

INTERSTATE COMMERCE COMMISSION
WASHINGTON

INVESTIGATION NO. 2857
THE ERIE RAILROAD COMPANY
REPORT IN RE ACCIDENT
AT STERLING, OHIO, ON
JANUARY 2, 1945

SUMMARY

Railroad: Erie
Date: January 2, 1945
Location: Sterling, Ohio
Kind of accident: Derailment
Train involved: Passenger
Train number: 2
Engine number: 2944
Consist: 8 cars
Estimated speed: 30 m. p. h.
Operation: Interlocking
Track: Double; tangent; 0.2 percent
descending grade eastward
Weather: Clear
Time: 3:43 a. m.
Casualties: 1 killed; 1 injured
Cause: Making indication displayed by
home signal and position of
derail not in accordance with
position of movable-point
crossing

INTERSTATE COMMERCE COMMISSION

INVESTIGATION NO. 2857

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

THE ERIE RAILROAD COMPANY

March 7, 1945.

Accident at Sterling, Ohio, on January 2, 1945, caused by making the indication displayed by the home signal and the position of the derail not in accordance with the position of the movable-point crossing.

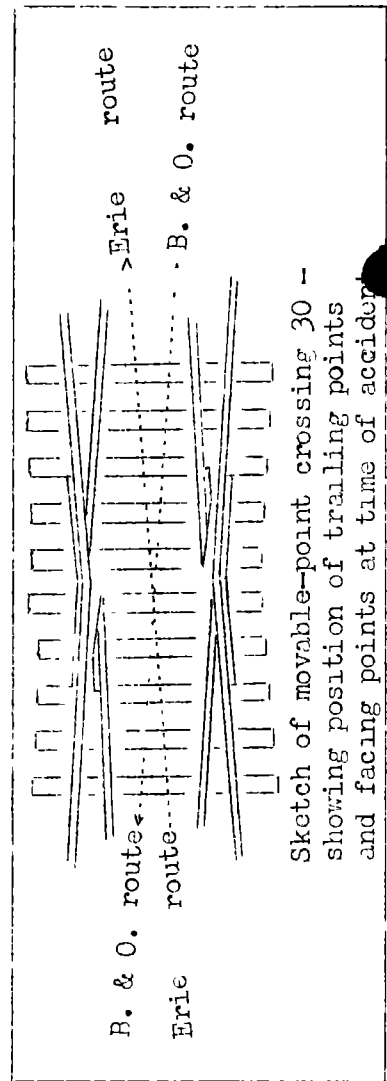
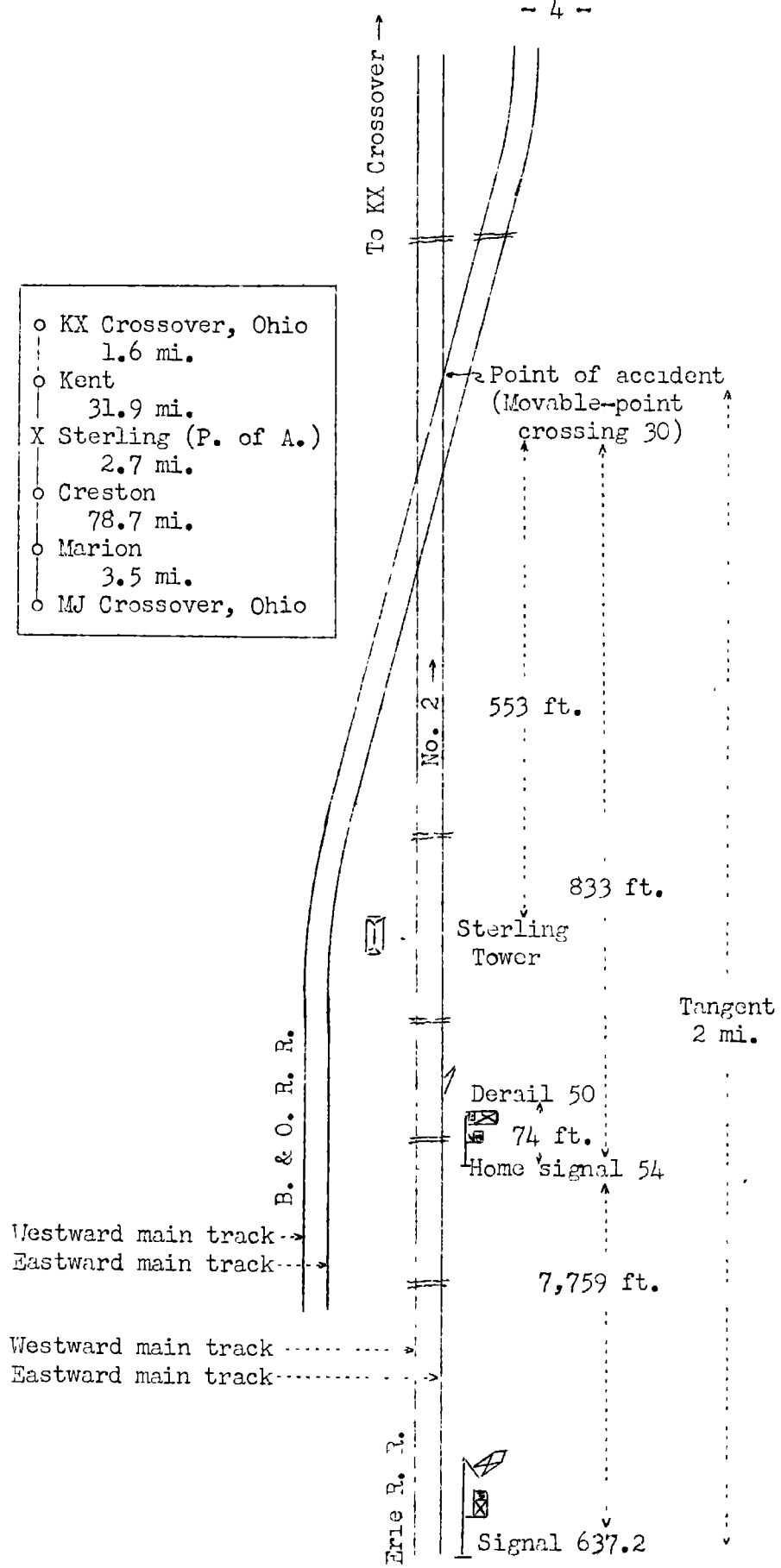
REPORT OF THE COMMISSION ¹

