Inv-2389

INTERSTATE COMMERCE COMMISSION

WASHINGTON

REPORT OF THE DIRECTOR

BUREAU OF SAFETY

ACCIDENT ON THE

PENNSYLVANIA RAILROAD

FORT WAYNE, IND.

October 24, 1939

INVESTIGATION NO. 2389

SUMMARY

Inv-2389

Railroad:	Pennsylvania	
Date:	October 24, 1939	
Location:	Fort Wayne, Ind.	
Kind of accident:	Side collision	
Trains involved:	Passenger	: Yard engine
Train number:	44	: ----
Engine numbers:	5337	: 8606
Consist:	9 cars	: 2 cars
Speed:	10-15 m. p. h.	: 8-15 m. p. h.
Operation:	Automatic block system for movements with current of traffic; train orders and manual block system for movements against current of traffic.	
Track:	Double; 4° left curve; 0.36 percent ascending grade eastward	
Weather:	Clear	
Time:	2:24 a.m.	
Casualties:	3 killed, 11 injured	
Cause:	Yard engine backing into a turnout without authority and striking the side of a moving passenger train	

December 29, 1939.

To the Commission:

On October 24, 1939, there was a side collision between a passenger train and a yard engine on the Pennsylvania Railroad at Fort Wayne, Ind., which resulted in the death of three passengers and the injury of eight passengers, two employees on duty and one employee off duty. This accident was investigated in conjunction with the Public Service Commission of Indiana.

