

TREASURE COAST REGIONAL PLANNING COUNCIL

MEMORANDUM

To: Council Members

AGENDA ITEM 10

From: Staff

Date: September 18, 2015 Council Meeting

Subject: All Aboard Florida Update

Introduction

The purpose of this item is to provide an update regarding the Florida East Coast Industries' (FECI) proposed All Aboard Florida (AAF) project. The project is intended to provide new high-speed intercity express service between Miami and Orlando on the Florida East Coast (FEC) rail corridor. Pursuant to the company's application for a Railroad Rehabilitation and Improvement Financing loan, the Federal Railroad Administration (FRA) is processing an Environmental Impact Statement (EIS).

Background

In 2012, FECI introduced the AAF project, which proposes new intercity express rail service between downtown Miami and Orlando, with additional stations in downtown Fort Lauderdale and downtown West Palm Beach. The project has been the subject of extensive Council, local government, and public discussion since its announcement. As currently proposed, the project would provide sixteen daily round-trip trains, totaling 32 additional trains on the corridor with maximum speeds of 79 MPH south of West Palm Beach; 110 MPH between West Palm Beach and Cocoa; and 125 MPH from Cocoa to Orlando. The company has indicated the FEC rail corridor will continue to carry freight service through Florida East Coast Railroad, which is projected to increase over time. Although the rail corridor is privately owned, it is included in the Florida Department of Transportation (FDOT) Strategic Intermodal System, which prioritizes it for statewide transportation funding to advance economic competitiveness and quality of life.

Project Updates

**Final Environmental Impact Statement**

The Federal Railroad Administration released the final EIS (FEIS) on August 4, 2015. A summary of Council's recommendations on the draft EIS, and an explanation of how they were addressed in the FEIS, are included in Attachment A. Some of Council's issues were addressed in the FEIS with additional data and analysis, such as updated analysis of boater activity at the St. Lucie and Loxahatchee river bridges. However, many issues raised by Council were not

addressed in the FEIS and remain outstanding. Of particular concern is the recommended closure of grade crossings, such as 14<sup>th</sup> Avenue and 21<sup>st</sup> Street in Indian River County, without sufficient data or analysis to justify these actions. In addition, although Palm Beach, Martin and St. Lucie counties have received 90% plans regarding AAF's proposed grade crossing improvements, Indian River County has not yet received similar plans to review. These issues should be addressed prior to the FRA issuing a Record of Decision (ROD), which will conclude the National Environmental Policy Act process for the AAF project.

### **Private Activity Bond Funding**

On August 5, 2015, the Florida Development Finance Corporation provided authorization for AAF to market \$1.75 billion in private activity bonds.

### **Quiet Zones**

Along the Phase 1 segment of the AAF project from 15<sup>th</sup> Street in West Palm Beach south to the southern Palm Beach County line, the affected local governments are proceeding with the establishment of quiet zones. As part of Council's assistance to the Palm Beach Metropolitan Planning Organization (MPO), Council staff facilitated a work session with the affected seven local governments in August to review proposed grade crossing improvements and quiet zone requirements. On September 24<sup>th</sup>, Council staff will facilitate a technical workshop with FRA staff to review proposed quiet zone designations and confirm the ability for these local governments to proceed with the quiet zone establishment process. Similar workshops conducted by Council staff and the Palm Beach MPO to assist the Palm Beach County local governments along the AAF Phase 2 segment from West Palm Beach to the northern County line are anticipated to be held later this fall and into 2016.

To assist the local governments in Martin, St. Lucie, and Indian River counties, Council staff will also facilitate a second technical workshop with FRA staff on September 23<sup>rd</sup> regarding quiet zones and the establishment process.

### **Sealed Corridor Requirements & Provision of Grade Crossing Infrastructure**

During the EIS review process, Council raised several questions regarding sealed corridor requirements and pedestrian infrastructure and trespass barriers required by the AAF project. In July, Council sent a letter to FDOT Secretary Boxold asking if the agency would require AAF to comply with FRA's guidelines pertaining to highway-rail grade crossings. In response, Secretary Boxold indicated that FDOT would be requiring AAF to comply with FRA's guidelines and Florida laws and regulations pertaining to highway-rail grade crossings (see Attachments B and C). The FEIS indicates AAF will pay for the costs of grade crossing infrastructure for vehicular safety.

Regarding pedestrian infrastructure, Secretary Boxold indicated FDOT does not have jurisdiction over the structure of agreements between the company and local governments regarding the use of railroad right-of-way. The FEIS further states AAF will provide pedestrian infrastructure for

local governments where desired if those local governments adopt updated easement agreements, which will generally shift the cost of pedestrian improvements to those local governments.

In August 2015 correspondence, Frank Frey, FRA General Engineer for High Speed Rail, indicated the 90% plans for Martin County “failed to meet the bare minimum safety requirements” as outlined in a series of documents referenced in the correspondence (see Attachment D). Accordingly, FRA has requested Council assist with the provision of grade crossing improvement plans to FRA for the agency to confirm compliance with the grade crossing requirements as specified in the FRA On-Site Engineering Field Report (Parts 1 and 2) and FEIS. This deficiency should be addressed prior to the issuance of the ROD.

### Conclusion

The proposed AAF service represents a unique opportunity to expand the utilization of a private freight corridor for economic benefit and mobility. However, the lack of access to AAF service in the northern counties provides adverse impacts from the project without any apparent benefits to offset those impacts. Furthermore, the FEIS does not provide sufficient data in several areas for a thorough analysis of impacts at the local and regional level. Key data and analysis deficiencies are identified in Attachment A, which includes an assessment of how the FEIS addressed Council’s recommendations on the Draft EIS.

### **Prior to issuing the ROD, FRA should:**

- 1) address data deficiencies with regards to land use, transportation, marine navigation, transit systems, bicycle and pedestrian circulation, public safety, air quality, noise and vibrations, and economic conditions;
- 2) include a more thorough analysis of project costs and benefits and suggested mitigation measures and alternatives;
- 3) establish stronger measures to more completely mitigate regional and local impacts and provide a better balance among the competing forms of transportation;
- 4) provide additional data and analysis concerning the proposed grade crossing closures in Indian River, Martin, and Palm Beach counties;
- 5) provide Indian River County, the City of Vero Beach, and the Indian River County MPO an opportunity to review and evaluate the 90% plans regarding AAF’s proposed grade crossing improvements; and
- 6) address concerns regarding safety requirements as identified by FRA in its review of the 90% plans for Martin County.

### Recommendation

Council should approve this report and authorize its transmittal to the Federal Railroad Administration.

### Attachments

# **Attachment A**

## **Final Environmental Impact Statement**

### **Consideration of Council Recommendations**

At its November 21, 2014 board meeting, Council reviewed the Draft Environmental Impact Statement (DEIS) for the AAF project and authorized the transmittal of 31 recommendations to the U.S. Department of Transportation Federal Railroad Administration (FRA) to be considered in the Final Environmental Impact Statement (FEIS). The recommendations were organized under 12 subject areas. Each of the recommendations is listed below followed by a discussion of how it is addressed in the FEIS.

