EXECUTIVE SUMMARY

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S.1 Purpose and Need for Proposed Action

S.1.1 Proposed Action

The Commuter Rail Transit (CRT) Project is proposed to operate on the existing CSX Transportation, Inc. (CSXT) A-line rail corridor from the existing DeLand Amtrak Station in Volusia County, south through downtown Orlando and Kissimmee until its terminus at the Poinciana Industrial Park at the intersection on US 17-92 and the CSXT tracks in Osceola County. This 60.8-mile corridor is the same as the final Build Alternative identified in the 2004 Alternatives Analysis report.

This corridor generally parallels Interstate 4 and US 17-92, and contains some of the area's most intensely and densely developed land use. The width of the study area generally includes the major north-south arterial roadways serving downtown Orlando and other major activity centers, principally Interstate 4, US Route 17-92, and SR 434/Forest City Road in the northern portion of the corridor and State Routes 421, 441, 423, 527, and the Florida Turnpike in the southern portion of the corridor.

The purpose of the Environmental Assessment (EA) is to assess the potential impacts of the Project's Full Build Alternative. This is the maximum project that would be built and operated, given the current limits of the CRT Project. The Full Build is the 60.8-mile line between DeLand Amtrak Station and Poinciana Industrial Park.

The communities potentially impacted by the CRT are DeLand, Orange City, and DeBary, in Volusia County; Sanford, Lake Mary, Longwood, Altamonte Springs, and Casselberry in Seminole County; Maitland, Winter Park, Orlando, and Edgewood in Orange County; and Kissimmee in Osceola County.

For the purpose of this EA Full Build analysis, the CRT service includes sixteen station stops with a bi-directional service (on weekdays only) at 15-minute peak period and 60-minute midday and evening service frequencies. The Locally Preferred Alternative (LPA) includes fifteen stations with 30-minute bi-directional service during weekday peak hours and 120-minute service during the midday. Commuter rail service would be operated with Federal Railroad Administration (FRA) compliant Diesel Multiple Unit (DMU) cars.

The Full Build project capital cost is $632.0 million (2005 dollars) and a LPA cost of $447.0 (2005 dollars) for construction. Capital cost of the project is anticipated to be funded through Federal funding (50%), as well as state and local funds. It is proposed that the FDOT along with county governments will fund the remaining 50% of capital costs. The expected distribution is 25% state and 25% local.

S.1.2 Purpose and Need for Action

The CRT project proposes an alternative mode of transportation to improve the mobility of travelers along Interstate 4 (I-4) and other major roadways within the Orlando Metropolitan Region, including, but not limited to, US 17-92, US 441, Orange Avenue, and SR 434 (Forest City Road). The study corridor, which is the primary travel corridor in the region, is highly congested and experiences poor highway levels of service all during the day, especially in the morning mid-day and afternoon peak hours.

The regional transportation system has not kept pace with the area's growth and travel demands. The regional activity centers and the high intensity land uses in the project corridor are not well connected by the existing transportation network. In addition, the level of public transit services provided within the corridor is insufficient to meet the growing mobility needs of the corridor workforce, visitors, and transit-dependent population. The proposed CRT Project assists in addressing these issues. The project meets the following goals, which were developed with the public as well as regional and local stakeholder input.

CFCRT Purpose and Goals are as follows:

- Provide an alternative mode of transportation between DeLand in Volusia County and Poinciana Industrial Park in Osceola County to the employment and activity centers within the Orlando Metropolitan area.

- Provide high capacity, fast, convenient and reliable commuter rail service in the congested Interstate 4 corridor thereby minimizing travel time and developing an integrated regional transit system.

- Assist in the implementation of regional and local growth management plans through more intense land uses and Transit Oriented Development (TOD) practices at the activity center station locations.

- Implement a financially feasible multi-modal transportation system that includes commuter rail and the corresponding growth management plans with established goals, objectives and policies in the four counties and respective cities.

- Provide an efficient regional transit system that is consistent with local transportation and community based plans and regarded as a good investment.

- Protect and preserve the environment and improve the areas quality of life.

Excessive levels of congestion are being experienced in the study corridor, which is the primary travel corridor in the region. This project connects the region's primary residential communities of Volusia, Seminole, and Osceola Counties, to the urban core in Orange County and the City of Orlando by using an existing active rail corridor (CSXT A-line) that is free flowing and reliable as compared to the peak periods on I-4 and US 17/92 on the north, and US 441, and Orange Avenue on the south.

Background

For many years the opportunity to utilize the CSXT right-of-way in Central Florida for passenger use has been discussed. The CSXT right-of-way is currently used 24 hours per day 7 days per week by freight and Amtrak trains. On average there are 10 through freight, 10 local freight trains and up to 6 Amtrak trains operating on a typical day. Many of these trains operate after 11:00 p.m.

The CRT would serve the major cities and concentrated development areas along the A-line in the region's primary travel corridor. CSXT's right of way purpose and use as an existing transportation corridor make it compatible with CRT.

The development of CRT service along this corridor has been the topic of several studies that suggested the development of commuter rail transit (CRT) service in the corridor is a relatively inexpensive alternative to other transit and highway improvements. The *Project Feasibility Report* (1992) by the Central Florida Commuter rail Authority (CFCRA), and the *Regional Systems Plan* adopted by LYNX in 1994, examined the feasibility of providing transit service via various technologies in several corridors around the Central Florida area. Based on these and other studies, the *Central Florida North-South Commuter Corridor Alternatives Analysis*, completed in 2004, recommended the commuter rail alternative with various end points for the project within the north-south corridor, and evaluated the potential impacts of such a project.

The CRT project was included in the METROPLAN Orlando *Cost Feasible Year 2025 Long Range Transportation Plan* adopted in June 2005 and the Volusia County Metropolitan Planning Organization (MPO) *2025 Cost Feasible LRTP* adopted in November 2005. These major planning studies have provided the basis for the development of the EA for the commuter rail system from DeLand Amtrak Station to Poinciana Industrial Park.

S.2 Alternatives

A wide range of alternatives were identified and analyzed during the Alternatives Analysis completed in 2004 which were modified and further defined after an intensive local government coordination effort and public outreach process. The following is a summary of the No Build, Transportation System Management (TSM), and Full Build Alternatives.

S.2.1 No Build Alternative

The No Build Alternative is a requirement of the NEPA regulations and serves as the future build year baseline for establishing the environmental impacts of the alternatives, the financial condition of implementing and operating agencies, and the cost-effectiveness of the TSM Alternative.

