

INTERSTATE COMMERCE COMMISSION

WASHINGTON

INVESTIGATION NO. 2955

THE BALTIMORE AND OHIO CHICAGO TERMINAL
RAILROAD COMPANY

REPORT IN RE ACCIDENT

AT 36TH STREET, CHICAGO, ILL., ON

DECEMBER 12, 1945

SUMMARY

Railroad: Baltimore and Ohio Chicago Terminal
Date: December 12, 1945
Location: 36th Street, Chicago, Ill.
Kind of accident: Rear-end collision
Trains involved: Alton passenger : Pere Marquette
passenger
Train numbers: Passenger Extra : 58
5293 South
Engine numbers: 5293 : 716-713
Consist: 11 cars : 9 cars
Estimated speed: Standing : 10 m. p. h.
Operation: Signal indications
Track: Double; tangent; 1.0 percent
descending grade southward
Weather: Clear
Time: 5:28 p. m.
Casualties: 103 injured
Cause: Failure to operate following
train in accordance with
signal indications

INTERSTATE COMMERCE COMMISSION

INVESTIGATION NO. 2955

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

THE BALTIMORE AND OHIO CHICAGO TERMINAL
RAILROAD COMPANY

January 24, 1946.

Accident at 36th Street, Chicago, Ill., on December 12,
1945, caused by failure to operate the following
train in accordance with signal indications.

