

INTERSTATE COMMERCE COMMISSION
WASHINGTON

INVESTIGATION NO. 2648
THE NEW YORK CENTRAL RAILROAD COMPANY
REPORT IN RE ACCIDENT
NEAR OSSING, N. Y., ON
NOVEMBER 11, 1942

SUMMARY

Railroad: New York Central
Date: November 11, 1942
Location: Ossining, N. Y.
Kind of accident: Rear-end collision
Trains involved: Express : Freight
Train numbers: Extra 316 West : Extra 309 West
Engine numbers: 316 : 309
Consist: 18 cars : 33 cars, caboose
Speed: Standing : 35-40 m. p. h.
Operation: Signal indications; accident
occurred within yard limits
Track: Four tracks; tangent;
practically level
Weather: Clear
Time: 1:08 a. m.
Casualties: 2 killed; 10 injured
Cause: Accident caused by failure to provide adequate flag protection for preceding train, and by failure to operate following train in conformity with yard-limit rule and signal indications

INTERSTATE COMMERCE COMMISSION

INVESTIGATION NO. 2648

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

THE NEW YORK CENTRAL RAILROAD COMPANY

January 25, 1943.

Accident near Ossining, N. Y., on November 11, 1942, caused by failure to provide adequate flag protection for the preceding train, and by failure to operate the following train in conformity with yard-limit rule and signal indications.

