

RAILROAD ACCIDENT INVESTIGATION

REPORT NO. 4132

CHICAGO, ROCK ISLAND AND PACIFIC RAILROAD COMPANY

HENRY, ILLINOIS

AUGUST 30, 1967

DEPARTMENT OF TRANSPORTATION
FEDERAL RAILROAD ADMINISTRATION

Washington

Summary

DATE: August 30, 1967

RAILROAD: Chicago, Rock Island
and Pacific

MOTOR CARRIER: Tobler Trans-
fer Co , Inc

LOCATION: Henry, Ill

KIND OF ACCIDENT: Collision and derail-
ment

EQUIPMENT INVOLVED: Passenger train Motortruck

TRAIN NUMBER: 11

LOCOMOTIVE NUMBER: Diesel-electric unit
640

CONSISTS: 3 cars Tractor, semi-
trailer

ESTIMATED SPEEDS: 79 m.p h. 10-20 m p h

OPERATION: Timetable, train
orders, automatic
block-signal system

TRACK: Single; tangent; 0 51
percent descending grade
westward

HIGHWAY: 2-lane; tangent; level;
crosses track at angle
of 76°58'

WEATHER: Cloudy

TIME: 11:45 a m

CASUALTIES: 19 injured

CAUSE: Failure of truck driver to
stop his vehicle short of
the crossing and to remain
standing until the closely
approaching train had passed,
as required by Illinois State
law

DEPARTMENT OF TRANSPORTATION
FEDERAL RAILROAD ADMINISTRATION
RAILROAD SAFETY BOARD

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Synopsis

On August 30, 1967, a Chicago, Rock Island and Pacific Railroad passenger train struck a motortruck at a rail-highway grade crossing near Henry, Ill , resulting in derailment of the entire train and injury to 19 passengers and employees

The accident was caused by failure of the truck driver to stop his vehicle short of the crossing and to remain standing until the closely approaching train had passed, as required by Illinois State law

Location and Method of Operation

The accident occurred on that part of the Illinois Division extending between Bureau and Peoria, Illinois, a distance of 46 8 miles This is a single-track line over which trains operate by timetable, train orders, and an automatic block-signal system In the accident area, trains move north and south by geographical directions The timetable directions, however, are east and west, and are used in this report in lieu of geographical directions

The collision occurred on the main track, 11 8 miles west of Bureau and 1 7 miles east of Henry, where the railroad is crossed at grade by Goodrich Road

The crossing is protected by advance-warning highway signs and standard crossbuck railroad-crossing warning signs

As a northbound vehicle on Goodrich Road approached the crossing on the day of the accident, the driver's view of the main track eastward was obstructed by a field of corn in the southeast angle of the crossing. However, as the vehicle approached the crossing within 25 feet, the driver's view of the main track eastward was unobstructed throughout a distance of 1,700 feet.

Details concerning the main track, Goodrich Road and railroad crossing, crossing-warning signs, railroad carrier's operating rules, Illinois motor vehicle law, and other factors are set forth in the appendix

Description and Discussion

No. 11, a westbound first-class passenger train, consisted of car-body type diesel-electric unit 640, one mail car and two coaches, in that order. The cars were of all-steel construction and had tightlock couplers. The train brakes had been tested and had functioned properly. The train left Bureau at 11:35 a m, 18 minutes late, the day of the accident. Approximately 10 minutes later, it approached the point near Henry where the main track is crossed at grade by Goodrich Road. The engineer and fireman were in the control compartment at the front of the locomotive, and the conductor and brakeman were in the second and third cars, respectively. According to both enginemen, the conventional and oscillating headlights were lighted, and the locomotive bell was ringing. Statements of the enginemen indicate that the train was moving westward on the main track at about 79 miles per hour as it approached the crossing. They further indicate that the engineer began to sound the prescribed signal on the locomotive horn while passing the crossing-whistle sign located 2,605 feet east of the crossing, and that he continued to sound this signal until the train reached the crossing.

As No. 11 neared the crossing, the attention of both enginemen was attracted to a southbound motortruck on Goodrich Road approaching the crossing at high speed, and they became concerned as to whether it would stop short of the track. A few moments later, however, they saw it stop short of the crossing. Immediately thereafter, the fireman noticed that a northbound motortruck on Goodrich Road was closely approaching the track and realized it would move onto the crossing without stopping. He immediately called a warning. The engineer stated that he did not hear the fireman's warning, and that he was unaware of the northbound motortruck until he saw it on the crossing and promptly applied the train brakes in emergency. Immediately afterward, before its speed was reduced, the train entered the crossing and struck the motortruck on its right side, near the rear end.

