



***Federal Railroad Administration
Office of Safety
Headquarters Assigned
Accident Investigation Report
HQ-2008-47***

***Norfolk Southern Corporation (NS)
La Crosse, IN
May 17, 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.

1. Name of Railroad Operating Train #1 Norfolk Southern Corp. [NS]		1a. Alphabetic Code NS		1b. Railroad Accident/Incident No. 032977	
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: Norfolk Southern Corp. [NS]		4a. Alphabetic Code NS		4b. Railroad Accident/Incident No. 032977	
5. U.S. DOT_AAR Grade Crossing Identification Number 478603V		6. Date of Accident/Incident Month 05 Day 17 Year 2008		7. Time of Accident/Incident 07:40:00 <input checked="" type="checkbox"/> AM <input type="checkbox"/> PM	
8. Type of Accident/Incident (single entry in code box) 1. Derailment 4. Side collision 7. Hwy-rail crossing 10. Explosion-detonation 13. Other Code 2. Head on collision 5. Raking collision 8. RR grade crossing 11. Fire/violent rupture (describe in narrative) 3. Rear end collision 6. Broken Train collision 9. Obstruction 12. Other impacts 07					
9. Cars Carrying HAZMAT 1		10. HAZMAT Cars Damaged/Derailed 0		11. Cars Releasing HAZMAT 0	
		12. People Evacuated 0		13. Division LAKE	
14. Nearest City/Town LA CROSSE		15. Milepost (to nearest tenth) 459.4		16. State Abbr Code N/A IN	
17. County LA PORTE					
18. Temperature (F) (specify if minus) 60 F		19. Visibility (single entry) Code 1. Dawn 3. Dusk 2. Day 4. Dark 2		20. Weather (single entry) Code 1. Clear 3. Rain 5. Sleet 2. Cloudy 4. Fog 6. Snow 1	
21. Type of Track Code 1. Main 3. Siding 2. Yard 4. Industry 1		22. Track Name/Number SINGLE MAIN TRACK		23. FRA Track Code Class (1-9, X) 4	
		24. Annual Track Density (gross tons in millions) 19.5		25. Time Table Direction Code 1. North 3. East 2. South 4. West 4	
OPERATING TRAIN #1					
26. Type of Equipment Consist (single entry) 1. Freight train 4. Work train 7. Yard/switching 2. Passenger train 5. Single car 8. Light loco(s). 3. Commuter train 6. Cut of cars 9. Maint./inspect.car		A. Spec. MoW Equip. Code 1		27. Was Equipment Attended? Code 1. Yes 2. No 1	
28. Train Number/Symbol NS217L416		29. Speed (recorded speed, if available) Code R - Recorded E - Estimated 58 MPH R		30. Trailing Tons (gross tonnage, excluding power units) 1491	
31. Method(s) of Operation (enter code(s) that apply) a. ATCS g. Automatic block m. Special instructions b. Auto train control h. Current of traffic n. Other than main track c. Auto train stop i. Time table/train orders o. Positive train control d. Cab j. Track warrant control p. Other (Specify in narrative) e. Traffic k. Direct traffic control Code(s) f. Interlocking l. Yard limits 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 (1) First involved (derailed, struck, etc) TTAX654284		a. Initial and Number 3		b. Position in Train 3	
(2) Causing (if mechanical cause reported) 0		c. Loaded (yes/no) yes		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) N		35. Locomotive Units a. Head End Mid Train Rear End b. Manual c. Remote d. Manual c. Remote		36. Cars a. Freight b. Pass. c. Freight d. Pass. e. Caboose	
(1) Total in Train 2		0 0 0 0		(1) Total in Equipment Consist 38 0 0 0 0	
(2) Total Derailed 0		0 0 0 0		(2) Total Derailed 0 0 0 0 0	
37. Equipment Damage This Consist \$800.00		38. Track, Signal, Way, & Structure Damage \$0.00		39. Primary Cause Code M308	
				40. Contributing Cause Code M399	
41. Engineer/Operators 1		42. Firemen 0		43. Conductors 1	
44. Brakemen 0		45. Engineer/Operator Hrs 5 Mi 0		46. Conductor Hrs 5 Mi 0	
Casualties to:		47. Railroad Employees 0		48. Train Passengers 0	
Fatal		0		49. Other 0	
Nonfatal		0		0	
50. EOT Device? 1. Yes 2. No 1		51. Was EOT Device Properly Armed? 1. Yes 2. No 1		52. Caboose Occupied by Crew? 1. Yes 2. No 2	
OPERATING TRAIN #2					
53. Type of Equipment Consist (single entry) 1. Freight train 4. Work train 7. Yard/switching 2. Passenger train 5. Single car 8. Light loco(s). 3. Commuter train 6. Cut of cars 9. Maint./inspect.car		A. Spec. MoW Equip. Code N/A		54. Was Equipment Attended? Code 1. Yes 2. No N/A	
55. Train Number/Symbol N/A		56. Speed (recorded speed, if available) Code R - Recorded E - Estimated N/A MPH N/A		57. Method(s) of Operation (enter code(s) that apply) a. ATCS g. Automatic block m. Special instructions b. Auto train control h. Current of traffic n. Other than main track	
58a. Remotely Controlled Locomotive? 0 = Not a remotely controlled 1 = Remote control portable					

