

4 TRANSPORTATION IMPACTS

The existing and future baseline conditions of the transportation system and services in the CRT Study Corridor without the proposed CRT Full Build Alternative are summarized in Chapter 4 of the approved EA, pages 4-1 through 4-41. Also included in the approved EA is the description and evaluation of the CRT Full Build impact on the following components of this baseline: traffic and roadways; parking at and near the station sites; public transportation; freight transportation patterns; and the St. John's River marine traffic. That analysis led to the identification of locations with significant potential negative impacts for which solutions are proposed to eliminate or mitigate these impacts.

In this chapter, the Project scope changes to the Full Build Alternative are clarified as they pertain to transportation impacts. As previously stated, although the limits of the Project have not changed, the number of stations has increased from 16 to 17 stations with the addition of Maitland Station. The DeBary/Saxon Boulevard Station is replaced by the Fort Florida Road Station, and the Longwood Station parking has been reconfigured. Transportation impacts are summarized for Maitland Station, Fort Florida Road Station, and Longwood Station. As the DeBary/Saxon Boulevard Station has been removed, it will be excluded from any further analysis related to this project.

4.1 Traffic and Roadways

The Project will have only limited impact on traffic operations at study roadways and intersections. The small number of locations that may be impacted by the Project can be mitigated, as discussed in Section 4.1.6 of the approved EA.

4.1.1 Existing Traffic Conditions

Existing physical, operating, and safety conditions for the traffic roadway system in the CRT Study Corridor were evaluated. The summary of existing conditions listed in Section 4.1.1 of the approved EA illustrated several areas that currently operate deficiently and/or experience safety issues. Further information is provided in the Existing Roadway and Traffic Conditions Report, December 2005. There has been no change in this section. Since the Longwood Station is simply a reconfiguration of the previously approved park-and-ride lot, the station was included within the original documentation for the approved EA.

No existing traffic operational deficiencies have been determined in the vicinity of the Fort Florida Road and Maitland stations.

4.1.2 Traffic and Roadway Impact Analysis Approach and Methodology

Section 4.1.2 of the approved EA summarized the development of daily and peak hour traffic volumes that were used to analyze study roadways and intersections and the major roadway improvements assumed at the study grade crossings and intersections for 2030 No-Build and Build conditions. This section in the approved EA described the approach/methodology used to estimate future traffic volumes for the 2030 No-Build and CRT Full Build Alternative, and presented the resulting roadway and intersection traffic volumes in the vicinity of the CRT route and stations.

There are no changes to this section of the approved EA. Traffic volumes at Project stations will be minimal as compared with traffic on adjacent roadways. It should be noted that the stations do not generate any new trips per se; instead, the transit improvements divert traffic that is already on the adjacent roadway network to the station parking areas to utilize the alternative mode of transportation.

4.1.3 Roadway and Intersection Turning Movement Analysis

The methodology to determine future traffic volumes is explained in Section 4.1.3, page 4-4 in the approved EA.

Table 4-1 summarizes the vehicle trips at the new Fort Florida Road and Maitland Stations during peak hours. Vehicle trips at stations would already be on the future roadway network and are not generated by the Project. With implementation of a new alternative mode of transportation, these vehicle trips would instead be redirected from the adjacent roadway network to the stations.

The proposed stations are generally classified as either “origin” or “destination” (or “walk access”) stations. Origin stations are those locations where most CRT riders would originate their daily trip from, typically a commute trip. These are stations that are located outside the urban core of Orlando where riders would walk, drive or use a feeder bus from their home to the CRT station to board a train for travel to work. Destination stations are locations where CRT riders will alight to walk or connect with a bus to reach their place of employment or other destination. Generally, station vehicle trips are higher for origin stations than for destination stations. Station trips for Fort Florida Road Station and Maitland Station are shown in Table 4-1. The Fort Florida Road Station is estimated to generate 148 vehicle trips during the commuter peak hours and the Maitland Station is estimated to generate 200 vehicle trips during the peak hours.