The locomotive and all three cars derailed as a result of the collision. The train stopped with the front end 792 feet west of the collision point. The locomotive and three cars stopped in line on the north side of the track structure at distances varying between 8 and 27 feet from the track centerline. There were no separations. The locomotive and first car overturned to the north. The second car stopped in a 30-degree leaning position to the north, and the third car stopped upright. The locomotive was heavily damaged, and three cars were considerably damaged.

The engineer, fireman, conductor, and sixteen passengers were injured. The truck driver was uninjured.

The motortruck was a combination vehicle about 54 feet long, owned and operated by the Tobler Transfer Company, Inc. of Peru, Ill. It had air brakes throughout. The tractor was a 1959 International, with tandem rear axles having dual wheels, a six-cylinder gasoline engine and a conventional cab. It carried 1967 Illinois license No. P10259. The semitrailer was a 1961 Strick of the aluminum closed-van type, 40 feet in length. It had tandem axles with dual wheels, and carried 1967 Illinois license No. ST 85534. At the time of the accident, the motortruck was transporting 34,600 pounds of polyvinyl chloride resin in intrastate commerce. The cargo was loaded on the semitrailer at a B. F. Goodrich plant located on the south side of the CRI&P Railroad about 1.3 miles from the railroad crossing.

The driver of the motortruck reported for work in Peru about 8:00 a.m. the day of the accident, and was assigned to pick up a load at the B. F. Goodrich plant near Henry, a distance of 27 miles. Shortly afterward, he left Peru with his motortruck and proceeded to the B. F. Goodrich plant via Goodrich Road and the railroad crossing where the accident occurred. At 11:41 a.m., after the semitrailer was loaded with 34,600 pounds of polyvinyl chloride resin, the motortruck left the B. F. Goodrich plant and proceeded northward on Goodrich Road en route to Peru via the railroad crossing located 1.3 miles from the aforesaid plant. Soon afterward, it approached the railroad crossing.

The driver stated that the motortruck was moving about 30 miles per hour as it approached the crossing in the area where his view of the track eastward was obstructed by the field of corn in the southeast angle of the crossing. He further stated that because of this restricted view and the rough condition of the crossing, he reduced speed to about 10 miles per hour while nearing the track. According to his statements, the driver neither saw nor heard any indication of the approaching westbound train while driving in the area where his view eastward was obstructed by the field of corn. Although his view eastward improved considerably as the motortruck approached the crossing within 25 feet, he still did not see or hear the closely approaching train, and drove onto the crossing without stopping. A few seconds later, as the tractor was crossing the track, the driver heard the train horn and then observed the train nearing the crossing. He immediately attempted to accelerate his vehicle.

and clear the track. However, before the motortruck was able to increase speed significantly, the train entered the crossing and struck the rear portion of the semitrailer, shearing the semitrailer in two about 16 feet from its rear end.

The tractor, with the front portion of the semitrailer attached, stopped on Goodrich Road 64 feet north of the collision point. The rear portion of the semitrailer stopped near the track structure west of the collision point. The semitrailer was destroyed.

The southbound motortruck, which had stopped short of the crossing for the train, was struck by parts of the sheared-off portion of the semitrailer of the northbound motortruck and was slightly damaged. The driver was not injured. This driver stated that he had stopped his vehicle short of the crossing immediately before or after hearing a blast of the horn of the train locomotive. After hearing a second blast of the locomotive horn he saw the train approaching the crossing at a distance which he estimated as 200 to 300 feet. He stated that he saw the northbound motortruck reduce speed as it neared the crossing, then saw it move onto the crossing at 15 to 20 miles per hour and be struck by the train.

The first mark of derailment was a flange mark on the gage side of the web of the north rail, 24 feet west of the collision point. At a point 13 feet farther westward, a flange mark appeared on top of a tie, on the gage side of the south rail. The north rail immediately west of the crossing was overturned, and the track structure west of the crossing was destroyed or heavily damaged throughout a considerable distance. Apparently some portion of the semitrailer, possibly the wheel assembly, became wedged under the front of the locomotive as a result of the collision and exerted sufficient lateral force to overturn the north rail immediately west of the crossing, causing the derailment of the entire train.

The driver of the northbound motortruck was 28 years old and had been continuously employed by Tobler Transfer Company, Inc. since June 1, 1964. He held Illinois Chauffeur's License No. P 362-2843-9071, with no restrictions. An official of the motor carrier considered him to be a good driver and stated that he had no police citations charged against his driving record. He had not been previously involved in any serious accident. The driver had made numerous trips to the B. F. Goodrich plant and was familiar with the route and crossing involved. According to the motor carrier's records, the driver had been on duty 3 hours 45 minutes at the time of the accident, after having been off duty 14 hours. The records also indicate that he had passed a physical examination on June 1, 1967, and that his hearing and vision were excellent.

