Inv-2435

INTERSTATE COMMERCE COMMISSION

WASHINGTON

REPORT OF THE DIRECTOR

BUREAU OF SAFETY

ACCIDENT ON THE

LINE OF THE

TERMINAL RAILROAD ASSOCIATION OF ST.LOUIS

EAST ST. LOUIS, ILL.

JULY 12, 1940

INVESTIGATION NO. 2435

SUMMARY

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Railroad:	Terminal Railroad Association of St. Louis	
Date:	July 12, 1940	
Location	East St. Louis, Ill.	
Kind of accident:	Rear-end collision	
Trains involved:	Freight	: Passenger
Train numbers:	Terminal Extra 130	: M. & O. No. 3
Engine numbers:	130	: Gas-electric motor-car 1820
Consist:	31 cars	: 1 car
Speed:	Standing	: 5-10 m. p. h.
Operation:	Timetable and train orders	
Track:	Double; 5°45' left curve; 1.5 percent descending grade eastward	
Weather:	Clear	
Time:	9:03 a. m.	
Casualties:	1 killed	
Cause:	Failure to provide proper flag protection for preceding train, and failure to control speed of following train properly	

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August 24, 1940.

To the Commission:

On July 12, 1940, there was a rear-end collision between a Terminal Railroad Association of St. Louis freight train and a Mobile & Ohio Railroad passenger train on the line of the Terminal Railroad Association of St. Louis at East St. Louis, Ill., which resulted in the death of one employee. This accident was investigated in conjunction with representatives of the Illinois Commerce Commission.

Location and Method of Operation

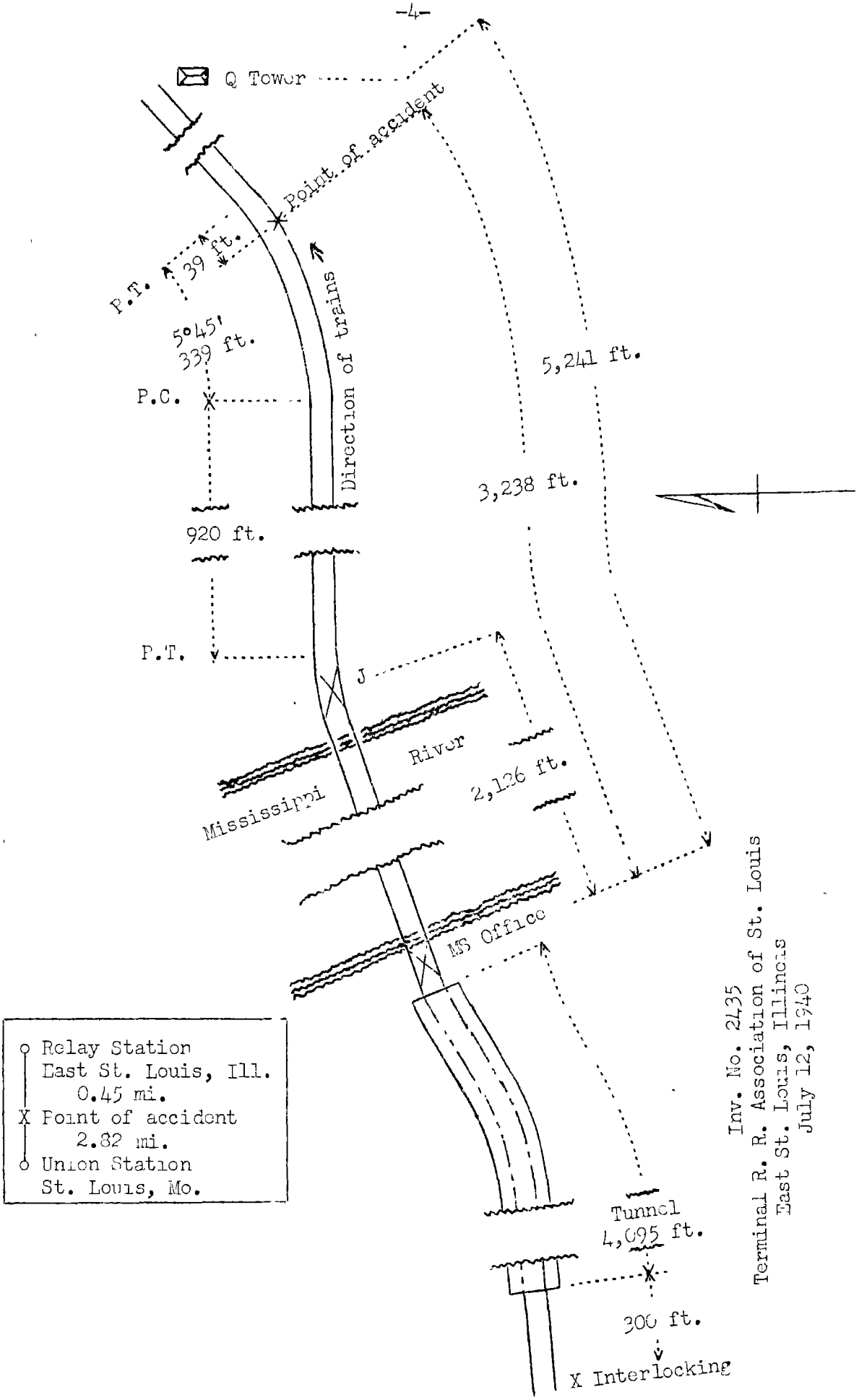
Trains arrive at St. Louis, Mo., and depart over the tracks of the Terminal Railroad Association of St. Louis, hereinafter referred to as the "Terminal." This accident occurred on the Eads Division, which extends between Union Station, St. Louis, Mo., and Relay Station, East St. Louis, Ill., a distance of 3.27 miles. In the immediate vicinity of the point of accident this is a double-track line over which trains are operated by timetable and train orders; there is no block system in use. The current of traffic is to the left. The tracks of the Terminal are virtually one continuous yard. Train movements are frequent and at irregular intervals. Trains are required to be operated under control and in accordance with operating rules and time-table rules and instructions.