PATTERSON, Commissioner:

On January 2, 1945, there was a derailment of a passenger train on the Erie Railroad at Sterling, Ohio, which resulted in the death of one employee, and the injury of one employee. This accident was investigated in conjunction with representatives of the Public Utilities Commission of Ohio.

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 KX Crossover, Ohio
1.6 mi.
- o Kent
31.9 mi.
- X Sterling (P. of A.)
2.7 mi.
- o Creston
78.7 mi.
- o Marion
3.5 mi.
- o MJ Crossover, Ohio



Inv. No. 2857
Erie Railroad
Sterling, Ohio
January 2, 1945

Location of Accident and Method of Operation

This accident occurred on that part of the Kent Division designated as the First Sub-Division and extending eastward from MJ Crossover, near Marion, to KX Crossover, near Kent, Ohio, 118.4 miles. This was a double-track line over which trains moving with the current of traffic were operated by signal indications. Within interlocking limits at Sterling, 81.4 miles east of Marion, this line intersected a double-track line of the Baltimore and Ohio Railroad. The accident occurred on the Erie eastward main track 553 feet east of the tower, at a movable-point crossing designated as crossing 30, where the Erie eastward main track intersected the B. & O. westward main track at an angle of 7°09'10". The Erie main tracks were tangent throughout a distance of 2 miles west of crossing 30 and a considerable distance eastward. The grade was 0.2 percent descending eastward.

The track structure consisted of 112-pound rail, 39 feet in length, laid in 1938 on an average of 24 ties to the rail length. It was fully tieplated, single-spiked, provided with 6-hole angle bars and an average of 8 rail anchors per rail length, and was ballasted with crushed stone to a depth of 24 inches. The movable points of crossing 30 were 13 feet long and were reinforced on the knuckle-rail side by rails 2.9 feet long, and on the gage side by straps in the web.

Semi-automatic signal 637.2 and interlocking home signal 54, governing east-bound movements on the eastward main track, were, respectively, 8,592 feet and 833 feet west of the point of accident. These signals were of the upper-quadrant type. Signal 637.2 was oil lighted and signal 54 was electric lighted. The involved aspects and corresponding indications and names of these signals were as follows:

<u>Aspect</u>	<u>Indication</u>	<u>Name</u>
Yellow, 45 degrees.	Prepare to stop at next signal. Train exceeding medium speed must at once reduce to that speed.	Approach.

The interlocking machine was of the electric type, and consisted of 70 working levers in an 88-lever frame. Approach and electric-switch locking were provided. Time releases in connection with approach locking were provided. Derails were provided on each main track on each side of the intersection. Derail 50 was located on the south rail of the eastward main track 74 feet east of home signal 54, and was of the split switch-point type.

Operating rules read in part as follows:

DEFINITIONS

* * *

Medium Speed.--One-half maximum authorized speed at point involved, but not to exceed thirty miles per hour unless otherwise provided.

* * *

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

* * *

637. In case of failure of indication on switches, movable frogs or derail the following instructions must be complied with: When the maintainer is present, he must operate indication latches. When the maintainer is not present, the indication latch may be operated by hand only as hereinafter prescribed.

