

INTERSTATE COMMERCE COMMISSION
WASHINGTON

REPORT NO. 3481

THE PITTSBURGH AND LAKE ERIE
RAILROAD COMPANY

IN RE ACCIDENT

AT COLLINSBURG, PA., ON

SEPTEMBER 17, 1952

SUMMARY

Date: September 17, 1952

Railroad: Pittsburgh and Lake Erie

Location: Collinsburg, Pa.

Kind of accident: Collision

Equipment involved: Freight train : School bus

Train number: Extra 9402 East :

Engine number: 9402 :

Consist: 64 cars, caboose :

Estimated speeds: 35 m. p. h. : 5 m. p. h.

Operation: Train orders, and a manual block-signal system for following movements

Track: Single; 5° curve; level

Highway: Tangent; crosses track at angle of 70°12'; 6.00 percent descending grade northward

Weather: Hazy

Time: 7:05 a. m.

Casualties: 4 killed; 40 injured

Cause: School bus occupying rail-highway grade crossing immediately in front of approaching train

INTERSTATE COMMERCE COMMISSION

REPORT NO. 3481

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

THE PITTSBURGH AND LAKE ERIE RAILROAD COMPANY

October 22, 1952

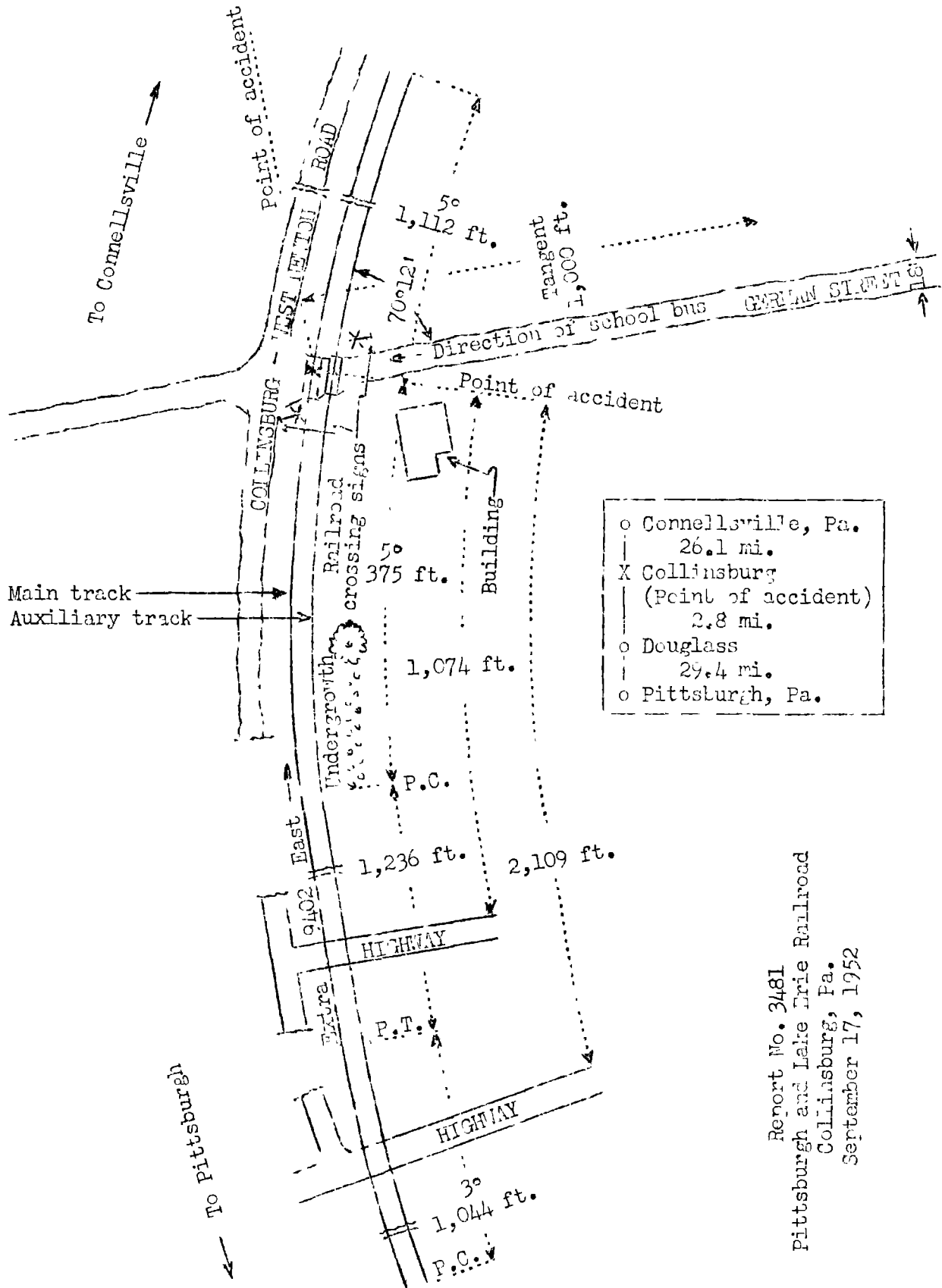
Accident at Collinsburg, Pa., on September 17, 1952, caused
by a school bus occupying a rail-highway grade crossing
immediately in front of an approaching train.