Table 4-1 2030 Vehicle Trips at Stations in Peak Hours

Station	a.m. Peak Hour		Total	p.m. Peak Hour		Total
	Ins	Outs		Ins	Outs	
Fort Florida Road Station	94	54	148	54	94	148
Maitland Station	128	72	200	72	128	200

Source: Earth Tech Inc. and AECOM Consulting.

The Year 2030 CRT Full Build Alternative traffic volumes and turning movements at Fort Florida Road Station and Maitland Station are shown in Figure 4-1 and Figure 4-2, respectively.

Vehicle trip generation at the Longwood Station has not changed as a result of the parking layout reconfiguration. There was a reduction of 21 parking spaces which would have no impact to vehicle trip generation.

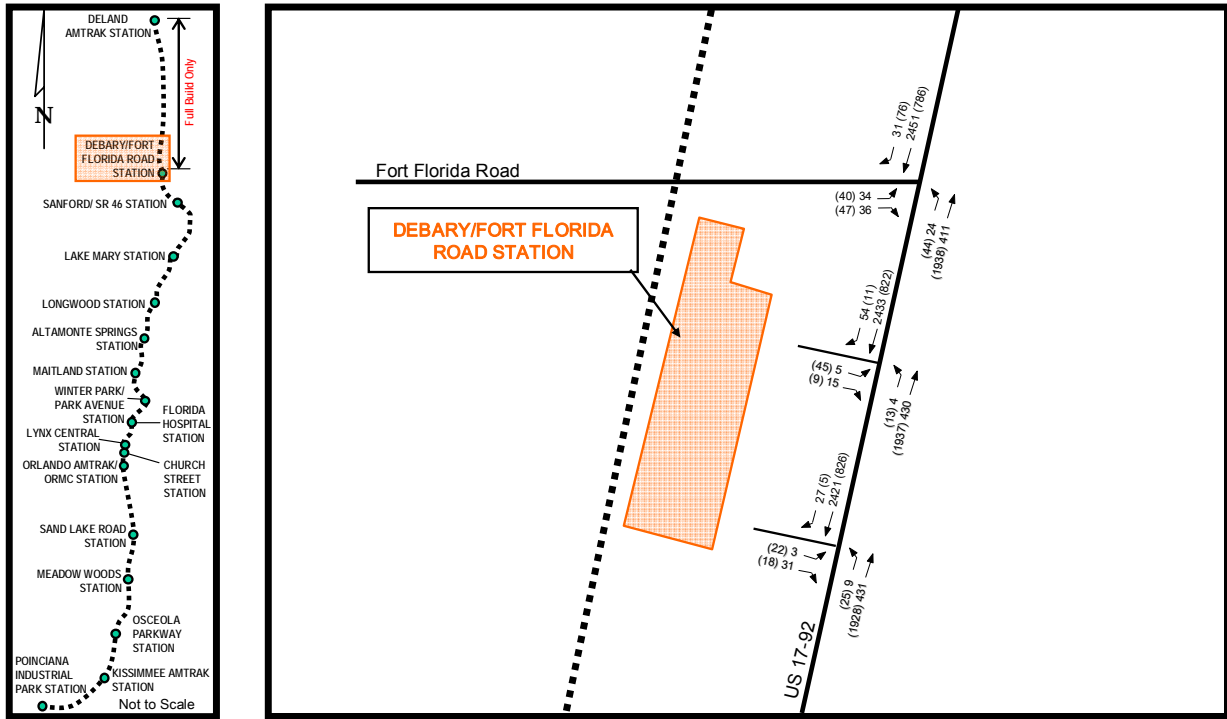


Figure 4-1 Fort Florida Road Station Turning Movement Volumes – 2030 Full Build

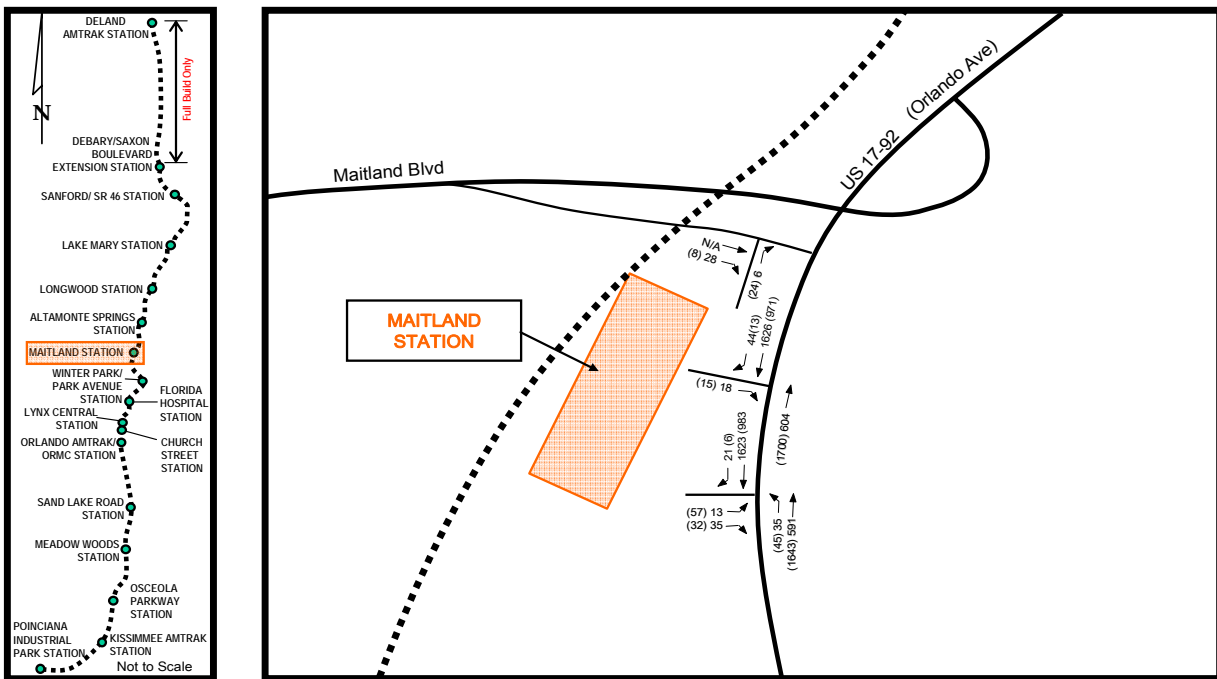


Figure 4-2 Maitland Station Turning Movement Volumes – 2030 Full Build

In summary, a small amount of traffic will be shifted from surrounding roadways to the Fort Florida and Maitland stations. The level of Project-related traffic is low compared with traffic on adjacent roadways.

4.1.4 Station Areas and Intersections

Section 4.1.4 of the approved EA evaluated potential traffic impacts in the vicinity of park-and-ride lots for the TSM Alternative, and proposed station locations for the 2030 No Build and CRT Full Build Alternatives. Since the level of Project-related traffic at stations is low (see Section 4.1.3), the Project has little or no impact on traffic operations on the adjacent roadways and at study intersections.

