INTERSTATE COMMERCE COMMISSION

WASHINGTON

REPORT NO. 3589

THE PENNSYLVANIA RAILROAD COMPANY

IN RE ACCIDENT

AT KOKOMO, IND., ON

AUGUST 25, 1954

SUMMARY

Date:	August 25, 1954	
Railroad:	Pennsylvania	
Location:	Kokomo, Ind.	
Kind of accident:	Collision	
Equipment involved:	Locomotive with cars	: Motor-truck
Engine number:	Diesel-electric unit 9155	:
Consist:	2 cars	:
Estimated speeds:	5-10 m. p. h.	: 15 m. p. h.
Operation:	Timetable, train orders, and manual-block system; yard limits	
Track:	Single; tangent; 0.15 percent descending grade eastward	
Highway:	Tangent; crosses track at angle of 64°; level	
Weather:	Clear	
Time:	6:50 a. m.	
Casualties:	1 killed; 5 injured	
Cause:	Motor-truck occupying rail-highway grade crossing immediately in front of approaching locomotive with cars	

INTERSTATE COMMERCE COMMISSION

REPORT NO. 3589

IN THE MATTER OF MAKING ACCIDENT INVESTIGATION REPORTS UNDER THE ACCIDENT REPORTS ACT OF MAY 6, 1910.

THE PENNSYLVANIA RAILROAD COMPANY

October 1, 1954

Accident at Kokomo, Ind., on August 25, 1954, caused by a motor-truck occupying a rail-highway grade crossing immediately in front of an approaching locomotive with cars.

REPORT OF THE COMMISSION[1]

CLARKE, Commissioner.

On August 25, 1954, there was a collision between a locomotive with cars on the Pennsylvania Railroad and a motor-truck at a rail-highway grade crossing at Kokomo, Ind., which resulted in the death of the driver of the motor-truck, and the injury of five train-service employees.

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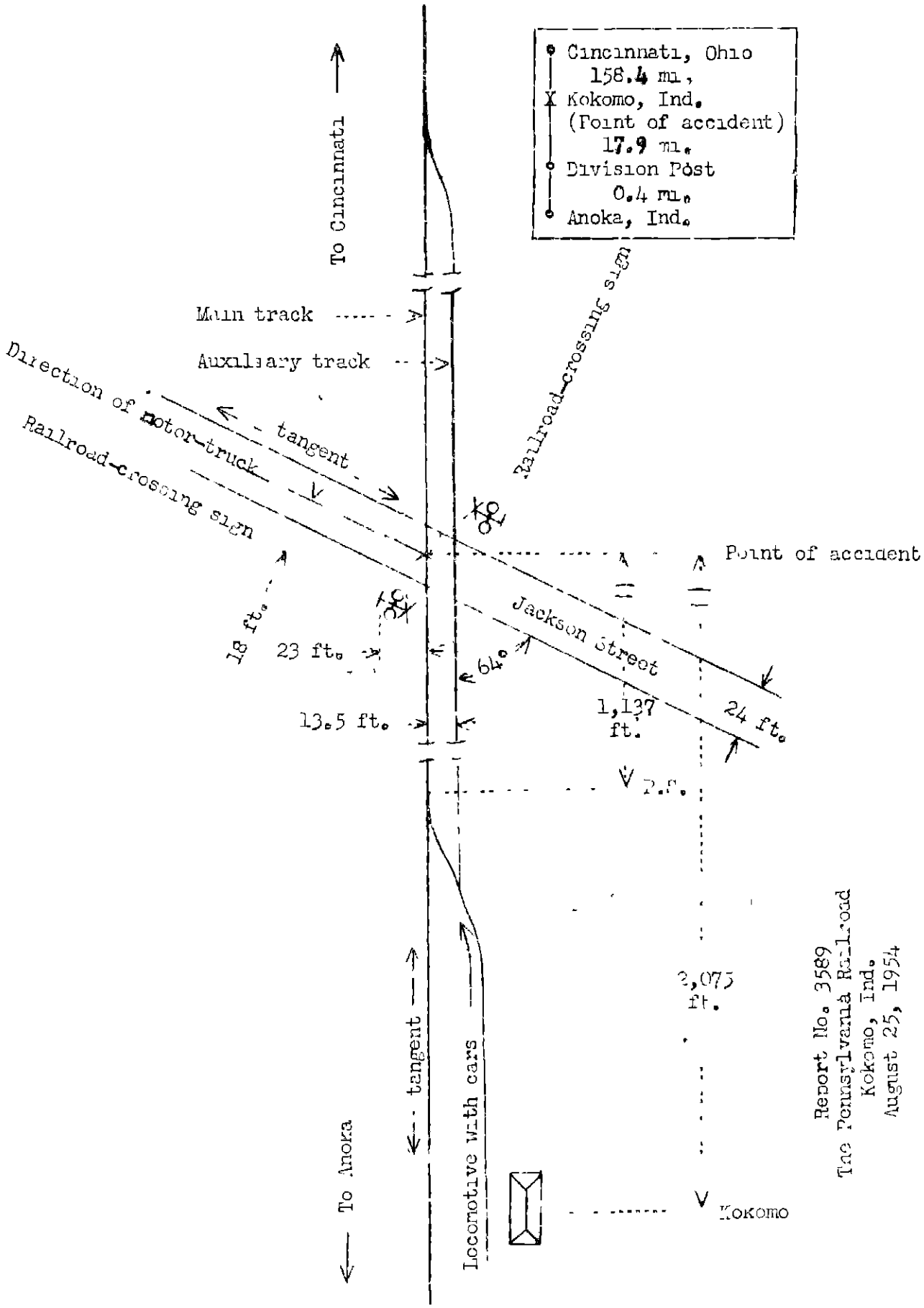
[1] Under authority of section 17 (2) of the Interstate Commerce Act the above-entitled proceeding was referred by the Commission to Commissioner Clarke for consideration and disposition.