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

59. Principal Car/Unit	a. Initial and Number	b. Position in Train	c. Loaded(yes/no)	60. If railroad employee(s) tested for drug/alcohol use, enter the number that were positive in the appropriate box.	Alcohol N/A	Drugs N/A
(1) First involved (derailed, struck, etc)	N/A	N/A	N/A			
(2) Causing (if mechanical cause reported)	N/A	N/A	N/A	61. Was this consist transporting passengers? (Y/N)		N/A

62. Locomotive Units	a. Head End	Mid Train b. Manual c. Remote	Rear End d. Manual c. Remote	63. Cars	Loaded a. Freight b. Pass.	Empty c. Freight d. Pass.	e. Caboose
(1) Total in Train	N/A	N/A N/A	N/A N/A	(1) Total in Equipment Consist	N/A N/A	N/A N/A	N/A
(2) Total Derailed	N/A	N/A N/A	N/A N/A	(2) Total Derailed	N/A N/A	N/A N/A	N/A

64. Equipment Damage This Consist	N/A	65. Track, Signal, Way, & Structure Damage	N/A	66. Primary Cause Code	N/A	67. Contributing Cause Code	N/A
Number of Crew Members				Length of Time on Duty			

68. Engineer/Operators	69. Firemen	70. Conductors	71. Brakemen	72. Engineer/Operator	73. Conductor
N/A	N/A	N/A	N/A	Hrs N/A Mi N/A	Hrs N/A Mi N/A
Casualties to:	74. Railroad Employees	75. Train Passengers	76. Other	77. EOT Device?	78. Was EOT Device Properly Armed?
Fatal	N/A	N/A	N/A	1. Yes 2. No N/A	1. Yes 2. No N/A
Nonfatal	N/A	N/A	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	81. Was Equipment Attended?	Code	82. Train Number/Symbol
				N/A	1. Yes 2. No	N/A	N/A

83. Speed (recorded speed, if available)	Code	85. Method(s) of Operation (enter code(s) that apply)	85a. Remotely Controlled Locomotive?
R - Recorded E - Estimated	N/A MPH N/A	a. ATCS b. Auto train control c. Auto train stop d. Cab e. Traffic f. Interlocking	0 = Not a remotely controlled 1 = Remote control portable 2 = Remote control tower 3 = Remote control transmitter - more than one remote control transmitter
84. Trailing Tons (gross tonnage, excluding power units)	N/A	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	N/A

86. Principal Car/Unit	a. Initial and Number	b. Position in Train	c. Loaded(yes/no)	87. If railroad employee(s) tested for drug/alcohol use, enter the number that were positive in the appropriate box.	Alcohol N/A	Drugs N/A
(1) First involved (derailed, struck, etc)	N/A	N/A	N/A			
(2) Causing (if mechanical cause reported)	N/A	N/A	N/A	88. Was this consist transporting passengers? (Y/N)		N/A

89. Locomotive Units	a. Head End	Mid Train b. Manual c. Remote	Rear End d. Manual c. Remote	90. Cars	Loaded a. Freight b. Pass.	Empty c. Freight d. Pass.	e. Caboose
(1) Total in Train	N/A	N/A N/A	N/A N/A	(1) Total in Equipment Consist	N/A N/A	N/A N/A	N/A
(2) Total Derailed	N/A	N/A N/A	N/A N/A	(2) Total Derailed	N/A N/A	N/A N/A	N/A