The accident occurred on the westward track at a point about 3,238 feet east of MS interlocking. As the point of accident is approached from the west there is a tangent 920 feet long, followed by a 5°45' curve to the left, 339 feet in length; the accident occurred on this curve at a point 39 feet from its eastern end. The grade for east-bound trains is 0.65 percent descending a distance of 971 feet and then 1.5 percent descending a distance of 249 feet to the point of accident.

MS interlocking is located at the west end of Eads Bridge, which spans the Mississippi River, and near the east portal of a tunnel, which is 4,095 feet long. X interlocking is located about 300 feet west of the west portal of this tunnel. Q Tower is located 5,241 feet east of MS interlocking. Interlocking signals do not indicate track occupancy.

Operating rules read in whole or in part as follows:

> 19. * * *
>
> A red flag by day and a red light by night shall be conspicuously displayed on



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the rear of every freight train on main track not displaying standard markers, the red light on right side of rear end of rear car.

36. * * *

Fusees must not be put on bridge or elevated structures.

51. In addition to markers on passenger trains by day and by night, a red light shall be conspicuously displayed at the rear of every train between Poplar Street, St. Louis, and "Q" tower, East St. Louis. On freight trains the red light shall be on right side, rear end of rear car.

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.

* * *

109. A proceed signal, or a train order, does not insure an unobstructed track ahead, except through the tunnel. The tracks of these companies are virtually one continuous yard. Train movements are frequent but often irregular. Movements must be made with trains under control.

261. On portions of the road so specified on the timetable, trains will run against the current of traffic by interlocking or block signals, whose indications will supersede timetable superiority and will take the place of train orders.

262. The movement of trains will be supervised by the train dispatcher, who will issue instructions.

Train under Control is defined as: Ability to stop within the distance the track is known to be clear.

Time-table general rules read in whole or in part as follows:

302. WARNING! All employees, for their own safety, are warned to familiarize themselves

> with * * * dangerous obstacles that do not clear a man upon the top of covered cars, or while upon the side of a car, * * * Particular attention is directed to the following principal overhead structures: EADS DIVISION — Eads Bridge, St. Louis Tunnel, * * *
>
> 308. In fog or storm and when view is otherwise obstructed, enginemen and trainmen must be especially alert and move trains under such control as to insure stopping within a distance track is known to be clear. In case of accident, responsibility will rest with the moving train. * * *.

The weather was clear at the time of the accident, which occurred at 9:03 a. m.