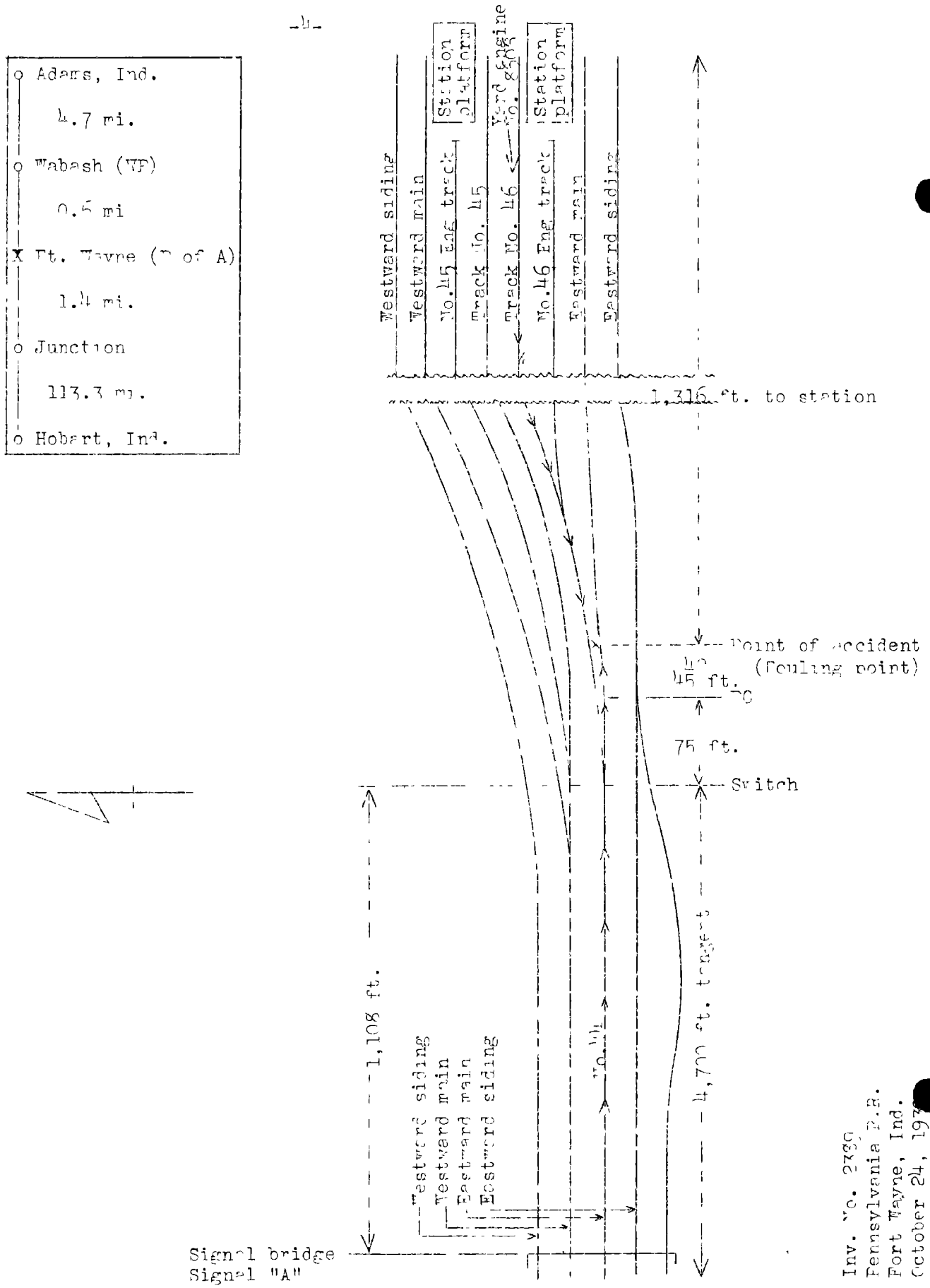
Location and Method of Operation

This accident occurred on that part of the Fort Wayne Division which extends between Hobart and Fort Wayne, Ind., a distance of 114.7 miles. In the vicinity of the point of accident this is a double-track line over which trains moving with the current of traffic are operated by an automatic block system, the signal indications of which supersede the superiority of trains; trains moving against the current of traffic are operated by train orders and a manual block system. The accident occurred within yard limits, at the fouling point of the switch of track No. 46 and the eastward main track, at a point 120 feet east of this switch and 1,316 feet west of the station. Approaching from the west a tangent extends approximately 4,700 feet to this switch and 75 feet beyond, which tangent is followed by a 4° curve to the left a distance of 45 feet to the point of accident and approximately 238 feet beyond. At the point of accident the grade is 0.36 percent ascending for east-bound trains.

At the station the eastward and westward main tracks are a considerable distance apart and between them are other tracks, one of which is track No. 46 which is between the station platforms. The eastward and westward sidings parallel the eastward and westward main tracks to the south and north, respectively.

The switch involved is a facing-point hand-throw switch for east-bound trains; entry to track No. 46 from the eastward main track is made through a No. 10 turnout which leads to the north. The center of the lens of an electrically lighted switch lamp, which is located to the south side of the eastward main track, is 10 inches above the ties; this switch lamp displays a green aspect when the switch is set for main-track movements.

The Fort Wayne switching district extends between Junction and Adams, located, respectively, 1.4 miles west and 5.3 miles east of Fort Wayne. A switchtender in charge of main-track switches is stationed at Fort Wayne from 11 p. m. until 7 a.m., daily. A train director at WP block station, located 0.6 mile east of the station, has charge of all main tracks and sidings



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in this switching district. Movements are made after the conductor and the switchtender have obtained permission from the train director to use a main track.

Signal "A," located on a signal bridge 1,108 feet west of the switch involved, is a semiautomatic, non-stick, position-light signal and governs eastward movements; a train receiving a slow-speed indication at this signal is required to proceed at not exceeding 15 miles per hour prepared to stop at the next signal.

Rules 17, 17a, and 33a of the book of operating rules, and S16C and S18A of the time-table special instructions, read in whole or in part as follows:

> 17. The headlight will be displayed to the front of every train by night.
>
> 17a. When rules require the headlight to be displayed, electric headlights will be dimmed:-
>
> (a) In yards.
>
> * * *
>
> (c) Approaching stations at which stops are to be made or where trains are receiving or discharging passengers.
>
> * * *
>
> 33a. Switch Tenders in charge of main track switches, who are required to give signals to trains moving on main tracks, will use a green flag by day and a green light by night to give proceed signals.
>
> S16C. * * * Trains or engines must approach switches where switch tenders are stationed, prepared to stop and must stop clear of any switch or route unless signal to proceed is received from the switch tender. * * *.
>
> S18A. Rule 93B. On portions of the railroad, within defined limits within terminal specified on the time-table, trains and engines are not required to protect against following movements. On main tracks, within these limits, trains and engines must move with caution, prepared to stop short of other movements or obstructions, unless by signal indication the track ahead, on which movement is to be made, is known to be clear. On other than main tracks within these limits, trains and engines

> must move with such speed that they can stop within range of vision, unless such track is seen or known to be clear and switches properly set.

The weather was clear at the time of the accident, which occurred about 2:24 a. m.