Station Areas

Table 4-2 summarizes the station roadway traffic analysis results for the new stations at Fort Florida Road and Maitland. Traffic volumes on roadways adjacent to the stations were screened for analysis based on the traffic volume screening criteria outlined in USDOT, Urban Mass Transportation Administration (UMTA, now FTA), Circular C 5620.01, "Guidelines for Preparing Environmental Assessments," October 16, 1979. The impacts are deemed to be generally not significant if the proposed Project would result in total traffic volumes of less than 600 vehicles per hour per lane (vphpl) on principal arterials and 500 vphpl on minor arterials or collectors.

Table 4-2 Station Traffic Screening Analysis Results

	Full Build 2030	Full Build 2030
Station	Exceeds FTA Roadway Volume Threshold ¹	Impacts Public Roadway
Fort Florida Road Station	No	No
Maitland Station	No	No

¹ UMTA C 5620.1, Table K

The traffic volume screening analysis shows that Project-generated traffic volumes along the roadways adjacent to the Fort Florida Road and Maitland stations are below threshold criteria and do not require further analysis. There is no change from the original approved EA for the Longwood Station. In addition, no stations will divert traffic to sensitive areas such as residential neighborhoods, historic districts, or hospital zones. The VMSF is expected to generate only low traffic volumes by employees and would not reach the volume threshold criteria listed above.