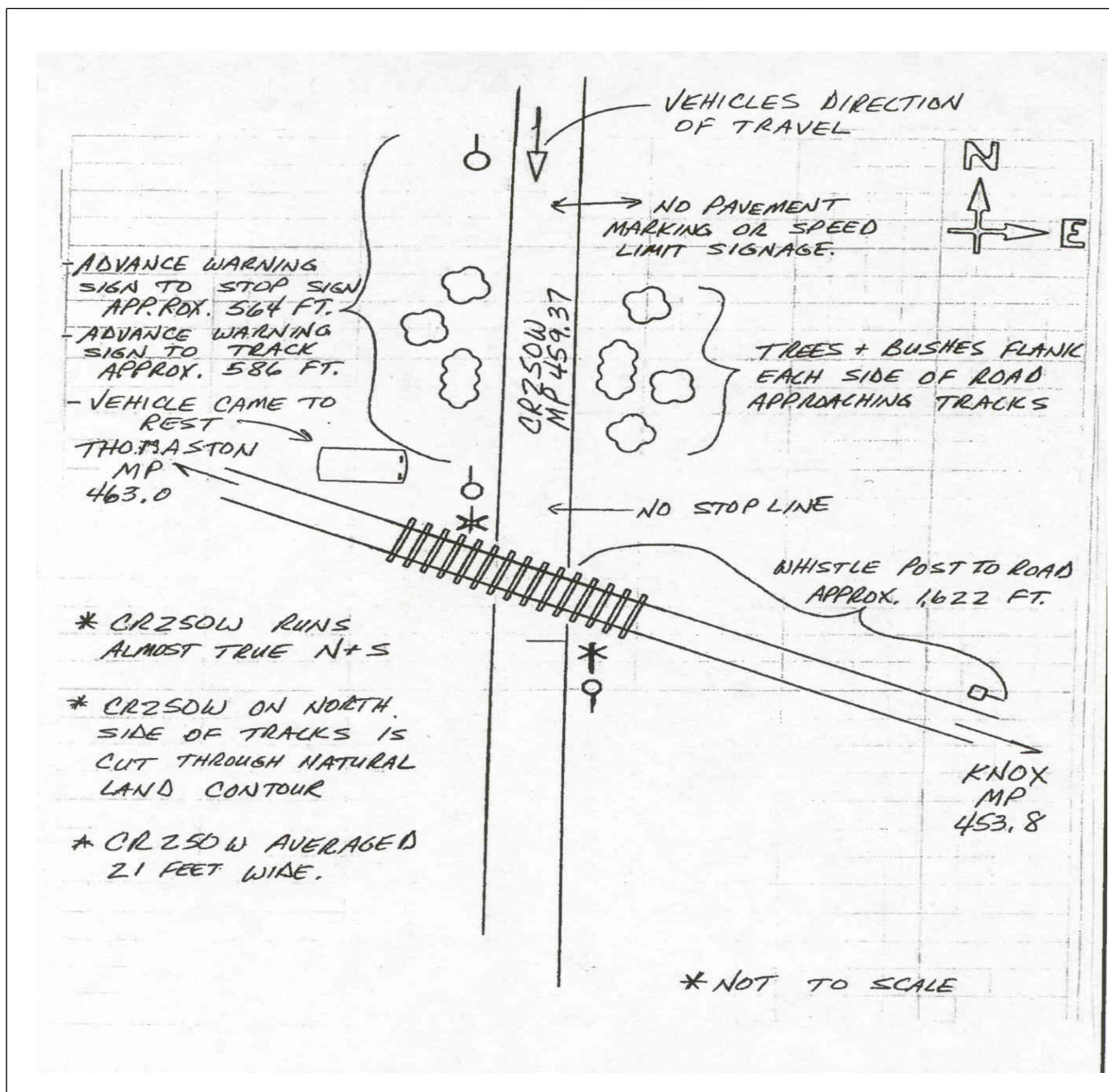
91. Equipment Damage This Consist	N/A	92. Track, Signal, Way, & Structure Damage	N/A	93. Primary Cause Code	N/A	94. Contributing Cause Code	N/A
Number of Crew Members				Length of Time on Duty			

95. Engineer/Operators	96. Firemen	97. Conductors	98. Brakemen	99. Engineer/Operator	100. Conductor
N/A	N/A	N/A	N/A	Hrs N/A Mi N/A	Hrs N/A Mi N/A
Casualties to:	101. Railroad Employees	102. Train	103. Other	104. EOT	105. Was EOT Device Properly
Fatal	N/A	N/A	N/A	1. Yes 2. No N/A	1. Yes 2. No N/A
Nonfatal	N/A	N/A	N/A	106. Caboose Occupied by Crew?	
				1. Yes 2. No	N/A

