
# *Federal Railroad Administration*
# *Office of Safety*
# *Headquarters Assigned*
# *Accident Investigation Report*
# *HQ-2008-91*

## *CSX Transportation (CSX)*
## *Edgewood, FL*
## *November 28, 2008*

***Note that 49 U.S.C. §20903 provides that no part of an accident or incident report made by the Secretary of Transportation/Federal Railroad Administration under 49 U.S.C. §20902 may be used in a civil action for damages resulting from a matter mentioned in the report.***

DEPARTMENT OF TRANSPORTATION
FEDERAL RAILROAD ADMINISTRATION

# FRA FACTUAL RAILROAD ACCIDENT REPORT

FRA File # HQ-2008-91

| | | |
|---|---|---|
| 1.Name of Railroad Operating Train #1: Amtrak [ATK ] | 1a. Alphabetic Code: ATK | 1b. Railroad Accident/Incident No.: 110386 |
| 2.Name of Railroad Operating Train #2: N/A | 2a. Alphabetic Code: N/A | 2b. Railroad Accident/Incident No.: N/A |
| 3.Name of Railroad Operating Train #3: N/A | 3a. Alphabetic Code: N/A | 3b. Railroad Accident/Incident No.: N/A |
| 4.Name of Railroad Responsible for Track Maintenance: CSX Transportation [CSX ] | 4a. Alphabetic Code: CSX | 4b. Railroad Accident/Incident No.: 110386 |
| 5. U.S. DOT_AAR Grade Crossing Identification Number: 622317K | 6. Date of Accident/Incident: Month 11 Day 28 Year 2008 | 7. Time of Accident/Incident: 07:03: ☐ AM ☑ PM |

8. Type of Accident/Indicent *(single entry in code box)*: 1. Derailment; 2. Head on collision; 3. Rear end collision; 4. Side collision; 5. Raking collision; 6. Broken Train collision; 7. Hwy-rail crossing; 8. RR grade crossing; 9. Obstruction; 10. Explosion-detonation; 11. Fire/violent rupture; 12. Other impacts; 13. Other *(describe in narrative)* — Code: 07

| 9. Cars Carrying HAZMAT | 10. HAZMAT Cars Damaged/Derailed | 11. Cars Releasing HAZMAT | 12. People Evacuated | 13. Division |
|---|---|---|---|---|
| 0 | N/A | N/A | 0 | JACKSONVILLE |

| 14. Nearest City/Town | 15. Milepost *(to nearest tenth)* | 16. State Abbr | 16. State Code | 17. County |
|---|---|---|---|---|
| EDGEWOOD | A795.5 | N/A | FL | ORANGE |

| 18. Temperature (F) *(specify if minus)* | 19. Visibility *(single entry)* 1. Dawn 2. Day 3.Dusk 4.Dark — Code | 20. Weather (single entry) 1. Clear 2. Cloudy 3. Rain 4. Fog 5.Sleet 6.Snow — Code | 21. Type of Track 1. Main 2. Yard 3. Siding 4. Industry — Code |
|---|---|---|---|
| 62 F | 4 | 1 | 1 |

| 22. Track Name/Number | 23. FRA Track Class (1-9, X) — Code | 24. Annual Track Density *(gross tons in millions)* | 25. Time Table Direction 1. North 2. South 3. East 4. West — Code |
|---|---|---|---|
| N/A | 4 | 18.25 | 1 |

## OPERATING TRAIN #1

| 26. Type of Equipment Consist *(single entry)* 1. Freight train 2. Passenger train 3. Commuter train 4. Work train 5. Single car 6. Cut of cars 7. Yard/switching 8. Light loco(s). 9. Maint./inspect.car A. Spec. MoW Equip. — Code | 27. Was Equipment Attended? 1. Yes 2. No — Code | 28. Train Number/Symbol |
|---|---|---|
| 2 | 1 | PO92-28 |

| 29. Speed *(recorded speed, if available)* R - Recorded E - Estimated — Code | 30. Trailing Tons *(gross tonnage, excluding power units)* |
|---|---|
| 58 MPH R | N/A |

