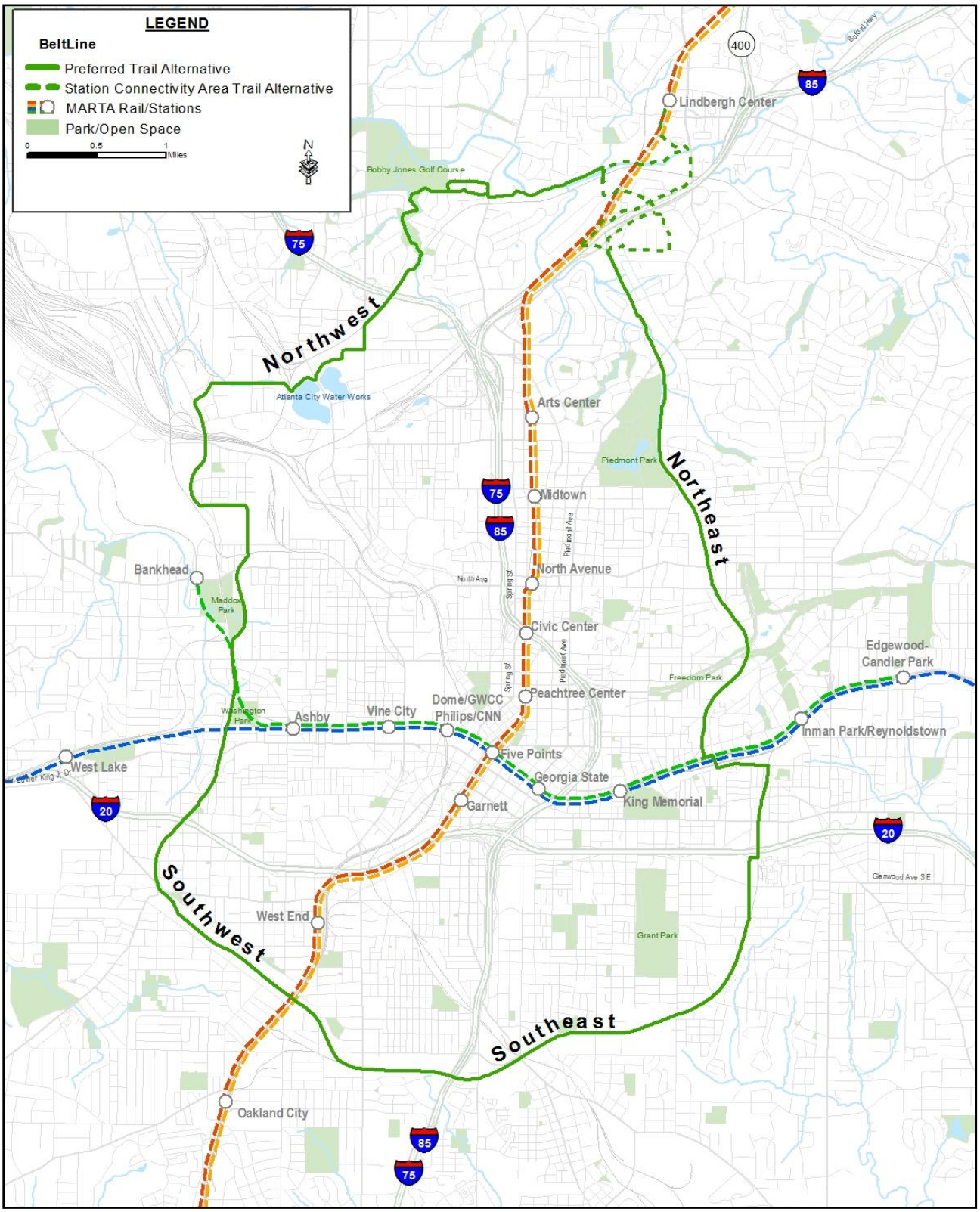
2.3.2 Tier 1 DEIS Conclusions

Based on the analysis presented in the Tier 1 DEIS and from the comments received during the DEIS public comment period, FTA and MARTA determined that the best performing and preferred multi-use trail alternative is a hybrid of the Marietta Boulevard Trail Alternative and the On-Street Trail Alternative, using the best features of each. Specifically, the Preferred Trail Alternative would be the majority of the Marietta Boulevard Trail Alternative from the Ashby MARTA Station and Connectivity Infill Alternative area to the area just south of Jefferson Street where it connects with the On-Street Trail Alternative around the Fulton County Jail. Continuing north, it uses the Marietta Boulevard Trail Alternative to the Atlanta Water Works, where it follows the On-Street Trail Alternative until the Lindbergh Center MARTA Station and Connectivity Infill Alternative area. Figure 2-8 shows the elements of the Preferred Trail Alternative derived from a combination of the Marietta Boulevard Trail and the On-Street Trail Alternatives. It is important to note that this is not a new trail, but a combination of alignments that were each studied in the Tier 1 DEIS.

The project sponsors considered the input heard from the TAC and SAC committees and the public during the DEIS as well as the results of the DEIS analysis of the Build and No-Build Alternatives prior to selecting the Preferred Alternatives. The committee and public input played a particularly strong role in the decision-making process as it emphasized some of the differences observed among the alternatives in the DEIS analysis and highlighted the importance of those differences to the community. The factors weighting the decision to select the Preferred Transit and Trails Alternatives included the fact that the use of Railroad ROW in the northwest zone is uncertain in the Tier 1 phase and that the Preferred Alternatives would:

- Provide connectivity to the most parks, neighborhoods, other transit and trails, BeltLine Tax Allocation District (TAD) acreage, and key destinations in the northwest zone such as Bankhead MARTA Rail Station, Westside Park, Atlantic Station, and Piedmont Hospital;
- Provide the most northerly access to Peachtree Street;
- Minimize private property impacts by placing alignments in existing transportation rights-of-way; and
- Reach the largest area underserved by rail transit.

Figure 2-8: Preferred Trail Alternative



2.3.3 Purpose and Need Met by Preferred Trail Alternative

The Preferred Trail Alternative performs distinctly better than the other Trail Build Alternatives in response to the Atlanta BeltLine's purpose and need as expressed through the goals and objectives listed below. The Tier 1 DEIS analysis indicates that the Preferred Trail Alternative is the most effective in improving access and mobility for existing and future residents and workers, increasing in-city bicycle and pedestrian options, and providing links in and between the transit and trail networks. In tandem with the land use and economic development component of the Atlanta BeltLine, the Preferred Trail Alternative will stimulate economic activity, structure growth, and address livability and economic opportunity.

The Preferred Trail Alternative distinguishes itself by responding to the Atlanta BeltLine goals and objectives as follows:

Goal 1 – Contribute to an integrated regional multi-modal transportation network that promotes seamless intermodal connectivity, increases community access to the existing transit and trails networks, and improves reliability of personal travel.

- The most desired connections to major employment centers and activity areas, such as Piedmont Hospital and a northern portion of Peachtree Street, can be made from the Preferred Trail Alternative (also applies to Goal 5).
- The Preferred Trail Alternative provides the most opportunity for connecting to the existing trails network.
- The Preferred Trail Alternative does not rely on freight rail ROW in the northwest zone; it also avoids the contentious crossing of Howell Junction.

Goal 2 – Manage and encourage the growth and economic development of the city, region, and state by providing transit and transportation improvements to areas designated for growth.

- The Preferred Trail Alternative provides a connection to a major recreation asset and adjacent redevelopment opportunity with the redevelopment of Westside Reservoir Park.

Goal 3 – Preserve and revitalize neighborhoods and business districts through context sensitive design of transit and trails, increased accessibility to mobility options and provision of affordable housing and transportation, and other community benefits.

- The adjacency of the Preferred Trail Alternative to underutilized industrial land, much of which is within the Atlanta BeltLine TAD, creates the greatest opportunity for redevelopment benefits (also applies to Goal 2).

Goal 4 – Provide a cost-effective and efficient transportation investment.

- There was no distinguishing rationale among the trail alignment alternatives.

Goal 5 – Provide a transit, bicycle, and pedestrian friendly environment.

- Goal 1 rationale bullets apply equally to Goal 5.

Goal 6 – Provide transit, bicycle, and pedestrian connectivity among communities, and between communities and existing and planned recreational opportunities.

- The Preferred Trail Alternative provides close access to major recreational facilities, such as the Westside Reservoir Park, Tanyard Creek Park, and Bobby Jones Golf Course.
- Goal 1 and 2 rationales apply equally to Goal 6 for the Preferred Trail Alternative.

Goal 7 – Minimize adverse impacts to the environment and foster positive environmental impacts.

- There was no distinguishing rationale among the trail alignment alternatives.

Goal 8 – Ensure consideration of public input throughout project planning and development.

- Public comment cited concerns regarding congestion around Atlantic Station, Deering Road, and the proximity of activities to Brookwood Hills, which the Preferred Trail Alternative would avoid.

2.4 Alternatives Considered in the Tier 1 FEIS

The FTA and MARTA are considering three alternatives in this FEIS/ 4(f) Technical Memorandum, the No-Build Alternative the Preferred Transit Alternative (known in the Tier 1 DEIS as D-Marietta Boulevard SC Alternative), and the Preferred Trail Alternative (a hybrid of the Marietta Boulevard and On-Street Alternatives considered in the Tier 1 DEIS). This section describes each alternative.

2.4.1 No-Build Alternative

As described in the Tier 1 DEIS, the No-Build Alternative is comprised of the following:

- The existing transportation system including roadways, transit service, and trails;
- All programmed transportation projects in the cost constrained ARC's Envision6 RTP and the Fiscal Years 2008-2013 TIP, except for the Atlanta BeltLine transit and trails; and,
- The trail improvements that the City of Atlanta and ABI have committed would be constructed, although some are elements of the Build Alternatives.

The proposed elements of the transportation system comprising the No-Build Alternative in the study area are listed in Appendix Table 2.2-1 and illustrated in Appendix Figure 2.2-2, both in Appendix D. These elements would provide a number of roadway maintenance, operational and capacity improvements; primarily radial transit services; and localized bicycle/pedestrian improvements.

Collectively, these facilities would not address the elements of the purpose and need. Specifically, the No-Build Alternative would not increase in-city transit and bicycle/pedestrian options to the extent that those options would improve access and mobility for existing and future residents and workers study area-wide. None of the planned projects specifically targets the study area for transit or bicycle/pedestrian improvements, although several would cross the study area to connect Downtown and

Midtown areas with areas outside the study area. As a result, the No-Build Alternative would not:

- provide public transit improvements to accommodate growing population and employment in the study area;
- provide public transit and bicycle/pedestrian options in those areas in which environmental justice populations have been identified in the study area;
- increase transportation options in parallel with making changes in land use and development patterns in the study area to improve economic opportunities and quality of life;
- increase transportation options in the study area that will provide more travel connections and greater efficiency and potentially reduce roadway congestion;
- increase rail transit options between neighborhoods and activity centers in the study area and provide connections to MARTA; or
- provide connections between parks.

Despite its failings and in accordance with NEPA, the No-Build Alternative is retained in this FEIS/ 4(f) Technical Memorandum to serve as a baseline by which the Preferred Alternatives are compared.

2.4.2 Preferred Transit Alternative Description

The D- Marietta Boulevard SC Alternative, from here on known as the Preferred Transit Alternative, is approximately 22-miles long and will accommodate approximately 50 proposed station locations with an average spacing of slightly less than a ½-mile. The Preferred Transit Alternative is described below by zone, and shown in Figure 2-5.

- Northeast zone – The alignment begins at Lindbergh MARTA rail station and proceeds southeast (see discussion under Section 2.2.4 MARTA Station Connectivity and Infill Station Alternatives). At Ansley Golf Course, the alignment enters the Decatur Belt and continues south to Edgewood Avenue on the Decatur Belt, an unused freight corridor owned by the ADA. Between these points, and starting on the north, the alignment crosses under Montgomery Ferry Road, proceeds behind Ansley Mall, crosses under Piedmont Road, proceeds alongside Piedmont Park, crosses Monroe Drive, crosses over Ponce de Leon Avenue and North Avenue, crosses under Freedom Parkway and Highland Avenue, and ends at Edgewood Avenue on the south. At the southern end, the alignment enters the area that includes the Inman Park/Reynoldstown and King Memorial MARTA rail stations.
- Southeast zone – The alignment begins at the Inman Park/Reynoldstown and King Memorial MARTA rail stations areas and proceeds southwest (see discussion under Section 2.2.4). From the point where the MARTA Station Connectivity and Infill Station Alternatives converge near the intersection of Memorial Drive and Bill Kennedy Way, the alignment proceeds southwest to Allene Avenue primarily on the A&WP BeltLine, a freight railroad owned by CSX. A short section of the alignment between Memorial Drive and Glenwood Avenue is on-street ROW owned by the City of Atlanta. Between these points, and starting on the north, the alignment proceeds south within the Bill Kennedy Way roadway ROW, crosses I-20, enters the CSX ROW at Glenwood Avenue, crosses over Ormewood Avenue and Confederate Avenue, crosses Boulevard and Milton Avenue, crosses under McDonough Boulevard and I-75/85, crosses over Metropolitan Parkway, and ends at Allene

Avenue on the southwest. At the western end, the alignment enters the area that includes the West End MARTA rail station.

- Southwest zone – The alignment begins at the West End MARTA rail station and proceeds northwest (see discussion under Section 2.2.4). From the convergence of the MARTA Station Connectivity and Infill Station Alternatives near Rose Circle, the alignment proceeds north to Martin Luther King, Jr. Drive on an unused railroad ROW owned by Georgia Department of Transportation (GDOT). Between these points, the alignment proceeds northwest crossing under Lawton Street, Ralph David Abernathy Boulevard, and I-20, and ends at Martin Luther King, Jr. Drive. At the northern end, the alignment enters the area that includes the Ashby MARTA rail station.
- Northwest zone - The alignment extends north from Joseph E. Boone Boulevard on former railroad ROW before transitioning to an alignment using Marietta Boulevard as an in-street running section. The alignment turns east across vacant land to rejoin the area adjacent to but outside the CSX corridor west of Howell Mill Road.

2.4.3 Preferred Trail Alternative Description

In general, the Preferred Trail Alternative follows alongside the Preferred Transit Alternative in the northeast, southeast, and southwest zones, as illustrated in Figure 2-8. The parallel alignment of the transit and trails reduces the potential for community and environmental disruption and would be the least costly. In the northwest zone, the Preferred Trail Alternative follows the Preferred Transit Alternative alignment except in three key areas: around Maddox Park, around the Atlanta Water Works, and along Tanyard Creek near Bobby Jones Golf Course. In these areas, the Preferred Trail Alternative would use other, parallel streets and ROW for much of its length. Separate trail alignments are required because of a lack of sufficient existing ROW, an engineering or access issue, or a need to provide a connection to a park that is not adjacent to the transit alignment.

2.4.4 Preferred Alternative Cost Estimates

The project sponsors developed an estimate of capital as well as operating and maintenance costs to implement the Preferred Transit Alternative. The estimated capital cost in 2009 dollars is approximately $1,611 million, or $66 million per mile. The estimated annual operations and maintenance cost in 2009 dollars is approximately $14.49 million.

The project sponsors developed an estimate of capital as well as operating and maintenance costs to implement the Preferred Trail Alternative. The estimated capital cost in 2009 dollars is approximately $100.4 million or $4.6 million per mile.

2.5 Supplemental Transit Features

Other elements of the proposed Atlanta BeltLine Preferred Transit Alternative are described below, which would be integral to the operation of a transit service, but are not decisive factors in this Tier 1 EIS. These other elements will be considered in detail in subsequent analysis. They include transit station locations, operational characteristics, and vehicle storage and maintenance facilities.

2.5.1 Transit Station Locations

The Preferred Transit Alternative includes approximately 50 potential station locations, which are illustrated in Figure 2-2 through Figure 2-4 and other figures throughout this FEIS/ 4(f) Technical Memorandum. Previous and ongoing studies, along with public and agency input, have helped to identify potential station locations and provide guidance regarding station spacing and frequency. Public and agency input has indicated a preference for numerous transit stops providing enhanced origin and destination accessibility relative to high mobility and transit travel speeds. A preference was also expressed for a few park-and-ride type facilities due to the high-density land use characteristics of the study area and transit-oriented focus of future development planning.

Potential station locations were identified through the *Atlanta BeltLine Redevelopment Plan* and subsequent Atlanta BeltLine Subarea Master Plans (Section 1.5.2.1). Table 2-9 lists the potential station locations along with which Atlanta Beltline Subarea Master Plan addresses them, the likely mode of access to the stations, and key potential connectivity with transit projects in the No-Build Alternative. These station locations are based on existing bus routes, as well as access, land use, and circulation plans developed through the *Atlanta BeltLine Redevelopment Plan* and Atlanta BeltLine Subarea Master Plans. These station locations and access details are preliminary in nature. Refinement of station access and locations will occur in future project development efforts.

Table 2-9: Potential Station Locations

Station Name	Atlanta BeltLine Subarea Master Plan	Primary Access Types	Comments
Northeast Zone			
Montgomery Ferry	Subarea 6	Bicycle - pedestrian - bus	
Ansley Mall	Subarea 6	Bicycle - pedestrian - bus	
Piedmont Park	Subarea 6	Bicycle - pedestrian - bus	
Virginia Monroe	Subarea 6	Bicycle - pedestrian - bus	
Ponce De Leon	Subarea 5	Bicycle - pedestrian - bus	
Angier Springs	Subarea 5	Bicycle - pedestrian - bus	
Highland	Subarea 5	Bicycle - pedestrian - bus	
Irwin	Subarea 5	Bicycle - pedestrian - bus	Potential connection to Atlanta Streetcar
Edgewood	Subarea 5	Bicycle - pedestrian - bus	Potential connection to Atlanta Streetcar
Southeast Zone			
Reynoldstown	Subarea 4	Bicycle - pedestrian - bus	
Memorial	Subarea 4	Bicycle - pedestrian - bus - car	Potential connection to I-20 East and Memorial Drive BRT projects
Glenwood	Subarea 4	Bicycle - pedestrian - bus - car	Potential connection to I-20 East and Memorial Drive BRT projects
Ormewood	Subarea 3	Bicycle - pedestrian - bus	
Delmar	Subarea 3	Bicycle - pedestrian - bus	
Confederate Avenue	Subarea 3	Bicycle - pedestrian - bus	
Boulevard	Subarea 3	Bicycle - pedestrian - bus	
Cherokee (Extension)	Subarea 3	Bicycle - pedestrian - bus	

Station Name	Atlanta BeltLine Subarea Master Plan	Primary Access Types	Comments
Hill Street	Subarea 3	Bicycle - pedestrian - bus	
Milton	Subarea 2	Bicycle - pedestrian - bus	
McDonough - University	Subarea 2	Bicycle - pedestrian - bus	
Pryor	Subarea 2	Bicycle - pedestrian - bus - car	
McDaniel	Subarea 2	Bicycle - pedestrian - bus	
Metropolitan	Subarea 2	Bicycle - pedestrian - bus	
Allene	Subarea 2	Bicycle - pedestrian - bus	
Southwest Zone			
Lee	Subarea 1	Bicycle - pedestrian - bus	
Lawton	Subarea 1	Bicycle - pedestrian - bus	
RDA	Subarea 1	Bicycle - pedestrian - bus	
Langhorn	Subarea 1	Bicycle - pedestrian - bus - car	
Westview	Subarea 10	Bicycle - pedestrian - bus - car	
MLK	Subarea 10	Bicycle - pedestrian - bus	
Northwest Zone			
Boone	Subarea 9	Bicycle - pedestrian - bus	
Bankhead MARTA	Subarea 9	Bicycle - pedestrian - bus - rail - car	
Rice	Subarea 9	Bicycle - pedestrian - bus	
W. Marietta	Subarea 9	Bicycle - pedestrian - bus	
Elaine	Subarea 8	Bicycle - pedestrian - bus	
Fairmont	Subarea 8	Bicycle - pedestrian - bus	
Howell Mill	Subarea 8	Bicycle - pedestrian - bus	
Northside	Subarea 8	Bicycle - pedestrian - bus	Potential connection to I-75 LRT project
I-75	Subarea 7	Bicycle - pedestrian - bus - car	Potential connection to I-75 LRT project
Collier	Subarea 7	Bicycle - pedestrian - bus	
Peachtree	Subarea 7	Bicycle - pedestrian - bus - car	Potential connection to Atlanta Streetcar
Fairhaven	Subarea 7	Bicycle - pedestrian - bus	

Note: Does not include stations in MARTA Connectivity and Infill Station Alternative Areas, because the alignments in these areas are not being determined in Tier 1

Station location and characteristics will be refined during the Tier 2 analysis. The Atlanta BeltLine project may include improvements to the street, curbside areas, and sidewalks near proposed stations to facilitate pedestrian, bicycle, and transit passenger access, roadway-based vehicle circulation, and the required geometry for operation of the selected technology. The decision regarding joint infill stations serving both MARTA heavy rail and the Atlanta BeltLine in the MARTA Station Connectivity and Infill Station Alternative areas is being deferred to subsequent analysis.

2.5.2 Operational Characteristics

Assumptions from previous studies and public and agency input have provided guidance in establishing Atlanta BeltLine transit service characteristics such as vehicle headways, scheduling, and train capacity provisions. Public and agency input has indicated a preference for providing enhanced and frequent origin and destination accessibility relative to favoring long distance mobility and transit travel speeds.

Ridership projections were developed during the *Inner Core BeltLine Alternatives Analysis Detailed Screening Results* (MARTA 2007). The results indicate the line loads for the B3 Alternative would be 1,129 passengers in the morning and afternoon peak periods, peak direction (between Lindbergh and Armour Drive). Peak periods are from 6:30am to 9:30am, and 3:30pm to 6:30pm. Through the 2007 screening analysis, the estimated end-to-end travel time for both LRT and SC would be over 71 minutes.

In this FEIS/ 4(f) Technical Memorandum, the service frequencies, or headways, are assumed to be 10 minutes during the peak period, 12 minutes during the off-peak period, and 15 and 30 minutes for evening and late evening, respectively.

For the Preferred SC mode, these assumptions result in a need for 19 SC trains in the three-hour peak period. This service would require 38 SC vehicles in the peak periods, and 46 SC vehicles total, including a 20 percent spare ratio[5].

2.5.3 Vehicle Storage and Maintenance Facilities

The new transit system developed for the Atlanta BeltLine project would require facilities to support operations and would potentially include the following:

- Storage yard for overnight and midday storage of vehicles, parts, materials, and special maintenance equipment;
- Employee facilities for operations offices, reporting crew, and welfare functions; and
- Maintenance facility for daily maintenance (cleaning, fueling, inspection, and running repairs) and heavy repair or overhaul.

A single storage and maintenance facility has been assumed to serve the entire Atlanta BeltLine fleet. Previous studies identified a potential site for vehicle storage and maintenance in the area immediately south of the existing MARTA Armour Yard facility near the northern end of the northeast zone of the Atlanta BeltLine alignment. This site is approximately 10 to 12 acres and would have the capacity for approximately 50 LRT-scale vehicles accommodating vehicle storage, daily and heavy maintenance activities, fleet operations, and employee welfare functions.

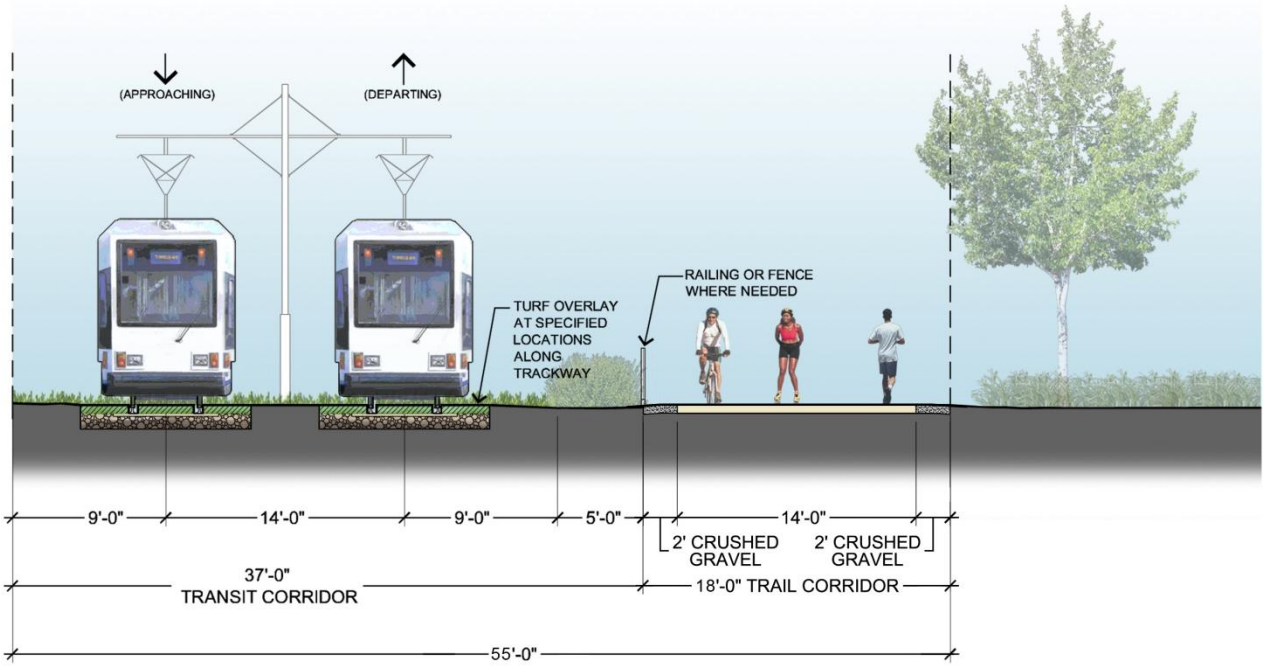
Consideration of this site and other potential sites will occur during Tier 2 analysis. In the Tier 1 EIS, the project sponsors considered operations and maintenance of Atlanta BeltLine vehicles in the context of the operation and maintenance of other vehicle technologies currently used or planned for use in other MARTA projects.

[5] Spare ratio is the number of spare vehicles divided by the vehicles required for maximum service.

2.5.4 Transit and Multi-Use Trail Cross Sections

Typically, the transit and trail corridor requires a 55-foot wide cross section for implementation, as illustrated in Figure 2-9. This cross section consists of a 37-foot wide transit corridor including a 5-foot buffer adjacent to a 18-foot trail corridor that includes a 4-foot buffer. At minimum, the transit and trail combined can fit within a 52-foot wide section with the removal of buffer space. Transit stations with platforms can be configured as a 72-foot wide section with a center platform for use in both directions of transit or a 75-foot wide section with a side platform for each direction of transit.

Figure 2-9: Typical Section of Trail and Transit



The transit component will operate in both directions, with tracks laid immediately adjacent to each other along the entirety of the alignment. Each travel direction will have dedicated track, with the potential exception of some bridge and tunnel sections where track sharing for bi-directional movement is the only option for travel due to ROW constraints.

3.0 AFFECTED ENVIRONMENT

3.1 Summary of Potential Environmental Effects

Table 3-1 provides an at-a-glance summary of the potential effects of the Preferred Transit and Trails Alternatives and the No Build Alternative. In addition to performing at the highest level with respect to the project purpose and need, the Preferred Transit and Trails Alternatives will provide many transportation, community, and environmental benefits. These benefits are achieved through planning and design efforts to date that have optimized the alignments and operations in response to the purpose and need and public input, while avoiding or minimizing adverse community and environmental impacts. FTA and MARTA intend to continue applying these avoidance and minimization strategies during Tier 2 analysis and to develop effective mitigation commitments to overcome potential unavoidable impacts that remain.

3.2 Transportation Systems and Facilities

This section describes existing and planned transportation systems and facilities in the study area, explains how the No-Build and the Preferred Transit and Trail Alternatives would potentially benefit or adversely affect them, describes means to avoid or minimize potential adverse effects, and identifies evaluations to be undertaken during subsequent analyses.

Topics covered within this section include travel patterns, transit services, the roadway network, freight rail services, transit and passenger rail services, bicycle and pedestrian routes, and transportation planning. Separately, a *Technical Memorandum on Transportation Systems and Facilities* provides further detail regarding these topics.

3.2.1 Methodology

The transportation elements discussed here include publicly owned and operated systems and private railroads. These systems include City of Atlanta streets, roadways maintained by GDOT, public transit (local bus service, commuter bus service, and MARTA heavy rail), railroads (freight and passenger), and pedestrian and bicycle networks. Planned transportation systems include additional modes not already present in the Atlanta area, such as SC, LRT, and passenger rail[6].

3.2.1.1 Assessment of Effects of Transportation Systems and Facilities

Consistent with the Tier 1 EIS approach, the potential effects of the alternatives on transportation systems and facilities were assessed at a general level using existing information. This evaluation of effects recognizes the need for a more detailed analysis to refine the design and evaluations in subsequent phases of the project.

This section addresses the effects of the No-Build Alternative and of the Preferred Transit and Trail Alternatives outside of the MARTA Station Connectivity and Infill Station Alternative areas. As described in Section 2.2.4, decisions regarding alternatives in those areas will be evaluated in subsequent analysis.

[6] Passenger rail is an electric or diesel propelled railway for urban passenger train service consisting of local short distance travel operating between adjacent cities and towns, or between a central city and adjacent suburbs.

Table 3-1: Summary of Potential Effects for the No-Build and Preferred Alternatives

	No-Build Alternative	Preferred Transit and Trail Alternatives
Transportation Systems and Facilities		
Travel Patterns	• Would not facilitate trips among activity centers, major travel generators, or MARTA rail stations in study area • Would not increase transportation options or improve travel efficiency in study area • Substantial gaps in bicycle and pedestrian networks between activity centers will remain • Serve nearly 80,000 people and 80,000 jobs in 2030 within ½-mile of proposed station	• Serves regional Home-Based Work (HBW) trips destined for study area • Redirects over 6,000 daily trips from radial routes • Improves average travel time savings in study area • Reduces number of study area transit trips transfers • Serves nearly 138,000 people and 117,000 jobs in 2030 within ½-mile of proposed stations • Serves twice the population of underserved groups compared to the No-Build
Transit Services	• No affects to existing MARTA rail or local bus services or GRTA commuter bus service • Connects to14 planned transit and passenger rail projects • In-street alignments of planned transit projects could impact existing bus service • Does not improve bicycle and pedestrian access to and from MARTA stations and bus stops	• Reduces transit transfers and rail congestion at MARTA Five Points Station • Does not duplicate existing transit services • Connects to 21 local bus routes, 6 express routes, and 24 planned transit and passenger rail projects • In-street alignments could affect existing bus service. Shared use of lane/facilities could improve bus service, whereas exclusive lane for Preferred Transit Alternative could negatively affect bus service • Improves bicycle and pedestrian access to and from MARTA stations, bus stops, and passenger rail • Subsequent analysis in the Tier 2 NEPA phase will determine potential effects on transit services, especially schedule adjustments, to facilitate transfers between services
Roadway System	• Most travelers with origins and destinations in the study area would not be provided with a transport alternative • Provide maintenance and operational upgrades, capacity improvements • The Atlanta Streetcar, SR 13 bus rapid transit (BRT), and Memorial Drive BRT will operate in-street and could increase congestion	• Diversion of home based work (HBW) and non-work trips may slow growth of congestion on study area roadways • At-grade crossings and in-street sections will have a minor effect on roadway operations • Bill Kennedy Way in-street section may affect congestion, parking, and existing bike facilities • Forecasted congestion and nearby intersections will require design to minimize operation effects. Further analysis and design refinement will occur in Tier 2 analysis
Freight Rail	• Lindbergh/Emory High Speed Transit and the Atlanta to Lovejoy Commuter Rail would potentially use or cross freight rail corridors	• Could affect existing and future freight operations in the southeast zone • Mitigation of effects to be determined and minimized through on-going consultation with freight rail operators.
Passenger Rail	• No affects to existing passenger rail operations	• No affects to existing / planned passenger rail • Passenger rail connections support the project need to increase transportation connections, travel efficiency, and reduce travel by personal vehicle
Pedestrian and Bicycle	• Ralph David Abernathy Boulevard and Marietta Boulevard facilities would supplement existing facilities • Significant gaps in network would remain throughout the study area • Minimally responsive to project needs • Would not increase amount of public greenspace in the study area or provide connections between parks • New bike/pedestrian facilities have no exclusive ROW	• Provides connectivity between areas separated by natural and manmade obstacles, and between activity centers, MARTA rail stations, and recreational and cultural facilities • Provides bicycle/pedestrian options in those areas in which environmental justice populations have been identified in the study area • Increases public greenspace and serves two trails • Trail has 15.9 miles of exclusive ROW

	No-Build Alternative	Preferred Transit and Trail Alternatives
Plan Consistency	• Not consistent with a majority of the local and regional transportation plans that include the Atlanta BeltLine transit and/or multi-use trails elements in their recommendations • Consistent with the Atlanta Regional Freight Mobility Plan	• Consistent with Envision6 RTP/TIP, Connect Atlanta Plan, Concept 3, Atlanta Region Bicycle Transportation and Pedestrian Walkways Plan, Plan for a Walkable Atlanta, and the 2004-2019 Comprehensive Development Plan (CDP) • Potentially conflict with the Atlanta Regional Freight Mobility Plan • Mitigation of effects to be determined and minimized through on-going consultation with freight rail operators
Land Use and Zoning		
Land Use	• Direct effects on land use in the study area by the additional ROW would be examined in the environmental analyses for each project • Inconsistent with FLUM • 213 acres underutilized land within ½-mile of potential stations	• 91.8 acres of converted land for Transit • 76.9 acres of converted land for Trails • Consistent with Future Land Use Map (FLUM) • 765 acres of underutilized land within ½-mile of potential stations • Could create pressures to convert low-density or industrial uses into higher-density uses that may be inconsistent with neighborhood character • Further analysis at the Tier 2 phase will evaluate potential effects

Zoning	• Inconsistent with zoning because the base zoning districts were adopted to support the CDP and FLUM
	• The purpose of the existing Atlanta BeltLine Overlay District would not be met
		• Consistent with the Atlanta BeltLine Overlay District
		• Transit infrastructure is permitted except in Multi-Family (MR) zones
		• Trails are permitted in public ROW, but outside of ROW, must meet zoning setback and buffer requirements if not designated as parks
		• If designated as parks:
		  ○ Special Use Permit required in Residential and Office zoning districts
		  ○ Application process available under existing regulations in MR, Mixed Residential Commercial, and Planned Development districts
		• Some districts require amendments to permit parks
		• Further analysis at Tier 2 phase to evaluate potential mitigation steps

Local Plans	• Not fully consistent with the CDP • Not consistent with the other plans	• Consistent with the CDP • Consistent with the local Atlanta BeltLine Subarea Master Plans
Economic Development Strategies	• Direct short term positive effect associated with construction employment • Supports the long-term economic conditions • Serves seven economic development focus areas • 101 acres of potential residential and commercial development capacity within ½-mile of proposed stations • Inconsistent with the economic development strategies in the CDP relative to the Atlanta BeltLine • Would not support the estimates of the economic growth in the study area	• Direct short-term positive effect associated with construction employment • Supports the long-term local and regional economies • Serves 20 economic development focus areas • 499 acres of potential residential and commercial development capacity within ½-mile of proposed stations • Will serve approximately 4,915 acres of Atlanta BeltLine TAD land • Could conflict with the City's policy of retaining as much industrial land within the City as possible • Strategies to avoid or minimize these effects will be considered during the Atlanta BeltLine Subarea Master Planning process and Tier 2 analysis
Neighborhoods and Community Facilities		
	• Limited accessibility impact on neighborhoods and community facilities in study area • Would serve only the study area neighborhoods that are crossed, leaving large geographic areas that would not be served • Would not provide recreational space • Would not remove the barrier created by the existing rail corridors in the study area	• Increases regional access for neighborhood residents • Up to 61 neighborhoods served and up to 71 community facilities accessed • Trail will provide recreational space • Trail will remove existing barrier between neighborhoods currently divided by the railroad ROW

	No-Build Alternative	Preferred Transit and Trail Alternatives
Socioeconomics and Environmental Justice		
Socioeconomics	• Incremental growth and development both within and outside the study area • ½ - mile service area of proposed transit station locations will contain an estimated 79,874 people in 2030 • ½ - mile service area of proposed transit station locations will contain an estimated 80,474 jobs in 2030	• Will complement and support the projected population, employment, and household growth • ½ - mile service area of proposed transit station locations will contain an estimated 137,940 people in 2030 • ½ - mile service area of proposed transit station locations will contain an estimated 116,799 jobs in 2030 • Creates 30,000 new full-time jobs; 48,000 year-long construction jobs; and 28,000 new housing units including 5,600 affordable units over its 25-year project span
Environmental Justice	• Improved transit service for some environmental justice (EJ) populations relative to the existing conditions • In 2000, ½ - mile service area of proposed transit station locations contained 5,850 zero-car households; 3,777 older adults; 9,368 disabled people; 11,700 low-income; and 28,272 minority people	• Improved transit service for some EJ populations, improving mobility and access to employment • In 2000, ½ - mile service area of proposed transit station locations contained 10,079 zero-car households; 8,005 older adults; 18,724 disabled people; 21,784 low-income households; and 59,864 minority people • Market pressures on low-income housing may be offset by existing affordable housing programs and City policy to protect single-family homes • Noise and vibration impacts will affect all residents in the southeast and southwest, including EJ populations. • Further analysis during Tier 2 to determine severity of impacts and mitigation measures
Visual and Aesthetic Resources		
	• No affect to existing viewshed • Infrequent maintenance of ROW vegetation has created an unsightly overgrown condition • Where vegetation or other screening is absent, views of railroad materials such as piles of ties or occasional dumped trash can also be observed	• New visual elements including new track and ballast, bridges, underpasses, power stations, poles and overhead wires, stations, storage yards, and trail signage, lighting, and furniture • Improves visual aesthetics of deteriorated elements • Currently obscured Railroad may be visible • Signage and warning indicators will be visible at at-grade crossings • The Trail will create new views, such as parks and historic structures • Detailed analysis as part of Tier 2 will evaluate impacts and suggest best management practices
Cultural, Historic, and Archaeological Resources		
	• Potential for cultural resource impacts would be highly localized and determined during required review process	• 105 total resources have the potential to be impacted by the Preferred Transit Alternative, and 103 by the Preferred Trail • Direct impacts to the Historic Resources located within the Atlanta BeltLine study area • 39 archaeologically sensitive sites in study area • Tier 2 analysis will report unavoidable impacts. Continued consultations with Georgia State Historic Preservation Office (SHPO) to identify mitigations and prepare a Programmatic Agreement
Parks and Recreational Resources		
	• Provides no new acres of park access in study area • Lovejoy Commuter Rail has the potential to affect Adair II Park, and the I-20 East BRT has the potential to affect Rawson-Washington Park	• Provides over 50 acres of park access • Provides connectivity between park activity centers, and between residences and park resources • Provides a transit option to access 22 existing parks and recreational facilities • Positive effect on future park and recreation facilities

	No-Build Alternative	Preferred Transit and Trail Alternatives
Safety and Security		
	• Requires existing safety and security protocols, such as compliance with American Association of State Highway and Transportation Officials (AASHTO) and Americans with Disabilities Act, or the control of roadway-track interactions for at-grade crossings, and measures in operation for existing transportation services	• Potential for pedestrian conflicts with transit, roadways, and pedestrian security along the trails • Shared ROW with existing freight rail will require appropriate horizontal and vertical clearances between freight rail, streetcar, and trail modes • Tier 2 analysis will identify needs and strategies for safe trail, station, roadway-track interactions, and freight rail-track interactions
Contaminated and Hazardous Materials		
	• Subject to the U.S. Environmental Protection Agency (USEPA) and Georgia Environmental Protection Division (GEPD) requirements for identifying and managing any contaminated or hazardous material sites	• 187 Recognized Environmental Condition REC sites are within the 300-foot study area for the Preferred Transit Alternative; of these 13 sites have the potential of being directly impacted • 166 REC sites within the 300-foot study area for the Preferred Trail; of these 13 sites have the potential of being directly impacted • 10 Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)-related sites are within the 300-foot study area for the Preferred Transit and Trail Alternatives; only 2 of these have the potential for direct impact • A survey of hazardous material will be completed prior to demolition or renovation of an identified structure, and will include abatement measures • Required subsequent activities include Phase I and Phase II Environmental Site Assessments, removal of underground storage tanks where necessary, development of remedial strategies, and coordination with GEPD
Utilities		
	• The sponsors of the No-Build projects will be responsible for identifying utilities and addressing potential conflicts	• Low potential for utility relocations along rail ROW • High potential for utility relocations along street • Moderate potential for utility relocations south of CSX rail ROW • High potential for utility relocations along the west of Peachtree Street • Potential impacts to water/sewer lines under CSX ROW connecting to the Atlanta City Water Works • Unavoidable relocations will be coordinated with the utility owners to minimize disruptions
Air Quality		
	• Improves local and regional air quality through improvements to the existing bus, rail, and roadway networks	• Reduction in vehicular emissions. Reduction should offset insignificant emissions increase from off-site electricity generation • The Preferred Trail will contribute no new emissions • Does not require a formal conformity determination on a regional level and, therefore, will not have air quality impacts for the nonattainment pollutants
Noise and Vibration		
	• Noise and vibration levels in the portions of the study area will be similar to those under the existing conditions	• 155 residences within noise screening distance and 113 residences within vibration screening distance in the northwest zone • A detailed noise and vibration analysis will take place during the Tier 2 analysis

	No-Build Alternative	Preferred Transit and Trail Alternatives
Energy		
	• Travel time-savings of 79.8 million vehicle miles. Energy savings of approximately 497 billion British Thermal Units (BTUs) annually	• Travel time-savings of 145.2 million vehicle miles. Energy savings of approximately 905 billion BTUs annually
Water Resources		
	• Potential to directly affect study area water resources	• No effects on wetlands, open water bodies, or sole source aquifers • 11 potential stream impacts from transit, 4 from trail • 1.17 acres of potential stream impact from transit, 0.52 acres from trail • Affects to floodplains associated with stream crossings • 16 acres of new impervious surface from transit, 7.2 acres from trails increasing stormwater runoff • Adjustments to alignment and amenity location to be determined during Tier 2 analysis
Biological Resources		
	• Potential to affect study area biological resources	• Potential impact associated with stream impacts, new street trees, and landscaped areas • Cleared vegetation could remove invasive plants, which could increase the diversity of native vegetation • Could change or eliminate the species composition currently using the habitat • No affects to protected species or species or habitat protected by the Migratory Bird Treaty • During Tier 2 analysis, design to be refined to avoid or minimize impacts as prescribed by resource protection regulations, including NEPA
Geologic Resources		
	• Would be the subject of an environmental assessment for each project	• Minimal potential effects on geology, topography, and soils • Extension of existing tunnel near Inman Park MARTA rail station, and the cut near Piedmont Park will require geotechnical survey • Geotechnical analysis to occur during Tier 2 analysis to identify minimization and mitigation strategies
Potential for Secondary Effects		
	• May include development of underdeveloped land near proposed transit station locations. This development, should it occur, may also result in changes to population, employment, and community facilities and services	• Secondary effects will be focused around proposed station areas, taking the form of development that will likely result in changes in population, employment and community facilities and services • Tier 2 analysis will identify specific secondary effects
Potential for Cumulative Effects		
	• Potential for cumulative effects on ROW, historic resources, parks, hazardous materials, noise, streams, and water quality (due to increases in impervious surfaces)	• Potential impacts on ROW, historic resources, parks, hazardous materials, noise, streams, and water quality (due to increases in impervious surfaces) • Tier 2 analysis will identify likelihood of, and appropriate mitigation for potential cumulative effects

The assessment measured the ability of each alternative to provide transportation benefits, such as the number of connections to bus routes, travel-time savings, and other factors. Qualitative measures that compare the relative merits of the alternatives were used where quantitative measures are either inappropriate or unavailable. Examples of qualitative measures are potential effects at roadway crossings and along in-street running sections.

3.2.1.2 Sources of Data

Primary data sources include field reconnaissance, assessment of conditions not available from secondary sources, and input from public and private entities having jurisdiction over transportation facilities in the study area. Secondary sources include studies and plans available from MARTA including past Atlanta BeltLine studies, including the *Regional Freight Mobility Plan* and traffic data from the regional travel demand model, the ARC, Georgia Regional Transportation Authority (GRTA), Atlanta Regional Transit Implementation Board (TIB), the City of Atlanta, GDOT, including the *State Rail Plan*, and other agencies. All traffic data are from the ARC unless otherwise indicated.

3.2.2 Travel Patterns

3.2.2.1 Affected Environment

Travel patterns in central Atlanta and the Atlanta BeltLine study area were analyzed in the *Atlanta BeltLine Feasibility Wrap-Up Report* (MARTA 2005) with a focus on home-based work (HBW) trips (commute trips from home to work). The report confirms the findings of the *Atlanta BeltLine Baseline Conditions Assessment* (MARTA 2004). There are numerous employment centers throughout the Atlanta region with travel patterns that are scattered to a number of major employment destinations rather than to a single primary CBD destination. Currently, the strongest HBW pattern is from the northern suburbs to Downtown and Midtown in central Atlanta and to Buckhead, which is north of central Atlanta and the study area. Findings in *Envision6* (ARC 2007) indicate that about 35 percent of HBW trips both originate and end within the City of Atlanta, that the average automobile trip beginning in the City is 5.5 miles in length.

As reported by ARC in the *2008 Transportation Fact Book*, approximately 12 percent of total daily person trips in the region are work trips, compared with approximately 84 percent that are non-work trips. Examples of non-work destinations within the study area include major shopping centers at Lindbergh, Ansley, and the West End Mall; parks including Piedmont Park and Maddox Park; schools; and community facilities. Most of these trips, regional and within Atlanta, use private vehicles or public transit services. For some areas, public transit is efficient and convenient, but other areas are underserved, as described in the following discussions by zone.

Land use planning in the City is focused on development of activity centers in the study area and central Atlanta, as shown in Figure 1-4, and discussed in Sections 1.5 and 3.3. The existing regional transportation system for both roadways and transit is radial. Other transportation projects currently being studied under the No-Build Alternative also are essentially radial. The circumferential path of the Atlanta BeltLine that connects many activity centers currently is underserved, but the number of trips is expected to rise as density increases in the activity centers and increased roadway congestion substantially affects travel in the foreseeable future, as discussed in Section 3.2.4.2.

Northeast Zone

The northeast zone has been the focus of much of the recent land development in the City. Projections to 2030 indicate that it will have the largest population and employment increases of all zones, and be second to the southeast in the growth of housing units. (Detailed socioeconomic data can be found in Section 3.5.) Major travel generators in this zone include Piedmont Park and the Atlanta Botanical Garden, the Carter Center, Ansley Mall, Martin Luther King Jr. National Historic Site, Lindbergh Center, and City Hall East.

Southeast Zone

The southeast zone has experienced recent land development. Projections to 2030 indicate the second largest increases in population and employment in the study area, and the highest increase of housing units. In 2000, nearly a quarter of households in the southeast zone was below poverty and had no automobile, while 16 percent of the workers used transit for their work trip. Major travel generators in this zone include Glenwood Park and Oakland Cemetery. Grant Park and Zoo Atlanta are nearby but not in the study area.

Southwest Zone

Between 2000 and 2008, the southwest zone experienced employment growth compared to the other study area zones and other parts of the City and County, which experienced job losses during the same period. Projections to 2030, however, indicate modest population and employment growth, and increase in housing units. U.S. Census 2000 data indicate that the southwest zone was the least affluent in the study area with nearly a third of households below poverty and with no automobile. Over a quarter of workers used transit for their work trip in 2000. Major travel generators in this zone include Historic Westside Village and West End Mall. Outside the study area, but nearby, is a concentration of four institutions of higher learning.

Northwest Zone

Projections to 2030 indicate that the northwest zone will have population and employment growth rates below the southeast zone, but above the southwest, and only a small increase in housing units as large areas are occupied by industrial uses and rail facilities. The northwest zone contains the largest contiguous portion of the Atlanta BeltLine TAD. In 2000, nearly a fifth of households in the northwest zone was below the poverty level and had no automobile, while 12.4 percent of the workers used transit for their work trip. Major travel generators in this zone include Piedmont Hospital, Maddox and Washington Parks, King Plow Arts Center, and the Atlantic Station development.

3.2.2.2 Effects on Travel Patterns

No-Build Alternative

As described in the *Technical Memorandum on Transportation Systems and Facilities*, the No-Build Alternative includes the Atlanta Streetcar, Lindbergh/Emory High Speed Transit, SR 13/Buford Highway BRT, and the Memorial Drive BRT and other transit projects that would serve radial trips. These projects are expected to accommodate some in-city HBW and non-work trips within their geographic area of influence. However, none of these projects individually or in aggregate would accommodate circumferential trips among the study area activity centers, major travel generators, and MARTA rail

stations, or collect trips from the study area to deliver passengers to and from the MARTA rail system. Moreover, the projects in aggregate would not address the need to increase transportation options in the study area in order to provide more travel connections, or improve travel efficiency. In addition, as described in Section 3.2.7, a number of bicycle and pedestrian network improvements are planned, but substantial gaps in bicycle and pedestrian networks between activity centers and other destinations will remain, requiring other modes to make many trips. Thus, the project need to expand bicycle/pedestrian options within the study area in a systematic way that provides connections to activity centers, major travel generators, MARTA rail stations, and recreational facilities will not be met by the No-Build Alternative.

Preferred Alternatives

The mostly short trips between neighborhoods, commercial and employment destinations, activity centers, and MARTA rail stations, especially those with one or both ends in the study area, will be facilitated by the Preferred Transit Alternative. The Preferred Transit Alternative also will serve regional HBW trips not destined for Downtown or Midtown by connecting the various radial routes with each other and the activity centers in the study area with a circumferential service. By doing so, the Preferred Transit Alternative will provide an alternative to travel by personal vehicle, thereby potentially reducing roadway congestion in central Atlanta.

The *Detailed Screening Analysis* (MARTA, January 2007) for the Atlanta BeltLine evaluated the travel benefits of Alternative B3, the predecessor to the Build Alternatives used in the Tier 1 DEIS. This and other benefits of B3 identified in the 2007 analysis apply to the Preferred Transit Alternative, as it is a refinement of B3. Using the regional travel demand model, the analysis determined that B3, and, therefore, the Preferred Transit Alternative, will have an estimated:

- annual ridership of 26.41 million,
- annual new ridership of 6.43 million,
- annual travel-time savings of 1.65 million hours,
- more direct rail transit travel with 6,376 fewer daily transfers at the Five Points MARTA rail station,
- a slight reduction of the average number of transfers per regional transit trip, and
- a daily reduction of 113,000 vehicle miles traveled.

These data indicate the Preferred Transit Alternative will provide an improvement in study area-wide travel patterns, overall travel–time savings, and a reduction in vehicle miles traveled (VMT) compared with the No-Build Alternative.

The Atlanta BeltLine transit element seeks to sustain the regional economy by serving the projected travel patterns forecast to result from Atlanta's planned redevelopment program of dense, urban, transit-oriented development ringing central Atlanta, rather than to meet existing travel demands or to cure existing capacity constraints in transportation. It also will provide some reduction of congestion as discussed in Section 3.2.4.

The Preferred Transit Alternative will connect existing and proposed activity centers and will redirect over 6,000 daily trips from the radial corridors to a circumferential one. This is shown by the number of transfers eliminated at the Five Points MARTA rail station as

stated above. These transfers represent trips that follow radial lines often because those are the only routes to a destination.

Travel Performance Measures
Travel performance measures were used to evaluate the performance of the No-Build and Preferred Transit Alternative, including travel-time savings, number of transfers, population and employment near stations, and service to various underserved groups.

Travel-time savings measures the estimated change in travel times between various origins and destinations determined by comparing the estimated transit travel times for the No-Build and the Preferred Alternatives for the same trips, as shown in Table 3-2.

Table 3-2: Preliminary Travel Times and Travel-Time Savings

Transit Trip		Average Travel Time (minutes)		Travel-Time Savings Difference between Preferred Transit Alternative and No-Build Alternative (minutes)
Origin	Destination	No-Build Alternative	Preferred Transit Alternative	
Grant Park	Cascade Avenue at Ralph David Abernathy Boulevard	48	28	20
Cascade Avenue at Ralph David Abernathy Boulevard	Joseph E Boone (Simpson Road)	66	10	56
Lindbergh Center	Joseph E Boone (Simpson Road)	37	25	12
Boulevard Heights	Ansley Mall	99	27	72
Colonial Homes	Ansley Mall	56	24	32

Source: AECOM 2010

The trips shown in Table 3-2 were selected to represent typical trips made within the study area. The No-Build Alternative travel time estimates are based on the existing transit service. Travel times for the Preferred Transit Alternative were derived from the preliminary operating plans based on route length, walk time to access stations, the number of stations, dwell times at stations, typical vehicle acceleration and deceleration rates, vehicle speeds, and estimates of congestion delay along in-street running segments. Assumptions include 12-minute headways, 30-second train holds at each station, and allowable speed of 55 miles per hour with actual speeds being lower. For the trips evaluated, the Preferred Transit Alternative would provide substantial improvement in travel time compared with the No-Build Alternative.

Number of Transfers evaluates the Preferred Transit Alternative relative to the number of transfers that would be required to make the trips in Table 3-2. The Preferred Transit Alternative will require no transfers while the No-Build Alternative would require an average of three per trip.

Population and Employment within ½-Mile of Potential Transit Stations evaluates the Preferred Transit Alternative based on the projected population to be served. Table 3-3 shows that the Preferred Transit Alternative will serve substantially higher projected population and employment than the No-Build Alternative.

Table 3-3: Population and Employment within ½-mile of the Proposed Transit Stations

Transit Alternative	Population		Employment	
	2008	2030	2008	2030
No-Build Alternative	54,776	79,874	65,256	80,474
Preferred Transit Alternative	110,205	137,941	87,681	116,799

Source: ARC 2008 Regional Forecasts and Geographic Information Systems (GIS)

Access for Underserved Groups evaluates the potential to improve mobility for low-income, minority, and disabled populations, populations over age 65, and zero-car households within ½-mile of proposed transit stations. Table 3-4 shows that the Preferred Transit Alternative will provide twice the amount of access to transit for transit-dependent, low-income, and minority populations than the No-Build Alternative.

Table 3-4: Transit-Dependent, Low-Income, and Minority Populations within ½-mile of the Proposed Transit Stations - 2000

Transit Alternative	Transit-Dependent			Low-Income Population	Minority Population
	Zero-Car Households	Population over Age 65	Disabled Population		
No-Build Alternative	5,850	3,777	9,368	11,700	28,272
Preferred Transit Alternative	10,079	8,005	18,724	21,784	59,864

Source: U.S. Census Bureau, Census 2000

In addition, the Preferred Transit Alternative will serve both Piedmont Hospital, a 481-bed facility with over 4,000 employees, over 900 physicians, and over 300,000 patients per year, and the Shepherd Center, a 132-bed facility with over 1,200 employees and over 14,000 patients per year. Other destinations serving the transit-dependent population for both work and non-work trips are highlighted by reviewing the lists of schools, churches, and community facilities in Section 3.4.

3.2.3 Transit Services

3.2.3.1 Affected Environment

Existing transit services in the study area include all MARTA heavy rail lines, 6 MARTA rail stations, 36 local MARTA bus routes, and GRTA Xpress regional commuter bus service between Lindbergh Center MARTA rail station and Gwinnett County. Figure 3-1 shows existing transit services in the study area zones and central Atlanta. Table 3-5 lists MARTA rail stations and connecting bus routes by zone. The following sections discuss the bus service in each zone.

