

INTERSTATE COMMERCE COMMISSION
WASHINGTON

INVESTIGATION NO. 3026
NEW YORK, SUSQUEHANNA AND WESTERN
RAILROAD COMPANY

REPORT IN RE ACCIDENT
AT PATERSON, N. J., ON
SEPTEMBER 27, 1946

SUMMARY

Railroad: New York, Susquehanna and Western
Date: September 27, 1946
Location: Paterson, N. J.
Kind of accident: Collision
Equipment involved: Cut of freight cars : Passenger train
Train number: : 822
Engine number: : Motor-car 1002
Consist: 10 cars : Motor-car
Estimated speed: Standing : 10 m. p. h.
Operation: Timetable, train orders and automatic
block signal system; yard limits
Track: Double; 3°32' curve; 1.09 percent
descending grade eastward
Weather: Clear
Time: 11:05 a. m.
Casualties: 58 injured
Cause: Failure to provide protection for
cars standing on main track within
yard limits on time of first-class
train, and failure properly to
control speed of train in accordance
with signal indication

INTERSTATE COMMERCE COMMISSION

INVESTIGATION NO. 3026

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

NEW YORK, SUSQUEHANNA AND WESTERN RAILROAD COMPANY

November 12, 1946 .

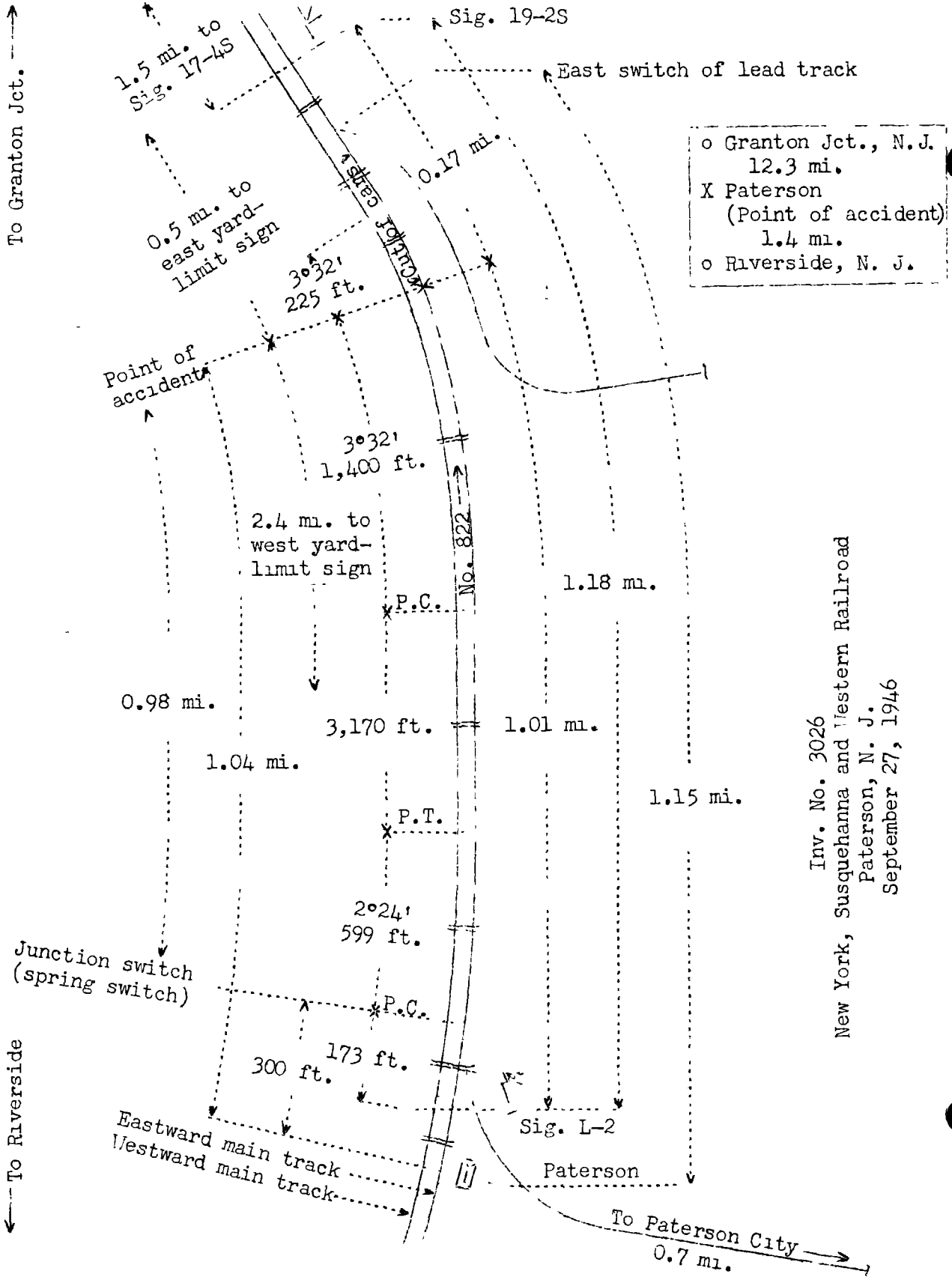
Accident at Paterson, N. J., on September 27, 1946, caused by failure to provide protection for cars standing on a main track within yard limits on the time of a first-class train, and by failure properly to control the speed of the train in accordance with signal indication.