Highway User Involved				Rail Equipment Involved			
107. C. Truck-Trailer A. Auto B. Truck 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 D	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
108. Vehicle Speed (est. MPH at impact)	00	109. geographical 1. North 2. South 3. East 4. West	Code 2	112. Position of Car Unit in 3			

110. Position 1. Stalled on Crossing 2. Stopped on Crossing 3. Moving Over Crossing 4. Trapped		Code 3	113. Circumstance 1. Rail Equipment Struck Highway User 2. Rail Equipment Struck by Highway User		Code 2					
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			Code 2	114b. Was there a hazardous materials release 1. Highway User 2. Rail Equipment 3. Both 4. Neither		Code 4				
114c. State here the name and quantity of the hazardous materials released, if any. N/A										
115. Type 1. Gates 4. Wig Wags 7. Crossbucks 10. Flagged by crew Crossing 2. Cantilever FLS 5. Hwy. traffic signals 8. Stop signs 11. Other (spec. in narr.) Warning 3. Standard FLS 6. Audible 9. Watchman 12. None				Code N/A	116. Signaled Crossing (See instructions for codes)		Code N/A			
Code(s)		07	08	N/A	N/A	N/A				
118. Location of Warning 1. Both Sides 2. Side of Vehicle Approach 3. Opposite Side of Vehicle Approach			Code 1	119. Crossing Warning with Highway Signals 1. Yes 2. No 3. Unknown		Code N/A				
120. Crossing Illuminated by Street Lights or Special Lights 1. Yes 2. No 3. Unknown			Code 2							
121. Age 16	122. Driver's Gender 1. Male 2. Female		Code 1	123. Driver Drove Behind or in Front of and Struck or was Struck by Second Train 1. Yes 2. No 3. Unknown		Code 2				
124. Driver 1. Drove around or thru the Gate 2. Stopped and then Proceeded 3. Did not Stop			125. Driver Passed Highway Vehicle 1. Yes 2. No 3. Unknown		Code 2	126. View of Track Obscured by (primary obstruction) 1. Permanent Structure 3. Passing Train 5. Vegetation 7. Other (specify in narrative) 2. Standing Railroad Equipment 4. Topography 6. Highway Vehicle 8. Not obstructed		Code 8		
Casualties to:		Killed	Injured	127. Driver 1. Killed 2. Injured 3. Uninjured		Code 1	128. Was Driver in the Vehicle? 1. Yes 2. No		Code 1	
129. Highway-Rail Crossing Users		3	0	130. Highway Vehicle Property Damage (est. dollar damage)		7000	131. Total Number of Highway-Rail Crossing Users (include driver)			3
132. Locomotive Auxiliary Lights? 1. Yes 2. No				Code 1		133. Locomotive Auxiliary Lights Operational? 1. Yes 2. No				Code 1
134. Locomotive Headlight Illuminated? 1. Yes 2. No				Code 1		135. Locomotive Audible Warning Sounded? 1. Yes 2. No				Code 1

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



137. SYNOPSIS OF THE ACCIDENT

On May 17, 2008, at approximately 7:40 a.m., EDT, a motor vehicle, struck the north side of westbound Norfolk Southern Railroad (NS) train 217L416 (NS 217). The accident occurred at highway-rail grade crossing County Road 250 West (CR250W), DOT 478 603 V.

The accident occurred on NS's single main track of the Lake Division, Chicago District, at milepost 459.37, near Hanna, Indiana. The motor vehicle driver and two passengers were killed. There were no injuries to the train crew. There was no derailment, fire or release of hazardous materials. One rail car sustained damages of approximately \$800. The motor vehicle was destroyed, the damage was estimated at \$7,000.

At the time of the accident it was daylight, clear, and the temperature was 58 °F.

The La Porte County Sheriff's Department accident report stated that speed was considered a contributing factor. Their report also investigated other possible contributing factors, which were alcohol and driver inattention.

Probable Cause:

The accident was caused by the failure of the motor vehicle operator to yield to the train. According to the La Porte County Sheriff's Department, the driver was in violation of Indiana Statutes IC 9-21-8-32 (Failing to stop at a stop sign) and IC 9-21-8-39 (Failing to yield at a railroad cross buck).