Table 3-5: MARTA Rail Stations

MARTA Rail Station	Study Area Zone	Line	Average Daily Entries	Connecting Bus Routes
Lindbergh Center	northwest and northeast	Red and Gold	8,402	5, 6, 27, 30, 39
Inman Park/Reynoldstown	northeast and southeast	Blue and Green	2,973	4, 6, 34, 107
King Memorial	northeast and southeast	Blue and Green	2,087	21
West End	southeast and southwest	Red and Gold	7,990	67, 68, 71, 81, 95
Ashby	southwest and northwest	Blue and Green	2,244	68
Bankhead	northwest	Green	2,376	26, 50, 58

Source: MARTA 2010

Northeast Zone

Thirteen MARTA local bus routes serve this zone (routes 2, 3, 4, 5, 6, 16, 21, 27, 30, 36, 99, and 186). Most bus routes are radial and provide feeder service to MARTA rail stations, while others access Downtown or Midtown. An exception is Route 6 Emory that connects Lindbergh Center and Inman Park/Reynoldstown MARTA rail stations. It is parallel with the Atlanta BeltLine study area, but aligned largely outside the study area to the east. With the exception of Route 6, there is no direct access between the MARTA rail stations; though, riders can make a transfer at the Five Points MARTA rail station in Downtown

In addition to accessing central Atlanta directly or via transfers at MARTA rail stations, two bus routes operating in the northeast zone access the southeast zone; one accesses the southwest zone; and four access the northwest zone.

In 2030, heavy roadway congestion is projected for all of the arterial streets in the zone north of Ralph McGill Boulevard, as well as on Highland Avenue, Freedom Parkway, Irwin Street, and Hilliard Street. Therefore, many of the current bus routes in the northeast zone would operate on streets projected to have heavy congestion.

Southeast Zone

Seventeen MARTA local bus routes serve the southeast zone (routes 4, 21, 32, 34, 42, 49, 55, 67, 68, 71, 74, 81, 95, 107, 155, 186, and 193). All routes are radial with some providing feeder service to MARTA rail stations while others directly access Downtown. Transit connection between either King Memorial or Inman Park/Reynoldstown and the West End MARTA rail station is limited to a rail trip requiring a transfer at Five Points MARTA rail station as there is no connecting bus route. Provision of a bus route parallel to the proposed Atlanta BeltLine would be circuitous because of the lack of an effective roadway grid.

In addition to accessing central Atlanta directly or via transfers at MARTA rail stations, two bus routes operating in the southeast zone provide access to the northeast zone; five provide access to the southwest zone; and one provides access to the northwest zone.

In 2030, projected heavy roadway congestion in the northern portion of this zone is a result of the I-20 entrance and exit ramps and the constraints of crossing the freight railroad ROW. Congestion in the southern and western portions of this zone is found on north-south radial streets parallel to I-75/85. Due to the projected congestion, several of the current bus routes will operate on streets projected to have heavy congestion in 2030, including two routes that operate on I-20 and its entrance and exit ramps.

Southwest Zone

Seven MARTA bus routes serve the southwest zone (3, 13, 67, 68, 71, 81, and 95). All bus routes are essentially radial with some providing feeder service to the MARTA rail stations, while others directly access Downtown or connect MARTA rail stations outside the study area with Five Points MARTA rail station. There is no direct access to the northern portions of the study area except via MARTA rail. Route 68 Donnelly connects West End and Ashby MARTA rail stations and crosses a portion of central Atlanta in relatively straight lines rather than following the curve of the study area.

In addition to accessing central Atlanta directly or via transfers at MARTA rail stations, one bus route operating in the southwest zone provides access to the northeast zone; five provide access to the southeast zone; and one accesses the northwest zone.

In 2030, heavy roadway congestion is projected for Murphy Avenue, Ralph David Abernathy Boulevard, Cascade Road, and Joseph E. Lowery Boulevard from Lee Street to I-20. Therefore, the current bus routes will operate on streets projected to have heavy congestion.

Northwest Zone

Fourteen MARTA bus routes provide service in the zone (routes 1, 5, 6, 12, 26, 27, 30, 37, 39, 50, 51, 58, 68, and 110). Except for Route 6 discussed above in the northeast zone, all bus routes are radial with some providing feeder service to MARTA rail stations while others directly access Downtown or Midtown.

In addition to accessing central Atlanta directly or via transfers at MARTA rail stations, four bus routes operating in the northwest zone provide access the northeast zone; one provides access to the southeast zone; and one accesses the southwest zone.

In 2030, heavy roadway congestion is projected for all but three radial arterials due to traffic entering or exiting the interstate system. Therefore, half of the current bus routes will operate on streets projected to have heavy congestion.

3.2.3.2 Effects on Transit Service

No-Build Alternative

The No-Build Alternative will not affect existing MARTA rail or local bus services or GRTA commuter bus service.

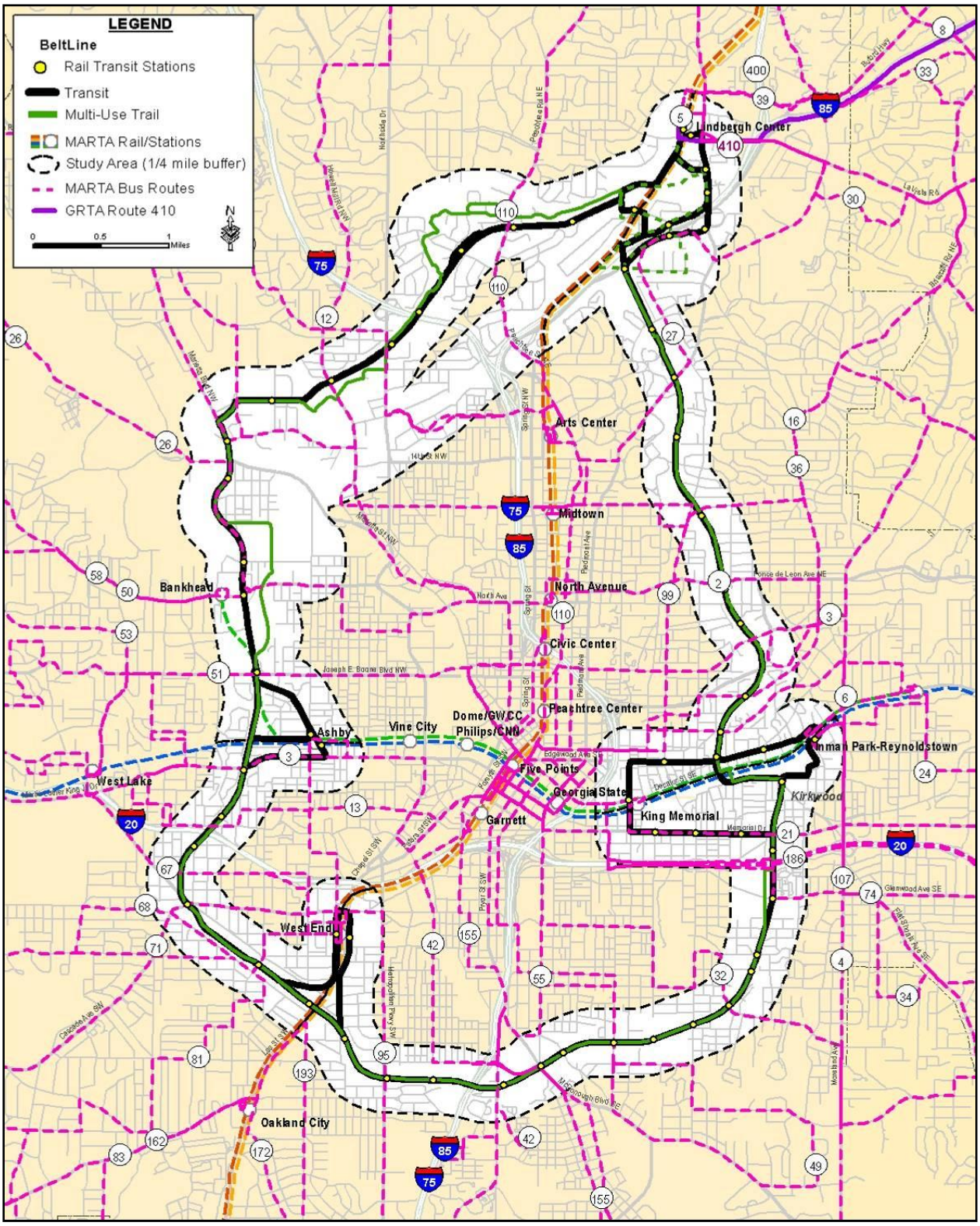
Preferred Alternatives

The Preferred Transit Alternative will enhance existing and planned transit service by providing connecting service between radial transit routes that cross the Atlanta BeltLine and new service where it is currently unavailable. This expanded network will attract new ridership on the existing transit services as discussed in the following sections.

MARTA Rail Service

The Atlanta BeltLine transit element will supplement the existing MARTA rail network by providing cross-town and circumferential transit service. Figure 3-1 shows the Atlanta BeltLine overlaid onto the existing MARTA rail lines and the stations for each. The Preferred Transit Alternative was evaluated to determine its potential to serve the largest number of MARTA rail stations with direct connections. The Preferred Transit Alternative will potentially serve the following MARTA rail stations or infill stations: Lindbergh Center, Inman Park/Reynoldstown or King Memorial, West End, Ashby, and Bankhead. The Preferred Transit Alternative will intersect rather than duplicate MARTA rail service. As discussed earlier, an important aspect of the Preferred Transit Alternative is its ability to reduce transfers at the Five Points MARTA rail station. The circumferential route of the Preferred Transit Alternative will benefit MARTA rail service by reducing transfers and transit congestion in central Atlanta. The Preferred Trail Alternative will also benefit the MARTA rail system by improving bicycle and pedestrian access to and from stations.

Figure 3-1: Existing Transit Service



Source: MARTA, GRTA, 2010
Note: The Atlanta BeltLine is not considered to be existing transit service, but for reference it is shown on this map. The MARTA service route data is current to September 2010.

MARTA Bus Service
The Preferred Transit Alternative will enhance the MARTA local and GRTA Xpress bus networks by providing connecting service at proposed Atlanta BeltLine stations.

The number of local bus connections to the Preferred Transit Alternative was evaluated. The number of bus connections is defined as the cumulative number of connection operations made by bus routes during the peak periods with potential stops at the proposed Atlanta BeltLine stations. Assuming the bus routes and schedules implemented in September 2010, the Preferred Transit Alternative will serve up to 73 local bus connections in the study area and connect with 21 routes. A similar evaluation of express bus connections shows that the Preferred Transit Alternative will provide six express bus connections. No bus routes provide circumferential service; therefore, the Atlanta BeltLine transit element will not duplicate MARTA bus service.

Localized effects on existing bus routes may occur in the in-street running portions of the Atlanta BeltLine depending on that portion's specific configuration. Potential adverse effects include MARTA buses experiencing potential delays from Atlanta BeltLine vehicles and changes to the traffic signal system. Conversely, operational accommodations for the Atlanta BeltLine could see an overall travel-time savings along bus routes if the buses operate in the Atlanta BeltLine transit lanes and utilize the signal system.

Atlanta BeltLine vehicles might temporarily block travel when at stations causing potential delays for local bus service, but potential effects will depend upon the frequency of stops, the dwell time, and the locations of local bus stops. A small subset of MARTA bus riders may experience adverse effects that result from potential changes in routes or headways, but the potentially beneficial effects of the Preferred Transit Alternative for riders in general will offset these limited potential adverse effects.

The Preferred Trail Alternative will beneficially affect the MARTA bus system by improving bicycle and pedestrian access to and from bus stops along trail routes.

Other Transit Service
The Preferred Transit Alternative will benefit existing commuter bus services by providing connecting service. As these routes generally have a radial pattern connecting central Atlanta with suburban locations, the Atlanta BeltLine will complement their service by providing a circumferential transit link that will enable riders to access additional activity centers. When operating in segments of in-street running, the same potential adverse and beneficial effects on commuter bus services may occur as with the local bus routes. The Preferred Trail Alternative will beneficially affect other transit services by improving bicycle and pedestrian access to and from stops along trail routes.

Planned Transit Services
The Preferred Transit Alternative was also evaluated to determine its potential to directly connect to No-Build Alternative transit projects illustrated in Appendix Figure 2.2-2 in Appendix D and to planned passenger rail service. The Preferred Transit Alternative will connect to approximately 24 planned transit and passenger rail projects, while the No-Build Alternative will connect to 14 planned projects. The Atlanta BeltLine and the planned services will be mutually complementary wherever the services share a station.

The measure evaluating the potential to connect to other transit projects also considered the capability of the Preferred Transit Alternative to be compatible with the technologies proposed for other projects. Final determinations as to the technologies for many of these planned projects have not been made with the exception of the first phase of the

Atlanta Streetcar Project, which will be a streetcar. Thus, performance by the Preferred Alternatives was measured qualitatively based on the typical operational characteristics of LRT and SC. Though the selected mode for the Atlanta BeltLine is SC, the Atlanta BeltLine corridor is being developed in a manner that preserves the option for proposed LRT projects connecting to counties surrounding the City of Atlanta to operate within the corridor. For this reason, the conceptual design of the Preferred Transit Alternative reflects the more conservative rail infrastructure and geometrical requirements of LRT to accommodate LRT projects planned under the No-Build Alternative. The potential effects of the Preferred Transit Alternative on proposed passenger rail services are discussed in Section 3.2.6.

The Preferred Trail Alternative will beneficially affect planned transit services by improving bicycle and pedestrian access to and from stops and stations along the trail route.

3.2.4 Roadway System

3.2.4.1 Affected Environment

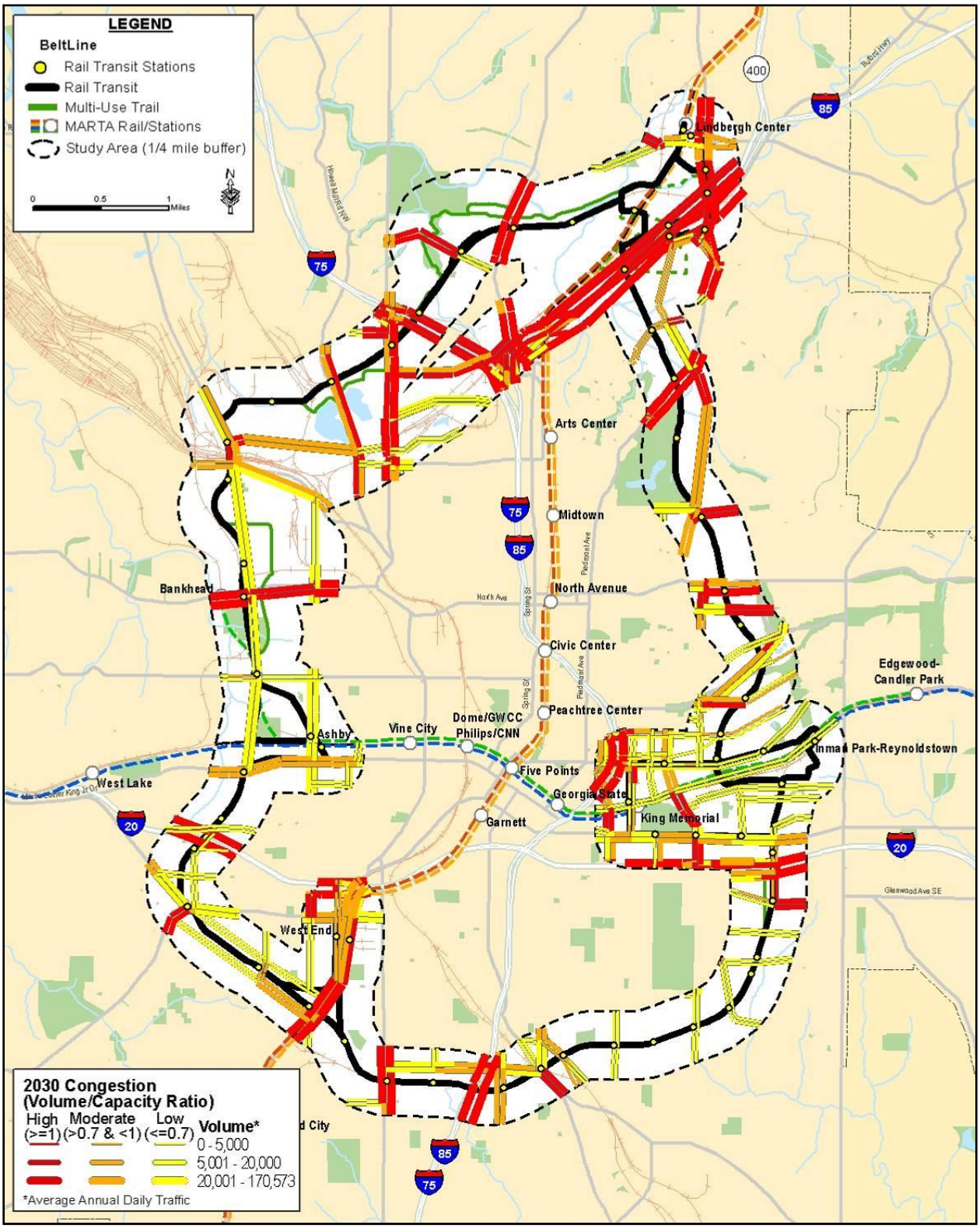
The existing roadway network in the study area, depicted in Figure 3-1, consists of a radial interstate system superimposed on an arterial and local street system, portions of which are laid out in a grid. The arterial and local street system enables radial travel as well as travel patterns between destinations within the City. The local street pattern was developed over time through cumulative expansions that were influenced by terrain, land use, and successive urban design theories. Today's roadway network of grid and non-grid streets substantially influences travel patterns.

Appendix E of *Connect Atlanta*, the City of Atlanta's Comprehensive Transportation Plan, contains a figure entitled Map 8 Roadway Segments at LOS F [ARC 2005 Model Year]. It shows that the number of vehicles using many principal roadways, especially the interstate system, equal or exceed the roadway's maximum capacity, a condition commonly referred to as "gridlock."

The 2008 *Final Technical Report* by the Transit Planning Board (TPB) found that congestion in Atlanta costs the region nearly $2 billion per year, roughly $1,127 per commuter. The ARC *Envision6 Needs Assessment Report*, Section 3, issued in 2005, projects that by 2030, if no transportation improvements are implemented, the annual cost per person will rise to approximately $2,400.

Figure 3-2 presents the projected year 2030 roadway congestion in the study area. A map of regional roadway congestion in 2030 can be found in the *Technical Memorandum on Transportation Systems and Facilities*. ARC measures the traffic congestion levels using volume-to-capacity (V/C) ratios. A V/C ratio is the volume of automobiles traveling on a roadway relative to the capacity available on the roadway in terms of travel lanes available. A V/C ratio of 1.0 indicates a volume of traffic that is equal to the design capacity of the roadway. The level of congestion is measured by three categories of severity: Low (V/C ratio of 0.10 to 0.69); Moderate (V/C ratio of 0.70 to 1.00); and High (V/C ratio over 1.00). As shown in Figure 3-2, many of the streets in the study area, especially in the northeast and northwest zones, will experience levels of congestion with V/C ratios greater than 1.00.

Figure 3-2: 2030 Roadway Volumes and Congestion Levels



Source: ARC 2006

Congestion substantially affects travel patterns and efficiency. The *Atlanta BeltLine Baseline Conditions Assessment* (2004) projected that the number of trips in congested conditions in the study area will increase from 59 percent of trips in the year 2000 to 70 percent in 2030. The assessment identified the need for faster, more convenient and more reliable transit service, bicycle and pedestrian connections, and better utilization of the MARTA rail system, especially between the existing and planned activity centers.

3.2.4.2 Effects on the Roadway System

No-Build Alternative

Roadway projects in the No-Build Alternative will provide maintenance and limited operational upgrades, as well as capacity improvements in some areas to reduce congestion. The projects are intended to provide localized operational improvements and congestion relief. However, no study area-wide project or combination of projects to address roadway congestion problems is planned. Several transit projects in the No-Build Alternative, including the Atlanta Streetcar, SR 13 (Buford Highway) BRT, and Memorial Drive BRT will operate in-street and could increase congestion.

As discussed in Section 3.2.2.2, the No-Build Alternative transit projects will attract riders that may otherwise travel by car. However, given the radial service areas of those projects, most travelers with origins and destinations in the study area will not be provided with an alternative to the use of private vehicles.

Preferred Alternatives

Diversion of HBW and non-work trips by the Preferred Transit and Trail Alternatives may slow the growth of congestion on the roadways serving the study area. Over time, congestion may be reduced on some of these roadways, which will allow the roadways to better accommodate future travel patterns without changing their characteristics or capacity.

Since the Preferred Transit Alternative will operate partly in public road ROW, its effect on roadways depends on how safely and efficiently the Atlanta BeltLine vehicles are able to share roadways with other transit modes and general traffic. The principal concerns in this regard are as follows:

- At-grade crossings in which the transit vehicle enters or exits a roadway or crosses it at-grade; and
- In-street running in which the transit vehicle operates in a travel lane of a roadway, which it shares with other transit modes and general traffic or from which general traffic, and possibly other transit modes, have been removed.

The potential effects of the Preferred Transit Alternative on the general roadway traffic are discussed below in each of these areas. Further analysis and design refinement will be undertaken in Tier 2 analysis to avoid or minimize potential effects on roadway operations. The MARTA Station Connectivity and Infill Station Alternative areas will be assessed in subsequent analysis.

At-Grade Crossings

At-grade crossings are found in the northeast and southeast zones for the Preferred Transit Alternative, but not in the southwest zone. In the northwest zone, the Preferred Transit Alternative has five at-grade crossings. At most locations, at-grade crossings will

have a minor effect on roadway operations, but at some locations, forecast congestion and nearby intersections would require careful design to avoid or minimize adverse effects on roadway operation.

For example, as discussed above, roadway operations will be delayed when the traffic stops for turning or passing Atlanta BeltLine vehicles. The proposed crossings will require sufficient queuing space for traffic, both at the crossing and at adjacent intersections to allow unhindered transit vehicle movement and safe and efficient roadway operations. Potential reconfiguration of the roadway and adjacent intersections to accommodate the Preferred Alternatives will have potential effects on traffic operations. Table 3-6 summarizes the potential effects of the at-grade crossings.

Table 3-6: Potential Effects of At-Grade Crossings

Zone	Street	Potential Effects on Roadway/Projected 2030 Congestion by Preferred Transit Alternative
Northeast	Atlanta Botanical Garden	Minor effects
	Monroe Dr. (near Kanuga St.)	Intersection queues extend into Atlanta BeltLine crossing; high congestion
	Irwin St. / Lake Ave.	Low to moderate congestion
Southeast	Memorial Dr.	Intersection and signal may require modification; low to moderate congestion
	Glenwood Ave.	Likely increase to moderate to high congestion
	Boulevard	Minor effects; low to moderate congestion
	Milton Ave.	Minor effects; low to moderate congestion
	Allene Ave.	Minor effects; low to moderate congestion
Northwest	Joseph E. Boone Blvd.	Minor effects; low to moderate congestion
	Marietta Blvd. and Elaine Ave.	Minor effects; low to moderate congestion
	Ellsworth Industrial Dr./Elaine Ave.	Minor effects; low to moderate congestion
	Fairmont Ave.	Current low congestion will increase
	English St.	Minor effects; low to moderate congestion

Note: Potential effects measured outside of the MARTA Station Connectivity and Infill Station Alternative Areas.

In-street Running Segments

As discussed in Section 2.2.4, conceptual engineering analyses for the Atlanta BeltLine examined transit geometry (curve radii, grades, and clearances), track configuration, and safety needs in all four zones as well as MARTA Station Connectivity and Infill Station Alternative Areas. Although SC has been selected as the preferred mode of transit, the outcome of these analyses is that either mode can be accommodated throughout the corridor. In this way, MARTA can maintain interoperability with other potential modes of transit in the future.

The Preferred Transit Alternative will operate an in-street running segment on Bill Kennedy Way, Marietta Boulevard, and Elaine Avenue. Table 3-7 summarizes potential effects. Figure 3-3 illustrates the locations along the Preferred Transit Alternative of potential in-street running and grade crossings outside of the MARTA Station Connectivity and Infill Station Alternative areas.

In mixed-traffic, moderate effects could be caused primarily by transit vehicles at stations. Greater effects could occur on cross-streets at intersections with transit signal priority, on both streets at intersections where the transit vehicles make turns because of the turning radius, and where the alignments enter and exit in-street running.

Table 3-7: Potential Effects, Proposed In-Street Sections

Zone	Street	Potential Effects on Atlanta BeltLine Transit Performance	Potential Effects on Roadway/ Projected 2030 Congestion by Preferred Transit Alternative
Southeast	Bill Kennedy Way	Long travel times and unreliable operations	High congestion forecast; potential removal of on-street parking; dedicated lane potentially infeasible at I-20 bridge; eliminates bicycle lane
Northwest	Marietta Blvd.	Adverse effects unlikely	Adverse effects unlikely
	Elaine Ave.	Adverse effects unlikely	Moderate adverse effects

Note: Assuming shared travel lanes, and potential effects measured outside of the MARTA Station Connectivity and Infill Station Alternative Areas. There are no in-street running sections in the northeast or southwest zones.

3.2.5 Freight Rail

3.2.5.1 Affected Environment

Active and inactive freight rail corridors are present throughout the study area, some forming the basis for the proposed Atlanta BeltLine Corridor. As shown on Figure 3-4, GDOT and the ADA are the principal owners of the inactive corridors, and CSX and Norfolk Southern operate and own or lease the active freight lines. Figure 3-5 depicts the approximate volumes of freight rail traffic and the route used by Amtrak. Section 3.2.6 provides discussion of Amtrak passenger rail service. Table 3-8 summarizes the important characteristics of the active freight rail corridors based on information available from MARTA, GDOT, a 2006 field survey and assessment of the freight rail corridors conducted by MARTA (MARTA *Rail Freight Analysis Report, Inner Core BeltLine/C-Loop Alternatives Analysis 2006*), and other sources as noted.

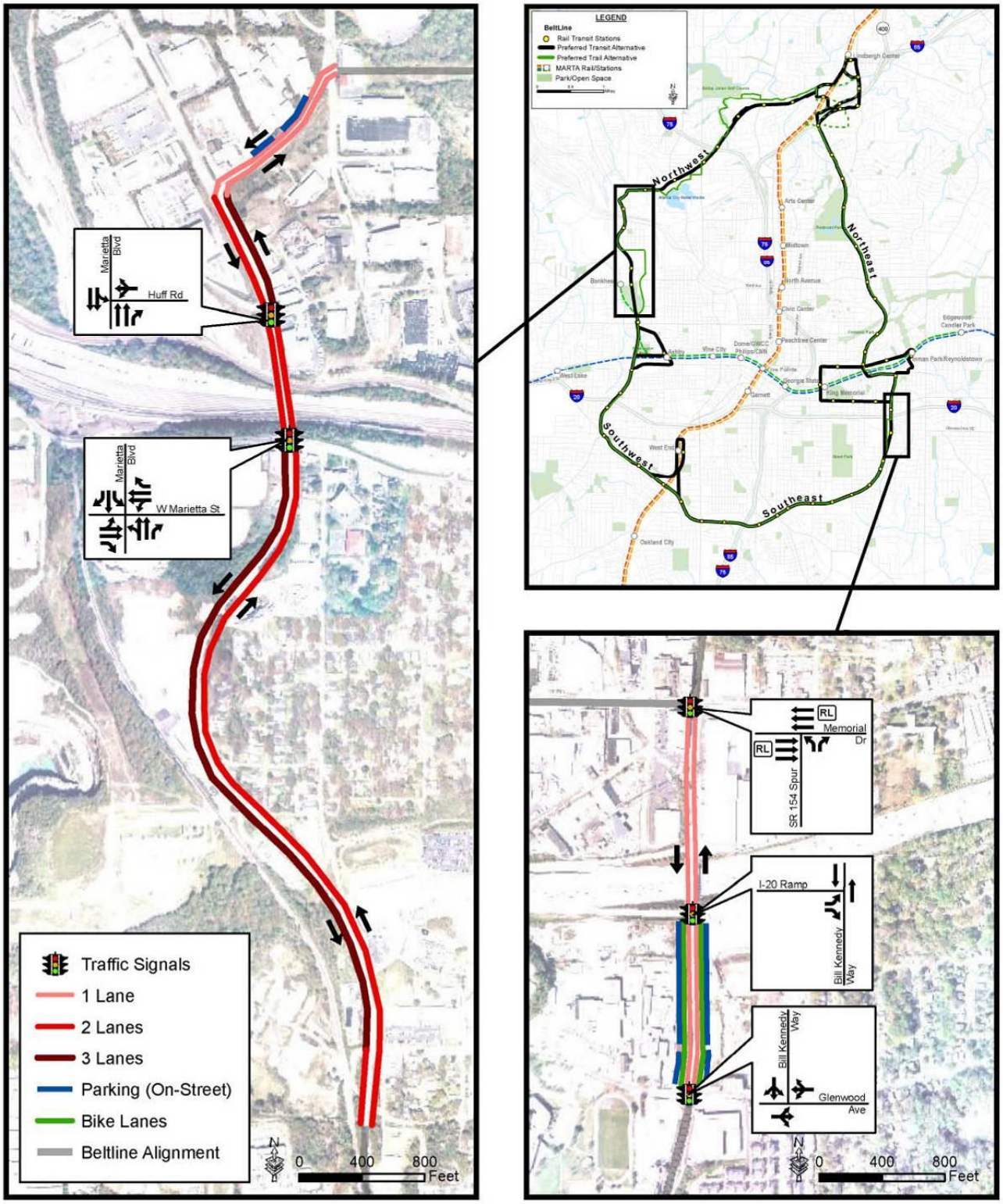
Table 3-8: Characteristics of Active Freight Rail Corridors within the Study Area

Zone	Owner	Railroad Corridor	Freight Activity*
Southeast	CSX	A&WP	2-3 trains per week
Northwest	CSX	CSX Bellwood Yard / CSX Northside	34-59 trains per day / 15-34 trains per day
	CSX	CSX Tilford Line / CSX Northside	15-34 trains per day / 15-34 trains per day
	NS	Norfolk Southern Northside	15-34 trains per day, over 35 on western segment

Source: GDOT estimates 2008
Note: There are no active freight rail corridors in the northeast or southwest zones.

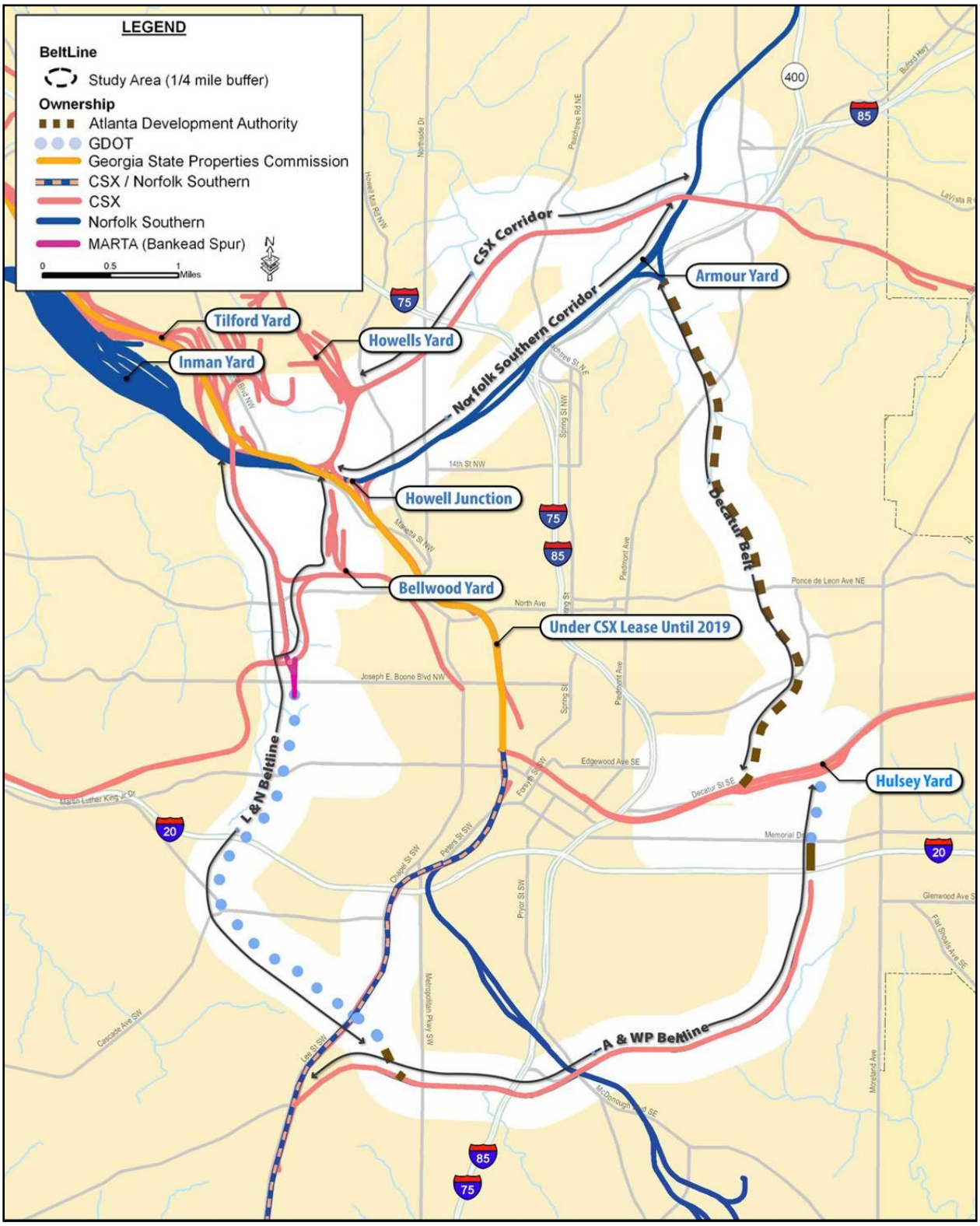
The *Atlanta Regional Freight Mobility Plan* (ARC, 2008) reviewed existing and projected conditions for all freight modes through 2030. It notes that Atlanta is a critical junction and logistics point for freight rail in the southeastern U.S., and that it is an important operations center for CSX. All freight modes are important to the regional economy, but freight rail is important to providing an alternative to trucks in central Atlanta. In 2005, freight rail tonnage was 130 million tons. The plan projects that by 2030 freight rail tonnage will increase by 37 percent and carloads by 53 percent.

Figure 3-3: In-Street Sections – Preferred Transit Alternative



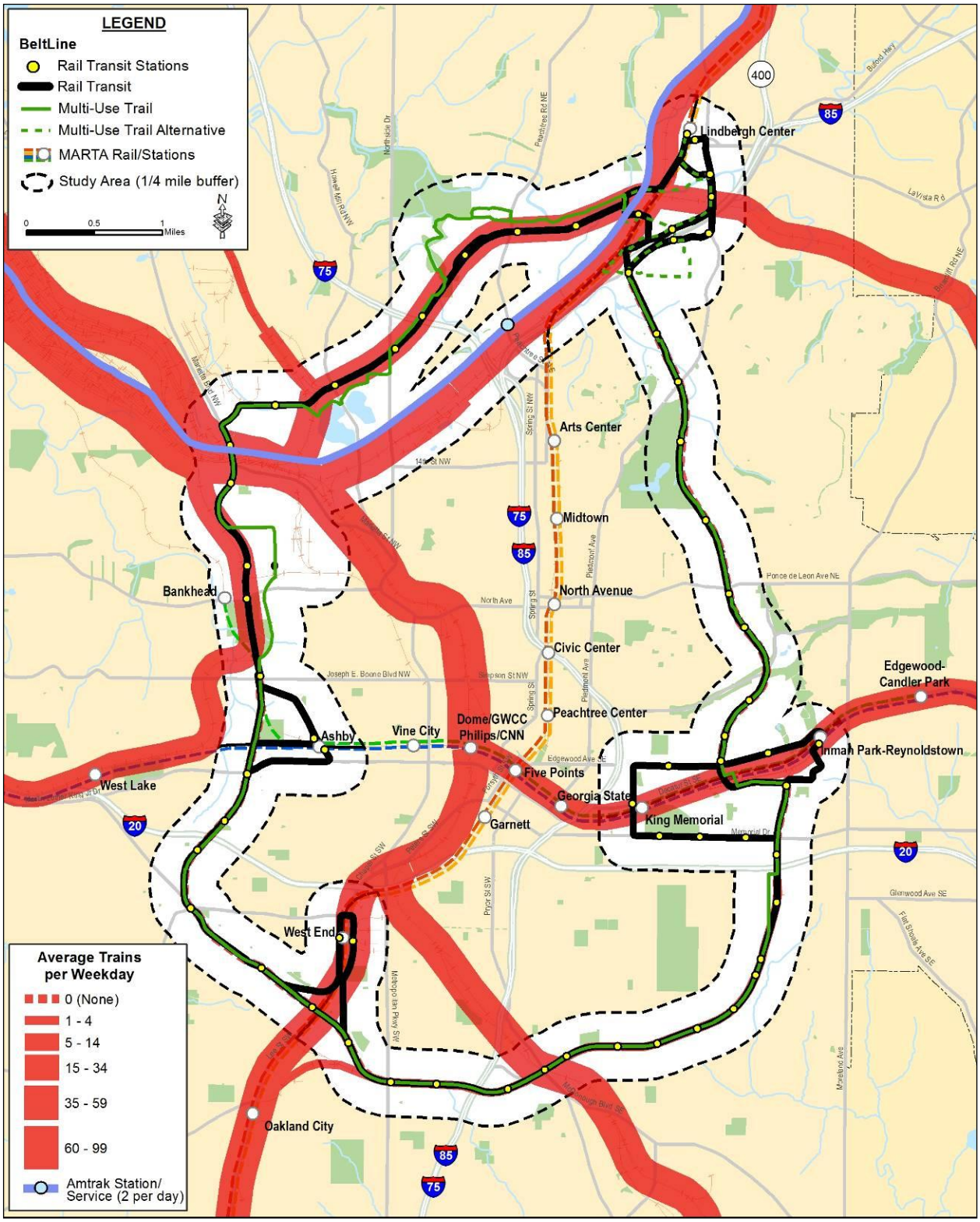
Source: AECOM Analysis 2010

Figure 3-4: Freight Rail Corridors and Facilities



Source: GDOT 2009

Figure 3-5: Freight and Amtrak Rail Traffic Volumes



Source: GDOT 2005

This *Atlanta Regional Freight Mobility Plan* includes 11 rail projects of which 3 are in the study area. The principal one is the improvement to Howell Junction, the major pinch point of the regional freight rail corridors.

Communication with public and private entities having jurisdiction over transportation facilities in the study area, including GDOT, CSX, and Norfolk Southern, identified several studies and discussions that are underway that have been considered in the evaluation of the No-Build and the Preferred Alternatives. First, GDOT is currently preparing a Tier 1 EIS for a project that would establish high-speed passenger rail service between Atlanta and Chattanooga. Although a definitive alignment has not been selected, one alternative would potentially use a portion of the Norfolk Southern corridor in the northwest zone. Second, potentially relocating Amtrak to the Atlantic Station area of the Norfolk Southern corridor has been discussed for some years, but concepts are yet unformed. The third is GDOT's Howell Junction study to determine how to separate CSX and Norfolk Southern operations in the congested Howell Junction property that it owns. However, no specific project has been identified to date. The fourth is CSX and Norfolk Southern's potential for future expansion of their corridor capacity in the northwest zone.

The following subsections describe by zone the existing freight rail corridors within the study area.

Decatur Belt - Northeast Zone
The ADA owns the inactive Decatur Belt between the Norfolk Southern Armour Yard and the CSX Hulsey Yard. The Decatur Belt includes all former Norfolk Southern property from near the junction of the wyes to Armour Yard in the north to DeKalb Avenue in the south. Tracks are present in the corridor only from Armour Yard south to Montgomery Ferry Road. The ROW width varies from 200 feet at the Armour Yard wye and around Ralph McGill Boulevard, but narrows to as little as 40 feet beyond Airline Street.

A&WP BeltLine - Southeast Zone
The A&WP BeltLine begins at the CSX Hulsey Yard and runs south to Confederate Avenue and west to the CSX mainline near the intersection of Sylvan Road and Murphy Avenue. The ROW is approximately 100 feet wide, varying at several locations. The line is double-tracked from Glenwood Avenue to Boulevard and single-tracked from there to Murphy Avenue.

CSX owns most of the A&WP Beltline, except as noted below, and the line is still active along most of its length. CSX periodically delivers hopper cars to a customer between Berne Street and Glenwood Avenue.

GDOT owns the segment of the A&WP Beltline from just south of Wylie Street to Memorial Drive; the City of Atlanta owns the short segment from the old A&WP station on Memorial Drive to approximately Glenwood Avenue that is now Bill Kennedy Way, a surface street.

L&N Beltline - Southeast Zone
The inactive L&N Beltline is owned by GDOT. It begins near the western end of the southeast zone at a turnout from the A&WP BeltLine owned by ADA located between Metropolitan Parkway and Allene Avenue. It continues into the southwest zone.

L&N Beltline - Southwest Zone
The inactive L&N Beltline, owned by GDOT, begins in the southeast zone as described above and runs through the southwest zone and into the northwest zone. The ROW is

generally 100 feet wide, but it widens to nearly 300 feet between Lawton Street and Cascade Avenue. In the north near Lena Street, there are no tracks.

L&N Beltline - Northwest Zone
The northwest zone has a complex network of active freight rail lines. Beginning in the south at Lena Street, the inactive L&N Beltline owned by GDOT extends northward to the MARTA Proctor Creek Line.

CSX Corridor - Northwest Zone
The CSX corridor consists of two active elements, the mainline (also known as the Abbeyville Subdivision) that extends north from the Tilford and Howell Yards to the Lindbergh area, and a line (A&WP Subdivision) that enters the study area in the vicinity of Joseph E. Boone Boulevard and turns north to Tilford and Bellwood Yards. The ROW contains a single-tracked mainline with a major siding track from Howell Yard up to East Switch at I-75. The ROW width ranges from 60 to 100 feet.

Norfolk Southern Corridor - Northwest Zone
The Norfolk Southern Corridor runs east from Inman Yard just outside of the study area to Howell Junction and then northeast to Armour Yard and continues to the northeast past Lindbergh Center. The segment between Howell Junction and Lindbergh Center is used by Amtrak. East of the I-75/85 interchange the MARTA Red and Gold Lines share the corridor; the Brookwood Amtrak station is at the intersection of Peachtree Street. From the Howell Junction Tower to Lindbergh Center, the Norfolk Southern corridor is double-tracked.

Howell Junction – Northwest Zone
Howell Junction is the major pinch point in the regional freight rail system as it is where the CSX and Norfolk Southern freight corridors come together at grade. At the junction, mainline Norfolk Southern tracks connecting the Inman Yard and the Corridor pass through a CSX interlocking to cross the CSX tracks from Tilford Yard traveling toward the south on a corridor leased from the Georgia State Properties Commission.

3.2.5.2 Effects on Freight Rail Corridors

No-Build Alternative

The No-Build Alternative includes a mix of transportation improvements to existing facilities and new transportation projects. Two projects, the Lindbergh/Emory High Speed Transit project and the Atlanta to Lovejoy Commuter Rail project will potentially use or cross freight rail corridors within the Lindbergh and West End Connectivity Areas, respectively. Detailed assessment of the extent of potential impacts of the No-Build projects on freight rail corridors will occur during environmental analysis for those projects.

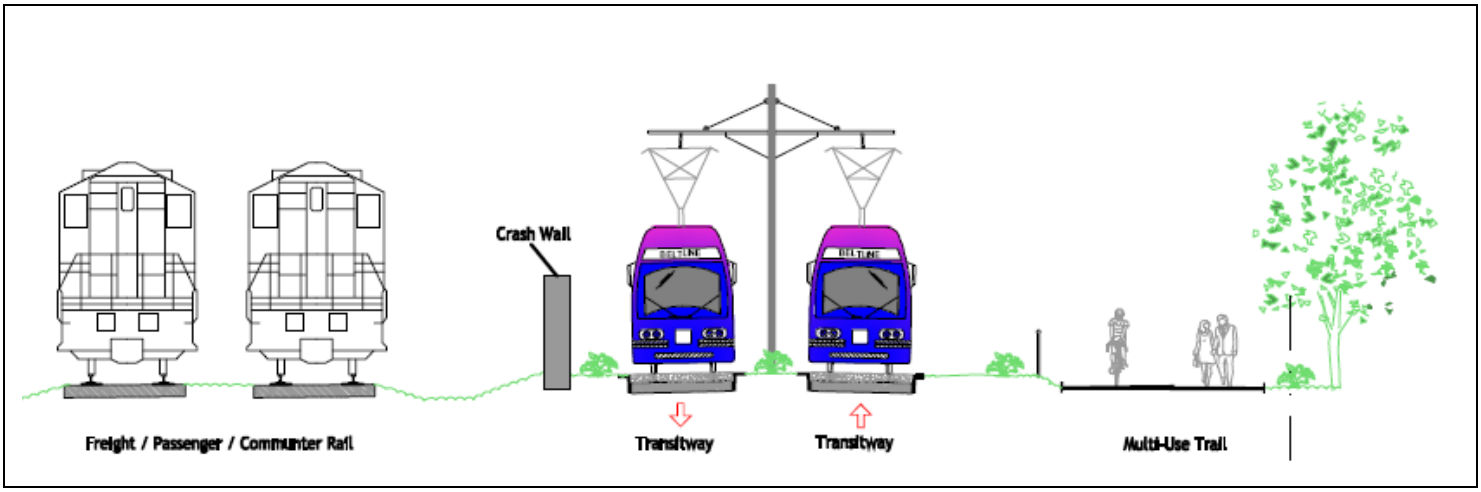
Preferred Alternatives

The Preferred Alternatives are planned to share the CSX corridors with active freight railroads in the southeast zone. As a result, they have the potential to affect active existing and future freight operations and infrastructure.

As described in Section 3.2.5.1, the active freight rail ROWs within the study area vary in width, and train movements range from 2 or 3 trains per week to almost 60 trains per day. The Atlanta BeltLine segments that contain co-aligned transit and multi-use trail elements have a 55-foot wide typical section. At station locations, the width could be as

much as 75 feet. In addition, the ROW must continue to accommodate the freight movements and a buffer or barrier between the freight tracks and the Atlanta BeltLine of a width not yet determined. In some segments, the Atlanta BeltLine ROW could vary and the width required in the freight ROW could be reduced, as discussed in Chapter 2.5.4. Figure 3-6 is a sketch of the typical section for the Preferred Transit and Trail Alternatives in an active freight rail ROW.

Figure 3-6: Typical Section of Transit and Trails Elements in Freight Rail ROW



*Dimensional relationships among modes are not defined. Drawing is not to scale.

The Preferred Transit Alternative will avoid the use of Norfolk Southern ROW and Atlantic Station area properties that could be considered for the Amtrak location at some future time. The Preferred Alternatives also will avoid the use of railroad ROW to construct and operate a grade separated transit structure crossing Howell Junction, which could affect operations in the most constricted location in the freight rail network.

To reduce effects on freight rail operation, various changes in the Preferred Alternative's typical section will be considered including locating stations outside the ROW, using a barrier in place of a buffer between the freight rail and transit and/or between the transit and the trails, and locating the trails element outside of the ROW. Relocating the freight rail tracks within the ROW will also be considered. The latter could result in effects on freight rail operations including the disruption of freight rail activities during construction, such as a reduced schedule or volume of operations, or the diversion of some freight rail activities to other rail corridors. Potentially, similar effects could be permanent.

As the active freight rail corridors in the study area are privately operated, the extent of allowable disruption, the monetary cost of the disruption, and the mitigation of effects both during and after construction must be determined and minimized through on-going consultation with the freight railroads. Therefore, an accurate assessment of potential effects of the Preferred Alternatives on active freight corridors will depend on the outcome of discussions between the project sponsors and the private railroads for shared use of the corridor.

3.2.6 Passenger Rail

3.2.6.1 Affected Environment

Amtrak provides intercity passenger rail service in Atlanta via the *Crescent.* The *Crescent* travels between New Orleans and New York City at a rate of two trains per day. Amtrak operates on the Norfolk Southern Corridor and uses the Brookwood station at Peachtree Street and I-85. Relocating Amtrak to the Atlantic Station area has been discussed for some years, but concepts are yet unformed.

Various conceptual planning efforts for expanded statewide passenger rail services have examined proposals for new services that would serve Atlanta. *GDOT's Intercity Rail Passenger Plan* (1995) identified long-range priorities for passenger routes across the State of Georgia using existing rail corridors with Atlanta as a hub. GDOT prepared the *Georgia State Rail Plan* in 2009, which updated GDOT's passenger and freight rail programs.

Currently there is no commuter rail service in the region, but there are seven proposed commuter rail routes, shown in Figure 3-7 and in TPB's *Concept 3,* that would operate from the proposed Multi-Modal Passenger Terminal (MMPT), a new station that would be located near the Five Points MARTA rail station. The MMPT would serve commuter rail, intercity rail, high-speed rail, and regional bus transit. In the 2009 *State Rail Plan*, the first priority route runs along the CSX/Norfolk Southern tracks to Lovejoy, GA with a planned extension to Macon. This route parallels the MARTA Red and Gold Lines and crosses the study area near the West End MARTA rail station. Six other routes would serve Canton, Gainesville, Athens, Madison, Senoia, and Bremen.

Atlanta is on the federally designated high-speed rail Southeast Corridor. GDOT, in coordination with several Southeastern States, is studying high-speed rail service from Macon, GA, to Greenville, SC, and Charlotte, NC via Atlanta. In addition, there is a proposed statewide Intercity Passenger Rail Service priority list with a route to Macon via Lovejoy and Griffin as the first priority. Second priority routes all extend the commuter rail services from Atlanta to Augusta via Madison, to Columbus via Griffin, and to Greenville, SC via Gainesville and Toccoa.

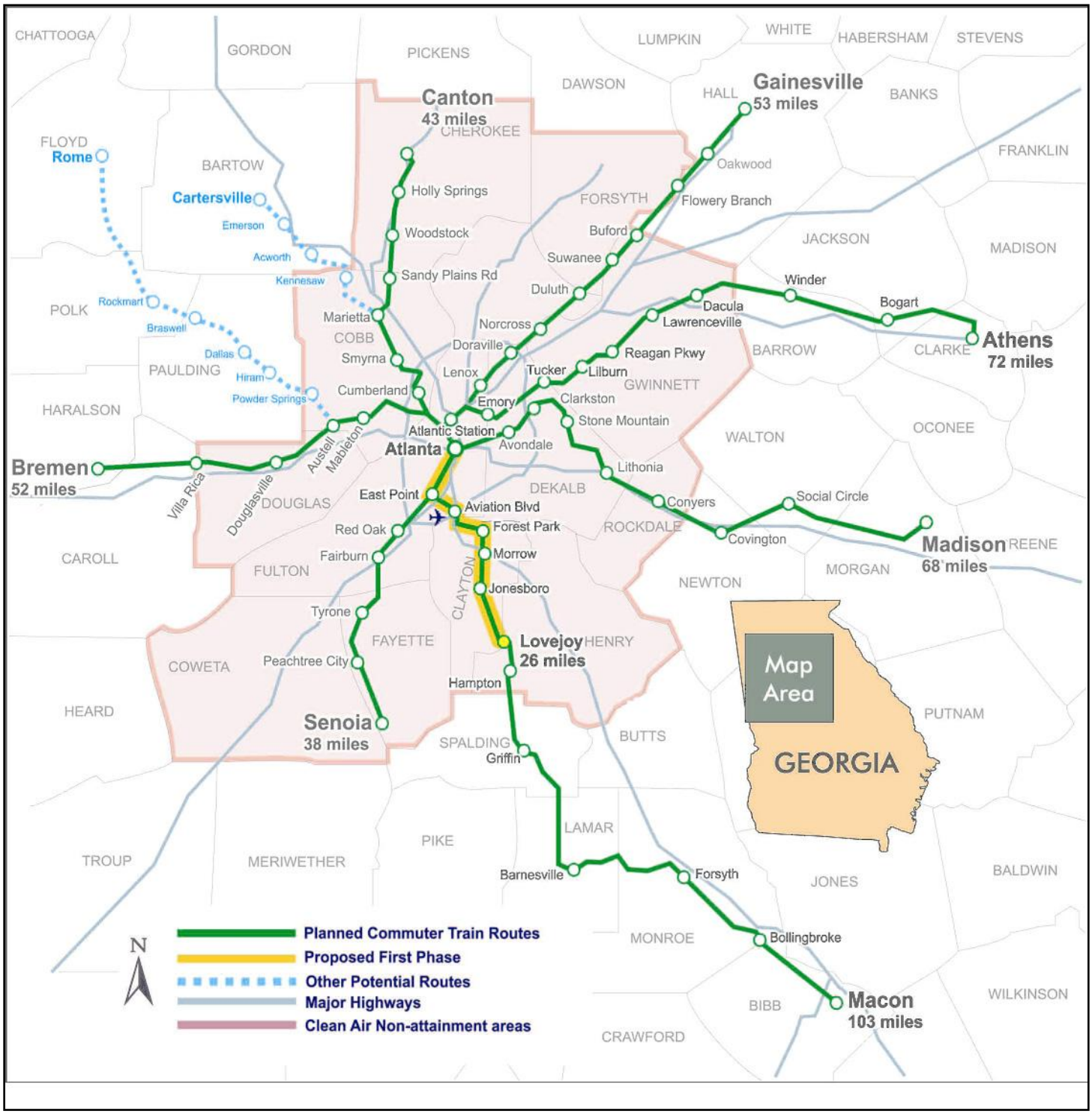
GDOT, the Federal Highway Administration (FHWA), and the Federal Railroad Administration (FRA) are currently preparing a Tier 1 EIS for a project that would establish high-speed passenger rail service between Atlanta and Chattanooga, TN. Although a definitive alignment has not been selected, the project would cross the Atlanta BeltLine within the northwest zone.

3.2.6.2 Effects on Passenger Rail

No-Build Alternative

The No-Build Alternative will not affect existing passenger rail operations.

Figure 3-7: Proposed Commuter Train Routes



Source: GDOT, downloaded June 25, 2010

Preferred Alternatives

No commuter rail or intercity passenger service is proposed to operate along the length of the CSX Corridor; thus, there will be no conflict with the Preferred Transit Alternative. The Preferred Alternatives will also avoid potential conflicts with the four passenger/commuter rail proposed projects that would use the Western Trunk from Howell Junction into Downtown Atlanta including the commuter rail lines to Bremen, Canton, Athens and Gainesville, along with Amtrak. There will also be no conflict with the proposed passenger/commuter rail lines to Athens and Gainesville that would use the Norfolk Southern Corridor to access the MMPT in Downtown Atlanta. Likewise, no conflict is anticipated between the Atlanta BeltLine and the Crescent Amtrak service connecting New Orleans and New York via Atlanta, which operates on the Norfolk Southern Corridor.

The Preferred Transit Alternative will also avoid effects to the potential alignment of the Atlanta – Chattanooga High Speed Ground Transportation (HSGT) project being considered by GDOT, which proposes to use a portion of the Norfolk Southern Corridor, west of the Atlanta BeltLine, as one of several potential HSGT alignments.

From a ridership market perspective, the Preferred Transit Alternative will not compete with the proposed commuter and intercity passenger rail as the Atlanta BeltLine will provide local service while passenger rail service is a regional or long-distance function. The Preferred Transit Alternative also will have potentially beneficial effects on future commuter rail service ridership if commuter rail services include stations at junctions with the Atlanta BeltLine transit alignment. The Preferred Transit Alternative will potentially benefit passenger rail service if joint stations are developed that provide transfer opportunities between the various services and modes. Connections that can be provided between the Atlanta BeltLine transit and trails and passenger rail services support the project need to increase transportation connections, travel efficiency, and reduce travel demand by personal vehicle.