Description

An east-bound Terminal freight train, with Conductor Pique and Engineman Flanders in charge, consisted of engine 130 and 31 cars. This train departed from X interlocking at 8:53 a. m., according to the train sheet, moving on the westward track, passed MS interlocking at 8:58 a. m., and continued on the westward track to Q Tower where it was stopped at 9 a. m. because of conflicting movements through the interlocking at that point.

No. 3, an east-bound Mobile & Ohio Railroad passenger train, with Conductor Chrisman and Engineman Wilson in charge, consisted of gas-electric motor-car 1820 and one coach. This train departed from St. Louis at 8:50 a. m., on time, according to statements of the crew, was diverted to the westward track and passed X interlocking at 8:58 a. m., according to the train sheet, 3 minutes late, passed MS interlocking at 9:02 a. m., 3 minutes late, and, while moving at a speed estimated to have been between 5 and 10 miles per hour, collided with Extra 130.

None of the equipment of either train was derailed. Motor-car 1820 and the coach of No. 3 were slightly damaged.

The employee killed was the flagman of Extra 130.

Summary of Evidence

Engineman Flanders, of Terminal Extra 130, stated that his train was operated east-bound over the westward track between X interlocking and Q Tower. His train stopped at Q Tower at 9 a. m. About 3 minutes later he felt a slight jar and his engine was moved forward a distance of about 2 feet. He looked back and

saw the M. & O. train standing at the rear of his train. He said that in the vicinity of the point of accident, because of bridge girders and track curvature, it is difficult to determine which track another train is using. He said that it is not customary to signal a flagman to protect the rear of a train. It is customary for a Terminal flagman to station himself on the rear coupler of the rear car while his train is crossing Eads Bridge and to flag following trains from that location. All trains are required to be operated under control.

Fireman Schamburg, of Terminal Extra 130, corroborated the statement of his engineman. After the accident occurred the fireman proceeded to the rear of the train and found the flagman lying nearby. A lantern was near the flagman; both the lantern frame and the lantern globe were broken.

Conductor Pique, of Terminal Extra 130, stated that his train stopped at Q Tower at 9 a. m. and the accident occurred about 3 minutes later. At the time of the accident he was stationed on the rear of the tender. The train was shoved forward about 1-1/2 feet by the impact. From the position of the flagman and his lantern after the accident the conductor formed the opinion that the flagman had a red lantern in his hand when the accident occurred. A red lantern is the only flagging equipment required on the Eads Division. The rear car was a Pennsylvania Railroad box car on which the hand brake was located at the west end. He said that while running through the tunnel and across the bridge involved the safest place for a flagman to station himself is on the rear coupler. The range of vision in the vicinity of the point of accident is about 30 car lengths. Flagmen are required to proceed back a sufficient distance to insure protection; however, when the weather is clear it is customary for a flagman to flag a following train from the rear coupler of his own train. The boardwalk between the two tracks on the bridge is 6 or 8 feet in width.

Brakeman Lewis, of Terminal Extra 130, corroborated the statement of his conductor.

Engineman Wilson, of M. & O. No. 3, stated that an air-brake test of his train was made at Union Station, St. Louis; the brakes functioned properly at all points where used en route. His train was diverted to the westward track at X interlocking. When his train approached the point of accident the weather was clear and visibility was unrestricted; however, his view ahead was restricted by track curvature and bridge girders. He first observed the rear end of Extra 130 at a distance of about 90 feet but thought it was on the eastward track until his own train was within about 20 feet of it; at that point he observed the flagman standing on the rear coupler. The flagman made no effort to give stop signals but was attempting to climb to the side

ladder. He said that it is usual to overtake trains on the bridge and that it is customary for flagmen of these trains to remain on the rear end sill or coupler and to give stop signals by hand. When he first observed the preceding train the speed of his own train was about 15 miles per hour; it was reduced to about 5 miles per hour at the time of the collision. He did not think a man stationed at the left side of the motor-car could have observed the preceding train before he himself observed it. He understood that the rules required him to operate his train under control but he did not realize that the preceding train was on the same track as his train until it was too late to take action to avert the collision. He was last examined on the operating rules in May, 1939.

Conductor Chrisman, of M. & O. No. 3, stated that when his train approached the point of accident he was stationed on the rear platform. The speed of his train was about 15 miles per hour. Looking ahead along the left side of the train he observed a cut of cars standing at a point about four car lengths distant. The flagman stood on the rear coupler and waved one stop signal with either a piece of paper or a piece of white cloth. The engineer applied the air brakes in emergency and the speed was reduced to 8 or 10 miles per hour at the time of the collision. He stated that while trains are moving on the tracks of the Terminal crews place more dependence upon the rule requiring trains to move under control than upon the flagging rule.