REPORT OF THE COMMISSION¹

PATTERSON, Commissioner:

On September 27, 1946, there was a collision between a passenger train and a cut of freight cars on the New York Susquehanna and Western Railroad at Paterson, N. J., which resulted in the injury of 55 passengers and 3 employees. This accident was investigated in conjunction with a representative of the New Jersey Board of Public Utility Commissioners.

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.



- o Granton Jct., N.J. 12.3 mi.
- X Paterson (Point of accident) 1.4 mi.
- o Riverside, N. J.

Inv. No. 3026
 New York, Susquehanna and Western Railroad
 Paterson, N. J.
 September 27, 1946

Location of Accident and Method of Operation

This accident occurred on that part of the railroad extending between Riverside and Granton Jct., N. J., 13.7 miles, a double-track line, over which trains moving with the current of traffic are operated by timetable, train orders and an automatic block-signal system. Within yard limits at Paterson, 1.4 miles east of Riverside, a single-track line extending between Paterson and Paterson City, 0.7 mile, connects with the eastward main track of the double-track line. The junction switch is a spring switch and is 300 feet east of the station. The accident occurred on the eastward main track, within yard limits at Paterson, at a point 2.4 miles east of the west yard-limit sign, 1.04 miles east of the station and 0.5 mile west of the east yard-limit sign. From the west on the eastward main track there are, in succession, a 2°24' curve to the left 599 feet in length, a tangent 3,170 feet and a 3°32' curve to the left 1,400 feet to the point of accident and 225 feet eastward. The grade is 1.09 percent descending eastward.

At Paterson the east switch of a lead track, about 200 feet long, which connects the eastward main track and several industry tracks, is 1.15 miles east of the station.

Semi-automatic signal L-2, governing east-bound movements from the single-track line through the junction switch to the eastward main track thence on the eastward main track to automatic signal 19-2S, 1.13 miles eastward, is 173 feet west of the junction switch and 1.01 miles west of the point of accident. Signal L-2 is a dwarf signal of the color-light type, and is continuously lighted. The involved aspect and corresponding indication and name of this signal are as follows:

<u>Aspect</u>	<u>Indication</u>	<u>Name</u>
Yellow	Proceed at restricted speed.	Restricting

Signal L-2 is controlled from the station at Paterson. The normal indication displayed by this signal is stop. The controlling circuits are so arranged that when the lever in control of signal L-2 is placed in position for this signal to display a permissive indication and the eastward main track is occupied between the junction switch and automatic signal 17-4S, 1.5 miles east of signal 19-2S, signal L-2 displays proceed-at-restricted-speed.

Operating rules read in part as follows:

DEFINITIONS

* * *

Restricted Speed.--Proceed prepared to stop short of train, obstruction, or anything that may require the speed of a train to be reduced.

* * *

14. ENGINE WHISTLE SIGNALS.

Note.--The signals prescribed are illustrated by "o" for short sounds; "--" for longer sounds.

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SOUND.	INDICATION.
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* * *

(c) — o o o	Flagman protect rear of train.
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35. The following signals will be used by flagmen:

Day signals--A red flag,
Torpedoes and
Fuses.

