



*Federal Railroad Administration
Office of Railroad Safety*

*Accident Investigation Report
HQ-2022-1488*

*Canadian Pacific Railway Company (CP)
Castalia, IA
January 25, 2022*

Note that 49 U.S.C. §20903 provides that no part of an accident or incident report, including this one, 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.

**FEDERAL RAILROAD ADMINISTRATION
BASIC ACCIDENT INVESTIGATION**

FRA File Number

HQ-2022-1488

1. Primary Railroad Canadian Pacific Railway Company			1a. Alphabetic Code CP	1b. Class Class I		1c. Railroad Accident Number 1001635122	
2. Other Railroad/Entity Involved			2a. Alphabetic Code	2b. Class Select:		2c. Railroad Accident Number	
3. Railroad/Entity Responsible for Track Maintenance Canadian Pacific Railway Company			3a. Alphabetic Code CP	3b. Class Class I		3c. Railroad Accident Number 1001635122	
4. Date and Time of Accident (local) 1/25/2022 09:30		6. Division/Operating Unit Quad City			6a. Subdivision Mason City		
7. State (Abbr.) IA	8. County Winneshiek		9. City/Town (closest) Castalia		10. Latitude/Longitude 43.10244, -91.65472		
11. Milepost 29.4	12. Track Name/Number Single Main		13. Track Type Main	14. FRA Track Class 3		15. Timetable Direction East	
16. Signalization Non-Signaled		16a. Method of Operation Direct Train Control		16b. Supplemental Codes (Select up to 5) P	J	Select:	Select:
17. Accident Type Highway-Rail Grade Crossin		18. Equipment Damage \$118.26		19. Track/Signal/Structure Damage \$45.00		20. Total Damage \$163.26	
21. Temperature (degrees Fahrenheit) -5		22. Visibility Day		23. Weather Clear		23a. Warnings/Advisories None	
23b. Weather Related Conditions None		24. Type of Equipment Freight Train			25. Train Symbol B36-19		
26. Trailing Tons 14,051	27. Train Length 6,277	28. Empty	29. Attended Yes	30. Remote No	31. Speed (mph) 30	31a. Estimated/Recorded Estimated Speed	
32. Total Locomotives in Accident 3	32a. Head-end Locomotives 3	32b. Mid-Train Locomotives 0	32c. Mid-Train Locomotive Position 0				32d. Rear-end Locomotives 0
32e. Total Locomotives Derailed 0	32f. Head-end Derailed 0	32g. Mid-Train Derailed 0	32h. Mid-Train Derailment Position 0				32i. Rear-end Derailed 0
33. Configuration Traditional Operation - Head-End Locomotives Only							
33a. Locomotive Control Locomotive not equipped with Locomotive Control							
33b. PTC Information PTC Active and in Use							
34. Total Cars in Accident 102	34a. Loaded Freight 102	34b. Loaded Passenger 0	34c. Empty Freight 0	34d. Empty Passenger 0	34e. Unoccupied Caboose/ Shoving Platform 0	34f. Occupied Caboose/ Shoving Platform 0	
35. Total Cars in Derail 0	35a. Loaded Freight 0	35b. Loaded Passenger 0	35c. Empty Freight 0	35d. Empty Passenger 0	35e. Unoccupied Caboose/ Shoving Platform 0	35f. Occupied Caboose/ Shoving Platform 0	
36a. HAZMAT in Train 100	36b. HAZMAT Derailed 0	36c. HAZMAT Releasing 0	36d. Evacuation No	36e. People 0	37. Point of Derailment N/A	38. Mechanism of Derailment Select:	
39. First Equipment Derailed N/A	39a. Load/Empty Select:	40. Empty	41. Weight (tons)	42. AAR Car Type	43. Leading End Select:	44. First Wheel Derailed Select:	
45a. Employee 1 Craft 617	45b. Injured Not Injured	45c. Time on Duty 1/24/2022 23:30	45d. Regular Assignment Select:	45e. Drug & Alcohol Tested No	45f. In cab @ time of Accident Yes		
46a. Employee 2 Craft 608	46b. Injured Not Injured	46c. Time on Duty 1/24/2022 23:30	46d. Regular Assignment Select:	46e. Drug & Alcohol Tested No	46f. In cab @ time of Accident Yes		
47a. Employee 3 Craft Select:	47b. Injured Select:	47c. Time on Duty	47d. Regular Assignment Select:	47e. Drug & Alcohol Tested Select:	47f. In cab @ time of Accident Select:		
48a. Employee 4 Craft Select:	48b. Injured Select:	48c. Time on Duty	48d. Regular Assignment Select:	48e. Drug & Alcohol Tested Select:	48f. In cab @ time of Accident Select:		
49a. Employee 5 Craft Select:	49b. Injured Select:	49c. Time on Duty	49d. Regular Assignment Select:	49e. Drug & Alcohol Tested Select:	49f. In cab @ time of Accident Select:		
50a. Contractors 0	50b. Injured Select:	50c. Time on Duty	50d. In cab @ time of accident Select:	50e. Empty			
51a. Trespassers 0	51b. Injured Select:	51c. In cab @ time of accident Select:	52a. Others 0	52b. Injured Select:	52c. In cab @ time of accident Select:		
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Operating Practices	Track	MP&E	Signal	Grade Crossing	Drug & Alcohol	Fatigue	HazMat
The pages will appear in the order selected, you can select as many as you need.							

