INTERSTATE COMMERCE COMMISSION

WASHINGTON

REPORT NO. 3447

LOUISVILLE AND NASHVILLE RAILROAD COMPANY

IN RE ACCIDENT

NEAR JACKSON, KY., ON

DECEMBER 4, 1951

SUMMARY

Date:	December 4, 1951	
Railroad:	Louisville and Nashville	
Location:	Jackson, Ky.	
Kind of accident:	Head-end collision	
Equipment involved:	Track motor-car 1393	: Locomotive
Train number:		: Extra 2500 South
Engine number:		: Diesel-electric units 2500, 2552, 2550, and 2501
Estimated speeds:	8 m. p. h.	: 20 m. p. h.
Operation:	Signal indications	
Track:	Single; 7° curve; 0.67 percent descending grade northward	
Weather:	Clear	
Time:	3:06 p. m.	
Casualties:	2 killed; 3 injured	
Cause:	Failure to provide adequate protection for movement of track motor-car	
Recommendation:	That the Louisville and Nashville Railroad Company provide adequate protection for movement of track motor-cars on its line	

INTERSTATE COMMERCE COMMISSION

REPORT NO. 3447

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

LOUISVILLE AND NASHVILLE RAILROAD COMPANY

March 6, 1952

Accident near Jackson, Ky., on December 4, 1951, caused by failure to provide adequate protection for the movement of a track motor-car.

REPORT OF THE COMMISSION[1]

PATTERSON, Commissioner:

On December 4, 1951, there was a head-end collision between a track motor-car and a locomotive on the Louisville and Nashville Railroad near Jackson, Ky., which resulted in the death of two maintenance-of-way employees, and the injury of three maintenance-of-way employees.

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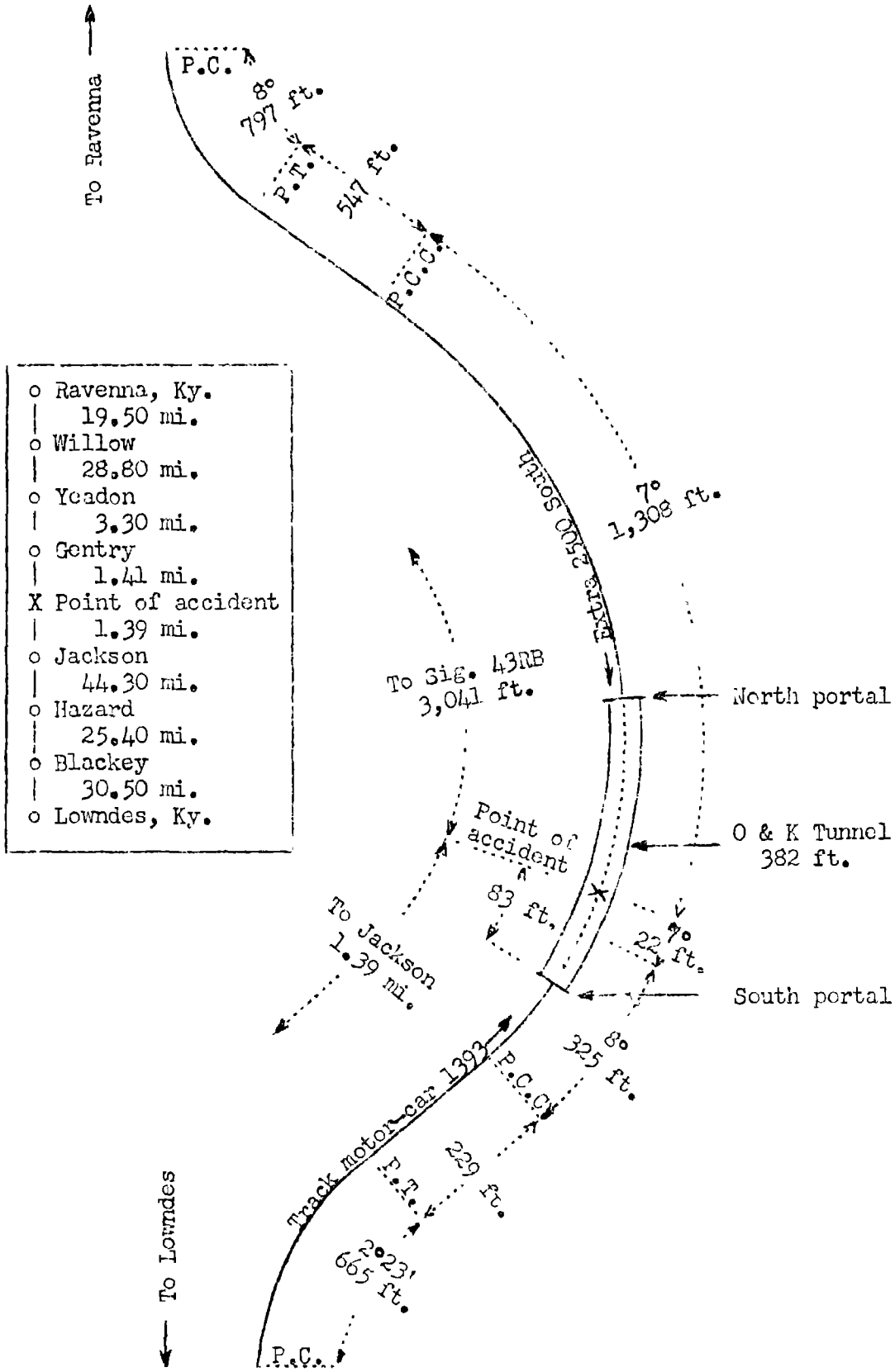
[1] Under authority of section 17 (2) of the Interstate Commerce Act the above-entitled proceeding was referred by the Commission to Commissioner Patterson for consideration and disposition.