#### **Land Use**

- 1. The final EIS should include a consistency analysis of all relevant comprehensive plans and community redevelopment agency plans. Mitigation measures or other alternatives should be established and analyzed to resolve inconsistencies or conflicts with local plans.**

This recommendation is addressed in the FEIS. The FEIS indicates many commenters requested a review of local comprehensive plans. However, because FRA determined the AAF project to be a regional-scale action, the comprehensive plan reviews focused on county-level plans. Since the FEIS concluded the AAF project would not result in substantial land use conversions in the communities through which it traverses, the FRA concluded land use conditions would not change, and therefore, additional comprehensive plan documents were not reviewed.

- 2. The final EIS should include a new alternative that would provide Martin, St. Lucie, and Indian River counties with some level of direct scheduled access to the AAF service, including intermittent or “skip-stop” service, to offset project impacts, more fairly distribute project benefits, and increase consistency with local government comprehensive plans.**

This recommendation is addressed in the FEIS. The FEIS indicates a major criterion for success of the AAF rail service is ridership, referencing the an approximate three-hour rail service trip time between Miami and Orlando as one of the most critical factors for the project to meet its stated ridership goals. With the current planned stations, the trip time is approximately three hours between Miami and Orlando. The FEIS indicates additional stops beyond the four planned stops would increase overall trip time and negatively impact achieving the number of passengers (ridership) necessary for the project to be successful. The FEIS further states AAF has not precluded additional stations as demands warrant in the future, noting Brevard County is currently evaluating locations for a possible future station and similar ridership studies could be undertaken in Indian River, Martin, and St. Lucie counties to evaluate future station feasibility.

- 3. The final EIS should include data to confirm the maintenance of a single-track through Historic Downtown Stuart and maintenance of public parking in FEC right-of-way.**

This recommendation is partially addressed in the FEIS. The latest plans indicate the AAF project will install double-track through downtown Stuart; however, AAF and FECR have indicated in correspondence to the City of Stuart that no downtown parking will be removed as a result of the project.

- 4. The final EIS should include data to confirm the location of the storage track outside the boundaries of St. Lucie Village such that egress and emergency response to Village residents can be maintained.**

This recommendation is addressed in the FEIS. The location of “triple track,” which constitutes storage track, will be located outside the boundaries of St. Lucie Village in St. Lucie County.

- 5. The final EIS should include measures to enable local governments to install landscaping and hardscape improvements to enhance pedestrian safety and beautify the FEC corridor at the lowest possible cost to the public and without the financial burden of easement lease costs.**

This recommendation is not addressed in the FEIS.

## **Transportation**

- 6. An updated traffic impact analysis should be conducted that utilizes current year traffic counts and a substantially expanded sample of grade crossings. The analysis should consider high-volume roadways, grade crossings proximate to the Loxahatchee River and St. Lucie River railroad bridges, emergency access routes, roadway intersections near grade crossings that are directly affected by grade crossing closures, and vehicular delays caused by grade crossing closures, including all potential mitigation measures. Additionally, costs to local governments need to be identified for intersection, roadway, and water management improvements needed to cure traffic and traffic safety impacts on the local and regional roadway network created by increased grade crossing closures.**

This recommendation is partially addressed in the FEIS. The DEIS included an analysis of traffic congestion which analyzed the ten highest-volume at-grade crossings (two per county) along the north/south corridor between Cocoa and West Palm Beach. No additional intersections were selected for analysis in the FEIS. The analyses evaluate the impacts on local traffic for the road crossing the FECR Corridor as well as the adjacent connected intersections, with respect to level of service and the delay for each signal cycle. The analysis found that typical at-grade crossings (intersections of local roads with the FECR Corridor) would be closed an average of 54 times per day (3 times per hour), with average closure times ranging from 1.7 minutes (passenger) to 2.8 minutes

(freight). The total average hourly closure would range from 4.2 minutes per hour to 4.5 minutes per hour, an increase of approximately 2 minutes per hour in comparison to the No-Action Alternative

The FEIS notes that at most intersections, the level of service degrades to LOS E or LOS F when a train passes. Four intersections are noted to operate at unacceptable levels of service for all traffic cycles, degrading to LOS F for short periods due to train passage. The FEIS includes a weighted average for all signal cycles, which indicates most intersections would operate at acceptable levels of service, except the four noted intersections. The FEIS concludes the AAF project would have a minor, but not significant, impact on local traffic by increasing the frequency of at-grade crossing closures, as the majority of intersections would be operating at acceptable levels of service (LOS A to LOS C) under the normal signal cycle under both the No-Action Alternative and with the Project.

The FEIS also indicates four grade crossings in the region should be closed, including 14<sup>th</sup> Avenue and 21<sup>st</sup> Street in Indian River County; Seaward Street in Martin County; and Hunter Street in Palm Beach County. However, the FEIS provides insufficient data and analysis to justify these closures.

- 7. The final EIS should include an analysis of pre-emption at grade crossings and include relevant improvements and their costs as part of the project.**

This recommendation is not addressed in the FEIS.

- 8. The final EIS should include a requirement for the installation of a connector road between Clematis and Evernia at the West Palm Beach station to reduce roadway network impacts.**

This recommendation is not addressed in the FEIS; however, the roadway will be constructed commensurate with construction of the West Palm Beach AAF station. AAF will construct the Datura/Evernia portion of the roadway as part of the West Palm Beach AAF station development. However, it was necessary for the City to approve a transfer of development rights with AAF to offset the company's costs to construct the Clematis/Datura portion of the roadway.

### **Marine Navigation**

- 9. In coordination with the U.S. Coast Guard, an updated marine navigational study should be conducted utilizing more accurate data related to boater traffic, marina locations, numbers of slips, and boater access and addressing safety issues from the queuing of boats awaiting bridge openings. This survey should evaluate the distribution of boating activity and railroad bridge closures across a twenty-four spectrum to more accurately evaluate impacts on navigation. The study should also consider the findings of the ongoing U.S. Coast Guard marine navigational survey**

**and appropriate modifications to the Code of Federal Regulations to reduce impacts on navigation.**

This recommendation is partially addressed in the FEIS. In response to public comments and using updated information provided by local communities, the FEIS includes a revised navigational impact analysis that utilizes boater count data from the summer of 2014, which is higher than the previously used Winter 2014 data. Under all Action Alternatives, the moveable bridges (St. Lucie River and the Loxahatchee River) would be closed more frequently to accommodate the increased number of trains. AAF has developed an operating plan that minimizes the number and duration of closures; however, the total daily closure time at each bridge and vessel wait times would increase substantially in comparison to the No-Action Alternative, particularly on peak-season weekends.