Report No. 3589
The Pennsylvania Railroad
Kokomo, Ind.
August 25, 1954

Location of Accident and Method of Operation

This accident occurred on that part of the Cincinnati Division extending between Division Post, near Anoka, Ind., and Cincinnati, Ohio, 176.3 miles. In the vicinity of the point of accident this is a single-track line, over which trains are operated by timetable, train orders, and a manual-block system. The accident occurred on the main track at a point where the railroad is crossed at grade by Jackson Street, 18.3 miles east of Anoka and 2,075 feet east of the station at Kokomo. In this vicinity the railroad extends from northwest to southeast and Jackson Street extends from east to west. Timetable directions on the railroad are east and west, and these directions are used in this report. The main track is tangent throughout a distance of more than 17 miles immediately west of the point of accident and 1 mile eastward. In the vicinity of the point of accident an auxiliary track parallels the main track on the south. The track centers at this point are 13 feet 6 inches. The grade is 0.15 percent descending eastward at the point of accident. Jackson Street is tangent in the immediate vicinity of the crossing. It intersects the railroad at an angle of 64 degrees. The street is surfaced with bituminous material and is 24 feet in width. The crossing extends the full width of the surfaced portion of the roadway. Planking is provided on each side of each rail, and the remaining portion of the crossing is surfaced with bituminous material. The grade for south-bound vehicles averages 2.0 percent ascending throughout a distance of approximately 100 feet immediately north of the crossing, and is level over the crossing.

A flashing-light warning signal is located in the northwest angle of the intersection, approximately 18 feet west of the center-line of the street and 23 feet north of the center-line of the main track. This signal is provided with two hooded red lights mounted back-to-back at each end of a horizontal bar which is mounted on a mast and is approximately 8 feet above the level of the street. The warning aspect is displayed by the alternate illumination of these lights. A standard cross-buck railroad-crossing sign which bears the words "RAILROAD CROSSING" in black on a white background is mounted on the same mast 11 feet 8 inches above the level of the street. A similar signal is located in the southeast angle of the intersection. The control circuits are so arranged that both signals display warning

aspects when an east-bound movement is occupying any portion of the main track throughout a distance of 1,245 feet immediately west of the crossing.

This carrier's operating rules read in part as follows:

14. Engine Whistle Signals

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 reached, unless otherwise provided * * *
* * *	

30. The engine bell must be rung * * * while approaching and passing public crossings at grade * * *

Laws of the State of Indiana read in part as follows:

ARTICLE XIII SPECIAL STOPS REQUIRED

47-2114 - Obedience to Signal Indicating Approach of Train

Whenever any person driving a vehicle approaches a railroad grade crossing, the driver of such vehicle shall stop within 50 feet but not less than 10 feet of such railroad and shall not proceed until he can do so safely, when:

(a) A clearly visible electric or mechanical signal device gives warning of the immediate approach of a train.

* * *

(c) A railroad train * * * approaching within approximately 1,500 feet of a highway crossing emits a signal audible for such distance and such train by reason of its speed or nearness to such crossing is an immediate hazard.

(d) An approaching train is plainly visible and is in hazardous proximity to such crossing.

The maximum authorized speed for freight movements is 40 miles per hour, but a restriction of 10 miles per hour is in effect for movements over street crossings in Kokomo.

Description of Accident

Diesel-electric locomotive 9155, assigned to yard service at Kokomo, headed eastward and pulling two loaded hopper cars, departed from an auxiliary track in the vicinity of the station shortly before 6.50 a. m. and entered the main track at a switch located 1,137 feet west of the point of accident. It then proceeded eastward, and while moving on the main track at a speed of between 5 and 10 miles per hour it struck a motor-truck at the rail-highway grade crossing at Jackson Street.