The No Build Alternative includes the current and planned roadway and transit projects that are committed and funded. It provides a baseline for comparison to all of the other alternatives. The No Build Alternative reflects significant future transit service and highway network expansion included in the LYNX Transportation Development Plan for Fiscal Years 2005-2009 (TDP) and selected other projects that are included in the Orlando Urban Area Transportation Study (OUATS) Year 2025 Plan Update. The EA No Build Alternative does not include the proposed 22-mile North-South LRT system (from Altamonte Springs to Sea World).

The highway network includes the cost feasible improvements for the highway network from the OUATS Year 2025 Plan Update, including high-occupancy vehicle (HOV) lanes and access ramps on I-4 from Kirkman Road to Maitland Boulevard.

S.2.2 TSM Alternative

The TSM/Baseline Alternative is defined as “the best that can be done” to address the identified transportation deficiencies in the corridor without constructing a new transit guideway. The TSM/Baseline Alternative includes all transit services provided in the No Build Alternative plus the addition of several express and limited-stop bus routes operating in the CRT north and south corridors. These express and limited-stop bus

routes were designed to satisfy the travel markets in the CRT study area. Additional discussion of these travel markets is provided in Chapter 1, which includes a summary of the Travel Market Analysis conducted in January 2005. The Full/TSM Baseline which corresponds to the 60.8 miles CRT is the Alternative that is subsequently compared to the No Build and Full Build CRT Alternatives for NEPA purposes.

S.2.3 Full Build Alternative

The Build Alternative features all of the transit services and projects included in the No Build Alternative with the addition of commuter rail services along the CSXT A-Line. The Full Build version of the CRT extends from DeLand (in west Volusia County) to Poinciana Industrial Park (in Osceola County). Commuter rail service would be operated with self propelled Diesel Multiple Units (DMU) vehicles which provide commuter rail capacity that combines necessary performance with greater operational flexibility than is generally possible with conventional diesel commuter rail equipment.

Two versions of the Build Alternative are described in the following sections: 1) Full Build, and the 2) Locally Preferred Alternative (LPA).

The LPA and Initial Operating Segment (IOS) are simply shorter segments along the Full Build Alternative alignment. Both the LPA and IOS have been discussed with the local communities regarding potential implementation strategies. However, for an assessment of the maximum impact, the Full Build is the Alternative that is the subject of this EA analysis.

The Full Build Alternative would extend from the DeLand Amtrak station to Poinciana Industrial Park, a distance of 60.8 miles, via the CSXT A-Line. A total of sixteen stations are in the Full Build Alternative and they would be located at: DeLand, Saxon Boulevard Extension (DeBary), Sanford, Lake Mary, Longwood, Altamonte Springs, Winter Park, Florida Hospital, LYNX Central Station, Church Street (in downtown Orlando), Orlando Amtrak/ORMC, Sand Lake, Meadow Woods, Osceola Parkway, Kissimmee Amtrak, and Poinciana Industrial Park.

For the purposes of this EA analysis and in order to assess the maximum impact, the proposed service plan would provide 15-minute bi-directional service during morning and evening peak periods and 60-minute service in the midday, Monday through Friday (approximately 260 days per year). This alternative operates 28 DMU vehicles combined in 1, 2 or 3 car consists to complete 56 trips per day. The primary infrastructure requirements include a new signal system and 42 miles of new 2nd track, 16 platform stations, a Vehicle Storage and Maintenance Facility (VSMF), and two end-of-line midday layover facilities. The Full Build Alternative will be constructed in phases beginning with the IOS in 2009, the LPA in 2013 and the Full Build Alternative at some time in the future.

S.3 Environmental Consequences

The proposed project would improve the 60.8-mile rail route within existing railroad rights-of-way. Table S-1 summarizes impacts to the natural and social environment that would result from the build alternatives. This EA considers impacts in the DeLand Amtrak Station to Poinciana Industrial Park Station project corridor when CRT is fully implemented.

S.3.1 Land Use and Zoning

No administrative changes or amendments are required with any of the affected future land use maps to accommodate the proposed CRT project and stations. Transit oriented development may be encouraged by land use changes by municipalities in the CRT corridor and could provide a policy foundation for stronger transit-oriented development and increased ridership.

The existing zoning is compatible with the following stations: DeLand Amtrak, Winter Park Station, Amtrak Florida Hospital, LYNX Central Station, Church Street, Orlando Amtrak/ORMC and Sand Lake Road, Kissimmee Amtrak, Osceola Parkway, and Poinciana Industrial Park stations. The stations in DeBary/Saxon Boulevard, Lake Mary, Longwood, and Altamonte Springs have mixed zoning which needs to be rezoned to be compatible for use as a CRT station.

The Meadow Woods and Osceola Parkway stations will require amendments to existing planned unit development (PUD) zoning. The PUD zoning allows permitted uses and development standards to be defined for each particular development.

S.3.2 Community Cohesion

The Full Build Alternative does not result in adverse impacts to community cohesion in neighborhoods along the corridor. No permanent impacts to the neighborhoods along the Corridor have been identified. For many neighborhoods without strong activity centers, the rail stations provide an opportunity to focus new development, enhance bicycle and pedestrian access and connectivity, streetscape improvements and other benefits associated with the transit stations and station areas.

S.3.3 Environmental Justice

Considering Environmental Justice (EJ) impacts, the Full Build Alternative does not result in disproportionate impacts to identified populations along the Corridor. Residential and commercial displacements will be concentrated in proposed station locations. Proposed station locations in the Full Build Alternative are located near areas with the greatest concentrations of minority population, low-income population, and transit-dependent population, with a higher percentage of transit-dependent populations within a ½ mile radius of the stations than in the surrounding county populations. The Full Build Alternative would provide benefits to transit-dependent populations along the Corridor by increasing mobility and improving access to employment centers throughout the Corridor.

Unmitigated noise impacts associated with the Full-Build Alternative are estimated to exceed the FTA “severe impact” criteria at 54 locations along the Corridor. Most of the impacted locations are residential locations and many of these exceedances occur within areas that have been identified as Environmental Justice areas. However, these areas are already impacted by noise from the warning horns from the existing CSXT freight trains and Amtrak trains. Presently, up to 26 passenger and freight rail trains a day travel along the CSXT corridor, including 10 through trains and up to 10 local trains (depending on location) that travel various segments of the project corridor.

Details of the noise impacts and mitigation are discussed in Chapter 3.3.4 FDOT has committed to implementation of adequate noise mitigation measures to eliminate these potential noise impacts to EJ populations.