31. Method(s) of Operation *(enter code(s) that apply)*: a. ATCS; b. Auto train control; c. Auto train stop; d. Cab; e. Traffic; f. Interlocking; g. Automatic block; h. Current of traffic; i. Time table/train orders; j.Track warrant control; k. Direct traffic control; l.Yard limits; m.Special instructions; n. Other than main track; o. Positive train control; p. Other *(Specify in narrative)*

Code(s): e | N/A | N/A | N/A | N/A

31a. Remotely Controlled Locomotive? 0 = Not a remotely controlled; 1 = Remote control portable; 2 = Remote control tower; 3 = Remote control transmitter - more than one remote control transmitter: 0

| 32. Principal Car/Unit | a. Initial and Number | b. Position in Train | c. Loaded *(yes/no)* |
|---|---|---|---|
| (1) First involved *(derailed, struck, etc)* | AMTK204 | 1 | no |
| (2) Causing *(if mechanical cause reported)* | 0 | 0 | N/A |

33. If railroad employee(s) tested for drug/alcohol use, enter the number that were positive in the appropriate box.

| Alcohol | Drugs |
|---|---|
| N/A | N/A |

34. Was this consist transporting passengers? (Y/N): Y

| 35. Locomotive Units | a. Head End | Mid Train b. Manual | Mid Train c. Remote | Rear End d. Manual | Rear End c. Remote |
|---|---|---|---|---|---|
| (1) Total in Train | 2 | 0 | 0 | 0 | 0 |
| (2) Total Derailed | 0 | 0 | 0 | 0 | 0 |

| 36. Cars | Loaded a. Freight | Loaded b. Pass. | Empty c. Freight | Empty d. Pass. | e. Caboose |
|---|---|---|---|---|---|
| (1) Total in Equipment Consist | 0 | 10 | 0 | 0 | 0 |
| (2) Total Derailed | 0 | 0 | 0 | 0 | 0 |

37. Equipment Damage — This Consist: $1,000.00

38. Track, Signal, Way, & Structure Damage: $0.00

39. Primary Cause Code: M308

40. Contributing Cause Code: N/A

Number of Crew Members

| 41. Engineer/ Operators | 42. Firemen | 43. Conductors | 44. Brakemen |
|---|---|---|---|
| 2 | 0 | 2 | 0 |

Length of Time on Duty

45. Engineer/Operator: Hrs 2 Mi 40

46. Conductor: Hrs 2 Mi 40

| Casualties to: | 47. Railroad Employees | 48. Train Passengers | 49. Other |
|---|---|---|---|
| Fatal | 0 | 0 | 3 |
| Nonfatal | 0 | 0 | 1 |

50. EOT Device? 1. Yes 2. No — 2

51. Was EOT Device Properly Armed? 1. Yes 2. No — N/A

52. Caboose Occupied by Crew? 1. Yes 2. No — N/A

## OPERATING TRAIN #2

| 53. Type of Equipment Consist *(single entry)* 1. Freight train 2. Passenger train 3. Commuter train 4. Work train 5. Single car 6. Cut of cars 7. Yard/switching 8. Light loco(s). 9. Maint./inspect.car A. Spec. MoW Equip. — Code | 54. Was Equipment Attended? 1. Yes 2. No — Code | 55. Train Number/Symbol |
|---|---|---|
| N/A | N/A | N/A |

| 56. Speed *(recorded speed, if available)* R - Recorded E - Estimated — Code | 58. Method(s) of Operation *(enter code(s) that apply)* | 58a. Remotely Controlled Locomotive? |
|---|---|---|
| 0 MPH N/A | a. ATCS; b. Auto train control; g. Automatic block; h. Current of traffic; m.Special instructions; n. Other than main track | 0 = Not a remotely controlled; 1 = Remote control portable |

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57. Trailing Tons *(gross tonnage, excluding power units)* N/A

c. Auto train stop; d. Cab; e. Traffic; f. Interlocking; i. Time table/train orders; j.Track warrant control; k. Direct traffic control; l.Yard limits; o. Positive train control; p. Other *(Specify in narrative)* Code(s): N/A N/A N/A N/A N/A