FEDERAL RAILROAD ADMINISTRATION
BASIC ACCIDENT INVESTIGATION

FRA File Number

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53. Executive Summary and FRA Investigation Findings:

On Tuesday, January 25, 2022, at approximately 9:30 a.m., CST, a Canadian Pacific Railway (CP) train (B36-19) collided with a school bus.

The incident occurred on the Quad City Division, Mason City Subdivision at Milepost (MP) 29.4 when an eastbound CP freight train en route to Prairie du Chien, Wisconsin, struck a school bus on the passenger front side at the 130th Avenue highway-rail grade crossing (DOT# 385195D) in the city of Castalia, Winneshiek County, Iowa. The collision did not result in a derailment but did involve minor injury.

The method of operation on the Mason City Subdivision is Track Warrant Control (TWC) with a maximum operating speed of 30 mph. The method of protection at DOT# 385195D is passive with two crossbuck signs displayed. On average, CP operates five trains daily through this crossing with two daylight trains, two at-night trains, and one local switching train.

The school bus had three occupants. The 64-year-old male bus driver sustained no injuries, but a 7-year-old male passenger had a small laceration above the right eye and a 13-year-old male passenger had no reported injuries. The two students on the school bus were checked by first responders and then transported to Winneshiek Medical Center Emergency Room in Decorah for further treatment and evaluation. The bus driver was uninjured but later went by private vehicle to be checked at the Winneshiek Medical Center Emergency Room.

CP train B36-19 was conventionally configured with three locomotives on the headend, 102 loads, and zero empties, and was 6,277 feet long, totaling 14,051 trailing tons. The school bus was traveling south as it approached DOT crossing #385195D as CP B36-19 approached from the west where the collision occurred. When the train crew realized the bus was stopped within the crossing limits, they placed the train into emergency striking the bus at 30 mph. According to the Winneshiek County Sheriff's report, and an interview with the bus driver who stated, "[he] slowed and stopped near the marked railroad crossing but was too close to the train tracks and was struck by the train engine." This resulted in the bus driver receiving a citation for "Failure to correctly stop at RR crossing."

Neither the train conductor nor the engineer were injured in this incident. There is some damage to the school bus and minor damage to the train engine CSXT 432. The Postville School Superintendent and other school staff at the scene made contact with both students' parents.

The temperature was approximately -5° F and clear.
There was no HAZMAT involved in the accident.
This was not PTC preventable.
This is not an Amtrak route.