S.3.4 Public Safety, Security and Community Services

The Build Alternative improves the safety and security for pedestrians, bicyclists, and motorists by improving the crossing surfaces and protection devices at existing grade crossings, and by installing fencing along sections of the right-of-way to prevent trespassing and intrusion. The rescheduling of freight train operations away from weekdays in the Build Alternative will improve public safety and security by reducing exposure of the general public to those operations. Additionally, crossing delays associated with the long through freight trains will be eliminated from weekdays when most community service related transportation, including school buses, is in operation. While the frequency of operations in the proposed CRT will be higher than in the No-Build, the delay at grade crossings will be predictable and of durations comparable to traffic signal phases.

S.3.5 Economic Impacts

The Project is expected to result in isolated short-term loss in taxable property where privately owned land is needed for stations, offset by significant economic benefits during construction, operations, and increased economic development. The loss in taxable revenue associated with the Full-Build Alternative is estimated at $672,072.22. (This loss in tax revenue is based on the conversion of land from private, or tax-revenue generating status, to public ownership, which does not generate tax revenues. These estimates were based on the 2005 millage rates for each county. If a city's millage rate was less than the county, the county rate was used to generate a worst-case estimate of revenue lost.)

The positive economic impacts of transit are well documented and can be expected to outweigh the short term reduction in tax base at some station locations. New public transportation-oriented development expands business revenues, leading to new jobs and higher wages and salaries, thus increasing the tax base and revenues flowing to local and state governments. Studies show that, nationwide, residential and commercial property values rise with proximity to rail public transportation systems and stations.

S.3.6 Utilities

The final design of the proposed commuter rail service will be coordinated with the utility owners who have facilities within the project Corridor. Proper coordination during design will minimize relocation adjustments and disruptions of service to the public. Any required utility relocations are anticipated to be minor and will be fully coordinated during construction.

S.3.7 Railroads

The addition of approximately 42 miles of new double track and a new railway signal system along the existing CSXT right-of-way will be required to accommodate the Full Build CRT service from DeLand to Poinciana Boulevard. There will be no double track through Maitland and at the St. Johns River Bridge.

The Full Build Alternative will result in improved rail infrastructure and a proposed operating plan to maintain the ability of CSXT and other rail freight operators to provide service to commercial and industrial rail users, and will accommodate existing Amtrak long-distance intercity passenger services. For freight services, the Full Build Alternative provides capacity to accommodate through trains as well as local switching train

movements by shifting freight operations to times of day that will not interfere with the commuter rail service.

S.3.8 Displacements and Relocations

A total of 130.2 acres of property on 98 separate parcels will be directly affected for the Full Build Alternative along the corridor, which includes parcels in both public and private ownership. Without exception, proposed takings are associated with the construction of the proposed CRT stations, although not all proposed stations will require property takings (e.g., Winter Park/Park Avenue, Florida Hospital, LYNX Central Station and Church Street stations do not include parking facilities and will be constructed entirely within existing CSXT or publicly held ROW).

S.3.9 Archaeological and Historic Resources

Station locations associated with historic resources include: DeLand Amtrak (DeLand ACL Railroad Station); Florida Hospital (Orange Avenue Commercial District); LYNX Central Station (Harry P. Leu, Inc.); Church Street (Downtown Orlando Historic District); Orlando Amtrak/ORMC (Orlando ACL Railroad Station); and Kissimmee Amtrak (Kissimmee ACL Railroad Station, Kissimmee Historic District – National Register of Historic Places (NRHP)-listed).

The Full Build Alternative is not expected to result in adverse impacts to archaeological resources. FDOT, in compliance with Section 106 of the National Historic Preservation Act of 1966 and in consultation with the State Historic Preservation Officer, has determined that the proposed action will have no adverse effect on the DeLand ACL Railroad Station (8VO2653), the Orlando ACL Railroad Station (8OR139), the Old Orlando Railroad Depot (8OR25), and the Downtown Orlando Historic District (8OR422). Refer to Appendix E for a copy of the letter received from SHPO dated March 9, 2007.

The following commitments have been made to ensure that potential adverse effects are avoided or minimized:

1. Provide design plans of the proposed DeLand Amtrak, Orlando Amtrak/ORMC and Church Street stations at the 30, 60, and 90 percent stages of completion for SHPO review and comment. The FDOT will coordinate with the SHPO office so that potential visual and aesthetic effects to the above-mentioned historic properties (8VO2653, 8OR139, 8OR422 and 8OR25) can be avoided or minimized. The plans will show the exact location of platforms and other improvements, including proposed parking areas. The SHPO will have a period of 30 days upon receipt of acceptable plans to complete their review.

2. Provide a sensitive design treatment for the three proposed stations and will ensure that the design, materials and locations of station platforms and canopies are architecturally and aesthetically compatible with the design of nearby historic resources.

3. Consult with SHPO office to determine appropriate landscaping treatments designed to reduce the potential visual effects of parking lots and ancillary features at the proposed stations.

4. Make every reasonable effort to maintain the rural character of the DeLand Amtrak Station through the use of environmentally compatible elements, such as vegetative screening, in the design of parking lots and sidewalks.

5. Make every reasonable effort to minimize physical alterations to the historic properties. Where required, alterations will be made in accordance with the *Secretary of the Interior's Standards for the Treatment of Historic Properties* (36 CFR Part 68).

6. Should there be any changes to previously reviewed and agreed upon design plans, FDOT will contact SHPO and provide the opportunity for review and comment. The SHPO will have a period of 30 days upon receipt of acceptable plans to complete their review.

The proposed action will not require the use of any properties as defined by Section 4(f) of the U.S. Department of Transportation Act. FTA has determined that Section 4(f) does not apply.

S.3.10 Recreation and Parkland Resources

The Full Build Alternative will not result in direct impacts to publicly-owned parks and recreation areas along the corridor. Temporary construction activities will be controlled so they do not affect access to the parks. Construction impacts that would temporarily affect park and recreational experiences include increased noise, dust, and truck traffic. These impacts will be minor and mitigated. The Full Build Alternative will benefit park users by providing improved access to several significant parklands and recreation areas along the corridor.

S.3.11 Pedestrian and Bicycle Facilities/Access

The Full Build Alternative will result in benefits to pedestrian and bicycle facilities and access along the corridor, providing a transit alternative that will encourage commuters to walk and bike to transit as an alternative to driving. The Full Build Alternative also provides an opportunity to maximize the use of existing pedestrian and bicycle facilities and to develop additional pedestrian/bicycle facilities and improvements. Where appropriate, new sidewalks and crosswalks with pedestrian signals will be constructed at the new stations, and pedestrian signage will be provided to clearly mark pedestrian paths to and from parking areas.