2 = Remote control tower
3 = Remote control transmitter - more than one remote control transmitter: N/A

| 59. Principal Car/Unit | a. Initial and Number | b. Position in Train | c. Loaded *(yes/no)* |
|---|---|---|---|
| (1) First involved *(derailed, struck, etc)* | 0 | 0 | N/A |
| (2) Causing *(if mechanical cause reported)* | 0 | 0 | N/A |

60. If railroad employee(s) tested for drug/alcohol use, enter the number that were positive in the appropriate box.

| Alcohol | Drugs |
|---|---|
| N/A | N/A |

61. Was this consist transporting passengers? (Y/N) N/A

| 62. Locomotive Units | a. Head End | Mid Train b. Manual | Mid Train c. Remote | Rear End d. Manual | Rear End c. Remote |
|---|---|---|---|---|---|
| (1) Total in Train | 0 | 0 | 0 | 0 | 0 |
| (2) Total Derailed | 0 | 0 | 0 | 0 | 0 |

| 63. Cars | Loaded a. Freight | Loaded b. Pass. | Empty c. Freight | Empty d. Pass. | e. Caboose |
|---|---|---|---|---|---|
| (1) Total in Equipment Consist | 0 | 0 | 0 | 0 | 0 |
| (2) Total Derailed | 0 | 0 | 0 | 0 | 0 |

64. Equipment Damage This Consist: $0.00

65. Track, Signal, Way, & Structure Damage: $0.00

66. Primary Cause Code: N/A

67. Contributing Cause Code: N/A

Number of Crew Members

| 68. Engineer/ Operators | 69. Firemen | 70. Conductors | 71. Brakemen |
|---|---|---|---|
| 0 | 0 | 0 | 0 |

Length of Time on Duty

72. Engineer/Operator: Hrs 0 Mi 0

73. Conductor: Hrs 0 Mi 0

| Casualties to: | 74. Railroad Employees | 75. Train Passengers | 76. Other |
|---|---|---|---|
| Fatal | 0 | 0 | 0 |
| Nonfatal | 0 | 0 | 0 |

77. EOT Device? 1. Yes 2. No N/A

78. Was EOT Device Properly Armed? 1. Yes 2. No N/A

79. Caboose Occupied by Crew? 1. Yes 2. No N/A

## OPERATING TRAIN #3

80. Type of Equipment Consist *(single entry)*: 1. Freight train; 2. Passenger train; 3. Commuter train; 4. Work train; 5. Single car; 6. Cut of cars; 7. Yard/switching; 8. Light loco(s); 9. Maint./inspect.car; A. Spec. MoW Equip. Code: N/A

81. Was Equipment Attended? 1. Yes 2. No Code: N/A

82. Train Number/Symbol: N/A

83. Speed *(recorded speed, if available)* Code
R - Recorded
E - Estimated N/A MPH 0

84. Trailing Tons *(gross tonnage, excluding power units)* N/A

85. Method(s) of Operation *(enter code(s) that apply)*
a. ATCS; b. Auto train control; c. Auto train stop; d. Cab; e. Traffic; f. Interlocking; g. Automatic block; h. Current of traffic; i. Time table/train orders; j.Track warrant control; k. Direct traffic control; l.Yard limits; m.Special instructions; n. Other than main track; o. Positive train control; p. Other *(Specify in narrative)* Code(s): N/A N/A N/A N/A N/A

85a. Remotely Controlled Locomotive?
0 = Not a remotely controlled
1 = Remote control portable
2 = Remote control tower
3 = Remote control transmitter - more than one remote control transmitter: N/A

| 86. Principal Car/Unit | a. Initial and Number | b. Position in Train | c. Loaded *(yes/no)* |
|---|---|---|---|
| (1) First involved *(derailed, struck, etc)* | 0 | 0 | N/A |
| (2) Causing *(if mechanical cause reported)* | 0 | 0 | N/A |

