INTERSTATE COMMERCE COMMISSION

WASHINGTON

INVESTIGATION NO. 3133

CHICAGO, SAINT PAUL, MINNEAPOLIS AND OMAHA RAILWAY COMPANY

REPORT IN RE ACCIDENT

AT ADRIAN, MINN., ON

SEPTEMBER 30, 1947

SUMMARY

Railroad:	Chicago, St. Paul, Minneapolis and Omaha	
Date:	September 30, 1947	
Location:	Adrian, Minn.	
Kind of accident:	Rear-end collision	
Trains involved:	Freight	: Freight
Train numbers:	86	: 84
Engine numbers:	230	: 239
Consists:	27 cars, caboose	: 14 cars, caboose
Estimated speeds:	Standing	: 15 m. p. h.
Operation:	Timetable and train orders	
Track:	Single; tangent; 0.214 percent ascending grade eastward	
Weather:	Raining; dark	
Time:	7:35 p. m.	
Casualties:	3 injured	
Cause:	Failure to provide adequate protection for preceding train	
Recommendation:	That the Chicago, St. Paul, Minneapolis and Omaha Railway Company install an adequate block system on the line on which this accident occurred	

INTERSTATE COMMERCE COMMISSION

INVESTIGATION NO. 3133

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

CHICAGO, SAINT PAUL, MINNEAPOLIS AND OMAHA
RAILWAY COMPANY

October 31, 1947

Accident at Adrian, Minn., on September 30, 1947,
caused by failure to provide adequate protection
for the preceding train.

REPORT OF THE COMMISSION[1]

PATTERSON, Commissioner:

On September 30, 1947, there was a rear-end collision between two freight trains on the Chicago, St. Paul, Minneapolis and Omaha Railway at Adrian, Minn., which resulted in the injury of three employees.

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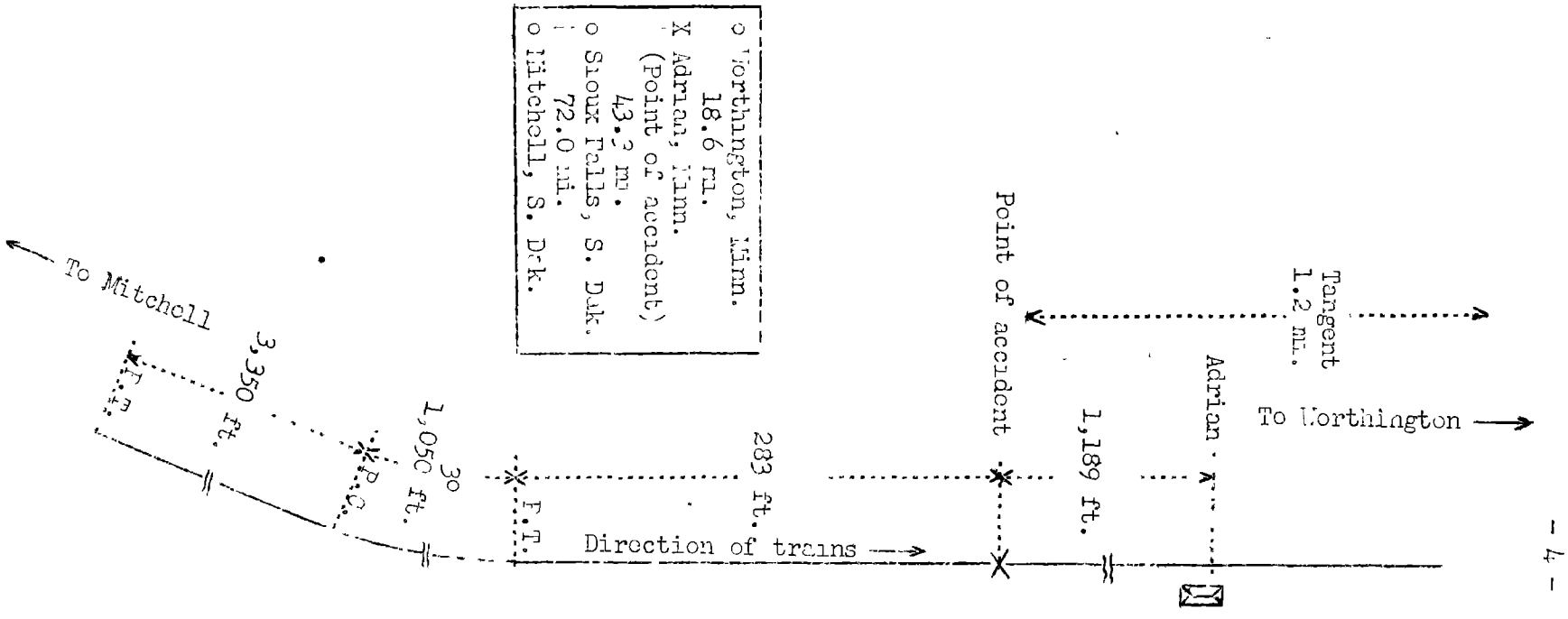
[1] Under authority of section 17 (2) of the Interstate Commerce Act the above-entitled proceeding was referred by the Commission to Commissioner Patterson for consideration and disposition.