In addition, bicycle racks will be provided on CRT trains to accommodate bicycle commuters who may wish to commute to the CRT stations on bicycle. Similar bicycle accommodations are provided on existing LYNX bus routes within the CRT corridor. Bicycle racks will also be provided at each station.

S.3.12 Visual and Aesthetic Resources

No negative visual impacts are anticipated, therefore, no specific mitigation measures are necessary. Impacts to existing visual and aesthetic resources along the corridor are expected to be minor. The smaller size of the CRT DMU train set, when compared to the existing CSXT freight trains, Amtrak passenger trains and the Auto Train, results in a much smaller intrusion into the visual landscape.

S.3.13 Air Quality

The Full Build Alternative will result in minor additional amounts of total annual emissions of Nitrogen Oxides and particulate matter than that of either the No Build or TSM Alternatives. This reflects the use of diesel-powered DMUs for the project, and is not considered to be a significant impact. Emissions of volatile organic compounds are slightly lower than the No Build Alternative, reflecting the lower Vehicles Miles Traveled on regional roadways for the Full Build Alternative. The Full Build Alternative does not result in exceedences of either the 1-hour or 8-hour National Ambient Air Quality Standard for carbon monoxide at any intersection analyzed within the study area.

S.3.14 Noise and Vibration

A detailed noise and vibration assessment was performed along the project Corridor, from DeLand in Volusia County to Poinciana Boulevard in Osceola County.

Noise

In summary, this is an existing freight and passenger corridor with 126 active at-grade crossings, 10 through freight trains, 6 Amtrak trains, and up to 10 local switcher trains traveling and sounding their horns throughout the entire line 24 hours a day, 7 days a week. The CRT represents an increase in the existing type and volume of noise, and will result in trains and warning horns being heard more frequently along the corridor during the week. The total amount of community noise exposure is already at a high level and people already exposed to high levels of noises can be annoyed by even small increases in cumulative noise levels. Should some CSXT through freight trains be redirected off the line in the future the cumulative operational and train horn noise levels along the line for freight that were used in this analysis would be lower.

The number of predicted FTA noise impacts along the project corridor is 163 moderate impacts and 54 severe impacts due to the use of the DMU warning horns at the grade crossings. To further reduce these noise impacts, the DMU warning horns could be modified or re-designed to reduce the sideline noise while still maintaining the FRA's minimum noise requirement of 96 dBA Lmax measured at a distance of 100 feet from the centerline of the horn. The FEIS prepared for the Utah Transit Authority Weber County to Salt Lake City Commuter Rail Project (April 2005), based the results of the noise analysis using a sheet metal shroud packed with 4-inch foam rubber as mitigation. The sideline noise levels from the train horns were estimated to be reduced by up to 22 dBA while maintaining full level of on-axis output and would be consistent with FRA requirements. Applying this mitigation technique or similar redesign of the horn to reduce sideline noise of the DMU warning horns can be expected to eliminate all moderate impacts and severe impacts of the CRT.

FDOT is committed to constructing a commuter rail project that will not have adverse noise impacts on a corridor community with existing high noise exposure. During the start-up period of commuter rail operations, FTA, with the assistance of FDOT, will prepare a detailed noise assessment. This assessment will verify the predicted project noise levels in the EA and test the efficacy of its operational and horn noise analysis and mitigation measures to ensure that there will be minimal community noise impacts from this project. The sheet metal shroud and foam rubber insulation shall be installed on all locomotives as described in the Mitigation section of this EA.

If noise monitoring during the start-up period reveals that the selected mitigation does not adequately control noise, the project sponsor is committed to adopting additional measures to reduce noise. In this case, the goal will be to eliminate all impacts in the "severe" range and to minimize the number of impacts in the "moderate" range. Such an outcome is consistent with FTA's FONSI for the project.

Vibration

FTA criteria are related to ground-borne vibration levels expressed in VdB that are expected to result in human annoyance. These criteria were used to assess annoyance due to ground-borne vibration from the DMU transit operations. The Full Build Alternative will not result in adverse vibration impacts along the corridor, therefore, no mitigation measures are required.

S.3.15 Ecosystems

In accordance with FTA requirements and the NEPA of 1969, as amended, an evaluation regarding important natural features, habitats, and protected species occurrence within the proposed project area was conducted.

In order to determine occurrence and potential occurrence of important natural features, habitats, and state and/or federally protected plant and animal species within the study area, preliminary data were collected and field investigations were conducted. The Endangered Species Biological Assessment Report (ESBAR) provides a detailed description of the methodology used to identify and quantify the type and acreage of each habitat and listed species within the Corridor. The ESBAR is provided separately as a technical support document.

Natural Communities

Natural areas recognized as ecologically viable areas representative of Florida's natural ecosystems occur adjacent to the study area. The proposed project's utilization of existing disturbed railroad corridor, which has existing active freight activity, will result in minimal or no impacts to these areas.

Wetlands as natural communities are addressed in Section 3.3.7 and thoroughly discussed in the CRT Wetlands Evaluation Report, provided as a separate technical support document.

Blue Spring State Park is located immediately west of the northern portion of the project area and contains portions of the existing rail right of way. This park is managed by the Florida Department of Environmental Protection (FDEP). Lake Beresford, managed by Volusia County Government, is adjacent to the project area. Given the location of the proposed project along an existing active rail corridor and within existing CSXT ROW, neither of these managed areas is expected to be significantly affected by the proposed project.

Potential Natural Areas (PNAs) identified along the project area include areas of upland mixed forest and scrub. While upland mixed forest and scrub habitats were observed adjacent to the project area, the existing disturbed nature of the CSXT corridor results in no direct impacts and only limited potential secondary impacts to areas designated as PNAs.

Through compliance with federal, state, and local regulations, as described in the Wetlands and Water Quality Sections of this document, this project and all described alternatives are expected to have no significant adverse impacts on natural communities.

Threatened and Endangered Species

Based on preliminary data collection efforts and field surveys, a number of potentially occurring and documented protected species are recognized for the area of the CRT project.

While the proposed project and alternatives are estimated to, at worst, possibly "affect, but not likely to adversely affect" the species indicated for the study area, protection measures and guidelines as referenced in the ESBA will be followed for all design and construction phases of this project or alternatives. Additional measures and permitting requirements are indicated for the Florida Scrub-Jay, Gopher Tortoise, Bald Eagle and Crested Caracara, Eastern Indigo Snake, and the Florida Black Bear.