87. If railroad employee(s) tested for drug/alcohol use, enter the number that were positive in the appropriate box.

| Alcohol | Drugs |
|---|---|
| N/A | N/A |

88. Was this consist transporting passengers? (Y/N) N/A

| 89. Locomotive Units | a. Head End | Mid Train b. Manual | Mid Train c. Remote | Rear End d. Manual | Rear End c. Remote |
|---|---|---|---|---|---|
| (1) Total in Train | 0 | 0 | 0 | 0 | 0 |
| (2) Total Derailed | 0 | 0 | 0 | 0 | 0 |

| 90. Cars | Loaded a. Freight | Loaded b. Pass. | Empty c. Freight | Empty d. Pass. | e. Caboose |
|---|---|---|---|---|---|
| (1) Total in Equipment Consist | 0 | 0 | 0 | 0 | 0 |
| (2) Total Derailed | 0 | 0 | 0 | 0 | 0 |

91. Equipment Damage This Consist: $0.00

92. Track, Signal, Way, & Structure Damage: $0.00

93. Primary Cause Code: N/A

94. Contributing Cause Code: N/A

Number of Crew Members

| 95. Engineer/ Operators | 96. Firemen | 97. Conductors | 98. Brakemen |
|---|---|---|---|
| 0 | 0 | 0 | 0 |

Length of Time on Duty

99. Engineer/Operator: Hrs 0 Mi 0

100. Conductor: Hrs 0 Mi 0

| Casualties to: | 101. Railroad Employees | 102. Train | 103. Other |
|---|---|---|---|
| Fatal | 0 | 0 | 0 |
| Nonfatal | 0 | 0 | 0 |

104. EOT 1. Yes 2. No N/A

105. Was EOT Device Properly 1. Yes 2. No N/A

106. Caboose Occupied by Crew? 1. Yes 2. No N/A

## Highway User Involved

107. A. Auto; B. Truck; C. Truck-Trailer.; D. Pick-Up Truck; E. Van; F. Bus; G. School Bus; H. Motorcycle; J. Other Motor Vehicle; K. Pedestrian; M. Other *(spec. in narrative)* Code: A

108. Vehicle Speed *(est. MPH at impact)*: 40

109. *geographical)* 1.North 2.South 3.East 4.West Code: 3

## Rail Equipment Involved

111. Equipment
1.Train *(units pulling)*; 2.Train *(units pushing)*; 3.Train *(standing)*; 4.Car(s) *(moving)*; 5.Car(s) *(standing)*; 6.Light Loco(s) *(moving)*; 7.Light(s) *(standing)*; 8.Other *(specify in narrative)* Code: 1

112. Position of Car Unit in: 1

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| 110. Position | Code | 113. Circumstance | Code |
|---|---|---|---|
| 1.Stalled on Crossing 2.Stopped on Crossing 3.Moving Over Crossing 4. Trapped | 3 | 1. Rail Equipment Struck Highway User 2. Rail Equipment Struck by Highway User | 1 |
| 114a. Was the highway user and/or rail equipment involved in the impact transporting hazardous materials? 1. Highway User 2. Rail Equipment 3. Both 4. Neither | 4 | 114b. Was there a hazardous materials release 1. Highway User 2. Rail Equipment 3. Both 4. Neither | 4 |

114c. State here the name and quantity of the hazardous materials released, if any.
N/A

| 115. Type Crossing Warning | 1.Gates 2.Cantilever FLS 3.Standard FLS | 4.Wig Wags 5.Hwy. traffic signals 6.Audible | 7.Crossbucks 8.Stop signs 9.Watchman | 10.Flagged by crew 11.Other *(spec. in narr.)* 12.None | 116. Signaled Crossing *(See instructions for codes)* Code | 117. Whistle Ban Code |
|---|---|---|---|---|---|---|
| Code(s) | 01 N/A N/A N/A N/A N/A N/A | | | | 01 | 1. Yes 2. No 3. Unknown 2 |

| 118. Location of Warning Code | 119. Crossing Warning with Highway Signals Code | 120. Crossing Illuminated by Street Lights or Special Lights Code |
|---|---|---|
| 1. Both Sides 2. Side of Vehicle Approach 3. Opposite Side of Vehicle Approach 1 | 1. Yes 2. No 3. Unknown 2 | 1. Yes 2. No 3. Unknown 2 |