REPORT OF THE COMMISSION¹

PATTERSON, Commissioner:

On September 17, 1952, there was a collision between a freight train on the Pittsburgh and Lake Erie Railroad and a school bus at a rail-highway grade crossing at Collinsburg, Pa., which resulted in the death of 4 occupants of the bus, and the injury of the driver and 39 other occupants of the bus. This accident was investigated in conjunction with a representative of the Pennsylvania Public Utility Commission.

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



Report No. 3481
Pittsburgh and Lake Erie Railroad
Collinsburg, Pa.
September 17, 1952

Location of Accident and Method of Operation

This accident occurred on that part of the Youghiogheny Division extending between Pittsburgh and Connellsville, Pa., 58.3 miles. In the vicinity of the point of accident this is a single-track line, over which trains are operated by train orders, and by a manual block-signal system for following movements. The accident occurred on the main track at Collinsburg, 32.2 miles east of Pittsburgh, where the railroad is crossed at grade by German Street. At this point an auxiliary track parallels the main track on the south. The tracks are spaced about 13 feet between track centers. The tracks extend northwest and southeast, and the highway extends northeast and southwest. Timetable directions on the railroad are east and west, and these directions are used in this report. From the west on the railroad there are, in succession, a 3° curve to the right 1,044 feet in length, a tangent 1,236 feet, and a 5° curve to the right 375 feet to the point of accident and 1,112 feet eastward. The grade is practically level. In the vicinity of the point of accident a highway designated as the Collinsburg-West Newton Road parallels the main track on the north. The center-line of the highway is 31.1 feet north of the center-line of the main track. German Street intersects the railroad and the Collinsburg-West Newton Road at an angle of 70°12'. Both highways are surfaced with bituminous material. German Street is 18 feet in width. It is tangent throughout a distance of over 1,000 feet immediately south of the crossing and a considerable distance northward. The grade for north-bound vehicles is, successively, 11.33 percent descending 600 feet, 6.00 percent descending 100 feet, 4.00 percent descending 200 feet, and 6.00 percent descending 100 feet to the crossing. The crossing is 22.7 feet in width at the south side and 28.3 feet in width at the north side. An area about 16 inches in width outside each rail and the area between the rails of each track are surfaced with planking. The area between the tracks is surfaced with bituminous material. The north rail of each track is superelevated 2-7/8 inches, and the south rail of the main track is 4-1/2 inches higher than the north rail of the auxiliary track. The surface of the crossing, which is in fair condition, is even with and in the same plane as the tops of the rails. North of the crossing the highway descends to the level of the Collinsburg-West Newton Road, which is about 2 feet lower than the level of the north rail of the main track.