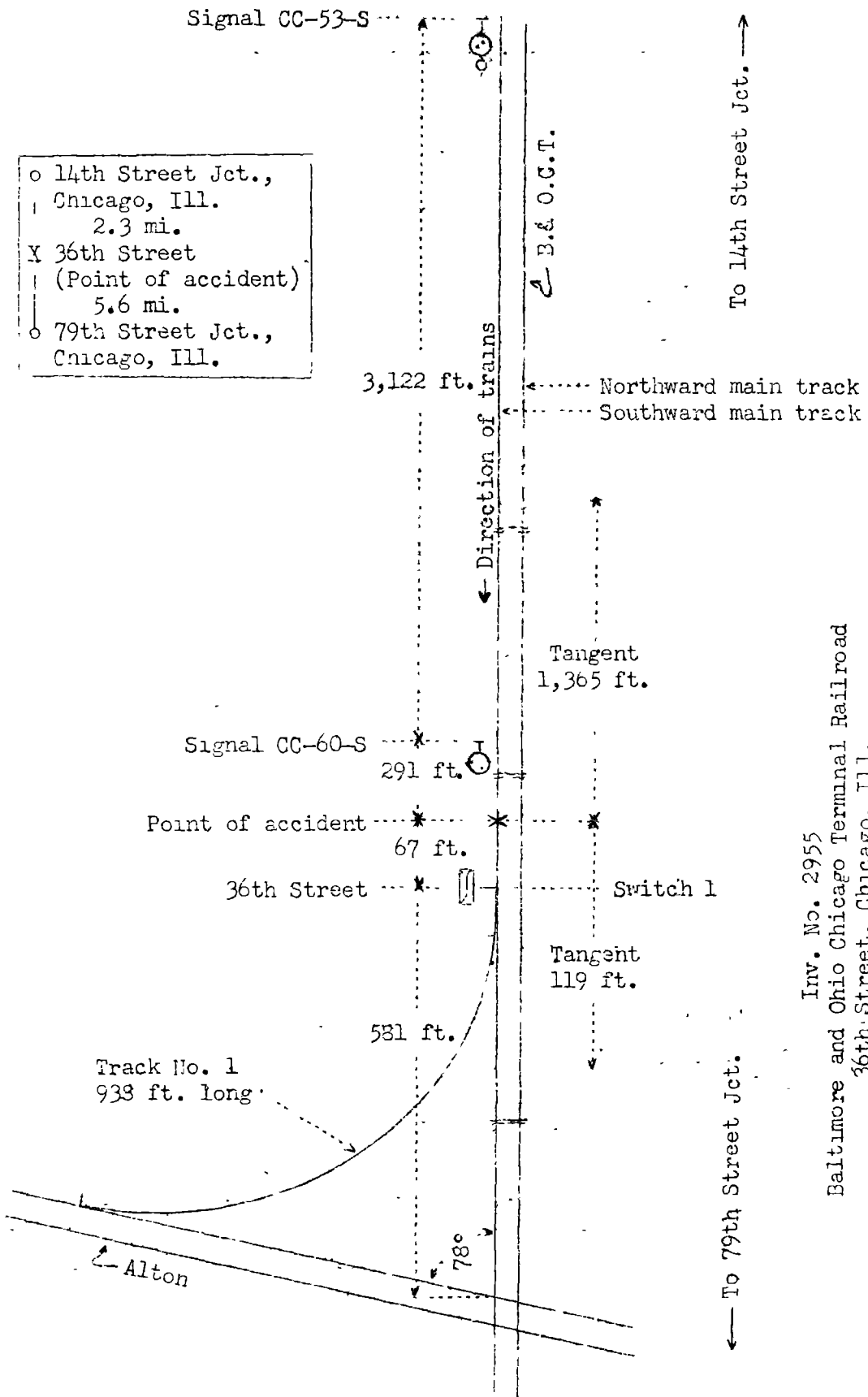
REPORT OF THE COMMISSION¹

PATTERSON, Commissioner:

On December 12, 1945, there was a rear-end collision between a passenger train of the Alton Railroad and a passenger train of the Pere Marquette Railway on the line of the Baltimore and Ohio Chicago Terminal Railroad at 36th Street, Chicago, Ill., which resulted in the injury of 94 passengers, 7 Pullman employees and 2 train-service employees. This accident was investigated in conjunction with a representative of the Illinois Commerce 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 14th Street Jct.,
Chicago, Ill.
2.3 mi.
X 36th Street
(Point of accident)
5.6 mi.
o 79th Street Jct.,
Chicago, Ill.



Inv. No. 2955
Baltimore and Ohio Chicago Terminal Railroad
36th Street, Chicago, Ill.
December 12, 1945

Location of Accident and Method of Operation

This accident occurred on that part of the Baltimore and Ohio Chicago Terminal Railroad extending between 14th Street Jct. and 79th Street Jct., Chicago, Ill., 7.9 miles, a double-track line in the vicinity of the point of accident, over which trains moving with the current of traffic are operated by signal indications. Trains of the Alton Railroad and the Pere Marquette Railway are operated over this line. At 36th Street, 2.3 miles south of 14th Street Jct., a double-track line of the Alton Railroad intersects the line of the Baltimore and Ohio Chicago Terminal Railroad at an angle of 78° at a point 581 feet south of the station. The north leg of a wye, 938 feet long and hereinafter referred to as track No. 1, connects the B. & O.C.T. southward main track and the Alton westward main track. The switch of track No. 1 on the B. & O.C.T., hereinafter referred to as switch 1, is opposite the station at 36th Street. Switch 1 is hand-operated and is in the charge of the operator at 36th Street. The accident occurred on the B. & O.C.T. southward main track at a point 67 feet north of switch 1. The southward main track is tangent throughout a distance of 1,365 feet north of the point of accident and 119 feet southward. The grade for south-bound trains is 0.06 percent ascending 1,325 feet, then it is 1.00 percent descending 42 feet to the point of accident and 687 feet southward.

Signals CC-53-S and CC-60-S, governing south-bound movements on the B. & O.C.T. southward main track, are, respectively, 3,413 feet and 291 feet north of the point of accident. Signal CC-53-S is of the color-position-light type, and is approach lighted. Signal CC-60-S is a dwarf signal of the color-position-light type, and is approach lighted. The involved aspects and corresponding indications and names of these signals are as follows:

<u>Signal</u>	<u>Aspect</u>	<u>Indication</u>	<u>Name</u>
CC-53-S	White light over two yellow lights in diagonal position to the right	Proceed, preparing to stop at next signal, and be governed by indication displayed by that signal. Train exceeding medium speed must at once reduce to that speed.	Approach.
CC-60-S	Two lunar white lights in diagonal position to the left	Proceed at restricted speed until entire train passes next signal.	Restricting.