| 121. Age | 122. Driver's Gender Code | 123. Driver Drove Behind or in Front of and Struck or was Struck by Second Train Code | 124. Driver Code |
|---|---|---|---|
| 21 | 1. Male 2. Female 1 | 1. Yes 2. No 3. Unknown 2 | 1. Drove around or thru the Gate 2. Stopped and then Proceeded 3. Did not Stop 4. Stopped on Crossing 5. Other *(specify in narrative)* 1 |

| 125. Driver Passed Highway Vehicle Code | 126. View of Track Obscured by *(primary obstruction)* Code |
|---|---|
| 1. Yes 2. No 3. Unknown 2 | 1. Permanent Structure 2. Standing Railroad Equipment 3. Passing Train 4. Topography 5. Vegetation 6. Highway Vehicle 7. Other *(specify in narrative)* 8. Not obstructed N/A |

| Casualties to: | Killed | Injured | 127. Driver Code 1. Killed 2.Injured 3. Uninjured | 128. Was Driver in the Vehicle? Code 1. Yes 2. No |
|---|---|---|---|---|
| 129. Highway-Rail Crossing Users | 3 | 1 | 130. Highway Vehicle Property Damage *(est. dollar damage)* 2000 | 131. Total Number of Highway-Rail Crossing Users *(include driver)* 4 |

| 132. Locomotive Auxiliary Lights? Code | 133. Locomotive Auxiliary Lights Operational? Code |
|---|---|
| 1. Yes 2. No 1 | 1. Yes 2. No 1 |
| 134. Locomotive Headlight Illuminated? Code | 135. Locomotive Audible Warning Sounded? Code |
| 1. Yes 2. No 1 | 1. Yes 2. No 1 |

136. DRAW A SKETCH OF ACCIDENT AREA INCLUDING ALL TRACKS, SIGNALS, SWITCHES, STRUCTURES, OBJECTS, ETC., INVOLVED.

Sorry, the report can not display the file.

137. SYNOPSIS OF THE ACCIDENT

On November 28, 2008, at 7:03 p.m., northward Amtrak (ATK) Passenger Train PO92-98 struck an eastbound vehicle at the East Lancaster Road, highway-rail grade crossing. The accident occurred in Orange County, Florida (FL) near the community of Edgewood. The Single Main Track at this location is owned and maintained by CSX Transportation (CSX) and located at milepost (MP) A795.57 on the Sanford Subdivision, Jacksonville Division. The method of operation is by a Traffic Control System (TCS).

The automobile had a total of four occupants. The automobile driver and two passengers were killed as a result of the crash. The fourth passenger in the automobile was critically injured. The Train, PO92-28, consisted of two locomotives and 10 rail passenger cars. There were four crew members, and 186 passengers and service employees on board ATK Passenger Train PO-92-28. There were no injuries to the train crew members or passengers. Amtrak's lead locomotive sustained $1,000 in damages, there were no track, or signal damages reported. The highway vehicle sustained $2,000 in damages, and completely destroyed. A third vehicle, properly parked adjacent to the track was struck by debris sustained $6,000 in damages.

The weather was dark and the sky was clear with a temperature of 62º F.

The probable cause of the accident is the highway user deliberately disregarded crossing warning devices.

138. NARRATIVE

CIRCUMSTANCES PRIOR TO THE ACCIDENT

On November 28, 2008, Amtrak Passenger Train PO92-28 changed crews at the assigned location in Tampa, Florida (FL). The train consisted of two locomotives with 10 passenger coach cars. The crew consisted of a locomotive engineer, qualifying assistant engineer, conductor, and assistant conductor. The crew was regularly assigned to this particular train, with the exception of the assistant conductor. The assistant conductor was an extra board employee who was transported to Tampa, FL the day before the trip for purposes of receiving the required rest. All four crew members were familiar with this track segment. The crew reported for duty at the assigned time at 4:35 p.m. and departed Tampa at 5:33 p.m. The Assistant Engineer was seated on the right (east) side of the lead locomotive cab at the controls. The Engineer was seated on the left (west) side of the locomotive. He was manning the radio and observing the train operation. The conductor was in the baggage car preparing for the next passenger stop, and the assistant conductor was in the eighth passenger car checking passengers.