Description

No. 44, an east-bound first-class passenger train, consisted of one mail car, one express car, one chair-lounge car, four Pullman cars and two deadhead coaches, in the order named, each of all-steel construction, hauled by engine 5337, and was in charge of Conductor Schlink and Engineman Ayres. This train passed Junction, the last open office, at 2:21 a. m., according to the train sheet, 4 minutes late, passed signal "A," which was displaying a slow-speed indication, received a proceed signal given by the switch tender, received a green aspect displayed by the switch lamp at the switch involved, and, while moving over this switch at a speed estimated to have been between 10 and 15 miles per hour, was sideswiped by yard engine 8606.

Yard engine 8606, of the 2-8-0 type, was in charge of Conductor Switzer and Engineman Dickens. This engine, headed eastward on track No. 46 with two passenger cars coupled to the east end, began a back-up movement, attained a speed estimated to have been between 8 and 15 miles per hour, and instead of stopping clear of the main track, it sideswiped No. 44.

The right rear corner of the tender of the yard engine struck the rear portion of the second car in No. 44 and raked the side of the car a distance of about 15 feet; this car was slightly damaged and its rear truck derailed. The train became separated between the second and third cars, the two portions being separated a distance of 60 feet. The third car was badly damaged, the forward portion being penetrated a distance of several feet and its side torn out a distance of about 20 feet; both of its trucks were derailed. The fourth car was slightly damaged and both of its trucks were derailed. The yard engine and its tender were derailed to the north and were slightly damaged.

The employees injured were the conductor and the front brakeman of No. 44 and a brakeman who was deadheading.

Summary of Evidence

Engineman Ayres, of No. 44, stated that the air brakes were tested at Chicago and they functioned properly en route. The automatic signal at Junction displayed an approach indication; signal "A" displayed a slow-speed indication, which was called, and his train passed it at a speed of about 10 miles per hour. From the immediate vicinity of the switch involved, the switchtender gave a proceed signal with a lighted green lantern; the switch lamp at that switch displayed a green aspect. As his engine passed over the switch at a speed of about 12 miles per hour he saw the yard engine some distance away on track No. 46 but did not pay particular attention to it; he thought it was moving but he could not determine from the back-up headlight, which was burning dimly, whether it was moving backward or forward. As his train progressed he could not see the yard engine, as it was to the north side of his engine. He was not aware of anything wrong until the air brakes became applied in emergency, whereupon he lapped the brake valve; his train moved about 120 feet and stopped. At first he thought that an air hose had burst but going back he saw that his train was separated between the second and third cars and that his train had been sideswiped by the yard engine. He stated that when approaching Fort Wayne station the headlight on his engine was burning dimly.

Fireman Harding, of No. 44, corroborated the testimony of the engineman in all essential details. He was on the left seat-box of the engine and saw the yard engine on track No. 46 about four car lengths east of the clearance point and moving westward at a speed of about 8 miles per hour, but he thought it would stop before fouling the main track; its rear headlight was burning but, owing to the angle, he could not tell whether it was with the bright or the dim light. The speed of his train was not over 15 miles per hour.

The statement of Flagman Robertson, of No. 44, did not develop anything additional of importance.

Engineman Dickens, of yard engine 8606, stated that the regular daily switching of passenger cars was being performed at Fort Wayne station. Immediately after 2:12 a. m. his engine with one car coupled ahead entered track No. 46 and coupled to another car. He received a hand signal from the conductor, who was at the east end of the two cars, and a back-up movement was started. No. 44 was due at 2:20 a. m. but, it being overdue at the time the back-up movement was started, he thought it would not arrive before his engine used the main track to pick up a car from the Wabash Railway. His cab window was open and, facing east, he was leaning out, glancing back intermittently. The first knowledge he had of the presence of No. 44 was when the

engine of that train passed at a speed of about 10 or 12 miles per hour and almost simultaneously his fireman called a warning of danger. He immediately closed the throttle and applied the air brakes in emergency, but too late to avert the accident. He estimated the speed of his engine to have been about 10 or 12 miles per hour when the impact occurred. The air was cut through on the two cars and the brakes functioned properly. There was nothing about the condition of the yard engine that contributed to the cause of the accident. Both headlights on his engine were burning dimly. He could not say whether the headlight of the passenger-train engine was burning. The only conversation he had with his conductor about making movements prior to the arrival of No. 44 was a remark that the other switch engine working at the east end of the station would deliver that train to the Wabash Railway. He understood fully that under the requirements of the rules and special instructions it was necessary to receive a signal from the switchtender and also to observe the indication displayed by the switch lamp involved before fouling or backing out to the eastward main track. On this occasion, however, he did not see the switchtender or the switch lamp and he explained his failure by saying he thought that as No. 44 was overdue before the back-up movement was started, it would be held until his engine picked up a car that was to be placed on No. 200, which was on track No. 46. At the time of the accident he had been on duty less than 4 hours, after having been off duty more than 15 hours. He said that he felt normal in every respect.

