

INTERSTATE COMMERCE COMMISSION

WASHINGTON

INVESTIGATION NO. 3084
BOSTON AND MAINE RAILROAD
REPORT IN RE ACCIDENT
AT SPRINGFIELD, MASS., ON
MARCH 15, 1947

SUMMARY

Railroad: Boston and Maine
Date: March 15, 1947
Location: Springfield, Mass.
Kind of accident: Rear-end collision
Equipment involved: Engine : Passenger train
Train number: : 723
Engine numbers: 4017 : 3626
Consist: : 3 cars
Estimated speeds: Standing : 15 m. p. h.
Operation: Timetable, train orders and
automatic block-signal system;
yard limits
Track: Double; 1°02' curve; level
Weather: Clear
Time: 6:45 p. m.
Casualties: 65 injured
Cause: Failure properly to control speed
of following train in accordance
with signal indication

INTERSTATE COMMERCE COMMISSION

INVESTIGATION NO. 3084

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

BOSTON AND MAINE RAILROAD

April 25, 1947

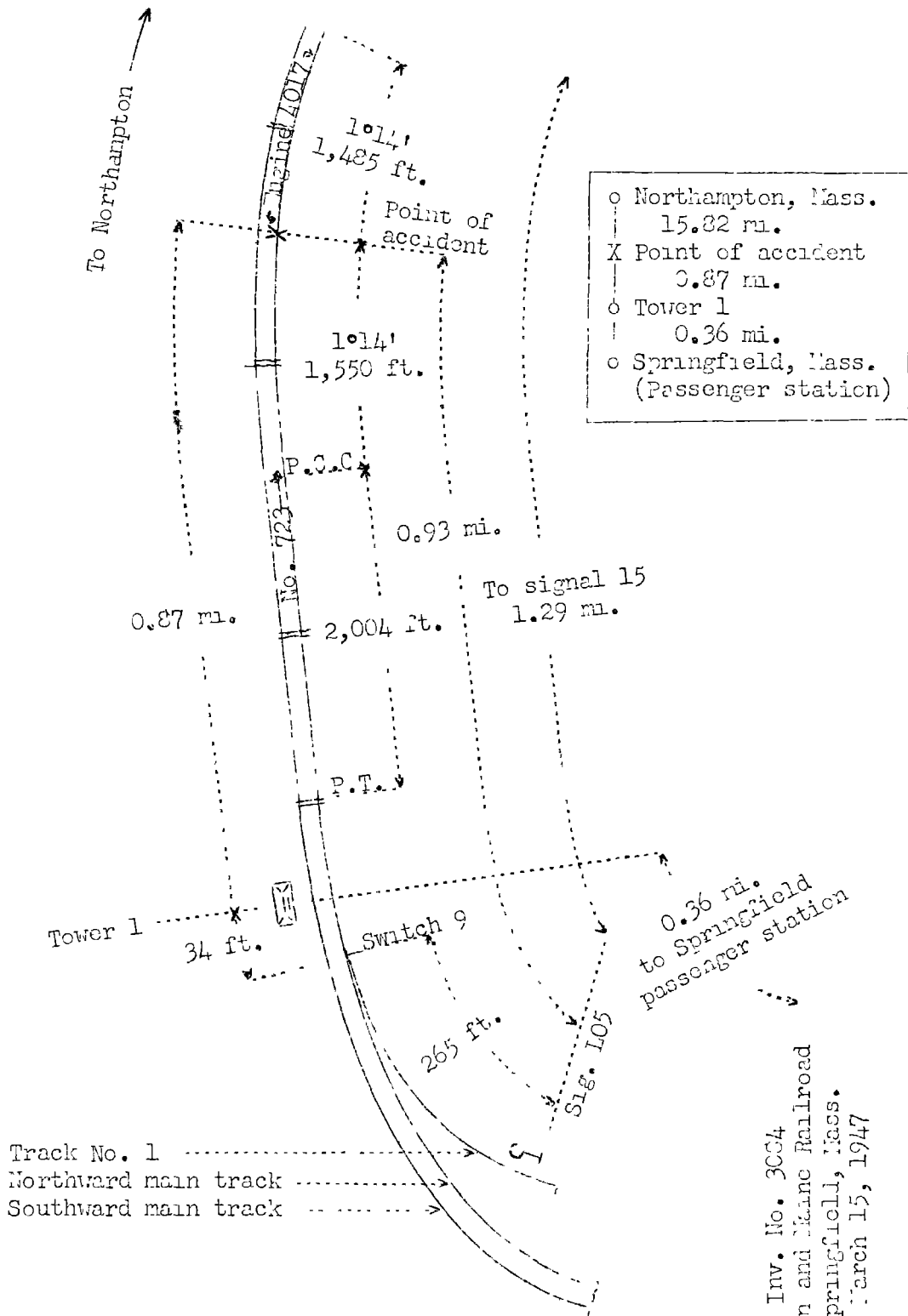
Accident at Springfield, Mass., on March 15, 1947, caused
by failure properly to control the speed of the
following train in accordance with signal indication.