The investigation revealed that the train approached the crossing at about 79 miles per hour, its maximum authorized

speed, and that both headlights were lighted and the locomotive horn and bell were sounding, as required

As the motortruck approached the crossing, the driver's view of the approaching train was obstructed by the field of corn. In addition to not being able to see the train, he apparently did not hear the horn of the train locomotive being sounded. The motortruck apparently reduced speed to between 10 and 20 miles per hour while approaching the crossing. As it neared the track within a distance of 25 feet, the driver had an unobstructed view of the approaching train, which evidently was within a few hundred feet of the crossing at that time. However, he neither saw the train nor heard the sound of its locomotive horn and drove onto the crossing without stopping, causing the collision.

The driver's restricted view while approaching the crossing was a significant causal factor in the accident. The primary causal factor was the driver's failure to determine whether the way was clear before driving onto the crossing. Had he exercised due caution by approaching the crossing with care, and by listening and looking in both directions along the track for an approaching train when he reached a point where his view was not obstructed by the field of corn, he could have seen that No. 11 was closely approaching and stopped his vehicle short of the track. Thus, the accident would have been averted.

Findings

- 1 The train was being operated in accordance with applicable rules and regulations as it approached the crossing.
- 2 The truck driver's view of the approaching train was obstructed until his vehicle neared the crossing within 25 feet.
- 3 As the motortruck neared the crossing within 25 feet, the driver had an unobstructed view of the closely approaching train. However, he did not exercise due caution at this time to determine whether a train was approaching and thereby failed to see or hear the train involved.
- 4 The driver did not stop his vehicle short of the track, as required by Illinois State law when a train is approaching so closely that an immediate hazard is created.
- 5 The driver drove his vehicle onto the crossing immediately in front of the closely approaching train, causing the collision.

Cause

This accident was caused by failure of the truck driver to stop his vehicle short of the crossing and to remain standing until the closely approaching train had passed, as required by Illinois State law

Dated at Washington, D C , this 8th
day of May 1968
By the Federal Railroad Administration
Railroad Safety Board

Bette E. Holt
Acting Executive Secretary

(SEAL)

Appendix

Track

From the east on the main track there are, in succession, a 0°54' curve to the right 2,022 feet, and a tangent 1,396 feet to the Goodrich Road crossing and a considerable distance westward. In this area the grade for westbound trains is 0.51 percent descending westward.

Goodrich Road and Railroad Crossing

Goodrich Road is a two-lane road, surfaced with bituminous material to a width of 20 feet. It is tangent a considerable distance north and south of the collision point and crosses the railroad at an angle of 76°58'. From the south, the grade is, successively, 1.64 percent descending 100 feet, 2.83 percent descending 300 feet, 0.55 percent descending 100 feet, 1.00 percent ascending 175 feet, 2.08 percent ascending 25 feet to the crossing, and level over the crossing.

The crossing is 28 feet wide with planking laid between and outside the rails.

Railroad Crossing Warning Signs

A circular railroad crossing advance-warning sign, 36 inches in diameter, is adjacent to the east side of Goodrich Road 419 feet south of the crossing. It is mounted on a mast 5 feet above the road surface and bears two intersecting diagonal stripes and the letters "RR" in black on a yellow background.

A standard crossbuck railroad-crossing warning sign is adjacent to the east side of Goodrich Road, 21 feet south of the crossing. It is mounted on a mast 11 feet above the road surface and bears the words "RAILROAD CROSSING" in 5½-inch black letters on a white reflectorized background. A similar sign, for southbound highway traffic, is provided in the northwest angle of the crossing.

Railroad Carrier's Operating Rules

- 14 Engine Horn or Whistle Signals - The horn or whistle must be sounded as prescribed by rule or law. ***

NOTE. - The signals prescribed are illustrated by "o" for short sounds; "———" for longer sounds. ***

SOUND

INDICATION

(1) ——— o ———

Approaching public crossings at grade. *** To be prolonged or repeated until crossing is occupied by engine or car.