In summary, the addition of the Fort Florida Road and Maitland stations will not have an adverse impact on the adjacent roadway system or sensitive areas. The Project will not adversely impact the major roadway movements at the station driveway locations. The reconfiguration of parking at the Longwood Station will not change traffic analysis findings from the approved EA analysis.

4.1.5 Roadway At-Grade Crossings Delays

There are no changes to this section of the approved EA. The CRT Full Build Alternative will have only a limited impact on intersections and roadways in the Study Corridor. The

Fort Florida Road at-grade crossing will not increase traffic delay within the study corridor. The Longwood Station parking reconfiguration will not change results summarized in the approved EA. Elements that will be implemented as part of the CRT Full Build Alternative, such as a new Constant Warning Time signal system, will reduce grade crossing delays and improve operations and safety throughout the Corridor.

4.1.6 Station Pedestrian and Bicycle Connections

The Fort Florida Road and Maitland Stations will provide connections to existing and future pedestrian and bicycle facilities adjacent to these stations. The addition of these stations will not have an adverse impact on pedestrian and bicycle operations and accommodations. The reconfigured Longwood Station will continue to provide connections to existing and future pedestrian and bicycle facilities.

4.2 Parking

Parking was evaluated for the Full Build Alternative and can be found in Section 4.2 of the approved EA. Determining localized parking demands for station areas is a result of travel demand forecasting. FDOT bears the ultimate responsibility for parking mitigation, and is committed to working with local communities and developers for the provision of the necessary number of parking spaces at each station location.

4.2.1 On-Street Parking

A full summary of the parking availability can be found in Section 4.2.1 of the approved EA. A discussion of existing public on-street parking supply and peak demand for a two-block radius around the proposed “walk” stations of Winter Park, Florida Hospital, LYNX Central Station, Church Street, and Orlando Amtrak/ORMC was also included in this section. No on-street parking is provided at the Fort Florida Road and Maitland stations. No on-street parking is associated with the VMSF. The Longwood Station off-street parking revisions will not affect on-street parking. Therefore, there are no changes in this section to the approved EA.

4.2.2 Station Parking

The following is a description of the existing conditions at the proposed Project scope changes CRT stations and the amount of parking that will be provided as part of the Full Build Project. No changes have been made to the other CRT stations.

- **Fort Florida Road Station** – The station design includes 275 park-and-ride spaces in the land parcel acquired for the station.
- **Maitland Station** – The station design includes 250 park-and-ride spaces to be provided by a local developer and the City of Maitland. This joint development agreement is an integral part of the parking plan for this location.
- **Longwood Station** – As a result of minor changes in configuration of the park-and-ride lot, the parking supply will decrease from the approved EA of 375 park-and-ride spaces to 354 spaces.

Table 4-3 shows the proposed parking supply for the new stations at Fort Florida Road and Maitland. The proposed Project scope changes will provide a total of 879 parking spaces.

The proposed parking spaces for both the Fort Florida and Maitland stations is sufficient to accommodate parking demand based on ridership projections and vehicle generation estimates shown above.

The Fort Florida Road Station replaces the previously proposed DeBary/Saxon Boulevard Station which included a parking supply of 275 spaces to meet projected demand.

Current planning at Maitland Station call for the construction of two 125 space parking structures (see Appendix A, A-3 Maitland Station Site Plan). The provision of the proposed 250 park-and-ride spaces at the Maitland Station will be accommodated through a joint use development agreement between the City of Maitland and local developers. FDOT has begun discussions with the city and will continue to formalize agreement conditions as the Project progresses.

The reconfiguration of parking at the Longwood Station will improve access, egress, and circulation. As a result, the number of spaces will decrease by approximately 5%, to 354 spaces from what was originally proposed in the EA (375 spaces). The proposed 354 parking spaces will continue to be adequate to accommodate demand at Longwood Station.