A standard cross-buck railroad-crossing sign is located 19 feet east of the center-line of the highway and 35.6 feet south of the center-line of the main track. This sign is mounted on a mast 12 feet above the level of the highway and bears the words "RAILROAD CROSSING" in black on a white background. A similar sign is located in the northwest angle of the intersection. There is no crossing-whistle sign for east-bound trains.

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 —

(1) Approaching public crossings
at grade.

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* * *

17. The headlight will be displayed to the front of every train by day and by night. * * *

30. The engine bell must be rung when an engine is about to move and while approaching and passing public crossings at grade * * *

Section 1027 of the vehicle code of the Commonwealth of Pennsylvania reads in part as follows:

* * * all motor vehicles used in the transportation of school children, either on contract with the school district authorities or owned by school districts, * * * shall come to a complete stop immediately before crossing a railway grade crossing.

* * *

The maximum authorized speed for freight trains is 55 miles per hour.

Description of Accident

Extra 9402 East, an east-bound freight train, consisted of engine 9402, a 2-8-4 type, 64 cars and a caboose. This train passed Douglass, 2.8 miles west of Collinsburg and the last open office, at 7 a. m., and while moving at a speed of 35 miles per hour it struck a school bus at the rail-highway grade crossing at German Street, Collinsburg.

The school bus involved was owned by the Doernste Bus Lines, and was operated under contract with the Rostraver Township School Board to transport students to and from various schools in the township. The chassis was a 1947 model GMC. It was powered by a 6-cylinder gasoline motor and was equipped with a transmission having five forward speeds. It was provided with dual wheels at the rear. The wheelbase was 19 feet 7 inches. The body was built by the Hicks School Bus Body Company. It was 25 feet 11 inches in length and had seating capacity for 60 passengers. The door was located on the right-hand side of the body and opposite the driver's seat. There was also an emergency door at the rear. The windows were provided with shatter-proof glass. The overall length of the bus was 32 feet. It bore Pennsylvania license No. OB334 and Pennsylvania PUC No. A49931. The driver held 1952 license bearing plate No. 6669236, operators No. 69638. At the time of the accident the bus was occupied by 48 students and the driver. This bus approached the crossing from the south and stopped several feet south of the crossing. It then started forward, and while it was moving over the crossing it was struck by Extra 9402 East.

Extra 9402 East stopped with the front of the engine 1,256 feet east of the crossing. No unit of the train was derailed. The front of the engine was slightly damaged. The bus was struck between the center and the rear of the body. The body was torn from the chassis. It stopped on its left side, with the front end about 60 feet east of the crossing and 30 feet north of the main track. It was practically demolished. The chassis stopped in an upright position, with its front end about 85 feet east of the crossing and 25 feet north of the main track. It was badly damaged.

The weather was hazy with pockets of fog at the time of the accident, which occurred at 7:05 a. m.

During the 30-day period preceding the day of the accident, the average daily movement over the crossing was 7 trains. During the 24-hour period beginning at 12:01 a. m., September 24, 1952, 939 automobiles, 91 trucks, and 21 other vehicles passed over the crossing.

Discussion

As Extra 9402 East was approaching the point where the accident occurred the speed was 35 miles per hour, as indicated by the tape of the speed recording device. The enginemen were maintaining a lookout ahead from their positions in the cab of the engine, the front brakeman was seated behind the engineer, and the conductor and the flagman were in the caboose. The brakes of the train had been tested and had functioned properly when used en route. The headlight was lighted brightly. The employees on the engine said that they encountered pockets of fog throughout a distance of about 15 miles west of Collinsburg. They said that the grade-crossing whistle signal was sounded for two crossings located, respectively, 2,109 feet and 1,074 feet west of German Street and also for the crossing at German Street. The engine bell was ringing during this time. As the train approached the first crossing west of German Street it entered a fog bank which extended from that point to a point about 200 feet west of German Street. When the engine emerged from the fog the engineer observed the school bus entering the crossing. At this time the engineer was sounding the last blast of the grade-crossing whistle signal. He immediately made an emergency application of the brakes and closed the throttle, but the collision occurred before the speed of the train was materially reduced. The fireman was unable to see the bus from his position on the engine until immediately before the collision occurred. The front brakeman did not see the bus.