Inv. No. 3133
Chicago, Saint Paul, Minneapolis and Omaha Railway
Adrian, Minn.
September 30, 1947

Location of Accident and Method of Operation

This accident occurred on that part of the Western Division extending between Mitchell, S. Dak., and Worthington, Minn., 133.9 miles, a single-track line, over which trains are operated by timetable and train orders. There is no block system in use. The accident occurred on the main track 115.08 miles east of Mitchell and 1,189 feet west of the station at Adrian. From the west there are, in succession, a tangent 3,350 feet in length, a 3° curve to the left 1,050 feet, and a tangent 283 feet to the point of accident and 1.2 miles eastward. The grade for east-bound trains varies between 0.018 and 0.73 percent ascending throughout a distance of 1.15 miles immediately west of the point of accident, where it is 0.214 percent ascending.

This carrier's 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.

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

14. The explosion of two torpedoes is a signal to proceed at restricted speed. * * *

* * *

19. The following signals will be displayed to the rear of every train, as markers, to indicate the rear of the train:

* * *

Lights * * * as markers, showing * * * red to the rear.

35. The following signals will be used by flagmen:

* * *

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

S-72. * * * trains of the second class are superior to those of the third; * * *

* * *

86. * * *

* * *

Third class trains may pass and run ahead of second class trains.

* * *

91. Unless some form of block signal is used, trains in the same direction must keep not less than ten minutes apart, except in closing up at stations.

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. * * *

* * *

99a. When a flagman goes back to protect a train at night, or in obscure weather, he will place a lighted fusee in the center of the track five hundred feet back of the rear of the train, and proceed back until sufficient distance is reached to insure full protection.

If a following train is in sight or hearing before the flagman has reached a point insuring full protection, he must at once place two torpedoes on the rail, and at night, or in obscure weather, or if the view is obscured, he will, in addition, display a lighted fusee and continue toward the approaching train, displaying stop signals until they are answered.

* * *

In this territory the maximum authorized speeds are 45 miles per hour for passenger trains and 40 miles per hour for freight trains.

Description of Accident

No. 86, an east-bound third-class freight train consisting of engine 230, 27 cars and a caboose, stopped on the main track at Adrian at 7:18 p. m., with the rear end standing 1,189 feet west of the station. About 17 minutes later the rear end of this train was struck by No. 84.

No. 84, an east-bound second-class freight train consisting of engine 239, 14 cars and a caboose, departed from Sioux Falls, the last open office, 43.3 miles west of Adrian, at 6:05 p. m., 35 minutes late, and while moving at an estimated speed of 15 miles per hour it collided with No. 86.