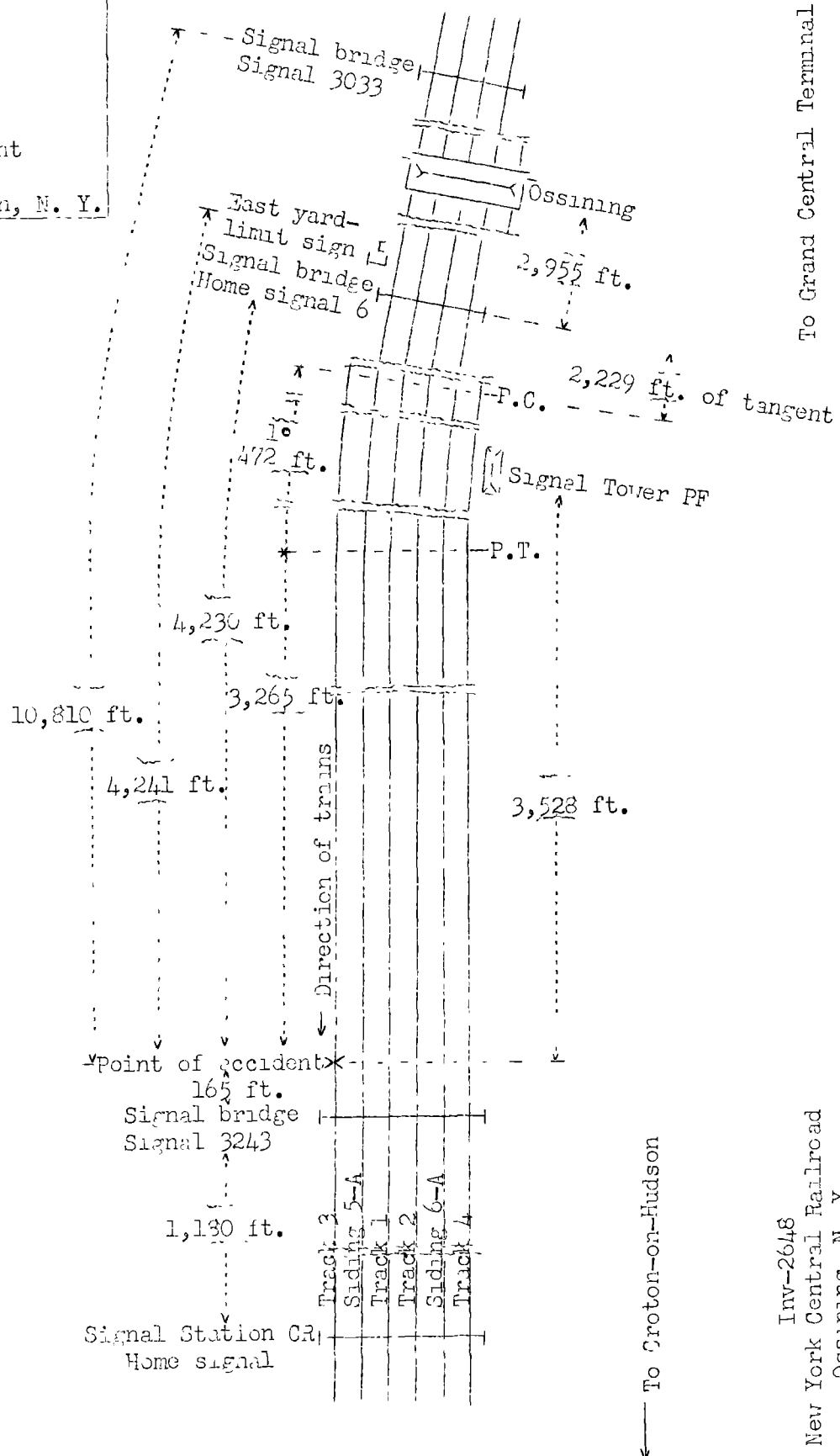
REPORT OF THE COMMISSION¹

PATTERSON, Commissioner:

On November 11, 1942, there was a rear-end collision between an express train and a freight train on the New York Central Railroad near Ossining, N. Y., which resulted in the death of two employees and the injury of one express messenger and nine employees. This accident was investigated in conjunction with a representative of the New York Public Service Commission.

¹Under 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 New York City, N. Y.
Grand Central Terminal
10.41 mi.
- o Spuyten Duyvil
19.76 mi.
- o Ossining
1.36 mi.
- X Point of accident
2.33 mi.
- o Croton-on-Hudson, N. Y.



To Grand Central Terminal ↑

↓ To Croton-on-Hudson

Inv-2648
 New York Central Railroad
 Ossining, N. Y.
 November 11, 1942

Location of Accident and Method of Operation

This accident occurred on that part of the Electric Division which extends between Grand Central Terminal, New York City, and Croton-on-Hudson, N. Y., a distance of 33.86 miles. The line is equipped with power rails for the electric propulsion of trains. Between PF interlocking and CR interlocking, located, respectively, 0.81 mile and 1.95 miles west of Ossining, this is a 4-track line within yard limits over which trains are operated by operating rules and signal indications. The tracks from north to south are track 3, westward passenger track, track 1, westward passenger track, track 2, eastward passenger track, and track 4, eastward passenger track. The accident occurred 1.36 miles west of Ossining on track 3 at a point 4,241 feet west of the east yard-limit sign and 3,525 feet west of the tower at PF interlocking. Approaching from the east there are, in succession, a tangent 2,229 feet in length, a 1° curve to the left 472 feet, and a tangent 3,265 feet to the point of accident and about 1.5 miles beyond. At the point of accident the grade is practically level.

Signal 3033, westward home signal at PF interlocking, signal 3243 and westward home signal at CR interlocking, governing westward movements on track 3, are mounted on signal bridges located, respectively, 10,810 feet and 4,230 feet east and 165 feet and 1,345 feet west of the point of accident. These are semi-automatic signals. Signals 3033 and 3243 are of the two-unit, search-light type, and are continuously lighted. The home signals have three arms. The top arm of the home signals for track 3 at PF and CR interlockings govern through movements on track 3. The involved night aspects and corresponding indications of these signals are as follows:

Signal 3033

<u>Aspect</u>	<u>Indication</u>
Yellow-over-red, staggered.	Proceed preparing to stop at next signal. Train exceeding medium speed must at once reduce to that speed. Reduction to medium speed must commence before passing signal and be completed before accepting a more favorable indication.

Home Signal at PF interlocking

<u>Aspect</u>	<u>Indication</u>
Red-over-red-over red, vertical.	Stop.

Signal 3243

<u>Aspect</u>	<u>Indication</u>
Red-over-red, staggered.	Stop, then proceed at restricted speed.

Home Signal at CR interlocking

<u>Aspect</u>	<u>Indication</u>
Red-over-red-over-red, vertical.	Stop.