The controlling circuits are so arranged that when switch 1 is in position for movement from the B. & O.C.T. southward main track to track No. 1 and regardless of track occupancy between

signal CC-60-S and switch 1, signal CC-53-S displays proceed-preparing-to-stop-at-next-signal and signal CC-60-S displays proceed-at-restricted-speed.

Operating rules read in part as follows:

11. A train finding a fusee burning on or near its track must stop and extinguish the fusee and then proceed at restricted speed.

34. All members of train and engine crews will, when practicable, communicate to each other the indication of each signal affecting the movement of their train or engine.

35. The following signals must be used by flagmen:

* * *

Night Signals--

A red light,
A white light,
Torpedoes and fusees.

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 fusees.

* * *

When a train is moving under circumstances in which it may be overtaken by another train, the flagman must take such action as may be necessary to insure full protection. By night, or by day when the view is obscured, lighted fusees must be thrown off at proper intervals.

* * *

SPEED RESTRICTIONS.

Normal Speed--The maximum speed permitted by timetables for main track movements.

Medium Speed--One-half the normal speed, not to exceed thirty (30) miles per hour.

* * *

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 authorized speed for passenger trains in the territory involved is 40 miles per hour.

Description of Accident

Passenger Extra 5293 South, a south-bound Alton passenger train, consisted of engine 5293, one express car, four troop sleeping cars, one kitchen car, one Pullman sleeping car and four troop sleeping cars, in the order named. All cars were of steel construction. This train passed 14th Street Jct. at 5:18 p. m., passed signal CC-53-S, which displayed proceed-preparing-to-stop-at-next-signal, passed signal CC-60-S, which displayed proceed-at-restricted-speed, entered track No. 1 at switch 1 and stopped at 5:27 p. m. with the engine and the first 10 cars on track No. 1 and the rear car on the B. & O.C.T. southward main track. About 1 minute later the rear end was struck by P.M. No. 58.

No. 58, a south-bound first-class P.M. passenger train, consisted of engines 716 and 713, one mail car, one baggage car, one parlor car, one parlor-dining car and four coaches, in the order named. All cars were of steel construction. This train passed 14th Street Jct. at 5:25 p. m., 2 minutes late, passed signal CC-53-S, which displayed proceed-preparing-to-stop-at-next-signal, passed signal CC-60-S, which displayed proceed-at-restricted-speed, and while moving at an estimated speed of 10 miles per hour it struck Passenger Extra 5293 South at a point 291 feet south of signal CC-60-S.

The force of the impact separated the engine of Passenger Extra 5293 South from the first car, and the train was driven forward about 60 feet. The first 10 cars and the front truck of the rear car were derailed. The first three cars, the sixth car and the ninth to eleventh cars, inclusive, remained upright and practically in line with the track. The third and fourth cars stopped practically upright and at 45-degree angles to the track. The seventh car stopped on its left side and parallel to the track. The second, fifth, seventh, eighth, tenth and eleventh cars were badly damaged, and the remainder of the cars and the tender of the engine were considerably damaged. The rear truck of the first car of No. 58 was derailed. The fifth and sixth cars were separated about 10 feet. The engines, the first two cars and the sixth car were slightly damaged.

The weather was clear and it was dark at the time of the accident, which occurred about 5:28 p. m.

The conductor of Passenger Extra 5293 and the conductor of No. 58 were injured.

Discussion

The rules governing operation in this territory provide that movements with the current of traffic may be made when authorized by proper signal indication. Rear-end protection against following trains is required. Passenger trains moving under authority of an approach indication must not exceed a speed of 20 miles per hour and must be prepared to stop short of the next signal. A proceed-at-restricted-speed indication requires that a train must be operated prepared to stop short of a preceding train or an obstruction.

About 1 minute after Passenger Extra 5293 South stopped, with the rear end standing on the southward main track, it was struck by No. 58, a south-bound passenger train, at a point 291 feet south of signal CC-60-S, which displayed proceed-at-restricted-speed.

