

INTERSTATE COMMERCE COMMISSION

REPORT OF THE DIRECTOR OF THE BUREAU OF SAFETY CONCERNING AN
ACCIDENT ON THE PENNSYLVANIA RAILROAD AT JUNIATA BRIDGE,
PA., ON JULY 22, 1932.

August 27, 1932.

To the Commission:

On July 22, 1932, there was a rear-end collision between two freight trains on the Pennsylvania Railroad at Juniata Bridge, Pa., which resulted in the death of one employee and the injury of two employees. The investigation of this accident was held in conjunction with a representative of the Public Service Commission of Pennsylvania.

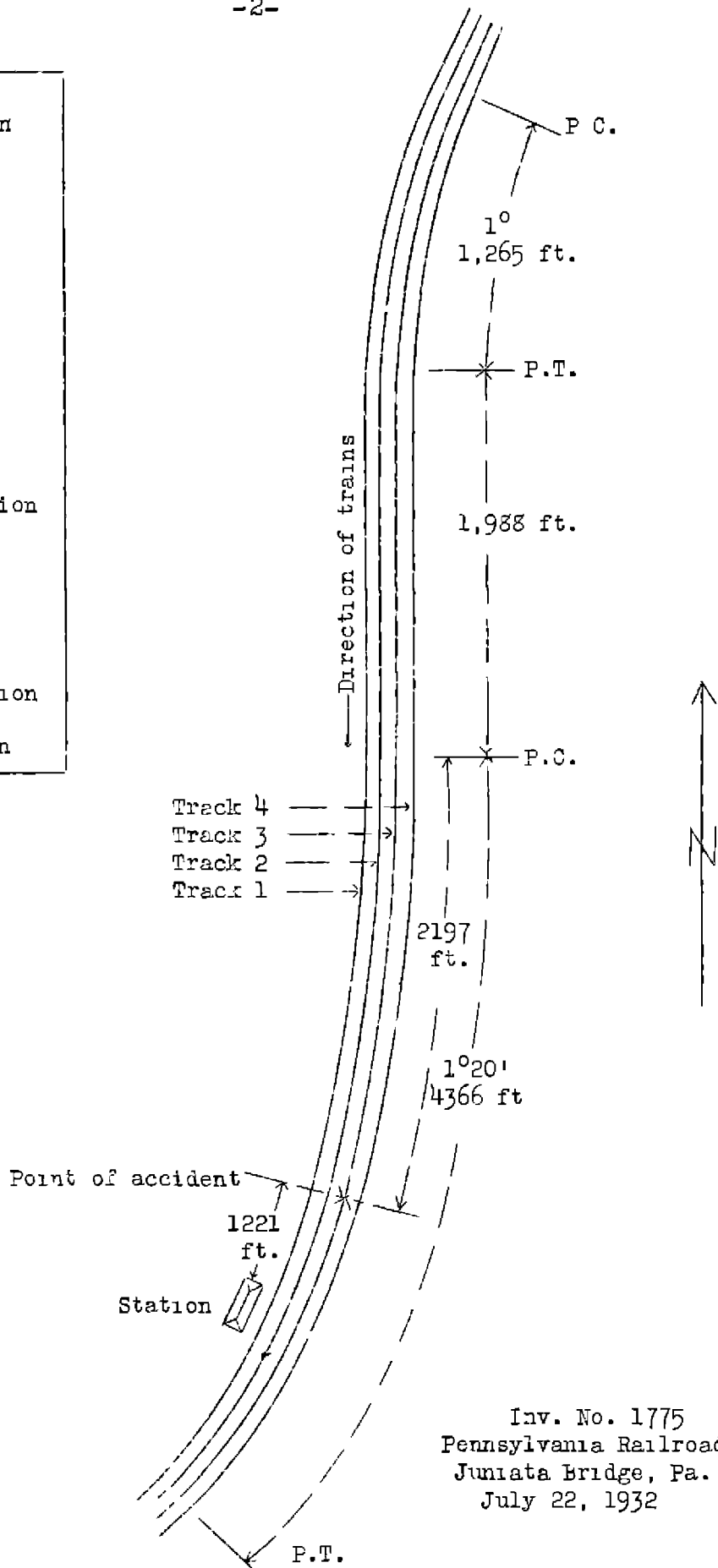
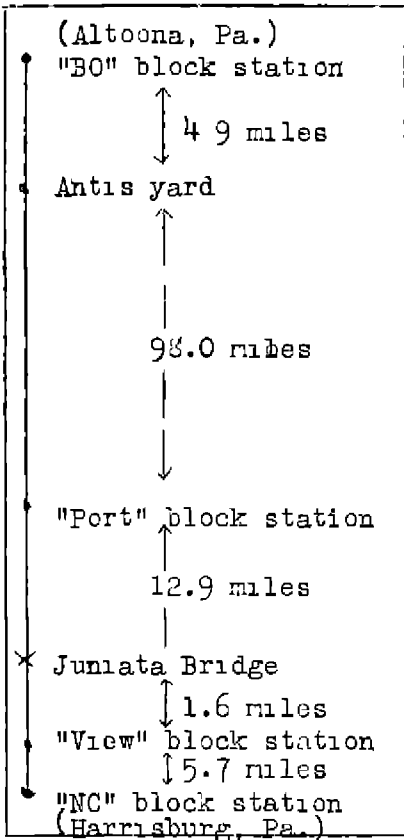
Location and method of operation