The Federal Railroad Administration (FRA) determined the probable cause to be M304 - Highway user cited for violation of highway-rail grade crossing traffic laws with a contributing cause of M303 - Highway user misjudgment under normal weather and traffic conditions.

Click here if you need additional room for Executive Summary and FRA Investigation Findings

Click Here to add Sign Page after ALL Discipline and Summary pages have been added

FEDERAL RAILROAD ADMINISTRATION
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58. Grade Crossing Analysis:

During our background examination for the analysis, it was discovered there was a previous Highway-Rail Grade Crossing accident at this crossing in September of 2009 when a highway vehicle crashed into the side of a moving train. In this instance, the driver was sighted for failure to maintain control of their vehicle.

For this investigation, FRA conducted a sight distance survey using predetermined speed and distances provided in FHWA table 30 and table 32. The timetable speed of the railroad track is 30 mph and the speed limit of 130th Avenue is 55 mph. The sight distance is determined using these speeds and the tables. Cone A is placed at the beginning of the Crossing Approach Zone where the driver should first obtain information that there is a crossing ahead. Cone B is placed at the beginning of Non-Recovery Zone; this is the "last safe stopping point." At the "last safe stopping point," this is where the approaching highway-user must be able to see an approaching train so that a safe stop can be made if necessary. Cone C is placed at the stop line of the road, approximately 15 feet from the nearest rail. Cone D is at the distance along the railroad from crossing (dT): The distance dT is defined as "sight-distance leg along the railroad tracks to permit the maneuvers described as for dH (ft)." The definition of dH (distance along the highway) is defined as "sight-distance leg along the highway allows a vehicle proceeding at speed to cross tracks even though a train is observed at a distance dT from the crossing or to stop the vehicle without encroachment of the crossing area (ft)." Table 30 indicates that cone A needs to be 1,030 feet from cone C, and cone B needs to be 535 feet from cone C. Table 32 indicated cone D needs to be 321 feet down the track from cone C. At cone A and cone B there is zero sight distance to cone D at this location. The trees and brush surrounding the railroad track obstruct the view. During the sight distance survey, a cone was placed at the location where a vehicle could see cone D, and this was 36 feet from cone C.

FRA conducted a second Sight Distance Survey using the FHWA "Clearing Sight Distance." Clearing sight distance is the distance needed to safely cross the crossing for crossings with a stop sign at the crossing or for vehicles that have mandates to stop at crossings. The clearing sight distance identified for this crossing is 790 feet and the minimum distance needed is 535 therefore, the minimum distance needed for line of sight for this crossing was provided. Note: the surveys conducted by FRA do not factor in the steep incline approaching the crossing and icy, snow-packed road conditions.

Conclusion:

FRA determined the probable cause to be M304 - Highway user cited for violation of highway-rail grade crossing traffic laws with a contributing cause of M303 - Highway user misjudgment under normal weather and traffic conditions.

58a. Evidence Collected

- Winneshiek County Police Report
- CP provided crew statements
- CP provided Mason City subdivision timetable
- FRA conducted sight distance survey

58b. DOT Grade Crossing Number	58c. Type of Crossing	58d. Warning Devices	58e. Quiet Zones
385195D	Public	Passive warning devices	No
58f. Vehicle Occupants	58g. Occupants Injured	58h. Occupants Killed	
3	1	0	Empty

62. Primary Cause Code M304	63. Contributing Cause Code 1 M303	64. Contributing Cause Code 2 Select:
65. Contributing Cause Code 3 Select:	66. Contributing Cause Code 4 Select:	67. Contributing Cause Code 5 Select:
68. Non-Compliance	69. Enforcement Recommended No	70. Mitigation Recommended No
71. Relevant Waiver No	72. Waiver Number(s)	73. NRC Report Number 1,327,266



Canadian Pacific (CP)
Mason City Subdivision
MP 29.4
130th Avenue (DOT# 385195D)
Castalia, IA

*Not to Scale