REPORT OF THE COMMISSION¹

PATTERSON, Commissioner

On March 15, 1947, there was a rear-end collision between an engine and a passenger train on the Boston and Maine Railroad at Springfield, Mass., which resulted in the injury of 59 passengers and 6 train-service employees. This accident was investigated in conjunction with representatives of the Massachusetts Department of Public Utilities.

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.



Inv. No. 3084
 Boston and Maine Railroad
 Springfield, Mass.
 March 15, 1947

Location of Accident and Method of Operation

This accident occurred on that part of the Fitchburg Division extending between Springfield and Northhampton Mass., 17.05 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 interlocking limits at Springfield a connecting track, extending from the southeast and designated as track No. 1, connects the B. & M. northward main track and an auxiliary track of the New York, New Haven and Hartford Railroad. This track is used by B. & M. trains and engines en route northward from the passenger station or the engine house at Springfield to the B. & M. main tracks. The connecting switch of the northward main track and track No. 1 is designated as switch 9 and is 34 feet south of Lobby 1, hereinafter referred to as Tower 1. Tower 1 is 0.36 mile north of the passenger station. The accident occurred on the northward main track within yard limits at Springfield, at a point 0.87 mile north of Tower 1. From the south on the northward main track there is a tangent 2,004 feet in length, then a compound curve to the right, the maximum curvature of which is 1°14', 1,550 feet to the point of accident and 1,485 feet northward. At the point of accident the curvature is 1°02'. The grade is practically level.

Semi-automatic signal L05 governs north-bound movements from track No. 1, through switch 9 to the northward main track, thence on the northward main track to automatic signal 15, 1.29 miles northward. It is 265 feet south of switch 9 and 0.93 mile south of the point of accident, and is of the single-unit, 4-indication, color-light type. The involved aspects and corresponding indications and names are as follows:

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

Signal L05 is controlled from Tower 1. The normal indication displayed by this signal is stop. The controlling circuits are so arranged that when the lever in control of signal L05 is placed in position for this signal to display a permissive indication and the northward main track is occupied between switch 9 and signal 15, signal L05 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. The Maximum allowable speed for train or engine operating at Restricted speed is 15 miles per hour.

* * *

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 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 fuseses. * * *

* * *

Time-table special instructions read in part as follows:

* * *

At Junction points it will be the duty of operators, towermen * * * to stop and notify inferior trains, if all overdue superior trains moving in the same direction on two or more tracks have not left, and conductors and enginemen of inferior train not so stopped will not be expected to stop and inquire about superior trains * * *

* * *

Operator * * * at Lobby 1 will stop and notify light engines * * * coming from * * * N.H.R.R. connection of any overdue B. & M. R.R. first class trains. * * *

The maximum authorized speed for all trains moving under a proceed-at-restricted-speed indication is 15 miles per hour.

Description of Accident

Engine 4017, a north-bound engine en route from the engine house to a freight classification yard at Springfield and moving on track No. 1, passed signal L05, which displayed proceed, entered the northward main track at switch 9, passed Tower 1 at 6:40 p. m. and stopped about 6:43 p. m., within yard limits on the northward main track, at a point 0.93 mile north of signal L05. About 2 minutes later engine 4017 was struck by No. 723.