MARTA will coordinate with GDOT and Amtrak as the Atlanta BeltLine project advances to assess opportunities, constraints, and solutions regarding these respective operations and projects, as described in Section 3.2.9.

3.2.7 Pedestrian and Bicycle

3.2.7.1 Affected Environment

Pedestrian Facilities

The quality of sidewalks, crosswalks, and pedestrian signals in the study area ranges from satisfactory to poor. A cursory assessment of sidewalks by the Atlanta Department of Watershed Management suggests that about 60 percent of streets have sidewalks relative to street length. As collecting current, accurate data for existing pedestrian facilities is outside the scope of this Tier 1 EIS, a qualitative assessment was undertaken. Many sidewalks are cracked or overgrown, and many crosswalks are dysfunctional or non-existent.

Bicycle Facilities

Currently, there are few on-street bicycle facilities. However, an extensive network is planned as shown on Figure 3-8. The *Connect Atlanta Plan* (Atlanta 2008) proposes both "Core" routes providing longer-distance connectivity, and "Secondary" routes providing

access to the Core routes. Table 3-9 lists the routes planned in the study area, the type of route, and its completion status.

Table 3-9: On-Street Bicycle Routes Intersecting the Preferred Transit Alternative

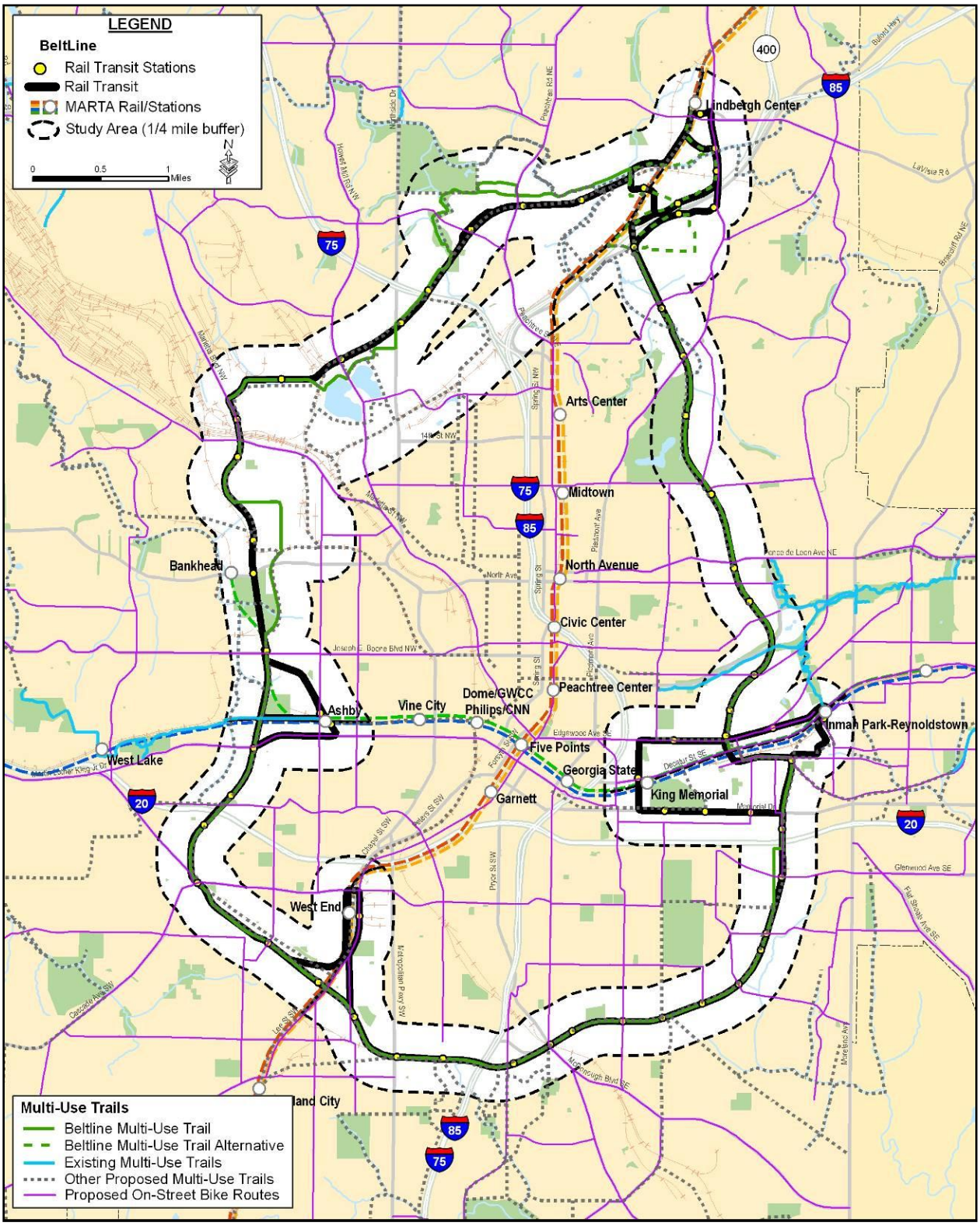
Zone	Roadway	Type of Route	Existing	Relationship to Preferred Transit Alternative
Northeast	Monroe Dr.	Secondary	No	At-grade
	Piedmont Ave.	Core	No	Over
	Montgomery Ferry Rd.	Secondary	No	Over
	North Ave.	Secondary	No	Under
	North Highland Ave.	Secondary	No	Over
	Virginia Ave.	Secondary	No	Over
	Ralph McGill Blvd.	Core	No	Under
Southeast	Glenwood Ave.	Secondary	Yes	At-grade
	Bill Kennedy Way	Secondary	Yes	In-street
	Hill St.	Secondary	No	Under
	Pryor Rd.	Secondary	No	Under
	Confederate Ave.	Secondary	No	Under
Southwest	Cascade Rd.	Core	No	Over
	Westview Dr.	Secondary	No	Over
	Lawton St.	Secondary	No	Over
Northwest	Marietta St.	Core	No	At-grade
	Marietta Blvd.	Core	No	In-street
	Howell Mill Rd.	Core	No	Over
	Collier Rd.	Secondary	No	Over
	Peachtree Rd.	Core	No	Over

Source: City of Atlanta Bureau of Planning 2008

Multi-Use Trails

Figure 3-8 also shows existing and planned multi-use trails that provide both bicycle and pedestrian facilities within or connecting to the study area and with the proposed on-street network. Currently, the region has few multi-use trails and the planned network, aside from the Atlanta BeltLine, has few cross-town trails and no circumferential trails.

Figure 3-8: Planned On-Street Bicycle Routes and Multi-Use Trails



Source: City of Atlanta Bureau of Planning 2008

3.2.7.2 Effects on Bicycle and Pedestrian Facilities

No-Build Alternative

The No-Build Alternative includes bicycle and pedestrian facilities along Ralph David Abernathy Boulevard and Marietta Boulevard that will supplement existing facilities, but significant gaps in the bicycle and pedestrian network will remain throughout the study area. Thus, three bicycle/pedestrian elements of the project need will not be addressed by the No-Build Alternative. First, the No-Build Alternative will not address the project need to expand bicycle/pedestrian options in a manner that benefits the larger study area. Second, the No-Build Alternative improvements will be in-street and will not directly connect existing parks. Thus, the No-Build Alternative will not increase the amount of public greenspace in the study area or provide connections between parks. Third, while the projects in the No-Build Alternative may serve minority and/or low-income populations in their immediate geographic vicinity, many study area populations will not benefit. As a result, the No-Build Alternative is minimally responsive to the project need to provide bicycle/pedestrian options in those areas in which environmental justice populations have been identified (see Section 3.5 for a discussion on environmental justice populations).

Preferred Alternatives

Specific to the Atlanta BeltLine purpose and need, the Preferred Trail Alternative will have beneficial effects on bicycle and pedestrian facilities by creating a circumferential route of multi-use trails that provides connections among existing and proposed pedestrian and bicycle facilities and other multi-use trails. The trails element will provide connectivity between areas currently separated by natural and manmade obstacles, and between activity centers, MARTA rail stations, and recreational and cultural facilities. The Preferred Trail Alternative will provide bicycle/pedestrian options in those areas in which environmental justice populations have been identified in the study area (see Section 3.5). In addition, the Preferred Trail Alternative will increase public greenspace.

The number of connections to other trails is a performance measure that considers the ability of the Preferred Trail Alternative to maximize the number of connections to other trails. The Preferred Trail Alternative will serve two other trails.

Miles of exclusive trails is another performance measure that evaluates the Preferred Trail Alternative by the number of miles of trails separated from automobile traffic. It assesses user safety in terms of separation from automobile traffic by measuring the length of potential exclusive ROW for the Preferred Trail Alternative. Preliminary estimates indicate that the Preferred Trail Alternative will have 15.9 miles of exclusive ROW and 4.1 miles of in-street trail outside of the Lindbergh MARTA Station Connectivity and Infill Station Alternative area. Section 3.9 discusses potential effects to pedestrian and bicycle safety and security.

The number of proposed trail access points, which include transit stations, connecting trails, and street crossings, is another performance measure. Access to trails is also possible at multiple points along permeable linear areas, for example the edge of Tanyard Creek Park. The Preferred Trail Alternative will have 68 planned access points, an average of 3 access points per mile.

3.2.8 Consistency with Transportation Plans

This section describes the consistency of the alternatives with several key plans and studies that have been adopted to guide transportation planning in the Atlanta region.

No-Build Alternative

The No-Build Alternative will not be consistent with a majority of the local and regional transportation plans because these plans include the Atlanta BeltLine transit and/or multi-use trails elements in their recommendations, but it will be consistent with the *Atlanta Regional Freight Mobility Plan,* as it would not affect active freight railroads.

Preferred Alternatives

The Preferred Alternatives generally are consistent with local and regional transportation plans including *Envision6 RTP/TIP* (ARC 2007)*, Connect Atlanta Plan* (Atlanta 2008)*, Concept 3* (TPB 2008)*, Atlanta Region Bicycle Transportation and Pedestrian Walkways Plan* (ARC 2007), and *Plan for a Walkable Atlanta* (Atlanta 2004).

The Preferred Transit Alternative is consistent because it will provide connections between activity centers and MARTA rail stations and bus routes. The Preferred Trail Alternative is consistent because it will provide increased infrastructure, routes, and connections for bicyclists and pedestrians throughout the study area. These plans are discussed in the *Technical Memorandum on Transportation Systems and Facilities* prepared for this project.

Table 3-10 lists the Atlanta BeltLine project elements in the RTP/TIP. The Preferred Alternatives will potentially conflict with the *Atlanta Regional Freight Mobility Plan* (ARC 2009) that recommends the region continue to enhance its freight rail network and maintain the viability of in-town rail yards and lines to accommodate the forecasted growth in freight rail volumes. The potential effects of the Atlanta BeltLine on freight rail lines are indeterminate pending arrangements for shared use of CSX freight rail corridors.

Table 3-10: Atlanta BeltLine Projects in *Envision6* RTP/TIP

Project Type	Status	Project Description
Bicycle/Pedestrian Facility	Programmed	Atlanta BeltLine Corridor – multi-use trails and streetscapes linking Lindbergh Center, Inman Park, West End, and Howell Station
		ROW and construction
		Tier 1 environmental design
		Preliminary engineering
Fixed Guideway Transit Capital	Long Range	Atlanta BeltLine Corridor – transit service
Multi-Use Bike/Pedestrian Facility	Programmed	West End multi-use trails along CSX rail corridor and Westview Drive

Source: ARC. 2007., *Envision6* RTP and TIP

The Preferred Trail Alternative is consistent with the key pedestrian and bicycle policies from the *City of Atlanta 2004-2019 Comprehensive Development Plan* and *Connect Atlanta Plan*, which promote increased infrastructure, safety, ridership, maintenance of facilities, routes, and connections within the City.

3.2.9 Potential Avoidance, Minimization, and Mitigation Measures

During the Public Scoping Process, questions and concerns were raised regarding potential impacts to traffic, bicycle, and pedestrian circulation. In response, MARTA planned the Preferred Alternatives to avoid or minimize potential adverse effects. The Atlanta BeltLine Preferred Transit Alternative will be aligned in or adjacent to exclusive ROW of existing rail corridors to the maximum extent possible to minimize in-street running segments and will use grade separations to minimize at-grade intersections with roadways and to avoid at-grade crossings of active rail lines. Further means to avoid, minimize, and mitigate adverse effects on roadways, transit, freight rail corridors, and bicycle and pedestrian facilities are discussed below.

3.2.9.1 Transit

As discussed in Section 3.2.3.2, potential adverse effects to existing MARTA local bus routes will consist largely of the effects of in-street alignments of the Preferred Transit Alternative. To the extent that the local bus routes are able to share exclusive transit lanes, the effects should be beneficial, but in cases where an exclusive lane is not shared with bus routes, especially if it reduces roadway capacity, there could be a negative effect. The use of shared exclusive transit lanes will be considered in the Tier 2 analysis because of these benefits. However, where shared exclusive use is determined to not be possible, appropriate mitigation measures will be reviewed during the Tier 2 analysis.

Subsequent analysis will determine potential effects, especially schedule adjustments, on MARTA rail services to facilitate transfers between these services and the Atlanta BeltLine. The Preferred Alternatives will not have a negative effect on existing commuter bus service, but will likely result in refinements to transit service in general.

3.2.9.2 Roadways

As outlined in Section 3.2.4.2, in-street running and at-grade crossings will potentially affect the roadway network at localized areas. Where heavy congestion is projected to be created or exacerbated by the Atlanta BeltLine transit, potential avoidance and mitigation measures may include purchase of additional roadway ROW to accommodate an exclusive or mixed-use transit lane. If the additional ROW would adversely affect private property, other means to minimize or avoid congestion may be required. At-grade crossings close to congested intersections and congested intersections within the in-street running segments will be analyzed to determine if new signalization or modification of existing signals would reduce congestion, including signal timing or pre-emption.

3.2.9.3 Freight Rail

As discussed in Section 3.2.5.2, the shared use of or proximity to active freight rail corridors could have potential adverse effects to freight rail operation. During initial consultation with Norfolk Southern and CSX, each railroad cited critical elements to their consideration of passenger rail or trails activity in their ROW. CSX, in particular, cited its “four pillars: uncompromised safety, capacity for current and future needs, no subsidization by CSX, and liability protection.” Thus, whether the Preferred Transit and Trail Alternatives are within or adjacent to a freight railroad corridor, specific CSX concerns must be addressed. Key issues of concern to the railroads include the effect of freight ROW use, crossing, or proximity on the safety and capacity of existing and future freight operations.

CSX, in its correspondence (shown in Appendix C) and during meetings, indicated a willingness to consider Atlanta BeltLine in or adjacent to its ROW. The correspondence states:

- "Because of the potential impact to our rail network, CSXT[7] requests that we continue to be included in the foregoing discussions concerning the potential use and preliminary engineering design that includes CSXT ROW for trails and transit lines during the NEPA process."[8]
- "CSXT will cooperate in establishment of such paths, recognizing that important requirements must be met and safety precautions taken to protect those who use the pathways."[9]
- "There may be a possibility of using some of the CSX right-of-way as long as the railroad's needs for capacity are met and efficiency and safety are not compromised."[10]
- "If in the future, if it is determined that CSX's needs for capacity are met and efficiency and safety are not compromised, CSX will be willing to continue discussing the possibility of the BeltLine project operating in their right-of-way but they cannot guarantee or commit to anything."[11]

The Atlanta BeltLine project sponsors intend to continue coordinating with the railroads as engineering details of alignment, geometry, vertical clearance, horizontal separation, cross section, safety barriers, and other design considerations are developed and evaluated. Moreover, matters of particular interest and concern to the railroads will be examined in consultation with the railroads, including but not limited to: interoperability of passenger and freight trains, shared facilities, capacity, operational safety and security, liability and insurance, access fees and compensation, equipment requirements, and capital improvements.

This Tier 1 EIS examines the Preferred Transit and Trail Alternatives within and outside freight railroad ROW. As is stated in Section 3.2.5, for the small portion of the Preferred Alternative that is planned to share active freight rail ROW in the southeast zone, means to further avoid or minimize potential effects through design refinements will be considered. For example, the typical section of the Preferred Transit and Trail Alternatives could potentially be modified to make it narrower. Temporal separation of transit and freight operations could be considered to potentially avoid adverse effects, but would involve freight operations for late-night/early morning hours when the transit service would not be in operation. Both temporal separation and diversion of the Atlanta BeltLine outside the railroad ROW would create other potential effects requiring assessment such as late-night noise, increases in vibration, and ROW impacts outside freight railroad corridors.

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[7] CSX Transportation Inc. (CSXT) is CSX's principal operating company.

[8] Letter from CSXT to Atlanta BeltLine, Inc. "Re: CSXT Comments on the Atlanta BeltLine Tier 1 Draft Environmental Impact Statement." 08 Oct. 2010.

[9] Ibid.

[10] Coordination Meeting between MARTA, ABI, and CSX. "Meeting Notes." 10 Nov. 2010.

[11] Ibid.

3.2.9.4 Passenger Rail Operations

As is stated in Section 3.2.6, there is no apparent conflict between the commuter rail or intercity passenger service and the Preferred Alternative. However, if in future phases of the project that changes, and a conflict does arise, the shared use of existing and potential future passenger/commuter rail corridors could adversely affect their operation. In that event, the typical section will be modified to the extent possible. If this proves infeasible, the transit and/or trail elements could be realigned outside of the rail corridors. Continued coordination between MARTA, GDOT, Amtrak, and others, as appropriate, is necessary as the Atlanta BeltLine project advances to assess opportunities, constraints, and solutions regarding these respective operations and projects.

3.2.9.5 Bicycle and Pedestrian

Potential effects to existing bicycle and pedestrian facilities could be their elimination or modification in some situations to provide a transit lane in a street ROW. Other potential effects on these facilities concern at-grade crossings of the Atlanta BeltLine and safety and security. Section 3.9 discusses proposed measures to address safety and security. A Tier 2 analysis will consider in more detail the potential project effects on the existing and planned bicycle and pedestrian facilities, especially at locations where in-street sections affect facilities and warrant mitigation.

3.2.10 Subsequent Analysis

A Tier 2 analysis will provide a more detailed examination of the potential effects of the Preferred Alternatives on transportation systems and facilities. Emphasis will be placed on effects on freight rail operations; in-street running sections; at-grade crossings and intersections; interfaces with future transit projects; trail crossings, access points, connections, and amenities; Atlanta BeltLine station locations, and MARTA Station Connectivity and Infill Station Alternatives areas including potential joint and infill MARTA rail stations. Means to avoid or minimize adverse effects will be considered, and appropriate mitigation measures to offset unavoidable effects will be developed.

3.3 Land Use and Zoning

Section 3.3 examines the existing and future land use and zoning in the study area. This includes the potential direct effects within the ROW of the Preferred Alternatives and potential indirect effects in the service areas (refer to the Methodology section below for a description of the term service area). The discussion of the land use and zoning within the ROW requirements is intended to address the potential needs to amend the zoning of parcels and to understand the existing and future land use designations to be converted by the acquisition of the parcels within the ROW.

3.3.1 Methodology

Areas of potential direct or indirect effects were calculated in acres for existing and future land use, zoning, and estimates of existing and additional required ROW. The direct land use effects will occur within the proposed ROW for the Preferred Alternatives, which is estimated to be 37 feet wide for transit and 20 feet wide for trails.

The indirect land use effects were assessed based on the area within ¼-mile of the alignment of the Preferred Transit Alternative, otherwise known as the service area, but not including the area directly within the proposed ROW (the direct effects). Indirect land use effects for the Preferred Trail Alternative were assumed in the calculations for the

indirect effects of the Preferred Transit Alternative because the Preferred Trail Alternative is intended to serve the same stations, activity centers, and communities. The acreage within the MARTA Station Connectivity and Infill Station Alternative Areas was included in the estimate of the direct effects.

3.3.2 Land Use

The existing land use data, illustrated on Figure 3-9, was primarily provided by the City of Atlanta and supplemented by the Fulton County Tax Assessor's parcel level data and by LandPro data compiled by the ARC. For some parcels, such as state-owned highway ROW, a use was not indicated. The existing land use, therefore, shows a smaller number of acres than future land use and zoning.

Future land use, presented in Figure 3-10, represents the City of Atlanta's *Future Land Use Map* (FLUM) that provides policy for development of vacant land and for redevelopment projects. The FLUM covers all areas of the City. It includes a large quantity of land that is designated as mixed-use and a category for transportation/utility land use. Within the study area, the transportation/utility category in the FLUM ranges from four percent in the northeast and southeast to five percent in the northwest and six percent in the southwest. It encompasses the public roadways and freight railroad corridors that would be used by the proposed Atlanta BeltLine alignment.

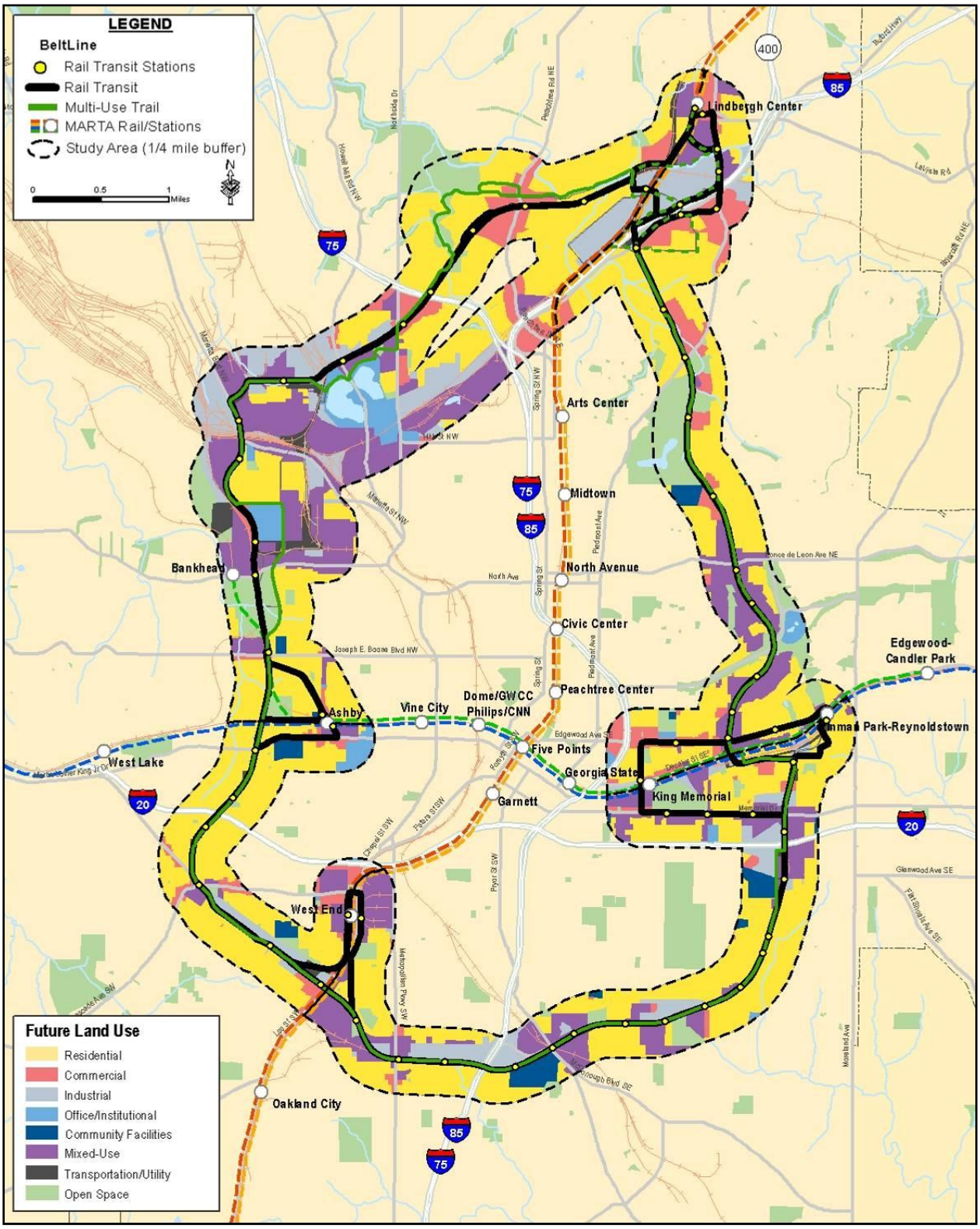
In this section, the many land use categories used by the City are aggregated into the generalized categories of residential, commercial, industrial, institutional, parks, transportation/utilities, and vacant. All of these generalized land use categories are found in each of the study area zones, but the proportions of the categories differ. The predominant existing land use category in the study area is residential, ranging from 30 percent to 56 percent of total land area in each zone.

3.3.2.1 Direct Effects on Land Use

No-Build Alternative

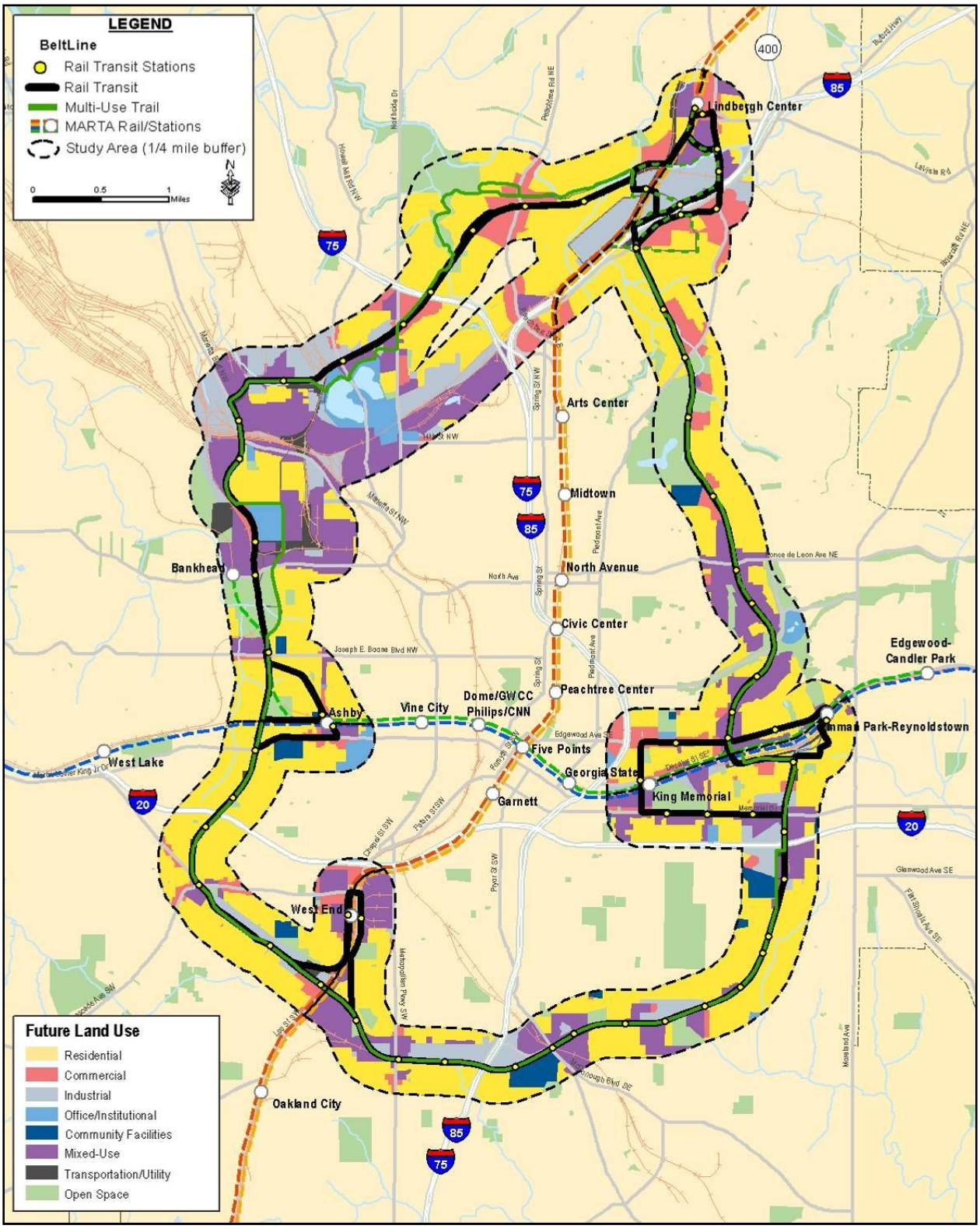
Direct effects on land use in the study area by the additional ROW requirements of the No-Build Alternative will be examined in the individual environmental analyses for each constituent project.

Figure 3-9: Future Land Use Map (FLUM)



Source: City of Atlanta, Bureau of Planning 2008

Figure 3-10: Future Land Use Map (FLUM)



Source: City of Atlanta, Bureau of Planning 2008

Preferred Alternatives

Table 3-11 presents the total acreage of the Preferred Transit Alternative's direct and indirect effects and the Preferred Trail Alternative's direct effects by zone.

Table 3-11: Acres of Potential Direct or Indirect Land Use Effect

Zone	Preferred Alternative's Potential Direct or Indirect Land Use Effects (Acres)		
	Transit		Trail
	Direct	Indirect	Direct
Northeast	17.5	1353.4	9.4
Southeast	20.0	1532.9	11.0
Southwest	9.2	767.7	5.0
Northwest	24.5	1836.9	10.4
Totals	71.2	5490.9	35.8

Source: AECOM analysis 2011

The *Technical Memorandum on Land Use, Zoning, and Local Plans* (AECOM 2011) provides further detail regarding the existing and planned conditions including objectives, policies, and recommended projects of the *Comprehensive Development Plan*; the Atlanta BeltLine Subarea Master Plans; and the relevant sections of the Zoning Ordinance.

Table 3-12 presents the direct effects of the Preferred Alternatives on existing land use in the proposed ROW. The direct effect of the Preferred Alternative is to convert all acreages in the ROWs to the Transportation/Utility land use category. It should be noted that the "total converted" numbers in Table 3-12 include the No Data category that, in large part, includes railroad, roadway, or utility ROW that more appropriately should be included in the transportation/utility category. In general, the smaller number of acres converted from other uses to Transportation/Utility have less direct effect on existing land use.

Table 3-12: Direct Land Use Effects

Zone	Alternative	Direct Land Use Effects (Acres)									
		Residential	Commercial	Industrial	Institutional	Parks	Vacant	No Data	Total Converted	Transportation/ Utility	Total
Northeast	Preferred Alternatives	0.3	0.3	0.1	0.0	0.0	0.0	26.1	26.8	0.0	26.8
Southeast	Preferred Alternatives	0.1	0.1	0.4	0.3	0.0	0.5	29.5	30.9	0.1	31.0
Southwest	Preferred Alternatives	0.0	0.1	0.2	0.0	0.0	2.7	7.6	10.6	3.7	14.3
Northwest	Preferred Transit Alternative	2.1	1.2	2.6	1.9	0.0	4.0	11.7	23.5	0.9	24.4
	Preferred Trail Alternative	2.1	0.7	0.4	2.7	1.1	1.1	0.5	8.6	2.2	10.8

Source: AECOM analysis 2011

In the northeast, southeast, and southwest zones outside the MARTA Station Connectivity and Infill Station Alternative Areas, there are 72.1 acres of direct impact due to acquisition for the Preferred Alternatives, of which 3.8 acres are shown in the transportation/utility land use category. The 68.3 acres of other generalized categories

that will be converted is comprised of 0.4 acres residential, 0.5 acres commercial, 0.7 acres industrial, 0.3 acres institutional, 3.2 acres vacant, and 63.2 acres for which no data is available. No acres used as parks are in the combined ROWs in these zones.

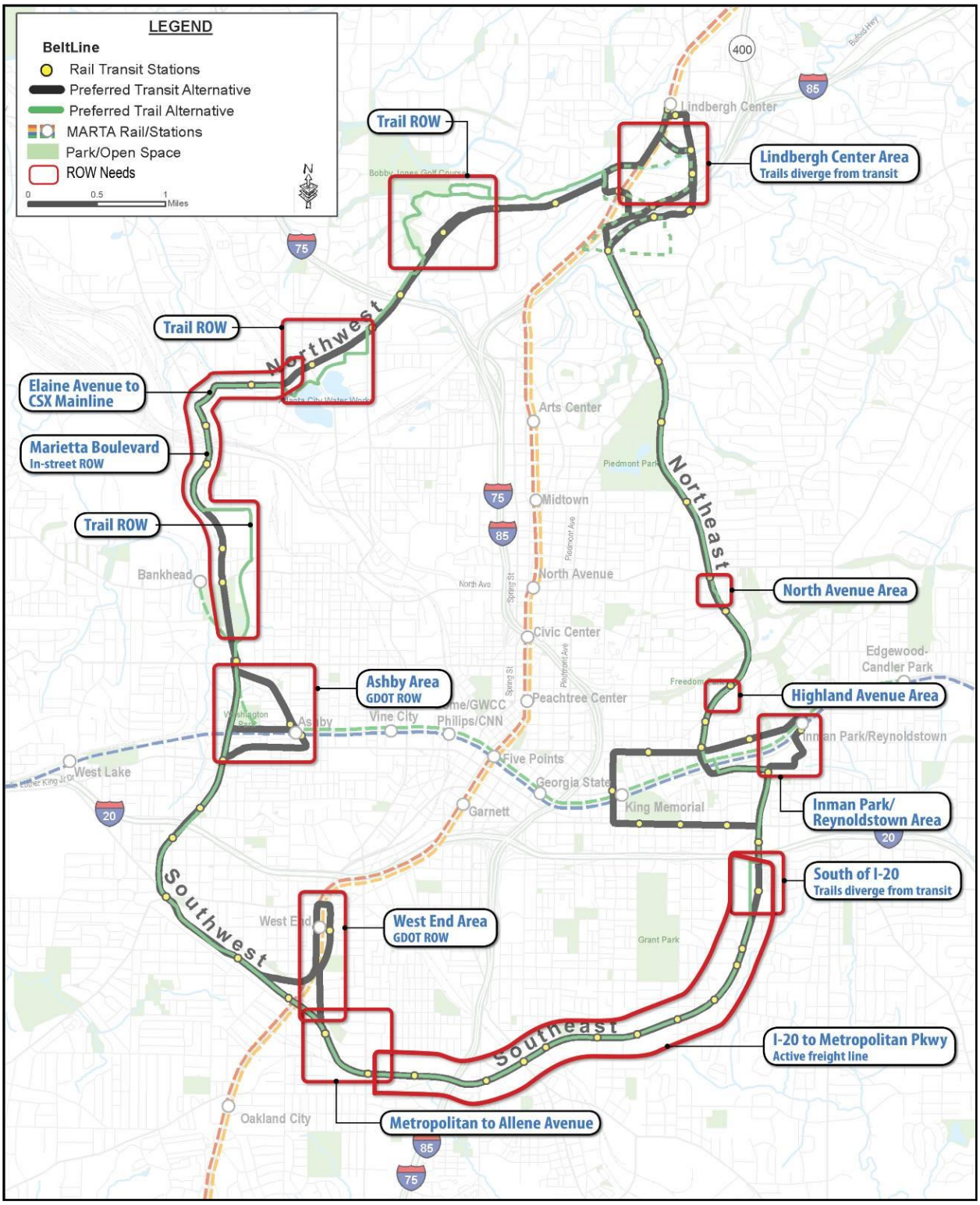
In the northwest zone, the Preferred Transit Alternative is adjacent to the active railroad ROWs. In the other zones, the Preferred Transit Alternative is aligned primarily in active and inactive railroad ROW or in roadways. These and certain other lands in the proposed ROW that are not owned by the City of Atlanta, MARTA, GDOT, or some other project sponsor, constitute additional required ROW. Figure 3-11 shows the alignments and estimated areas of the additional required ROW. While actual cross sections may vary due to site-specific conditions, the estimates of direct impacts within proposed ROWs use the typical cross sections as conservative estimates.

In the northwest zone, the Preferred Transit Alternative will convert 23.5 acres from other land use categories to transportation/utility. If the acres of vacant or "no data" land use categories are excluded from estimating the direct effect in the northwest zone, the Preferred Transit Alternative converts only 7.8 acres of land use (residential, commercial, industrial, institutional, or parks) to transportation/utility.

The Preferred Trail Alternative in the northwest zone will convert 8.6 acres from other land use categories to transportation/utility. If the acres of vacant or "no data" land use categories, are excluded from estimating the direct effect in the northwest zone, the Preferred Trail Alternative converts only 7.0 acres of land use (residential, commercial, industrial, institutional, or parks) to transportation/utility.

As described in Section 2.5.1 and illustrated by Figure 2-2, approximately 50 preliminary locations for stations were identified for evaluating potential Atlanta BeltLine service characteristics. These stations are located approximately ½-mile apart near major roadway intersections, existing or proposed trip generators, and other key access points. The final station locations, their designs and dimensions, and an assessment of the potential direct effects will occur in the Tier 2 analysis.

Figure 3-11: Additional Required Right-of-Way



Source: AECOM 2010

3.3.2.2 Indirect Effects on Land Use

No-Build Alternative

The No-Build Alternative would not be fully compatible with the FLUM as it is based on the CDP, which includes the adopted Atlanta BeltLine Subarea Master Plans. The Subarea Master Plans support increased transit and additional multi-use trails and specifically recommend higher-density land uses located where the proposed Atlanta BeltLine can efficiently serve them. Indirect effects on land use in the study area by the additional ROW requirements of the No-Build Alternative will be examined in the individual environmental analyses for each constituent project.

Preferred Alternatives

According to CEQ Regulation 1508.8, indirect effects "… may include growth-inducing effects and other effects related to induced changes in the pattern of land use, population density or growth rate," Indirect effects are not directly caused by the project, but by intervening factors that the project affects. Modern streetcar contributes to existing market forces that can increase the potential for development or redevelopment of land typically within a ¼-mile of station locations. Improved transit access can increase the convenience and desirability of surrounding residential, commercial, and office properties. The type of development at stations with available land and supportive zoning in place tends to be more intense, mixed-use development that supports high-density residential, commercial, and office-related uses.

The potential changes by land use category are expressed in Table 3-13 as increases or decreases in the number of acres by generalized category per zone.

Table 3-13: Potential Changes in Land Use in Service Areas

Zone	Changes in Land Use of Service Areas (Acres) for the Preferred Transit Alternative							
	Residential	Commercial	Industrial	Institutional	Mixed Use	Parks	Transportation/ Utility	Vacant/No Data
Northeast	+232.5	-58.9	-21.4	-2.4	+245.4	+111.7	+38.3	-547.5
Southeast	+345.0	-83.1	+44.2	-101.3	+339.1	+35.7	-13.0	-572.0
Southwest	+207.1	+11.0	+28.9	+2.5	+14.8	+13.6	-7.8	-273.9
Northwest	+210.0	+42.9	+26.9	-87.5	+325.1	+109.7	+52.2	-687.1

Source: AECOM 2011

The Preferred Alternatives would support realization of the FLUM. As mentioned earlier, however, there are qualifications to the apparent benefits of converting vacant or "no data" land use categories to transportation/utility. Causing less change in land use may already come closer to conformance with the FLUM. Other qualifications are discussed below. Additional discussion of the indirect effects on future land use can be found in the *Technical Memorandum on Land Use, Zoning and Local Plans* (AECOM 2011).

In the northeast zone, most potential station locations have planned higher-intensity and mixed-use land uses in their vicinities that would be consistent with the transit element of the Atlanta BeltLine. The potential station in the Armour Yard area has mostly industrial

future land use in its vicinity, which could be vulnerable to market pressures for future land use conversions (Atlanta 2008). To some extent, this is foreseen by the FLUM that anticipates a reduction in the acres of industrial land.

In the southeast zone, near Garibaldi Street and Ormewood Avenue, the potential station locations have nearby land uses that are mostly low-density residential or industrial that could be vulnerable to future market pressures for land use conversions. Near McDonough Boulevard, Glenwood Avenue, and Moreland Avenue / Hardee Street, land uses of higher-intensity and mixed-use are consistent with the transit element. A notable change projected in this zone is the large reduction in institutional acreage.

In the southwest zone, potential station locations near Martin Luther King, Jr. Drive and Westview Drive are almost entirely low-density residential future land uses designations. Two others near Westview Drive and Rose Circle have significant industrial future land use designations. These potential station areas could be vulnerable to future market pressures for land use conversions. Other potential station locations have higher-intensity and mixed-use future land uses in their vicinities that are consistent with and will benefit from the transit element of the Atlanta BeltLine.

In the northwest zone, there is the potential for growth in residential use, industrial uses, and parks. The extent of potential indirect land use effects in this zone could depend on further definition of the shared ROW in segments of freight rail. Although industrial uses near potential station locations near Marietta Street and along Marietta Boulevard near Elaine Avenue could be vulnerable to market pressure for conversion to other uses; this is not reflected in the changes projected by the FLUM.

The potential development that could result in the long-term could also result in increased property values. While the project is intended to encourage economic development in proximity to some station and amenity areas, as described in the CDP, it also could create market pressures to convert existing low-density or industrial uses into higher-density uses. For example, although the FLUM includes denser uses in the ¼-mile vicinity of proposed stations, it retains a significant amount of low-density residential land use. Parcels designated for future industrial use could be vulnerable to market demand for residential, office, and retail development near transit stations (Atlanta 2008). In some locations, this might be incompatible with neighborhood character. Further, higher property values may reduce the affordability of affected neighborhoods for low-to-moderate income households (Immergluck 2007). To mitigate this potential adverse effect, the Atlanta BeltLine TAD reserves 15 percent of its bond funds to assure that 20 percent of its new housing units are affordable. Further analysis in the Tier 2 phase would evaluate these potential effects in more detail.

The following measures evaluate how well the No-Build and Preferred Alternatives meet the land use objectives of the FLUM in relation to specific issues.

Provide service to areas of underutilized land including Brownfields: This measure estimates the extent to which the Preferred Transit Alternative would provide service to underutilized land by estimating the number of acres of this land within a ½-mile of proposed stations. Section 101 of Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) defines a Brownfield as “real property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant.” Underutilized parcels are defined as parcels whose existing building’s value is less than 40 percent of the total appraised land value, suggesting the high likelihood of redevelopment or reinvestment. The results are shown in Table 3-14,

Table 3-14: Underutilized Land within ½-mile of the Potential Station Locations

Transit Alternatives	Acres
No-Build	213
Preferred Transit Alternative	765

Source: AECOM 2010

Provide service to areas in the Atlanta BeltLine TAD with high development capacity of underutilized or undeveloped land within ½-mile of proposed stations: This measure estimates the extent to which the Preferred Transit Alternative would serve underutilized or undeveloped areas within ½-mile of the proposed station locations. Underutilized/undeveloped parcels were identified by using existing land use maps, aerial photography, and field surveys. These properties were then categorized to identify the ones with higher development capacity as defined by the *Atlanta BeltLine Redevelopment Plan* and the Atlanta BeltLine Subarea Master Plans. Table 3-15 shows the estimated acreage of potential higher density residential and commercial development capacity by Alternative.

Table 3-15: Potential Residential and Commercial Development Capacity

Transit Alternative	Acres
No-Build	101
Preferred Transit Alternative	499

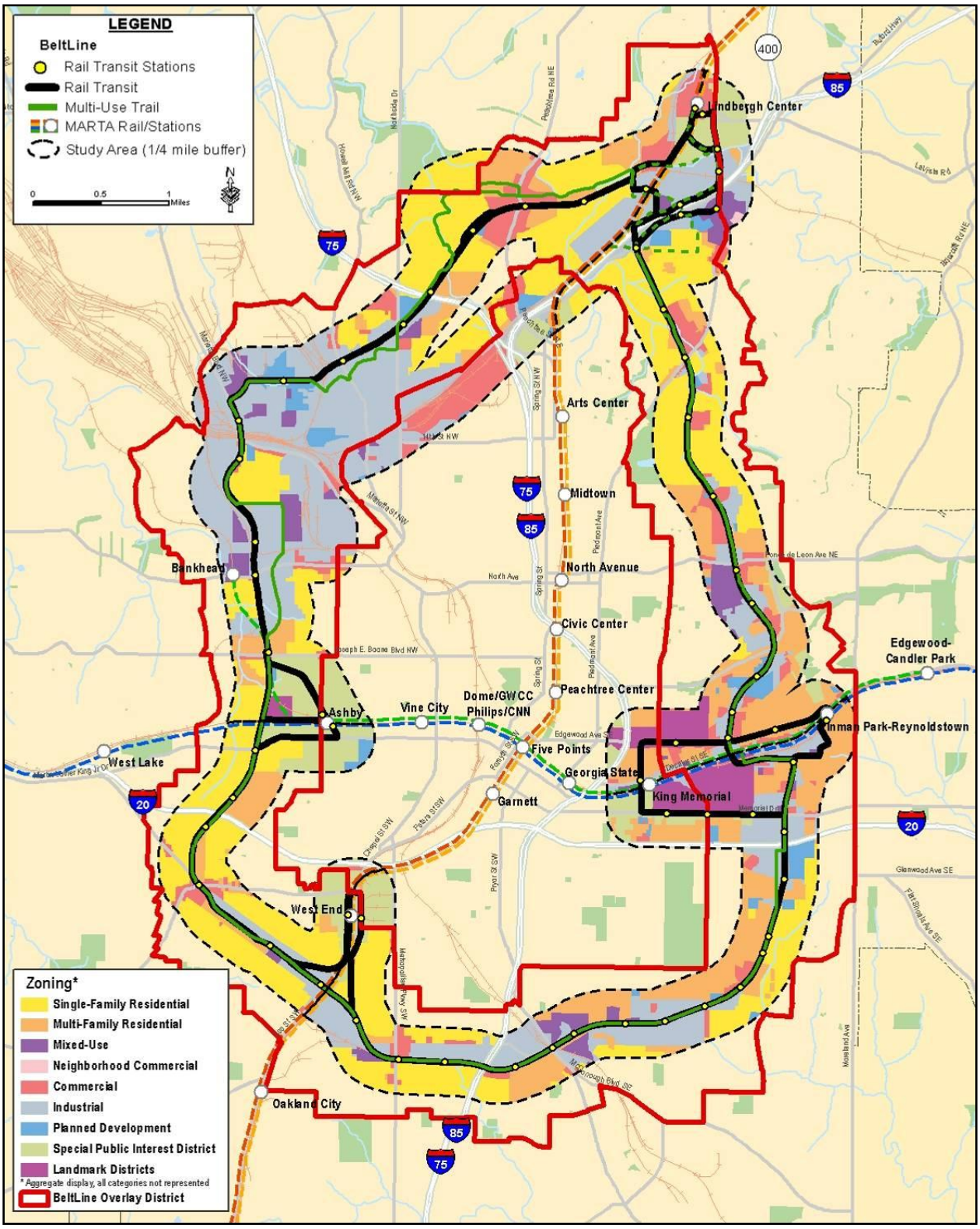
Source: AECOM 2010

The number of economic development focus areas within ½-mile of the proposed station and trail access points: This measure tallies the number of economic development focus areas, as defined by ABI, within ½-mile of the proposed station locations and trail access points. They are shown in Figure 1-5 the Preferred Alternatives will serve all 20 economic development focus areas, while the No-Build Alternative would serve seven.

3.3.3 Zoning

The *City of Atlanta Zoning Ordinance* (*City of Atlanta Zoning Ordinance* August 2009) is intended to assure the development of future land use in a manner that is compatible with the CDP and the FLUM. All properties are within a zoning district. Figure 3-12 shows the base districts that regulate permitted uses and the Atlanta BeltLine Overlay District. Base zoning districts regulate land use through various development regulations. Most base zoning districts contain a single permitted use, but there also are Special Public Interest (SPI) Districts that regulate areas with special attributes such as Downtown, Landmark Districts (LD) that regulate areas of historic and cultural importance, and Planned Development Districts for multiple parcels developed together. The Preferred Alternatives would have no direct effects to SPI and LD districts.

Figure 3-12: Zoning in the Study Area



Source: City of Atlanta, Bureau of Planning 2008

There also are Overlay Zoning Districts that apply additional regulations, such as the Atlanta BeltLine Overlay District. The District was ordained in 2007 and has the same geographic boundaries as the Atlanta BeltLine Redevelopment Area, defined in the *Atlanta BeltLine Redevelopment Plan* (Atlanta 2005). It regulates aspects of building and site design and implements the *Atlanta BeltLine Street Framework Plan* (Atlanta 2008) that has been adopted to improve the street grid and the pedestrian and bicycle routes, while the underlying base zoning districts regulate the permitted uses.

No-Build Alternative

The No-Build Alternative generally would not be consistent with zoning because the base zoning districts were adopted to support the land use policies in the CDP and the FLUM. These policies promote transit-oriented development. The Atlanta BeltLine Overlay District was adopted specifically to support the implementation of the Atlanta BeltLine, which would not be met under the No-Build Alternative.

Preferred Alternatives

This subsection summarizes the current zoning designations of directly affected areas and considers the requirements for potential zoning changes based on land use conversions to transportation/utility land uses or to parks. Table 3-16 presents the number of acres of land in the proposed ROWs by zoning district outside the MARTA Station Connectivity and Infill Station Alternative Areas. Many parcels in the vicinity of proposed stations are zoned for higher residential and employment densities as part of a transit-oriented development strategy (defined as higher-density mixed use development within walking distance of transit), but other conditions apply in some areas.

Table 3-16: Zoning of ROWs

Zone	Build Alternative	Areas where Zoning May be Affected (Acres)						
		Single Family Residential	Multi-Family Residential	Mixed Use	Commercial	Industrial	Planned Development	Total Acres
Northeast	Preferred Alternatives	9.2	0.6	1.0	4.4	10.6	1.0	26.8
Southeast	Preferred Alternatives	4.2	4.4	0.9	2.5	17.9	1.1	31.0
Southwest	Preferred Alternatives	3.5	4.3	0.0	0.4	6.1	0.0	14.3
Northwest	Preferred Transit Alternative	4.4	2.4	0.4	1.9	13.1	2.2	24.4
	Preferred Trail Alternative	4.3	2.4	0.7	1.8	6.6	1.5	17.3

Source: City of Atlanta, Bureau of Planning. 2011.
Note: Assuming potential effects measured outside of the MARTA Station Connectivity and Infill Station Alternative Areas.

Atlanta BeltLine transit tracks, stations, and operating infrastructure either would be permitted uses or would be considered Special Exceptions in the Residential districts other than MR (Multi-Family). Other facilities, such as storage and maintenance yards, are permitted uses only in the light and heavy industrial districts, but these were not included in the estimates of directly affected ROW and will be addressed in the Tier 2 analysis.

Unless the MR district is redefined to allow transit tracks, stations and operating infrastructure either as permitted uses or Special Exceptions, the acres needing zoning amendments for the Preferred Transit Alternative are: 0.6 acres in the northeast zone,

4.4 acres in the southeast zone, 4.3 acres in the southwest zone, and 2.4 acres in the northwest zone,

The Preferred Trail Alternative will generally be permitted in existing public ROW, but the sections of trail outside a public ROW could be in a zoning district that limits paved areas or requires setbacks between the trail and existing structures. Regulations would vary if the Preferred Trail Alternative is designated as a park. Residential and Office zoning districts allow parks by Special Use Permit. Multi-Family, Mixed Residential Commercial, and Planned Development (PD) (other than PD-Business Park), have a process through which applications can be made under existing regulations. Other zoning districts do not provide for parks, open space, or recreation and would require an amendment to the ordinance to provide for implementation of the trails.

Based on the assumption that the PD districts are Business Parks and, together with the Commercial and Industrial districts, will require amendments to permit the trails, the acres needing amended zoning for the Preferred Trail Alternative are: 16 acres in the northeast zone, 21.5 acres in the southeast zone, 6.5 acres in the southwest zone, and 9.9 acres in the northwest zone, The Preferred Alternatives will have no direct effects to SPI and LD districts. Unless these zoning districts are redefined to permit transit, transit accessories, and parks, the Preferred Alternatives will require zoning amendments for 65.6 acres.

Most of the MARTA Station Connectivity and Infill Station Alternative Areas and the entire study area of the Preferred Alternatives are within the Atlanta BeltLine Overlay District (*City of Atlanta Zoning Map*, August 2009). The Atlanta BeltLine Overlay District could potentially be redefined to include the portions of the study area currently not in that district following further analysis.

3.3.4 Local Plans

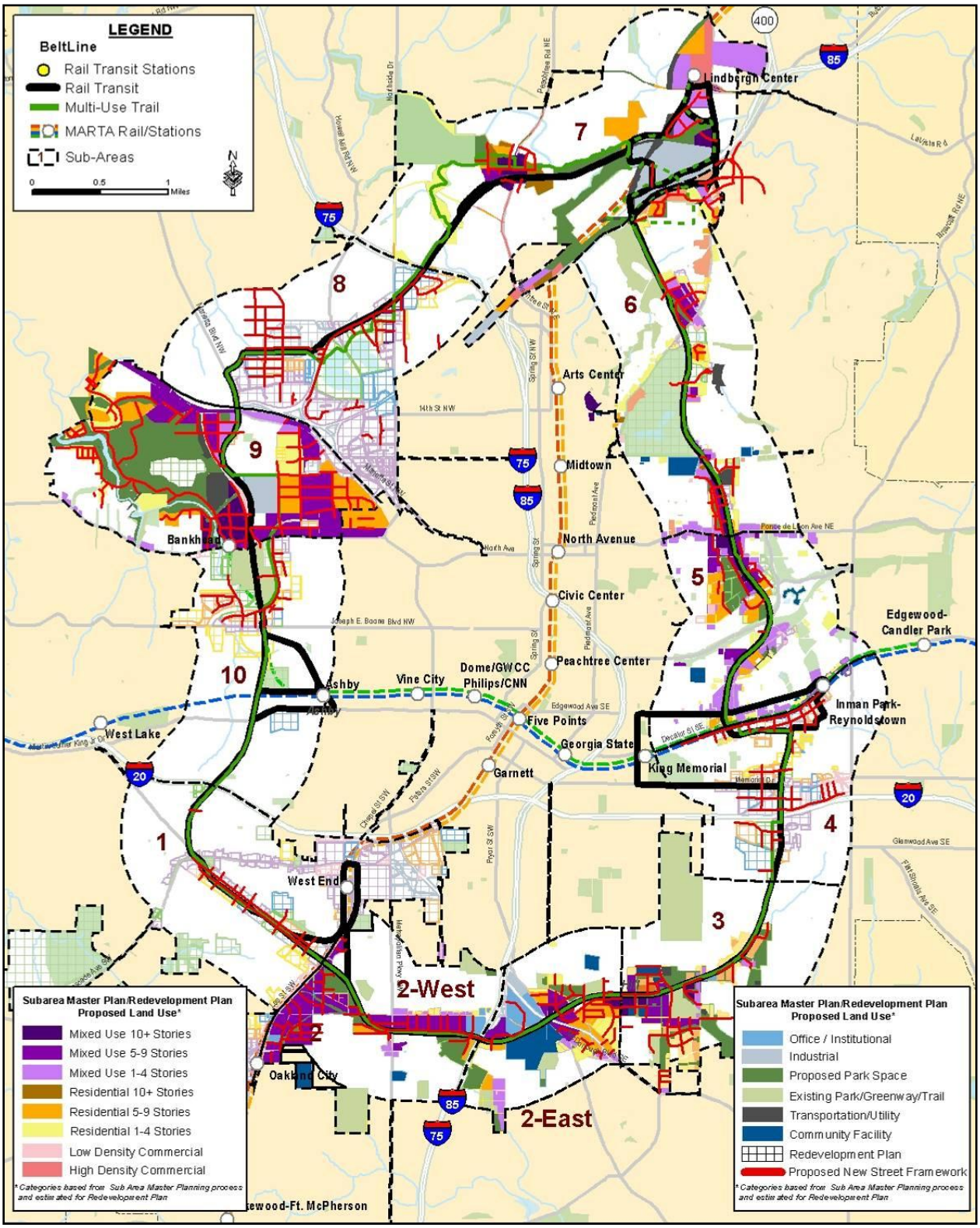
A number of plans and studies have guided land development and the transit, multi-use trails, and greenspace components of the Atlanta BeltLine as described in Chapter 1.0. The principal ones are the *Atlanta Strategic Action Plan, Comprehensive Development Plan* (CDP) (City of Atlanta 2008); the Atlanta BeltLine Subarea Master Plans (ABI ongoing); and the *Regional Development Plan* (RDP) (ARC 2007).