The FEIS indicates AAF will mitigate the increased closure times by implementing new measures to notify mariners of the bridge closure times and to make closure times more predictable, publishing a set schedule for each bridge, providing public access to bridge closure schedules, and implementing a notification sign/signal/horn at each location with countdowns to indicate the times at which the bridge will begin to open and close. Additionally, AAF will establish a point of contact with first responders and emergency personnel to promptly respond to unforeseen waterway emergencies. The FEIS indicates AAF will also rehabilitate the lift mechanisms on all three moveable bridges to increase reliability and reduce bridge closure cycle times.

**10. Independent bridge inspections should be conducted for the Loxahatchee and St. Lucie River railroad bridges to determine their safety and structural integrity.**

This recommendation is addressed in the FEIS. Bridge conditions were evaluated as part of the Marine Navigational Survey, and in response to public comments, the FEIS includes an additional evaluation of the New River Bridge. The FEIS indicates AAF has committed to replace or repair the mechanical and electrical systems for each of the three moveable bridges to ensure their operational condition and reliability is maintained. However, AAF is not proposing to replace these bridges because they are structurally sound and do not require reconstruction or replacement for the proposed passenger rail service.

**11. The final EIS should consider physical improvements to create taller, wider bridge apertures at the Loxahatchee and St. Lucie river bridges to enable bi-directional traffic, access for more vessels when the bridge is closed, and mechanical improvements to improve the efficiency, timing, and predictability of bridge closings.**

This recommendation is addressed in the FEIS. In response to public comments, the FEIS included an evaluation of several alternatives and associated costs for replacing or reconstructing the movable bridges with high-level fixed bridges. Two options were evaluated for the high-level fixed bridges, one for passenger trains only and the other for

all trains. In the analysis of these potential bridges, the new bridges are presumed to have a height that matches the nearest adjacent fixed bridge. Given operational logistics, limitations of surrounding property, roadway grade requirements, and order of magnitude cost estimates, the FEIS concludes none of the alternatives are sufficiently feasible. Existing fixed bridges will be replaced, or new fixed bridges will be constructed to maintain the existing vertical and horizontal clearances and maintain existing navigation conditions. There will be no change in the structure or the dimensions of the opening for the St. Lucie River or Loxahatchee (Jupiter) River bridges.

**12. The final EIS should consider an alternative with reduced service on the N-S Corridor, including the relocation of freight traffic onto other rail corridors such as the CSX, especially during peak boating hours.**

This recommendation is addressed in the FEIS. The FEIS indicates several alternative routes, including the CSX rail corridor, Florida Turnpike, and I-95, were evaluated in the Level 1 screening process. AAF evaluated alternatives under the primary screening criteria of meeting the purpose and need, feasibility to construct and operate, and impacts to the environment. Because AAF is a for-profit private enterprise, alternatives were evaluated primarily in the light of whether they could be constructed and operated in accordance with AAF's financial model. The FEIS indicates AAF selected the FECR Corridor as its preferred alternative because it meets the purpose and need while remaining feasible to construct and operate based on ridership and cost projections and potential environmental impacts. The FRA has reviewed AAF's analysis and validated the conclusions. Each of three alternative alignments – CSX, Turnpike, and I-95 – has been determined to be infeasible.

The FEIS further notes that commenters indicated AAF should attempt to negotiate a shared-use agreement for tracks west of the FECR Corridor. Based on the dispatching and on-time performance issues detailed above, the FEIS indicates a shared-use agreement with CSX and Amtrak would not enable AAF to provide reliable service, which would not satisfy the project purpose.

**13. The project should include improvements to Taylor Creek Bridge to increase its vertical clearance.**

This recommendation is addressed in the FEIS. The FEIS indicates commenters noted that the existing Taylor Creek Bridge is too low for boat access; the City of Fort Pierce had completed a study that recommended opening up Taylor Creek; and the AAF project should include improvements to the Taylor Creek Bridge to increase its vertical clearance. The FEIS indicates the Taylor Creek Bridge is in suitable condition for the proposed passenger rail and does not require replacement. Raising the Taylor Creek Bridge would require raising the adjacent grade crossings and the approaches on both SR A1A and Avenue H, thereby requiring the proximate railroad spurs be abandoned. The FEIS indicates it is infeasible to raise the bridge due to cost and logistics.



## Transit Systems

- 14. The final EIS should include an analysis of the operation of Tri-Rail service on the FEC rail corridor, a requirement to establish reasonable access to the corridor for Tri-Rail service, and clarification that AAF stations are designed to accommodate future Tri-Rail service in the most efficient manner and at the lowest cost to the public.**

This recommendation is partially addressed in the FEIS. The FEIS acknowledges there are several transportation projects within the Project Study Area have been proposed or are currently in preliminary planning stages. The Tri-Rail Coastal Link Study is being undertaken by FDOT, and is evaluating the use of the FECR Corridor for the Tri-Rail service, which currently operates on the CSX-controlled railroad right-of-way west of the FECR Corridor. AAF is coordinating and discussing possibilities with the South Florida Regional Transportation Authority regarding its ability to operate commuter rail service in conjunction with AAF operations, as required by the commitments established in the Finding of No Significant Impact for the Miami to West Palm Beach Phase. However, the FEIS indicates both access and operating agreements remain outstanding for the operation of Tri-Rail commuter service on the FECR.

- 15. The final EIS should include an analysis of impacts on local transit service caused by grade crossing and other delays in the local roadway network.**

This recommendation is partially addressed in the FEIS. The FEIS indicates the AAF project is not anticipated to impact local transit services, as intercity passenger rail would not compete with local transit services for long-distance riders due to the stations served and the higher fares. The FEIS indicates local transit providers would be expected to carry more passengers locally as a result of the rail service as these passengers will be seeking connections to their ultimate destinations from the AAF station; however no specific analyses regarding these service impacts are included in the FEIS.

## Bicycle and Pedestrian Circulation

- 16. The final EIS should include a requirement for the installation bicycle/pedestrian infrastructure, including gates, lights, and crossing arms, at all grade crossings as part of the project's safety improvements. In addition, the final EIS should include the installation of pedestrian grade crossings in locations of known pedestrian activity where grade crossings are more than one mile apart.**

This recommendation is partially addressed in the FEIS. The FEIS indicates AAF will be responsible for ensuring that legal crossings along the corridor are safe and comply with existing regulations. AAF will work to install pedestrian gates at crossings where local municipalities that agree to maintain such gates. AAF will work with Florida Operation Lifesaver, a statewide, non-profit public awareness and education program to ensure compliance with existing regulations regarding railroad crossings. The FEIS does not address the installation of additional pedestrian grade crossings.