The flagman of Passenger Extra 5293 said that he dropped a lighted 5-minute fusee from the rear door of the rear car about 350 feet north of the point where the accident occurred. At that time he did not see or hear a train approaching from the north. When Passenger Extra 5293 stopped, the rear car was standing about 45 feet south of the north end of a 71-foot through-girder bridge, which spans 36th Street. Because the rear car was not equipped with end platforms, the flagman alighted from a door on the right side about midway between the ends of the car, proceeded between the side of the car and the west girder of the bridge to the south end of the bridge, and then proceeded northward to the west of the west girder to provide flag protection. He had reached a point about 50 feet to the rear of his train and was giving stop signals with a lighted white lantern when the engines of No. 58 passed him. He understood that at night a lighted red lantern was one of the signals required to be used for flagging purposes but, because he had placed his red lantern on a hook which was attached to a cross bar at the rear door of the rear car, this signal was not available when he alighted. He last observed the marker lamps at the rear of his train about 30 minutes prior to the occurrence of the accident. At that time the marker lamps were lighted and displaying red to the rear. The operator at 36th Street said that the marker lamps of Passenger Extra 5293 were displaying red to the rear when the accident occurred. This employee and two signal maintainers, who were in the vicinity of the station, said that a fusee was burning on the southward main track about 350 feet north of the point of accident when No. 58 passed that point.

As No. 58 was approaching signal CC-53-S, located 3,122 feet north of signal CC-60-S, the speed was about 25 miles per hour. The headlight of the first engine was lighted brightly. The brakes of this train, which were in the charge of the

engineer of the first engine, had functioned properly en route. Signal CC-53-S displayed proceed-preparing-to-stop-at-next-signal, and the enginemen of both engines called the indication. This train stopped at a stop sign, located 483 feet south of signal CC-53-S and 200 feet north of the main tracks of two lines which intersect the line of the B. & O. C. T., then proceeded. Soon afterward signal CC-60-S became visible to the enginemen of No. 58. These employees thought this signal displayed proceed, and they so called the indication. No. 58 attained a speed of about 20 miles per hour immediately south of the stop sign and this speed was maintained until the engines were about 400 feet north of signal CC-60-S. At this point, the fireman of the first engine observed that this signal was displaying proceed-at-restricted-speed, and he called a warning to the engineer. Then the engineer of the first engine saw stop signals being given with a lighted white lantern about 600 feet distant, and he moved the brake valve to emergency position. The speed of No. 58 was about 10 miles per hour when the collision occurred. The enginemen said no marker light was visible at the rear of the preceding train and no lighted fusee was seen in this vicinity as their train was approaching the point where the accident occurred.

About 10 minutes before the collision occurred, the operator at 36th Street lined switch 1 for Passenger Extra 5293 to enter track No. 1. The approach-lighting circuit of signal CC-60-S extends northward a distance of 2,200 feet, and visual tests made after the accident disclosed that aspects displayed by this signal could be seen throughout this entire distance.

Prior to the accident, signal CC-60-S had been reported as not operating properly, as a proceed indication could not be obtained when the route was lined for movement of a south-bound train. This trouble was reported about 3:15 p. m., and the signal maintainer was called and was at the scene at the time of the accident. However, the cause of the trouble was not located until after the accident, then it was found that one of the control wires was open, which condition would prevent the display of a proceed indication for any movement. The controlling circuits are so arranged that when switch 1 is in position for movement from the B. & O. C. T. southward main track to track No. 1 the only aspect which can be displayed by signal CC-60-S is proceed-at-restricted-speed. This is the indication which was displayed for Passenger Extra 5293. The position of the switch had not been changed as the rear car of that train had not passed over the switch. The fireman of the first engine of No. 58 called the restricted-speed aspect just before his engine passed signal CC-60-S, and after the accident the signal was displaying the same aspect. In tests after the accident there was no condition found that would permit the display of a proceed indication or prevent the display of a

proceed-at-restricted-speed indication by signal CC-60-S for No. 58. This indication required No. 58 to be operated in such manner that it could be stopped short of a preceding train or an obstruction.

Cause

It is found that this accident was caused by failure to operate the following train in accordance with signal indications.

Dated at Washington, D. C., this twenty-fourth day of January, 1946.

By the Commission, Commissioner Patterson.

(SEAL)

W. P. BARTEL,
Secretary.