The Project will not reduce or impact parking supply for any businesses/residences that will continue to operate adjacent to the Project. In summary, the addition of the Fort Florida Road and Maitland stations does not change the finding of no significant impact on parking.

Table 4-3 Station Parking Supply and Impact Summary

Station	Proposed Station Parking Supply (spaces)	Adequate Parking Provided By Project	Existing Parking Spaces Impacted ¹	Replacement Parking Provided?	Parking Impacts? (based on FTA C 5620.1) ²
Fort Florida Road Station	275	Yes	0	N/A	No
Maitland Station	250	Yes	0	N/A	No
TOTAL	525	Yes	0		

Station site plans for the Fort Florida Road, Maitland, and Longwood stations are provided in the Appendix A.

4.3 Transit

Section 4.3 of the approved EA addressed the potential impacts of the CRT Full Build Alternative on transit and related services in the study area. The CRT Full Build Alternative provides the strongest system identity and highest capacity for connecting the existing and planned transit services in the region in the long-term.

4.3.1 Existing Transit and Related Services

The CRT is generally well served by fixed route bus transit operated by two regional transit authorities serving the four-county study area. The regional transit bus services within the Study Corridor are provided by the CFRTA, known as LYNX, and the Volusia County Public Transit System, known as VOTRAN. Amtrak intercity rail passenger service utilizes the CSXT A-Line tracks. Additionally, there are private intercity bus services and a variety of public and private shuttle bus operators.

All public commuter transit services in the study area today are buses operating in mixed traffic, with the exception of the existing downtown bus circulator. The CRT Full Build Alternative would add commuter rail service to the existing network of transit and related services within the study area, would not eliminate or reduce any of those services, and therefore, would have no adverse impact on them. No new fixed bus routes have been proposed above those featured in the No-Build Alternative as described in the approved EA. Minor route deviations or short route extensions to local bus routes will provide transfer connections to the new Fort Florida Road and Maitland stations. These bus route modifications associated with the supplement to the approved EA will not adversely impact riders using existing VOTRAN or LYNX fixed route services. Route modifications are outlined in the *CRT Final Transit Operating Plans Report, November 2007*.

Amtrak

Existing Amtrak service in the Study Corridor serves a long distance intercity travel market, not the commuter travel market. Existing Amtrak stations are located in DeLand, Winter Park, Orlando, and Kissimmee. The Sanford Amtrak Station closed in 2005 and is no longer in use. The CRT Full Build Alternative will modify portions of passenger platforms at the four existing Amtrak stations to accommodate the relatively short commuter rail DMU trains. In addition to these four Amtrak locations, the CRT Full Build Alternative will construct thirteen new commuter rail stations at other locations along the rail line. The CRT Full Build Alternative will not adversely impact any of the existing Amtrak operations in the Study Corridor.

Private Transportation Services in Corridor

The Corridor is within the Central Florida region, which has one of the largest private sector transportation markets in the country. A variety of private bus operators provide transit service in the Corridor; however, most of these are charter service companies or small carriers, and do not serve the commuter market identified in the travel market analysis. The proposed Project scope changes to the CRT Full Build Alternative are not expected to have any adverse impact on Greyhound Lines, Inc. nor on other private transportation providers.

4.3.2 Geographic Areas of Service

The geographic location of transit services in the Corridor, and in particular, the location of station stops, is an important measure of how well travel markets are served and how accessible the services are to the traveling public. The analysis shows that the Project scope changes to the CRT Full Build Alternative would have no adverse impact on the geographic area of transit service in the study area, and would increase the service area.

4.3.3 Travel Times and Reliability

Travel time and service reliability are discussed in Section 4.3.3 of the approved EA. The proposed Project scope changes to the Full Build Alternative would have no adverse impact on travel times and reliability in the study area.

4.3.4 Frequency and Hours of Service

Section 4.3.4 of the approved EA compares service frequencies. The proposed Project scope changes to the CRT Full Build Alternative specified in this document would have no adverse impact on the frequency and hours of transit service available to the public in the study area, and would actually increase service frequency in many markets.