**17. The final EIS should include a requirement for fencing in areas of known pedestrian activity to channelize pedestrian traffic into formal pedestrian crossings.**

This recommendation is addressed in the FEIS. The FEIS indicates AAF will conduct ROW Field Surveys to observe, document, and provide recommendations to minimize trespassing by employing fencing, warning signage, public outreach/information, and other appropriate measures as required. AAF will also develop a Hazard Analysis and System Safety Program Plan prior to the start of operations, which will identify potential system risks based on an evaluation of potential risk severity and frequency. These measures will be applied universally along the corridor.

**18. The final EIS should include a requirement for the establishment of a multi-use pathway along the N-S Corridor.**

This recommendation is addressed in the FEIS. The FEIS indicates many commenters suggested a shared-use pedestrian/bicycle path should be constructed within the E-W and N-S Corridors to enhance local and regional travel; however, neither FECR nor AAF support the additional use of the FECR ROW for a rail-with-trail use. AAF's ownership interest in the ROW limits its uses to operation of passenger rail service, but AAF does not control the land resources. FECR has retained its rights to use any remaining property within the ROW for railroad purposes. Similarly, AAF's property interest in the ROW along the E-W Corridor does not include the right to operate a bicycle or mixed-use trail in conjunction with passenger rail operations. In either location, the FEIS indicates the addition of bicycle trail would increase the impacts to natural resources and would present significant safety liabilities.

**Public Safety**

**19. The final EIS should include an emergency response traffic analysis, including a detailed analysis of impacts on emergency vehicle trips, route data, access to hospitals and critical infrastructure, and key roadways and intersections to maintain timely emergency response. This analysis should be conducted with consultation from local emergency management, fire rescue, and hospital representatives.**

This recommendation is not addressed in the FEIS. The FEIS indicates many commenters voiced concerns that more frequent train trips will affect public safety vehicle response times because of the increased number of grade crossing closures. Commenters noted that the majority of hospitals, medical centers and fire stations along the N-S Corridor are west of the FECR Corridor, while the majority of residents live on the east side. The FEIS responded by stating upgrades to road crossings will be coordinated with and/or communicated to local emergency responders, as activations at the road crossings are expected to be more frequent with the increased frequency of train traffic. However, the delays are also expected to be minimal, as the passenger trains should clear a typical crossing in less than a minute. This improved communication with emergency responders

will have an overall beneficial effect on minimizing potential conflicts and their consequences.

**20. The final EIS should include measures to improve communications for emergency response, such as the provision of real-time information for the dispatch of first responders.**

This recommendation is addressed in the FEIS. The FEIS indicates upgrades to road crossings will be coordinated with and/or communicated to local emergency responders, as activations at the road crossings are expected to be more frequent with the increased frequency of train traffic. This improved communication with emergency responders will have an overall beneficial effect on minimizing potential conflicts and their consequences. Also, the FEIS continues to maintain that AAF will establish a point of contact with first responders and emergency personnel to promptly respond to unforeseen waterway emergencies.

**21. The final EIS should require the project provide a second emergency response vessel upstream of the Loxahatchee River Bridge.**

This recommendation is not addressed in the FEIS. The FEIS indicates AAF will develop formal contact with first responders and emergency personnel. A point of contact will be established to ensure that emergency personnel can coordinate with the dispatch center when access is necessary to respond to waterway emergencies.

### **Air Quality**

**22. The final EIS should include a more extensive analysis of vehicle and vessel delays, accumulated impacts on air quality, and appropriate mitigation measures.**

This recommendation is partially addressed in the FEIS. An analysis of the projected air quality impacts at grade crossings was completed as part of the FEIS, but the analysis did not include emissions from vessel delays. The overall emissions were calculated for all of the criteria pollutants for both 2016 and 2036. The operations of new passenger trains would increase local emissions from vehicle queuing typically by less than 50 percent compared to normal traffic and freight emission levels. Emissions from grade crossing vehicle queuing with passenger trains were generally significantly less than one ton per day, which constitutes a de minimis impact on overall emission levels. Total emissions from all sources (normal cycle, freight and passenger) generally amount to less than one ton/day with the exception of NOx emissions for Banyan Boulevard and Northlake Boulevard crossings in Palm Beach County. Emissions at those two crossings are still considered de minimis pursuant to EPA standards. The FEIS concluded the project would provide a net regional air quality benefit as compared to the No-Action Alternative. Air quality in the region would be improved through the diversion of vehicles from the roads and highways.

## **Noise and Vibrations**

### **23. All historic buildings and structures adjacent to the rail corridor should be evaluated for the potential impact of vibrations.**

This recommendation is addressed in the FEIS. The FEIS indicates the methodology for identifying cultural resources has been developed in conjunction with the State Historic Preservation Officer (SHPO) and is similar to previous approved methodologies that have been applied to other large-scale transit projects. The FEIS indicates the project would have no direct or indirect effects (noise, vibration, or change in setting) to the historic resources adjacent to the N-S Corridor. A conditional “no adverse effect finding” is anticipated based on the condition that consultation with the SHPO will continue through the design process in order to ensure compatibility and appropriate sensitivity to the FECR Railway Historic District and bridge resources.

### **24. A medical facility assessment should be conducted to confirm location of all hospital/medical facilities, analyze noise and vibration impacts, and determine appropriate mitigations to reduce impacts. The impact analysis of noise and vibrations should specifically address the effect of Rayleigh waves.**

This recommendation is addressed in the FEIS. The FEIS confirms that potential noise and vibration impact has been assessed at all hospital and medical facilities as they apply to Category 2 (hospital locations where people sleep) and Category 3 (institutional facilities) receptors. The FEIS indicates using wayside horns at intersections instead of the locomotive horn has been shown to substantially reduce the noise footprint without compromising safety at the grade crossing. A wayside horn does not need to be as loud as a locomotive horn, but the real advantage is the focusing of the warning sound only on the area where it is needed. AAF has committed to installing stationary wayside horns at each of the 117 grade crossings where severe, unmitigated impacts would occur using locomotive-mounted horns. These mitigation measures would eliminate all severe noise impacts for residential and institutional receptors along the N-S Corridor. Where compliant with safety regulations and FRA guidelines, AAF is also working with local communities that would like to create quiet zones as an alternate noise abatement measure to wayside horns.

The FEIS indicates potential ground-borne vibration impacts, which include Rayleigh waves, are assessed in the FEIS. Rayleigh waves can be slow, low-amplitude soil movements. The greatest potential for vibration impact is along the N-S Corridor due to the increase (approximately doubling) of vibration events as a result of adding passenger train service to the existing freight operations. There is no potential vibration impact along the MCO Segment. Along the E-W Corridor, vibration impacts would be the same for each of the three alignments, Alternatives A, C, and E. There is the potential for vibration impact at 118 Category 2 and 12 Category 3 receptors. Along the N-S Corridor, there would be potential vibration impact at a total of 3,317 Category 2 receptors, 513 Category 3 receptors, three TV studios, three recording studios, nine auditoriums, and three theatres. Vibration levels at all receptors will be less than 100 vibration decibels, the

threshold for minor structural damage to fragile buildings, and therefore vibration is not anticipated to cause structural damage to buildings.