* * *

93. Within yard limits the main track may be used, protecting against first class trains.

* * *

99. When a train stops under circumstances in which it may be overtaken by another train, the flagmen must go back immediately with flagman's signals a sufficient distance to insure full protection, placing two torpedoes, and when necessary, in addition, displaying lighted fuses. * * *

* * *

The maximum authorized speed for all trains in the vicinity of the point of accident is 20 miles per hour.

Description of Accident

About 10:25 a. m., during switching operations, the crew of engine 236 left a cut of 10 freight cars standing on the eastward main track within yard limits at Paterson. About 40 minutes later the west car was struck by No. 822.

No. 822, an east-bound first-class passenger train, consisted of motor-car 1002. The motor-car is operated from a control compartment at the front end. This train, en route from Paterson City to Graton Jet., passed signal L-2, which displayed proceed-at-restricted-speed, entered the eastward main track at the junction switch, departed from Paterson at 11:03 a. m., on time, and while moving at an estimated speed of 10 miles per hour it struck the cut of cars at a point 1.01 miles east of signal L-2.

The front end of motor-car 1002 was considerably damaged, and the interior of the car was somewhat damaged. The most westerly car of the cut of freight cars was slightly damaged.

The weather was clear at the time of the accident, which occurred about 11:05 a. m.

The conductor, the engineer and a student engineer of No. 822 were injured.

According to data furnished by the railroad, motor-car 1002 is of light-weight all-steel construction. It is 76 feet in length, weighs 78,040 pounds, and consists of a control compartment at each end and a passenger compartment having seating capacity for 80 persons. The car is powered by a 6-cylinder 235-horsepower motor. The car is provided with schedule SME double-end brake equipment having a safety-control feature.

Discussion

The rules governing operation on this line provide that within yard limits the main track may be used protecting against first-class trains. A proceed-at-restricted-speed signal indication requires the speed of a train to be controlled in such manner that it can be stopped short of a train or an obstruction. The employees concerned in this investigation so understood.

No. 822, an east-bound first-class train, was due to leave the junction switch at Paterson, the last station where time is shown, at 11:03 a. m. About 10:25 a. m. the crew of engine 236 left a cut of 10 freight cars standing on the eastward main track within yard limits at a point

0.98 mile east of the junction switch and 1.01 miles east of signal L-2. No. 822 passed signal L-2, which displayed proceed-at-restricted-speed, entered the eastward main track at the junction switch and departed at 11:03 a. m., on time, and was moving at an estimated speed of 10 miles per hour when it struck the cut of cars.

When the accident occurred the crew of engine 236, except the front brakeman, were in the vicinity of their engine, which was standing on an industry track and about 500 feet east of the west end of the cut of cars. The front brakeman was in the vicinity of a street crossing about 200 feet east of the engine. The engineer said that he overlooked sounding the engine whistle signal for flag protection to be furnished against No. 822 until just before the accident occurred, then he sounded the signal. The front brakeman and the fireman thought the flagman was providing protection for the cut of cars. The conductor said that he had failed to wind his watch and that it had stopped at 10:43 a. m., and therefore was not aware that No. 822 was overdue until the collision occurred. The flagman did not look at his watch, but he thought there was sufficient time remaining for their engine to move the cut of cars into clear before No. 822 was due to leave the junction switch. The members of the crew of engine 236 had compared time with a standard clock a few hours before the accident occurred, and there was only a few seconds variation in their watches.

The engineer of No. 822 said that as his train was moving on the tangent track immediately west of the curve on which the accident occurred he made a service brake-pipe reduction, in compliance with the proceed-at-restricted-speed indication displayed by signal L-2, and the speed was reduced from about 20 to 10 miles per hour when the train entered the curve. Then he saw the cut of cars about 400 feet distant but, because he did not see or hear any flagging signal, he thought the cars were on the westward main track. Immediately afterward he observed that the cars were occupying the eastward main track and he moved the brake valve to emergency position, but the collision occurred before the train could be stopped.

Because of an embankment and vegetation on the inside of the curve on which the accident occurred, the view of the point where the accident occurred from the control compartment of an east-bound motor-car is materially restricted.

Cause

It is found that this accident was caused by failure to provide protection for cars standing on a main track within yard limits on the time of a first-class train, and by failure properly to control the speed of the train in accordance with signal indication.

Dated at Washington, D. C., this twelfth day of November, 1946.

By the Commission, Commissioner Patterson.

W. P. BARTEL,
Secretary.

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