Switches.--In case of indication failure on switches, movable frogs or derail, signalmen must remove the fuse in the control circuit. They must then examine all switch or derail points operated by the lever and spike them in the proper position for the movement which it is desired to make. After this is done, indication may then be operated by hand and the remaining switches or derrails required for the route may be set up in proper order. Signal must not be cleared, but caution card issued for movement of trains or engines.

663. Trains or engines must not pass an interlocking Stop-signal without receiving a Clearance Form * * * and hand signals * * *. Enginemen and trainmen must not proceed on hand signals until they are fully informed of the situation; the movement must then be made at restricted speed.

The maximum authorized speed for the passenger train involved was 70 miles per hour.

Description of Accident

No. 2, an east-bound first-class passenger train, consisted of engine 2944, three express cars, one mail car, three coaches and one Pullman sleeping car, in the order named. All cars were of steel construction. This train passed Creston, 2.7 miles west of Sterling, at 3:40 a. m., 1 hour 41 minutes late, passed signals 637.2 and 54, which displayed approach, and while moving at an estimated speed of 30 miles per hour, the engine, the first to the fourth cars, inclusive, and the front truck of the fifth car were derailed at crossing 30.

The engine stopped on its right side about 260 feet east of the point of derailment, obstructed the B. & O. westward main track and fouled the Erie eastward main track. The first car stopped upright and across the Erie main tracks. The second, third and fourth cars stopped upright and practically in line with the B. & O. westward main track. The engine and the first three cars were damaged.

The weather was clear at the time of the accident, which occurred at 3:43 a. m.

The engineer was killed, and the fireman was injured.

Discussion

During a period of several hours immediately prior to the accident the temperature was about zero and snow was being driven by a strong wind in the vicinity of the interlocking at Sterling, and snow burners were in operation at the switches, derails and frogs. When the accident occurred, because of weather conditions signal maintainers and section forces of the B. & O. and the Erie were on duty to keep the plant operative. About 3:40 a. m. the operator made unsuccessful attempts to line the route for No. 2. He said that the lever controlling the derails and crossing 30 functioned properly, but when he placed the lever controlling signal 54 in position to display proceed this signal continued to display stop. Then the operator informed the signal foreman, who was in the tower, of this condition. The signal foreman immediately proceeded to signal 54, and he said that while he was examining the relay controlling this signal the indication changed from "stop to approach, and the signal was displaying approach when No. 2 passed it.

As No. 2 was approaching Sterling the headlight was lighted brightly, and the enginemen were maintaining a lookout ahead. The air brakes had functioned properly en route, and the engine had been riding smoothly. When the engine passed signal 637.2 the speed was about 30 miles per hour and this speed was maintained until the engine reached a point a short distance west of crossing 30. Then the engineer appeared to be concerned about some condition in front of the engine, and moved the brake valve to service position. Soon afterward the fireman observed an unusual movement of the engine, and the derailment occurred almost immediately.

The investigation disclosed that when the accident occurred crossing 30 was lined for movement on the B. & O. westward main track, but derail 50 on the Erie eastward main track was in non-derailing position and home signal 54 displayed approach for No. 2. Examination disclosed that the south trailing point of crossing 30 had been forced open, the lock rod and the operating rod were broken, and the north facing point was broken. The controlling circuits were so arranged that, when the route was

lined for movement on the B. & O. tracks, the derails on the Erie tracks would be in derailing position and the home signals governing movements on the Erie tracks would display stop. Since crossing 30 was lined for movement on the B. & O., derail 50 on the Erie eastward main track should have been in derailing position and home signal 54 should have displayed stop.

Under the circumstances present the only manner developed during the investigation in which derail 50 could be in non-derailing position when No. 2 passed it was for some person in the tower and having knowledge of the operation of the plant to release the locks so that the lever controlling derail 50 could be placed in position for this derail to be moved to non-derailing position, and for another person who had knowledge of the operation of the mechanism and relays, located in the housing at home signal 54, to manipulate the mechanism or relays in such manner as to cause this signal to display approach. The investigation disclosed that persons having the necessary knowledge were in the tower and at home signal 54 when No. 2 was approaching the interlocking.

Under the rules a train could not be authorized to pass a home signal displaying stop until proper examination of all derails and movable-point crossings involved was made. However, if conditions required, the route could be established by fastening the points of the derails and crossings in position for the intended movement and proper authority issued to the crew of No. 2 for their train to pass the home signal displaying stop. A train receiving such authority was required to be operated through the interlocking under such control as would prevent an accident. If the prescribed rules had been complied with, examination of crossing 30 would have disclosed that the route was not lined for the intended movement, and this accident would not have occurred.

Cause

It is found that this accident was caused by making the indication displayed by the home signal and the position of the derail not in accordance with the position of the movable-point crossing.

Dated at Washington, D. C., this seventh day of March, 1945.

By the Commission, Commissioner Patterson.

(SEAL)

W. P. BARTEL,
Secretary.