Considering the mitigation measures proposed, no significant adverse impacts are anticipated to the regional populations of the federally or state-listed species protected by the Endangered Species Act of 1973, amended (16 U.S.C. 1531 et seq.). Refer to Appendix E for a copy of the letter received by USFWS dated February 21, 2007.

S.3.16 Wetlands

Full-Build Alternative wetland and other surface water feature impacts are estimated at 23.56 acres. Of these impacts, 18.21 acres are directly associated with station locations. In the locations where new parking lots will be required, efforts would be made to avoid direct impacts to any extant wetland resources. Wetland impacts will be mitigated pursuant to S. 373.4137 FS to satisfy all mitigation requirements of Part IV Chapter 373, F.S. and 33 U.S.C.s. 1344.

S.3.17 Water Quality

Point Source Pollution and Stormwater

The most significant water quality issues and regulation for the proposed project involve point source pollution. Water quality impacts, if any, are addressed in urban sections of the project under local MS4 requirements and WMD drainage and stormwater requirements for treatment of runoff from impervious area. As secondary or cumulative impacts, these effects will be negligible through compliance with the appropriate regulatory agency requirements during design and construction.

The proposed stormwater facilities design will include, at a minimum, the water quantity requirements for water quality impacts as required by the South Florida WMD and St. Johns River WMD in Rules 40E-4, Florida Administrative Code (F.A.C.), and 40C-4, F.A.C.

Outstanding Florida Waters

The project coincides with Outstanding Florida Waters near its northern terminus, in Volusia County: Blue Spring State Park and the Wekiva River Aquatic Preserve. Proposed components of the project for this area consist primarily of minor grading and additional track construction to be accommodated entirely within the existing active freight and passenger railroad ROW; there will be no direct impacts to the abutting Blue Spring

State Park or Wekiva River Aquatic Preserve. Therefore, no impacts to these Outstanding Florida Waters are expected.

Wild and Scenic Rivers

There are no Federal Wild and Scenic Rivers located along or adjacent to the project Corridor.

Aquatic Preserves

The Wekiva River Aquatic Preserve is adjacent to the proposed project area. Per the discussion on Outstanding Florida Waters, no impacts to Aquatic Preserves are expected.

Coastal Zone Management (CZM) and Coastal Barrier Resources

The project is consistent and in accordance with the state's CZM Program. There are no anticipated impacts to coastal resources associated with this project. Therefore, no impacts to the Florida coastal zone are expected from implementation of the No Build, TSM or Full Build Alternatives.

Floodplains

The encroachments to the floodplain are not anticipated to have an adverse effect. In summary, any required mitigation measures for floodplain and floodway encroachment will result in no net impact for the Full-Build Alternative.

S.3.18 Contamination

There are no hazardous waste disposal sites regulated under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) located along the project Corridor, and construction of the Full Build Alternative would not interfere with existing remediation activities at any existing remediation site.

For the Full Build Alternative, all potentially contaminated sites within 300 feet of the 16 proposed stations and the VSMF at Rand Yard were identified. Six station locations were assigned a Low Contamination Risk Potential Rating (CRPR), and 10 station locations and the proposed VSMF facility were assigned either a Medium or High CRPR. Mitigation measures, dependent on the results of additional site specific assessments of soils and groundwater will be developed during project design, as appropriate.

S.3.19 Farmlands

The State of Florida has not established criteria for defining and delineating Additional Farmland of Statewide Importance. Criteria for defining and delineating Additional Farmland of Local Importance are determined by appropriate county agencies. Some counties have established criteria for defining and delineating Additional Farmland of Local Importance.

There will be no impacts to Important Farmlands for the CRT project, including commuter rail station locations. This conclusion is based on the use of the existing rail ROW for the proposed project. For the proposed station locations for the Full Build Alternative, analysis of soil map units revealed that no soils meeting criteria for Prime Farmlands occur within any of the proposed station locations.

S.3.20 Energy

The Full Build Alternative includes the use of an existing rail corridor and the amount of new rail construction is limited along the project Corridor. A limited amount of construction is proposed at new station sites (shelters, kiosks at all sites and rail crossover structures at three stations Sanford, Florida Hospital and Sand Lake Road).

The Full Build Alternative will result in a greater reduction in transportation energy use in the CRT study area for the year 2025, compared to the No Build Alternative. The projected energy use decreases from 733,970 million Vehicle Miles Traveled (VMT) in the No Build to 733,938 million VMT in the Full Build Alternative.

Because the implementation of the Full Build Alternative would result in a reduction in indirect energy usage in the project study area, no mitigation measures are required.

S.3.21 Construction Impacts

Noise and vibrations impacts will be from the heavy equipment movement and construction activities such as pile driving and vibratory compaction of embankments. Noise control measures will include those contained in FDOT's "Standard Specifications for Road and Bridge Construction," in addition to those recommended in the Construction Noise and Vibration Mitigation section of this document. Adherence to local construction noise and/or construction vibration ordinances by the contractor will also be required where applicable.

Cleanup and remediation efforts during construction include removal of contaminated soil and/or groundwater. Contaminated soil typically will be stockpiled in designated areas along the alignment, and then transported from the stockpile area for further treatment or disposal. Contaminated groundwater removed as a result of dewatering may be stored in tanks on the construction site, discharged to a local storm drain or sewer in compliance with discharge permit requirements, or transported from the site for treatment or disposal.

S.4 Transportation Impacts

S.4.1 Forecast Ridership

The Full Build Alternative achieves the highest boardings and passenger miles compared to both the TSM Baseline and No Build Alternatives. Linked transit trips are a good indicator of the mode shift achieved because it counts each trip only once in each direction regardless of whether transfers are involved. The Full Build Alternative would result in the largest gain in systemwide linked transit trips of any alternative. Total annual Full Build CRT ridership is forecast to be 13,760 daily boardings in 2025. Growth in passenger miles is increasing at a rate faster than growth in overall ridership because average trip length is increasing.

S.4.2 Operating Revenues and Costs

For this initial stage of analysis, a $2.50 average fare per boarding (2005 dollars) was applied to the forecasted ridership projections to derive operating revenue. The $2.50 average fare reflects a “deep discount” fare policy utilized by LYNX to keep public transit affordable for its riders, as well as the blended yield of a potentially distance-based pricing structure. Other revenue sources identified are: Ancillary (from advertising); Maintenance of Traffic (MOT) funds for I-4 construction mitigation based on the precedent of Tri-Rail during reconstruction of I-95; Section 5307 Preventive Maintenance formula funds; and

state and local operating assistance within a framework established in 2005 between FDOT and local governments.