**25. The final EIS should include sufficient infrastructure to enable local governments to designate quiet zones as deemed appropriate along the corridor.**

This recommendation is partially addressed in the FEIS. As part of its infrastructure program, AAF will pay the cost of the recommended grade crossing safety improvements related to the introduction of passenger rail service, in conjunction with county and municipal execution of amendments to existing crossing license agreements. AAF has committed to installing wayside horns at 117 grade crossings between Cocoa and West Palm Beach. The FEIS indicates pole-mounted wayside horns will substantially reduce the noise footprint when compared to the existing train-mounted warning horns for both passenger and freight trains. Therefore, the noise will significantly decrease with the use of pole mounted horns as compared to the current use of train mounted horns. AAF has also agreed to work with local jurisdictions to implement quiet zones. Where quiet zones are established, pole-mounted horns will not be required.

### **Hazardous Materials & Solid Waste Disposal**

**26. The final EIS should include an analysis of the potential impacts, the adequacy of emergency response and operational interaction among local agencies, and mitigation measures for freight train hazardous materials spills/releases in proximity of passenger trains.**

This recommendation is not addressed in the FEIS. The FEIS indicates that some commenters on the DEIS asked about the potential for derailments or accidents to result in spills or fuel or other contaminants. Spills from derailments and accidents are rare events, and any spills would be handled through existing safety, containment, and clean-up procedures. Freight trains traveling along the N-S Corridor are currently equipped to haul hazardous materials and will continue to do so. Implementing the Action Alternatives would not change the potential for indirect effects along the N-S Corridor, as there is no anticipated change in frequency or quantity of hazardous materials transported by freight.

**27. Additional data is needed regarding the entire range and frequency of chemical materials that could be carried on the corridor.**

This recommendation is not addressed in the FEIS. The application indicates that liquid propane gas, ethanol, sodium hydroxide/caustic soda, alcohol in bond, hydrogen chloride, bleach-sodium hypochlorite, and ammonium nitrate are among the hazardous materials currently hauled by freight trains in the FECR corridor.

## **Environmental Justice**

- 28. The final EIS should provide additional information to definitively determine the project will not adversely impact environmental justice populations including but not limited to access to school and work, neighborhood fragmentation, and access by the transportation disadvantaged.**

This recommendation is addressed in the FEIS. The FEIS notes a concern raised by commenters was that in some environmental justice communities, residents lack cars and regularly cross the FECR tracks mid-block to access jobs, shopping, schools, and services. With the improvements to the track infrastructure and more frequent faster trains, this convenient access would be cut off and would adversely affect the ability of environmental justice populations to access jobs and services.

The FEIS indicates that with respect to access between environmental justice communities and jobs/services/school access, all such unauthorized pedestrian crossings are both illegal trespass and unsafe under current conditions. The infrastructure and safety improvements that are incorporated in the Project will reduce illegal and unsafe trespass on the rail line, and improve safety for area residents by adding sidewalks at grade crossings. This is not a disproportionate adverse impact to environmental justice communities. Also, AAF will conduct right-of way field surveys to observe, document, and provide recommendations to minimize trespassing by employing fencing, warning signage, public outreach/information, and other appropriate measures as required. AAF will also develop a Hazard Analysis and System Safety Program Plan prior to the start of operations, which will identify potential system risks based on an evaluation of potential risk severity and frequency. These measures will be applied universally, including both environmental justice and non-environmental justice communities.

## **Economic Conditions**

- 29. The final EIS should include a more detailed and balanced cost/benefit analysis of the project's economic impacts to local governments, businesses, and residents.**

This recommendation is not addressed in the FEIS. The FEIS acknowledges that commenters stated the DEIS did not adequately evaluate the effects of the Project on residential property values. However the FEIS indicates the potential for the Project to impact residential property values is inconclusive. The FEIS concludes that the project would have minimal impact to the maritime industry; is not expected to result in an adverse impact to businesses within small downtowns along the N-S Corridor; and would not result in the reduction of municipal tax revenue, commercial displacements, or job loss along the N-S Corridor.

- 30. The final EIS should include a requirement for the establishment of a standardized, predictable, and reasonable fee structure for local governments regarding grade crossing improvements.**

This recommendation is not addressed in the FEIS. The FEIS indicates potential long-term direct and adverse effects to local economic conditions would include the costs associated with grade crossing maintenance to be paid by the municipalities in which they are located. As part of its infrastructure program, AAF has voluntarily assumed the cost of grade crossing safety improvements related to the introduction of passenger rail service. However, the State of Florida requires municipalities to fund the maintenance of grade crossing equipment within their jurisdictions. The Project will result in minor increases in the annual cost of maintaining grade crossing equipment due to the addition of a second track, as set forth in the Florida Department of Transportation Schedule of Annual Cost of Automatic Highway Grade Crossing Traffic Control Devices (725-090-41). Municipalities will also experience a small increase in the periodic cost of roadway resurfacing at the grade crossings, which typically occurs every 5 to 10 years based on the volume of highway traffic.

If proposed by municipalities and approved by FRA, municipalities are typically responsible for funding all improvements and equipment maintenance associated with Quiet Zones within their jurisdictions. However, AAF's investments in grade crossing safety improvements, in conjunction with amendments to existing crossing license agreements, include several components that are necessary in the establishment of Quiet Zones. As a consequence, the cost of Quiet Zones will be greatly reduced. Further, the State of Florida has made monies available to counties and municipalities for quiet zone improvements.

### **Historic & Cultural Resources**

**31. An updated historic and cultural resources analysis should be conducted with consideration of all designated historic districts as well as all designated and eligible structures along the corridor to fully assess project impacts.**

This recommendation is addressed in the FEIS. The FEIS follows the same methodology to identify designated historic districts that was used in the DEIS, but includes a more extensive evaluation of historic properties. Effects were evaluated at each historic property within the area of potential effect to determine if there would be any physical alteration or modification of the property as a result of the project, or if the Project would change the setting of the property. Indirect effects were evaluated for all historic properties within the defined indirect impacts area of potential effect to determine if the Project would change their setting, if vibration would result in damage to a structure, or if changes in noise levels would have the potential to alter its character-defining features.