At the time of the accident the school bus was on its regular route between the Collinsburg Grade School and the Rostraver Junior-Senior High School at Pricedale, Pa., about 7 miles south of Collinsburg. This route is via German Street and the Collinsburg-West Newton Road. After making a scheduled stop at a point approximately 62 feet south of the main track of the railroad to permit students to enter, the bus proceeded northward and stopped several feet south of the crossing. The driver said that the weather was hazy and there appeared to be fog at a distance, but there was no fog in the immediate vicinity of the crossing. After the bus stopped, he looked in both directions, and, because the windows were closed, he opened the door to ascertain whether he could hear an approaching train. Both the driver and a student who was seated directly behind him said that they did not see the approaching train at this time and that they did not hear the sound of the whistle. When the driver was satisfied that no train was approaching, he started the bus forward. He first heard the sound of the whistle after the bus had entered the crossing, and at the same time he observed the approaching train. The collision occurred almost immediately afterward.

As a vehicle approaches the crossing from the south, the driver's view of a train approaching from the west is obstructed by a building located in the southwest angle of the intersection and by trees and undergrowth along the south edge of the railroad right-of-way. The northeast corner of the building is 51.5 feet west of the center-line of the highway and 59.3 feet south of the main track. On September 26 observations and tests were made to determine the range of vision between a vehicle closely approaching the crossing from the south and an engine approaching from the west. Engine 9402 and a bus similar to the bus involved in the accident were used in making these tests. There was a slight haze, but visibility up to distances of about 2,000 feet was not restricted. The bus was stopped at a point approximately 5 feet south of the crossing, the point at which the driver and several witnesses thought the bus stopped on the day of the accident. The windows of the bus were closed and the front door was open. As engine 9402 approached from the west the grade-crossing engine-whistle signal was sounded for the first crossing west of German Street and for the crossing at German Street. The engine bell was ringing. An occupant of the bus heard both whistle signals, but he could not hear the bell at any time before the engine came into view. From the driver's seat in the bus, the engine first became clearly visible when the front of the engine reached a point 348 feet west of the crossing. The engineer obtained his first view of the bus when the front of the engine reached a point 296 feet west of the crossing. A train moving at a speed of 35 miles per hour would cover these distances in 6.8 seconds and 5.8 seconds, respectively. After this test was completed, the bus was started forward and driven across the crossing in second gear, the gear used by the driver on the day of the accident. An interval of 10.5 seconds elapsed between the time the front of the bus entered the crossing and the time the rear end cleared the crossing. Obviously, since there is no automatic warning device at this crossing, the only protection afforded the driver of a motor vehicle against a train moving at the maximum authorized speed of 35 miles per hour is the sound of a grade-crossing engine-whistle signal. In the instant case the driver of the bus did not hear the sound of the whistle.

In addition to the accident here under investigation, two collisions between trains and motor vehicles have occurred at this crossing since January 1, 1942. Although neither of these accidents resulted in fatalities, the conditions present constitute a definite hazard. After the accident occurred, the route of the school bus was changed in such manner that the crossing in question is no longer used.

Cause

It is found that this accident was caused by a school bus occupying a rail-highway grade crossing immediately in front of an approaching train.

Dated at Washington, D. C., this twenty-second day of October, 1952.

By the Commission, Commissioner Patterson.

(SEAL)

GEORGE W. LAIRD,
Acting Secretary.