The total annual Operating and Maintenance cost in the 2025 Full Build Alternative is estimated to be $180.84 million (2005 dollars) including LYNX, VOTRAN and the CRT Project. The CRT portion is $32.56 million (2005 dollars). The commuter rail capital costs for the LPA and the Full Build commuter rail are $447.0 and $632.0 respectively. Detailed information is provided in Chapter 2.

S.4.3 Freight

Freight

The Full Build Alternatives would add a new signal system and approximately 42 miles of second mainline track. These upgrades will result in a faster and safer operation through the Study Corridor for both passenger rail traffic and freight rail traffic. Only a short section in Maitland and the St. John's River Bridge will not be double tracked.

Trucking

The Full Build Alternative would have no impact on long-distance through truck traffic because all major through routes are currently grade separated. Long-distance truck traffic that originates or terminates in the Corridor and local delivery truck traffic is potentially impacted during the CRT peak hour service. However, the intersection, grade crossing and roadways improvements will mitigate the impact of the Full Build Alternative on all local truck traffic.

Marine

The Build Alternatives would utilize the existing rail bridge across the St. Johns River for commuter rail operations. The commuter rail service would operate frequently during weekdays in the morning and afternoon peak commuting periods. The CRT commuter trains are shorter (1, 2 or 3 cars) than Amtrak passenger trains (10 cars) and would travel at speeds equivalent or faster than the Amtrak trains.

Marine traffic on the St. John's River at this location is relatively light during the weekdays and primarily small recreational boats that can usually cross under the bridge with the lift span closed. There is no commercial barge traffic. CRT commuter operations will not be delayed due to marine traffic.

S.4.4 Traffic and Roadway

Traffic operations were evaluated for study intersections and roadways in the Project Corridor for year 2025 No Build and Build conditions. The project will shift a small amount of traffic away from existing roadways to origin stations. The level of Project-related traffic is low compared with traffic on adjacent roadways. There will be very little Project-related traffic at the four destination stations in Orlando. The project will not adversely impact the major roadway movements at the station driveway locations.

The CRT will not increase traffic delay for the vast majority of at-grade crossings throughout the Study Corridor. No study intersections will deteriorate to deficient conditions as a result of the Project. A total of four study intersections and three at-grade crossings located adjacent to stations may experience increased vehicle delay as a result of additional gate down times. The additional delay at these locations can be reduced by implementing mitigation measures that include additional turn lanes at intersections and

signal optimization at grade crossings, and where possible, shifting platforms further away from the crossing.

The parking supply identified for the CRT would be adequate to accommodate parking demand and the limited locations with potential parking impacts are fully mitigated in the Full Build Alternative.

The Full Build Alternative has no adverse impact on other existing and planned transit service. A limited number of existing bus routes will be slightly modified to serve the new stations. No new buses will be added. Fewer than 4 buses per hour will be added to the streets adjacent to the stations. Amtrak trains run in the off peak and will be scheduled between the CRT operations. The Full Build Alternative would attract substantial new transit ridership and in so doing reduce regional Vehicle Miles Traveled. By operating within an established active rail line with its own right-of-way, the commuter rail service will provide a highly reliable transit service free of the roadway congestion encountered by transit modes that share roadways with general traffic.

The Full Build Alternative has no significant impacts on other freight transportation modes operating in the study area. The infrastructure improvements and operating plan of the Full Build Alternative has been fully coordinated with CSXT, which currently operates freight rail service in the Corridor. A Memorandum of Understanding with CSXT addresses and confirms that there will be no adverse impact on freight rail transportation in the Corridor. As described in the section above, the Full Build Alternative will have no adverse impact on truck or marine traffic.

S.4.5 Station Parking

For station locations where businesses or residences would be impacted (Lake Mary Station, Longwood Station, Altamonte Springs Station, and Sand Lake Road Station), the businesses or residences will be relocated as part of the Project's Relocation Plan. The Kissimmee Amtrak Station parking will be replaced with the new surface parking that is part of the Kissimmee Intermodal project. The Project will not reduce parking for any businesses/residences that will continue to operate adjacent to the Project. In summary, the CRT Project's impact on parking is not significant.

S.4.6 Intersections and Grade Crossing Improvements

A critical component to the Full Build Alternative operation that will greatly reduce at-grade crossing vehicle delay due to CRT and freight trains will be the replacement of the old existing railway "Fixed Start" crossing warning system with new Constant Warning Time (CWT) crossing protection technology for crossing protection activation (i.e., lights and gates). The CWT technology determines, based on a trains speed, when to activate the crossing protection to provide a constant 30 seconds of advance warning for every train (CRT or Freight). In contrast, the existing Fixed Start system uses a fixed location for the at-grade crossing protection activation device that is based on the maximum train speed allowed. Therefore, if a train is traveling significantly slower than the maximum speed allowed, the crossing protection will be active much longer before the train arrives.

The 3 grade crossings with significant adverse impacts are Lake Mary Boulevard, SR 436 (Altamonte Drive), and Poinciana Boulevard. The impact on vehicle delay at these three at-grade crossings can be reduced by optimizing train signals to reduce gate down times.

The CRT Full Build will not increase traffic delay in 2025 for 108 of the at-grade crossings throughout the Study Corridor. Overall daily delay at grade crossings would increase by approximately 8 percent in the CRT Full Build. Vehicle delay at three at-grade crossings located adjacent to stations can be reduced by optimizing signal operations and redirecting some of the long through freight trains to other lines.

CSXT freight trains generate a disproportionate amount of delay due to their length and slow speed. In addition to the specific mitigation measures, several system-wide measures (e.g., CWT) will be implemented as part of the Full Build Alternative that will not only reduce the impact of the CRT, but improve overall operations.

In summary, the CRT will have only a limited impact on intersections and roadways in the Study Corridor. The four intersections within the study area and three at-grade crossings that may be impacted by the CRT can be improved through relatively low-cost mitigation measures. Elements that will be implemented as part of the CRT, such as a new CWT signal system, will reduce grade crossing delays and improve operations and safety throughout the Corridor.

S.5 Summary of Impacts

Table S-1 provides a summary listing of impacts identified in the Environmental Assessment. The largest impacts that must be mitigated are related to noise and potential delays at the at-grade crossing near the three of the 16 stations. Table S-2 through Table S-5 provides a summary of impacts by station location.