Additional project commitments included in the FEIS include:

- Continue to consult with SHPO regarding appropriate design elements for the replacement of the two National Register of Historic Places eligible bridges and the replacement of those bridges that are contributing elements to the FECR Historic District;

- Continue to consult with SHPO in the design and construction of replacement and updated crossing gates at grade crossings within historic districts abutting the FECR Historic District or in proximity to historic properties;
- Continue to consult with SHPO to assess and avoid any potential adverse effects to other historic properties as a result of changes to project design or area of potential effect;
- Place communications towers in locations that have been determined to contain no above or below ground historic properties;
- Implement alternative construction methods such as vibratory or sonic pile driving to reduce vibration impacts from pile driving at archaeological sites located within 135 feet of locations where pile driving occurs;
- Consult with SHPO concerning avoidance, minimization, and mitigation of adverse effects to any discoveries of significant archaeological resources inadvertently discovered during the Project;
- Implement an Archaeological Monitoring Plan for all project work in the area of six identified archaeological sites (Hobe Sound National Wildlife Refuge #3 Site (8MT1287); the Fort Capron Site (8SL41); Vero Man/Vero Locality Site (8IRI/8IR9); Fort Pierce (8SL31); Railroad (8IR846); and Avenue A-Downtown Fort Pierce (8SL1772) and in any other areas designated by SHPO as stipulated in the Memorandum of agreement; and
- All architectural history work or archaeological work carried out shall be conducted by, or under the direct supervision of, a person or persons meeting the Secretary of the Interior's Professional Qualifications Standards for Architectural History.



## Attachment B



July 13, 2015

Jim Boxold, Secretary  
Florida Department of Transportation  
605 Suwannee Street  
Tallahassee, FL 32399-0450

Subject: Pedestrian Safety Requirements for All Aboard Florida Project

Dear Secretary Boxold:

The purpose of this letter is to clarify parties responsible for carrying out required pedestrian safety improvements along the Florida East Coast (FEC) rail corridor for the proposed "All Aboard Florida" (AAF) project. With the introduction of 32 daily high-speed passenger trains into an existing freight corridor, the AAF project will result in a significant change to the railroad operating environment, triggering the need for safety enhancements along the corridor. Local governments have raised concerns regarding the type of pedestrian improvements (e.g., sidewalks, pedestrian gates, barrier fencing) as well as funding for construction, operations and maintenance. Several local governments have been informed by AAF representatives that costs for these safety improvements are local. This appears to be inconsistent with the Federal Railroad Administration (FRA) guidelines and prior FDOT correspondence.

In its review of the FEC's corridor safety assessments, the FRA acknowledged the need for pedestrian safety improvements, noting "trespassing is an epidemic" along the corridor (see Attachment 1: FRA On-Site Engineering Field Report, Part 1, 3/20/2014). To address the critical safety needs, FRA strongly emphasized the importance for the AAF project to be developed in accordance with FRA's Highway-Rail Grade Crossing Guidelines for High-Speed Passenger Rail (FRA Guidelines). Former FDOT Secretary Prasad confirmed FDOT will require AAF to comply with the FRA Guidelines in a letter to Council dated 6/4/2014 (included as Attachment 2). This FDOT commitment is reflected in a subsequent FRA report, titled "FRA On-Site Engineering Field Report, Part 2," published 9/23/2014 (included as Attachment 3). Further, FRA officials are requiring AAF to "bridge the gap" at all of those respective grade crossing locations where existing sidewalks terminate on each side of the crossing, prior to the railroad right-of-way. It has been Council's understanding that all FRA-required safety improvements (including the construction of sidewalks through railroad property and installation of railroad pedestrian gates and barrier fencing) are part of the AAF project and; therefore, costs for constructing these improvements will not be passed onto local governments.

*"Bringing Communities Together" • Est.1976*

421 SW Camden Avenue - Stuart, Florida 34994  
Phone (772) 221-4060 - Fax (772) 221-4067 - [www.tcrpc.org](http://www.tcrpc.org)

Jim Boxold, Secretary  
July 13, 2015  
Page Two

AAF has recently provided 90 percent design plans and other communications to local governments along the FEC corridor. The design plans and other information provided appear inconsistent with the FRA Guidelines, particularly with respect to pedestrian safety improvements. Several local government officials indicate AAF has informed them that municipalities will be responsible for funding both construction and operations/maintenance of two key pedestrian safety infrastructure components: (a) sidewalks and pedestrian gates, and (b) barrier fencing along the corridor. FRA's HSR Guidelines clearly address the need for pedestrian infrastructure as necessary safety improvements. Under "Pedestrian and Trespass Considerations," the guidelines state:

**Pedestrian treatments at vehicular crossings and associated sidewalks, including pedestrian pathways, are an essential safety element** (p. 13, highlight added).

Trespassing on railroad property is the single largest cause of deaths associated with railroad operation. High-speed rail corridors should be clearly posted against entry, and consideration should be given to use of **tamper-resistant fencing**, video surveillance, and similar measures in high-traffic areas (p. 14, highlight added).

Given the emphasis on these pedestrian safety improvements in the FRA Guidelines as required safety elements, once again it is the Council's understanding that such enhancements are to be funded by the AAF project as part of the overall package of required safety improvements. Accordingly, these costs are not to be passed on to local governments. Finally, the operations and maintenance of these improvements, especially the "tamper-resistant fencing," appears to also be part of the required on-going safety improvements, to be funded by AAF.

In summary, Council is respectfully seeking clarification regarding the Department's position towards pedestrian-oriented safety improvements, including which entity – AAF or the local governments – will be required to fund construction and on-going operations and maintenance. Thank you.

Sincerely,



Michael J. Busha, AICP  
Executive Director

MJB/KD:kd

Attachments

cc: Tod Mowery, TCRPC Chair

# Attachment C



## Florida Department of Transportation

RICK SCOTT  
GOVERNOR

605 Suwannee Street  
Tallahassee, FL 32399-0450

JIM BOXOLD  
SECRETARY

July 22, 2015

RECEIVED

JUL 27 2015

TREASURE COAST  
REGIONAL PLANNING COUNCIL

Michael J. Busha, AICP  
Executive Director  
Treasure Coast Regional Planning Council  
421 SW Camden Avenue  
Stuart, FL 34994

Dear Mr. Busha,

Thank you for expressing the Treasure Coast Regional Planning Council's concerns regarding pedestrian safety improvements along the All Aboard Florida (AAF) project. We value your comments and understand that public and agency involvement will better ensure that the All Aboard Florida (AAF) project provides a service that benefits the communities along the proposed passenger rail corridor.

Safety is the Department's highest priority with transportation programs and facilities. As indicated previously we are requiring AAF to comply with the Federal Railroad Administration's guidelines and Florida laws and regulations pertaining to highway-rail grade crossings.

The Department does not have jurisdiction over the structure of agreements between the rail company and the local governments requesting rights to cross railroad right-of-way.

Thank you again for continuing to express your Council's views related to the AAF project.

Sincerely,

  
Jim Boxold  
Secretary

cc: Todd Gruenemeier, Manager, Florida Rail Office

[www.dot.state.fl.us](http://www.dot.state.fl.us)

## Attachment D

### Kim Delaney

---

**From:** Frank.Frey@dot.gov  
**Sent:** Friday, August 28, 2015 12:21 PM  
**To:** trauth@martin.fl.us  
**Cc:** kdelaney@tcrpc.org  
**Subject:** RE: AAF Rail Safety - Martin County  
**Attachments:** HwyRailXingGuidelines110609.pdf; 6\_4\_14\_Prasad.pdf; FRA Response Letter.pdf; Letter to Secretary Jim Boxold - Pedestrian Safety Requirements for All Aboard Florida project.pdf; St. Lucie - AAF.docx; Martin County - AAF.docx

Good afternoon Terry - I will need George's email address in order to share the attached with him as well.