138. NARRATIVE

CIRCUMSTANCES PRIOR TO THE ACCIDENT

The Norfolk Southern (NS) method of operation at the location of the accident is by signal indication of a Traffic Control System (TCS). The maximum authorized speed for the single Main Track at the location of the accident is 60 mph. This is designated in the NS Lake Division Timetable Number 5, dated June 10, 2002. The railroad timetable direction of the train was west. The geographic direction was northwest. Timetable directions are used throughout this report.

The crew of NS 217 included a locomotive engineer and a conductor. They went on duty at 2:40 a.m. EDT, May 17, 2008, at the NS Fort Wayne Rail Yard in Fort Wayne, Indiana. This is the home terminal for both employees, and both received more than the required statutory off duty rest period prior to reporting for duty. The conductor was off duty the previous three days and the engineer was off duty for twelve hours.

NS 217 consisted of two locomotives and 10 articulated rail cars. NS 217 operates between Fort Wayne, Indiana and Chicago, Illinois. The lead locomotive was NS 9504 and the trailing locomotive was NS 9247. A Class 1 Train Air Brake Test slip was in the locomotive; the crew performed a set and release test of the brakes; the End of Train Device (EOTD) was operating properly and the train departed Fort Wayne at 4:15 a.m. The train was 2,514 feet long with 1,491 training tons.

At the location of the accident the track is tangent and relatively level. There is dense vegetation and trees located on the north and south side of the right-of-way, beginning approximately 50 feet from the tracks.

As NS 217 approached the accident site, the engineer was seated on the north side of the locomotive and the conductor was seated on the south side of the locomotive.

County Road CR250W extends from the northwest to the southeast at about a 25 degree angle to the single Main Track. There is a slight crest, estimated to be about a one percent grade, north of the track. The grade of CR250W is relatively level south of the single Main Track. CR250W has two lanes, one each for north-

south traffic. It is constructed of asphalt, there are no speed signs, however, by State statute the maximum vehicle speed is 55 mph.

THE ACCIDENT

The train was being operated at 59 mph as it approached the accident site. A 1991 Chevrolet pick-up truck was traveling from north to south on CR250W. NS 217 passed over the crossing and the pickup truck collided with the first freight car behind the locomotives. The vehicle ended up in the northwest quadrant of the rail crossing. The three male occupants, ages 14, 15, and 16 years old, were ejected from the vehicle.

According to the engineer, the lead locomotive was occupying the crossing when he caught a glimpse of a vehicle. When the engineer looked in the side mirror on the north side of the locomotive, he saw debris in the air. He told the conductor he thought the train had been struck. The conductor got up and looked back to the east and also saw paper and debris in the air. The engineer notified the dispatcher that he thought a vehicle had struck the train and brought the train to a controlled stop just east of County Road CR400 West, approximately one mile west of Road Crossing CR250W.

When the train had stopped, the conductor walked back on the north side of the train making an inspection for any signs of the train being struck. The first car behind the locomotives, TTAX 654284, appeared to have been hit. The conductor noticed a piece of hose and miscellaneous auto debris on the rail car. At this point the conductor confirmed to the engineer that the train had been struck. The conductor continued to walk eastward on the north side of the train towards CR250W.

The conductor encountered a La Porte County Deputy Sheriff who confirmed that a vehicle had struck the train. The conductor then returned to the locomotive and awaited further instructions. The train had stopped with the rear end approximately 5,000 feet from the initial impact location. After the impact the train traveled approximately 7,500 feet.

The La Porte County Sheriff's Department arrived at 7:52 a.m. La Porte Emergency Medical Services (EMS) and the Hanna (Indiana) Township Fire Department administered aid to the occupants of the pickup truck. Two of the occupants were determined to be deceased at the scene. The third was unstable and in critical condition. A Med-Flight helicopter was summoned to transport the critically injured victim to a hospital. The EMS team was unable to stabilize the condition of the injured male for air transport, so EMS transported the third individual to La Porte Hospital, La Porte, Indiana, by ambulance where he was pronounced dead a short time later.

Neither train crew member was injured. The locomotive engineer of NS 217 submitted to a portable breath test, which was administered by a La Porte County Sheriff's Deputy. The test was negative for alcohol.

The driver of the vehicle was 16 years old and was in possession of a valid Indiana motor vehicle driver's license. According to the La Porte County Sheriff's accident report, all three occupants had minute amounts of alcohol in their system.