No. 723, a north-bound first-class passenger train, consisted of engine 3626, one passenger-baggage car and two coaches, in the order named. All cars were of steel under-frame construction. This train departed from the passenger station at Springfield at 6:35 p. m., on time, entered track No. 1 at the N.Y.N.H. & H. and B. & M. connection, passed signal L05, which displayed proceed-at-restricted-speed, entered the northward main track at switch 9, passed Tower 1, the last open office, at 6:43 p. m., and while moving at an estimated speed of 15 miles per hour it struck engine 4017.

The force of the impact moved engine 4017 northward a distance of about 60 feet. Engine 4017 and the engine of No. 723 were considerably damaged. A separation occurred between the engine and the first car of No. 723. None of the equipment was derailed.

The engineer, the fireman, the conductor and two brakemen of No. 723, and the fireman of engine 4017 were injured.

The weather was clear and it was dark at the time of the accident, which occurred about 6:45 p. m.

Discussion

No. 723, a north-bound first-class train, was due to leave the passenger station at Springfield at 6:35 p. m. About 6:38 p. m. the operator at Tower 1 lined the route for engine 4017, a north-bound engine en route from the engine house to the freight classification yard at Springfield, to proceed from track No. 1 to the northward main track at switch 9. Signal L05 displayed proceed for engine 4017. This engine passed Tower 1 at 6:40 p. m. and stopped about 6:43 p. m. within yard limits on the northward main track at a point 0.93 mile north of signal L05 and 0.87 mile north of Tower 1. No. 723 departed from the passenger station at 6:35 p. m., on time, proceeded from track No. 1 to the northward main track at

switch 9, under a proceed-at-restricted-speed indication displayed by signal L05, passed Tower 1 at 6:43 p. m. and was moving at a speed of about 15 miles per hour when it struck engine 4017. When the collision occurred a lighted red lantern and a lighted white light were displayed on the rear of the tender of engine 4017.

When the accident occurred the train that engine 4017 was to handle northward from the yard at Springfield was occupying a yard track located immediately east of the northward main track. Engine 4017 stopped on the northward main track in the vicinity of the rear of this train to supply the caboose with coal from the tender.

No. 723 was moving on a curve to the right at a speed of about 15 miles per hour when the engineer first observed the red light on the tender of the preceding engine about 50 feet distant. He immediately moved the brake valve to emergency position, but the collision occurred before the train could be stopped. The fireman was not aware of anything being wrong until the brakes were applied in emergency. The brakes of No. 723 had been tested and had functioned properly en route.

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.

Under the provision of time-table special instructions in effect in this territory, flag protection against following first-class trains was not required to be provided for engine 4017 while it was occupying the northward main track, unless the crew of this engine had received information from the operator at Tower 1 that all overdue north-bound first-class trains had not passed Tower 1 prior to the departure of engine 4017. In this case, the operator at Tower 1 did not inform the crew of engine 4017 that No. 723 had not passed Tower 1 when he lined the route for movement from track No. 1 to the northward main track through switch 9. The operator said that at the time he lined the route he thought No. 723 would be the first movement to use the route. When he observed that engine 4017 was approaching the tower he decided that he would permit this engine to proceed ahead of No. 723, but he did not so inform the crew of either movement, as he expected No. 723 to comply with the requirements of the proceed-at restricted-speed indication displayed by signal L05.

The engineer of No. 723 said he thought that the yellow aspect displayed by signal L05 required his train to be operated at a speed not exceeding 15 miles per hour and to be prepared to stop short of signal 15, located 1.29 miles north of signal L05. Because of the engineer's misunderstanding of the requirements of the proceed-at-restricted-speed indication displayed by signal L05, he was not expecting to find the northward main track occupied between signal L05 and signal 15.

Cause

It is found that this accident was caused by failure properly to control the speed of the following train in accordance with signal indication.

Dated at Washington, D. C., this twenty-fifth day of April, 1947.

By the Commission, Commissioner Patterson.

(SEAL)

W. P. BARTEL,
Secretary.