My review of the 90% design plans has been completed for Martin County in which the spreadsheet is attached for your review. This is only a draft and will be modified pending our follow up meeting. I have also included my comments for St. Lucie for your situational awareness. In summary, unfortunately AAF failed to meet the bare minimum safety requirements as outlined in the following correspondences:

- a. Part 1 and Part 2 of FRA's ON-SITE ENGINEERING FIELD REPORT, by Frank Frey (on file)
- b. FRA's Final Environmental Impact Statement and Section 4(f) Determination Report Aug. 4, 2015, pages 3-45 through 3-51 (on file)
- c. FRA's Highway-Rail Grade Crossing Guidelines for High-Speed Passenger Rail, Version 1.0 (attached)
- d. The Letter from Florida Secretary of Transportation Ananth Prasad (attached)
- e. The Letter from FRA Administrator Szabo (attached)
- f. TCRPC's pedestrian safety concern letter (attached)
- g. Specific discussions that took place onsite during February 4, 2014 through March 7, 2014, and during July 15, 2014 through July 18, 2014

Regarding your response to Lefevre (dated 6/3/15) on page 3, I will need to know your concern in why you are omitting 4-Quad gates at NE County Line Road (which one - at MP 280.90 or 255.30), SE Osprey Street, and SE Jonathan Dickenson Way. I just want to ensure that we are on the same page.

My schedule is very sparse over the next two weeks. I will be available on Friday Sept 4th, and then not until Monday Sept 14th and thereafter. Please let me know when a good time will be to follow up.

Respectfully,

Frank A. Frey, Gen. Engineer-HSR  
Federal Railroad Administration | U.S. DOT  
1200 New Jersey Avenue, SE  
RRS-721 W 33.117  
(202) 493-0130  
cell (202) 738-2195



*Florida Department of Transportation*

RICK SCOTT  
GOVERNOR

605 Suwannee Street  
Tallahassee, FL 32399-0450

ANANTH PRASAD, P.E.  
SECRETARY

June 4, 2014

RECEIVED

JUN 13 2014

TREASURE COAST  
REGIONAL PLANNING COUNCIL

Michael J. Busha, AICP  
Executive Director  
Treasure Coast Regional Planning Council  
421 SW Camden Avenue  
Stuart, FL 34994

Dear Mr. Busha,

Thank you for expressing the Treasure Coast Regional Planning Council's concerns regarding safety improvements for the All Aboard Florida (AAF) project. We value your comments and understand that public and agency involvement will better ensure that the All Aboard Florida (AAF) project provides a service that benefits the communities along the proposed passenger rail corridor. The Florida Department of Transportation (Department), the Federal Railroad Administration, and Florida East Coast Industries will continue to work closely with local communities on the improvements at at-grade crossings and other issues with the AAF project.

As you indicated, safety is the Department's highest priority with transportation programs and facilities. We will require AAF to comply with the Federal Railroad Administration's guidelines for rail crossing safety as specified for higher speed passenger rail services.

Thank you again for continuing to express your Council's views related to the AAF project.

Sincerely,

A handwritten signature in blue ink, appearing to read "Ananth Prasad", is written over a faint, larger version of the signature.

Ananth Prasad, P.E.  
Secretary

cc: Fred Wise, Director, Florida Rail Enterprise



U.S. Department  
of Transportation  
**Federal Railroad  
Administration**

Administrator

1200 New Jersey Avenue, SE  
Washington, DC 20590

JUL 29 2014

Mr. Vinay Mudholkar  
Senior Vice President for Infrastructure  
All Aboard Florida  
2855 Le Jeune Road, 4th Floor  
Coral Gables, FL 33134

Dear Mr. Mudholkar:

Thank you for your June 20, 2014 letter, to the Federal Railroad Administration (FRA) requesting clarification of FRA's recommendations for highway-rail grade crossing improvements along All Aboard Florida's (AAF) Miami to West Palm Beach rail corridor.

The FRA participated in grade crossing diagnostic reviews of the highway-rail grade crossings located on AAF's Miami to West Palm Beach rail corridor. On March 20, 2014, FRA provided a written report of its recommendations to the members of the diagnostic team for their consideration. While FRA looks forward to providing additional input to the diagnostic team, the Florida Department of Transportation (FDOT) has the authority to determine the appropriate treatments for public highway-rail grade crossings in the State. Therefore, FDOT will provide final approval of the design for each crossing in accordance with Florida statutes and applicable Federal laws and regulations, taking into consideration the recommendations provided by the grade crossing diagnostic team.

The FRA reviewed the project's grade crossing design plans at the 30 percent design phase and provided comments to the entire diagnostic team, including AAF. FRA requested updated grade crossing design plans from AAF on May 8, 2014, but was informed that updated plans would not be available until August 2014. As each crossing has different physical and operating characteristics, FRA will be unable to determine whether the treatments proposed at each crossing are appropriate until FRA has reviewed the updated grade crossing design plans. The examples of grade crossing design configurations that were attached to your letter appear to be appropriate, assuming that the unique characteristics of the crossing are taken into consideration. However, as noted above, FDOT will make the final decision on the grade crossing design plans.

On June 25, 2014, FDOT and FRA discussed the issue of the orientation of the crossing gate arms. Although FRA's report of recommendations, dated March 20, 2014, does not discuss appropriate orientation of the crossing gate arms, it is my understanding that FRA raised this issue during the onsite review of a skewed crossing with an acute angle where a motor

vehicle could be trapped between a lowered gate arm and the track. A gate oriented perpendicular to the centerline of the roadway would result in a wider than normal distance between the gate arm and the track that would significantly exceed the State's standard of 15 feet from the centerline of track. This condition may be alleviated by orienting the gate arms parallel to the track. FDOT officials asserted that State standards require the gate arms be perpendicular to the centerline of the roadway, yet noted that it is possible to obtain a deviation from the standards if circumstances require it. FRA encouraged FDOT to pursue a deviation from State standards if FDOT determines that a gate arm oriented parallel to the tracks would be appropriate at a particular crossing. However, FRA recognizes that the appropriate orientation of gate arms at the crossing is a determination that must be made by FDOT.