Atlanta BeltLine Subarea Master Planning efforts are underway for 10 “subareas” of the study area shown on Figure 3-13. This planning process builds on recommendations of the *Atlanta BeltLine Redevelopment Plan* (ABI 2005) that led to the creation of the Atlanta BeltLine TAD. The Atlanta BeltLine Subarea Master Plans address parks and open space, mixed-use residential and commercial land use, urban design proposals including public art, and mobility and circulation. Atlanta BeltLine Subarea Master Plans for Subareas 2, 3, 4, 5, 7, and 9 are adopted and the other four are in process. The plans assume implementation of the Atlanta BeltLine by 2030.Transportation recommendations are contained in the *Atlanta BeltLine Street Framework Plan* (ABI 2008). Additional discussion of these plans can be found in the *Technical Memorandum on Land Use, Zoning and Local Plans* (AECOM 2011).

No-Build Alternative

The No-Build is not fully consistent with the CDP because it does not include the Atlanta BeltLine, a proposed project in the CDP. It is not consistent with the Atlanta BeltLine Subarea Master Plans or the RDP because they are based on the assumption that the Atlanta BeltLine would be constructed.

Figure 3-13: Atlanta BeltLine Subarea Master Plans



Source: ABI 2009

Preferred Alternatives

The Preferred Alternatives are consistent with the Atlanta BeltLine Subarea Master Plans as the Atlanta BeltLine is included in each. The Preferred Alternatives are also consistent with the City's adopted CDP.

3.3.5 Economic Conditions and Development Strategies

Economic studies that evaluate the economic effects of the project in the study area were reviewed in this evaluation. The studies are discussed in Chapter 1.0. The principal studies include *Update of Market Forecasts for the Atlanta BeltLine Study Area* (RCRLO 2008) and *Atlanta BeltLine Tax Allocation District Feasibility Study* (EDAW 2005). Both found an existing, diverse economic base, projected significant population and economic growth, and recognized the Atlanta BeltLine as an important component in attracting economic activity and facilitating mobility.

No-Build Alternative

The No-Build Alternative would have a direct short-term positive effect associated with construction employment, but this would be a smaller effect than that of the Preferred Alternatives. In the long term, it generally would support the existing economic conditions. It would be inconsistent with the economic development strategies in the CDP, relative to the Atlanta BeltLine, and its associated projects and would not support the estimates of the economic growth discussed above.

Preferred Alternatives

The Preferred Alternatives will have a direct short-term positive effect associated with construction employment. In the long term, the Atlanta BeltLine and its associated projects will increase mobility and provide development opportunities, as described in the Section 3.3.2 above. The studies reviewed indicate that the long-term effects on the local and regional economies would be beneficial. The Preferred Alternatives will serve all 20 economic development focus areas and several activity centers discussed in Section 1.5.2.

The land use impacts of the Atlanta BeltLine could conflict with the City's policy of retaining as much industrial land within the City as possible.

Update of Market Forecasts for the Atlanta BeltLine Study Area projects an increase in the study area of 84 percent in the number of households; over 3.1 million square feet of new regional office space; over ¾ million square feet of new local office space; over 2.2 million square feet of new local retail; and over 1.6 million square feet of new regional retail. The *Atlanta BeltLine Tax Allocation District Feasibility Study* estimates that the TAD will create approximately 37,500 permanent jobs, 48,000 construction jobs, 28,000 new residential units including 5,600 affordable units; and 9 million square feet of new retail, office, and light industrial space that would add over $20 billion to the tax base. The Preferred Alternatives would serve approximately 4,900 acres of Atlanta BeltLine TAD land.

3.3.6 Potential Avoidance, Minimization, and Mitigation Measures

During the Public Scoping Process, questions and concerns were raised regarding the potential direct impacts to residences and businesses, the secondary effects of associated redevelopment projects, and the consistency of that development with

existing land uses. In response, the Preferred Alternatives have been designed to minimize the additional required ROW and potential adverse effects on existing land uses. The Preferred Alternatives would use existing transportation ROW to the maximum extent possible. Also, local policies and the Atlanta BeltLine Subarea Master Plans are intended to protect community character.

To some extent, the indirect conversion of land uses is an integral aspect of the Atlanta BeltLine. Implementation of the City's industrial retention policy could mitigate development pressures on industrial areas. Strategies to avoid or minimize these effects will be considered through the Atlanta BeltLine Subarea Master Planning process and in subsequent Tier 2 analysis.

The potential development that could result in the long-term could also result in increased property values. While the project is intended to encourage economic redevelopment, higher property values may reduce the affordability of affected neighborhoods for low-to-moderate income households (Immergluck 2007). To mitigate this potential adverse effect, the Atlanta BeltLine TAD reserves 15 percent of its bond funds to assure that 20 percent of its new housing units are affordable. Further analysis in the Tier 2 phase would evaluate these potential effects in more detail.

3.3.7 Subsequent Analysis

This Tier 1 analysis identifies acres of potential direct impacts based on the proposed alignments and typical sections. The Tier 2 analysis will determine site-specific ROW requirements that result from station locations, topography and other physical constraints, need for zoning amendments, and insufficient available ROW in public ownership for the Preferred Alternatives. The Tier 2 analysis also will evaluate the economic development effects of the Preferred Alternatives.

3.4 Neighborhoods and Community Facilities

This section presents a description of the neighborhoods and community facility resources within the Atlanta BeltLine study area, as well as the potential effects of the project on these resources.

3.4.1 Methodology

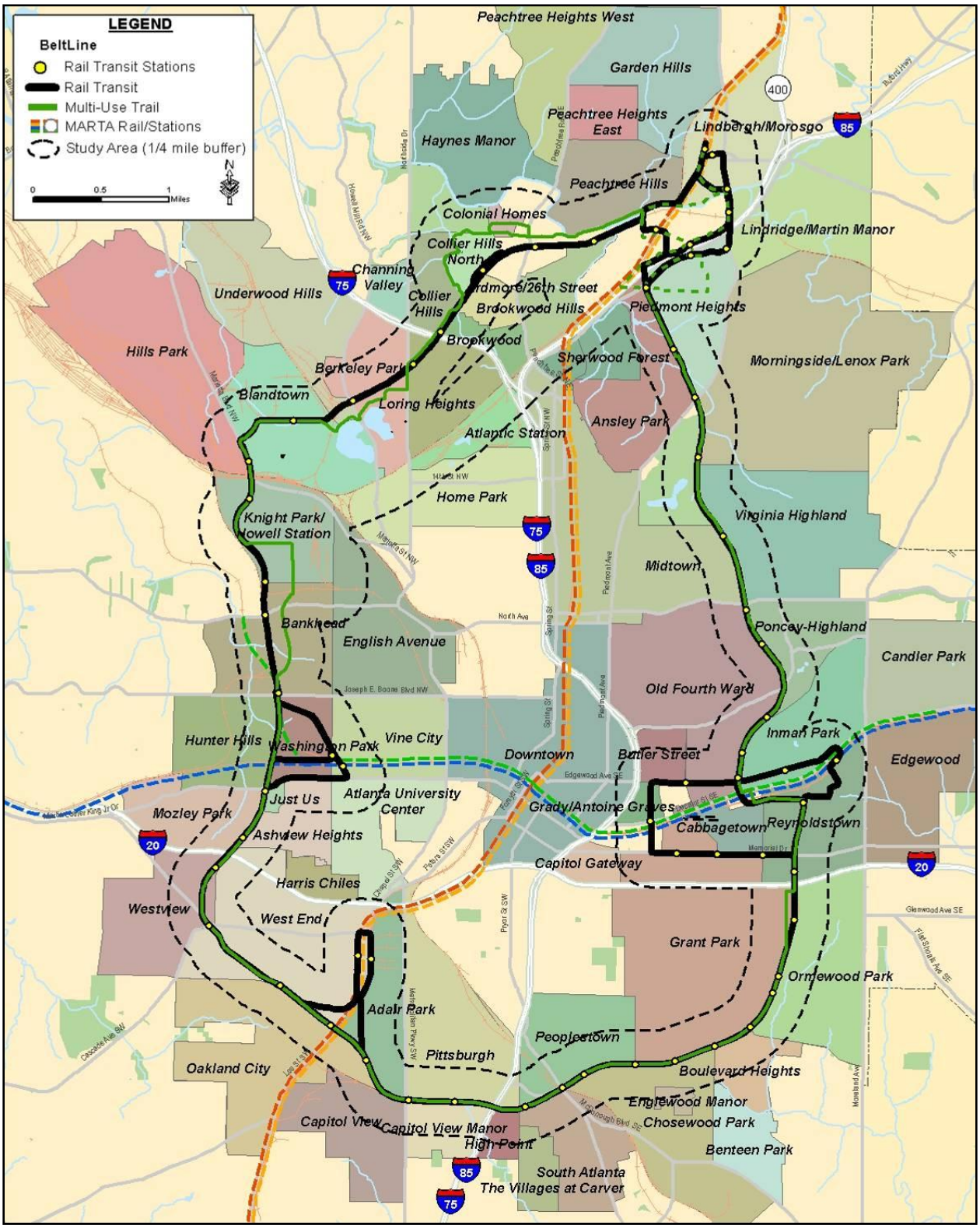
The neighborhoods in the study area were identified from information obtained from the City's Bureau of Planning. Community services and facilities were identified within the study area using information obtained from the ARC and the U.S. Geographic Survey (USGS). A qualitative assessment of potential impacts was undertaken by examining the location of the No-Build and Preferred Alternatives in relation to neighborhoods and community facilities.

3.4.2 Affected Environment

3.4.2.1 Neighborhoods

The City, and particularly the study area, contains a number of long-standing and historic neighborhoods. The study area contains 61 neighborhoods. Figure 3-14 depicts the neighborhoods and their boundaries as defined by the City. Table 3-17 lists the neighborhoods by study area zone. The neighborhoods are briefly described in the following paragraph; a more detailed description of the neighborhoods can be found in the *Atlanta BeltLine Existing Conditions Report* (MARTA 2009).

Figure 3-14: Neighborhoods



Source: City of Atlanta, Bureau of Planning 2009

Table 3-17: Neighborhoods

Northeast Zone			
Ansley Park	Inman Park	Morningside/Lenox Park	Sherwood Forest*
Butler Street	Lindridge/Martin Manor	Old Fourth Ward	Virginia-Highland
Downtown	Lindbergh/Morosgo*	Piedmont Heights	
Grady/Antoine Graves	Midtown*	Poncey-Highland	
Southeast Zone			
Adair Park*	Capitol View	High Point	Reynoldstown
Benteen Park	Capitol View Manor	Oakland City*	South Atlanta
Boulevard Heights	Chosewood Park	Ormewood Park	The Villages at Carver
Cabbagetown	Englewood Manor	Peoplestown	
Capitol Gateway	Grant Park	Pittsburgh	
Southwest Zone			
Adair Park*	Harris-Chiles	Magnolia Park*	Vine City*
Ashview Heights	Hunter Hills*	Mozley Park	West End
Atlanta University Center	Just Us Neighbors	Oakland City*	Westview
Northwest Zone			
Ardmore	Channing Valley	Hills Park	Peachtree Hills
Atlantic Station	Collier Hills	Home Park	Sherwood Forest
Bankhead	Collier Hills North	Hunter Hills*	Underwood Hills
Berkeley Park	Colonial Homes	Knight Park/Howell Station	Vine City*
Blandtown	English Avenue	Lindbergh/Morosgo*	Washington Park*
Brookwood	Garden Hills	Loring Heights	
Brookwood Hills	Haynes Manor	Midtown*	

* Neighborhood falls across two zones

Neighborhoods in the northeast zone range from historic streetcar suburbs constructed in the late 1800s and early 1900s to residential areas built following World War II. In the southeast zone, neighborhoods range from late 19th and early 20th century single-family communities to apartment and single-family developments built in the early twenty-first century. The southwest zone consists almost entirely of single-family residential neighborhoods, many originally established in the late 19th and early 20th centuries. The northwest zone consists of a variety of neighborhoods, including early 20th century garden suburbs, light industrial areas and freight yards, 1940s garden apartment complexes, townhouses, and early twenty-first century mixed-use developments.

3.4.2.2 Community Facilities

The study area contains approximately 81 community facilities, including police stations, fire stations, schools, places of worship, libraries, hospitals and health facilities, and museums. These resources provide basic services to the neighborhoods, help to shape the area's overall quality of life, and foster a sense of community identity. Appendix D contains a figure depicting the locations of community facilities and a table listing them by study area zone. A detailed description of the community facilities within the study area can be found in the *Atlanta BeltLine Existing Conditions Reports* (MARTA 2009).

3.4.3 Preliminary Environmental Consequences

The preliminary assessment of the potential environmental consequences of the No-Build and Preferred Alternatives is described below.

3.4.3.1 No-Build Alternative

The No-Build Alternative includes a mix of improvements to existing facilities and new transit projects. These projects would have limited impact on regional accessibility for the neighborhoods and community facilities in the study area, and, therefore, would have limited impact on study area residents. The projects in the No-Build Alternative will serve only a limited number of neighborhoods, leaving multiple neighborhoods and community facilities that will not be served by improved transit. A more refined assessment of impacts to neighborhoods and community facilities resulting from the No-Build projects will occur during investigations for those projects.

Currently, the railroad ROW that comprises the Atlanta BeltLine creates a barrier dividing neighborhoods. In the southeast and northeast zones, these rail ROWs frequently serve as neighborhood boundaries with limited connectivity across. The No-Build Alternative will not remove this barrier.

3.4.3.2 Preferred Alternatives

The Preferred Alternatives will either use existing railroad and roadway ROW or run parallel to existing railroad ROW. This strategy will minimize the potential for creating new physical barriers that would reduce connectivity between neighborhoods. As noted in the *Atlanta BeltLine Health Impact Assessment* (Ross 2007), the rail corridors have "historically divided people and places. The new vision for this corridor has the opportunity to reintegrate many neighborhoods" (p. 11).

Neighborhood and Community Access

The Preferred Transit Alternative is expected to increase regional access for neighborhood residents, while the Preferred Trail Alternative will provide recreational space and serve to knit together neighborhoods currently divided by the railroad ROW. In addition, as noted in the *Atlanta BeltLine Health Impact Assessment* (Ross 2007), "[t]he [Atlanta] BeltLine can also be connected to existing neighborhood institutions to promote increased physical activity and social capital" (p. 56).

The neighborhoods and community facilities potentially served or affected by the Preferred Alternatives are summarized in Table 3-18. These data show that the Preferred Transit Alternative will serve 61 neighborhoods and provide access to 68 community facilities. The Preferred Trail Alternative will serve 55 neighborhoods and provide access to 71 community facilities. A map of community facilities and a full list by zone can be found in Appendix D.

Table 3-18: Potentially Served or Affected Neighborhoods and Community Facilities

Zone	Build Alternative	Affected Neighborhood / Community Facility
Northeast	Preferred Alternatives	14 neighborhoods, 5 schools, 5 places of worship, 2 fire stations, 2 police precincts, 1 library, Martin Luther King, Jr. Community Center, Atlanta Botanical Gardens, City Hall East
Southeast	Preferred Alternatives	17 neighborhoods, 11 schools, 8 places of worship, 1 fire station, 1 corrections facility
Southwest	Preferred Alternatives	10 neighborhoods, 4 schools, 6 places of worship, 2 fire stations, 1 library, 1 senior citizens center
Northwest	Preferred Transit Alternative	20 neighborhoods, 8 places of worship, 1 school, 2 hospitals, 1 jail, 1 court, 2 fire stations
	Preferred Trail Alternative	14 neighborhoods, 11 places of worship, 2 schools, 2 hospitals, 3 fire stations

Appropriateness of Scale

An evaluation measure considered in this FEIS/ 4(f) Technical Memorandum is the potential of the Preferred Alternatives, both the transit mode and the stations and other fixed facilities, to be of a physical scale that is appropriate for the existing neighborhoods and communities through which they would pass. This qualitative measure considers the Preferred Alternatives relative to the proportions (size and mass) of the surrounding buildings, especially along the proposed routes. The determination of SC as the preferred transit technology relied in part upon this performance measure.

Other key factors in assessing the appropriateness of the Atlanta BeltLine within the context of the surrounding community were noise, vibration, and visual effects. The land uses adjacent to each of the Preferred Alternatives were also considered, especially when greater ROW requirements could be anticipated.

As was described in the service characteristics found in Chapter 2.2.5, SC will perform well in overall fit and appropriateness given the key factors considered. SC have smaller, lighter vehicles and tighter turning radii, which tend to cause fewer noise and vibration impacts. Specifically, this means less likelihood of high-pitched wheel squeal that occurs as the wheels rub against the rails as vehicles increase in length.

Due to the shorter length of SC vehicles, SC track geometry can fit into existing roadway and railroad ROWs without many precautionary design elements. For example, relatively tighter turns at roadway intersections would be possible for SC vehicles, rather than requiring additional ROW to accommodate a larger turning radius. Thus, SC technology is likely to incur fewer ROW impacts, thereby having less potential impact on land uses and visual effects.

3.4.4 Potential Avoidance, Minimization, and Mitigation Measures

Conceptual design of the Preferred Alternatives conservatively indicates low potential for impacts on neighborhoods and community facilities. As the project advances, the design will be refined with the intent of avoiding or minimizing impacts. There also will be a focus on context sensitive design of Atlanta BeltLine infrastructure to ensure compatibility with the surrounding neighborhoods.

Some impacts, such as visual changes caused by overhead power wiring, may be found to be unavoidable. A number of best management practices and mitigation strategies will be considered at that time to effectively offset these impacts. Strategies could include visual buffering, architectural treatments, and design adjustments to improve access or address pre-existing access issues. The development of appropriate mitigation strategies will occur in consultation with the affected neighborhoods and community facilities.

3.4.5 Subsequent Analysis

Detailed analysis will take place as part of Tier 2 to identify potential impacts to neighborhoods and community facilities. Analysis during Tier 2 will evaluate the potential for localized impacts on neighborhoods and communities. At that time, the project sponsors will coordinate with neighborhoods and communities to assess the need for and develop appropriate design strategies to offset unavoidable impacts.

3.5 Socioeconomics and Environmental Justice

This section provides summary project area demographics and identifies populations in the study area that meet the environmental justice criteria outlined in Section 3.5.1. This chapter also presents a preliminary assessment of the potential environmental impacts of the Atlanta BeltLine project on socioeconomics and environmental justice populations.

3.5.1 Methodology

The study area for the socioeconomic and environmental justice analyses presented in this section consists of the census tracts within the Atlanta BeltLine study area. The assumption is this area generally reflects the population characteristics of the study area and the extent to which the Atlanta BeltLine project may result in changes to existing conditions.

3.5.1.1 Socioeconomics

Data presented in this section are from the ARC 2030 Demographic Forecasts and the U.S. Census Bureau (Census 2000). The data were characterized at the census tract, city, and county level.

3.5.1.2 Environmental Justice

The Council on Environmental Quality (CEQ) provides guidance for identifying environmental justice populations in *Environmental Justice Guidance under the National Environmental Policy Act* (CEQ 1997). The guidance defines environmental justice populations as low-income or minority. Low-income populations are defined according to CEQ guidance, which states, "low-income populations in an affected area should be identified with the annual statistical poverty threshold from the Bureau of the Census' Current Population Reports, Series P-60 on Income and Poverty." The guidance defines minorities as "Individual(s) who are members of the following population groups: American Indian or Alaskan Native; Asian or Pacific Islander; Black, not of Hispanic origin; or Hispanic."

For this FEIS/ 4(f) Technical Memorandum, a description of existing transit-dependent populations within the study area, as well as a discussion of the potential effects on these populations has been included. A transit-dependent household is a household that reported having no access to a vehicle in the 2000 U.S. Census, also known as a zero-car household. Transit-dependent populations discussed in this FEIS/ 4(f) Technical Memorandum also include those workers 16 or over who reported to the 2000 U.S. Census who utilize public transportation to get to work. In some cases, transit-dependency also includes 2000 U.S. Census data for populations over 65 and the disabled.

Based on CEQ guidance, a census tract has a large concentration of either minority, low-income, or transit-dependent population if:

- At least 50 percent of the population in the zone is minority, low-income, or transit-dependent; or
- The minority or low-income population or zero-car households is at least 10 percent greater than the average of the minority, low-income, or transit-dependent population in the county.

In this study, identification of concentrations of minorities and other special population groups in the study area occurred through analysis of U.S. Census Bureau, Census 2000 data at both the county and the zone level. Comparison of census data for each zone to countywide data helped determine if any of the zones would qualify as having large concentrations of minority, low-income, or transit-dependent populations according to the parameters described above. Using these thresholds, a zone in this FEIS/ 4(f) Technical Memorandum has a large concentration of a special group if the:

- Minority population within that zone is greater than or equal to 67 percent of total zone population;
- Low-income households within that zone are greater than or equal to 26 percent of the total number of households within that zone; or
- Transit-dependent populations - zero-car households within that zone is greater than or equal to 25 percent of total zone population and/or workers using public transportation is greater than or equal to 19 percent of the total zone.

3.5.2 Affected Environment - Socioeconomics

Long-term forecasts predict an increase in population and employment growth for the City of Atlanta and the surrounding region. This section describes the demographic trends in the study area.

In 2008, the overall study area contained 16 percent of Atlanta's population, 12 percent of Atlanta's total employment, and 17 percent of Atlanta's households. The ARC forecasts the population will increase by 29 percent, employment by 66 percent, and households by 24 percent by 2030. The forecasts also indicate that the number of housing units within the study area will increase by approximately 15 percent.

3.5.2.1 Population Growth

Table 3-19 presents the population for years 1990, 2000, and 2008 and projections for the year 2030. During 2008, population in the Atlanta BeltLine study area made up 16 percent of Atlanta's population. Historically, the northwest zone had the highest population of all the study area zones, while the southwest zone had the lowest population. The 2030 projection shows population growth for all zones, but with the northwest continuing to lead with the highest population.

Table 3-19: Population - 1990 to 2030

Area	Population (Year)				Growth (Percent Change)		
	1990	2000	2008	2030	1990 to 2000	2000 to 2008	2008 to 2030
Northeast Zone	14,681	17,385	21,583	30,458	18%	24%	41%
Southeast Zone	14,156	14,622	17,021	23,281	3%	16%	37%
Southwest Zone	8,598	9,530	11,029	12,477	11%	16%	13%
Northwest Zone	18,600	22,616	26,423	31,716	22%	17%	20%
Atlanta BeltLine Study Area	56,035	64,153	76,056	97,932	14%	19%	29%
Atlanta	415,200	416,474	477,300	602,783	0%	15%	26%
Fulton County	670,800	816,006	951,500	1,145,902	22%	17%	20%

Source: U.S. Census Bureau, Census 2000 and ARC 2008 Regional Forecasts

3.5.2.2 Population Density

Figure 3-15 and Figure 3-16 depict year 2008 and 2030 population densities, respectively. In general, 2008 densities were greatest in three small geographic areas (as indicated by dark brown shades on the map). This includes two areas in the northeast (Lindbergh Center and Old Fourth Ward) and one within the southwest zone south of the Ashby MARTA rail station. Year 2030 projections forecast population densities will be greatest in the north portions of the northwest and northeast zones and the southern portion of the northeast zone.

3.5.2.3 Employment

Table 3-20 presents employment for the study area zones, the Atlanta BeltLine study area as a whole, the City, and Fulton County for years 1990, 2000, and 2008 and projections for the year 2030. Historically, the northeast zone had the highest employment of all the study area zones while the southwest zone had the least employment. Declines in employment between 2000 and 2008 were likely due to citywide losses in corporate and construction jobs. The 2030 projection shows growth in all zones, but with the northeast continuing to lead in total employment.

Table 3-20: Employment - 1990 to 2030

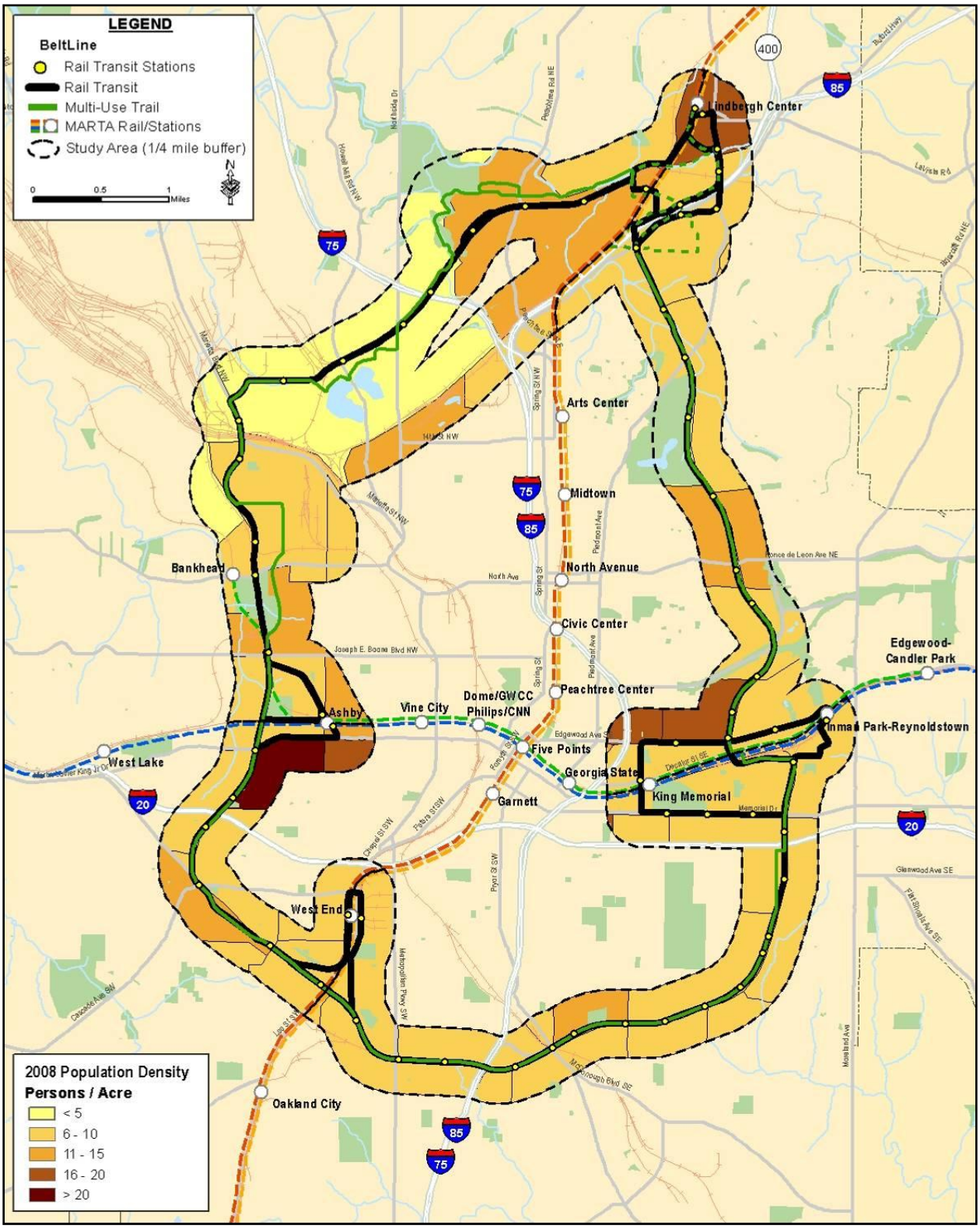
Area	Employment (Year)				Growth (Percent Change)		
	1990	2000	2008	2030	1990 to 2000	2000 to 2008	2008 to 2030
Northeast Zone	27,341	29,028	21,547	38,233	6%	-26%	77%
Southeast Zone	9,230	8,354	6,801	11,515	-9%	-19%	69%
Southwest Zone	2,698	2,249	2,697	2,865	-17%	20%	6%
Northwest Zone	18,531	27,034	18,582	29,622	46%	-31%	59%
Atlanta BeltLine Study Area	57,800	66,665	49,627	82,235	15%	-26%	66%
Atlanta	397,147	437,195	398,426	534,073	10%	-9%	34%
Fulton County	560,600	730,900	727,740	1,046,985	30%	0%	44%

Source: U.S. Census Bureau, Census 2000, and ARC 2008 Regional Forecasts

3.5.2.1 Employment Density

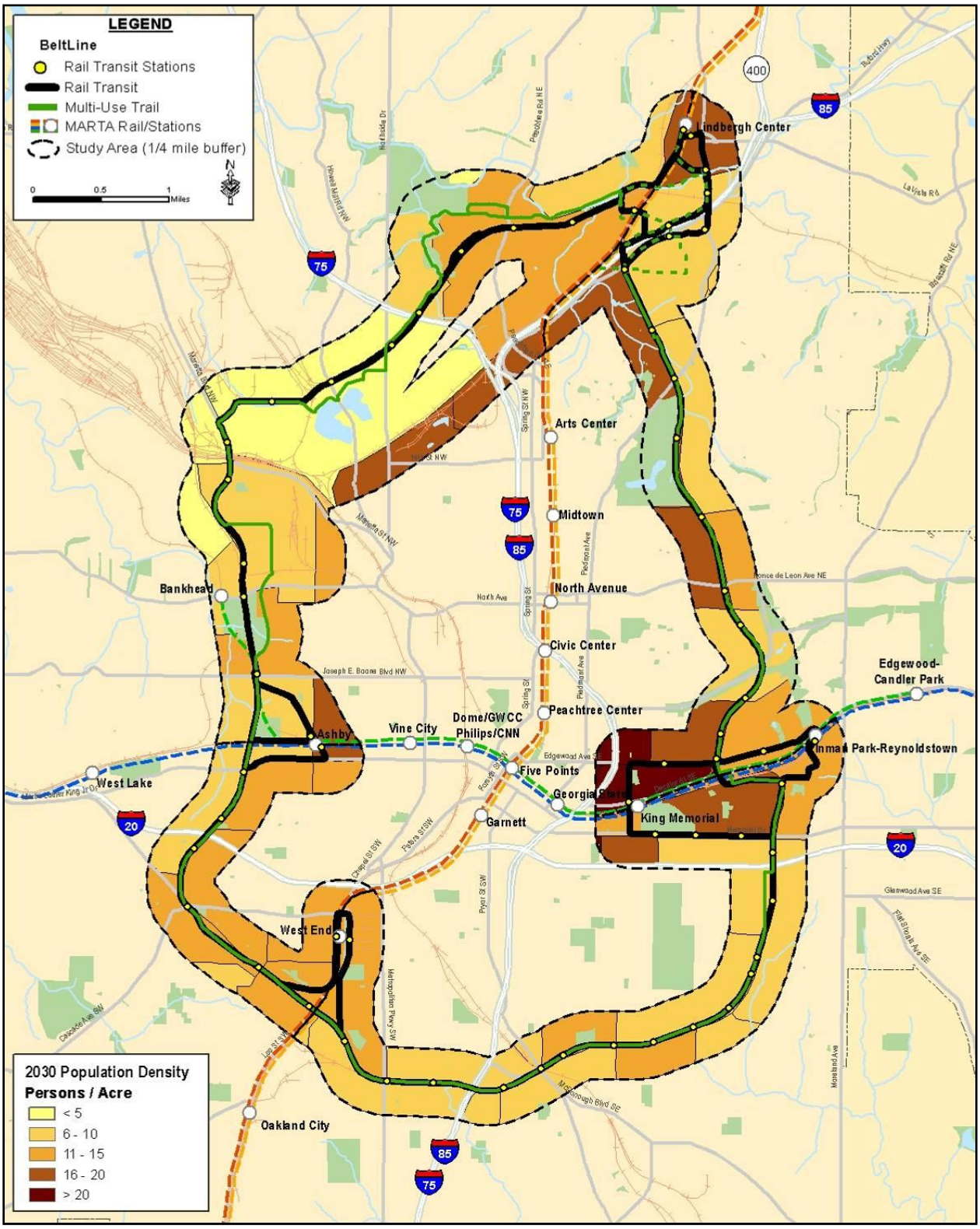
In 2008, employment was primarily concentrated in the northeast and northwest zones of the study area. Year 2030 employment projections estimate increases in all zones, but predict employment will continue to concentrate primarily in the northeast and northwest zones. Figure 3-17 And Figure 3-18 2008 and 2030 employment densities, respectively.

Figure 3-15: Population Density - 2008



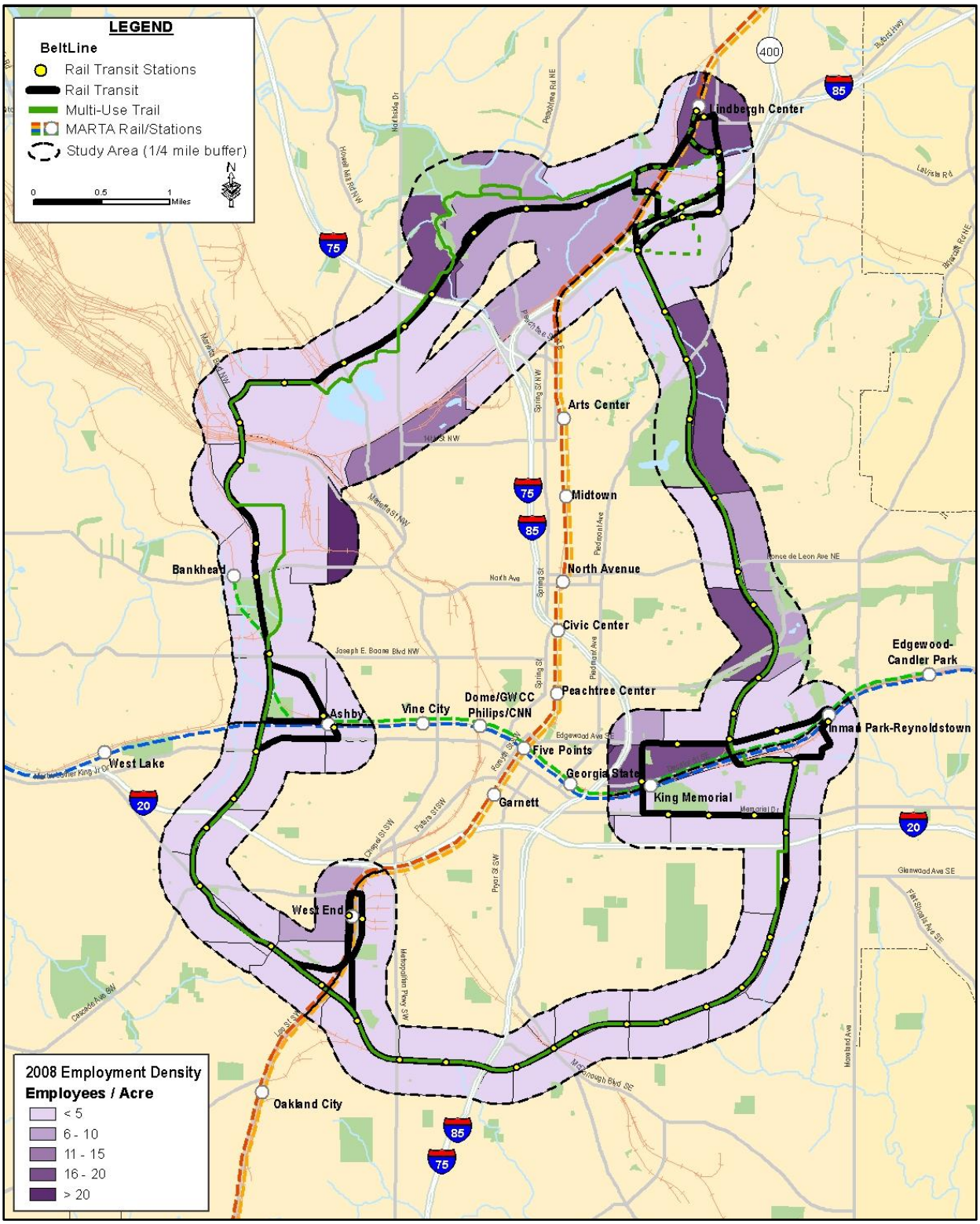
Source: U.S. Census Bureau, Census 2000, and ARC 2008 Regional Forecasts

Figure 3-16: Population Density - 2030



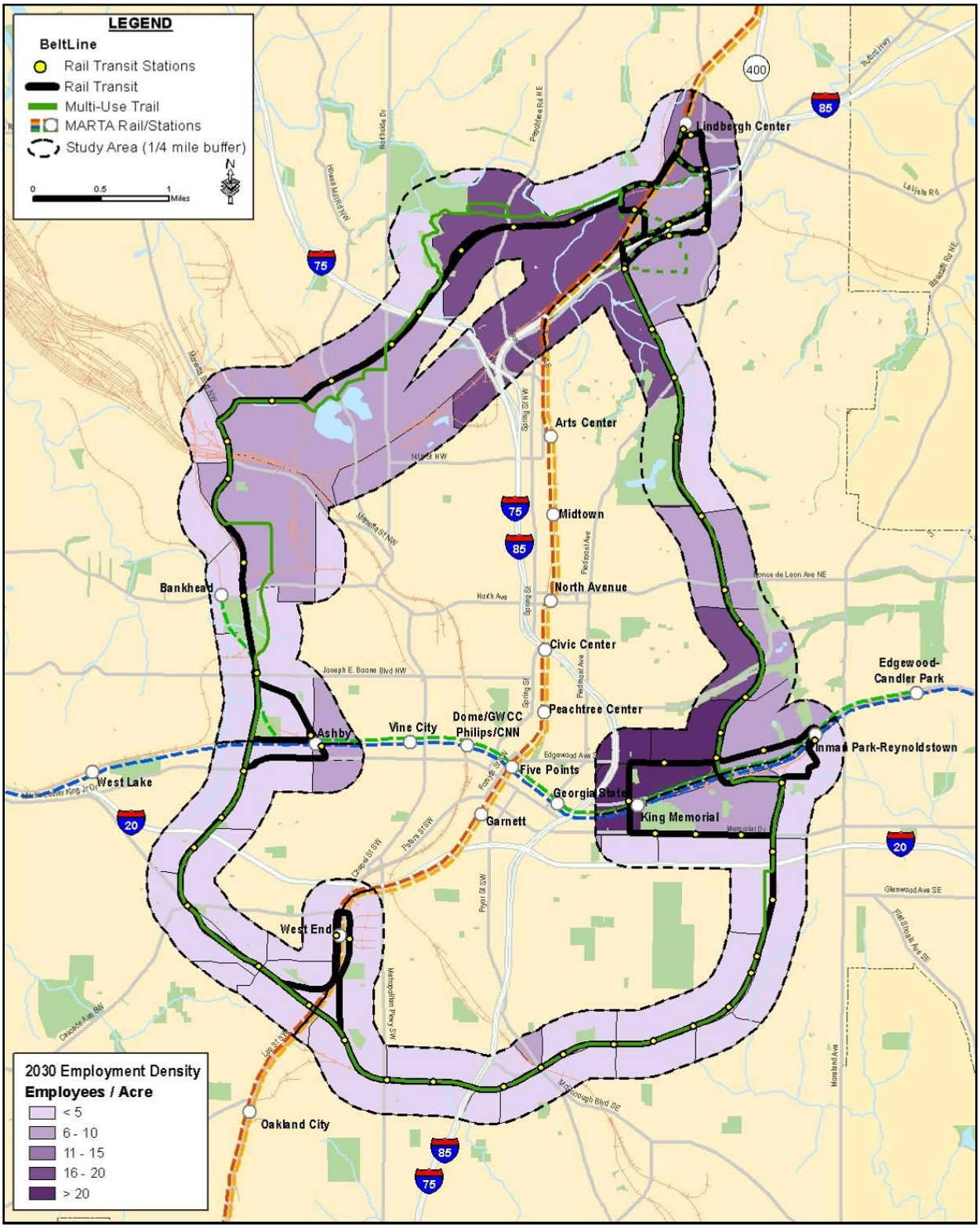
Source: U.S. Census Bureau, Census 2000 and ARC 2008 Regional Forecasts

Figure 3-17: Employment Density - 2008



Source: U.S. Census Bureau, Census 2000 and ARC 2008 Regional Forecasts

Figure 3-18: Employment Density - 2030



Source: U.S. Census Bureau, Census 2000, and ARC 2008 Regional Forecasts

3.5.2.2 Households

Table 3-21 presents a summary of household data for the geographically defined areas within the study area. “Households are defined as the set of people who occupy a housing unit — a house, an apartment, a mobile home, a group of rooms, or a single room occupied as separate living quarters. Households are classified by their size (the number of people living in them) and by their type (the relationships among the members of the household)” (Lewis 2002). According to the ARC, the average household size in the Atlanta region[12] in 2008 was 2.72 persons. In the Atlanta BeltLine study area, the average household size is slightly lower at 2.25 persons[13].

During 2008, the Atlanta BeltLine study area had 33,791 households. Historically, the northwest zone had the greatest number of households of all the study area zones, while the southwest zone had the least number of households. The 2030 projection shows growth in all zones, but with the northeast leading in total households.

Table 3-21: Households - 1990 to 2030

Area	Number of Households (Year)				Growth (Percent Change)		
	1990	2000	2008	2030	1990 to 2000	2000 to 2008	2008 to 2030
Northeast Zone	7,716	8,765	11,362	16,227	14%	30%	43%
Southeast Zone	5,166	5,672	6,927	10,008	10%	22%	44%
Southwest Zone	3,140	3,560	3,724	5,049	13%	5%	36%
Northwest Zone	8,031	9,592	11,778	13,935	19%	23%	18%
Atlanta BeltLine Study Area	24,053	27,589	33,791	45,219	15%	22%	34%
Atlanta	155,752	168,242	198,641	251,887	8%	18%	27%
Fulton County	257,140	321,242	382,422	479,900	25%	19%	25%

Source: U.S. Census Bureau, Census 2000, and ARC 2008 Regional Forecasts

3.5.2.3 Household Density

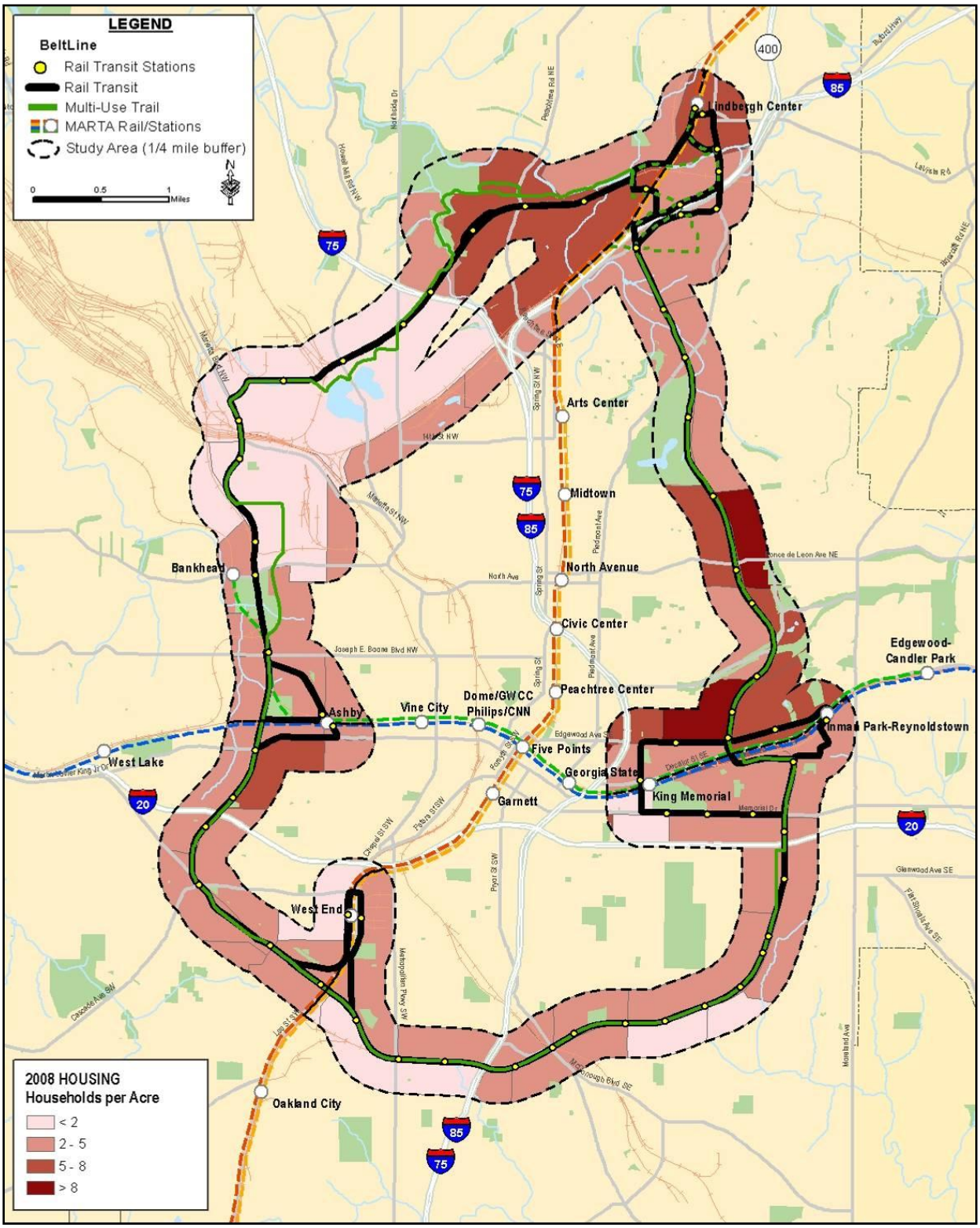
Figure 3-19 and Figure 3-20 depict study area household densities for 2008 and 2030, respectively. Generally, projections indicate household density will increase between years 2008 and 2030 equally across the study area.

In 2008, study area household density ranged from 3.0 to 5.3 households per acre. The average household density in the study area in 2008 was approximately 3.7 households per acre. Year 2030 projections report density to increase to an average of 4.3 households per acre. Areas with the greatest household density are along the Peachtree Corridor, Piedmont Park, and near Lindbergh Center, Inman Park/Reynoldstown, West End, and Ashby MARTA rail stations.

[12] The Atlanta Region is defined as the 10-county area including Cherokee, Clayton, Cobb, DeKalb, Douglas, Fayette, Fulton, Gwinnett, Henry and Rockdale counties, as well as the City of Atlanta. (ARC 2010)

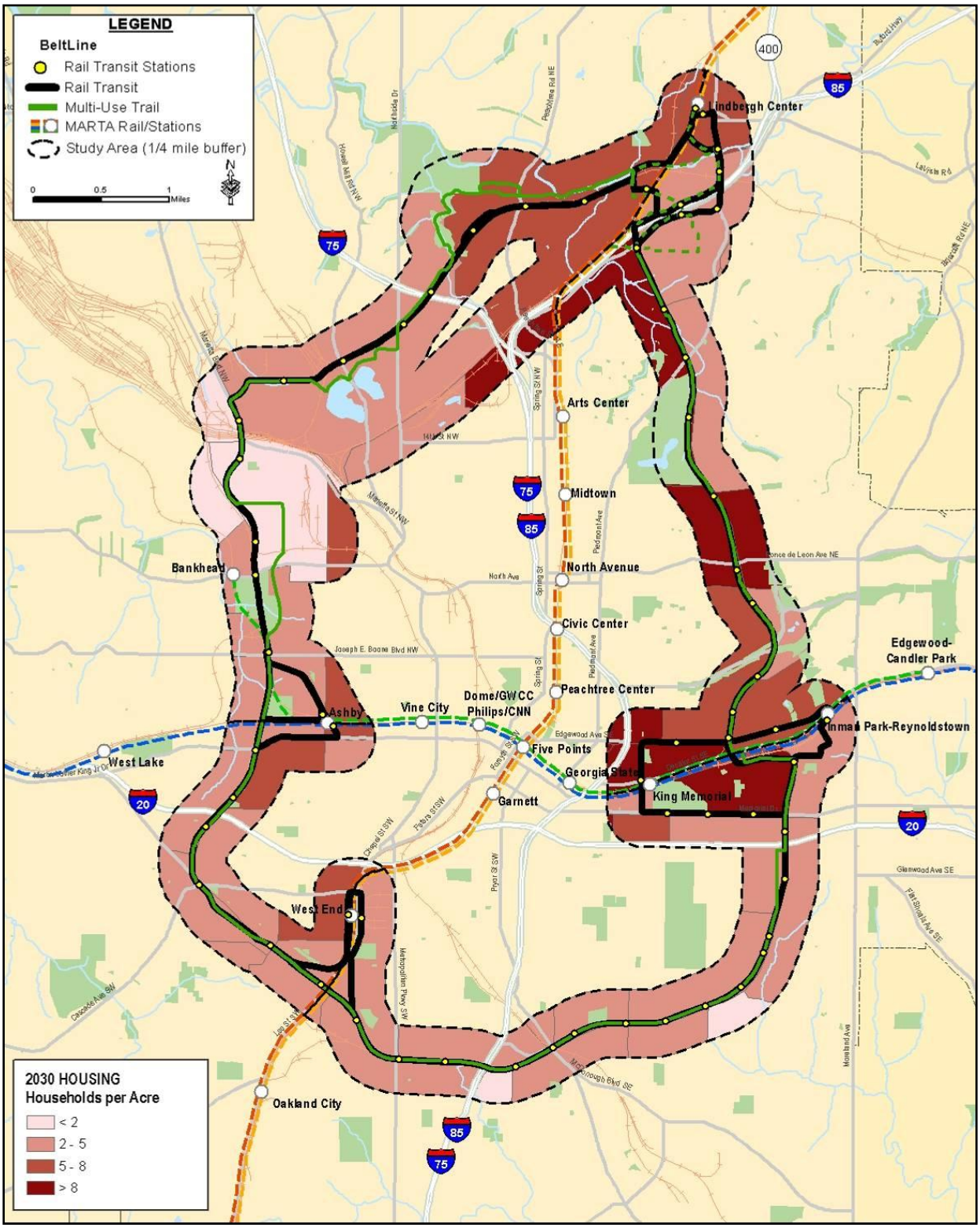
[13] Average household size is based on the ARC 2030 population projection divided by the 2030 household projection.

Figure 3-19: Household Density - 2008



Source: U.S. Census Bureau, Census 2000; ARC 2008 Regional Forecasts

Figure 3-20: Household Density - 2030



Source: U.S. Census Bureau, Census 2000; ARC 2008 Regional Forecasts

3.5.2.1 Housing Units

This section discusses housing for the 1990 to 2030 period. U.S. Census 2000 data and ARC demographic data were used to determine the number of existing housing units. Table 3-22 summarizes projected housing growth for the Atlanta BeltLine study area, as well as, for the City and Fulton County, for the 1990 to 2030 periods. Historically, the northwest and northeast zones had the greatest number of housing units of the study area zones. The 2030 projection indicates growth in all zones, but with the northeast leading in housing unit growth.

Table 3-22: Housing Units and Housing Unit Growth - 1990 to 2030

Area	Number of Housing Units (Year)				Growth (Percent Change)		
	1990	2000	2008	2030[1]	1990-2000	2000-2008	2008-2030
Northeast Zone	9,042	9,750	13,155	16,034	8%	35%	22%
Southeast Zone	6,266	6,511	8,201	9,475	4%	26%	16%
Southwest Zone	3,685	4,056	4,266	4,213	10%	5%	1%
Northwest Zone	9,784	10,929	13,605	14,137	12%	24%	4%
Atlanta BeltLine Study Area	28,777	31,246	39,227	43,859	9%	26%	12%
Atlanta	182,754	186,998	226,677	250,864	2%	21%	11%
Fulton County	297,503	348,632	434,408	460,555	17%	25%	6%

Source: ARC 2008 Regional Forecasts, U.S. Census Bureau, Census 2000

[1] 2030 data for housing units are based on the ARC 2030 population projection divided by 2008 average household size.

3.5.3 Affected Environment - Environmental Justice

3.5.3.1 Low-Income Population

Low-income populations are those that were living at or below the 1999 U.S. Census Bureau's poverty thresholds[14]. For a family of four, the threshold was $17,603 with a threshold of $8,794 for individuals.

According to the U.S. Census Bureau, the 1999 median household income of City of Atlanta households was approximately $34,770. In the Atlanta BeltLine study area, the median household income was approximately $43,222. Of the study area zones, the northeast had the highest median income ($49,387). The households in the southwest had median incomes of approximately one-half of those in the northeast, at $22,077. Table 3-23 presents data pertaining to 1999 median household income and the population below the poverty level in 2000.

[14] 1999 data were the only data available at the census tract level at the time of writing.

Table 3-23: Population below Poverty Level

Area	Median Household Income (1999)	Population for whom Poverty Status is Determined[1] (2000)	Population Below Poverty Level	Percent Below Poverty
Northeast Zone	$49,387	15,964	3,104	19.4%
Southeast Zone	$28,989	14,020	3,925	28.0%
Southwest Zone	$22,077	8,347	2,836	33.9%
Northwest Zone	$48,293	18,171	3,610	19.8%
Atlanta BeltLine Study Area	$43,222	56,502	13,475	23.8%
Atlanta	$34,770	392,406	95,743	24.4%
Fulton County	$47,321	789,793	124,241	15.7%

Source: U.S. Census Bureau, Census 2000

[1]The U.S. Census Bureau determines poverty status for all people except institutionalized people, people in military group quarters, people in college dormitories, and unrelated individuals under 15 years old.

Of the zones within the study area, the southwest and southeast zones are characterized as environmental justice areas for low-income with 33.9 and 28 percent of the population, respectively, living below the poverty level in 2000. Figure 3-21 illustrates the incidence of low-income populations in the study area.

3.5.3.2 Minority Population

In the year 2000, the U.S. Census identified 68.7 percent of the City's population as minority and 60.9 percent of the Atlanta BeltLine study area population as minority. The southwest and southeast zones had the highest concentration of minority populations. Table 3-24 shows the percentage of minorities within the study area, each of the four zones and other jurisdictions. Figure 3-22 shows the distribution of minority population throughout the study area.