Table S-1: Impacts Identified in the Environmental Assessment

Impacts	Measure
Land Use	Development incompatible with local planning
Community Cohesion	Disruption to existing neighborhoods
Environmental Justice	Disproportionate impact to Environmental Justice populations
Public Safety, Security and Community Services	Delays in providing public safety services; impeded access to community services
Economic Impacts	Loss of tax revenue
Utilities	Relocation of major utility systems
Railroad	Impacts to existing rail traffic
Displacements and Relocations	Displacement of residencies and/or businesses
Historic and Archaeological Resources	Adverse effect or effect to eligible historic or archaeological resources
Recreation and Parkland Resources	Conversion of parklands and recreation areas to different use
Pedestrian and Bicycle Facilities/Access	Impacts to pedestrian and bicycle travel patterns and facilities
Visual and Aesthetic Resources	Negative visual impacts
Air Quality	Exceeds NAAQS
Noise	Exceeds FTA Noise Impact Criteria
Vibration	Exceedences of FTA vibration impact criteria
Ecosystems	Impacts to natural areas or T&E species and habitats
Wetlands	Impacts to jurisdictional wetlands
Water Quality	Point source impacts; impacts to floodplains
Contamination	Impacts to known hazardous waste sites
Energy	Increase in energy consumption
Construction	Significant temporary impacts
Station Roadways	Increase in traffic volumes
Intersection LOS	Degradation in Level of Service
At-grade Crossing	Change in peak hour and daily delay
Station Parking	Displacement of existing parking or impacts to neighborhoods
Transit - Systemwide	Impact to other existing or planned bus transit services, and systemwide ridership
Transit - Other	Interference with existing Amtrak service
Freight Rail Traffic	Interference with freight rail services
Trucking	Interference with trucking routes
Marine	Reduction in openings of St. John's River Railroad Bridge

Table S-2: Station Impact Summary - Volusia

Impacts	DeLand Amtrak Station	DeBary/Saxon Blvd. Extension Station
Land Use	Rezoning allowed	Rezoning allowed
Community Cohesion	Vacant land	Vacant land
Environmental Justice	None	None
Public Safety, Security and Community Services	Some improvements	Some improvements
Economic Impacts	Positive impact in Long term	Positive impact in Long term
Utilities	Minor changes	Minor changes
Railroad	Maintain access to existing rail users	Maintain access to existing rail users
Displacements and Relocations	None	None
Historic and Archaeological Resources	Conditional No effect	NA
Recreation and Parkland Resources	NA	NA
Pedestrian and Bicycle Facilities/Access	Improved access	Improved access
Visual and Aesthetic Resources	Minor	Minor
Air Quality	No exceedences	No exceedences
Noise	None	None
Vibration	Less than existing	Less than existing
Ecosystems	None	None
Wetlands	.59 acres	1.61 acres
Water Quality	1.4 acre detention pond	1.7 acre detention pond
Contamination	Medium	Low
Energy	Reduction in indirect energy usage	Reduction in indirect energy usage
Construction	Temporary	Temporary
Station Roadways	154 a.m. peak hour trips added	95 a.m. peak hour trips added
Intersection LOS	Minor change	Minor change
At-grade Crossing	Minor change	Minor change
Station Parking	180 spaces added	275 spaces added
Transit - Systemwide	Improved service	Improved service
Transit - Other	Interface with Amtrak	Interface with Amtrak
Freight Rail Traffic	Safer operation	Safer operation
Trucking	Minor change	Minor change
Marine	No change	No change

Table S-3: Station Impact Summary - Seminole

Impacts	Sanford/SR 46 Station	Lake Mary Station	Longwood Station	Altamonte Springs Station
Land Use	Rezoning allowed	Zoned for High Density Use	Zoned for High Density Use	Rezoning allowed
Community Cohesion	No disruption to neighborhoods	Minor disruption to neighborhoods	Moderate disruption to neighborhoods	Minor disruption to neighborhood
Environmental Justice	None	1 business	None	2 residences, 2 businesses
Public Safety, Security and Community Services	Some improvements	Some improvements	Mitigation identified	Mitigation identified
Economic Impacts	Positive impact in Long term	Positive impact in Long term	Positive impact in Long term	Positive impact in Long term
Utilities	Minor changes	Minor changes	Minor changes	Minor changes
Railroad	Maintain access to existing rail users	Maintain access to existing rail users	Maintain access to existing rail users	Maintain access to existing rail users
Displacements and Relocations	1 Business	7 Residences 1 Business	3 Residences 3 Businesses	2 Residences 13 Businesses 1 parking lot
Historic and Archaeological Resources	NA	NA	NA	NA
Recreation and Parkland Resources	NA	Improved access	NA	NA
Pedestrian and Bicycle Facilities/Access	Improved access	Improved access	Improved access	Improved access
Visual and Aesthetic Resources	Minor	Minor	Minor	Minor
Air Quality	No exceedences	No exceedences	No exceedences	No exceedences
Noise	Impact mitigated	Impact mitigated	None	Impact mitigated
Vibration	Less than existing	Less than existing	Less than existing	Less than existing
Ecosystems	None	None	None	None
Wetlands	3.97 acres	2.98 acres	.90 acres	None
Water Quality	.8 acre detention pond	1.25 acre detention pond	.6 acre detention pond	1.2 acre detention pond
Contamination	High	High	Medium	High
Energy	Reduction in indirect energy usage	Reduction in indirect energy usage	Reduction in indirect energy usage	Reduction in indirect energy usage
Construction	Temporary	Temporary	Temporary	Temporary
Station Roadways	100 a.m. peak hour trips added	256 a.m. peak hour trips added	170 a.m. peak hour trips added	287 a.m. peak hour trips added
Intersection LOS	Minor change	Minor change	Minor change	Minor change
At-grade Crossing	Minor change	Minor change	Slight delay	Slight delay
Station Parking	300 spaces added	650 spaces added	375 spaces added	650 spaces added
Transit - Systemwide	Improved service	Improved service	Improved service	Improved service
Transit - Other	Interface with Amtrak	Interface with Amtrak	Interface with Amtrak	Interface with Amtrak
Freight Rail Traffic	Safer operation	Safer operation	Safer operation	Safer operation
Trucking	Minor change	Minor change	Minor change	Minor change
Marine	No change	No change	No change	No change