Fireman Todd, of yard engine 8606, stated that when the back-up movement was started he worked on the fire and then sat on his seat-box; he looked back and saw the switchtender, about two passenger-car lengths away and north of the passenger train, waving stop signals with a lighted green lantern and at the same time he saw the cars of the passenger train; he called a warning of danger to the engineman but just as he finished doing so the tender began to scrape the side of No. 44. Before the accident he saw neither the indication displayed by the switch lamp involved nor the engine of the passenger train. He did not hear his conductor instruct the engineman about the movements to be made. He was not thoroughly familiar with conditions in the passenger yard but he knew that a switchtender was stationed there and had charge of the switch involved. He stated that the engineman appeared normal.

Yard Conductor Switzer, of engine 8606, stated that he had an understanding with the engineman that the intended movement would not be made until after No. 44 arrived. When the back-up movement was started the yard engine was about two or three car lengths west of the station platform and it continued about five

or six car lengths to the point where the accident occurred. He was on the east platform of the second car ahead of the engine and was not in position to see the switchtender, the switch lamp or the passenger train. He was not aware of anything wrong until the accident occurred, at which time he estimated the speed of the yard engine to have been about 10 miles per hour. Permission to use the eastward main track after No. 44 passed was obtained in the regular manner and he gave this information to his brakemen and the switchtender. He thought that his engineman would stop in the clear and not back out on the main track until after No. 44 had passed and the switchtender had opened the switch and had given the proper signal.

Yard Brakeman Boldt, of engine 8606, was with the conductor on the east platform of the second car ahead of the engine. He estimated the speed of the yard engine to have been between 10 and 15 miles per hour. After the accident he observed that the headlight of the engine of No. 44 was not burning. His statement was similar to that of the conductor.

Yard Brakeman Childers, of engine 8606, was south of the tracks and opposite a cross-over switch located about 425 feet west of the switch involved. He saw No. 44 approaching and observed that at first its headlight was burning, but when the engine was about halfway between Junction and signal "A" it became extinguished and remained so until the engine, moving at a speed of about 10 or 12 miles per hour, passed him. He did not see the accident occur because No. 44 was between him and the yard engine, but he saw the switchtender give a proceed signal to permit No. 44 to move to the station. The switch lamp involved was displaying a green aspect.

Switchtender Beman stated that the movement intended was of regular occurrence. Arrangements were made with the train director at WP block station for yard engine 8606 to back out after No. 44 passed. He was opposite the switch involved, which was lined for the main track; a green aspect was displayed for No. 44. With a green lantern he gave that train a proceed signal, which was acknowledged from the vicinity of signal "A." He then walked from the switch to the westward main track and at this time yard engine 8606 had not started the back-up movement on track No. 46. Soon afterward he heard the exhaust from the yard engine, only a short distance away. Waving stop signals with his lighted lantern he ran toward it on the south or engineman's side; when the impact occurred he was between the cab of the yard engine and No. 44. He stated that in the absence of any hand-lantern signal from him to permit its movement over the switch, the yard engine should have stopped in the clear. The headlight of No. 44 became extinguished after that train

passed Junction and he did not observe whether it was turned on again before No. 44 reached the switch. He heard the engine bell ringing.

Train Director Onstott, at WP block station, stated that the yard conductor obtained permission from him, in the required manner, to use the eastward main track after No. 44 passed over the switch involved and that the switchtender checked with him as to this movement. These conversations took place about 2:12 a. m.

A joint statement of all five members of a Wabash Railway yard crew at Fort Wayne indicated that the headlight of the engine of No. 44 was burning until that train reached a point about 475 feet west of the switch involved and then it became extinguished. The train passed at a speed of about 15 miles per hour. They did not see yard engine 8606 prior to the accident.