The circuits of the involved signals are so arranged that when track 3 is occupied between the home signal at PF interlocking and signal 3243, signal 3033 will display yellow-over-red and the home signal at PF interlocking will display red-over-red-over-red.

Operating rules read in part as follows:

SIGNAL DEFINITIONS.

* * *

Medium Speed.--A speed not exceeding thirty miles per hour.

Slow Speed.--A speed not exceeding fifteen miles per hour.

Restricted Speed.--A speed not exceeding that which will enable a train to stop short of train ahead, obstruction, or switch not properly lined, look out for broken rail, and not exceeding slow speed.

Note--Speed restrictions apply to the entire train.

11. A train finding a fusee burning on or near its track must stop and extinguish the fusee, and then proceed prepared to stop short of train ahead or obstruction.

15. The explosion of two torpedoes is a signal to reduce speed and prepare to stop short of train ahead or obstruction. The explosion of one torpedo will indicate the same as two, but the use of two is required.

34. The engineman and fireman must, and when practicable the trainmen will, communicate to each other the indication of all signals affecting the movement of their train.

35. The following signals will be used by flagmen:

* * *

Night signals--A red light,
A white light,
Torpedoes,
Fusees.

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

All other trains and engines must move within yard limits prepared to stop unless the main track is seen or known to be clear.

Note.--Yard limits will be indicated by yard limit boards.

99. When a train stops under circumstances in which it may be overtaken by another train, the flagman 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. * * *

* * *

D-251. On portions of the road so specified on the time-table, trains will run with the current of traffic by block signals whose indications will supersede time-table superiority.

505a. Where an interlocking is in use in automatic block system territory, interlocking rules govern movements through the interlockings. Interlocking home signals will be used also as block signals.

605. Interlocking signals govern the use of the routes of an interlocking, and as to movements within Home Signal limits, their indications supersede the superiority of trains, but do not dispense with the use or the observance of other signals whenever and wherever they may be required.

606. At interlocking stations where separate * * * automatic block signals are not provided, the interlocking home (or dwarf) signals will be used also as prescribed by Rules * * * 505a.

665. Trains or engines must not pass an interlocking signal indicating "Stop" without receiving hand signals. Enginemen or trainmen must not proceed on hand signals until after their train or engine has been brought to a stop and they are fully informed of the situation; * * *

Time-table Special Instructions provide that rule D-251 is in effect in the territory involved.

In the vicinity of the point of accident the maximum authorized speed for the express train involved is 55 miles per hour, and for freight trains, 25 miles per hour.

Description of Accident

Extra 316 West, a west-bound express train, consisted of electric engine 316, 17 express cars and a passenger-baggage car, in the order named. All cars were of steel construction. This train departed from Spuyten Duyvil, 19.76 miles east of Ossining, on track 3 at 12:27 a. m., according to the dispatcher's record of movement of trains, passed the tower at PF interlocking and the last open office, at 12:52 a. m., and stopped at the home signal at CR interlocking, which displayed red-over-red-over-red, at 12:54 a. m., with its rear end standing 4,230 feet west of the home signal at PF interlocking and 4,241 feet west of the east yard-limit sign. About 14 minutes later the rear end was struck by Extra 309 West.

Extra 309 West, symbol FH-3, a west-bound freight train, consisted of electric engine 309, deadhead electric engine 319, 18 loaded and 15 empty cars and a caboose. At West 96th Street, New York City, a terminal air-brake test was made and this train departed at 12:15 a. m., according to the statement of the conductor. Extra 309 entered track 3 at Spuyten Duyvil and departed at 12:37 a. m., according to the dispatcher's record of movement of trains, passed signal 3033, which displayed yellow-over-red, passed the east yard-limit sign, passed the home signal, which displayed red-over-red-over-red, passed the tower at PF interlocking at 1:07 a. m., and while moving at an estimated speed of 35 to 40 miles per hour it struck the rear end of Extra 316 West.

The rear three cars of Extra 316 West were derailed and damaged. The rear truck of the fourth car from the rear was derailed.