ANALYSIS & CONCLUSIONS

ANALYSIS - TOXICOLOGICAL TESTING:

The La Porte County Coroner's office ordered the blood of the three victims evaluated to determine the presence of alcohol. The toxicological tests were conducted at La Porte Hospital. Minute traces of alcohol were detected in the blood of all three victims.

The La Porte County Sheriff's Department accident report states that the locomotive engineer of NS 217 voluntarily submitted to a portable breath test and that the test was negative for alcohol.

CONCLUSION:

FRA did not conclude that the alcohol present in the victims contributed to the collision.

ANALYSIS – HIGHWAY-RAIL GRADE CROSSING AND PASSIVE WARNING DEVICES:

The highway-rail crossing at grade is equipped on the north and south side with passive warning devices; cross bucks and stop signs.

Southbound on CR250W there is an advance warning sign posted approximately 564 feet in advance of the stop sign. There are no highway-rail grade pavement markings or stop lines present on the southbound traffic lane on CR250W.

The northbound traffic lane has an advance warning sign and a stop line, but no highway-rail grade pavement markings.

Trees and bushes have been cut parallel to the tracks and in advance of the road crossing leaving an unobstructed view to the train crews and vehicular traffic. This area of clearing trees and bushes to avoid an obstructed line of site is maintained by the La Porte County Highway Department. The NS maintains the right-of-way for 50 feet from the center line of railroad tracks. A preview of the right-of-way by FRA Inspectors indicated that the railroad was in compliance with State statutes.

CONCLUSION:

No exceptions were taken to the condition of the crossing and the passive warning devices. Southbound motorists can clearly see the stop signs and cross bucks 1,000 feet in advance of the crossing.

ANALYSIS – LOCOMOTIVE SAFETY DEVICES:

The leading locomotive was equipped with a headlight, ditch lights, and an on-board audible warning device as required by Federal Regulations. The locomotive engineer tested the devices in the presence of a La Porte County Deputy Sheriff at the location the train stopped after the accident; all of the devices operated as intended.

CONCLUSION:

The locomotive safety devices operated as intended.

ANALYSIS – LOCOMOTIVE ENGINEER OPERATING PERFORMANCE: LOCOMOTIVE WARNING DEVICES:

FRA analysis of the relevant data from the video and audio devices on locomotive NS 217, revealed that the horn was sounded for a period of about 10 seconds prior to the arrival of NS Train 217L4-16 at the crossing. Federal Regulations require the horn be sounded, at a minimum, 15 seconds prior to the arrival of a train at a highway-rail grade crossing.

CONCLUSION:

Due to numerous factors like the vehicle driver's speed, his inattentiveness and his excess alcohol consumption, FRA was unable to conclude whether these factors may have possibly contributed to the accident or if failure of the engineer to continue to sound the train horn for 15 seconds rather than the 10 seconds recorded was adequate.

ANALYSIS: FATIGUE

FRA obtained fatigue related information, for the 10-day period preceding this incident including the 10-day work history (on duty/off duty cycles) for all of the employees involved.

CONCLUSION:

Upon analysis of that information FRA concluded fatigue was not probable for any of the employees.

ANALYSIS: VEHICLE SPEED

According to the La Porte County Sheriff's accident report, skid marks were noted at the crossing indicating that the driver attempted to stop the vehicle. Reconstruction by the La Porte County Sheriff's Department concerning the "speed of the vehicle" immediately prior to impact ranged between 31 and 50 mph. The officer who generated these calculations noted that they were considered a conservative estimate of speed.

CONCLUSION:

While the exact speed has not been determined, speed should be considered as a contributing factor.

OVERALL CONCLUSIONS:

The railroad was in compliance with their rules and applicable Federal and State Regulations, except for the use of the locomotive horn as identified above. There were no witnesses to the accident and no information was available that could be used to determine why the vehicle failed to stop at the crossing.

PROBABLE CAUSE AND CONTRIBUTING FACTORS:

The La Porte County Sheriff's Department accident report stated that speed was considered a contributing factor. The presence of alcohol and driver inattention was also cited in the report as probable contributing causes.

The accident was caused by the failure of the motor vehicle operator to yield to the oncoming train. According to the La Porte County Sheriff's Department, the driver was in violation of Indiana Statutes IC 9-21-8-32 (Failing to stop at a stop sign) and IC 9-21-8-39 (Failing to yield at a railroad cross buck).

#