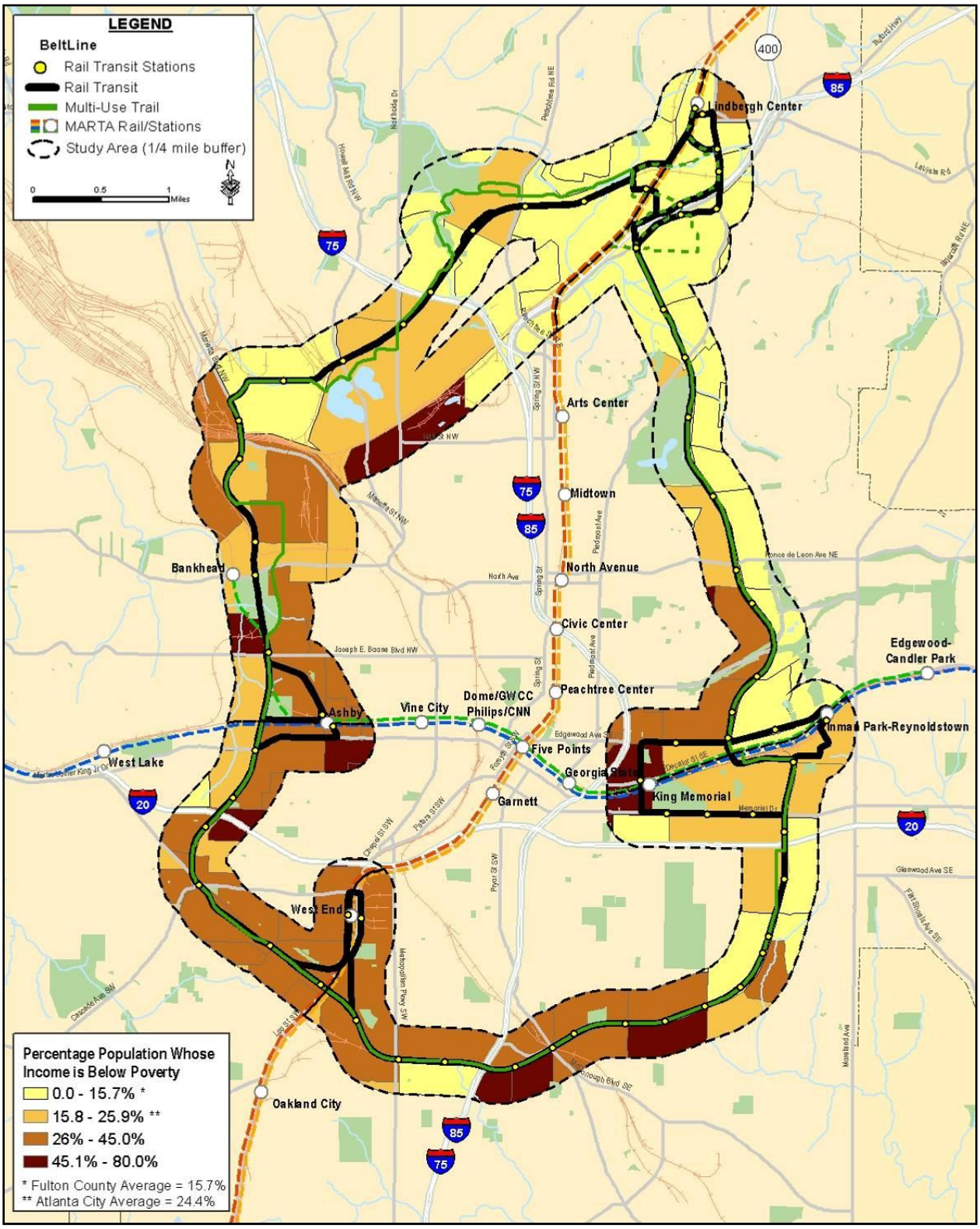
Table 3-24: Minority Populations - 2000

Area	Total Population (2000)	Minority Population	Percent Minority Population
Northeast Zone	17,385	7,810	44.9%
Southeast Zone	14,622	10,549	72.1%
Southwest Zone	9,530	9,434	98.9%
Northwest Zone	22,616	11,336	50.1%
Atlanta BeltLine Study Area	64,153	39,129	60.9%
Atlanta	416,629	286,212	68.7%
Fulton County	816,006	445,957	54.7%

Source: U.S. Census Bureau, Census 2000

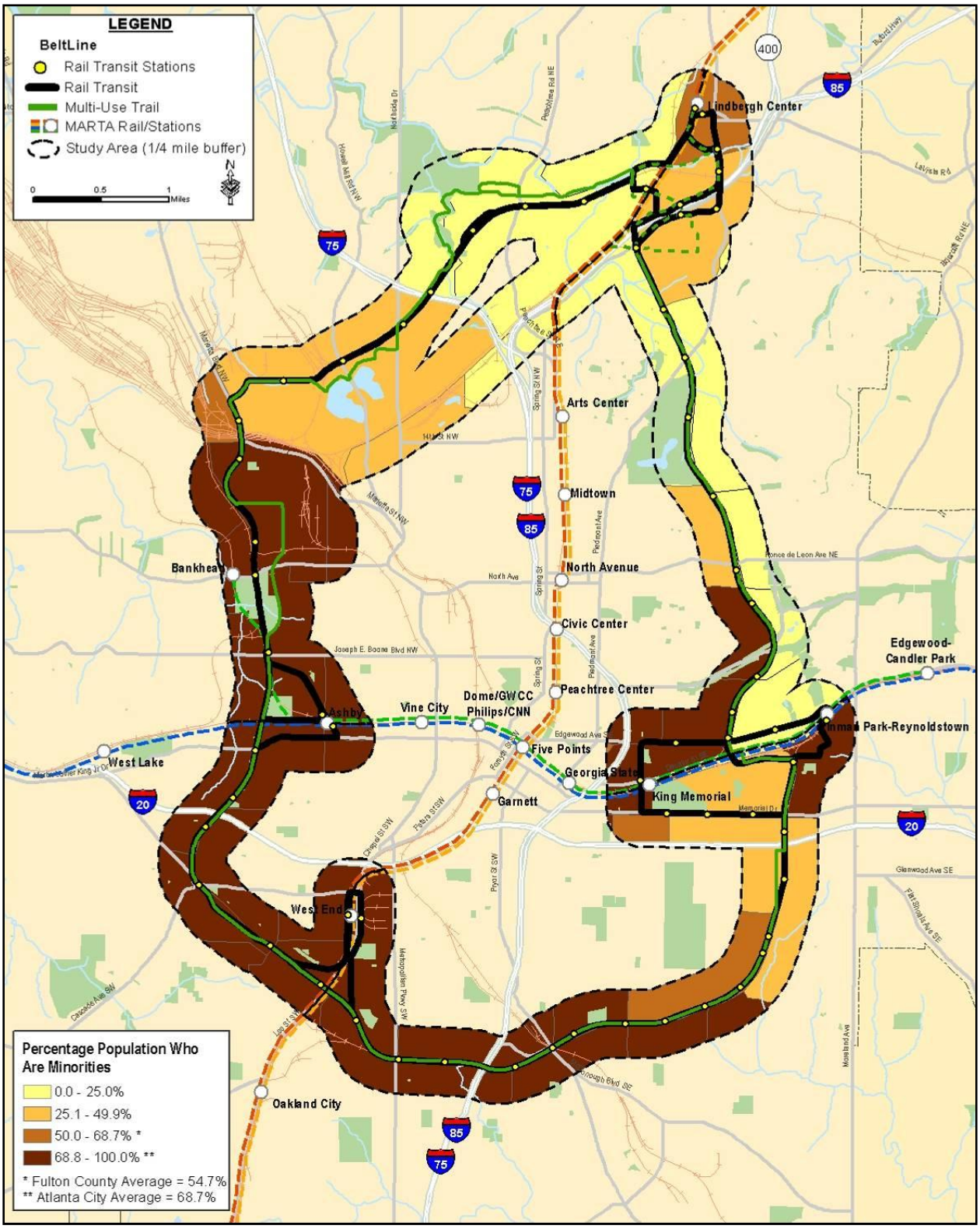
Of the zones within the study area, the northeast zone is the only zone that does not qualify as an environmental justice area for minority concentrations according to the criteria.

Figure 3-21: Population below Poverty Level - 2000



Source: U.S. Census Bureau, Census 2000

Figure 3-22: Minority Population - 2000



Source: U.S. Census Bureau, Census 2000

3.5.3.1 Transit-Dependent Population

Table 3-25 lists the percentage of zero-car households and workers using public transportation within the study area, the City of Atlanta, and Fulton County.

Table 3-25: Zero-Car Households and Percent of Workers Using Public Transportation - 2000

Area	Total Households	Percent Zero-Car Households	Workers 16 Years and Older	Percent Using Public Transportation to Get to Work
Northeast Zone	8,765	18.2%	10,603	14.5%
Southeast Zone	5,672	23.8%	6,427	15.5%
Southwest Zone	3,560	34.1%	2,722	26.1%
Northwest Zone	9,592	18.6%	10,663	12.4%
Atlanta BeltLine Study Area	27,589	21.2%	30,415	15.0%
Atlanta	168,242	23.6%	178,970	15.0%
Fulton County	321,242	15.2%	385,442	9.3%

Source: U.S. Census Bureau, Census 2000

In 2000, 23.6 percent of City households had no vehicle, while 21.2 percent of households within the study area had no vehicle. The southwest and southeast zones had the highest percentage of households with no vehicle. Figure 3-23 depicts the distribution of zero-car households in the study area.

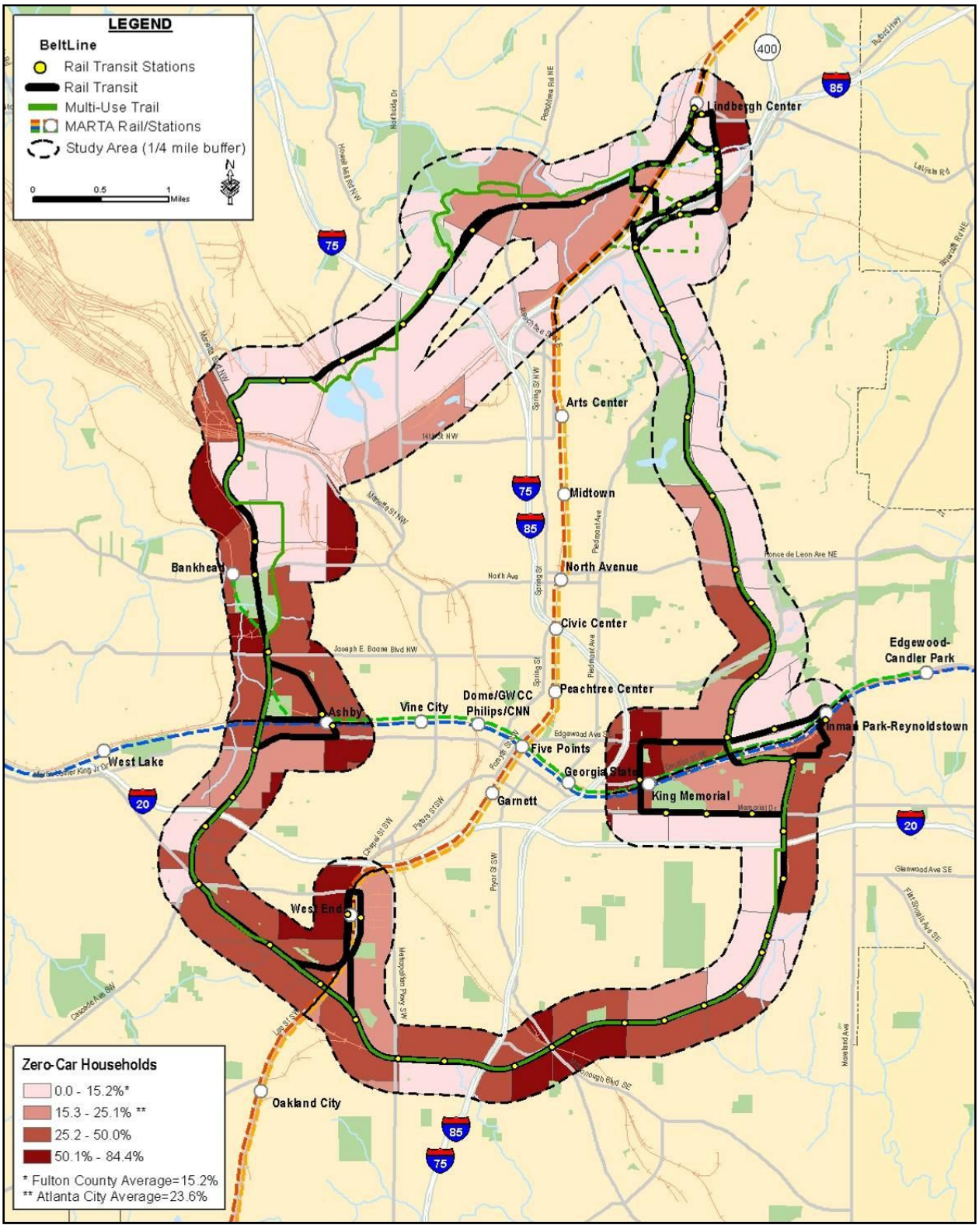
Fifteen percent of Atlanta workers over the age of 16 used public transportation to get to work in year 2000. Within the study area, 15 percent of workers used public transportation to get to work. Of the zones in the study area, the highest percentages of workers using public transportation were in the southwest and southeast zones, while the northeast and northwest zones had the lowest percentages. The percentage of transit-dependent residents in each of the four zones, the study area, and the City of Atlanta surpasses that of Fulton County.

3.5.4 Preliminary Environmental Consequences

This section summarizes the findings of the potential socioeconomic and environmental justice effects of the No-Build and Preferred Alternatives. The evaluation measures that relate to the socioeconomic and environmental justice resource areas are also presented in this section. The evaluation measures include: population and employment within ½-mile of the proposed station locations; housing and employment within ½-mile of the proposed trail access points; and transit-dependent, low-income, and minority populations within ½-mile of the proposed transit station locations

This section addresses environmental justice in accordance with the provisions of Executive Order (EO) 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*.

Figure 3-23: Zero-Car Households - 2000



Source: U.S. Census Bureau, Census 2000

3.5.4.1 Socioeconomics

No-Build Alternative

The No-Build Alternative would incrementally improve the attractiveness of existing transportation and trails in Atlanta. As a result, there is an expectation for incremental growth and development both within and outside the study area. Localized benefits are anticipated from implementing the transit and trail projects listed in Chapter 2.0.

Table 3-26 presents the 2008 and 2030 population and employment within ½-mile of the proposed transit station locations. The No-Build Alternative would serve the lowest population and employment forecasts in both 2008 and 2030.

Preferred Alternatives

Table 3-26 presents the 2008 and 2030 population and employment within ½-mile of the proposed transit station locations. The Preferred Transit Alternative would serve the substantially higher population and employment than the No-Build Alternative in both 2008 and 2030.

Table 3-26: Population and Employment within ½-mile of the Proposed Transit Station Locations

Transit Alternatives	Population		Employment	
	2008	2030	2008	2030
No-Build	54,776	79,874	65,256	80,474
Preferred Transit Alternative	110,205	137,941	87,681	116,799

Source: ARC 2008 Regional Forecasts and GIS
Note: Population and employment for the No-Build Alternative includes only those No-Build projects located within the study area. They are described in Chapter 2.4.1 and mapped in Appendix D.

Overall, the improvements proposed with the Preferred Alternatives would complement and support the projected population, employment, and household growth as described in Section 3.5.2. The development effects anticipated because of the Preferred Alternatives are expected to improve the relative balance of housing and employment within the study area. As stated in *The Atlanta BeltLine Health Impact Assessment* (Ross 2007), the Atlanta BeltLine is "to link destinations and people either by putting places and people in closer proximity through redevelopment of underutilized land or by providing a more varied transportation system that includes additional transit, trails, and sidewalk networks to link people to existing parts of the City." The proposed Atlanta BeltLine could act as a gateway to employment in other areas as well as provide an amenity for potential employment to locate in the Atlanta BeltLine study area (Ross and West 2007).

The study on the feasibility of the Atlanta BeltLine TAD shows the Atlanta BeltLine could create approximately 30,000 new full-time jobs, 48,000 year-long construction jobs, and add 28,000 new housing units (including 5,600 affordable units) over its 25-year project span (EDAW 2005).

An evaluation measure used in this Tier I FEIS is the ability of the Preferred Trail Alternative to maximize housing units and employment within ½-mile of the proposed trail access points. Table 3-27 presents the number of housing units and employment for the Preferred Trail Alternative; totals are dramatically higher than those for the No-Build Alternative.

Table 3-27: Housing and Employment within ½-mile of the Proposed Trail Access Points

Trail Alternatives	Housing (2008)	Employment (2008)
No-Build	9,489	6,707
Preferred Trail Alternative	53,696	63,928

Source: U.S. Census Bureau, Census 2000
Note: Housing and employment data for the No-Build Alternative include only the No-Build projects located within the study area. The No-Build projects in the study area are described in Chapter 2.4.1. and mapped in Appendix D.

3.5.4.2 Environmental Justice

In 2006, FTA issued *Environmental Justice: Principles, Policies, Guidance, and Effective Practices* that contains three principles of environmental justice to guide transit agencies in their compliance efforts:

- Ensure that new investments and changes in transit support structures, services, maintenance, and vehicle replacement deliver equitable levels of service and benefits to minority and low-income populations;
- Avoid, minimize, or mitigate disproportionately high and adverse effects on minority and low-income populations; and
- Enhance public involvement activities to identify and address the needs of minority and low-income populations in making transportation decisions.

No-Build Alternative

The transportation improvements under the No-Build Alternative will provide improved transit service for some environmental justice populations relative to the existing conditions. Neighborhoods served within the study area will benefit from enhanced accessibility near one of the projects, but the number of transit-dependent, low-income, and minority populations served is smaller in comparison to the Preferred Transit Alternative (shown in Table 3-28).

Table 3-28: Transit-Dependent, Low-Income, and Minority Populations within ½-mile of the Proposed Transit Station Locations - 2000

Transit Alternative	Transit-Dependent*			Low-Income Population	Minority Population
	Zero-Car Households	Population over Age 65	Disabled Population		
No-Build	5,850	3,777	9,368	11,700	28,272
Preferred Transit Alternative	10,079	8,005	18,724	21,784	59,864

Source: U.S. Census Bureau, Census 2000
*: In this performance measure, transit dependent was defined as zero-car households, population of 65 and disabled populations in the initial screening conducted in the 2007 *Inner Core BeltLine Alternatives Analysis Detailed Screening Results*
Note: Data for the No-Build Alternative include only those No-Build projects located within the study area. The No-Build projects in the study area are described in Chapter 2.4.1 and mapped in Appendix D.

Many of the opinions expressed during the Public Scoping meetings involving environmental justice communities will not be addressed by the No-Build Alternative, particularly those involving development and interconnectivity throughout the study area. However, the No-Build Alternative will not disproportionately affect environmental justice populations as transit and trail improvements other than the Atlanta BeltLine are planned

in all zones of the study area, including the zones defined as environmental justice. Therefore, they would experience somewhat improved access.

Preferred Alternatives

Potential effects to environmental justice populations because of the Preferred Alternatives are summarized in Table 3-29 and detailed in the *Socioeconomics and Environmental Justice Technical Memorandum*.

Table 3-29: Potential Effects on Environmental Justice Populations within the Study Area

Resource	Potential Effect of Preferred Alternatives
Land Use and Development	Potential land use conversions may occur where existing and future land uses are not compatible (e.g., residential uses) with the transit or trails elements. While effects are not expected to be disproportionate because they would occur throughout the entire study area, further evaluation is needed in the Tier 2 analysis.
Access to Housing and Property Values	As public and private investment takes place in the Atlanta BeltLine study area, increases in property values and subsequent increases in property taxes and rents could lead to the displacement of long-time residents within the southeast and southwest zone neighborhoods. Low-income residents may be forced to move to more affordable neighborhoods outside of the proposed Atlanta BeltLine service area. However, there are programs, administered by the City, ABI and the Atlanta Collaborative Land Trust, in place to prevent existing residents from being displaced. Further, the overall household cost of transportation would be reduced partially offsetting higher housing costs. In addition, the City of Atlanta has policies in place and is completing Atlanta BeltLine Subarea Master Planning to develop a framework for protecting single-family residences.
Parks	The proposed transit and multi-use trails would improve access to existing parks.
Neighborhoods and Community Facilities	Environmental justice communities, especially within the southeast and southwest zones, would experience improved regional mobility and better access to community facilities within the study area and to other neighborhoods because of the Preferred Alternatives. With improved connections, the character of the neighborhoods would not be significantly altered. No disproportionate effects are expected to environmental justice communities since all communities in the study area would experience the improved mobility and access equally.
Employment	Environmental justice communities would have improved access to employment within the study area, as well as the region, potentially creating new job opportunities. Approximately 30,000 new full-time jobs and 48,000 year-long construction jobs would be created over the 25-year project span. No disproportionate impacts to environmental justice communities are anticipated since all communities would have improved access as a result of the project.
Noise & Vibration	The preliminary noise and vibration analyses indicate that the southeast and southwest zones would have the most residents that could experience the highest residential noise and vibration impacts. This potential disproportionate effect will be evaluated further during the Tier 2 analysis to determine the severity of the potential noise effects and mitigation measures to mediate them.

Many of the considerations heard during meetings involving environmental justice communities will be addressed by the Preferred Alternatives, particularly those involving development and interconnectivity throughout the study area. As the project advances, the project sponsors will consider the many design and construction-related considerations heard, such as station amenities, crossing conditions, and the means to avoid adverse impacts to all study area populations.

An evaluation measure used in this FEIS/ 4(f) Technical Memorandum is the ability of the Preferred Alternatives to maximize services to low-income, minority and transit-dependent populations within ½-mile of proposed transit station locations. According to the 2000 U.S. Census data presented in Table 3-28, the Preferred Transit Alternative would provide transit options to more transit-dependent, low-income, and minority populations than the No-Build Alternative.

Public Involvement

The project sponsors developed a *Public Involvement and Agency Coordination Plan (PIAC)* in August 2008 for the Atlanta BeltLine project. The plan addresses CEQ Guidance that states that an agency should identify any potentially affected minority populations, low-income populations, and develop a strategy for their effective public involvement in the agency's determination of the scope of the NEPA analysis. As such, the intent of the PIAC is to encourage citizens and local decision-makers to take part in the identification, development, and implementation of transit and trail improvements in the Atlanta BeltLine study area, and to identify potential impacts of alternatives on transportation, social, environmental, and economic conditions. Specific outreach efforts to Environmental Justice populations included coordination with neighborhood organizations, faith-based organizations, cultural groups, and community centers.

The public outreach for the Atlanta BeltLine Tier 1 DEIS was initiated with the Scoping Phase from July 24, 2008 to September 22, 2008. Eight formal Public Scoping meetings, two in each of the four zones of the study area, were conducted in accordance with NEPA guidelines 40 CFR Parts 1500-1508 and 23 CFR Part 771.

Chapter 7.0 provides a full discussion of the PIAC plan and summarizes all of the comments received during the Scoping Phase. A summary of the key themes in the comments received that relate to socioeconomics and environmental justice include:

- The cost of the project to taxpayers;
- The potential for disproportionate effects on the elderly, low-income and minority communities - the elderly should not be displaced;
- Consistent and equitable development and infrastructure investment in all neighborhoods served by the Atlanta BeltLine;
- The potential for the Atlanta BeltLine to attract additional crime and vagrants, especially along the proposed trail system;
- The ability to prevent accidents and injuries at crossing locations and during construction;
- Transit preferences: ensure Americans with Disabilities Act Accessibility; use electric/natural gas vehicles; use vehicles carrying 50 to 60 riders; use trolley-like cars; provide a combination of short- and long-trips to both local and regional destinations; use dedicated streetcar lanes; provide raised pedestrian crossovers with lighting; provide more stations in southeast and southwest zones; provide retail shops in stations; provide raised platforms, provide ample parking; provide 24-hour service; use MARTA card;
- Trail amenity preferences: clearly marked trails; use cameras to monitor the trails; limit vehicle crossings; provide traffic signals at heavy pedestrian crossings; and design trails to be as seamless as possible; and
- The improved access to stops and the quality of life that the transit and trails could provide.

During the Tier 1 EIS, small group workshops were held to solicit neighborhood and community input to the alternatives development and evaluation process and learn community issues and concerns. These workshops were supplemented by Stakeholder Advisory Committee (SAC) and Technical Advisory Committee (TAC) meetings comprised of community representatives and interested parties. Meetings for the public

were also held in various locations within the project corridor. Events were advertized via newsletters, website, and distribution and posting of flyers within communities along the Atlanta BeltLine. A list of the announcement dates and locations can be found in Appendix E.

Likewise, supplemental public notification of the public comment period and public hearings was undertaken to generate interest with as many people as possible in participating in the Tier 1 EIS process. Chapter 7.0 provides more detail regarding community and public outreach activities.

3.5.5 Potential Avoidance, Minimization, and Mitigation Measures

As the project advances, the conceptual design will be refined with the intent of avoiding or minimizing potential disproportionate adverse impacts on environmental justice populations. Specifically, during Tier 2 analysis, adjustments to the configuration, alignment, and location of amenities will be examined to avoid disproportionate adverse impacts to environmental justice populations. The project sponsors intend to continue coordination with all communities, particularly environmental justice populations, to develop context sensitive design solutions that benefit all populations.

With regard to housing, affordable housing units will be targeted to households with incomes that are below 60 percent of the Area Median Income (AMI) for renters and 115 percent of AMI for homebuyers. In addition, the City has policies in place and is completing Atlanta BeltLine Subarea Master Planning to develop a framework for protecting single-family residences. ABI and the City are currently exploring adopting tax assessment policies to reduce the potential impact of increasing property taxes on lower income owner-occupants or tenants. These include the development of a community land trust to maintain permanent affordable housing, providing financial and legal consulting services, and creating a property tax endowment to assist senior and low-income residents with the payment of their property taxes to enable those citizens to remain in their communities (ABI 2007).

Some impacts may be unavoidable and will be reported during Tier 2 analysis. A discussion of the potential mitigation strategies for each of the resource areas listed in Table 3-29 above is provided in the respective resource sections.

3.5.6 Subsequent Analysis

Subsequent environmental evaluations during the Tier 2 analysis will address the following:

- Detailed effects of the project on population, employment, and housing growth;
- Detailed effects of the project on potential land use conversion and community benefits;
- Detailed adverse and beneficial effects of the project on environmental justice communities;
- Review of potential adverse and beneficial effects on neighborhoods, parks, and community facilities;
- Relocation impact analysis for potentially displaced residences, including environmental justice residences, and other uses;
- Pedestrian and vehicular circulation studies; and

- Detailed noise and vibration analyses and mitigation measures.

3.6 Visual and Aesthetic Resources

This section presents a description of the visual and aesthetic resources within the Atlanta BeltLine study area, as well as the potential effects of the project on these resources.

3.6.1 Methodology

The existing visual and aesthetic characteristics of the study area were determined by viewing and qualitatively describing existing land uses, and by reviewing available maps and photographs. Site visits provided an understanding of the aesthetic conditions within each zone. More detailed analysis will be conducted during the Tier 2 analysis.

3.6.2 Affected Environment

The study area encompasses a variety of land uses with differing visual and aesthetic characteristics, including industrial and light industrial areas served by the rail lines, parks, commercial areas, and residential neighborhoods. The visual context of the study area includes former light industrial areas converted to commercial and residential uses, new multi-family residential, industrial and light industrial, garden apartments, commercial developments, single-family neighborhoods, and open space. In general, development in the study area backs up to the railroad ROW, which in residential areas is frequently screened by vegetation or physically separated from surrounding uses by changes in grade. Whereas vegetative buffering can be seen as a benefit, infrequent maintenance of that vegetation can also create an unsightly overgrown condition. Street crossings include overpasses and underpasses, as well as at-grade crossings. Often the railroad ROW is only visible at these crossings.

Where views of the ROW are unobscured, the sight of old railroad embankment, structures, rails, ties and ballast beds are present. Railroad-related structures and equipment are visible at all at-grade crossings including signs and crossing warning indicators. Rail yards, sidings, and active or parked trains can be observed from public ROW in numerous locations in the study area. Where vegetation or other screening is absent, views of railroad materials such as piles of ties may still be evident. Dumped trash can also be observed along some ROWs.

Views from the ROW are not a factor if the railroad ROW is currently unused. Where the railroad ROW is active, viewers from within the ROW are restricted to train operators and maintenance personnel as public access is not provided along ROW.

3.6.2.1 Potentially Sensitive Views and Resources

Potentially sensitive views and resources throughout the study area include the prominent visual resources described in Table 3-30 by zone, as well as the cultural and recreational resources identified along the route, as described in Section 3.7. During the public scoping process, community members in all zones expressed concern regarding potential effects to residential neighborhoods bordering the ROW.

Table 3-30: Potentially Sensitive Views and Visual Resources by Zone

Zone	Build Alternatives	Potentially Sensitive Views and Visual Resources	
Northeast	Preferred Alternatives	Ansley Golf Course Ansley Mall Amsterdam Walk Piedmont Park Historic Fourth Ward Park	Midtown Promenade Midtown Place City Hall East Residential neighborhoods
Southeast	Preferred Alternatives	Oakland Cemetery Woodland Garden Park Boulevard Crossing Park Daniel Stanton Park The playing fields of the New Schools at Carver	Adair Park Number One Adair Park Number Two Residential neighborhoods
Southwest	Preferred Alternatives	Booker T. Washington High School Donnelly Park	Rose Circle Park Residential neighborhoods
Northwest	Preferred Transit Alternative	Washington Park tennis courts Maddox Park Piedmont Hospital	Shepherd Center Tanyard Creek Park Ardmore Park
	Preferred Trail Alternative	Washington Park tennis courts Maddox Park Piedmont Hospital The Howard School	Shepherd Center Tanyard Creek Park Ardmore Park

3.6.3 Preliminary Environmental Consequences

Visual impacts were considered when assessing the effects on views of and from the Atlanta BeltLine. Potentially sensitive viewsheds in the study area would include properties adjacent to the Preferred Alternatives, or users of the proposed Atlanta BeltLine transit and trails.

3.6.3.1 No-Build Alternative

The No-Build Alternative would not change the existing viewshed. Field observations of the existing ROW noted that, whereas the ROW may be visually obscured from adjacent properties and public ROW by vegetation, infrequent maintenance of that vegetation has created an unsightly overgrown condition. Where vegetation or other screening is absent, views of railroad materials, such as piles of ties or occasional dumped trash, can also be observed.

3.6.3.2 Preferred Alternatives

The Preferred Alternatives will primarily use existing railroad and roadway corridors. The effect of using existing transportation ROW is to minimize the potential for substantial visual impact on neighborhoods, communities, parks, and historic properties. Nevertheless, the Atlanta BeltLine will introduce new visual elements within and/or near railroad ROW including new track and ballast, bridges, underpasses and embankments, power stations, poles and overhead wires, stations, storage yards, and multi-use trails with associated signage, lighting, and furniture.

Where existing railroad or roadway infrastructure has deteriorated, the potential exists for the project sponsors to improve visible elements, such as bridges, through rehabilitation or replacement of elements to be used by the Preferred Alternatives. Vegetation, structures, or equipment within and/or near existing or acquired railroad ROW may have to be removed in part or whole to accommodate the new transit and trails elements of the Atlanta BeltLine. New signage and warning indicator equipment will be installed at-grade

crossings. These activities and amenities have the potential to change the visual characteristics of and from the railroad ROW and immediate surroundings. Railroad ROWs that are currently obscured by vegetation may be readily visible as a result of implementing the Preferred Alternatives.

The Preferred Trail Alternative will be aligned within and/or near existing railroad ROW alongside the Atlanta BeltLine transit component and/or adjacent to existing roadways. Within railroad ROW and, in some cases along existing roadways, the multi-use trails will create new views of the study area from these locations. Public users of the trails will have a new set of views of adjacent prominent resources, such as parks and historic structures.

3.6.4 Potential Avoidance, Minimization, and Mitigation Measures

The proposed use of existing railroad ROW or proximity to existing railroad ROW is intended to locate new transportation resources in already designated transportation corridors. The intent of aligning the Atlanta BeltLine alongside existing freight railroad infrastructure is to minimize the potential for substantial visual impact on neighborhoods and communities. However, as described in Section 3.3, some changes in existing visual characteristics may occur. Conceptually, mitigation strategies that can be considered to address unavoidable adverse visual impacts include modifying the location and configuration of new visual elements to reduce visual impact, providing visual screening or buffers, shielding lighting, and addressing related concerns such as maintenance and trash removal.

3.6.5 Subsequent Analysis

Detailed analysis will be undertaken as the project design is further developed during Tier 2 analysis to identify and assess the extent of adverse impacts on the visual and aesthetic resources within the study area. Further development of project design will include refining the conceptual design presented in this FEIS/ 4(f) Technical Memorandum using more detailed environmental analysis and ongoing public input. For example, for each of the proposed station sites, further analysis will be conducted in conjunction with local agencies to develop an understanding of the relationship of the proposed station architecture, lighting systems, and other features to the surrounding natural and built environment, and the historic context of the area. The analysis would identify the potential for blockage of valued views and the areas where the scale, form, and aesthetics of project facilities could be designed to complement the surrounding landscape. Tier 2 analyses would yield a basis for considering specific measures that could be integrated into the final station designs to avoid or reduce the visual impacts of the stations on their surroundings.

3.7 Cultural, Historic, and Archaeological Resources

This section describes the cultural, historic, and archaeological resources that exist within the Atlanta BeltLine study area as well as the potential effects of the project on these resources.

3.7.1 Methodology

Coordination with the State Historic Preservation Office (SHPO) determined the approach for identifying known and potential cultural, historic, and archaeological resources along the corridor for the Tier 1 EIS, as documented in Appendix C, Agency Coordination. A meeting on August 6, 2009 obtained concurrence from the SHPO

regarding an approach to the cultural resources evaluation that includes the following three steps:

- Study Area Definition
- Existing Data Sources Review
- Field Reconnaissance

The Tier 1 and 2 analyses will fulfill the requirements of Section 106 of the National Historic Preservation Act (NHPA) as codified in 36 CFR 400. Section 106 requires federal agencies or projects requiring a federal permit to take into account the effects their actions might have on historic properties. In the Atlanta BeltLine Tier 1 FEIS, the focus of Section 106 analysis is on identifying areas of cultural, historic, and archaeological sensitivity. Both documented sites and those undocumented areas with a potential for historic or prehistoric archaeological resources define the term "areas of archaeological sensitivity." Subsequent analysis to be undertaken during the Tier 2 phase of the project is described in Section 3.7.4.

A *Cultural Resources Reconnaissance Technical Memorandum* (2009) was prepared to support the Tier 1 DEIS. Neither a *Historic Resources Survey Report* (HRSR) or a Phase I archaeological study was prepared for this FEIS/ 4(f) Technical Memorandum . A more detailed assessment will be prepared as part of future Tier 2 analyses for both historic resources and archaeological resources using the Preferred Alternative.

3.7.1.1 Study Area Definition

In consultation with the SHPO, the study areas used to identify cultural resources for the Tier 1 study were ¼-mile from each side of the Atlanta BeltLine corridor centerline for historic architectural resources, for a maximum of a ½-mile within which both direct and indirect effects to these resources might occur. For archaeological resources, the study area was identified to include 150 feet from each side of the proposed Atlanta BeltLine corridor centerline, for a maximum of 300 feet within which construction of any project improvements could potentially affect archaeological resources.[15] A resource was considered to be potentially directly affected if it was wholly or partially inside the APE of the Preferred Alternative, or if the boundary of the resource was adjacent to the APE. The study area for historic architectural resources is broader to include potential indirect effects.

3.7.1.2 Existing Data Sources Review

Existing information on previously identified historic properties was reviewed to identify any known resources that exist within the study area. This review included properties listed on the National Register of Historic Places (NRHP), NRHP nominations, National Historic Landmarks, and the updated Georgia Historic Bridge Survey (GHBS 2008). Also consulted were the Georgia's Natural, Archaeological, and Historic Resources GIS (NAHRGIS) database (https://www.itos.uga.edu/nahrgis/) and documentation available at the Georgia Department of Natural Resources (GADNR), SHPO, Atlanta Urban Design

[15] As part of the Georgia Environmental Policy Act (GEPA) study conducted specifically for the northeast zone of the Atlanta BeltLine Corridor, surveying and documentation of cultural resources took place (2008 - 2009). The *Cultural Resources Reconnaissance Technical Memorandum* (2009) shows the data gathered from the cultural resources study, which is also included in the Tier 1 EIS.

Commission (AUDC), Historic American Building Survey (HABS), Historic American Engineering Record (HAER), and other available sources of information.

Additional information specifically for the northeast zone was obtained from the Atlanta BeltLine Georgia Environmental Policy Act (GEPA) study. Supporting technical reports for that study, the *Historic Resources Survey Report* (HRSR) and a *Phase I Archaeological Report,* were reviewed.

Review of the state archaeological site files at the University of Georgia and existing survey reports identified archaeological sites within a one-kilometer (0.62 miles) distance surrounding the archaeological study area. In addition, topographic maps, aerial photography, and as-built maps for the original MARTA line identified areas of high archaeological site potential.

Construction of a predictive model determined potential prehistoric site locations, based on topography, known site locations, and the degree of historic landform disturbance. Historic maps from the 19th Century through the 20th Century were also sources of information for locating areas of historic archaeological site potential.

Identification of potential consulting parties followed the review of existing information on previously identified historic properties. In addition to the SHPO, other consulting parties were determined based on the guidance in the *GDOT/FHWA Cultural Resource Survey Guidelines*. The consulting parties invited by FTA and MARTA to comment on the Atlanta BeltLine project included the SHPO, the National Park Service Southeast Regional Office, the ARC, the Fulton County Board of Commissioners, and the City of Atlanta Bureau of Planning. For more information regarding the review of resources and sources consulted, see the *Cultural Resources Reconnaissance Technical Memorandum* (2009).

3.7.1.3 Field Reconnaissance

Field reconnaissance was conducted in the historic architectural study area to identify any historic properties potentially eligible for listing in the NRHP or Georgia Register of Historic Places (GRHP). This reconnaissance involved a windshield survey to locate properties that appeared to be over 50 years of age and potentially eligible based upon National Register criteria. The basis for this evaluation included the physical appearance of the resources and their architectural design. Other factors such as integrity, setting, and historical importance based upon knowledge of the development of the neighborhood also were included in the evaluation of potential eligibility.

A reconnaissance also was conducted in the archaeological study area to confirm the sensitivity of areas assessed to have archaeological potential based on background research or prehistoric site predictive modeling. Field-testing was performed in the northeast zone as part of the GEPA study and is documented in the *Environmental Effects Report – Atlanta BeltLine Corridor Northeast Zone* report.[16]

3.7.2 Affected Environment

The discussion of cultural resources is organized by study area zone. A total of 180 cultural resources were identified. Lists of all cultural resources by study area zone can

[16] AECOM, Inc., 2009. *Environmental Effects Report – Atlanta BeltLine Corridor Northeast Zone*, Atlanta BeltLine Corridor Environmental Study. Prepared for MARTA and ABI.

be found in the *Cultural Resources Reconnaissance Technical Memorandum* (2009). One resource, the Historic Railroads of the Atlanta BeltLine, has been determined eligible for the entire Atlanta BeltLine Corridor. The contributing elements within the northeast zone were surveyed in detail during the Atlanta BeltLine GEPA study.

Other resources, such as Atlanta's Historic Apartment Complexes, exist in more than one zone, but were counted only once. Figure 3-24 shows all NRHP-listed, or potentially eligible historic resources in the study area. Table 3-31 lists the number of existing and potential historic and archeological resources by zone. Appendix D includes detailed figures by zone illustrating areas of archaeological sensitivity in the 300-foot study area for archaeological resources. No sacred Native American Lands were identified within this study area.

Table 3-31: Number of Historic and Archaeological Resources by Zone

Zone	Georgia/National Register of Historic Places		AUDC Additional "Significant" properties	Additional Resources Identified During Field Reconnaissance	Archaeologically Sensitive Areas	Total Number of Resources
	Listed Sites	Eligible Sites				
Northeast	16	28	0	0	8	52
Southeast	10	2	13	17	12	54
Southwest	6	1	4	6	4	21
Northwest	12	3	9	14	15	53
Total All Zones						180

Sources: NRHP, GRHP, AUDC, and ARC 2011.

A Tier 2 analysis will be completed to determine potential eligibility of those resources not already listed on the NRHP or determined eligible.

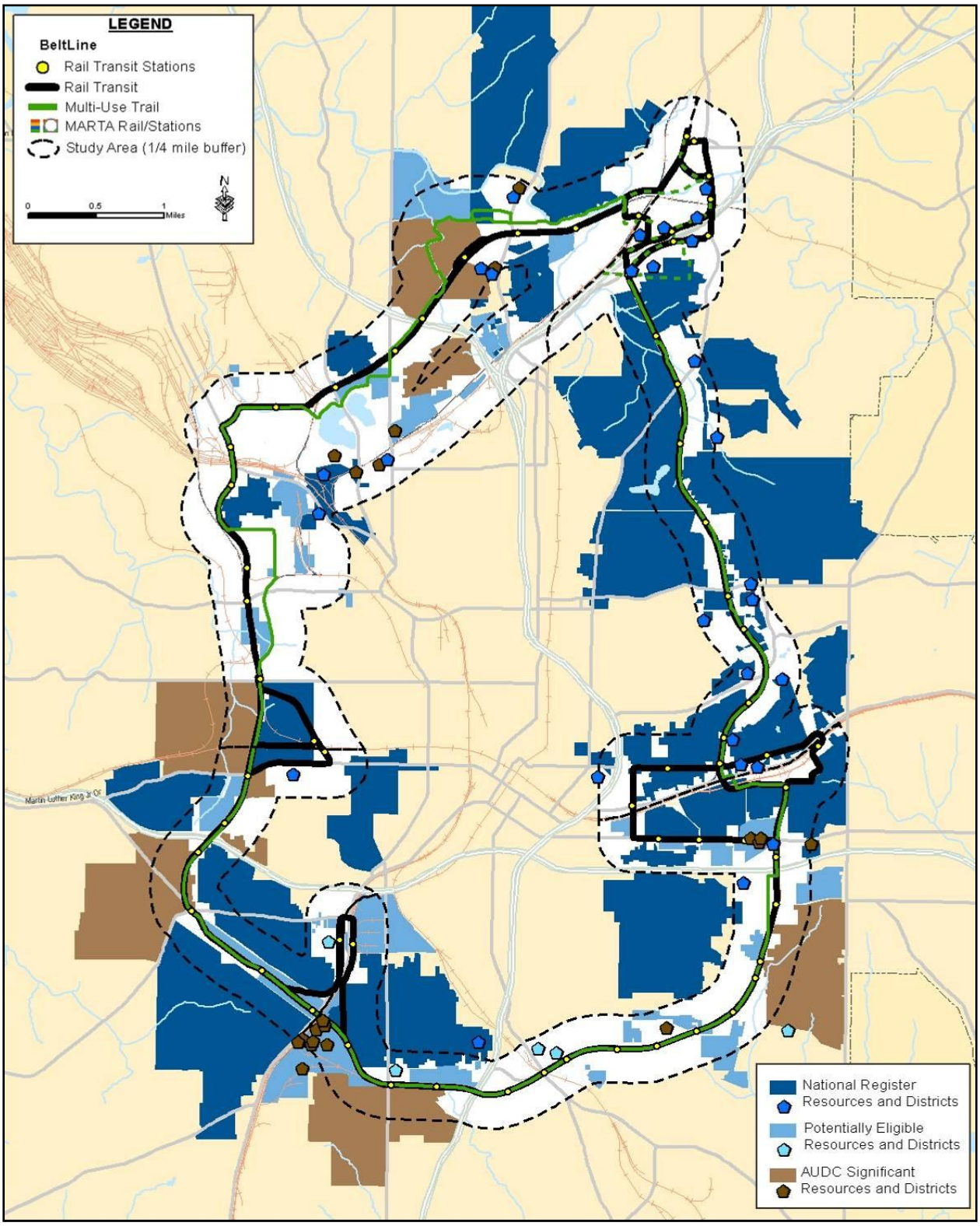
3.7.2.1 Preliminary Environmental Consequences

This section describes the potential impacts of the No-Build and Preferred Alternatives on cultural resources, including both historic and archaeological sites that are listed, eligible, and potentially eligible for listing on the GRHP or the NRHP. For the purpose of this section, and for ease of discussion, all of the resources are referred to as "cultural resources."

No-Build Alternative

The No-Build Alternative includes a mix of improvements to existing facilities and new transit projects. The improvements to existing facilities are geographically specific; as such, the potential for cultural resource impacts will be highly localized. Assessment of the extent of potential cultural resource impacts of the No-Build projects will occur during environmental analysis for those projects. Public outreach and Section 106 coordination in regard to avoiding, minimizing, and mitigating the potential adverse cultural resources effects of the No-Build projects will take place during those environmental reviews.

Figure 3-24: Historic Resources



Sources: NRHP, GRHP, AUDC, and ARC. 2010
Note: Resources on more than one list are mapped according to their highest designation level. National and/or State Register listing takes precedence over AUDC listing, for example.

Preferred Alternatives

The proposed use of existing railroad ROW by the Atlanta BeltLine will aggregate transportation resources in existing transportation corridors and minimize the potential for substantial impacts on the environment, including cultural resources.

During the scoping process, the general public as well as regional agencies provided input regarding cultural resources. Comments from the public and agencies expressed concern that the proposed Atlanta BeltLine could have detrimental effects on historic structures and archaeological resources, and there should be an assessment of these potential impacts. Preliminary design of the Preferred Alternatives occurred with the intent of avoiding or minimizing impacts to cultural resources, wherever feasible.

Although 180 total resources were identified within the larger project study area across all four zones, as discussed in Section 3.7.2 and in the *Cultural Resources Reconnaissance Technical Memorandum* (2010), only 105 resources fall within 150 feet of the Preferred Transit Alternative and 103 resources for the Preferred Trail Alternative, noted in Section 3.7.1.

Table 3-32 indicates the total number of historic resources and areas of archaeological sensitivity potentially subject to direct and indirect, proximity impacts within each zone. It should be noted that there has not yet been a formal evaluation of eligibility or effects under Section 106 as part of this project.

Table 3-32: Potential Impacts to Cultural Resources

Zone	Alternative	Numbers of Potential Impacts to Cultural Resources
Northeast	Preferred Alternatives	29
Southeast	Preferred Alternatives	42
Southwest	Preferred Alternatives	16
Northwest	Preferred Transit Alternative	17
	Preferred Trail Alternative	15

For a list of cultural resources located within the study area, and their physical relationship to the Preferred Alternatives, see the *Cultural Resources Reconnaissance Technical Memorandum* (2009) and *Cultural Resources Reconnaissance Technical Memorandum Addendum* (2011).

As stated above, the use of existing railroad and roadway ROW, wherever possible, to locate proposed transit and trail elements minimizes the potential for direct effects on historic resources. On the other hand, the main resource that will be directly impacted by the Preferred Transit Alternative is the Historic Railroad Resources of the Atlanta BeltLine. This resource, which spans all four study area zones, is comprised of numerous contributing elements including railroad ROW, track, ballast, bridges, culverts, retaining walls, and other related features. Any proposed action within the former Atlanta BeltLine railroad system footprint will likely cause impacts to the resource.

Additional ROW is expected to be needed in specific areas adjacent to the Atlanta BeltLine corridor to accommodate the Preferred Alternatives. A preliminary assessment of ROW needs identified the Orkin-Rollins Building as another historic resource that

would be directly impacted by the Preferred Alternatives in the northeast zone. This resource could have an element of the project constructed on a portion of the property, creating a direct impact to the building itself. Other historic resources could be indirectly affected by proximity impacts such as visual, noise, vibration, and access changes.

Finally, 39 areas of archaeological sensitivity are identified by background research and field reconnaissance in all zones. The investigations suggest that the areas of sensitivity could retain potentially significant archaeological sites.

3.7.3 Potential Avoidance, Minimization, and Mitigation Measures

Conceptual design of the Preferred Alternatives conservatively indicates the potential for direct and indirect impacts on cultural resources. As the project advances, the design will be refined with the intent of further avoiding or minimizing impacts on cultural resources.

Some impacts may be unavoidable and will be reported during Tier 2 analysis. At this point, FTA and MARTA will work in consultation with the Georgia SHPO and Consulting Parties to identify mitigation strategies, which will eliminate or mitigate adverse effects; and if necessary, prepare a Programmatic Agreement to outline mitigation commitments.

3.7.4 Subsequent Analysis

During the Tier 2 analysis, further design development will enable the identification of specific direct and indirect effects on cultural resources and allow compliance with the requirements of Section 106 to proceed. In addition, during Tier 2 analysis, additional investigations and studies will take place to: 1) identify cultural resources and determine eligibility for the NRHP; 2) determine the direct and indirect effects on those cultural resources; and 3) develop appropriate mitigation measures for unavoidable impacts.

As part of meeting the requirements of Section 106, the project sponsors would consult with the Georgia SHPO and other consulting parties and the public concerning the full range of effects to cultural resources during Tier 2 analysis.

3.8 Parks and Recreational Resources

This section presents a description of the parks and recreational resources within the Atlanta BeltLine study area, as well as the potential effects of the project on these resources.

3.8.1 Methodology

The methodology for assessing potential effects on parks and recreational resources included the following tasks:

- Identification of publicly-owned parks and recreational properties in the study area;
- Identification and assessment of the potential effects of the alternatives on the parks and recreational resources potentially crossed or otherwise affected by the alternatives;
- Determination of the consistency of the alternatives with City and regional plans for park and recreational facilities;
- Identification of general areas where the alternatives could need additional ROW that could affect adjacent park properties; and

- Identification of potential design and mitigation strategies to offset potential negative impacts.

The analysis applied both quantitative and qualitative assessments in the tasks presented above. The analysis utilized quantitative assessments to determine if parks and recreational resources exist within the ¼ mile study area and the 150-foot buffer to either side of the Preferred Alternatives. The larger ¼-mile study area allows a broader view of potential effects within the overall Atlanta BeltLine study area, while the 150-foot buffer area focuses on direct physical impacts with a width that conservatively allows for anticipated alternative impacts. Data on parks and recreation areas in the study area were obtained from the City of Atlanta through their GIS resources and adopted park and recreation plans. All City classifications of parks were used, which include: Regional Parks, Community Parks, Neighborhood Parks, Block Parks, Garden Parks, and Conservation Parks.

The identification of the potential impacts on parklands and recreation areas in the study area focused on potential ROW impacts. A qualitative assessment evaluated the potential of the alternatives to contribute to or detract from existing or planned parks and recreational resources.

3.8.2 Planning Context

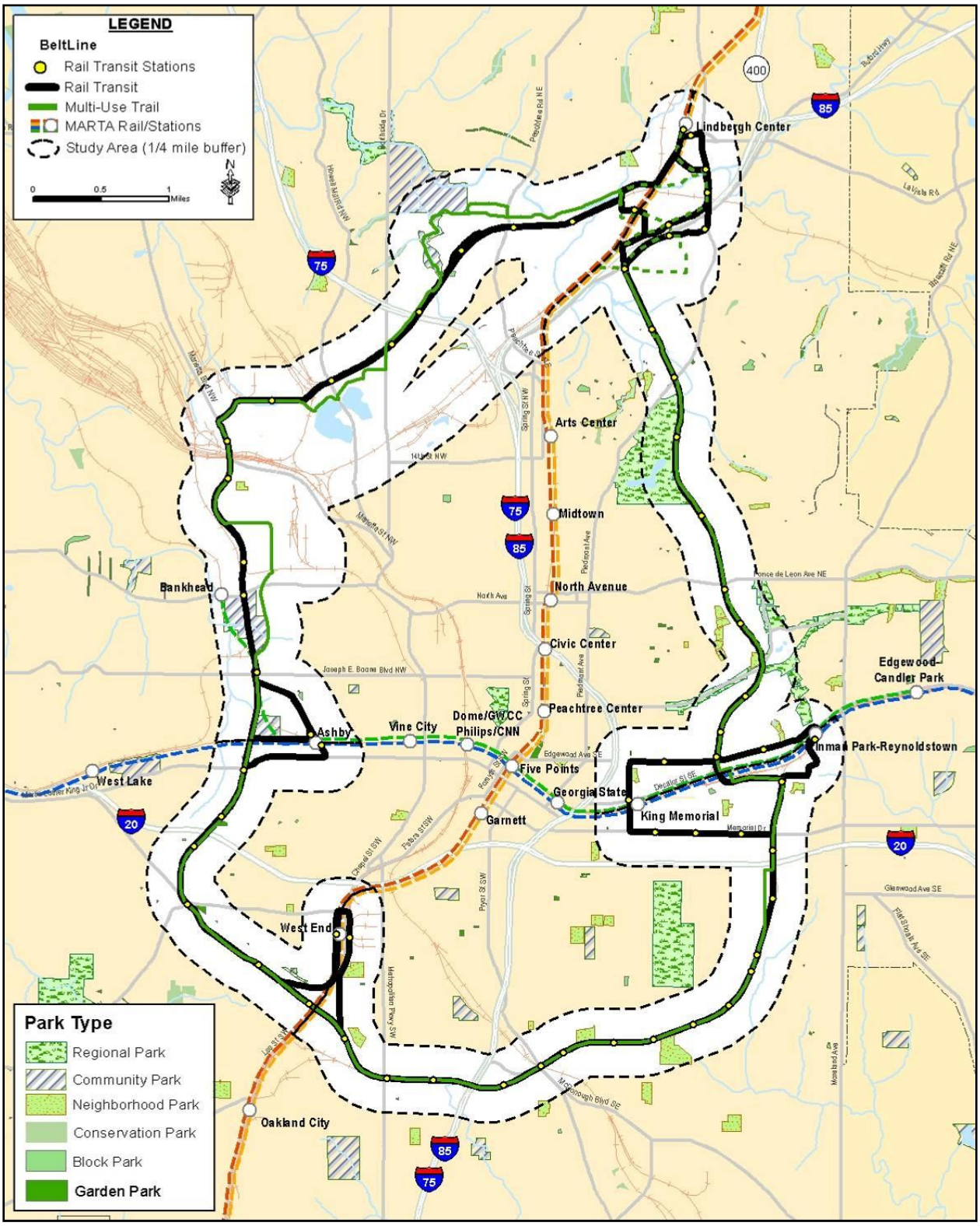
According to the *Atlanta's Project Greenspace Summary Report*, released in 2009 by the City of Atlanta, the City lags behind its U.S. peers in greenspace per capita. This number will continue to fall if the City is not proactive in implementing a greenspace vision. Currently, Atlanta offers 0.75 acres of public parkland per 100 residents. Its goal is to increase that ratio to one acre per 100 residents. Goals outlined in the report include:

- Protecting a minimum of 20 percent of the City's land area as greenspace;
- Providing a minimum of 10.5 acres of public parkland per 1,000 residents;
- Providing publicly accessible greenspace within a ½-mile walk of every resident;
- Protecting at least 75 percent of Atlanta's environmentally sensitive lands via ownership and/or development regulations; and
- Providing recreational facilities and programs to meet citizen needs based on a level of service standards.

3.8.3 Affected Environment

Twenty-two public parks, including two regional parks, six community parks, six neighborhood parks, seven garden parks, and one block park are located within the original 150-foot buffer used for the Preferred Alternatives. These parks total approximately 65.5 acres within the 150-foot buffer and extend beyond the buffer to cover a total of 605 acres. Appendix D contains a table listing park and recreational facilities by zone, within the 150-foot buffer, and within the ¼-mile study area (shown in Figure 3-25).

Figure 3-25: Parks



Source: City of Atlanta, Department of Parks, Recreation, & Cultural Affairs 2010

3.8.4 Preliminary Environmental Consequences

3.8.4.1 No-Build Alternative

Existing Park and Recreational Effects

Under the No-Build Alternative, only two projects will potentially affect parks and recreational resources in the study area. Commuter Rail-Lovejoy/Griffin/Macon has the potential to affect Adair II Park near West End in the southeast zone, and the I-20 East BRT has the potential to affect Rawson-Washington Park at the edge of the Atlanta BeltLine study area in the southeast zone. The sponsors of the projects in the No-Build Alternative will be required to identify unavoidable impacts to these and any other parks, and to develop appropriate mitigation strategies for these in accord with federal, state, and local requirements.