Table S-4: Station Impact Summary - Orange

Impacts	Winter Park Station	Florida Hospital Station	LYNX Central Station	Church Street Station
Land Use	Zoned for High Density Use	Zoned for High Density Use	Zoned for High Density Use	Zoned for High Density Use
Community Cohesion	No disruption to neighborhoods	No disruption to neighborhoods	No disruption to neighborhoods	No disruption to neighborhoods
Environmental Justice	None	None	None	None
Public Safety, Security and Community Services	Some improvements	Some improvements	Some improvements	Some improvements
Economic Impacts	Positive impact in Long term	Positive impact in Long term	Positive impact in Long term	Positive impact in Long term
Utilities	Minor changes	Minor changes	Minor changes	Minor changes
Railroad	Maintain access to existing rail users	Maintain access to existing rail users	Maintain access to existing rail users	Maintain access to existing rail users
Displacements and Relocations	None	None	None	None
Historic and Archaeological Resources	NA	No effect	No effect	Conditional No effect
Recreation and Parkland Resources	Improved access	Improved access	Improved access	Improved access
Pedestrian and Bicycle Facilities/Access	Improved access	Improved access	Improved access	Improved access
Visual and Aesthetic Resources	Minor	Minor	Minor	Minor
Air Quality	No exceedences	No exceedences	No exceedences	No exceedences
Noise	Impact mitigated	Impact mitigated	Impact mitigated	None
Vibration	Less than existing	Less than existing	Less than existing	Less than existing
Ecosystems	None	None	None	None
Wetlands	None	None	None	None
Water Quality	No change to existing drainage	No change to existing drainage	No change to existing drainage	No change to existing drainage
Contamination	Low	Low	Low	Medium
Energy	Reduction in indirect energy usage	Reduction in indirect energy usage	Reduction in indirect energy usage	Reduction in indirect energy usage
Construction	Temporary	Temporary	Temporary	Temporary
Station Roadways	193 a.m. peak hour trips added	56 a.m. peak hour trips added	15 a.m. peak hour trips added	17 a.m. peak hour trips added
Intersection LOS	Minor change	Minor change	Minor change	Minor change
At-grade Crossing	Minor change	Minor change	Minor change	Minor change
Station Parking	City of Winter Park to provide	None	None	None
Transit - Systemwide	Improved service	Improved service	Improved service	Improved service
Transit - Other	Interface with Amtrak	Interface with Amtrak	Interface with Amtrak	Interface with Amtrak
Freight Rail Traffic	Safer operation	Safer operation	Safer operation	Safer operation
Trucking	Minor change	Minor change	Minor change	Minor change
Marine	No change	No change	No change	No change

Table S-4: Station Impact Summary – Orange (cont)

Impacts	Orlando Amtrak/ORMC Station	Sand Lake Road Station	Meadow Woods Station
Land Use	Zoned for High Density Use	Rezoning allowed	Amend PUD
Community Cohesion	No disruption to neighborhoods	No disruption to neighborhoods	No disruption to neighborhoods
Environmental Justice	None	None	None
Public Safety, Security and Community Services	Mitigation identified	Some improvements	Some improvements
Economic Impacts	Positive impact in Long term	Positive impact in Long term	Positive impact in Long term
Utilities	Minor changes	Minor changes	Minor changes
Railroad	Maintain access to existing rail users	Maintain access to existing rail users	Maintain access to existing rail users
Displacements and Relocations	None	2 Businesses	None
Historic and Archaeological Resources	Conditional No effect	NA	NA
Recreation and Parkland Resources	NA	NA	NA
Pedestrian and Bicycle Facilities/Access	Improved access	Improved access	Improved access
Visual and Aesthetic Resources	Minor	Minor	Minor
Air Quality	No exceedences	No exceedences	No exceedences
Noise	None	None	Impact Mitigated
Vibration	Less than existing	Less than existing	Less than existing
Ecosystems	None	None	None
Wetlands	None	6.17 acres	.70 acres
Water Quality	No change to existing drainage	1 acre detention pond	4.46 acre detention pond
Contamination	Medium	Medium	High
Energy	Reduction in indirect energy usage	Reduction in indirect energy usage	Reduction in indirect energy usage
Construction	Temporary	Temporary	Temporary
Station Roadways	24 a.m. peak hour trips added	372 a.m. peak hour trips added	416 a.m. peak hour trips added
Intersection LOS	Minor change	Minor change	Minor change
At-grade Crossing	Slight delay	Minor change	Minor change
Station Parking	None	650 spaces added	390 spaces added
Transit - Systemwide	Improved service	Improved service	Improved service
Transit - Other	Interface with Amtrak	Interface with Amtrak	Interface with Amtrak
Freight Rail Traffic	Safer operation	Safer operation	Safer operation
Trucking	Minor change	Minor change	Minor change
Marine	No change	No change	No change

Table S-5: Station Impact Summary – Osceola

Impacts	Osceola Parkway Station	Kissimmee Amtrak Station	Poinciana Industrial Park Station
Land Use	Amend PUD	Zoned for High Density Use	Rezoning allowed
Community Cohesion	No disruption to neighborhoods	No disruption to neighborhoods	No disruption to neighborhoods
Environmental Justice	None	None	None
Public Safety, Security and Community Services	Some improvements	Some improvements	Mitigation identified
Economic Impacts	Positive impact in Long term	Positive impact in Long term	Positive impact in Long term
Utilities	Minor changes	Minor changes	Minor changes
Railroad	Maintain access to existing rail users	Maintain access to existing rail users	Maintain access to existing rail users
Displacements and Relocations	Vacant land	None	Vacant land
Historic and Archaeological Resources	NA	No effect	NA
Recreation and Parkland Resources	NA	Improved access	NA
Pedestrian and Bicycle Facilities/Access	Improved access	Improved access	Improved access
Visual and Aesthetic Resources	Minor	Minor	Minor
Air Quality	No exceedences	No exceedences	No exceedences
Noise	None	Impact mitigated	None
Vibration	Less than existing	Less than existing	Less than existing
Ecosystems	None	None	None
Wetlands	None	None	None
Water Quality	Included Gateway Commons Dev.	No change to existing drainage	.9 acre detention pond
Contamination	Low	High	Low
Energy	Reduction in indirect energy usage	Reduction in indirect energy usage	Reduction in indirect energy usage
Construction	Temporary	Temporary	Temporary
Station Roadways	179 a.m. peak hour trips added	218 a.m. peak hour trips added	157 a.m. peak hour trips added
Intersection LOS	Minor change	Minor change	Minor change
At-grade Crossing	Minor change	Minor change	Slight delay
Station Parking	200 spaces added	390 spaces added	250 spaces added
Transit - Systemwide	Improved service	Improved service	Improved service
Transit - Other	Interface with Amtrak	Interface with Amtrak	Interface with Amtrak
Freight Rail Traffic	Safer operation	Safer operation	Safer operation
Trucking	Minor change	Minor change	Minor change
Marine	No change	No change	No change