The vehicle involved was a 1948 model Dodge motor-truck owned and operated by the Kokomo Sheet Metal and Heating Company. The driver, who was the sole occupant, held Indiana operator's license No. 714189. The motor-truck bore Indiana license No. 114788, and was powered by a 6-cylinder 125-horsepower engine, using propane gas as fuel. This vehicle was equipped with an enclosed cab and a van type body. Dual tires were provided on the rear wheels. It was equipped with hydraulic brakes. The overall length of the vehicle was 21 feet 6 inches, and the estimated light weight was 8,000 pounds. It was equipped with two fuel tanks which were mounted on opposite sides of the frame, under the truck bed and immediately to the rear of the cab. Each tank was 1 foot 8 inches in diameter and 5 feet in length. The tanks were designed to withstand working pressure of 250 pounds per square inch. The estimated weight of each tank was 300 pounds and the capacity was 72 gallons. The fuel used was propane gas, a highly volatile, heavier than air, inflammable gas, which becomes liquified under pressure and resumes its gaseous form when released. At the time of the accident the

motor-truck was not loaded. This vehicle was moving southward on Jackson Street at an estimated speed of 15 miles per hour when it entered upon the crossing and was struck by the locomotive of the yard movement.

The yard movement stopped with the front end of the locomotive 148 feet east of the point of collision. No equipment was derailed. The motor-truck was struck on the right side near the rear end of the cab and the forward corner of the van body. After the impact occurred it was moved eastward by the yard movement and stopped between the auxiliary track and the main track and against the front end of the locomotive. The fuel tank on the right side of the motor-truck was punctured and displaced as a result of the collision and escaping gas became ignited. The motor-truck was badly damaged as a result of the collision and was further damaged by fire. The locomotive was slightly damaged.

The driver of the motor-truck was killed. The engineer, the fireman, the yard conductor, and two yard brakemen were injured.

The weather was clear at the time of the accident, which occurred about 6:50 a. m.

During the 30-day period preceding the day of the accident the average daily movement over the crossing was 15.7 trains and yard movements. During the 24-hour period beginning at 6:30 a. m., August 27, 1954, 645 automobiles, 79 trucks, and 57 other vehicles passed over the crossing.

Diesel-electric locomotive 9155 was equipped with footboards at the front and rear ends. The control compartment was at the rear.

Discussion

As the yard movement was approaching the point where the accident occurred the enginemen and a yard brakeman, who was seated in front of the fireman, were maintaining a lookout ahead from their respective positions in the control compartment of the locomotive. The yard conductor was standing in the rear of the control compartment, and the other yard brakeman was seated near the front end of the first car. The air hose between all units of the movement were coupled and the air-brake system was charged The

engineer said that he was sounding the crossing-whistle signal and that the bell was ringing as the locomotive approached the crossing at Jackson Street. The fireman and one of the yard brakemen said they observed that the flashing-light warning signals at the crossing were functioning. Members of the crew estimated that the speed of the movement was between 5 and 10 miles per hour. The fireman and the yard brakeman called a warning when they observed the motor-truck enter the crossing at a speed which the yard brakeman estimated as approximately 15 miles per hour. The engineer immediately made an emergency application of the brakes. He said that the motor-truck was not visible from his position on the locomotive until immediately before the impact occurred. The speed of the movement was not materially reduced before the collision occurred. Escaping fuel from the damaged tank of the motor truck vaporized and enveloped both the motor-truck and the equipment of the yard movement. This mixture became ignited immediately after the collision occurred. The driver of the motor-truck died later as a result of burns, and all members of the crew of the yard movement received severe burns.

The flashing-light warning signals at this crossing received a regular semi-monthly inspection and test on August 17, 1954, and had been tested and inspected again on the day before the accident occurred, after line wires had been elevated temporarily at another crossing in the vicinity. During these tests no defective condition was found in the signal apparatus. The warning signals were tested by a member of the signal force about 1 hour 15 minutes after the accident occurred and functioned as intended.

The driver of the motor-truck was a resident of the area and was familiar with the location of the crossing. Members of the crew said that after the accident occurred the driver of the motor-truck informed them that the flashing-light warning signals were operating when his vehicle approached the crossing and that he had looked eastward but had not observed the yard movement approaching from the west before the motor-truck entered upon the crossing.

As a vehicle approaches Jackson Street crossing from the north the driver's view of an approaching east-bound movement on the railroad is materially restricted by a building located north of the main track and west of Jackson Street. From a point on Jackson Street 20 feet north of the

north rail of the main track the driver of a vehicle can obtain a view of the main track throughout a distance of approximately 650 feet west of the crossing, and from a point 15 feet north of that rail the main track west of the crossing is visible throughout a distance of approximately 2,000 feet.

Cause

This accident was caused by a motor-truck occupying a rail-highway grade crossing immediately in front of an approaching locomotive with cars.

Dated at Washington, D. C., this first day of October, 1954.

By the Commission, Commissioner Clarke.

(SEAL)

GEORGE W. LAIRD,

Secretary.