Future Park and Recreational Effects

The No-Build Alternative will have some positive effects on future park and recreational resources in the study area, as it would add bicycle and pedestrian facilities and trails to improve access to parks and recreational resources. Planned parks and recreational resources identified in the City's CDP include park expansions, new parks, and recreational resources. These projects are included in the No-Build definition provided in Section 2.4 of this document. Table 3-33 summarizes the locations of these new facilities, which will primarily benefit the local community.

Table 3-33: No-Build Alternative: Planned Park, Pedestrian, and Multi-Use Trail Resource Improvements within the Study Area

Project Name	Project Type	Zone	Project Description
Lindbergh to Inman trail	Hiking trail	Northeast	Unpaved trail improvement project
Piedmont Park Expansion	Regional park	Northeast	Expansion of a regional park and recreational resource per the *Piedmont Park Master Plan* (Currently under construction)
Eastside Trail	Multi-use bicycle / pedestrian resource	Northeast	Eastside multi-use trail from Piedmont Park to Glenwood (Currently under construction)
Four Corners Park Expansion	Neighborhood park	Southeast	Expansion to neighborhood park and recreational resource
Ralph David Abernathy Boulevard pedestrian/intersection improvements	Pedestrian resource	Southwest	Ralph David Abernathy Boulevard pedestrian and intersection improvements
West End multi-use trails	Multi-use bicycle / pedestrian resource	Southwest	West End multi-use trails along CSX RR and Westview Drive
Southwest Hiking Trail	Hiking trail	Southeast	Unpaved trail improvement project
Enota Park	Neighborhood park	Southeast	New neighborhood park
Westside Reservoir Park	Regional park	Northwest	New regional park and recreational resource
Marietta Boulevard pedestrian improvements	Multi-use bicycle / pedestrian resource	Northwest	Marietta Boulevard pedestrian improvements
Northside Atlanta BeltLine Trail	Multi-use bicycle / pedestrian resource	Northwest	Northside multi-use trail along Ardmore, Tanyard, and Atlanta Memorial Parks

Source: City of Atlanta. 2007. Atlanta Strategic Action Plan CDP

The 2009 *Atlanta's Project Greenspace Technical Report* (Atlanta 2009) presents the City of Atlanta's vision of parks and recreational resources as a highly interconnected network with easy access (within ½-mile) to public parks for all Atlanta residents. The No-Build Alternative will be minimally responsive to this vision for future park and recreational resources by providing new bicycle/pedestrian and trail facilities at discrete locations in the study area.

3.8.4.2 Preferred Alternatives

The Preferred Alternatives will have an overall positive effect on the parks and recreational facilities in the study area as the project will directly address many of the City's greenspace goals and provide access to those facilities. The Preferred Trail Alternative will provide over 50 acres of the 3,784 public park acres needed to meet the 10 acres per 1,000 residents goal, using 2030 population projections. The Preferred Alternatives will also provide connectivity between park activity centers, and between residences and park resources.

Existing Park and Recreational Effects

Potential effects on parks and recreational facilities were assessed in terms of access, direct physical impacts, and indirect or proximity impacts. The Preferred Transit Alternative will provide a transit option to access existing parks and recreational facilities. The Preferred Trail Alternative will have a positive effect on existing park and recreation resources by creating direct pedestrian- and bicycle-oriented trail connections between the public parks, and between communities and public parks. Table 3-34 lists the number of parks and recreational resources accessible by the Preferred Transit and Preferred Trail Alternatives.

Table 3-34: Number of Parks and Recreational Resources Accessible by the Preferred Alternatives by Zone

Zone	Preferred Transit Alternative	Preferred Trail Alternative
Northeast	6	6
Southeast	3	3
Southwest	7	7
Northwest	5	6
Totals	21	22

During the Public Scoping Process, specific concern was expressed about the potential for the Atlanta BeltLine to have a direct impact on park ROW. As a result, consideration was given in the development of the Preferred Alternatives to avoid the need to use ROW from an existing park or recreational resource. Initial analysis indicates that the Preferred Alternatives will not likely require ROW from any parks and are not likely to directly affect existing parks and recreational facilities. For example, at Freedom Park, the transit and trail project elements will remain in the existing rail ROW that crosses a narrow portion of the park. As the existing Freedom Park multi-use trails cross the existing rail ROW, a positive effect will be the connection of the Freedom Park Trail to the Atlanta BeltLine trails element. Because the design of the Preferred Alternatives will be refined during the Tier 2 analysis, potential impacts to parks by the project will continue to be evaluated during the planning process.

The intent of the Atlanta BeltLine is to avoid or minimize adverse effects on existing parks and recreational facilities. Providing trail connections to or through existing parks could require use of parkland; however, the connections and trails will provide an enhancement to the parks by improving access and connectivity to other parks. It is likely that the ownership of the park will remain the same.

It should be noted that where the transit and trail alternatives cross existing trails, such as at Freedom Park, access and safety measures in the form of design and operational controls will be provided. These could include strategies such as grade-separated crossings of transit and trails, or gated and signalized at-grade crossings. The details of these strategies will be determined during Tier 2 analysis.

Indirect Effects

The potential exists for indirect effects as defined by Section 4(f) of the USDOT Act due to the proximity of transit operations to 13 park and recreational facilities in the Preferred Alternatives listed below:

Freedom Park	Stafford Street Park
Piedmont Park	Ardmore Park
Daniel Stanton Park	Bobby Jones Golf Course
Gordon-White Park	Maddox Park
Green Leaf Circle	Tanyard Creek Park
Napoleon Circle	Washington Park
South Gordon Triangle	

Indirect effects of transit operations due to proximity can include noise and/or vibration impacts. However, initial noise and vibration screening indicates a low potential for direct effects due to the Atlanta BeltLine project. As the project design advances, strategies to avoid the potential for direct effects on parks and recreational facilities will be applied.

A more detailed list of individual park acreage within the 150-foot buffer and the ¼ mile study area is provided in Appendix D, along with figures that illustrate the park locations by zone.

Planned Park and Recreational Resources

The Atlanta BeltLine is part of the City's greenspace plan. Thus, anticipation is for the Preferred Alternatives to have a positive effect on future park and recreation facilities, as they will help realize the City's vision of increased public park space and park connectivity.

3.8.5 Potential Avoidance, Minimization, and Mitigation Measures

As the project design advances, the project sponsors will strive to avoid or minimize adverse effects on parks and recreational resources. Identification of unavoidable, specific impacts and determination of appropriate mitigation measures will occur by coordinating with the resource owner.

Potential mitigation strategies might include use of best management practices during construction activities and specific park enhancements or potential land replacement for long-term adverse impacts. Mitigation of proximity effects to parks could take place through context sensitive design, plantings, and sound buffering.

Should there be a temporary impact to parks and recreational resources during construction activities, public access will be restored when construction is complete. Construction activities will occur in a manner that will least disturb the use of these resources. Temporarily affected land within parks will mean restoration to pre-construction or better conditions after construction activities are complete.

3.8.6 Subsequent Analysis

During the Tier 2 analysis of the Preferred Alternatives, more detailed research on the types of functions and activities at each resource, public access, and exact property boundaries will occur to determine the extent of any potential effects. The analyses will include:

- Descriptions of the uses and functions of each of the resources, and identification of resource boundaries including: total size of resources, specific services and facilities, and access to resources;
- Specific potential effects on each resource, including property acquisition, if any;
- Physical effects, proximity effects, and temporary effects on each resource resulting from proposed operations and infrastructure improvements to accommodate the Atlanta BeltLine; and
- Documentation of consultation with the affected federal, state, and local jurisdictions and owners/operators of the identified resources.

3.9 Safety and Security

This section describes the potential safety and security issues raised by the Preferred Alternatives, possible strategies to minimize risks during project construction and operation, and possible subsequent analysis regarding project safety and security.

3.9.1 Methodology

This section qualitatively assesses the potential safety and security issues that will be addressed as the Atlanta BeltLine development progresses, which respond to the FTA's *Safety and Security Management Plan* (SSMP) requirements.

Safety and security regulations and guidance related to the project include the American Association of State Highway and Transportation Officials (AASHTO), the Illuminating Engineering Society of North America (IESNA), and the Americans with Disabilities Act. Materials, engineering guidelines, and accessibility requirements are addressed.

When the project is ready to enter the Preliminary Engineering phase, applicants for and recipients of FTA funding must submit a *Safety and Security Management Plan* (SSMP). The SSMP describes how the applicant will address safety and security for the Atlanta BeltLine project regardless of the chosen transit mode technology. During the Tier 1 FEIS analysis, certain features that respond to the SSMP requirements were identified. They are described in brief below.

3.9.2 Affected Environment

Existing safety protocols and measures in operation for existing transportation services are in effect. These protocols and measures are procedures to protect the safety of the public and the employees of MARTA, GDOT, the City of Atlanta, CSX, Norfolk Southern, and other entities that operate along or across the Atlanta BeltLine. Clearance requirements are in place along passenger and freight railroad lines, including CSX, Norfolk Southern, and MARTA. The sponsors of the projects listed on the TIP, included in the No-Build Alternative, would implement safety measures that are consistent with their own protocols and requirements.

Seventeen fire stations serve the study area. The project study area is entirely within the limits of existing fire, police, and emergency response team protection.

3.9.3 Environmental Consequences

Safety and security are conditions of transportation operations that protect the resources, the operators, and the users of those resources. This section contains a qualitative assessment of the potential operational safety and security conditions of the No-Build and Preferred Alternatives.

3.9.3.1 No-Build Alternative

Under the No-Build Alternative, existing safety and security protocols, such as compliance with AASHTO and American's with Disabilities Act, or the control of roadway-track interactions for at-grade crossings, and measures in operation for existing transportation services will be in effect. This will include MARTA, GDOT, the City of Atlanta, CSX, Norfolk Southern, and other entity procedures to protect the safety and security of their resources, the public, and their employees who use the resources.

The No-Build Alternative will not change existing fire, police, and emergency response team routes or access.

3.9.3.2 Preferred Alternatives

Assessment of safety and security for the Preferred Alternatives occurs through four key topic areas: trails, stations, roadway-track interactions, and freight rail-track interactions. The provisions described for safety in this section are conceptual and subject to refinement and detailed evaluation of effects in a Tier 2 analysis.

In general, the Preferred Alternatives will not change fire, police, and emergency response team routes or access. During Tier 2 analysis, an evaluation of emergency services access routes will be undertaken to ensure that the Atlanta BeltLine facilitates access.

Trails

The Atlanta BeltLine trail design provides for a safe and secure environment for trail users. Utilization of the standards established in guidelines from AASHTO, IESNA, or by the American's with Disabilities Act will address most safety issues along the trails. The AASHTO guide will address vertical and horizontal alignment issues. The American's with Disabilities Act will specify standards for steps, ramps, handrails, and guardrails. Installation of lighting will meet the IESNA guidelines and be tailored appropriately for different conditions along the trails.

Several issues could present safety and security concerns for potential trail users, including the potential for pedestrian conflicts with transit, roadways, and pedestrian security along the trails. During the conceptual design, consideration was given to all these factors to help minimize the potential for such conflicts and breeches of pedestrian security. The design provides for safe interaction of trail users with transit and roadway traffic through use of signage and visual indicators at crossings.

A performance measure was used in this FEIS/ 4(f) Technical Memorandum to evaluate the ability of the Preferred Trail Alternative to maximize the miles of exclusive trails separated from roadway traffic. This measure assesses trail user safety in terms of the extent to which the trail alignment is within its own ROW and entirely separate from roadways. The assessment considered the number of linear feet of potential exclusive ROW for the Preferred Trail Alternative based on conceptual design.

Another area for potential conflicts is at proposed planned trail access points, particularly at roadway crossings. Trail access points include transit stations, connecting trails, and street crossings. Access to trails is also possible along linear areas (e.g., Tanyard Creek Park edge). Prescribed safety designations, such as appropriate crosswalks and visual cues, will be provided to minimize risks for both trail users and vehicles. Table 3-35 highlights the number of miles of exclusive ROW versus in-street ROW, as well as the number of proposed trail access points for the Preferred Trail Alternative.

Table 3-35: Estimated Exclusive Right-of-Way and Access Points for Multi-Use Trails

Alternative	Miles within Exclusive ROW	Miles in Street	Proposed Trail Access Points
Preferred Trail Alternative	15.9	4.1	68

Source: AECOM 2011

The security of the trail users is paramount. Where the trail diverges from the transit line the trail may become more isolated. These potential areas of low visibility might create a security risk for trail users. City policing of the trails may be an option to provide increased security to trail users.

Stations

Safety and security of stations will be an important consideration during Tier 2 analysis and design. Station design will conform to MARTA safety and design criteria as well as American's with Disabilities Act standards, National Fire Protection Association (NFPA), and Building Officials and Code Administrators International, Inc. (BOCA) standards. The design of lighting will promote safety and security and conform to IESNA guidelines. In addition, there will be a provision for appropriate access for emergency response by police, fire department, and paramedic equipment and personnel. Where stations are not within street ROW, access will be from adjacent streets. Construction materials for the stations will meet code requirements from BOCA and the NFPA. Outside of stations, safe management of pedestrian interactions with transit vehicles will minimize conflicts between pedestrians and vehicular traffic.

Roadway – Track Interactions

A major issue with transit systems is the interaction between transit and roadway vehicles. Efforts will be made to protect both transit users and drivers of roadway vehicles that interact with transit. Landscaping can act as a buffer between vehicular and transit traffic, but, when used, vehicular and pedestrian crossings will provide clear views

in all directions. Traffic signals will be installed at intersections where the trail crosses a high-traffic vehicular road at grade. Railroad warning devices for highway grade crossings will be used where appropriate. The design of the crossing circuitry will avoid unnecessary delays to motorists. Where needed, the grade crossing warning system will preempt adjacent traffic lights to avoid automobiles forming a queue across the tracks.

Mainline grade crossings will consist of durable, long lasting materials. Construction of grade crossings will occur with due consideration to access for track maintenance, electrical isolation, non-interference with electrical track circuits or rail fastenings, tire adhesion, and slip resistance for pedestrians. Grade crossings will be on tangent track and away from special trackwork areas, unless otherwise approved by MARTA. Rail joints will not exist in grade crossings.

As the design advances, there will be an evaluation of the warrant for modifications to existing roadways. Plans to permanently alter existing roadways will take place in coordination with GDOT and/or the City to assure safety of all modes of travel.

Freight Rail – Track Interactions

The Preferred Alternatives will avoid sharing active freight rail ROW for the majority of the length of the corridor. A shared ROW will require additional coordination between MARTA, in partnership with ABI, and freight rail companies. Such coordination will determine design and operating conditions for a shared ROW situation. As described in Section 3.2.5.2, for example, CSX and MARTA have clearance requirements that will have to be accommodated in shared use or parallel ROW.

3.9.4 Potential Avoidance, Minimization, and Mitigation Measures

The design of safety and security strategies will focus on addressing the conditions developed as part of the Preferred Alternatives. The selection and application of those strategies will strive to avoid adverse impacts on adjacent properties and land uses. Where impacts are unavoidable, means to minimize those impacts will occur. Typical considerations could include, but will not be limited to design modification or selection of alternate strategies. In all cases, the project sponsors will coordinate with the affected property owner to identify and design appropriate solutions or mitigation strategies. The project sponsors will coordinate with police, fire, and other safety agencies through the development of the project.

3.9.5 Subsequent Analysis

A Tier 2 analysis will identify the specific safety and security needs and strategies for the Preferred Alternatives regarding trails, stations, roadway-track interactions, and freight rail-track interactions. Potential for impacts to traffic and safety response times will also be evaluated for all emergency services.

3.10 Contaminated and Hazardous Materials

This section describes the known contaminated and hazardous materials located in the study area of the Preferred Alternatives, possible strategies to minimize exposure during project construction and operation, and subsequent analysis regarding project handling requirements.

3.10.1 Methodology

An investigation for known or suspected contaminated and hazardous material sites occurred within both the ¼-mile study area and the 300-foot buffer area (defined as 150 feet on either side of the proposed alignments). The larger ¼-mile study area allows a broader view of potential effects within the overall Atlanta BeltLine study area, while the 300-foot buffer area focuses on direct physical impacts with a width that conservatively allows for all anticipated alternative impacts. In compliance with United States Environmental Protection Agency (USEPA) and American Society for Testing and Material (ASTM) requirements, federal and state environmental regulatory database reports, including current and historic status reports, were reviewed to determine the number of hazardous materials sites and Recognized Environmental Conditions (REC) sites located within the 300-foot study area.

A field survey of potential REC sites was completed all zones and included a visual review of the sites to observe signs of spills, stressed vegetation, evidence of the presence of buried tanks or buried waste, subsidence, unusual soil discolorations, or any other unnatural items that may indicate the possible presence of environmental conditions. The findings of the site reconnaissance were limited to the readily observable conditions within the 300-foot buffer area.

The regulations of the USEPA and the GEPD govern the activities that are associated with the identification, investigation, and remediation of contaminated sites. The USEPA and GEPD also regulate the generation, handling, and disposal of solid and hazardous materials and wastes.

The identification of potential contaminated sites or “due diligence” requirements are included in the USEPA’s All Appropriate Inquiries (AAI) codified as 40 CFR Part 312, and by the American Society for Testing and Materials (ASTM) E1527-05 *Standard Practice for Environmental Site Assessments*.

The governing regulations on managing, investigating and handling hazardous materials include: the Resource Conservation and Recovery Act and CERCLA including the Superfund Amendments and Reauthorization Act; the Toxic Substances Control Act; and the Hazardous and Solid Waste Amendments of 1984, as codified in 40 CFR et al. Georgia’s environmental rules are codified as 391, et al. The primary environmental rules dealing with hazardous or contaminated sites are the Hazardous Site Response, incorporated in 391-3-19. The remaining environmental rules contained in 391 help support Georgia’s Hazardous Site Response Program.

This review of contaminated and hazardous material sites provides the necessary information for the Atlanta BeltLine Corridor project to fulfill the regulations set forth by NEPA.

Federal regulations dealing with asbestos containing building materials (ACM) are in part contained in 40 CFR, Part 763. The USEPA enforces the *Asbestos Hazard Emergency Response Act* (AHERA) and the *National Emission Standards for Hazardous Air Pollutants* (NESHAPS) and regulates ACM abatements in residences of more than four units, commercial buildings, and federal facilities and projects. ACM within the State of Georgia is governed by Environmental Rule 391-3-14 and the *Georgia Asbestos Safety Act*, which oversees the handling, management, transportation, and disposal of ACM.

Federal regulations that govern lead-based paint (LBP) are included in 40 CFR, Part 745 through enforcement by the USEPA. LBP within the State of Georgia is governed by

Environmental Rule 391-3-24 and the *Georgia Lead Poisoning Prevention Act of 1994*. The environmental rule contains the procedures, requirements, and standards for performing LBP abatement activities.

3.10.2 Affected Environment

3.10.2.1 Regulatory Database Reports

The regulatory database searches indicated an estimated total of 2,226 reports of potential hazardous sites were within the ¼-mile study area. Of this total, 1,102, or 49.5 percent, are in the northwest zone. The largest percentage of industrial and non-residential properties also occurs within the northwest zone. In general, areas that contain higher percentages of industrial or non-residential properties contain higher numbers of reports and potentially higher amounts of contaminated or hazardous material sites. Areas containing a greater percentage of residential properties, such as in the southwest zone, typically contain fewer database reports within the ¼-mile study area. In this case, the southwest zone contains 6.8 percent of the total, and potentially lesser numbers of contaminated or hazardous material sites.

A summary of the regulatory database reports for the study areas is included in Table 3-36. Note that individual sites can appear on multiple databases. For example, a site listed on the Underground Storage Tank (UST) database could also be listed on the Leaking Underground Storage Tank (LUST) database. Also of note is that Facility Index System / Facility Registry System (FINDS) reports are often redundant to selected federal or state databases in content and listing.

3.10.2.2 Recognized Environmental Conditions (REC) Sites

The database reports were also reviewed to determine the number of REC sites located within the 300-foot buffer area; preliminary findings identify approximately 828 REC sites. Table 3-37 details the estimated number by zone of REC sites within the 300-foot buffer area. A preliminary list of the REC and Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) (i.e., Superfund) sites located within or adjacent to each zone is included in Appendix D and shown on Figure 3-26. For the purposes of this FEIS/ 4(f) Technical Memorandum , the sites and their locations are approximate.

Table 3-36: Preliminary Federal and State Reports and Database Reports

Regulatory Database	Number of Sites Within the ¼-Mile Study Area	Number of Sites Within 300 Foot Buffer Area[1]
Federal Records		
Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS)	12	4
CERCLIS No Further Remedial Action Planned (CERCLIS-NFRAP)	20	11
Corrective Action Report (CORRACTS)	4	2
Emergency Response Notification System (ERNS)	52	13
Facility Index System/Facility Registry System (FINDS)[2]	552	208
FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA Tracking System (FTTS)	15	5
FIFRA/TSCA Tracking System Administrative Case Listing (HIST FTTS)	16	6
Hazardous Materials Information Reporting System (HMIRS)	21	8
Integrated Compliance Information System (ICIS)	10	6
CERCLA Lien Information (LIENS)	1	1
PCB Activity Database System (PADS)	2	0
Conditionally Exempt Small Quantity Generators (RCRA-CESQG)	42	17
Non Generators (RCRA-NonGen)	209	84
Large Quantity Generators (RCRA-LQG)	4	1
Small Quantity Generators (RCRA-SQG)	29	14
Resource Conservation Recovery Act - Transporters, Storage and Disposal (RCRA-TSDF)	3	1
Section 7 Tracking Systems (SSTS)	5	0
Toxic Chemical Release Inventory System (TRIS)	4	1
Toxic Substances Control Act (TSCA)	6	4
US BROWNFIELDS	1	1
Engineering Controls Sites List (US ENG CONTROLS)	1	0
Sites with Institutional Controls (US INST CONTROL)	1	0
State Records		
Permitted Facility & Emissions Listing (AIRS)	67	33
Above Ground Storage Tanks (AST)	5	1
Drycleaner Database A listing of drycleaners in Georgia (DRYCLEANERS)	27	6
GA BROWNFIELDS	35	14
Non-Hazardous Site Inventory (GA NON HIS)	140	56
List of Leaking Underground Storage Tanks (LUST)	206	80
Hazardous Site Inventory (SHWS)	10	5
Delisted Hazardous Site Inventory Listing (DEL SHWS)	1	1
Spills Information Oil or Hazardous Material Spills or Releases (SPILLS)	343	93
Solid Waste Disposal Facilities (SWF/LF)	1	1
A listing of facilities which store or manufacture hazardous materials and submit a chemical inventory report (TIER 2)	55	30
Underground Storage Tank Database (UST)	326	121

Source: Environmental Data Resources, Inc. (EDR) DataMap™ Corridor Study, Inquiry Numbers: 02244958.3r, dated June 17, 2008, 02517938.1r, dated June 15, 2009, 02517938.2r, dated June 16, 2009, and 02558078.1r dated August 10, 2009. Sites and properties may be listed in more than one database reports.

[1] Information is preliminary and locations should be considered approximate. Addresses of the sites were reviewed and verified using a geo-referencing program. However, field verification, except where noted, of all sites is required for a more accurate location.

[2] FINDS reports are often redundant in content and listing to the other reports provided.

Table 3-37: Preliminary Recognized Environmental Condition (REC) Sites

Zone	REC Sites within the 300-foot Buffer Area
Northeast Zone	73
Southeast Zone	112
Southwest Zone	20
Northwest Zone	107
Total RECs within 300-foot APE	312

Source: EDR DataMap™ Corridor Study, Inquiry Numbers: 02244958.3r, dated June 17, 2008, 02517938.1r, dated June 15, 2009, 02517938.2r, dated June 16, 2009, and 02558078.1r dated August 10, 2009.
Note: Information is preliminary and locations should be considered approximate. All sites were reviewed and verified using Google Earth® or similar geo-referencing program. However, field verification, except where noted, of all sites should be completed for the Tier 2 analysis or subsequent investigations.

In the northeast zone, a cluster of industrial/non-commercial use properties are present in and around the Armour Drive/Ottley Drive area. These sites have had reported spills and USTs and were reported to generate hazardous waste. In addition, one former CERCLA site is present in this industrial park. Hulsey Yard is also considered an REC given ongoing railroad-related operations.

In the southeast zone, the areas along Memorial Drive and near the Inman Park/Reynoldstown MARTA rail station contain numerous sites that have had reported spills, USTs, and had generated hazardous waste including one CERCLA-related site. REC sites are also prevalent at the areas of Milton Avenue and Hank Aaron Drive, including one former CERCLA site. Two former CERCLA sites are present immediately east of the West End area.

In the southwest zone, the industrial and non-residential areas near the West End MARTA rail station have a high occurrence of reported spills, USTs, and sites that have generated hazardous waste.

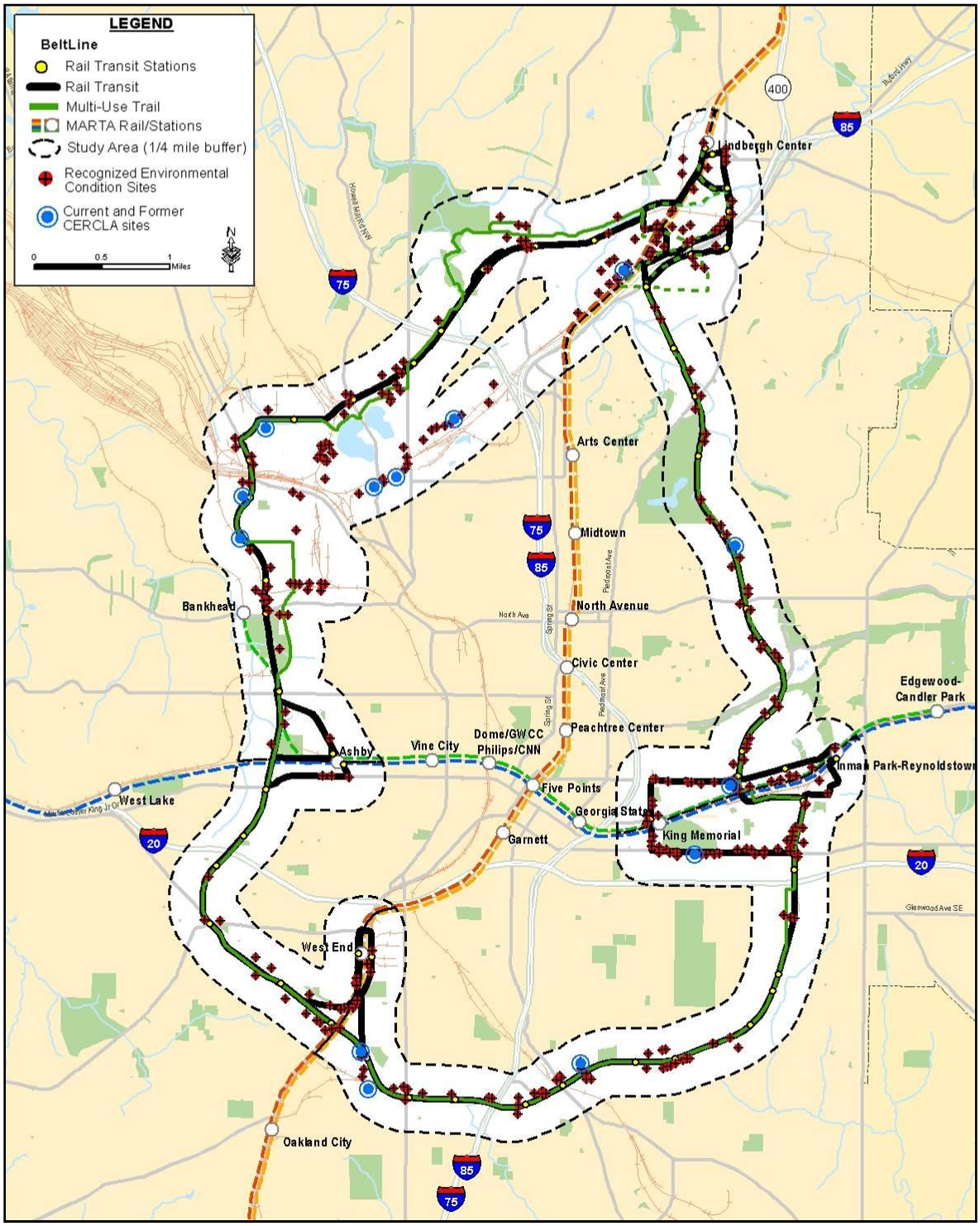
In the northwest zone, many of the REC sites in the northwest zone contain USTs, leaking USTs, spills, or handle/generate hazardous waste, and are current and/or former CERCLA-related sites.

3.10.3 Preliminary Environmental Consequences

3.10.3.1 No-Build Alternative

Proposed projects included in the No-Build Alternative (e.g., BRT and Atlanta Streetcar) that may overlap or intersect the Atlanta BeltLine Corridor have the potential to encounter identified REC sites within their respective study areas. The No-Build projects are subject to the requirements as the Atlanta BeltLine Corridor Preferred Alternatives for identifying and managing any contaminated or hazardous material sites.

Figure 3-26: Preliminary REC and Current and Former CERCLA Sites within the 300-Foot Buffer Area



Source: EDR DataMap™ Corridor Study, Inquiry Numbers: 02244958.3r, dated June 17, 2008, 02517938.1r, dated June 15, 2009, 02517938.2r, dated June 16, 2009, and *02558078.1r* dated August 10, 2009.
Note: Information is preliminary and locations should be considered approximate. All sites were reviewed and verified using Google Earth® or similar geo-referencing program. However, field verification, except where noted, of all sites should be completed for the Tier 2 analysis or subsequent investigations.

3.10.3.2 Preferred Alternatives

The Preferred Alternatives have the potential to encounter RECs within the 300-foot buffer area. Table 3-38 summarizes the numbers of REC sites located within the 300-foot buffer area of each study area zone.

Table 3-38: Preliminary Number of REC and CERCLA-Related Sites

Zone	Alternative	Number of REC Sites within the 300-Foot Buffer Area*	Number of Former/Current CERCLA-Related Sites within the 300-Foot Buffer Area*
Northeast	Preferred Alternatives	43	3
Southeast	Preferred Alternatives	80	4
Southwest	Preferred Alternatives	14	0
Northwest	Preferred Transit Alternative	50	3
	Preferred Trail Alternative	29	3

Source: EDR DataMap™ Corridor Study, Inquiry Numbers: 02244958.3r, dated June 17, 2008, 02517938.1r, dated June 15, 2009, 02517938.2r, dated June 16, 2009, and 02558078.1r dated August 10, 2009.
Note: Information is preliminary and locations should be considered approximate. All sites were reviewed and verified using Google Earth® or similar geo-referencing program. However, field verification, except where noted, of all sites should be completed for the Tier 2 analysis or subsequent investigations.
* Includes the maximum number of REC sites present along a given MARTA Station Connectivity and Infill Station Alternatives.

The Preferred Transit Alternative has the potential to encounter 187 RECs and 10 CERCLA-related sites within the 300-foot buffer area, while the Preferred Trail Alternative has the potential to encounter 166 RECs and 10 CERCLA-related sites.

Potential direct impacts to properties of concern were evaluated for the Preferred Alternatives located in the northwest zone where the alignments differ. As shown by Table 3-39, the Preferred Transit Alternative has the potential to affect up to 13 REC sites, 2 former or current CERCLA-related sites, and possibly affect 22 buildings. The Preferred Trail Alternative has the potential to affect the same number of REC and CERCLA-related sites, and possibly affect three buildings.

Table 3-39: Preliminary Number of Potential Direct Impacts to REC Sites, CERCLA-Related Sites and Buildings

Zone	Alternative	Number of Potential Direct Impacts		
		REC Sites	Former/Current CERCLA-Related Sites	Building Impacts
Northwest	Preferred Transit Alternative	13	2	22
	Preferred Trail Alternative	13	2	3

Source: EDR DataMap™ Corridor Study, Inquiry Numbers: 02244958.3r, dated June 17, 2008, 02517938.1r, dated June 15, 2009, 02517938.2r, dated June 16, 2009, and 02558078.1r dated August 10, 2009.
Note: Information is preliminary and locations should be considered approximate. All sites were reviewed and verified using Google Earth® or similar geo-referencing program. However, field verification, except where noted, of all sites should be completed for the Tier 2 analysis or subsequent investigations.

Affecting a known REC site or previously unidentified contaminated site will require coordination with the respective property owner and regulators, and potentially require

soil and groundwater sampling investigations, as well as the possible remediation of contaminated or hazardous materials within the ROW. Additionally, impacts to buildings will require the identification and/or abatement of ACM and LBP prior to the full or partial demolition of the structures. Wherever possible, impacts to REC sites, CERCLA-related sites, and buildings should be avoided or minimized to limit impacts to hazardous and contaminated materials.

3.10.4 Potential Avoidance, Minimization, and Mitigation Measures

The Preferred Alternatives have the potential to encounter contaminated or hazardous materials. As project design advances, the project sponsors will strive to avoid impacts to and from contaminated sites and hazardous materials. Where impacts are unavoidable, minimization of the impacts will occur. Minimization strategies could include designing project components at- or near-grade, or elevating the system using fill material or structure. These strategies can greatly avoid or reduce the impacts to and from contaminated materials.

Properties acquired for the development of the Preferred Alternatives could include buildings, facilities, or structures that require demolition. ACM and/or LBP could be present in these buildings. In addition, ACM and/or LBP may be present in both older and active facilities and equipment still present on the railroad and roadway ROW to be used by the Preferred Alternatives. In accord with federal, state, and local requirements, a survey would be conducted for ACM and LBP and assured completion of abatement prior to the demolition or renovation of a building or structure.

During operations and maintenance, the project sponsors will be subject to compliance with applicable federal, state, and local regulations governing the storage, handling, and disposal of hazardous and contaminated materials.

3.10.5 Subsequent Analysis

Subsequent analysis for contaminated and hazardous materials sites will include additional investigations along the ROW of the Preferred Alternatives, at a potential area of concern, or for properties considered for acquisition during the development of the project. Additional investigations could include the following:

- Phase I Environmental Site Assessments for properties considered for acquisition, inclusive of reviews of the historical land use and Freedom of Information Act (FOIA) file searches;
- Phase II Environmental Site Assessments of the proposed ROW, specific areas of concern, or for properties considered for acquisition;
- ACM and/or LBP investigations of facilities, structures, and/or equipment present along the proposed alignment; or at properties considered for acquisition;
- Identification of likely removals of relic and/or active underground storage tanks;
- If applicable, development of remedial strategies, for the proposed alignment, area of concern, or properties considered for acquisition; and
- Coordination and prioritization of all investigations and remediation activities with property owners, the EPA, and GEPD.

3.11 Utilities

This section presents a description of the utility resources within the Atlanta BeltLine study area, as well as the potential effects of the project on these resources.

3.11.1 Methodology

The presence of common utility types, described in Section 3.11.2, was identified through a review of aerial photographs, mapping available from utility companies and contractors, and visual inspections. Contact was made with each utility company and contractor through the Utility Protection Center of Georgia.

For the purpose of this FEIS/ 4(f) Technical Memorandum , the definition of a potential utility conflict is the location of any utility within 200 feet of the centerline of a No-Build or Preferred Alternative alignment. Typically, construction of transit requires a large amount of land disturbance within the transit ROW. In this case, the potential for encountering utilities is high. In contrast, trail construction typically requires a small area of land disturbance and is considerably less likely to encounter utilities.

NEPA requires that all major federal actions assess potential impacts to the built and natural environment. Utilities are a commodity or service for public use and, therefore, require consideration in the environmental process.

3.11.2 Affected Environment

The Atlanta BeltLine study area contains infrastructure for potable water treatment and supply, sanitary sewer collection and treatment, stormwater collection and discharge, electric distribution, communication facilities and cabling, and natural gas storage and distribution. Many utilities run adjacent to roadway and railroad ROWs. A description of each type of utility infrastructure is provided below.

3.11.2.1 Water and Sewer

Potable water, sanitary sewer, and stormwater collection systems are found throughout the study area. With the exception of treatment plants and certain types of pump stations, most sanitary sewer infrastructure is subsurface. Manholes for system access or air-release provide surface evidence of the sanitary sewer system.

Stormwater collection and discharge systems also occur throughout the study area. These underground systems may be as simple as a single pipe carrying drainage underneath the roadbed or as complicated as a network of pipes and inlets designed to collect and detain drainage from heavily developed areas. An example is the stormwater treatment facility near Piedmont Park and Amsterdam Avenue.

3.11.2.2 Electric

Georgia Power provides and maintains the majority, if not all, of the electric distribution systems within the study area. Power plants serving the study area, but not located in the study area, are generally coal-fired or nuclear. The distribution systems include high voltage lines on towers, substations, transmission lines both above and below ground, ground and pole-mounted transformers, and service lines.

3.11.2.3 Communication Facilities

Communication facilities throughout the study area consist predominantly of fiber optics for local and national telecommunications. AT&T, Verizon, and a number of other companies maintain fiber optic lines in the study area. The communication infrastructure is both aerial and underground cabling.

3.11.2.4 Natural Gas

Residences and businesses throughout Atlanta use natural gas for cooking, space heating, water heating, and industrial processes. The pressurized infrastructure that supplies natural gas consists of underground distribution pipes and compressor stations. The Atlanta Gas Light Company is the dominant supplier of gas in the study area.

3.11.3 Preliminary Environmental Consequences

3.11.3.1 No-Build Alternative

The No-Build Alternative could result in potential impacts on utilities to implement the projects. The sponsors of those projects will be responsible for identifying utilities and addressing potential conflicts.

3.11.3.2 Preferred Alternatives

Based on the Tier 1 assessment, many utilities run adjacent to or within roadway and rail ROW that are part of the Preferred Alternatives. The potential for utility impacts and relocations is dependent on the exact location of utilities in relation to Atlanta BeltLine construction and operation activities.

In general, the Preferred Alternatives should encounter few potential utility locations within existing rail ROWs. In contrast, in-street alignments could encounter a high concentration of utilities, such as gas, water, and stormwater lines, and, therefore, a high number of potential utility relocations. The following situations may occur during implementation of the Preferred Alternatives:

- Major electrical lines such as overhead primary, underground primary, and underground network form a dense network in the Atlanta BeltLine study area. In the case of electric utilities, overhead primary lines run along most of the streets considered for in-street alignments of the transit and trails system. Although these primary lines cross over the streets at numerous locations, the potential for relocation of poles and wires will be minimal. The potential for utility relocations, however, may occur with underground primary and network lines.
- Underground fiber optic conduits potentially pose conflicts with the Preferred Alternatives. However, due to a typical conduit depth of eight feet or greater, it is possible that fiber optic lines will experience minimal to no project-related impacts.
- Two six-inch gas lines are generally located under many of the streets considered for the Preferred Alternatives. Typically, gas lines do not occur along active and abandoned railroad ROW, but cross the ROW at particular locations. Gas lines are typically located three feet underground although depths can vary greatly. The project sponsors will strive to avoid gas lines.

- Stormwater drainage and communication utilities installed by the railroads may occur along existing and former railroad ROW. The project sponsors will strive to avoid stormwater and communication utilities installed by the railroads.

Table 3-40 summarizes the potential utility issues associated with the Preferred Transit Alternative only, as the Preferred Trail Alternative will have minimal potential effect.

Table 3-40: Potential Utility Effects of the Preferred Transit Alternative

Zone	Potential Utility Effects
Northeast Southeast Southwest	Low concentration of potential utility relocations along rail ROW High concentration of potential utility relocations along in-street segments
Northwest	Moderate concentration of potential utility relocations south of CSX rail ROW High concentration of potential utility relocations along the west of Peachtree St.

The following subsections describe specific utility configurations by zone. As the Atlanta BeltLine project design advances, examination of potential utility conflicts will occur and the means to avoid impacts will be sought. Where a utility cannot be avoided during construction or where access to a utility generates interference during operation, relocation of the utility will be considered. Current utility easements in and across the ROW may need to be consolidated to facilitate potential relocations and implementation of improvements. Utility relocations may be needed so that maintenance of the utility will not interfere with transit operation or vice versa.

Water and Sewer

Throughout the study area, underground water and sewer lines cross or run parallel to roadways and railroad ROWs. The project sponsors would strive to avoid water and sewer utilities. In the northeast zone, adjacent to the Atlanta Botanical Gardens and Clear Creek, a large underground combined sewer overflow facility exists close to the Preferred Alternatives. Atlanta BeltLine improvements intend not to interfere with operations or maintenance of the facility.

In the northwest zone, the Atlanta City Water Works Reservoirs One and Two and the associated treatment plant are located just south of the Preferred Alternatives in the vicinity of Howell Mill Road. Piping connecting to these facilities may cross under the CSX ROW. Engineering design of the Preferred Alternatives would consider the presence of these reservoirs and strive to avoid or minimize impacts on them.

Electric

Throughout the study area, underground primary and network electrical lines cross or run parallel to the railroad ROW and in-street segments in numerous locations. These potential areas of effect are often near the intersection of the Preferred Alternatives with a major roadway or MARTA rail line. Appendix D contains a list of the electrical lines that lie within or near the study area. The project sponsors would strive to avoid electric utilities.

Communication Facilities

Throughout the study area, communication lines cross or run parallel to or within the railroad ROW and in-street segments in numerous locations. Appendix D contains a list

of the communication lines that lie within or near the study area. The project sponsors would strive to avoid communication lines.

Natural Gas

Throughout the study area, gas lines cross or run along most of the streets proposed for in-street running by the Preferred Alternatives. Appendix D contains a list of the natural gas lines that lie within or near the study area. The project sponsors would strive to avoid natural gas lines.

3.11.4 Potential Avoidance, Minimization, and Mitigation Measures

Design efforts will strive to avoid or minimize conflicts with existing utilities. Where impacts are unavoidable, coordination with utility representatives will proceed regarding relocation or other appropriate mitigating actions. Current utility easements in and across the ROW may need to be consolidated to facilitate potential relocations and implementation of Atlanta BeltLine improvements. Further evaluation considering utility size, lateral, and vertical location is needed, as these are primary indicators to the extent of impact and not necessarily quantity alone. Any necessary utility relocation decisions will include consideration of sensitivity to surrounding built and natural environments.

Specific mitigation measures are not available at this time since specific impacts are unidentified. It will be possible to minimize most impacts through utility operator/owner involvement during preliminary design of the Preferred Alternatives. If utility relocations are unavoidable, coordination with the City of Atlanta and utility owners will be conducted to develop relocation and construction phasing plans around peak usage hours to minimize utility disruptions.

3.11.5 Subsequent Analysis

Subsequent analyses will focus on project-specific impacts identified during design when more precise definitions of the utility size and location, ROW, transit and trail alignments, proposed station locations, and operations are developed.

3.12 Air Quality

This section describes the air quality of the region surrounding the Preferred Alternatives' study area, possible strategies to minimize air quality impacts during project construction and operation, and possible subsequent analysis regarding air quality.

3.12.1 Methodology

Existing air quality characteristics were determined by reviewing available air quality data from GEPD-managed monitoring sites and comparing that data to federal and state National Ambient Air Quality Standards (NAAQS).

Any project constructed in the State of Georgia has to achieve compliance with the NAAQS and the *Georgia Ambient Air Standards*. The USEPA delegates authority to the Air Protection branch of GEPD to monitor and enforce air quality regulations in the State. The *Georgia State Implementation Plan* (SIP), developed in accordance with the CAA, contains the major requirements with respect to transportation in general.

3.12.1.1 Relevant Pollutants

"Air Pollution" is a general term that refers to one or more chemical substances that degrade the quality of the atmosphere. Individual air pollutants degrade the atmosphere by reducing visibility, damaging property, reducing the productivity or vigor of crops or natural vegetation, or reducing human or animal health. Regulations for air pollutant emissions exist to protect human health and welfare, and the environment.

The 1970 Federal *Clean Air Act* was established by NAAQS to protect the public health. The USEPA identifies eight air pollutants of nationwide concern: carbon monoxide (CO), sulfur oxides (SO_x), hydrocarbons (volatile organic compounds, or VOCs), nitrogen oxides (NO_x), ozone (O_3), particulate matter sized 10 micrometers or less (PM_{10}), particulate matter with a size of 2.5 micrometers or less ($PM_{2.5}$), and lead (Pb). The sources of these pollutants, their effects on human health, and their concentrations in the atmosphere vary considerably.

3.12.1.2 Pollutants of Concern

The pollutants that are most important for this air quality assessment are those that are traceable principally to motor vehicle engines and electrical power plants. In the study area, ambient concentrations of CO and O_3 are predominantly influenced by roadway motor vehicle activity. Emissions of VOCs, NO_x, PM_{10}, and $PM_{2.5}$ come from both mobile and stationary sources, while emissions of Pb are associated mainly with various stationary sources.

CO is the primary pollutant used to indicate the potential for adverse air quality impacts from motor vehicles in general, and at roadway intersections in particular. This is because roadway motor vehicles produce most of the ambient CO, and emission rates of CO from vehicles are relatively high in comparison to emissions of other pollutants. The CO standard would most likely be exceeded first under federal and state ambient air quality standards. Accordingly, CO is the main pollutant of concern for air quality analysis.

Similarly, because the formation of O_3 a regional pollutant, occurs in the presence of VOC and NO_X, indirect evaluation of O_3 takes place through its precursors. However, because the CO standard would be exceeded first before either NO_2 or VOCs, only CO is included in the modeling analysis. As a result, measurements of O_3 concentrations typically occur directly in the atmosphere rather than through modeling predictions.

Appendix D lists the NAAQS and the *Georgia Ambient Air Standards*, which are almost identical. Presently, there are NAAQS for seven criteria pollutants: O_3, CO, NO_2, sulfur dioxide (SO_2), PM_{10}, $PM_{2.5}$, and Pb.

3.12.1.3 Climate Change and Greenhouse Gas Emissions

In addition to criteria pollutants, greenhouse gases (GHGs) emissions were also considered in this report for NEPA disclosure purposes by following the *Draft NEPA Guidance on Consideration of the Effects of Climate Change and Greenhouse Gas Emissions* issued by the Council of Environmental Quality (CEQ) in February 2010. As the proposed action is anticipated to release GHGs to the atmosphere, these emissions are quantified and disclosed for each activity of the proposed action.

GHGs are compounds that contribute to the greenhouse effect. The greenhouse effect is a natural phenomenon where gases trap heat within the surface-troposphere (lowest

portion of the earth's atmosphere) system, causing heating (radiative forcing) at the surface of the earth. The primary long-lived GHGs directly emitted by human activities are carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF_6). These gases influence the global climate by trapping heat in the atmosphere that would otherwise escape to space. The heating effect from these gases is considered the probable cause of the global warming observed over the last 50 years. Global warming and climate change can affect many aspects of the environment. Not all effects of GHGs are related to climate, for example, elevated concentrations of CO_2 can lead to ocean acidification and stimulate terrestrial plant growth, and CH_4 emissions can contribute to O_3 levels.

The USEPA Administrator has recognized potential risks to public health or welfare and on December 7, 2009 signed an endangerment finding regarding greenhouse gases under Section 202(a) of the CAA, which finds that the current and projected concentrations of the six key well-mixed greenhouse gases in the atmosphere threaten the public health and welfare of current and future generations.

As per CEQ's *Draft NEPA Guidance on Consideration of the Effects of Climate Change and Greenhouse Gas Emissions*, an increase of 25,000 metric tons or more of GHG emissions is considered an indicator that a quantitative and qualitative assessment may be meaningful to decision makers and the public. Although the likelihood that this threshold is met will be investigated in further detail during the Tier 2 analysis phase, indirect emissions produced to power electrically-powered transit corridors is expected to be considerably less than the CEQ threshold.

To determine the potential effects on air quality, the estimated probable 2030 annual ridership was used to ascertain the extent to which each alternative would attract ridership and transfer trips from roadways to transit. The assumption is an emissions reduction would be highly correlated to ridership attraction.Affected Environment

This section summarizes measured ambient air quality data for the region, including the study area. GEPD maintains a statewide network of monitoring stations that routinely measure pollutant concentrations in the ambient air. These stations provide data to assess compliance with the NAAQS and to evaluate the effectiveness of pollution control strategies. The relevant monitored pollutants are O_3, NO_2, CO, particulates, and SO_2.

Appendix D presents the "Recently Monitored Ambient Air Quality in the Region" showing the maximum measured concentrations for these pollutants measured at representative monitoring stations nearest to the study area, as reported by the GEPD for 2005-2008.Below is a summary of those findings:

- Fulton and DeKalb Counties recorded the fourth highest concentrations of O_3 in Georgia, exceeding the NAAQS of 0.075 parts per million (ppm) in the given measured years of 2005 to 2008, which ranged from a low of 0.084 ppm in 2008 to a high of 0.098 ppm in 2007.
- The highest average concentrations of $PM_{2.5}$ (three-year mean) measured within Fulton County ranged from 15.30 µg/m^3 in 2006, to16.05 µg/m^3 in 2007, which continued to exceed the NAAQS of 15 ppm.
- There are short-term exceedances of the SO_2 standard, but none of the standards for longer time periods (including 24-hours and annual) are exceeded.
- The reported concentrations for CO, NO_2, and PM_{10} do not exceed their respective standards.

3.12.2 Preliminary Environmental Consequences

The following subsections describe the probable effects of each alternative on air quality in the context of probable ridership. A detailed air quality assessment will take place as part of the Tier 2 analysis for the Preferred Alternatives and a detailed evaluation of potential station locations.

3.12.2.1 No-Build Alternative

None of the Atlanta BeltLine project elements will occur under the No-Build Alternative. However, the other transportation improvements proposed in the *Envision6* RTP have the intent of improving local and regional air quality through strategic improvements to the existing bus, rail, and roadway networks.

3.12.2.2 Preferred Alternatives

As part of the *Inner Core BeltLine Alternatives Analysis Detailed Screening Results* (MARTA 2007) phase of the Atlanta BeltLine project, the annual total ridership of 26.4 million was estimated for the preferred B3 Alternative, the predecessor of the Preferred Transit Alternative. This ridership rate represents an 80 percent increase over the 14.5 million predicted under the No-Build Alternative[17].

As shown in Table 3-41, new ridership attributed directly to the system-wide enhancements proposed as part of the Atlanta BeltLine Corridor, has an expected increase of 44 percent. These data show a substantial increase in ridership between the No-Build and the Preferred Transit Alternative. In terms of air quality, the ridership numbers for the Preferred Transit Alternative equates to eliminating a number of vehicles from roadways in the region and their corresponding vehicular emissions.

Table 3-41: Ridership Estimates - 2030

Performance Measure	No-Build Alternative	Preferred Alternative (B3)	
		Ridership	Percent Change
Total Ridership (annualized in millions)	14.5	26.4	+82%
New Riders (annualized in millions)	-	6.4	+44%

Source: MARTA. 2007. *Inner Core BeltLine Alternatives Analysis Detailed Screening Results.* Atlanta, GA.

During this same period, projected traffic in the metropolitan Atlanta region has an expectation of increasing by slightly less than one percent per year (0.77 percent) or 25.9 percent between 2000 and 2030.

As shown in Table 3-42, projections indicate vehicle hours traveled (VHT) increasing by 39.6 percent, indicating longer commute times because of increased traffic congestion. In fact, expectations are that total hours of delay (an indication of total traffic congestion) will increase almost threefold (262.9 percent) from 2000 to 2030.

[17] Detailed Screening Results and Selection of Locally Preferred Alternative, Inner Core BeltLine Alternatives Analysis, MARTA, Atlanta, GA, January 2007.

Table 3-42: Existing and Projected Traffic Growth and Roadway Congestion - 2000 and 2030

Roadway Performance Measures	2000	2030	Percent Change
Vehicle Miles Traveled (VMT)	9,591,054	12,077,922	25.9%
Vehicle Hours Traveled (VHT)	27,178	37,936	39.6%
Hours of Delay	99,002	359,319	262.9%

Source: MARTA. 2005. *Feasibility Wrap-Up Report, Inner Core BeltLine/C-Loop Transit Feasibility Study.* Atlanta, GA.

The traffic congestion and delay summarized in Table 3-42 clearly indicates not only the need for transit in the region, but also the likelihood for use of that transit service. As a result, the air quality benefits associated with the Preferred Transit Alternative include a reduction in vehicular emissions as automobile drivers switch to transit. This emissions reduction should meet with an insignificant emissions increase from off-site electricity generation required to power the SC vehicles via overhead catenaries.

The Preferred Trail Alternative provides a non-motorized transportation option that will contribute no new emissions. To the extent the Preferred Alternatives would reduce the number of automobiles on the road, there is an expectation of a reduction in regional emissions and concentrations of CO, volatile organic compounds, nitrogen oxides, and particulate matter. This reduction in regional emissions would also apply to greenhouse gases (such as water vapor, carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), and fluorinated gases). Any reductions in man-made emissions would contribute to an overall reduction in both greenhouse gases and the criteria pollutants as automobile drivers switch to transit. To the extent that travelers opt to use the trails as an alternative to motorized travel, air quality will benefit.

3.12.3 Transportation Conformity Determination

Based on the project's inclusion in the *Envision6* RTP, the proposed action will not require a formal conformity determination on a regional level and, therefore, will not have significant air quality impacts for the nonattainment pollutants.

3.12.4 Potential Avoidance, Minimization, and Mitigation Measures

With respect to regional emissions and conformity, the *Envision6* RTP includes the Atlanta BeltLine project. Estimated ridership for the Preferred Transit Alternative will have a beneficial effect on air quality by reducing automobile emissions. Therefore, compliance with the transportation conformity requirements and regional air quality do not warrant mitigation measures at this time. A detailed assessment of the potential impacts from the project (such as intersection hot spot analysis) is proposed as part of the Tier 2 analysis phase.

3.12.5 Subsequent Analysis

Subsequent analysis will include a detailed air quality assessment of the Preferred Transit Alternative including station locations. This detailed hot spot analysis is proposed as part of the Tier 2 analysis phase to demonstrate project-level conformity with the NAAQS. This will include assessments of the potential effect of project-related motor vehicle emissions on local roadways near stations and congested intersections. An evaluation will also occur on the role of indirect emissions used to power the Atlanta BeltLine vehicles and other potential associated emission sources, such as freight rail locomotive emissions from modified freight operations in terms of regional air quality.

3.13 Noise and Vibration

This section describes the potential noise and vibration impacts of the Preferred Alternatives, possible strategies to minimize these impacts during project construction and operation, and possible subsequent analysis.

3.13.1 Methodology

The noise and vibration assessment took place in accordance with FTA's *Transit Noise and Vibration Impact Assessment* guidelines[18], which specify the type of analysis appropriate for a Tier 1 EIS. The FTA guidelines assess noise and vibration impacts from transit vehicles and facilities (such as buses, trains, and stationary sources such as grade crossings bells and maintenance facilities). FTA assesses impacts at sensitive receivers such as residences, schools, hospitals, museums, and libraries. Typically not under consideration are commercial and industrial properties sensitive to transit noise and vibration, except perhaps, laboratories and other facilities that utilize sensitive photographic or imaging equipment.

3.13.1.1 Noise

The use of various sound levels exists to quantify noise from transit sources, including a sound's loudness, duration, and tonal character. The A-weighted decibel (dBA) is commonly used to describe the overall noise level because it more closely matches the human ear's response to audible frequencies. Because the A-weighted decibel scale is logarithmic, a 10 dBA increase in a noise level is generally perceived as a doubling of loudness, while a 3 dBA increase in a noise level is just barely perceptible to the human ear. Figure 3-27 shows typical A-weighted sound levels from transit and other common sources.