17 Headlights - The standard white headlight must be displayed brightly to the front of every train by day and by night

30 - Ringing Bell - *** the engine bell must be rung *** while approaching and passing public crossings at grade ***

Illinois Motor Vehicle Law

ARTICLE XII - SPECIAL STOPS REQUIRED

Sec 83 Obedience to Signal Indicating Approach of Train
(a) ***

(c) The driver of a vehicle shall stop within 50 feet but not less than 10 feet from the nearest track when a train is approaching so closely that an immediate hazard is created, and shall not proceed until he can do so safely

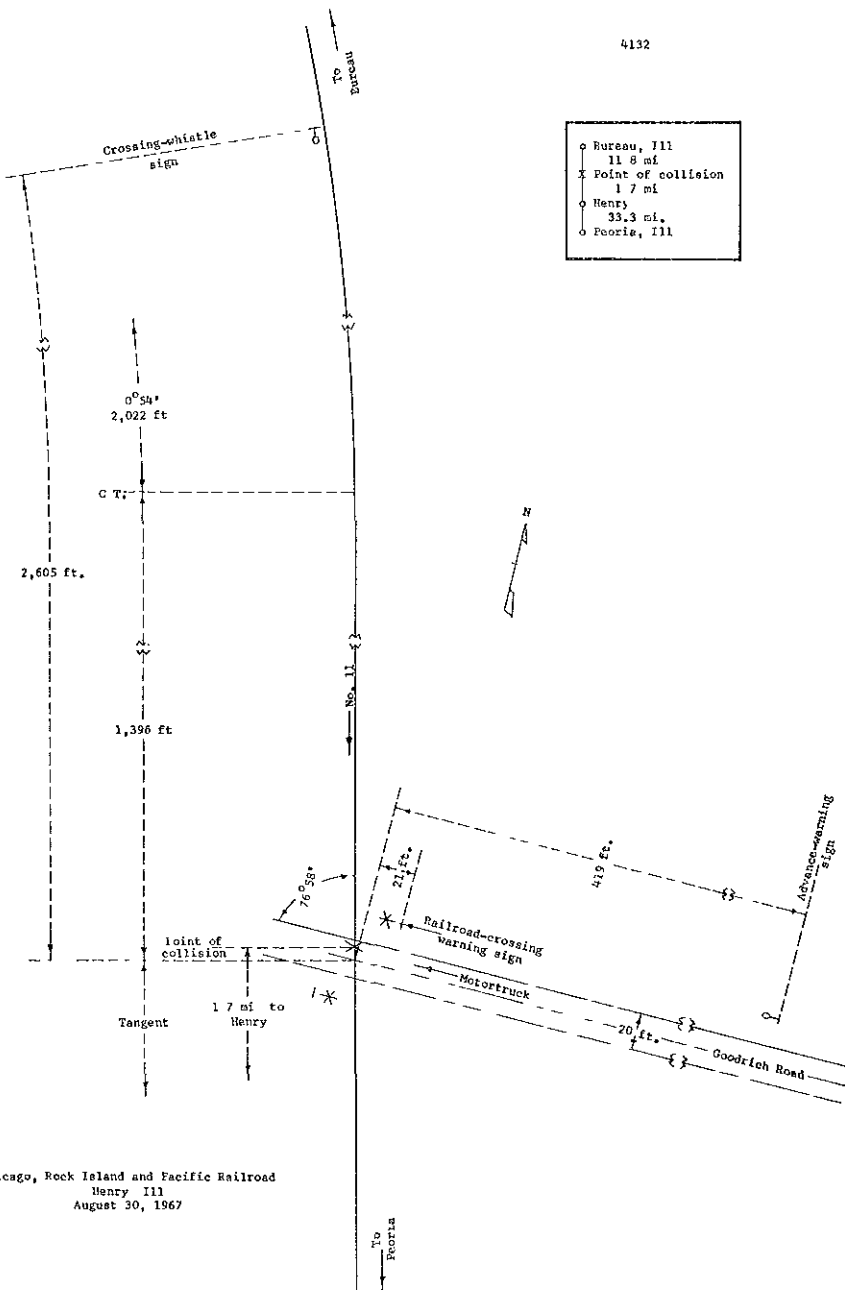
Other Factors

The collision occurred about 11:45 a m , in cloudy weather

The maximum authorized speed for passenger trains in the collision area is 79 miles per hour

During the 30-day period immediately preceding the day of the accident, the average daily train movement over the Goodrich Road crossing was 8 47 trains. During the 24-hour period beginning 12:01 a m., September 20, 1967, a traffic count disclosed that 368 highway vehicles moved over the crossing

According to the railroad carrier's records, the engineer and fireman of No 11 had been on duty 4 hours 45 minutes at the time of the accident, and the conductor and brakeman had been on duty 3 hours 15 minutes. All four crew members had previously been off duty over 36 hours



- | | | |
|---|--------------------|----------|
| o | Bureau, Ill | 11.6 mi |
| X | Point of collision | 1.7 mi |
| o | Henry | 33.3 mi. |
| o | Peoria, Ill | |

Chicago, Rock Island and Pacific Railroad
 Henry Ill
 August 30, 1967

To Peoria