Master Mechanic Brower arrived at the scene of the accident within less than an hour after its occurrence. He inspected yard engine 8606 and found the throttle in closed position, the reverse lever in the center of the rack, the independent-brake valve in slow-application position and the automatic-brake valve in service position. The air-brake equipment, when removed and placed on a test rack, was found to be in good operating condition.

After the accident Gang Foreman Hoffman and Assigned Laborer Bleich tested the headlight of engine 5337 and it burned properly in both bright and dim positions.

According to data furnished by the railroad, the third car in No. 44 was Wabash chair-lounge car 1552; it was of all-steel construction, 84 feet in length, and weighed 130,000 pounds. It had a total seating capacity of 57 persons, 32 in the front or chair end and 25 in the rear or lounge end. In addition to the sheathing being torn a distance of about 20 feet, the floor for a distance of several feet between the aisle and the north side of the car was torn away; the seats on the north side were ripped out and piled in the aisle and on the seats at the south side of the car. The damage to this car was estimated at $8,000. The passengers that were killed and injured were in the front end of this car.

Discussion

According to the evidence, the regular daily switching of passenger cars at Fort Wayne station was being performed by yard

engine 8606. The required permission to use the eastward main track after No. 44 passed over the switch involved was obtained by the yard conductor from the train director; the switchtender verified the authorization obtained for this movement. The yard conductor said that he instructed the yard engineman accordingly, but the engineman said that the only conversation he had with the conductor about making switching movements prior to the arrival of No. 44 was that the yard engine working at the east end of the station would deliver that train to the Wabash Railway. The fireman of yard engine 8606 said he did not hear the conductor give the engineman any instructions. The engineman understood that it was necessary to receive a signal from the switchtender and to observe the indication displayed by the switch lamp before fouling or backing out to the eastward main track, and he knew that No. 44 was due at 2:20 a. m. Nevertheless, his engine, with one car ahead of it, coupled to a car on track No. 46 and then started a back-up movement from a point two or three car lengths west of the station platform. A speed estimated at between 8 and 15 miles per hour was attained but instead of stopping and remaining clear of the main track until No. 44 passed and waiting to receive a hand-lantern signal from the switchtender, and ascertaining the aspect displayed by the switch lamp involved, he continued the back-up movement for a total distance of five or six car lengths to the point where the right rear corner of the tender sideswiped the north side of No. 44. The yard engineman said that he was facing forward, glancing back intermittently during the back-up movement, and he did not see the stop signals waved to him by the switchtender immediately prior to the accident. The air was cut in on the two cars and the brakes functioned properly. There was nothing about the condition of the yard engine to distract the engineman's attention. He attributed his failure to remain clear of the eastward main track to his impression that as No. 44 was overdue at the time the back-up movement was started, it would be held until his engine used the eastward main track, because a car was waiting to be picked up by his engine and to be placed on No. 200, which was on track No. 46.

The fireman of the yard engine was not thoroughly familiar with the conditions in the passenger yard but he knew that a switchtender was stationed at this location and had charge of the switch involved. When the back-up movement was started he was working on the fire; if he had maintained a proper lookout while this movement was being made he should have been able to see the stop signals given by the switchtender and the aspect displayed by the switch lamp in time to warn the engineman earlier, and thereby the accident might have been averted.

The yard conductor and one yard brakeman were on the east end of the second car ahead of the yard engine; they thought the engineman would stop on track No. 46, clear of the main track, until No. 44 had passed and the switchtender had opened the switch and had given the required signal to use the main track. The other yard brakeman was not in position to take any action to prevent the accident.

According to the evidence No. 44 was being operated in conformity with signal indications and a hand signal given by the switchtender; the switch was lined for the main track. The engineman said that he dimmed the headlight when approaching the station as required by the rules, but other witnesses said that they saw the headlight become extinguished when the passenger train engine was about 475 feet west of the switch involved. A test of the headlight made after the accident disclosed it to be in proper condition. Although it appears from the evidence that the yard engineman and the yard fireman did not maintain a proper lookout while their engine was making the back-up movement on track No. 46, it is possible that had the headlight of the passenger engine been lighted they might have discovered that No. 44 was closely approaching in time to have averted the accident.

Conclusion

This accident was caused by a yard engine backing into a main track turnout without authority and striking the side of a moving passenger train.

Recommendation

In view of the circumstances in this case it is recommended that the carrier give consideration to the need for additional protection at this point.

Respectfully submitted,

S. N. MILLS

Director.