This accident occurred on that part of the Middle Division extending between "B0" block station, near Altoona, Pa., and "NC" block station, near Harrisburg, Pa., a distance of 123.1 miles; in the vicinity of the point of accident this is a four-track line over which trains moving against the current of traffic, which was the case with the trains involved in this accident, are governed by a manual block-signal system. The accident occurred on track 3, the westbound freight track, at a point 1,221 feet west of the station at Juniata Bridge. Approaching this point from the west, there is a 1° curve to the left 1,265 feet in length, and then tangent track for a distance of 1,988 feet, followed by a 1° 20' curve to the right 4,366 feet in length, the accident occurring on this latter curve at a point 2,197 feet from its western end. The grade at the point of accident is 0.02 per cent ascending for eastbound trains.

The weather was clear at the time of the accident, which occurred about 11.22 a.m.

Description

Eastbound freight train extra 6959 consisted of 112 cars and a caboose, hauled by engine 6959, and was in charge of Conductor Smith and Engineman Rensel. This train departed from Antis yard (Altoona) at 6.35 a.m., and on arrival at Port block station, 12.9 miles west of Juniata Bridge, on track 2, the crew received train order No. 17, Form 19, conferring right over opposing trains on track 3 from Port to View, a block station 1.6 miles east of Juniata Bridge. This train left Port on track 3 at 10.31 a.m., under a clear block-signal indication, and was stopped with its rear end at Juniata Bridge, where it was standing when it was struck by extra 6875.



Inv. No. 1775
 Pennsylvania Railroad
 Juniata Bridge, Pa.
 July 22, 1932

Eastbound freight train extra 6875 consisted of 96 cars and a caboose, hauled by engine 6875, and was in charge of Conductor Gebhart and Engineman Irvin. This train left Antis yard at 7.50 a.m., and upon arrival at Port, train order No.19, Form 19, was received giving it right over opposing trains on track 3 to View. The train departed from Port at 10.57 a.m., under a permissive signal indication, and was approaching Juniata Bridge when it collided with extra 6959 while traveling at a speed estimated at about 5 miles per hour.

The caboose, the three rear cars, and the rear truck of the fourth car of extra 6959 were derailed, while engine 6875 and its tender turned over to the left, and the first three cars in its train were derailed; the caboose of extra 6959 was practically demolished. The employee killed was the engineman of extra 6875, and the employees injured were the fireman and head brakeman of the same train.

Summary of evidence

Engineman Rensel, of extra 6959, stated that as his train approached View, he made an 8-pound brake-pipe reduction, and then made a further reduction of 5 pounds, and when this second reduction was made the brakes went into emergency, due to a break-in-two resulting from a broken knuckle. Repairs were made, the train was recoupled, the brakes tested, and he then called in the flagman, but when attempting to start the train he was unable to do so and saw the conductor near the rear end giving stop signals. He had felt no shock or surge at the head end, and did not know a collision had occurred until informed by a local resident.

Conductor Smith, of extra 6959, stated that when the train stopped, the flagman started back immediately. The conductor started towards the head end, but after reaching a point about 25 car-lengths from the engine he saw the train being recoupled and after hearing the brakes release he notified the operator by telephone that the train was ready to proceed; immediately after this conversation he heard the crash at the rear end of his train. He also heard the whistle sounded to call in his flagman; this was after the accident had occurred. The train stopped at 11.05 a.m., and he estimated the time of the accident at 11.20 a.m.