Engines 309 and 319 were derailed and badly damaged. The first to seventh cars, inclusive, and the twenty-third to twenty-seventh cars, inclusive, were derailed and damaged.

It was clear at the time of the accident, which occurred at 1:08 a. m.

The employees killed were the engineer and the fireman of Extra 309. The employees injured were the conductor, the front brakeman, the middle brakeman and the flagman of Extra 309, and the engineer, the fireman, the conductor, the front brakeman and the flagman of Extra 316.

Data

In tests made after the accident the signals involved functioned as intended.

Discussion

The rules governing operation within yard limits in the territory involved provide that all trains except first-class trains must move prepared to stop unless the main track is seen or known to be clear. According to the interpretation placed upon the operating rules by operating officials of this railroad, when a train stops within yard limits under circumstances in which it may be overtaken by another train the flagman must go back immediately with flagman's signals a sufficient distance to insure full protection. An interlocking signal displaying stop must not be passed by a train unless proper authority from the signalman has been received. Enginemen must, and trainmen will when practicable, observe signals and communicate their indications to each other. All the surviving employees involved understood these requirements.

About 14 minutes after Extra 316 West had stopped at CR interlocking, its rear end was struck by Extra 309 West at a point 4,230 feet west of the home signal at PF interlocking and 4,241 feet west of the east yard-limit sign. The home signal displayed stop. Extra 316 was required to provide flag protection and Extra 309 was required to stop short of any obstruction within yard limits.

When Extra 316 stopped at the home signal at CR interlocking, the conductor and the flagman were in the caboose. Soon afterward the conductor went to the front end of his train and the flagman went back to provide flag protection. The flagman said he reached a point about 850 feet east of the rear car of his train, placed two torpedoes on the north rail and remained in that vicinity until he saw the reflection of the headlight of a train approaching from the east on track 3. He did not display a lighted fusee because the flagman at the rear of a train which previously had moved westward through siding 5-A and crossed over to track 3 had placed a lighted fusee on track 3 about 1,100 feet east of the rear end of Extra 316 to protect the crossover movement. The flagman of Extra 316 said this fusee was burning when Extra 309 was approaching, and he gave stop signals with a red lantern. These signals were not acknowledged by the engineer of Extra 309 and there was no indication that the brakes of that train were applied before the collision occurred. The speed of Extra 309 was 35 or 40 miles per hour when the engine passed the location of the flagman. From the time Extra 316 stopped until the collision occurred not less than 14 minutes was available in which to provide flag protection. Had the flagman proceeded eastward during the period his train was stopped, he would have been able to provide adequate flag protection.

The enginemen of a west-bound passenger train, which passed PF interlocking on track 1 about 1 minute before Extra 309, said they observed that signal 3033 for track 3 and the home signal for that track at PF interlocking displayed, respectively, yellow-over-red and red-over-red-over-red. As their engine passed the tower at PF interlocking they could see lighted red markers displayed on the rear car of Extra 316.

As Extra 309 was approaching the point where the accident occurred the speed was 35 to 40 miles per hour. The conductor said the air brakes had functioned properly at all points where used en route. The speed was not reduced after his train passed Spuyten Duyvil until the accident occurred. The engine was not equipped with a safety-control feature. Why this train was not operated in accordance with the provisions of the yard-limit rule and in accordance with the indication displayed by the home signal at PF interlocking could not be determined as the engineer and the firemen, who were the only employees on the engine, were killed in the accident. If the speed of Extra 309 had been controlled in accordance with the yard-limit rule, or if the indications displayed by the signals had been obeyed, this accident would not have occurred.

In the territory westward from Harmon, where steam locomotives are operated, the New York Central Railroad is equipped with an automatic train-stop system, but this system is not in service in electrified territory east of Harmon. Had an automatic train-stop or train-control device been in service on the line east of Harmon this accident would have been prevented.

Cause

It is found that this accident was caused by failure to provide adequate flag protection for the preceding train, and by failure to operate the following train in conformity with the yard-limit rule and signal indications.

Dated at Washington, D. C., this twenty-fifth day of January, 1945.

By the Commission, Commissioner Patterson.

(SEAL)

W. P. FARTEL,
Secretary.