Baggageman-Flagman Smith, of M. & O. No. 3, stated that he was in the baggage compartment when the brakes were applied in emergency. The train moved about 100 feet and then, while moving at a speed of about 5 miles per hour, struck the preceding train.

Chief Power Director and Dispatcher Latta stated that he was on duty at X interlocking at the time of the accident. Terminal Extra 130 and M. & O. No. 3 were routed over the westward track from X interlocking to Q Tower because of congested movement on the eastward track. Train orders were sent to the operators at MS interlocking and Q Tower specifying that these trains would operate east-bound on the westward track; the rules do not require that copies of train orders be delivered to train crews. It is necessary for a flagman to ride on the rear coupler in the territory involved because of close clearance in the tunnel. Cabooses are not used on Terminal trains operating over Eads Bridge. He said that the rules required following trains to move under control expecting to find a train ahead.

A statement of traffic density over Eads Bridge covering the 30-day period prior to the day of the accident disclosed a movement of 1,020 passenger trains, 1,099 freight trains, and 1,638 light engines, or a total daily average of 125.2 movements.

Observations of the Commission's Inspectors

Visual tests made by the Commission's inspectors disclosed that a box car standing at the point of accident could be first seen from a point 1,263 feet distant; from a point 330 feet distant it was possible to determine on which track the car was standing.

Discussion

According to the evidence, there was a congested movement on the eastward track and Terminal Extra 130 and M. & O. No. 3 were operated over the westward track between X interlocking and Q Tower. Terminal Extra 130 stopped at Q Tower about 9 a. m., and about 6 minutes later was struck by M. & O. No. 3.

Under the rules the flagman of the preceding train was required to go back immediately with flagman's signals a sufficient distance to insure full protection. The evidence indicates that the flagman remained on the rear coupler until the following train practically reached the rear end of his train. Had the flagman gone back the distance which he could have covered in the time available, it is probable his signals would have been seen by the engineman of the following train in time to take action to stop his train short of the train ahead. Why the flagman did not go back could not be determined as he was killed in the accident.

Under the rules the following train was required to proceed under control and to be prepared to stop within the distance the track was known to be clear. The engineman and the conductor said that the speed of their train was about 15 miles per hour when it was approaching the point where the accident occurred. Both said that the preceding train could be seen a short distance only. The engineman said that he did not see the flagman of the preceding train give stop signals; the conductor said that he saw the flagman give one signal with some white object in his hand. Both the conductor and the engineman said that the flagman was stationed on the rear coupler of his train when they first saw him. Had the following train been operated in compliance with the rules no doubt this accident would have been averted.

Cabooses are not provided for Terminal trains operated over Eads Division and, when the rear car is a house-car, it is necessary for a flagman to station himself on the rear coupler because of close overhead clearance. It is customary for a flagman of a Terminal train to flag a following train while he is stationed on the rear car of his train. Flagmen are not provided with flagging equipment other than a red lantern used to

provide a marker for the train, and they are not permitted to throw off burning fusees on the bridge structure. These conditions present a dangerous situation for a flagman.

This Bureau investigated another rear-end collision which occurred on December 25, 1939, on this railroad at a point near the scene of the accident here under investigation. In the report of this Bureau covering the former accident, it was pointed out that there was nothing to prevent trains from closing up to each other at any point between MS interlocking and Q Tower, and the following recommendation was made:

> "In view of the density of traffic on this division it is recommended that operating officials immediately give consideration to the necessity for additional protection."

The average daily movement during the 30-day period preceding December 25, 1939, was 165.8. Between the dates of these two accidents some of the traffic was diverted to another route; however, during the 30-day period prior to July 12, 1940, the average daily movement was 125.2, and it does not appear that any material change in operating practice was made. Considering the density of traffic in this territory and the circumstances and conditions involved in this accident, it is apparent that the protection provided on this line is not adequate.

Conclusion

This accident was caused by failure to provide adequate flag protection for the preceding train and by failure to control properly the speed of the following train.

Recommendation

It is recommended that operating officials promptly take necessary measures to provide additional protection on this line.

Respectfully submitted,

S. N. MILLS,

Director.