Flagman Tillman, of extra 6959, stated that he went back as soon as the train stopped, proceeding to a point about 32 or 33 car-lengths from the caboose, where he placed torpedoes on the rails; at this point he could not have seen a train on the tangent west of the curve. He waited in that vicinity about five minutes and was about five car-lengths east of the torpedoes when he heard the whistle of a train running against the current of traffic. He again started westward and

had nearly reached the torpedoes when the engine of the approaching train came into view, about 15 car-lengths distant. He immediately gave stop signals, but did not hear these signals acknowledged, although the brakes were applied when the train passed him, traveling at a speed of about 15 miles per hour. He had ample time in which to have gone back to the straight track but considered that he was back far enough to afford full protection and said he would not have flagged in any different manner even if he had known that another train was following his own train.

Fireman Johnson, of extra 6875, stated that a normal stop was made at Port block station, the only time the automatic brakes were used en route. The train moved from track 2 to track 3 under a permissive signal indication; he called this indication to the engineman and the engineman acknowledged it, but he did not know whether the engineman actually saw the signal. The train attained a maximum speed of 22 or 23 miles per hour after leaving Port and several whistle signals were sounded as required for movements against the current of traffic. The engineman shut off steam when the train was approaching Juniata Bridge, at a speed of 18 or 20 miles per hour, and after drifting a short distance applied the independent engine brake, further reducing the speed to 16 or 17 miles per hour. Fireman Johnson was riding on the left side of the cab and his first knowledge of anything wrong was when the brakeman called "flag"; the engineman made a service application of the brakes, acknowledged the flag by means of the whistle, and then moved the brake-valve to emergency position. The brakes appeared to take proper hold and reduced the speed of the train to about 5 miles per hour by the time the accident occurred. As soon as the first warning was given he crossed over to the right side of the cab and saw the flagman, about 25 car-lengths from the rear end of the train ahead. Fireman Johnson, who was a qualified engineman, said that although the train was being operated under a permissive block signal he did not think the speed had been excessive.

Head Brakeman Hawk, of extra 6875, was riding in the gangway on the right side of the engine but did not see the flagman until the engine was about 10 car-lengths from him. He immediately called the engineman's attention to the flagman and the engineman replied that he saw him and started to make a service application of the brakes, and then applied the brakes in emergency.

Air Brake Instructor Barr stated that he is familiar with the territory between Port and View block stations and with the restricted range of vision at various points, due to foliage and hills on the inside of curves, he was of the opinion that a train with a tonnage similar to that of extra 6875 could not be operated safely at a speed of more than 15 miles per hour under a permissive signal indication.

Superintendent Phelan said that on the day following the accident Flagman Tillman, Fireman Johnson and Head Brakeman Hawk were taken to the scene of the accident and the flagman located the torpedoes as having been 1,380 feet west of the caboose, while his own location when he saw the following train was only 858 feet from the caboose; had he been back 1,597 feet he could have seen at least 2,400 feet farther west. It also appeared that Brakeman Hawk did not see the flagman's signals until 583 feet from him, although he had a clear view for a distance of 1,135 feet, or 1,557 feet from the caboose.

Conclusions

This accident was caused primarily by the failure of Flagman Tillman, of extra 6959, to provide proper flag protection.

The rules provide that the flagman must go back a sufficient distance to insure full protection. According to the statements of Flagman Tillman, however, he put down torpedoes, then walked eastward, and was only 858 feet from his own train when the following train came into view. He had had over 15 minutes in which to have continued back to a point where he could have seen entirely around the curve towards the west, and had he done so, and had he remained at that location, he could have given warning in time to have prevented the accident.

The rules also provide that permissive block signals indicate that all trains, except passenger trains, must proceed with caution prepared to stop short of a train or obstruction. Extra 6959, moving under a clear signal indication, consumed about 34 minutes on the run of 12.9 miles from Port to Juniata Bridge, while extra 6875, moving under a permissive indication, only consumed about 25 minutes. The track in this territory is winding, with the view obscured in many places, and under these circumstances Engineman Irvin, of extra 6875 should have been operating his train at a lower rate of speed, so that he would have been able to stop short of a train or obstruction.

Respectfully submitted,

W. P. BORLAND

Director.