The twenty-sixth and twenty-seventh cars and the caboose of No. 86, and the engine and the first three cars of No. 84 were derailed and damaged. The engine of No. 84 stopped upright and in line with the track, with the front end 128 feet east of the point of collision.

The engineer, the fireman and the front brakeman of No. 84 were injured.

It was dark and raining at the time of the accident, which occurred at 7:35 p. m.

During the 30-day period preceding the day of the accident, the average daily movement in the vicinity of the point of accident was 7.3 trains.

Discussion

About 17 minutes after No. 86, an east-bound third-class freight train, stopped on the main track at Adrian the rear end was struck by No. 84, an east-bound second-class freight train. No. 84 was superior to No. 86 by class. Under the rules, No. 86 was authorized to occupy the main track on the time of No. 84, and No. 86 was required to provide protection against following trains.

When the collision occurred the conductor, the enginemen and the front brakeman of No. 86 were in the vicinity of the front end of their train, and these employees were

not aware of anything being wrong until the collision occurred. The flagman said that immediately after his train stopped he proceeded westward to provide protection against following trains, and placed two torpedoes on the south rail of the main track about 1,200 feet west of the rear of his train. Then he returned eastward and had reached a point about 800 feet west of the rear of his train when he saw the reflection of the headlight of the following train about 2,500 feet distant. He immediately lighted a red fusee and gave stop signals until the engine of No. 84 passed him. He said his signals were not acknowledged by the engineer of No. 84, and he estimated the speed of that train as about 40 miles per hour when the engine passed him. At that time there was no indication that the brakes of No. 84 were applied.

As No. 84 was approaching Adrian the speed was about 20 miles per hour, in compliance with a speed restriction of 25 miles per hour for freight trains moving on a 3° curve immediately west of Adrian. The headlight was lighted brightly, and the enginemen and the front brakeman were maintaining a lookout ahead. The conductor and the flagman were in the caboose. The brakes of this train had been tested and had functioned properly en route. Brake-pipe pressure of 70 pounds was being maintained. The first the employees on the engine knew of anything being wrong was when two torpedoes were exploded under the engine about 750 feet west of the point where the collision occurred. Immediately afterward, the fireman saw stop signals being given with a red fusee about 200 feet distant and the lighted red marker lamps of the preceding train. He immediately called a warning to the engineer, who moved the brake valve to emergency position, but the collision occurred before the train could be stopped. After the accident the residue of two exploded torpedoes was found at points 760 feet and 741 feet west of the point of accident, and the remains of a burned fusee were found at a point 539 feet west of the point of accident.

Because of an embankment and vegetation adjacent to the track on the inside of the curve immediately west of the point where the accident occurred, the view of the point of accident from either side of an east-bound engine is materially restricted.

In this territory trains are operated by timetable and train orders only. The only provision for spacing following trains is by the time-interval method enforced

by operators at open stations, and by flagmen's signals. The rules require that a following train must be spaced at least 10 minutes behind a preceding train. In this case the preceding train departed from Sioux Falls, 43.3 miles west of Adrian, 2 hours 35 minutes before the following train departed from that station, and at the time the following train departed from Sioux Falls all offices between Sioux Falls and Adrian were closed. Unless adequate flag protection was furnished by the crew of the preceding train, there was nothing to prevent the following train from moving at the maximum authorized speed in the vicinity of Adrian. This carrier's book of operating rules contains manual-block rules for the blocking of both opposing and following trains, but these rules were not in effect in the territory in question. If an adequate block system had been in use in this territory, the crew of the following train would have received definite information that the preceding train was occupying the main track in the same block.

Cause

It is found that this accident was caused by failure to provide adequate protection for the preceding train.

Recommendation

It is recommended that the Chicago, St. Paul, Minneapolis and Omaha Railway Company install an adequate block system on the line on which this accident occurred.

Dated at Washington, D. C., this thirty-first day of October, 1947.

By the Commission, Commissioner Patterson.

(SEAL)

W. P. BARTEL,

Secretary.