4.3.5 Transit Impacts Summary

The CRT Full Build Alternative will have a strong positive impact on the quantity and quality of transit services provided within the study area.

The proposed Project scope changes will have no negative impacts for transit. The CRT Full Build provides a mix of transit services that best serve projected travel demand as evidenced by the highest systemwide transit patronage and mode share.

The proposed Project scope changes will provide a total 879 parking spaces. The potential impacts associated with the parking spaces have been evaluated and mitigated throughout this supplement to the approved EA.

4.4 Travel Demand Forecasting Model

A complete description and discussion of model systems can be found in Section 4.4 of the approved EA. Regional model results for the CRT Full Build Alternative show that the Full Build would increase systemwide transit demand, patronage, and mode share.

The approved EA Full Build Alternative achieves the highest boardings and passenger miles. 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.

For the supplement to the approved EA, DeBary/Saxon Station is removed and Fort Florida Road and Maitland Stations are added. The New Starts ridership for the 31 mile IOS is shown in Table 4-4. , This would result in the largest gain in system wide linked transit trips of any alternative.

Table 4-4 2030 Daily Transit Trips (Linked Trips)

Alternative	Daily Transit Trips	Change from No-Build Alternative (trips)	Change from TSM Alternative (trips)
IOS	120,868	+5,710	+3,696

Source: New Starts Application, November 2007

4.5 Freight

Trucking and Freight Rail are the primary modes for existing freight movements in the Corridor. A complete discussion of freight rail can be found in the approved EA, Section 4.5.

4.5.1 Freight Rail

There are no changes to this section of the approved EA. The CRT Full Build Alternative would add a new signal system and approximately 40 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.

4.5.2 Trucking

There are no changes to this section of the approved EA. The CRT Full Build Alternative would have no impact on long-distance through truck traffic because all major through routes are currently grade separated. Local delivery truck traffic and long-distance truck traffic that originates or terminates in the Corridor are potentially impacted during the CRT peak hour service. However, the measures presented previously in Section 4.5.2. of the approved EA regarding intersection, grade crossing and roadway improvements will mitigate the impact of the CRT Full Build Alternative on truck traffic.

4.5.3 Marine Transportation

There are no changes to this section of the approved EA. The CRT Full Build Alternative would utilize the existing rail bridge across the St. Johns River for commuter rail operations. Because marine traffic on the St. John's River at this location is recreational and relatively light during the weekdays, CRT commuter operations will not be delayed due to marine traffic.

4.6 Summary

As described in the above sections, the CRT Full Build Alternative including the proposed Project changes provides substantial transportation benefits and addresses the purpose and need for the Project as identified in Chapter 2. The CRT Full Build Alternative provides these substantial transportation benefits with no significant adverse transportation impacts. The CRT Full Build Alternative addresses the Project goals and objectives related to transportation, in particular, the mobility goal and its objectives to maximize transit ridership, maximize transit reliability, minimize travel time, and integrate with regional transit service.

No study intersections will deteriorate to deficient conditions as a result of the CRT Full Build Alternative including the proposed Project scope changes. The CRT will not

increase traffic delay for the vast majority of at-grade crossings throughout the Study Corridor. The new Fort Florida Road and Maitland Stations will not adversely impact roadways and intersections.

The parking supply identified for the Project will be adequate to accommodate parking demand and the limited locations with potential parking impacts are fully mitigated in the CRT Full Build Alternative. Adequate off-street parking will be provided at the Fort Florida Road and Maitland Stations to accommodate projected demand. FDOT will continue coordinating with the City of Maitland to develop a joint use development agreement to provide 250 park-and-ride spaces to serve the Project.

The CRT Full Build Alternative including the Project scope changes have 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. Fewer than four 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 CRT Full Build Alternative will 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 new Fort Florida Road and Maitland Stations will not adversely impact transit service.

The CRT Full Build Alternative including the Project scope changes have 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. In addition, as described above, the Full Build Alternative including the new Fort Florida Road and Maitland Stations will have no adverse impact on truck or marine traffic.