FRA recommended in its report dated March 20, 2014, that pedestrian gate arms should be installed at 12 highway-rail grade crossing locations along the Miami to West Palm Beach segment, due to pedestrian activity at these locations. AAF recently agreed to install pedestrian gate assemblies at 6 of the 12 highway-rail grade crossing locations identified in the FRA report. However, it is my understanding that the AAF disagrees with FRA's recommendation to install pedestrian gates at the other six grade crossings because they have unpaved roadway shoulders. FRA notes that, at each of the six crossings with unpaved roadway shoulders, there is a sidewalk on each side that terminates at the railroad right-of-way. Thus, a person walking on the sidewalk toward the track will have two choices. First, the pedestrian could continue to walk straight across the railroad right-of-way to the sidewalk on the opposite side. This action would require walking on an unimproved surface, stepping over the rail onto the track, stepping over the far rail onto an unimproved surface, and walking on the right-of-way until reaching the other sidewalk. From a safety perspective, this exposes the pedestrian to possible tripping hazards along the railroad right-of-way and the track itself. Also, there are no crossing warning devices along the pedestrian's route to warn that a train is approaching. Finally, this route would result in the pedestrian trespassing on the railroad right-of-way since the pedestrian would not be using an authorized crossing.

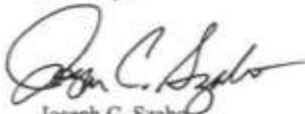
Second, the pedestrian could walk onto the street, cross the railroad tracks on the travelled portion of the roadway, and then walk toward the opposite sidewalk. This action would require the pedestrian to share the roadway with motor vehicles, which would expose the pedestrian to the dangers posed by approaching highway traffic. In most circumstances, the pedestrian will also need to trespass on the railroad right-of-way to reach the street. From a safety perspective, this also exposes the pedestrian to possible tripping hazards along the railroad right-of-way. FRA notes that an aerial view of the 13th Avenue North crossing in Lake Worth, which is the crossing that was provided in your letter, clearly shows a worn foot path on the railroad right-of-way that has been created by the behavior just described.

Ultimately, FDOT will need to provide final approval of the crossing treatments at the six highway-rail grade crossings at issue. However, FRA encourages AAF to continue to work with the municipalities to identify and address the hazards associated with the truncated sidewalks at these highway-rail grade crossing locations. FRA understands that the municipalities would be responsible for the cost of extending the sidewalk up to where the crossing surface begins. However, the cost to municipalities to extend the sidewalks on

either side of the crossing may be reduced by scheduling concurrent construction while AAF is rebuilding and enhancing each crossing location. FRA discussed its concerns with FDOT officials and encouraged FDOT to partner with you and the municipalities to resolve this issue. FRA concurs that a pedestrian gate is not necessary unless there is a sidewalk but strongly encourages AAF to work with the municipalities to address the hazards posed by truncated sidewalks at these locations.

The FRA looks forward to working with AAF as it establishes new passenger service along this corridor. If you have any questions or concerns, please contact Mr. Ronald Ries, Staff Director, Highway-Rail Crossing and Trespasser Programs Division, at (202) 493-6285 or [Ronald.Ries@dot.gov](mailto:Ronald.Ries@dot.gov).

Sincerely,



Joseph C. Szabo  
Administrator



## Martin County - Grade Crossing Safety Comments

August 28, 2015

The following locations are missing the necessary Four-Quadrant Gates				
Street Name	City/Town	Milepost	DOT #	Additional Comments
County Line Road	Martin County	280.90	272 372 S	
Park Road	Martin County	277.70	272 370 D	
Bridge Road	Hobe Sound	274.10	272 366 N	
Pettway Street	Hobe Sound	272.70	272 365 G	4-Quads present, but missing sidewalk and separate sidewalk gate
Crossrip Street	Salerno	271.40	272 362 L	Missing sidewalk, missing exit gate and separate sidewalk gate
Osprey Street	Salerno	270.90	272 934 K	Missing sidewalk, missing exit gate and separate sidewalk gate
Cove Road	Salerno	267.14	272 359 D	Verify if 4-Quads are warranted
Broward Street	Salerno	266.80	272 358 W	Missing exit gate
Salerno Road	Salerno	266.60	272 357 P	
Seaward Street	Salerno	266.50	272 356 H	Remove non-conforming medians on each approach
Monterey Road	Stuart	263.30	272 353 M	Missing exit gate, orient gates <b>parallel</b> to rail
SR A1A	Stuart	262.50	272 350 S	
Florida Street	Stuart	262.30	272 349 X	Missing sidewalk and separate sidewalk gate
MLK / 7 <sup>th</sup> St	Stuart	261.90	272 348 R	Missing separate sidewalk gate at SE quadrant
Jenson Beach Blvd.	Rio	256.80	272 340 L	
Skyline Drive	Rio	255.50	272 337 D	Missing exit gate and separate sidewalk gate
County Line Road	Rio	255.30	272 336 W	Missing exit gate, orient gates parallel to rail

*Continued on second page...*

## St. Lucie County – Grade Crossing Safety Comments

August 28, 2015

<b>The following locations are missing the necessary Four-Quadrant Gates</b>				
<b>Street Name</b>	<b>City/Town</b>	<b>Milepost</b>	<b>DOT #</b>	<b>Additional Comments</b>
Midway Road	Walton	246.30	272 331 M	Missing exit gate
Savannah Road	Fort Pierce	243.80	272 330 F	
City Causeway	Fort Pierce	239.80	272 218 U	
Chamberlain Blvd.	St. Lucie Village	238.40	272 213 K	
Harbor Branch Rd	St. Lucie County	235.10	272 206 A	

<b>Miscellaneous Grade Crossings Comments</b>				
<b>Street Name</b>	<b>City/Town</b>	<b>Milepost</b>	<b>DOT #</b>	<b>Additional Comments</b>
Orange Avenue	Fort Pierce	241.50	272 239 M	Missing exit gate, should be 3-Quad gate due to a 100-ft median present on the opposite side.
Avenue A	Fort Pierce	241.30	272 238 F	Missing 100-foot non-traversable medians for each approach
Avenue D	Fort Pierce	241.10	272 236 S	Missing sidewalk gate at SE quadrant
Torpey Road	St. Lucie Village	237.10	272 210 P	Missing flasher pole at SE quadrant
Rouse Road	St. Lucie Village	236.70	272 209 V	Missing flasher pole at SE quadrant
Private Road	St. Lucie County	234.50	272 205 T	Plans missing operational procedures seeking permission from R.R. dispatch to gain access and cross intersection.
Private Road	St. Lucie County	233.90	272 204 L	Plans missing operational procedures seeking permission from R.R. dispatch to gain access and cross intersection.

Miscellaneous Grade Crossings Comments				
Street Name	City/Town	Milepost	DOT #	Additional Comments
SR A1A	Salerno	268.65	272 360 X	Missing 150-foot medians for each approach
Alice Street	Stuart	260.05	272 344 N	Missing flasher pole at SE quadrant
A1A / CR707	Martin County	259.30	272 343 G	orient gates <b>parallel</b> to rail
Ocean Breeze Park / Miracle Way	(City of Jensen Beach?) Town of Ocean Breeze	257.10	272 341 T	Missing design plan – verify if this crossing location is permanently closed. FEC must update inventory form.