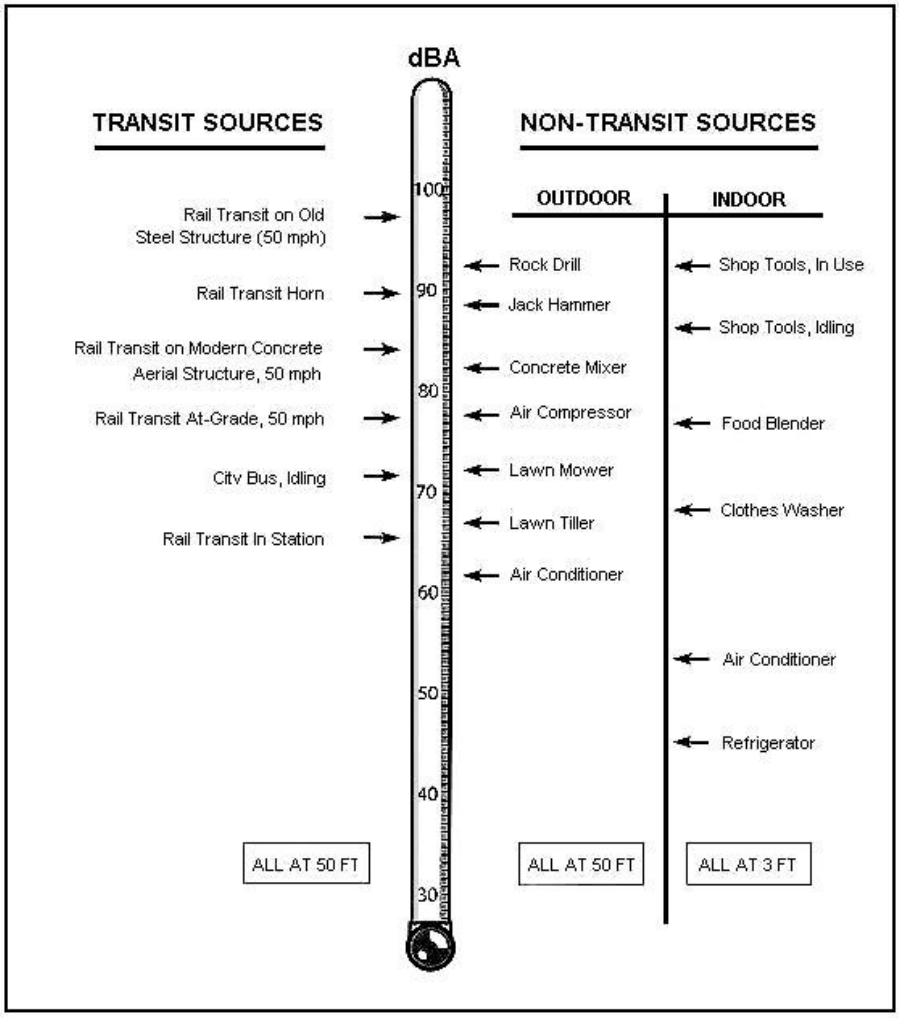
The FTA guidelines prescribe a screening distance of 125 feet for low- and intermediate-capacity vehicles, such as SC vehicles. The screening distances are measured from the centerline of the rail route within which an impact may occur from passenger rail noise sources. This screening distance applies to FTA Category 2 land uses, which includes residences and buildings where people normally sleep such as hospitals and hotels. For the initial screening assessment, the FTA recommends only evaluating potential impacts at residences as a surrogate for other land-use categories and sensitivities such as schools, libraries, churches, and parks. Using this screening distance, a total number of potentially impacted residences within the study area was determined.

3.13.1.2 Vibration

Ground-borne vibration associated with vehicle movements is usually the result of uneven interactions between wheels and the road or rail surfaces. Examples of such interactions (and subsequent vibrations) include train wheels over a jointed rail, untrue, warped rail car wheel, a motor vehicle wheel hitting a pothole, a manhole cover, or any other uneven surface. Figure 3-28 shows typical ground-borne vibration levels from transit and other common sources.

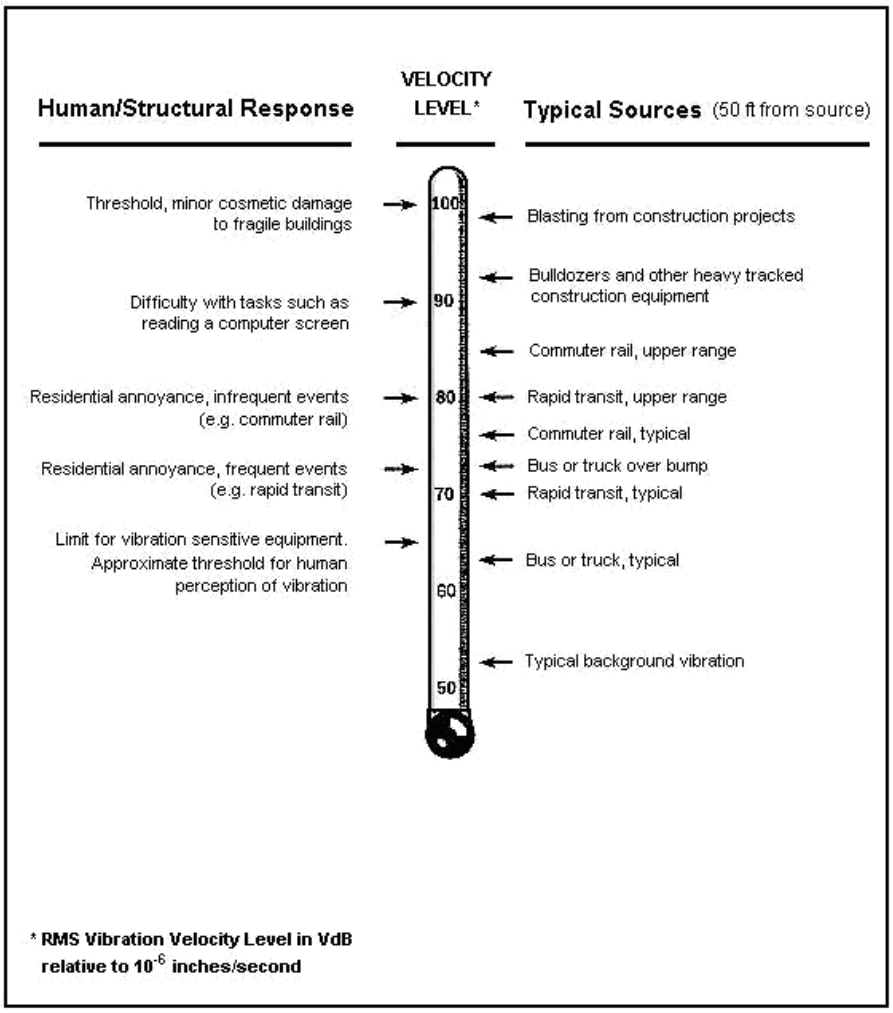
[18] USDOT, FTA, Office of Planning and Environment. 2006. *Transit Noise and Vibration Impact Assessment*, FTA-VA-90-1003-06.Washington, DC.

Figure 3-27: Typical A-Weighted Noise Levels



Source: FTA. 2006. *Transit Noise and Vibration Impact Assessment.* Washington, DC.

Figure 3-28: Typical Ground-Borne Vibration Levels



Source: FTA. 2006. *Transit Noise and Vibration Impact Assessment.* Washington, DC.

The FTA guidelines prescribe a screening distance of 100 feet for low- and intermediate-capacity vehicles, such as SC. The screening distances are used to identify areas within which an impact may occur between a passenger rail vibration source and existing residences. As with noise, only rail service factored into this assessment (i.e., other transit sources, such as wheel squeal, traction power substations, and maintenance facilities would be evaluated in further detail in the Tier 2 analysis phase). Using these screening distances, a total number of potentially impacted residences within the study area were determined.

3.13.2 Affected Environment

The existing ambient noise and vibration environment in all zones is typical of developed urban and suburban communities. Primary influences on noise conditions in the study area include traffic noise along local roadways and highways and existing freight railroad activity where applicable. Roadway traffic dominates ambient noise levels. More than in the other zones, the ambient noise levels in the northwest zone are affected by existing CSX and Norfolk Southern freight railroad activity, especially for residences near active grade crossings because of the federally mandated use of warning horns.

3.13.3 Preliminary Environmental Consequences

3.13.3.1 No-Build Alternative

Noise and vibration levels in the portions of the study area within the FTA screening distances under the No-Build Alternative will be similar to those under the existing conditions. The No-Build Alternative will result in no changes in noise or vibration without the Atlanta BeltLine and without any modifications to the existing freight rail operations.

3.13.3.2 Preferred Alternatives

The FTA screening distances for noise and vibration were utilized to identify potential impacts among the almost 18,000 receptors identified within the project study area. The screening distances were applied to the Preferred Transit Alternative. Table 3-43 identifies the estimated number of residences within the noise and vibration screening distances of SC for the Preferred Transit Alternative.

Table 3-43: Number of Residences within the FTA Noise Screening Distances

Zone	Number of Residences within FTA Noise Screening Distance for SC (125 feet)	Number of Residences within FTA Vibration Screening Distance of SC (100 feet)
Northwest	155	113

The distinguishing features of SC vehicles cannot be more precisely quantified during the initial Tier 1 FEIS when details such as SC vehicle type, headway times, consist sizes, operating speeds, and track curvature have not been defined.

3.13.4 Potential Avoidance, Minimization, and Mitigation Measures

A detailed noise and vibration analysis will take place for the Preferred Transit Alternative during the Tier 2 analysis. At that time, strategies to avoid or minimize noise and vibration impacts will be examined for feasibility and incorporated into the project design, while strategies to mitigate the unavoidable impacts will be examined further.

Most importantly, the Preferred Alternative has been conceptually designed to avoid and minimize impacts on residences and other noise and vibration sensitive land-uses such as hospitals, libraries, churches, parks, and museums. For example, several segments of alternatives have been selected within or adjacent to existing, active freight railroad corridors to minimize noise and vibration impacts due to land-takings or expanded ROW acquisitions. The types of noise and vibration control strategies that could be examined to mitigate any potential impacts include:

- Selecting and maintaining equipment, such as rail grinding and wheel truing;
- Increasing the radius of curves to minimize the onset of wheel squeal;
- Eliminating train horn noise at grade crossings in compliance with the Quiet Zone requirements in the FRA whistle ban regulation[19];
- Installing noise buffers, barriers and screening;

[19] Final Rule on the Use of Locomotive Horns at Highway-Rail Grade Crossings, August 17, 2006, 49 Code of Federal Regulations, 222 and 229.

- Selecting the least noise and vibration-producing equipment and construction techniques; and
- Utilizing operational controls such as restricting vibration-inducing activities to locations with no potentially affected receptors or restricting vibration-producing activities to less sensitive times of day.

3.13.5 Subsequent Analysis

Subsequent analysis that will take place during Tier 2 analysis to determine specific noise and vibration impacts include the following:

- Measuring existing ambient conditions;
- Analyzing future transit vehicle operations;
- Determining project impacts from transit vehicles and any modifications to the existing freight rail operations;
- Determining impact from other ancillary sources such as maintenance facilities, park and ride lots, warning horns and bells; and
- Determining appropriate mitigation during operations and construction.

3.14 Energy

This section describes the potential energy use of the Preferred Transit Alternative, possible strategies to minimize energy consumption during project construction and operation, and possible subsequent analysis regarding project energy use.

3.14.1 Methodology

A qualitative examination of existing energy resources used by transportation was made in part by using data and statistics presented in the 28th Edition of the *Transportation Energy Data Book* (Center for Transportation Analysis 2008). The sources of existing energy used by transportation facilities in the City of Atlanta were determined through observation and consultation with the Georgia Power and Southern Company websites.

The evaluation of potential energy use by the Preferred Transit Alternative focused on forecast ridership and savings in VMT by personal car and the relationship of those factors to energy use. The evaluation used the ridership forecast reported in Table 3-41 and developed during the *Inner Core Atlanta BeltLine Alternatives Analysis* (MARTA 2007).

3.14.2 Affected Environment

The *Transportation Energy Data Book* (Center for Transportation Analysis 2008) reports that highway vehicles were responsible for approximately 80 percent of all transportation energy use in the United States in 2007. Non-highway modes (air, water, pipeline, and rail) accounted for the remaining 20 percent, with air travel accounting for nearly half of the non-highway energy use. Rail accounted for approximately 2 percent of transportation energy use.

The sources of energy that power transportation in the study area include electricity and fossil fuels. Electricity powers the MARTA heavy rail system. Gasoline and diesel fuel are the primary fuels for roadway and other transit vehicles. According to the 2000 U.S.

Census, 15 percent of workers over the age of 16 in Atlanta and in the Atlanta BeltLine study area used public transit to get to work, while the majority of the remaining workers traveled by personal car.

Georgia Power, one of four utilities that comprise Southern Company, provides electrical power to the Atlanta region. As indicated on their website, Georgia Power derives electricity from a range of sources including coal, nuclear, oil and gas, and hydroelectric plants.

3.14.3 Preliminary Environmental Consequences

3.14.3.1 No-Build Alternative

The No-Build Alternative assumes the planned service changes and enhancements identified in the ARC *Envision6* RTP and the Fiscal Years 2008-2013 TIP will be implemented, with the exception of the Atlanta BeltLine. The forecast population and employment changes in the Atlanta region, documented in Section 3.5 are also assumed.

As described in Chapter 2.0, the planned projects in the RTP and TIP will collectively address some issues related to suburb-to-city mobility. However, many transportation imbalances and issues will remain concerning in-city mobility, transit accessibility and connectivity, particularly with the existing MARTA system, and insufficient transportation options.

As part of the *Inner Core BeltLine Alternatives Analysis Detailed Screening Results* (MARTA 2007) phase of the Atlanta BeltLine project, annual total ridership of 14.5 million was predicted for the elements of the No-Build Alternative[20]. This number is approximately equivalent to an annual automobile travel savings of 79.8 million vehicle miles. Using the industry standard for automobile energy use, 6,233 British Thermal Units (BTUs) per vehicle mile,[21] the energy savings by diverting personal car drivers to transit services available under the No-Build Alternative will be up to approximately 497 billion BTUs annually. However, growth in the number of vehicles on roadways will be substantial in the No-Build Alternative because existing and planned transit services will provide only a partial solution to the transportation needs of the region and study area. Growth in the number of vehicles on roadways will require additional energy and fuel consumption in proportion to the number of added vehicles. Moreover, increased traffic volume will adversely affect LOS, as described in Chapter 1.0, thereby reducing average travel speeds by 24 percent in 2030 and increasing fuel consumption.

3.14.3.2 Preferred Alternatives

The expected source of energy for the Atlanta BeltLine transit element is electricity provided by Georgia Power. However, the preliminary findings of this assessment can apply to either electricity or diesel fuel use, the two typical sources of energy for SC transit systems. Energy will be necessary to power the Atlanta BeltLine transit

[20] MARTA. 2007. Detailed Screening Results and Selection of Locally Preferred Alternative, Inner Core Atlanta BeltLine Alternatives Analysis.

[21] Federal Transit Administration. 1999. Technical Guidance on Section 5309 New Starts Criteria.

equipment, station equipment, and maintenance yard operations. Of these sources, the rail transit equipment will have the highest demand for energy.

Atlanta BeltLine ridership is projected to be 26.4 million boardings annually with a travel savings of 145.2 million vehicle miles per year. Using the industry standard for automobile energy use, 6,233 BTUs per vehicle mile, the energy savings by diverting personal car drivers to Atlanta BeltLine riders will be up to approximately 905 billion BTUs annually.

Comparison of the No-Build Alternative travel and energy savings with the Preferred Transit Alternative travel and energy savings indicates a net increase of 11.9 million boardings annually and 65.5 million vehicle miles annual travel savings for the latter. As shown in Table 3-41 in Section 3.12 Air Quality, new ridership attributed directly to the system-wide enhancements proposed as part of the Atlanta BeltLine, is expected to be 6.4 million boardings, a savings of 35.4 million annual vehicle travel miles and approximately 220 billion BTUs. Table 3-44 summarizes the estimates of annual energy savings for the No-Build and Preferred Transit Alternatives.

Table 3-44: Annual Energy Savings

Alternative	Annual Boardings (millions)	Annual Travel Miles Saved (millions)	Annual Energy Savings (billion BTUs)
No-Build	14.5	79.8	497
Preferred (New Ridership)	6.4	35.4	220
Preferred (All Atlanta BeltLine Ridership)	26.4	145.2	905

Sources: MARTA. 2007. *Inner Core BeltLine Alternatives Analysis Detailed Screening Results* and AECOM 2010

As reported in the *Transportation Energy Data Book,* rail transit typically uses 12 times more energy, or BTUs, than an automobile based on an average energy-efficiency of approximately 70,000 BTU per vehicle mile. However, each rider on an SC vehicle uses approximately 8 percent of the energy that a person in an automobile uses. Therefore, the energy efficiency or the amount of BTUs saved by a rail transit rider is significant in comparison to that of a single driver. As a result, although Atlanta BeltLine operations will be a new energy consumer, the effect of the project on overall energy supply and use will be a substantial savings. Other savings, such as reduced congestion and delays on roadways in the Atlanta region, are additional energy benefits of the Preferred Transit Alternative.

3.14.4 Potential Avoidance, Minimization, and Mitigation Measures

Consideration of energy conservation measures will be ongoing during construction and operation of the Atlanta BeltLine to minimize overall energy needs. For example, a potential energy plan could encourage construction contractors and operations personnel to adopt energy conservation measures including, but not limited to, the following:

- Use energy-efficient equipment;
- Incorporate energy-saving techniques;
- Avoid unnecessary idling of equipment;
- Consolidate material delivery, whenever possible, during construction to ensure efficient vehicle utilization;

- Schedule delivery of material during non-rush hours to minimize fuel use lost to traffic congestion;
- Use renewable energy sources along the system;
- Encourage employees and contractors to carpool; and
- Maintain equipment and machinery in good working condition, especially those using fossil fuels.

3.14.5 Subsequent Analysis

Upon a decision to proceed with the proposed action, MARTA will coordinate with Georgia Power in relation to its energy needs to operate the Atlanta BeltLine. This FEIS/ 4(f) Technical Memorandum anticipates that adequate power will be available from Georgia Power to serve the Atlanta BeltLine. Subsequent efforts might include more detailed analysis on potential energy consumption by the Preferred Alternative.

3.15 Water Resources

This section identifies and describes the water resources in the study area, including wetlands, streams, floodplains, open water bodies (lakes and ponds), groundwater recharge areas, and sole source aquifers. The section also summarizes the effects of the No-Build and Preferred Alternatives on the water resources in the study area. Table 3-45 provides the definitions for the various water resource terminology used throughout this section.

Table 3-45: Water Resource Terminology

Term	Information Source	Definition
Wetlands	U.S. Army Corps of Engineers (USACE) / U.S. Environmental Protection Agency (USEPA)	Areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions (USEPA and USACE, 42 Federal Register, 37, 125-126, 37128-29, July 19, 1977)
Groundwater recharge areas	Georgia DNR's *Hydrologic Atlas 18* (1989 Edition)	Portions of the earth's surface where water infiltrates into the ground to replenish an aquifer
Sole source aquifers	USEPA Region 4 Sole Source Aquifers maps	A sole or principal source of water that supplies at least 50 percent of the drinking water consumed in the area overlying the aquifer
Runoff		The portion of stormwater that cannot infiltrate the ground surface

3.15.1 Methodology

The identification of water resources was accomplished by review of USGS topographic maps, the National Wetlands Inventory (NWI), aerial photography, Flood Insurance Rate Maps (FIRM), and other available reports and studies (e.g. water quality reports, soil surveys) and by undertaking field observations to verify resources identified from these reviews.

An area of potential impact of 150 feet on each side of the alignments of the Preferred Alternatives was used to assess the potential direct effects on water resources. A water resource within the potential impact area was considered to be potentially directly impacted.

3.15.2 Affected Environment

The northern part of Atlanta drains into the Chattahoochee and Little Rivers and by the tributaries of the Flint River, which drain into the Gulf of Mexico. The southern part of Atlanta and adjacent areas to the south drain into tributaries of the South River, which flows eastward into the Atlantic Ocean.

3.15.2.1 Surface Water Resources

Streams

Table 3-46 summarizes the number of surface waterways by study area zone and their principal characteristics. Each crossing of the study area has been defined individually and is illustrated on Figure 3-29.

Table 3-46: Stream Crossings by Zone

Zone	Number of Streams (Type)
Northeast	9 Streams (5 Perennial, 3 Intermittent, 1 Ephemeral)
Southeast	2 Streams (1 Intermittent, 1 Ephemeral)
Southwest	The southwest zone is within the watershed of Proctor Creek. However, the Preferred Alternatives do not cross the streams.
Northwest	14 Streams (11 Perennial, 2 Intermittent, 1 Ephemeral)

Source: ARC 2008

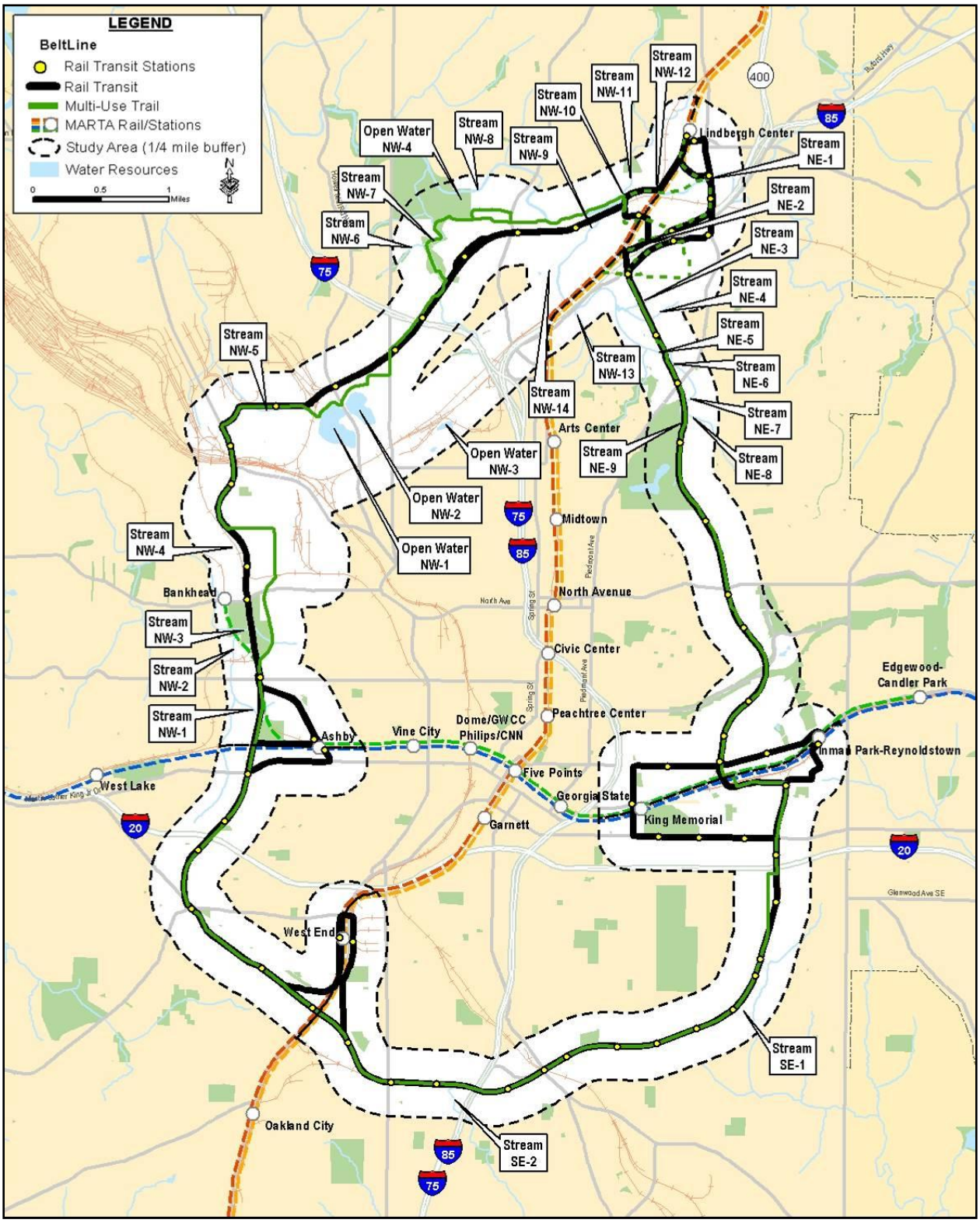
Wetlands

There are two wetland areas in the study area and both are in the northeast zone. One is along the edge of Piedmont Park near the Park Drive Bridge, between the rail corridor and the park. The U.S Army Corps of Engineers (USACE) system classification of the first wetland is low quality resulting from its presence in fragmented habitat, being of limited size, and supporting the growth of invasive plant species. The other wetland is located north of Armour Drive and west of Piedmont Road, near Peachtree Creek. This USACE system classification of the second wetland is medium quality resulting from its relative maturity and ability to retain floodwater, provide limited wildlife habitat, and filter pollutants from the environment.

Open Water Bodies

There are five open water bodies in the study area, one in the northeast zone and the others in the northwest zone. In the northeast zone, Lake Clara Meer is a major, manmade surface water body located in Piedmont Park; it is surrounded by maintained lawn and landscaped areas. It serves as a recreational and aesthetic asset of the park. In the northwest zone, there are four manmade impoundments including the Atlanta Waterworks ponds.

Figure 3-29: Study Area Surface Water Resources



Source: USGS topographic maps, NWI, aerial photography, FIRMs, other available reports and studies, and field observations 2008

Groundwater Recharge Areas

There are no significant groundwater recharge areas in the study area. All parks and greenspace, including vegetated residential areas, provide a surface area conducive for stormwater runoff to filter into the ground. The remainder of the study area consists of impervious surfaces, such as roadways and commercial land uses with associated parking areas.

Sole Source Aquifers

There are no sole source aquifers in the study area based on the USEPA definition.

Floodplains

As shown on Figure 3-30, there are 100- and 500-year floodplains in the northeast zone associated with Peachtree Creek, Clear Creek, and their unnamed tributaries. They are located near the Lindbergh Center MARTA station and within and near Piedmont Park. In the southwest zone, the floodplains are associated with Proctor Creek and its unnamed tributaries south of the Ashby MARTA station. In the northwest zone, the floodplains are associated with Peachtree Creek, Proctor Creek, and their unnamed tributaries.

3.15.3 Environmental Consequences

During the Public Scoping Process, questions and concerns were raised regarding how the Atlanta BeltLine would affect water resources. Particularly, there was concern about the potential effects on stormwater runoff, flooding, groundwater and surface waters, and water quality. It was asked whether potential mitigation strategies to protect water resources would be identified in the Tier 1 EIS. In response, the potential effects of the No-Build and Preferred Alternatives and potential strategies to avoid, minimize, and mitigate potential impacts on water resources are discussed below.

3.15.3.1 No-Build Alternative

Several projects included in the No-Build Alternative have the potential to directly affect study area water resources. These potential effects will be identified and strategies to avoid, minimize, and mitigate the potential effects will evaluated during the environmental reviews of those projects.

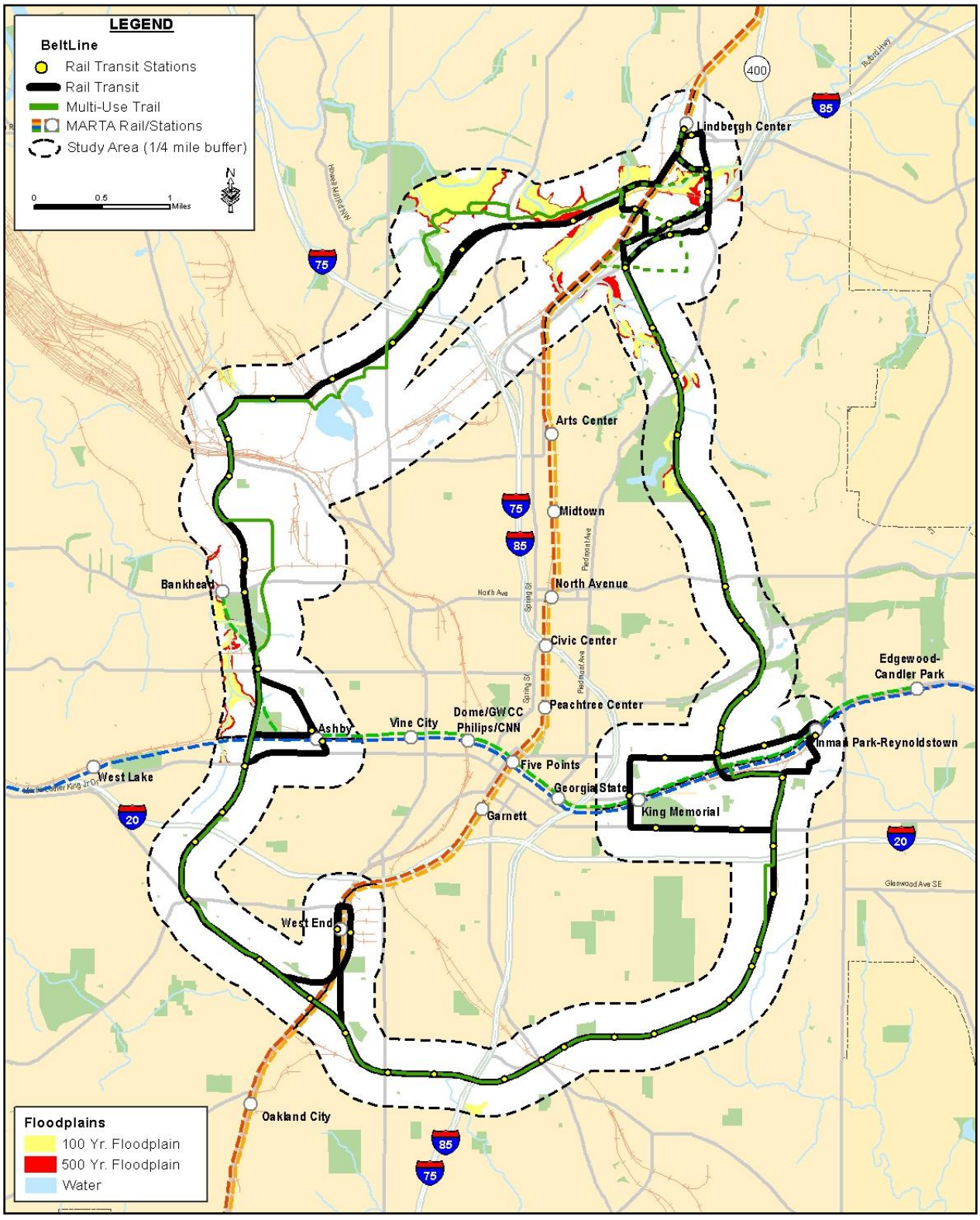
3.15.3.2 Preferred Alternatives

The Preferred Alternatives will have no effects on wetlands, open water bodies, or sole source aquifers, but will have the potential to directly affect surface waters, groundwater resources, floodplains, and stormwater in the study area. These affects are briefly described below.

Streams

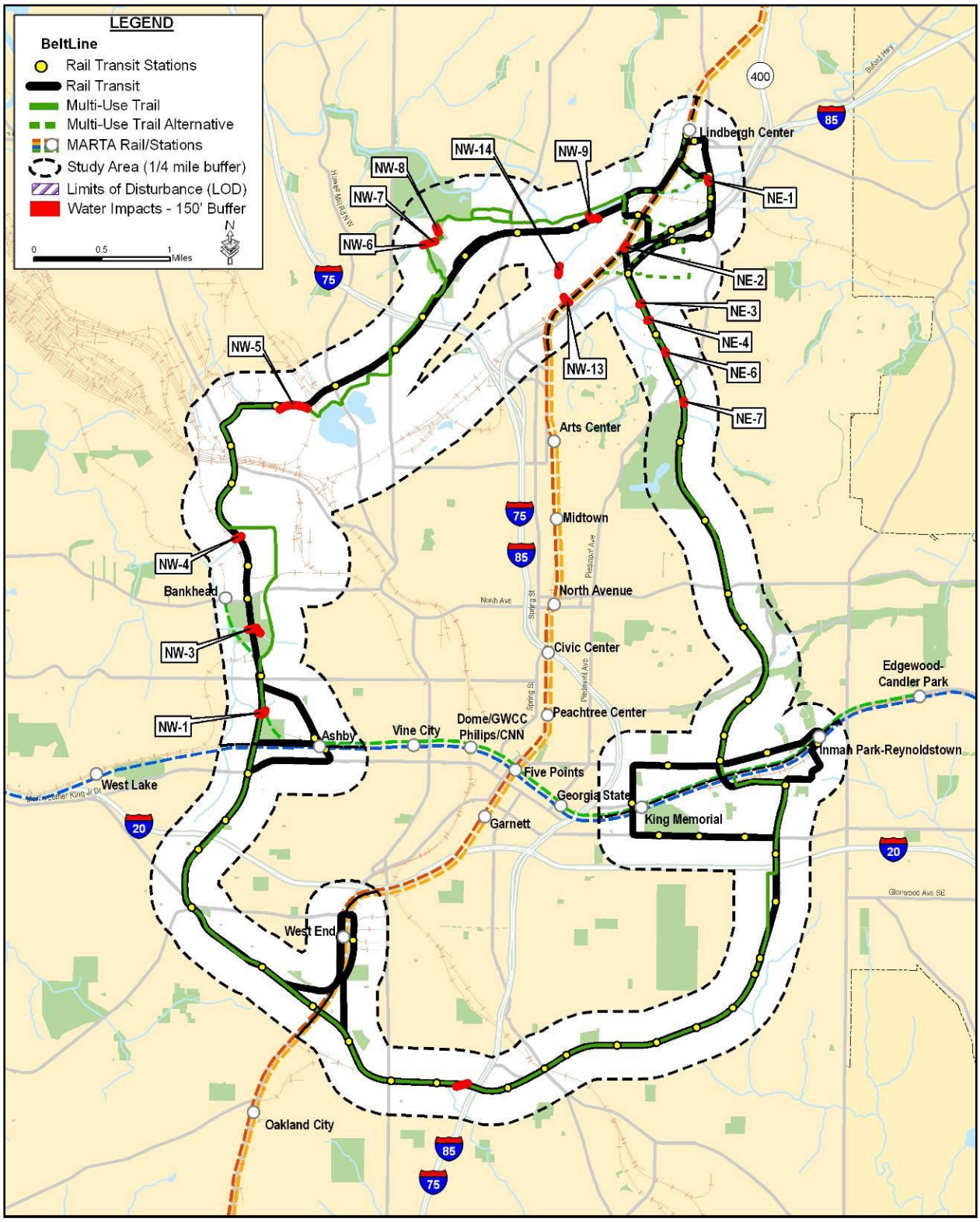
Streams could be impacted with new crossing structures, extensions of existing culvert crossings, and stream buffer encroachments. Figure 3-31 shows the potential crossings of streams by the Preferred Alternatives in the study area. Stream impacts are listed in Table 3-47 where impacts exist.

Figure 3-30: Floodplains



Source: ARC 2009

Figure 3-31: Potential Crossings of Water Resources



Source: ARC 2008

Table 3-47: Potential Impacts to Streams

Alternative	Number of Potential Stream Impacts	Area (acres)of Potential Stream Impact
Preferred Transit Alternative	11	1.17
Preferred Trail Alternative	4	0.52

Source: AECOM 2010

[1]Trail effects are combined with transit quantities where transit and trails are co-aligned. Quantities shown for trails occur where trails have a separate alignment from the transit.

In this analysis, the effects of the Preferred Trail Alternative were combined with the effects of the Preferred Transit Alternative where transit and trails are co-aligned. Therefore, the Preferred Trail Alternative will affect an additional four streams where it is not co-aligned with the Preferred Transit Alternative.

Groundwater Resources

The Preferred Alternatives will introduce new impervious surfaces at stations and trails, which will affect groundwater resources. Converting pervious ground where precipitation can infiltrate to impervious pavement or structures will reduce the ability of water to recharge to the groundwater in proportion to the amount of impervious surfaces. Table 3-48 shows the amount of impervious surface for the Preferred Alternatives. As described in Section 3.15.2, parks are the principal groundwater recharge resources. In the northwest zone, Maddox and Tanyard Creek Parks contain large areas of pervious surfaces. The Preferred Alternatives are not anticipated to affect the parks or the groundwater recharge areas in the parks.

Table 3-48: Amount of New Impervious Surface Outside of MARTA Rail Station Areas

Alternative	Impervious Surface (acres)
Preferred Transit Alternative	16.0
Preferred Trail Alternative	13.4

Source: AECOM 2010

Note: Total acreage does not include impervious surface within the MARTA rail station areas.

Floodplains

The Preferred Alternatives will potentially affect the floodplains associated with the affected streams. Perpendicular crossings or longitudinal encroachments may be unavoidable.

Stormwater

To the extent possible, the Preferred Alternatives will be co-aligned with the existing railroad ROW. The finished grades will be similar to the existing corridor. Nevertheless, the construction of new transit facilities will introduce new impervious surfaces and increased stormwater runoff will be managed in accordance with applicable regulations.

3.15.4 Potential Avoidance, Minimization, and Mitigation Measures

Conceptual design of the Preferred Alternatives conservatively indicates the potential for direct and indirect impacts on water resources, such as encroachments on or structures over water resources, and increased stormwater runoff from added impervious surface.

As the project advances, the design will be refined to avoid or minimize impacts on water resources. During Tier 2 analysis, adjustments to the alignment and the location of amenities will be examined to avoid effects on water resources.

Unavoidable effects will be reported during Tier 2 analysis. Best management practices will be identified and mitigation strategies developed at that time to minimize unavoidable impacts. These may include soil erosion control measures, stormwater management, and water quality provisions that may be applied temporarily during construction, or permanently as appropriate, to protect water resources.

3.15.5 Potentially Required Permits and Approvals

3.15.5.1 Federal

Unavoidable impacts to streams regulated by 33 CFR Part 328.3(b) and protected by Section 404 of the Clean Water Act (22 United State Code 1344) will require a Section 404 permit from the USACE. Tier 2 analysis will require demonstration of project compliance with Executive Order 11988 Floodplain Management that prescribes protection of floodplains from impacts, particularly longitudinal impacts, wherever possible.

3.15.5.2 State

Unavoidable impacts to buffers around streams will require a Stream Buffer Variance permit from the GEPD.

3.15.5.3 City

Impacts to stream buffers are subject to compliance with the City of Atlanta's specifications regarding stream or riparian buffers and associated erosion and sediment control requirements.

3.15.6 Subsequent Analysis

During Tier 2 analysis, the design will be refined to avoid or minimize impacts on water resources including adjustments to the alignment and location of amenities, as prescribed by federal, state, and local water resource protection regulations and guidelines under NEPA.

3.16 Biological Resources

This section identifies the biological resources in the study area and describes the potential effects of the No-Build and Preferred Alternatives on those resources, including aquatic and terrestrial species protected by the Endangered Species Act, birds protected by the Migratory Bird Treaty Act, and invasive species.

3.16.1 Methodology

The identification of existing biological resources employed a combination of existing available data from the Wildlife Resources Division of the GADNR and a preliminary field reconnaissance of the area of potential impact, which is 150 feet on each side of the alignment of the Preferred Alternatives to conservatively allow for all anticipated effects.

3.16.1.1 Aquatic Habitats and Species Resources

The water bodies supporting aquatic biota within the study area were identified using available data. Investigation of the potential for trout streams used the GADNR Wildlife Resources Division database, which contains existing data for known rare species and natural communities as well as potentially occurring rare species and natural communities. Field examinations occurred in rivers, streams, and open water bodies to characterize potential aquatic resources.

3.16.1.2 Terrestrial Habitats and Species Resources

The terrestrial habitats identified in the study area include non-aquatic fields, woodlands, and landscaped areas. A determination of wildlife and plant life known or likely to use the identified terrestrial habitats took place using available data sources and field observations.

3.16.1.3 Protected Species

The potential for protected species to occur in the study area was evaluated by coordination with the GADNR and by a preliminary field reconnaissance for suitable habitat. GADNR is a repository for data on known threatened, endangered, and rare species that are recognized by them and by the U.S. Fish and Wildlife Service (USFWS). On July 24, 2009, information relating to the locations and potential occurrences of protected species was requested from GADNR, and the response, dated September 9, 2009, is included in Appendix C of the Tier 1 FEIS. Field verification to identify potential habitats that could support protected species took place. A formal biological assessment will take place during Tier 2 analysis.

3.16.1.4 Migratory Bird Treaty Act

Areas potentially used by birds protected by the Federal Migratory Bird Treaty Act were identified. The focus of this investigation was areas containing greater than 100 acres of contiguous habitat and other habitats such as culverts and bridges.

3.16.1.5 Invasive Species

During the terrestrial habitat evaluation, species determined by the state to be invasive were identified through observation.

3.16.2 Affected Environment

3.16.2.1 Aquatic Habitats and Species Resources

As discussed in Section 3.14.2, aquatic resources included in the study area are Peachtree Creek and its tributary streams, a number of tributaries to Clear and Tanyard Creeks, Lake Clara Meer in Piedmont Park, Sugar, Intrenchment, and Proctor Creeks, and the South River. None of the aquatic resources is a designated wild trout stream.

Aquatic biota likely to inhabit these resources are restricted to species tolerant of medium quality, somewhat impaired to fully impaired water quality. Generally, the number and diversity of species in impaired condition aquatic resources are limited to commonly occurring species that are tolerant of the impaired conditions.

3.16.2.2 Terrestrial Habitats and Species Resources

Piedmont Park provides a combination of manicured landscaping and wooded edges. Oakland Cemetery, Freedom Park, Daniel Stanton Park, Adair Park, Washington Park, Maddox Park, Tanyard Creek Park, Ardmore Park, and Peachtree Hills Park provide manicured landscaping. The ballasted track area within the Decatur Belt Corridor is flanked by opportunistic tree, shrub, and herb vegetation. The L&N Corridor is overgrown in many areas with opportunistic tree, shrub, and herb vegetation. The CSX and Norfolk Southern Corridors are kept clear of excess vegetation, but the edges may contain opportunistic tree, shrub, and herb vegetation.

In many areas, invasive plants dominate as discussed in greater detail in Section 3.16.2.5. These terrestrial characteristics provide little food and cover for a low number of commonly occurring animals that are adapted to a human environment, such as squirrels, rabbits, raccoons, opossums, robins, and starlings.

3.16.2.3 Protected Species

Table 3-49 presents a list of federally and/or state protected plants and animals observed through GADNR field reconnaissance near the study area and obtained from GADNR coordination. See Appendix D of the Tier 1 FEIS for a full list of federally and/or state protected plants and animals in Fulton County.

Table 3-49: Listed Plant and Animal Species in Fulton County

Zone	Species Name	Type of Species	Listing	Location Where Species Observed
Northeast	Bay Star-vine – *Schisandra glabra*	Plant	State Protected – Threatened	Unspecified locations approximately 1.25 miles northeast of the study area, 2.25 miles east of the study area, and a 2.75 miles east of the study area
	Chattahoochee Crayfish – *Cambarus howardi*	Aquatic Arthropod	State Protected	Approximately 1.75 miles east of the study area in Peachtree Creek
	Peregrine Falcon – *Falco peregrinus*	Bird	State Protected	Approximately 1.75 miles southwest of the study area
Southwest	Bachman's Sparrow – *Aimophila aestivalis*	Bird	State Protected	Approximately 1.75 miles south of the study area
	Pink Ladyslipper – *Cypripedium acaule*	Plant	State Protected	Approximately 2.25 miles southwest of the study area
Northwest	Georgia Aster – Symphyotrichum georgianum	Plant	Federally Protected – Candidate	Approximately 2.25 miles northwest of the study area

Source: GADNR www.gadnr.org site accessed June 2008; USFWS, www.fws.gov site accessed June 2008
Note: The southeast zone did not have any listings of plant or animal species.

GADNR reported that a single federally-protected species and five state protected species occur within a three-mile radius of the study area. Preliminary field reconnaissance within the 300-foot area of potential impact found no additional protected species or suitable habitat for a protected species.

3.16.2.4 Migratory Bird Treaty Act

Preliminary field reconnaissance within the area of potential impact found no large tracts of intact forest that would provide suitable habitat for migratory birds. Several migratory bird nests were observed beneath the overpass carrying the MARTA rail line over Proctor Creek and North Avenue, beneath the Collier Road Bridge over Tanyard Creek, and the Peachtree Road Bridge over Peachtree Creek. The overpasses located at

Ormewood Avenue, Berne Street, Confederate Avenue, Murphy Avenue, Lawton Street, Ralph David Abernathy Boulevard, Lucile Avenue, I-20, Martin Luther King, Jr. Drive, Mobile Street, Joseph E. Boone Boulevard, Donald Lee Hollowell Parkway, and the railroad trestles over Tanyard and Clear Creeks potentially would provide nesting habitat for migratory bird species.

3.16.2.5 Invasive Species

Nine invasive species were found within the area of potential impact including Chinese privet, Japanese honeysuckle, mimosa, kudzu, English ivy, Chinese lespedeza, Nepalese browntop, Johnsongrass, and multiflora rose.

3.16.3 Preliminary Environmental Consequences

During the Public Scoping Process, questions and concerns were raised regarding how the Atlanta BeltLine would affect biological resources. Issues expressed included what the project effects would be on animals including threatened and endangered species, animal habitat, and vegetation. In response, the anticipated effects of the Preferred Alternatives are described in this section, as are potential strategies to avoid, minimize, and mitigate potential impacts on biological resources.

3.16.3.1 No-Build Alternative

The No-Build Alternative includes several planned projects with the potential to affect study area biological resources. These potential effects will be investigated under the environmental processes for future projects that may comprise the No-Build Alternative.

3.16.3.2 Preferred Alternatives

The Preferred Alternatives have the potential to affect biological resources associated with existing streams and stream buffers, as well as street trees and landscaped areas that may be affected where additional ROW is required.

As summarized in Chapter 3.15, the Preferred Transit Alternative will potentially affect up to 11 streams. Some typical effects could include shading, enclosure, and/or filling of the waterway within the limit of disturbance, which may degrade or eliminate the habitat values of the aquatic resources, thereby changing or eliminating the species composition currently using the resources.

The Preferred Alternatives will also clear vegetation from the railroad corridors. This effect could remove opportunistic plant materials, particularly invasive species.

Impacts on biological resources because of new ROW acquisition could include removing landscaped areas or edge areas. Removing the profusion of invasive species will be a benefit as these species prohibit the growth and diversity of native terrestrial vegetation. The small percentage of the terrestrial vegetation that is native opportunistic species may also be reduced or removed. These effects could change or eliminate the species composition currently using the resources.

Based on current data and observations, the Preferred Alternatives will not be expected to affect protected species or to affect species or habitat protected by the *Migratory Bird Treaty Act*. The elevated structures that will potentially provide suitable habitat for migratory bird species are stated in Section 3.16.2.4.

3.16.4 Potential Avoidance, Minimization, and Mitigation Measures

Conceptual design of the Preferred Alternatives conservatively indicates the potential for impacts on biological resources. As the project advances, the design will be refined to avoid or minimize effects on biological resources. During Tier 2 analysis, adjustments to the alignment and the location of amenities will be examined to avoid effects on biological resources as prescribed by federal and state regulations and guidelines including NEPA.

Unavoidable effects will be reported during Tier 2 analysis. A number of best management practices will be identified and mitigation strategies developed at that time to minimize unavoidable impacts. These could include:

- coordination with regulators to identify appropriate and reasonable means to accommodate protected species;
- removal and disposal of invasive plant parts to avoid future infestations; and
- enhancement of landscaping using native species or cultivars of native species that will provide superior food and shelter resources to the vegetative community that is currently present.

3.16.5 Potentially Required Permits

3.16.5.1 Federal

Unavoidable impacts to aquatic resources will require Section 404 of the Clean Water Act permit from the USACE; USEPA review and concurrence will be required regarding project compliance with the Migratory Bird Treaty Act during Tier 2 analysis; Section 7 of the Federal Endangered Species Act will likely require consultation during Tier 2 analysis if federally protected species are encountered.

3.16.5.2 State

GADNR consultation could be required during Tier 2 analysis if state regulated species are encountered, and a GEPD Stream Buffer Variance could be required for unavoidable impacts to terrestrial resources near streams.

3.16.5.3 Local

Compliance with the City of Atlanta's specifications regarding stream or riparian buffers and associated erosion and sediment control requirements would be required.

3.16.6 Subsequent Analysis

During Tier 2 analysis, the design will be refined to avoid or minimize impacts on biological resources including adjustments to the Preferred Alternative alignment and location of amenities as prescribed by federal, state, and local biological resource protection regulations and guidelines including NEPA.

3.17 Geologic Resources

This section describes the geologic resources in the study area and the potential effects of the No-Build and Preferred Alternatives on these resources.

3.17.1 Methodology

The assessment of geologic resources included identification of topography, underlying geologic conditions, unique geologic formations, and primary soil types including soils designated as prime, unique, of statewide importance, or of local importance. This was completed through a review of USGS topographic maps, aerial photography, the Natural Resources Conservation Service (NRCS) Soil Survey, and data from the U.S. Department of Agriculture (USDA) as appropriate.

A qualitative assessment of potential effects on geologic resources took place by examining the conceptual engineering needs associated with the No-Build and Preferred Alternatives and making a preliminary assessment of effects. The assessment focused on evaluating potential earthmoving and excavation activities, particularly in areas where deep excavations could occur to build tunnels or foundations for elevated structures.

3.17.2 Affected Environment

3.17.2.1 Topography

The study area is located on a series of ridgetops that overlie the valleys formed by Peachtree, Proctor, Clear, South River, Sugar, and Intrenchment creeks. There are dramatic bedrock outcrops along several railroad ROWs; creek corridors tend to be narrow, deep, and steep-sided.

While the terrain is moderate, it is still rolling. The natural ridge and valley terrain is responsible in part for the manner in which the streets and land use have developed. Major arteries such as the interstate systems and railroads follow ridgelines and routes of least topographic change. Exceptions to this trend can be observed near the Lindbergh Center MARTA rail station, for example, where dramatic changes in natural elevation required the use of elevated structures to support MARTA and other arteries.

3.17.2.2 Geology

The study area is located in the Piedmont Physiographic Province of Georgia. The character of the Piedmont Province is of narrow waterways below broad valleys and moderate slopes. It is composed of hard igneous and metamorphic rocks derived from ancient (300 to 600 million years old) sediments, once deeply buried and subjected to high temperatures and pressures. The primary bedrock formations that underlie the study area are the Lithonia Gneiss, Clairmont, Wahoo Creek, Stonewall Gneiss, and Clarkston formations (shown in Appendix D). These formations consist of hard rock types including biotite gneiss and schist, granite, granite gneiss, mica schist, and other rocks of the Precambrian and Paleozoic age (Hodler and Schretter 1986).

3.17.2.3 Soils

The soil series present in the study area includes Cecil, Cartecay-Toccoa, Congaree, Congaree-Cartecay, Rion, and Wickham. A description of each soil type can be found in Appendix D. The study area's principal soil associations consist of urban land (soil areas of cut and fill), also referred to as Udorthents, and a combination of native soils series' and urban lands (USDA 2009).

3.17.3 Preliminary Environmental Consequences

During the Public Scoping Process, questions and concerns were raised regarding how the Atlanta BeltLine would affect environmental resources in general, including geology, soils, and topography. In response, the expected effects of the alternatives are described in this section, as are potential strategies to avoid, minimize, and mitigate potential effects on geological resources.

3.17.3.1 No-Build Alternative

The projects assumed in the No-Build Alternative will be the subject of an environmental assessment for each project. In general, the effects of the No-Build Alternative on geology, topography, and soils will be incremental.

3.17.3.2 Preferred Alternatives

The Preferred Transit Alternative will follow a similar grade to those of the existing railroads and streets. The Preferred Trail Alternative will follow existing grades in most locations in order to facilitate access. As a result, the anticipation is for there to be minimal potential effects on geology, topography, and soils in most areas. In some locations, however, deeper and/or wider excavations than required for at-grade construction will occur. Examples include extensions of existing tunnels under existing roadways near Inman Park/Reynoldstown MARTA rail station, and cutting back existing exposed bedrock in the cut section of the Decatur Belt ROW near Piedmont Park.

3.17.4 Potential Avoidance, Minimization, and Mitigation Measures

Geotechnical testing will occur as the design advances to identify location-specific geologic and soils conditions and to determine an appropriate design and construction approach to avoid or minimize potential adverse effects. Selection of soil and rock removal techniques will take place based on localized conditions and requirements. The project sponsors will employ soil erosion and sediment control best management practices to control disturbed soils during construction. There will be a containment of excavated soils and a stabilization of finish graded soils.

3.17.5 Subsequent Analysis

Geotechnical analysis will occur during a Tier 2 analysis. A geotechnical survey will be required to characterize local soil and rock conditions to assist decision making on appropriate design and construction methods, the suitability of existing soils and geology to support structures, the need for fill material, the amount of material to be removed and how to remove it, and the rationale for using retaining walls and other slope stabilization techniques. At that time, a more detailed assessment of localized effects on topography, geology, and soils will take place, and there will be an identification of minimization and mitigation strategies as warranted

4.0 SECONDARY AND CUMULATIVE EFFECTS

This chapter presents a preliminary evaluation of the potential secondary (indirect) impacts and cumulative (incremental) impacts of the Preferred Transit and Trails Alternatives as compared to the No-Build Alternative.

4.1 Methodology

Secondary (indirect) effects are defined as "impacts which are caused by the action and are later in time or farther removed in distance, but are still reasonably foreseeable. Secondary impacts could include growth-inducing impacts and other impacts related to changes in the pattern of land use, population density or growth rate, and related impacts on air and water and on other natural systems, including ecosystems" (40 CFR 1508.8(b)). An example of a secondary effect is when a new rail station is built in an undeveloped area and commercial uses, which otherwise would not have been built, develop in the station area.

Cumulative impacts are changes to the environment that are brought about by an action in combination with other past, present, and future human actions. In simplest terms, analyzing cumulative impacts means considering and accounting for the impacts of a proposed action in the context of the existing transportation system and improvements to it that are reasonably foreseeable in the vicinity. For the purposes of this FEIS/ 4(f) Technical Memorandum , the basis for the estimation of potential cumulative impacts relies on the Preferred Alternatives for the project design year of 2030 and on the No-Build Alternative.

The secondary and cumulative effects analysis qualitatively addresses each resource type identified in the study area and makes an assessment of whether or not the resource has the potential to be affected by secondary or cumulative effects.

Based on guidance from the CEQ, USDOT, Federal Highway Administration (FHWA), and the USEPA, the following methodology was developed. This methodology serves to provide a Tier 1 level assessment of potential secondary and cumulative effects. It is assumed that a greater level of analysis will be undertaken during the Tier 2 analysis. The following steps were applied to this Tier 1 analysis:

- Identify potential sensitive resources and potential area of effect;
- Identify potential sources of effects; and
- Identify potential effects.

4.2 Legal and Regulatory Context

4.2.1 Secondary Impacts

CEQ NEPA regulations require that there be an analysis of potential secondary impacts for federally funded projects. The CEQ implementing regulations (40 CFR 1500-1508) require that an EIS include a discussion of preliminary environmental consequences, including "indirect effects and their significance" (40 CFR 1502.16). In addressing potential uncertainties in this type of analysis, the CEQ regulations require the EIS to make a "good faith effort" to identify and disclose indirect or secondary impacts (CEQ, 1981).

4.2.2 Cumulative Impacts

The CEQ/NEPA regulations also require that an analysis of potential cumulative impacts take place for federally funded projects. The CEQ/NEPA implementing regulations (40 CFR 1500-1508) require that an EIS include a discussion of preliminary environmental consequences, including "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, regardless of what agency (federal or non-federal) or person undertakes such other actions" (40 CFR 1508.7). In addressing potential uncertainties in this type of analysis, CEQ requires the EIS to make a "good faith effort" to identify and disclose cumulative impacts (CEQ, 1981).