The track in the accident area is a single main track which is tangent through the highway-rail grade crossing. There is a 1 degree curve about 300 feet south of the highway-rail grade crossing. The grade of the track is practically level. The CSX timetable direction of the train is north. The geographical direction is north. Timetable direction is used throughout this report.

THE ACCIDENT:

ATK PASSENGER TRAIN PO92-28:

ATK Passenger Train PO92-28 was being operated at 58 mph approaching East Lancaster Road. The train crew's view of the crossing was un-obstructed. The assistant engineer said he sounded the horn for East Lancaster Road and out of the corner of his eye he could see a vehicle traveling east on East Lancaster Road at a high rate of speed. He observed the car go over the median of the road, around the gates and in front of the train. He simultaneously initiated an emergency train air brake application about the same time as the

highway vehicle impacted the train. The engineer confirmed the assistant engineer's eye witness account.

On November 28, 2008, at 7:03 p.m., northward Amtrak (ATK) Passenger Train PO92-98 struck an eastbound vehicle at the East Lancaster Road, highway-rail grade crossing. The accident occurred in Orange County, (FL) near the community of Edgewood. The Single Main Track at this location is owned and maintained by CSX Transportation (CSX) and located at milepost (MP) A795.57 on the Sanford Subdivision, Jacksonville Division. The method of operation is by a Traffic Control System (TCS). The automobile had a total of four occupants. The automobile driver and two passengers were killed as a result of the crash. The fourth passenger in the automobile was critically injured. ATK Passenger Train PO92-28 consisted of two locomotives and 10 rail passenger cars. There were four crew members and 186 passengers and service employees on board ATK Passenger Train PO92-28. There were no injuries to the train crew members or passengers. Amtrak's lead locomotive sustained $1,000 in damages; there were no track or signal damages reported. The highway vehicle sustained $2,000 in damages and was completely destroyed. A third vehicle, properly parked adjacent to the track, was struck by debris and sustained approximately $6,000 in damages.

The weather was dark and the sky was clear with a temperature of 62º F.

The probable cause of the accident is the highway user deliberately disregarded crossing warning devices.

The speed was recorded by the event recorder of both locomotives. The maximum authorized speed for the trains was 60 mph, as designated in the current CSX Timetable No.5. The conductor stated that he could hear the horn from his location and the emergency brake application. The assistant conductor said that he could not hear the horn from his location back in the passenger car, but he heard the emergency brake application. Both the conductor and the assistant conductor stated that the stop was very smooth. They commented that most of the passengers were not even aware that anything had occurred.
The train stopped approximately 1,150 feet from the point of impact. The rear of the train stopped approximately 300 feet north of the point of impact.

HIGHWAY VEHICLE-1994 BUICK:

The automobile was traveling east to west on East Lancaster road. According to the assistant engineer, the driver never attempted to stop at the crossing. A report filed by the Florida Highway Patrol (FHP) estimated the driver was operating the vehicle at about 40 mph when the collision occurred. The posted speed limit is 40 mph. The point of impact was in the median lane of the highway-rail grade crossing surface. The impact occurred in the center of the crossing with the front area of the Locomotive making contact on the passenger side of the vehicle. The vehicle was thrown northwest from the crossing into the parking lot of a business located at 711 East Lancaster Road. The vehicle made contact with the ground one time as it entered the parking lot, then struck the right side of a parked truck in the parking lot. The vehicle continued to a final stop on its right side and roof facing north-east, about 176 feet from the initial point of impact. The driver and right rear occupant were ejected from the vehicle.

After the train stopped, both the locomotive engineer and assistant locomotive engineer remained on the locomotive; the engineer made an emergency transmission over the radio to the CSX dispatcher. The engineer said he could see the Emergency Medical Responders (EMS) arriving even before he had completed his call to the Dispatcher. The Conductor said he sent the Assistant Conductor back to the accident scene to assist, while he checked the head end crew members for injuries, and the train for damages. The Conductor determined that no one on the train was injured. The Conductor then walked back to the accident scene, and sent the Assistant Conductor back to take control of the train until his return.

Emergency Medical Services (EMS) were notified at 7:04 p.m. and arrived at the scene at 7:07 p.m. The Florida Highway Patrol Officer was notified at 7:10 p.m. and arrived at 7:33 p.m. One of the occupants (the right rear passenger) of the automobile was pronounced dead at the scene. Three of the occupants were transported to Orlando Regional Medical Center where two of them (the driver and the right front vehicle passenger) were pronounced dead shortly after their arrival. The fourth occupant (the left rear passenger) was treated and later released. The train and crew were released to proceed and continue to Jacksonville Florida.

ANALYSIS AND CONCLUSIONS:

ANALYSIS - TOXICOLOGICAL TESTING:
The automobile involved was a 1994 Buick, mid-sized four door sedan. The driver was a 21-year-old male. The three passengers were two men, ages 22 and 28 and one women age 19. According to FHP, Traffic Homicide Investigator, a toxicological test was performed on the driver and the results were negative. The FHP initiated a homicide investigation into the accident. There were no toxicological tests performed on the train crew. FRA does not require such testing for this type of accident.

CONCLUSION:
Intoxication was not a casual factor in the accident.
ANALYSIS - HIGHWAY-RAIL GRADE CROSSING:
East Lancaster Road is a blacktop four lane county road with a 14-foot painted center median. The road runs east and west. The road intersects the track at an approximate 90 degree angle. East Lancaster dead-ends at South Orange Avenue, about 65 feet east of the Highway-Rail Grade Crossing. There is an advance warning sign posted about 257 feet from the crossing identifying the railroad tracks ahead. There is another advance warning sign posted about 158' from the crossing identifying a distance of 65 feet between tracks & highway. Pavement markings are clearly distinguishable. The active crossing warning system is a Phase Motion Detector (PMD-3) and a Hawk event recorder. The event recorder showed a total warning time of 33 seconds prior to the train arriving at the highway-rail grade crossing with the gates reaching the down position 17 seconds before the train arrived at the crossing. The active warning devices were tested by a CSX signal maintainer on the day of the accident, and found to function as intended. FRA Signal and Train Control Inspector (S&TC) inspected the cross devices on December 4, 2008 with no exception noted. A witness at the scene stated to the Florida Highway Patrol that the vehicle tried to make it across the tracks in front of the train by going around the gates, and that the gates were down and the lights were flashing.

CONCLUSION:
The crossing is in relatively good condition including the pavement and markings. The warning devices functioned as intended.

ANALYSIS - LOCOMOTIVE SAFETY DEVICES:
The lead locomotive was equipped with a headlight, auxiliary lights, and an audible warning device required by Federal regulations and functioned as intended.

CONCLUSION:
The locomotive safety devices were in full compliance with the Federal requirements.

ANALYSIS - LOCOMOTIVE ENGINEER OPERATING PERFORMANCE:
The locomotive was equipped with a speed indicator and an event recorder as required. The relevant even recorder data was downloaded by Amtrak at the accident site, and analyzed.

CONCLUSION:
The analysis of the event recorder data concluded that the engineer was in compliance with all applicable railroad operating and train handling requirements.

ANALYSIS - FATIGUE:
FRA uses an overall effectiveness rate of 77.5 percent as the baseline for fatigue analysis, which is equivalent to blood alcohol content (BAC) of 0.05. At or above this baseline, we do not consider fatigue as probable for any employee. Software sleep settings vary according to information obtained from each employee. If an employee does not provide sleep information, FRA uses the default software settings. FRA obtained fatigue related information, including a 10-day work history, for the employees involved in the accident.

CONCLUSION:
FRA concluded that fatigue was not probable for any of the crew members assigned to this train.

PROBABLE CAUSE AND CONTRBUTING FACTORS:

The accident occurred because the driver of the automobile failed to stop at the highway-rail crossing, as required by State of Florida highway traffic laws. The driver of the vehicle deliberately disregarded crossing

warning devices required by State of Florida highway traffic laws. The driver of the vehicle deliberately disregarded crossing warning d