4.3 Potential for Secondary and Cumulative Impacts

As described in Chapter 1.1, the proposed transit and trails elements of the Atlanta BeltLine are part of a comprehensive economic development effort that combines greenspace, trails, transit, and new development along 22 miles of historic rail segments that encircle central Atlanta. The combination of the following elements: transportation, affordable housing, brownfield redevelopment, land use, historic preservation, parks and recreation, and economic development is intended to attract and organize some of the region's future growth around parks, transit, and trails. A desired secondary effect of the Atlanta BeltLine is to change the pattern of regional sprawl in the coming decades, which will lead to a more livable Atlanta with an enhanced quality of life and sustained economic growth.

4.3.1 Potential Sensitive Resources

For purposes of this analysis, sensitive resources are defined as those areas that have been identified as being directly affected or those resources that could be affected by potential secondary development or those resources that are particularly susceptible to cumulative effects. Based on the analysis provided in this FEIS/ 4(f) Technical Memorandum, the following potentially sensitive resources have been identified:

- Property owners and occupiers within and near the potential Atlanta BeltLine ROW
- Land Use and Economic Conditions
- Historic Resources
- Parks
- Hazardous Materials
- Noise
- Streams
- Water Quality

4.3.2 Potential Area of Effect

The Atlanta BeltLine study area encompasses a large geographic area, mostly focused around the central core of Atlanta. However, from a cumulative effects perspective, potential effects on sensitive resources, such as water quality, may not be limited to the defined study area and therefore should consider the potential effects to identified resources from a more regional perspective. For this reason, the potential area of effect

should extend to the boundaries of the watershed associated with the study area. It is assumed, that during Tier 2 analysis, the potential area of effect will be further refined.

4.3.3 Potential for Secondary Effects

4.3.3.1 No-Build Alternative

Under the No-Build Alternative, it is assumed that various transportation projects programmed into the 2013 TIP will occur and may result in some level of secondary effects. Secondary effects related to the No-Build Alternative may include development of underdeveloped and/or undeveloped land near proposed transit stations or stops. This development, should it occur, may also result in changes to population, employment, and community facilities and services.

4.3.3.2 Preferred Alternatives

Owners and occupiers of property within and near the Atlanta BeltLine ROW have the potential to experience secondary effects due to the Preferred Alternatives. It is likely that secondary effects will be focused in and around proposed station areas, taking the form of development that will likely result in changes in population, employment, and community facilities and services. During Tier 2 analysis, specific secondary effects will be identified.

4.3.4 Potential for Cumulative Effects

4.3.4.1 No-Build Alternative

The projects in the No-Build Alternative, in aggregate, have the potential for cumulative effects on ROW, historic resources, parks, hazardous materials, noise, streams, and water quality (due to increases in impervious surfaces).

4.3.4.2 Preferred Alternatives

The various transportation projects planned within the study area, in combination with the Atlanta BeltLine project, will potentially have impacts on ROW, historic resources, parks, hazardous materials, noise, streams, and water quality (due to increases in impervious surfaces). During Tier 2 analysis, an assessment of potential cumulative effects will occur to determine the likelihood and appropriate mitigation for potential cumulative effects.

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5.0 CONSTRUCTION IMPACTS

This section describes potential construction-related impacts of selecting the Preferred Alternatives. For purposes of the FEIS/ 4(f) Technical Memorandum, a discussion of probable construction impacts and potential mitigation strategies is provided. During the Tier 2 analysis, more site-specific construction impacts will be identified and appropriate mitigation would be developed.

All construction will conform to the applicable federal, state, and local requirements. Construction of the Preferred Alternatives will include, but will not be limited to: laying tracks; modifying roadways and sidewalks; paving and repaving of surfaces; clearing vegetation; grading; excavating; removing debris; stabilizing soil; and constructing, demolishing and/or modifying structures, utilities, and drainage infrastructure. For all activities, the project sponsors anticipate using standard construction practices.

5.1 Probable Impacts and Potential Mitigation Strategies

5.1.1 Disruption to Existing Businesses

5.1.1.1 Probable Impacts

Construction of the Preferred Alternatives may temporarily disrupt existing businesses along the Atlanta BeltLine Corridor. During construction, access to and from businesses may be impacted; however, some level of access will be maintained to all businesses during construction. The potential for disruption may result in patrons opting to take their business elsewhere, which could result in a temporary economic impact on existing businesses along the corridor.

5.1.1.2 Potential Mitigation Strategies

Potential disruption to existing businesses will be temporary, only lasting during construction activities for that area. Construction will be phased in order to minimize possible disruptions. In addition, MARTA in partnership with ABI, will make a reasonable effort to maintain access, both pedestrian and vehicular, to existing businesses during construction. Existing access points will be used to the extent possible; however, if alternative access to these businesses is required, appropriate signage and detours will be provided. MARTA in partnership with ABI will establish good communication protocols with potentially affected business in order to minimize temporary effects.

5.1.2 Neighborhoods and Community Cohesion

5.1.2.1 Probable Impacts

Any major construction project, public or private, could temporarily inconvenience or disturb neighboring communities and services. Potential temporary impacts may include:

- Traffic congestion and detours
- Interrupted access to residences and businesses
- Loss of roadside parking
- Light intrusion (night construction)
- Disruption of utility services

- Presence of construction workers and materials
- Noise and vibrations from construction equipment and vehicles

5.1.2.2 Potential Mitigation Strategies

MARTA will make a reasonable effort to minimize temporary construction impacts to neighboring communities and services. Construction activities are not expected to impede community cohesion. Reasonable efforts to maintain access to community services will be made. Appropriate signage and detours will be provided to maintain access to neighborhoods and amenities for both pedestrians and vehicles. Construction activities affecting roadways and transit operations will likely occur during off-peak hours to minimize disruption. Best management practices will be employed to minimize the potential effects of construction-related fugitive dust emissions, light intrusion, noise, and vibration. Potential disruptions in utilities will be timed not to occur during peak usage hours. Appropriate notifications and ongoing communications with the affected communities will be made prior to construction activities taking place.

5.1.3 Visual and Aesthetic Quality

5.1.3.1 Probable Impacts

The visual and aesthetic quality of the corridor will be temporarily affected by construction equipment and construction staging areas. For residents living along the corridor, some materials stored for the project could be visually displeasing. This will be a temporary condition.

5.1.3.2 Potential Mitigation Strategies

In general, to reduce the potential for visual impacts, construction activities will be contained as much as practical. Construction easements on parcels outside the corridor, where required, will be managed to minimize potential visual impact. Following construction, the use of ground cover, landscaping, or related materials will restore areas to pre-construction conditions or better. Further, during Tier 2 analysis, areas that may be considered visually sensitive, such as recreational, natural, or historic resources, will require site specific mitigation to minimize the temporary and permanent impacts related to construction.

5.1.4 Parks and Recreation

5.1.4.1 Potential Construction Effects

Likely construction effects could include temporary use of property for staging equipment, temporary disturbances to access and activities, and temporary land disturbances, such as impacts to vegetation and increased sediment and erosion.

5.1.4.2 Potential Mitigation Strategies

If construction staging or access occurs in or adjacent to a publicly owned park or recreational facility, the project sponsors will coordinate with the property owner during the development of construction plans.

5.1.5 Freight Rail Operations

5.1.5.1 Probable Impacts

As stated in Section 3.2.9.3, CSX business decisions regarding potential use of its ROW by activities other than their own freight operation are predicated on safety, maintenance of current operations, accommodation for future needs, and liability protection. In this context, construction activities within or near freight railroad ROW, when agreed to by the railroad, must not compromise these essential criteria.

As the Atlanta BeltLine project advances, construction planning and staging will be developed in consultation with the railroads. Although the goals of such planning are to avoid or minimize impacts to the railroads and their operations, some impacts such as construction of structures to cross over railroad tracks may have unavoidable temporary impacts. An example is temporary interruption of operations while constructing nearby facilities to assure the safety of construction workers and railroad operators. These interruptions could result in operational delays.

5.1.5.2 Potential Mitigation Strategies

To address unavoidable effects of construction activities on the railroads, the project sponsors will consult with the railroads to develop mutually agreeable mitigation strategies. These could include, but will not be limited to, design adjustments to minimize effects and scheduling of activities to cause the least disruption.

5.1.6 Air Quality

5.1.6.1 Probable Impacts

Temporary effects to the local ambient air quality will occur during construction activities. These potential impacts include direct emissions from construction equipment and trucks, increased emissions from motor vehicles on the streets due to disruption of traffic flow, rerouted trains, and fugitive dust emissions. These impacts will be temporary and will affect only the immediate vicinity of the construction sites and access routes.

5.1.6.2 Potential Mitigation strategies

Measures potentially used to mitigate fugitive dust impacts could include:

- Spraying exposed areas with water or other dust suppressants;
- Covering trucks carrying dusty materials to and from the site;
- Washing construction vehicles, particularly their wheels and underbodies before they leave construction sites;
- Minimizing the use of vehicles in unpaved or uncovered areas; and
- Regularly cleaning adjacent paved areas to remove dust before it has the potential for re-suspension into the air.

5.1.7 Noise and Vibration

5.1.7.1 Probable Impacts

Project construction activities could have short-term noise and vibration effects on sensitive receptors in the immediate vicinity of the construction site. Potential sources of noise and vibration during construction could include noise and vibration from construction equipment and noise from construction vehicles and delivery vehicles traveling to and from the site.

Similar effects also could result from rerouted train movements required during construction in certain corridors. The level of effect of these noise and vibration sources depends upon the noise characteristics of the equipment and activities involved (e.g., pile driving), the construction schedule (time of day and duration of activity), and the distance from sensitive receptors.

During Tier 2 analysis, the identification of potentially highly sensitive receptors, such as historic sites or receptors that deal with highly sensitive equipment, will occur to minimize any potential construction effects to those resources.

5.1.7.2 Potential Mitigation Strategies

During the construction phase, noise and vibration control measures may be required to ensure compliance with all federal and local guidelines and noise limits. For example, specifications could require contractors to use properly maintained and operated equipment, including the use of exhaust mufflers according to the equipment manufacturer's specifications. As determined to be necessary during final design, there could be an incorporation of additional noise control measures into the construction specification documents. Methods of potential noise and vibration control during construction include, for example, the following measures:

- Erecting temporary noise barriers between noisy activities and noise-sensitive receptors;
- Utilizing alternative construction methods that avoid impact pile driving near vibration-sensitive receptors, such as residences, schools, and hospitals. Whenever possible, use of drilled piles or sonic/vibratory pile drivers to reduce excessive vibration;
- Re-routing construction traffic along roadways that minimize noise and vibration impacts at nearby sensitive receptors; or,
- Requiring contractors to use Best Available Control Technologies (BACT) to limit excessive noise and vibration.

5.1.8 Water Resources

5.1.8.1 Probable Impacts

The Preferred Alternatives have the potential to directly affect streams in the study area during construction with one or a combination of new crossing structures, extensions of existing culvert crossings, and stream buffer encroachments. During construction, possible temporary impacts on water quality may also occur. Water quality may be affected by turbidity caused by in-stream work. The potential exists for water quality to also be affected by disturbance of existing contaminated facilities and spills or potential

or accidental discharges during construction. Additionally, increased runoff from construction sites may affect water resources within the study area.

5.1.8.2 Potential Mitigation Strategies

Potential effects on water resources will be minimized using best management practices such as silt fencing, restricting certain in-stream activities at certain times, and proper planning. All appropriate federal, state, and local regulations will be followed during construction. As appropriate, an erosion and sediment control plan and all applicable permits will be approved and acquired prior to commencing construction activities.

5.1.9 Infrastructure and Utilities

5.1.9.1 Probable Impacts

Short-term utility service disruptions could occur due to construction activities. This will occur where utility relocations are necessary or in the event a utility line is impacted during construction.

5.1.9.2 Potential Mitigation Strategies

All utilities within the study area that have the potential to be affected will be identified during the Tier 2 analysis. Prior to construction activities, coordination will occur with utility owners in order to identify ways to minimize utility disruptions to their customers. Most utility companies have technologies to alter facilities without inconveniences to the customers. To the extent feasible, mitigation strategies will include:

- Maintaining utility connections in temporary locations;
- Minimizing the time without service;
- Installing alternative service before disconnecting the existing service; and
- Allowing service disruption only during periods of non-usage or minimum usage.

5.1.10 Contamination

5.1.10.1 Probable Impacts

To varying degrees, the Preferred Alternatives could disturb contaminated soils. In some areas, depending on the severity of contamination, the soils on site will be considered hazardous wastes, subject to state and federal remediation regulations. Some of these wastes could undergo removal prior to the commencement of construction activities to avoid the following potential impacts:

- Groundwater contamination;
- Exposure of construction workers to health risks; and
- The wider distribution of pollutants by contaminated dust.

All corridors could potentially involve the removal or disturbance of contaminated soils. Further testing and evaluation will occur prior to the completion of preliminary engineering and documentation of appropriate mitigation strategies will take place in a subsequent Tier 2 analysis.

5.1.10.2 Potential Mitigation Strategies

Encountering any contaminated materials will require mitigation, remediation, and/or removal, as well as protection from those contaminants during the construction of the project. Additional remedial investigations or actions could depend on the types, frequencies, and amounts of contamination encountered, if any. Impacted media or materials that could possibly be encountered include the site soils, groundwater, underground or above ground storage tank systems, and asbestos containing materials (should any buildings or structures require demolition).

Best management practices, industry standards, and regulatory-approved methods will be used during any investigation and upon handling any materials. Coordination with all required regulatory agencies will be completed to ensure the continued compliance of the Atlanta BeltLine Corridor. Any work with regard to contaminated or hazardous materials undertaken as part of the Atlanta BeltLine Corridor project should be completed in accordance with all local, state, and federal regulatory requirements.

Additionally, the nature and extent of a contaminated site or hazardous materials will require developing site-specific environmental health and safety planning concerning the workers, the surrounding area, and the environment. Material handling plans, personal protection, workplace monitoring, construction environmental control plans, alternative designs, and methods of construction will need to be evaluated and adjusted to limit impacts from those materials.

6.0 PRELIMINARY SECTION 4(F) EVALUATION

This chapter is a preliminary Section 4(f) evaluation that describes the potentially protected properties identified within the study area. As planning for the project progresses, more detailed analysis will occur and if a potential use of Section 4(f) resources is identified at that time, a Section 4(f) evaluation will be prepared as part of the Tier 2 document.

6.1 Methodology

Section 4(f) properties as defined include "publicly owned land of a public park, recreation area, or wildlife and waterfowl refuge of national, State, or local significance, or land of an historic site of national, State, or local significance," as per Section 4(f) codified in 49 U.S.C. §303(c) and 23 C.F.R. Part 774. Section 4(f) properties were identified in each of the four zones of the study area. Information was compiled based on the analysis conducted as part of the Tier 1 EIS for parklands and historic properties. For more detail on the methodology used to identify these properties, refer to Chapters 3.7 and 3.8 of this FEIS.

Publicly owned recreation facilities and historic properties were identified using readily available information from various state and local agencies and limited field reviews. As determined in consultation with the SHPO, the study area for historic architectural properties was determined to be a ¼-mile to either side of the proposed Preferred Alternatives. For archaeological properties, the buffer area consists of a linear corridor that extends 150 feet from each side of the centerline of the proposed Preferred Alternatives' alignments. For publicly owned recreation facilities, the buffer area considers facilities within 150-feet on either side of the Preferred Alternatives' alignments. The buffer area for each resource is used in addition to the ¼ mile study area in order to capture all potential for use.

For purposes of the preliminary Section 4(f) analysis, Section 4(f) properties (historic properties and parklands) identified in Chapters 3.7 and 3.8 as being affected are discussed. In this chapter, the potential use of and benefits to Section 4(f) properties by the Preferred Transit and Trails Alternatives are described.

6.2 Legal and Regulatory Context

6.2.1 Section 4(f)

As stated above, Section 4(f) provides protection to significant publicly owned parks, recreation areas, and wildlife and waterfowl refuges, as well as privately or publicly owned sites with historic significance. This is done by prohibiting any agency within the U.S. DOT from approving the "use" of Section 4(f) properties unless there is no feasible and prudent alternative that avoids the use of Section 4(f) properties, and that the project incorporates measures to minimize harm to those properties if they cannot be avoided.

Under Section 4(f), a "use" is considered to occur under the following conditions:

- When a project permanently incorporates land from a Section 4(f) property,
- When a project temporarily occupies land within a Section 4(f) property, or
- When a project introduces proximity effects, such as noise or visual effects, which substantially impair the intended use of the Section 4(f) property.

The Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU), Section 4(f) was amended to include a *de minimis* impact determination, which allows the U.S. DOT to approve a minor use of Section 4(f) property without identifying and evaluating avoidance alternatives. A *de minimis* impact determination is made on an individual basis and does not apply to an entire project. Certain criteria must be met in order for an impact to Section 4(f) properties to be considered *de minimis*. Guidance on *de minimis* impacts is provided in the December 2005 FHWA and FTA joint memorandum "Guidance for Determining *De Minimis* Impacts to Section 4(f) Resources."

6.3 Affected Environment

The Section 4(f) properties identified within the Atlanta BeltLine study and buffer area are described below.

6.3.1 Section 4(f)/6(f) Properties

6.3.1.1 Cultural Resources

Properties that have been determined to be on or eligible for the NRHP (including historic districts, buildings, structures, objects, and certain archaeological sites) qualify for Section 4(f) protection. There were 180 cultural resources identified in the larger project study area. Of those 78 are either listed or eligible for listing on the National Register of Historic Places (NRHP). Although not currently Section 4(f) properties, an additional 37 resources were identified as being potentially eligible for listing on the NRHP. The Atlanta Urban Design Commission (AUDC) considers 26 resources to be significant Atlanta BeltLine resources. The remaining 39 are areas of archaeological sensitivity. These additional resources will require further investigation in Tier 2 analysis. If any of these are determined in the future to be National Register eligible, they would be considered Section 4(f) properties. Appendix D provides a list of those resources and their status.

6.3.1.2 Parks and Recreational Properties

There are 22 publicly-owned parks within the 300-foot potential limits of disturbance area. These parks are listed in Table 6-1. Another 11 projects are in development to create new parks or improve existing park and recreational facilities (Chapter 3.8).

6.4 Preliminary Section 4(f) Analysis

6.4.1 No-Build Alternative

The No-Build Alternative includes approved regional transportation projects (*Envision6* RTP/TIP Projects 2030) within the Atlanta BeltLine study area. The No-Build Alternative could potentially use potential Section 4(f) properties within the study area. Several of the planned transportation improvements, such as the I-20 East BRT, Memorial Drive BRT, and the Commuter Rail-Lovejoy/Griffin/Macon project, cross the Historic Rail Resources of the Atlanta BeltLine. In addition, multiple trails are planned to connect with existing parks and recreation properties within the study area.

Table 6-1: Parks and Recreational Properties

Property Name	Description
Northeast Zone	
Piedmont Park	185-acre regional park; active and passive amenities: tennis courts, trails, gazebos, ball fields, playgrounds, soccer fields, swimming pool, dog park
Delta Park	0.22-acre garden park; no specified or designated use; no amenities
Historic Fourth Ward Park	18-acre neighborhood park, that offers a trail, water detention pond, and playgrounds
Freedom Park	Approximately 188 acre regional park that offers a trail and a playground
Selena S. Butler Park	Approximately three acres; active recreational uses: basketball, tennis, playground, and recreation center
Springvale Park	Approximately four acres; playground
Southeast Zone	
Adair Park II	Approximately 10-acres:passive and active amenities: tennis courts, basketball courts, ball field, playground, picnic shelters, grills
Boulevard Crossing	22-acre neighborhood park with multi-use fields and playgrounds
Daniel Stanton Park	Approximately eight-acres unused; plans are to rehabilitate the park for active recreation
Southwest Zone	
Gordon-White Park	Approximately two acres; no amenities, specified or designated uses
Green Leaf Circle	Approximately one acres; no amenities, specified or designated uses
Napoleon Circle	A small garden park; no amenities
Rose Circle Park	A small greenspace
Rose Circle Triangle	A small greenspace
South Gordon Triangle	A small garden park; no amenities, no specified or designated uses
Stafford Street Park	A small garden park; no amenities; no specified or designated uses
Northwest Zone	
Ardmore Park	1.74-acres; no amenities; no specified or designated uses
Bobby Jones Golf Course	149 acres; golf course
Maddox Park	51.5-acre; amenities include basketball courts, a tennis court, a ball field, a playground, pavilion, pavilion parking and a swimming pool
Mayson Turner-Ashby Street Triangle	1.27-acre in-street greenspace
Tanyard Creek Park	14.5-acre community park that provides a playground
Washington Park	20.43-acres; amenities: restrooms, recreation center, trail, pavilion, picnic shelters, ball fields, natatorium, playground, grills

6.4.2 Preferred Alternatives

The Preferred Transit and Trail Alternatives are not engineered alignment concepts, but rather generalized alignment locations that will be further developed and assessed in Tier 2 analyses. Section 6.4.2.2 describes the preliminary analysis for parks.

6.4.2.1 Preliminary Section 4(f) Analysis for Historic Properties

As identified in the previous sections, 180 historic properties have been identified within the study corridor of the proposed Atlanta BeltLine. The Preferred Transit and Trail Alternatives have the potential to affect a similar number of historic properties as the other transit and trails alternatives considered in the Tier 1 DEIS, shown in Table 6-2. It should be noted that a formal evaluation of effects under Section 106 for this project will occur during Tier 2 analysis as directed by the GA SHPO.

Table 6-2: Significant Historic Sites Potentially Affected

Zone	Numbers of Significant Historic Sites Potentially Affected								
	Transit Alternatives					Trail Alternatives			
	All A- CSX Howell Jct.	All B- Howell Jct.	All C- CSX Marietta Blvd.	Preferred Transit Alternative (All D- Marietta Blvd.)	All F- Atlantic Station	Marietta Blvd.	Howell Jct.	On-Street	Preferred Trail Alternative
Northeast *	29	29	29	29	29	29	29	29	29
Southeast*	42	42	42	42	42	42	42	42	42
Southwest*	16	16	16	16	16	16	16	16	16
Northwest	19	18	17	17	21	12	12	16	15
Totals	106	105	104	104	108	99	99	103	102

* The impacts of the Preferred Transit and Preferred Trail Alternatives share the same number of potential impacts where transit and trails are co-aligned in the Northeast, Southeast, and Southwest Zones.

Note: Preferred Transit and Trails Alternatives are shaded.

In the northwest zone, the Preferred Transit and Trails Alternatives will have the same or fewer potential effects to historic properties than the other transit and trails considered in the Tier 1 DEIS.

Each property for which a potential affect may occur will be examined on a case-by-case basis in Tier 2 to determine National Register eligibility and effect under Section 106. Eligible properties will be subject to Section 4(f) evaluation, including a determination of use of Section 4(f) properties and the potential to avoid or minimize use of the properties according to the evaluation procedures of Section 4(f).

6.4.2.2 Preliminary Section 4(f) Analysis for Public Parks, Recreation Areas, and Wildlife Refuges

Table 6-3 below provides a summary of the identified public parks and recreation areas within the potential area of effect and the relationship of those resources to the Preferred Transit and Trails Alternatives. No direct use of public parks, recreation areas, or wildlife refuges is anticipated to occur with the Preferred Transit and Trails Alternatives.

6.5 Conclusions

As described in the previous sections of this chapter, potential 4(f) properties are located within the Atlanta BeltLine study area. The No-Build Alternative proposes projects that could use some of the identified potential Section 4(f) properties. While it is unknown during this phase of planning, it is possible that direct uses of Section 4(f) properties could occur because of the Preferred Transit and Trails Alternatives. During subsequent phases of project development, more detailed planning and engineering will occur. The Atlanta BeltLine project will seek to avoid direct or constructive use of Section 4(f) resources.

Each potential historic property for which a potential affect may occur will be examined on a case-by-case basis in Tier 2 to determine National Register eligibility and effect under Section 106. Eligible properties will be subject to Section 4(f) evaluation, including a determination of use of Section 4(f) properties and the potential to avoid or minimize use of the properties according to the evaluation procedures of Section 4(f).

In Tier 2, public parkland and recreational resource uses, if any, will be determined and the potential to avoid or minimize use of the properties will be assessed according to the evaluation procedures of Section 4(f).

Table 6-3: Potential Uses of Publicly Owned Park and Recreation Properties

Property	Preferred Transit Alternative	Preferred Trail Alternative
Northeast Zone		
Piedmont Park	Adjacent to park	No use
Delta Park	Adjacent to park	No use
Historic Fourth Ward Park	Adjacent to park	No use
Freedom Park	Passes perpendicularly through park within existing rail ROW	Passes perpendicularly through park within existing rail ROW, low potential for use
Selena S. Butler Park	Adjacent to park	No use
Springvale Park	Adjacent to park	No use
Southeast Zone		
Adair Park II	Adjacent to park	No use
Boulevard Crossing	Adjacent to park	No use
Daniel Stanton Park	Adjacent to park	No use
Southwest Zone		
Gordon-White Park	Adjacent to park, transit line separated from property by White St. NW	No use
Green Leaf Circle	No use	No use
Napoleon Circle	No use	No use
Rose Circle Park	No use	No use
Rose Circle Triangle	Adjacent to park	No use
South Gordon Triangle	Adjacent to park	No use
Stafford Street Park	Adjacent to park	No use
Northwest Zone		
Ardmore Park	Adjacent to park	Adjacent to park
Bobby Jones Golf Course	No use	Adjacent to park
Maddox Park	Adjacent to park	Adjacent to park
Mayson-Turner Ashby Street Triangle	Adjacent to park	No use
Tanyard Creek Park	Adjacent to park	Adjacent to park
Washington Park	Adjacent to park	Adjacent to park

Part of the purpose and need for the project is to provide greater connectivity and increased greenspace within the study area. The addition of the Preferred Trail Alternative will help to accomplish this goal. While portions of the trail alignment will be incorporated into existing parks or connect to existing trail systems, it is assumed that these actions will not result in a Section 4(f) "use" of the publicly owned properties as long as land ownership will remain the same and the addition of the trail is consistent with existing uses on the properties.

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7.0 PUBLIC INVOLVEMENT

This chapter describes the public involvement activities that were conducted as part of the Tier 1 EIS.

7.1 Public Involvement and Agency Coordination Plan Summary

A *Public Involvement and Agency Coordination (PIAC) Plan*, based on ABI's *Community Engagement Framework* (CEF 2006) created by City of Atlanta Resolution 06-R-1576 and MARTA's public participation plan, was developed to guide the public involvement process for the Atlanta BeltLine Corridor Environmental Study. The objective of the public participation program is to invite and encourage the public to learn about and become involved in the study. The development of the *PIAC Plan* ensured ongoing public involvement throughout the course of the project using a variety of tools and techniques. The *PIAC Plan* describes how the public, local, state, and federal agencies and decision-makers took part in the identification, development, and implementation of the proposed transit and multi-use trails system in the Atlanta BeltLine Corridor. The *PIAC Plan* summary can be found in Appendix E.

As noted above, the PIAC Plan is based on ABI's CEF and MARTA's Public Participation Plan. ABI's CEF consists of the following in order to keep Atlanta residents informed and actively engaged in the BeltLine's creation so that the Atlanta BeltLine reflects the aspirations of its many neighborhoods and communities:

- Tax Allocation District Advisory Committee (TADAC)
- Atlanta BeltLine Affordable Housing Advisory Board (BAHAB)
- Quarterly Updates for the public
- Community Engagement Advocate Office
- Atlanta BeltLine Study Groups

The remaining sections of this Chapter and Appendix E document how the CEF has been an integral part of the EIS public participation process.

Key objectives of the public involvement efforts are to facilitate public understanding, to solicit input on the alternatives, and to identify potential consequences of alternative courses of action relative to the transportation, social, environmental, and economic context. As part of the *PIAC Plan,* the public, federal, state, and local agencies were given the opportunity to review and comment on key project milestone decisions and to provide MARTA in partnership with ABI with the benefit of public insight throughout the project planning and development process.

The *PIAC Plan* was developed in accordance with Section 6002 of Public Law 104-59 "Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users" (SAFETEA-LU), which mandates the development of a coordination plan for all projects for which an EIS is prepared under NEPA. It stipulates opportunity be provided for involvement at key points by the public and agencies.

7.2 Public Involvement Activities

The public, committees, and agencies were engaged on an ongoing basis during the Tier 1 DEIS to provide timely and current feedback, and to ensure that the EIS process is

consistent with federal policy regarding public participation. A copy of public involvement outreach activities including public, committee, and agency meetings is included in the *PIAC Plan*.

7.3 Public Involvement: Scoping, Workshops, and Meetings

To date, there have been three major decision points in the process where significant involvement from the public, agencies, and project committees was solicited:

- Fall 2008 Public Scoping process to develop the purpose and need as well as goals and objectives for the Tier 1 DEIS
- Spring 2009 Public Workshops series to determine the conceptual ROW for transit and trails and identify possible station locations, transit stops, transit and trail routes, and transit service characteristics
- Fall 2009 and 2010 Public Workshops to present progress-to-date and solicit input from the public on the proposed transit and trail alignment and technology alternatives and No Build Alternative

The meetings were conducted in accordance with NEPA guidelines 40 CFR Parts 1500-1508 and 23 CFR Part 771, and all public meetings locations were compliant with the Americans with Disabilities Act and accessible by public transportation.

7.3.1 Fall 2008 Public Scoping Meetings

The project sponsors conducted a number of Public Scoping Meetings during the Scoping process, which began on July 25, 2008 and ended on September 22, 2008. The forums included formal Public Scoping Meetings, as well as other briefings with neighborhood and business organizations to inform the public, interest groups, and involved agencies about the study, the alternatives under consideration, and related issues. The goal was to encourage active participation from the public and agencies early in the decision-making process.

7.3.1.1 Formal Public Scoping Meetings

The project sponsors conducted eight formal Public Scoping Meetings, two in each of the four zones of the study area. A list of the Public Scoping Meeting locations, dates, and number of attendees are listed in Appendix E.

Each of the formal Public Scoping Meetings followed the same format. At each meeting location, attendees signed-in upon arrival and received a Scoping Information Package. Meeting locations included an “open house” area with information boards illustrating the Atlanta BeltLine Corridor; a tiered EIS process overview; the Tier 1 DEIS goals and objectives; and the proposed transit and trail alignments. MARTA and ABI staff was available to answer questions.

Each meeting included a formal presentation with an overview of the project background and purpose and need; a summary of the environmental process; an overview of the No-Build and Build Alternatives; and a summary of the key issues associated with project implementation. Following the presentation, members of the public had the opportunity to ask questions and provide input to the purpose and need, goals and objectives, alternatives, and their concerns. Attendees had the option of either completing the comment form contained in the Scoping Package at the meeting and dropping it in a comment box or mailing it in prior to the close of the comment period. A record of all

attendees and participants was compiled; individuals were added to the overall Tier 1 DEIS mailing list and database.

A court reporter was present to record the public's comments. Reports from the meetings are available from the MARTA Office of Transit System Planning upon request. The *Scoping Summary Report* (December 2008) details the comments and issues raised by the public during the Scoping meetings.

7.3.1.2 Other Meetings Held During Scoping

Prior to, during, and after the formal Public Scoping Meetings, over 46 supplemental progress presentations and stakeholder briefings occurred at regularly scheduled meetings of ABI, community, neighborhood, and business organizations. Information about the Tier 1 DEIS and the proposed project was available at each meeting. The location, date and time, and number of attendees for these meetings are shown in Appendix E. More than 1,928 residents participated in these other meetings.

7.3.1.3 Summary of Public Scoping Comments Received

The formal comment period for Public and Agency Scoping began July 25, 2008 and ended on September 22, 2008. Throughout the Tier 1 DEIS process, comments received during Scoping were reviewed, considered, and used to shape the purpose and need, goals and objectives, transit and trail alternatives, and evaluation process (see Appendix E for a summary of Public Scoping comments received). The conceptual transit and trail alignments and transit technologies included in the Tier 1 DEIS reflect the comments received during the formal comment period (summarized in the *Scoping Summary Report* (MARTA 2008).

Over 300 people submitted 947 comments: 769 were from comment forms distributed during Public Scoping Meetings and briefings and provided on the Atlanta BeltLine project website at that time, www.itsmarta.com/newsroom/BeltLine.html (the current project websites are www.itsmarta.com/BeltLine-Corr.aspx and eis.beltline.org). The *Scoping Summary Report* (MARTA 2008) details the comments and issues raised during the Public Scoping Meetings.

7.3.1.4 Scoping Meeting Advertisement and Notice

Advertisement of the Public Scoping Meetings appeared in the following venues:

- Newspapers: Atlanta Journal-Constitution (August 9, 2008; August 17, 2008) and Atlanta Daily World (August 14-20, 2008)
- Project Websites
- Other Announcements: A Study Update/Flyer printed in English and Spanish was distributed through the contact database, hand-distributed at neighborhood meetings and locations within the community, and placed on the Atlanta BeltLine project websites that advertised the meetings.

7.3.2 Spring 2009 Public Workshops

7.3.2.1 Citywide Conversation on Transit and Trails

The project sponsors conducted a Citywide Conversation on Transit and Trails on April 2, 2009, from 6:00-8:00 PM at the All Saints Episcopal Church (634 West Peachtree

Street, Atlanta, GA 30308), inviting members of the Steering Agency Committee (SAC), and the public at-large. The purpose of the meetings was to inform the community of the status of the project, obtain input on purpose and need, goals and objectives, and the performance measures and evaluation criteria to be used in assessing the alternatives.

The Citywide Conversation on Transit and Trails included discussions of the overall Atlanta BeltLine project, the Atlanta BeltLine Corridor Environmental Study, and the environmental study interface with Atlanta BeltLine Subarea Master Planning efforts. However, the presentation and subsequent conversation focused on the Evaluation Criteria that would be used to evaluate the project alternatives and upcoming public workshops.

Following the presentation, the attendees (61 in total) divided into groups to review the purpose and need, goals and objectives, preliminary evaluation criteria and associated performance measures. The purpose of this exercise was to get a consensus that the right evaluation criteria and performance measures were in use and to insure that there was not an omission of important information. Breakout discussion topics included study purpose and need; goals and objectives of the project; existing conditions in the corridor; a study update; and, the evaluation criteria and outcomes. A summary of the list of questions received from participants during the meeting, as well as the feedback received from the breakout session, is provided in Appendix E.

7.3.2.2 Spring 2009 Public Workshop Series

From April 13, 2009 to May 4, 2009, five workshops were held, one in each of the Atlanta BeltLine Study Group areas: the southeast, northeast, and southwest zones, and two in distinct areas of the northwest zone (westside and northside) to engage the public in identifying appropriate transit technologies and potential transit and multi-use trail alternatives considered for the project.

Promotion of the workshops took place throughout the study area to involve the public, some of whom were previously involved in Atlanta BeltLine planning efforts, through MARTA and ABI outreach methods. Others participated because of a host of outreach strategies designed to reach community, transit and trail users, and stakeholders of the future transit and trails project. These activities resulted in small group hands-on workshops attended by approximately 105 individuals. A list of the public workshop meeting locations, dates, and number of attendees are listed in Appendix E.

The first portion of the public workshops provided an opportunity for the participants to view a series of display boards and a continuous video that described the various transit and trails improvement options identified in previous studies for the Atlanta BeltLine. A short presentation followed describing the overall Tier 1 DEIS process, results of previous studies, and the purpose of the workshop.

After the presentation, participants formed smaller discussion groups for an interactive exercise focused on identifying potential modifications or additions to the alternative service types, alignments, and station locations previously identified for the Atlanta BeltLine project. Each breakout group included a staff facilitator to lead the discussion, access to an interactive video screen that displayed maps of the proposed project alignment and stations, and a staff person to document the comments and suggestions offered by the group. Following the breakout session, a representative for each group presented a short summary regarding the key points raised by their group.

7.3.2.3 Public Workshop Advertisement

Advertisement for the Public Workshops appeared on the project websites and through a Study Update/Flyer distributed to those listed in the contact database and hand-distributed at neighborhood meetings, churches, community centers, grocery stores, libraries, businesses and other high traffic locations.

7.3.2.4 Public Workshop Extension

To gain additional feedback from the public, there was an extension on the Public Workshop comment period to June 12, 2009. Additional opportunities to engage the public in identifying transit mode technologies and potential transit and multi-use trail alternatives occurred during 12 public and community organization presentations listed in Appendix E.

Through intensified efforts to engage the public in identifying opportunities and impacts for the transit and trails design, community forums already in place, such as libraries, office complexes and mall food courts received an abbreviated version of the presentation. These activities resulted in attendance of approximately 502 individuals. Staff documented the comments and suggestions offered. A summary of the issues raised during the Public Workshops is provided in Appendix E, and detailed in the *Public and Committee Workshops April-June 2009* report prepared as part of this project.

7.3.2.5 Post Public Workshop Meetings

The project sponsors continued to introduce the Tier 1 EIS to new audiences and to update audiences that were formerly briefed. During regularly scheduled meetings of community groups and organizations, the project sponsors provided updates to the community to create awareness of the study and to help promote future public meetings. Public comments and input were included in the project record and considered based on the impact to the project. A list of the post workshop briefings can be found in Appendix E.

7.3.2.6 Summary of Public Workshop Comments Received

Recorded and considered in the refinement of alternatives and transit mode technologies were the comments and suggestions from the five Public Workshops. A summary of the comments made during the workshops regarding transit service type, transit alignments, station locations, and trail alignments is available in Appendix E. The *Public and Committee Workshops April-June 2009* presents a full summary of issues raised by the public during all of the Public Workshops.

7.3.3 Fall 2009 and 2010 Public Meetings

MARTA in partnership with ABI conducted five formal Public Meetings, one in each study area in 2009, and an additional Public Meeting in Fall 2010 to address revisions to Alternatives following FTA comments from the initial version of the Administrative DEIS. A list of the public meeting locations, dates, and number of attendees is in Appendix E.

The public meetings provided an opportunity for the participants to view a series of display boards and videos that described and demonstrated the various transit and trail alternatives. The video presentations at the 2009 and 2010 meetings highlighted potential transit and trail features and provided a “birds-eye view” of the corridor. Also included was the preliminary evaluation and associated methodology of the Build

Alternatives for the Atlanta BeltLine. A presentation followed describing the meeting purpose, overall study process, and preliminary results of the evaluation process reviewing how well the alternatives supported the project's purpose and need. After the presentation, the participants broke into smaller discussion groups for an interactive exercise to obtain feedback on the proposed alternatives and evaluation results for the Atlanta BeltLine. Each breakout group included two consultant team members: one to facilitate the discussion and the other to document group feedback. Comments received from the workshops are detailed in MARTA's *Public and Committee Meetings November 2009 Report* and the *Public Meetings December 2010 Report,* which are summarized in Appendix E.

7.3.4 Public Hearing and Public Comment Period

The USEPA published a Notice of Availability of the Tier 1 DEIS in the Federal Register on July 29, 2011, signaling the beginning of the public comment period. The Tier 1 DEIS was made available for review at libraries and key agencies throughout the City according to federal requirements. The public comment period for the Tier 1 DEIS was held from July 29 to September 17, 2011.

Four Public Hearings were held at 2 locations within the study area, on August 16 and 18, 2011, at which 61 people attended. The hearings were led by MARTA and ABI who used a project video and question and answer session to inform attendees about the project. A formal comment period followed that was led by a neutral third-party facilitator. A court recorder documented the comments and responses.

7.3.4.1 Additional Outreach Before and During the Public Comment Period

A variety of meeting and public involvement strategies were used to update the public on the status of the project and to invite the public to the Public Hearings. For example, a series of meetings was held to present the results of input from the Agencies, TAC, and SAC prior to the public hearings. An additional 19 outreach meetings and activities occurred including NPU briefings, MARTA Elderly & Disabled Advisory Committee, Atlanta Planning Advisory Board, and the TADAC.

7.3.4.2 Comments Received During the Formal Public Comment Period

The total of all comments received during the DEIS comment period was 33. The comments came from the following sources: (14) from the Public Hearing, (8) from the project website, (7) from an online Peak Democracy survey, (2) from MARTA email, (1) from the Project Hotline, and (1) from the Public Hearing Comment Form.

Public comments received during the Public Comment period can be grouped into several general categories described in the Table 7-1 below. Each comment is addressed by the Project Sponsors in Appendix F: Comments Received During the Public Comment Period. FTA and MARTA considered input received during the public involvement process prior to selecting the Preferred Transit and Trail Alternatives.

Table 7-1: Summary of Comments Received During Public Comment Period

Comment Category	Content
Documentation Request	Request for information or draft document
Planning Process	Comments that relate to the EIS planning process and previous or ongoing planning efforts around the Atlanta BeltLine project
Environmental Justice/ Public Involvement Process	Requests for further outreach, or comments related to types of outreach included in the planning process
Agency Coordination	Requests for ongoing and additional agency coordination
Opposed to the Project	Comments in opposition to the Atlanta BeltLine project as a whole
General Support for the Project	Comments in support for the Atlanta BeltLine and the planning efforts surrounding the project
Support for a Specific Technology or Alignment	Comments in support of LRT or SC; comments in support of specific trail and transit alignments reviewed in the Tier 1 EIS process
Alternate Technology or Alignment Suggestions	Suggestions of alternative technologies to LRT or SC, alternative alignments for transit or trail, or additional trail connections and MARTA station connections
Community Impacts	Comments from neighborhood associations, or comments about general community impacts
Environmental Impacts	Comments about the quality of the existing environment or comments concerning potential impacts of the project
Cost Estimates/ Funding	Request for cost estimates and comments regarding funding sources
Agency Comments	Official comments from affected agencies are covered by the other categories in this table
No Comment	Agency or association decided to not make an official comment

7.3.4.3 Public Hearing Advertisements

Advertisement of the Public Hearings appeared in the following venues:

- Newspapers: Atlanta Journal-Constitution (August 8, 2011; August 10, 2011), Atlanta Daily World (August 11, 2011) and Mundo Hispanico (Spanish – August 11, 2011)
- Project Websites

Other Announcements: A meeting flyer and Study Fact Sheet (Newsletter #6) were printed to advertise the public hearings and the newsletter was distributed through public libraries, email, and to frequently visited retail venues in the study group area. Notice of the meeting was also placed on the project websites and notices emailed to SAC and TAC members to share the meeting notice with their contacts.

7.4 Agency Involvement: Coordination, Committees, and Meetings

SAFETEA-LU requires the identification of Lead, Cooperating, and Participating agencies in the development of an EIS. Under SAFETEA-LU, Lead Agencies must perform the functions that they have traditionally performed in preparing an EIS in accord with 23 CFR 771 and 40 CFR parts 1500-1508. According to CEQ regulations, 40 CFR 1508.5, a Cooperating Agency is any federal agency, other than a Lead Agency, that has jurisdiction by law or special expertise with respect to any environmental impact involved in a proposed project or project alternative.

Participating Agencies are those with an interest in the project, invited to comment on the environmental documentation produced as part of the project. Appendix E includes a list of agencies by category designation of Lead, Cooperating, or Participating.

Formation of two committees supported the development of the Tier 1 EIS: the SAC and the TAC. Descriptions of the agency coordination and TAC and SAC committee meetings are provided below.

7.4.1 Lead Agencies and the Technical Advisory Committee

Federal, state, and local agencies received invitations to participate and provide comments regarding possible concerns or considerations for the resource areas under their authority. The Lead Agencies for the Atlanta BeltLine Corridor Environmental Study are FTA and MARTA. The Cooperating and Participating agencies are listed in the *PIAC Plan* and Appendix E.

The TAC is composed of representatives of organizations and agencies that have a specific interest and/or responsibility in the Atlanta BeltLine project or that have shown special interest in the redevelopment of the corridor. It included individuals with technical environmental skills and background.

The role of TAC is to provide advice and input regarding methodology and the scoping process and specific guidance on technical matters. By nature of their technical expertise, in some cases there was an invitation to agencies to serve on both the Agency Coordination Group and the TAC. A list of the TAC member organizations is provided in the *PIAC Plan* and Appendix E.

7.4.1.1 Agency/TAC Meetings and Outreach

Agency/TAC Scoping Meeting

MARTA in partnership with ABI invited interested agencies and the TAC to participate in three meetings in the early stage of the Tier 1 DEIS. One meeting served as the kick-off meeting to introduce the Tier 1 DEIS and the proposed project. The other two meetings occurred during the Public Scoping period.

The Scoping meetings held on July 17, 2008 and August 12, 2008 provided an overview of the Tier 1 DEIS and allowed the participants to comment and ask questions on the purpose and need, goals and objectives, project alternatives and their potential impacts. On August 22, 2008, interested agencies and the TAC reconvened to respond to the Scoping materials provided at the August 12 meeting. There was also a synopsis of comments made during the formal Public Scoping Meetings. The *Scoping Summary Report* (MARTA 2009) lists comments of note mentioned during the meeting and responses to the request for comment.

At the Agency Scoping Meetings, attendees reviewed presentation materials provided at the Public Scoping Meetings. After a review of the project and Atlanta BeltLine background, participants had the opportunity to comment on the Tier 1 DEIS and advise MARTA of their issues of concern. The *Scoping Summary Report* (MARTA 2009) discusses these comments in detail, as well as the responses to comments received. The Agency and TAC members provided comments during the Scoping Meeting. Full detail of comments is listed in Appendix E.

Agency/TAC and Client Group Meeting on the Existing Conditions and Evaluation Criteria

MARTA in partnership with ABI held a meeting on March 23, 2009 with interested agencies and the TAC to review and discuss the results of the analysis of existing conditions in the Atlanta BeltLine study area and evaluation criteria for the alternatives.

The Agency/TAC meeting included; viewing of project display boards, discussion on the purpose of the meeting, presentation on key project milestones, highlights of the *Environmental Effects Report* (MARTA & ABI 2009) and evaluation methodology and criteria, discussion on the upcoming public workshops, and review of the next steps in the study process. Following the presentation, the attendees formed two smaller groups to review the evaluation criteria, specifically the performance measures. The purpose of this exercise was to get a consensus that the performance measures aligned with the goals and objectives of the project, and any revisions or additions to the evaluation criteria.

Additional Agency/TAC Meetings on Alternative Alignments

MARTA in partnership with ABI held workshops were held with the following agencies to discuss the alternative alignments: ADA staff and Atlanta's Economic Development Sub-Cabinet A on May 28, 2009; TAC workshop on June 2, 2009; and MARTA staff on July 9, 2009. The workshops followed a format that was similar to the Spring 2009 Public Workshops described in Section 7.3.2. The *Public and Committee Workshops April-June 2009* (MARTA) report includes the meeting notes from each of these meetings. Appendix E shows the meetings held with the Agency/TAC in Phases 2 and 3.

Agency/TAC Meetings on Alternatives Evaluation

Meetings were held by MARTA in partnership with ABI to review the methodology and results of the analysis of the transit and trails alternatives, to see how the alternatives supported the project purpose and need, how committee and public comments were incorporated into the analysis and to solicit comments and issues from attendees. There were three meetings total: a TAC meeting on November 2, 2009; a TAC meeting on November 30, 2010; and an ADA Economic Development Sub-Cabinet on November 12, 2009. The format and content of the meeting is shown in Appendix E.

7.4.1.2 Notification and Advertisements for Technical Advisory and Agency Committee Workshops

Committee members received email notices two weeks prior to the meetings. Within two days of the meetings, committee members were telephoned to confirm attendance.

7.4.2 Stakeholder Advisory Committee

The SAC serves a key role in encouraging public participation. It is composed of representatives from a variety of area organizations, such as the TADAC, MARTA and ABI's network of citizen and business organizations, faith-based organizations, community-based organizations, and advocacy groups. The SAC provided ongoing assistance to the project, especially in the outreach component. The SAC provided input and comments on the project findings, and played a key role in generating participation from the public at large. A list of SAC members is provided in the *PIAC Plan* and Appendix E.

7.4.2.1 SAC Meetings and Outreach

Formal SAC Kick-Off Meeting

The kick-off meeting for the SAC, held on July 22, 2008 by MARTA in partnership with ABI, introduced the project, the environmental process, and project milestones, and discussed the role of the SAC. There was also encouragement of the SAC to solicit community participation throughout the Tier 1 DEIS. Twenty-five committee members attended (see Appendix E).

SAC Scoping Meeting

MARTA in partnership with ABI invited the SAC to participate, along with the public, in a series of Scoping Meetings. In preparation for the meetings, the SAC assisted in promoting the series of meetings by distributing meeting notices both electronically and in hard copy within their community, organizations, and area of influence. At the SAC Scoping Meeting, attendees reviewed presentation materials. After a review of the project and Atlanta BeltLine background, participants had the opportunity to comment on the Tier 1 DEIS purpose and need, goals and objectives, and advise MARTA of their issues of concern. The *Scoping Summary Report* discusses these comments.

SAC / Spring 2009 Public Workshops

SAC members received email invitations to participate, along with the public, in the five Public Workshops held April 13, 2009 through May 4, 2009. The format of the Public Workshops is provided in Section 7.3.2.

SAC Workshop

A SAC Workshop, held by MARTA in partnership with ABI, took place on June 2, 2009 to review and comment on the alternatives considered. The workshop with the SAC followed a format similar to the Public Workshops described in Section 7.3.2 including a brief presentation and interactive breakout group exercise focused on soliciting comments and suggestions relative to the project alignments, station locations, and service types considered for the Atlanta BeltLine project. The *Public and Committee Workshops April-June* 2009 report includes the meeting notes and comments received. Appendix E shows the location of the workshop held with the SAC. Appendix E provides a summary of the input received following the Public Workshops.

Fall 2009 and 2010 SAC Meetings on Alternatives Evaluation

MARTA, in partnership with ABI, held a SAC meeting on November 2, 2009 and on November 30, 2010 to review the methodology and results of the analysis of the transit and trails alternatives; to see how well the alternatives supported the project purpose and need; how committee and public comments were incorporated into the analysis; and to solicit comments and issues from attendees.

7.4.2.2 Notification for Stakeholder Advisory Committee Meetings

SAC members were notified of meetings by way of email notices and telephone notification two weeks prior to the meetings. Within two days of the meetings, phone call reminders encouraged members to attend the meeting.

7.5 Communication Tools

Utilization of a variety of collateral materials and communication tools helped to inform and solicit input from the public and agencies. The communication tools complimented and supplemented the outreach effort. These tools include:

- Stakeholder Contact Database
- Project Websites and Email
- Newsletter
- Study Update
- Telephone Hotline and Business Card
- Media Relations
- Comment Form

7.5.1 Stakeholder Contact Database

The project team developed a master database, which expanded over the course of the project. The database listed interested individuals and groups who desired to keep informed of the progress of the study, and aided in promoting participation at public meetings and notifying the public of key updates to the project website.

The database includes over 850 entries of individuals representing the public, property owners adjacent to the proposed transit and trail alignments, neighborhood planning units, committees, agencies, elected and public officials, civic and community groups, public interest groups, faith-based organizations, and the business community. Updates to the stakeholder contact database have been ongoing throughout the term of the Tier 1 EIS.

7.5.2 Project Website and Email

MARTA hosted a website for the Atlanta BeltLine Corridor Environmental Study at www.itsmarta.com/BeltLine-Corr.aspx.

The ABI/Atlanta BeltLine Partnership website also hosted a project website at http://www.BeltLine.org/BeltLineBasics/TransitTrailsandTransportation/EnvironmentalImpactStudyEIS/tabid/2936/Default.aspx, which later became eis.beltline.org. ABI also issues blast emails regarding meetings and other events.

Both the MARTA and ABI websites provided information and solicited input on the project. The websites contain a synopsis of the project, frequently asked questions, the Tier 1 EIS schedule, newsletters, and study updates. They also contain Tier 1 EIS reports, links to previous relevant studies, as well as contact information and how citizens can get involved. A comment form is available on the MARTA project website. During the project, recording and responding to emailed comments occurred when appropriate. Update of the Comment Summary Database for the project happened as new comments arrived.

7.5.3 Newsletter

The team produced and distributed seven newsletters during the course of the study. These publications address major accomplishments in the Tier 1 DEIS as well as upcoming events. Distribution both electronically and in hard copy made the publications accessible to a greater range of people. The newsletters are available on the Atlanta BeltLine project websites.

7.5.4 Study Update

Six study updates will have been produced during the course of the Tier 1 EIS. The updates are comprised of brief summaries of specific developments, primarily of a technical nature, that have been completed. These updates are written in easy to understand language and are suitable for distribution in hard copy and electronically. The study updates are available on the Atlanta BeltLine project websites.

7.5.5 Telephone Hotline and Business Card

A telephone hotline number allowed interested individuals to contact the Tier 1 EIS team with questions and/or comments regarding the project. The number, (404) 524-2070, links to a recorded message in English and Spanish and remained accessible throughout the course of the Tier 1 EIS. The Hotline number appears in all printed information materials and on the project websites.

A business card created specifically for the project contains all the contact information, including the website addresses, and hotline number. The procedure for collecting and responding to messages left on the Hotline is contained in the *PIAC Plan*. The Tier 1 EIS team logs and responds to all telephone inquiries.

7.5.6 Media Relations

Media coverage aided in advertising the study and as a tool to encourage public participation in the development of the Tier 1 EIS. The *PIAC Plan* contains more than 50 media outlets covered including printed media, radio, television, colleges and universities, and community outlets.

7.5.7 Comment Form

Comment forms, in English and Spanish, are part of the public outreach program. The comment forms solicit responses that pertain to a variety of specific issues as well as general input on the project. Comment forms were available at all meetings and on the project websites. Distribution of the first comment forms took place at the Public Scoping Meetings, while the second was made available through the Atlanta BeltLine project websites.

8.0 ISSUES TO BE RESOLVED AND NEXT STEPS

The Tier 1 EIS process enabled the project sponsors to select a transit mode as well as transit and trail alignments. As described in this FEIS, the Tier 2 analysis will evaluate the Preferred Alternatives in greater detail, focusing on decisions regarding:

- Transit and trail alignments in Station Connectivity Areas;
- Connections to existing or potential infill MARTA stations;
- Determining actual stop locations and developing engineering designs for stops;
- Refining ridership, travel forecasting and developing an operating plan;
- Assessing in-street operating conditions;
- Selecting a maintenance and storage facility site;
- Conducting detailed environmental analyses, striving to avoid or minimize impacts, and developing mitigation where appropriate;
- Refining engineering design for transit and trails, right-of-way needs, cost estimates and a financing plan; and
- Continuing public and agency involvement as required by NEPA in the Tier 2 analysis. Public and agency engagement during the Tier 1 EIS identified the continuing need for outreach, in particular, outreach to minority and low-income communities as well as youth organizations during Tier 2. On-going coordination with CSX during Tier 2 will be undertaken to refine the engineering design where crossings or proximate alignments are contemplated by the Preferred Alternatives. Greater involvement with the City of Atlanta, the State Historic Preservation Office and the Georgia Environmental Planning Department will be important to completing the Tier 2 analysis.

The Tier 1 FEIS process includes a 30-day period for review and comment on the FEIS document. The FTA will consider comments received as it prepares a Record of Decision (ROD). The ROD will either approve or deny the Atlanta BeltLine Preferred Alternatives. It will also state that the NEPA process for the Atlanta BeltLine is not complete until the project sponsors undertake and complete Tier 2 analysis.

The Tier 2 analysis will refine the preferred transit and trail alignments to achieve the most cost-effective investment while avoiding or minimizing potential adverse environmental effects; identify and assess trail design elements, transit station locations, vehicle types, storage facilities, site-specific impacts, and mitigation measures for impacts that cannot be avoided.

The project sponsors will continue public and agency outreach during the Tier 2 as a means of developing and evaluating these elements of the Atlanta BeltLine. The Tier 2 analysis will culminate in an environmental document that is consistent with NEPA requirements under the USDOT Act.