Report No. 3447
Louisville and Nashville Railroad
Jackson, Ky.
December 4, 1951

Location of Accident and Method of Operation

This accident occurred on that part of the Eastern Kentucky Division extending between Lowndes and Ravenna, Ky., 154.6 miles. In the vicinity of the point of accident this is a single-track line, over which trains are operated by signal indications. Jackson and Gentry are located, respectively, 100.2 miles and 103 miles north of Lowndes. At each of these stations a siding parallels the main track on the east. The accident occurred on the main track 101.6 miles north of Lowndes and 1,39 miles north of the station at Jackson. From the south there are, in succession, a 2°23' curve to the right 665 feet in length, a tangent 229 feet, an 8° curve to the left 325 feet, and a 7° curve to the left 22 feet to the point of accident and 1,308 feet northward. From the north there are, in succession, an 8° curve to the left 797 feet in length, a tangent 847 feet, and the curve on which the accident occurred. The grade is 0.67 percent descending northward at the point of accident.

O & K Tunnel is located 1.39 miles north of the station at Jackson. The accident occurred on the main track at a point 83 feet north of the south portal of this tunnel. The tunnel is 382 feet in length, 17 feet 6 inches in width at subgrade, 13 feet 3 inches in height from the tops of the rails to the springing line of the arch, and 22 feet in height from the tops of the rails to the top of the tunnel.

Semi-automatic signal 43RB, governing south-bound movements from the siding to the main track at Gentry, is located 3,041 feet north of the point of accident. This is a dwarf signal of the searchlight type. It displays three aspects. Aspects applicable to this investigation and the corresponding indications and names are as follows:

Aspect	Indication	Name
Red	STOP.	STOP.
Yellow	PROCEED AT RESTRICTED SPEED.	RESTRICTING.

Signal 43RB forms a part of a traffic-control system which extends between Blackey, 30.5 miles north of Lowndes, and Ravenna. The south siding-switch at Gentry is power operated. The control machine is located in the dispatcher's office at Ravenna.

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, but not exceeding 15 miles per hour.

14. Engine Whistle Signals.

Note.--The signals prescribed are illustrated by "o" for short sounds; "__" for longer sounds. * * *

Sound	Indication
* * *	
(m) ____	Approaching * * * tunnels * * *
* * *	

30. The engine bell must be rung * * * while running through * * * tunnels * * *

743. Dispatchers will make memoranda of information given operators of motor cars, and require a repetition of the information given.

Rules of the Maintenance of Way Department read in part as follows:

126. Keeping Clear of Trains.* * * Foremen must use the utmost care in running their cars over the road. Curves, tunnels, and other dangerous places should be flagged and a constant lookout should be kept.

* * *

306. Insulated Track Cars * * * All track cars * * * used within track circuit limits shall be insulated.

Safety Rules of the Maintenance of Way Department read in part as follows:

27. * * * The person in charge of the operation of the car must, when practicable, procure information as to movements of trains. Dispatcher or operator will make memorandum of information given foreman or others in charge of car and have such person repeat the information given. Before trip is started, employe in charge of car shall read lineup on which movement is being made to other men on car and when information concerning train movements is not available motor car movement must be made under flag protection, using torpedoes and fusees either until a location is reached where information on trains can be secured, or until car reaches its destination. In addition to complying with these rules all other possible precautions must be taken to prevent collisions. * * *

37. Operate all cars at all times prepared to stop in less than one-half (1/2) range of vision. Use proper protection in operating around curves. * * *

45. In operating car through tunnel use protection required by special instructions of the officers in charge of the division.

Bulletin special instructions read in part as follows:

* * *

In the future whenever a man charged with responsibility of the handling of a motor car, desires information about trains, and when requesting same, he must always state his name, in what direction he desires to move, and to what point, and must impress upon the operator who is going to secure the information for him, that this information is desired for the movement of a motor car, and see that the operator understands that the information is desired for the movement of a motor car.

Operators must always secure information from the train dispatcher for the movement of motor cars and must make written record of it to deliver to person requesting same, and in cases where any party handling a motor car telephones an operator for a line-up (instead of talking directly to him in the office) must make a written record of the information given him by the operator.

* * *

* * * when line-ups or other information is given to foremen through operators it should be transmitted in the form of a message, addressed to the foreman or interested party * * *

* * *

* * * as a general practice, those desiring line-ups will receive same through telegraph operators, instead of train dispatchers. Train dispatchers will continue to issue the line-ups * * * to operators, and the operators will issue the line-ups to the motor car operators and others requiring them, in writing, where possible, but if that is not possible, the operator will transmit the information orally from the telegram received from the dispatcher * * *

* * *

The instructions * * * should not be construed as prohibiting the supervisory forces from communicating with the train dispatcher direct * * *. Neither are the instructions intended to affect the established practice of section and extra gang foremen and others using telephone occasionally, but not as a regular practice, at outlying points, where no operator is available, for the purpose of obtaining instructions and information concerning their work, from the train dispatchers, or others.

* * *

The maximum authorized speeds were 40 miles per hour for the locomotive and 30 miles per hour for the track motor-car.

Description of Accident

Track motor-car 1393, occupied by a maintenance-of-way bridge foreman and five employees, departed north-bound from Jackson at 3 p. m. About 6 minutes later, while moving through O & K Tunnel at a speed of about 8 miles per hour, it collided with Extra 2500 South at a point 83 feet north of the south portal of the tunnel.

Extra 2500 South, a helper locomotive consisting of Diesel-electric units 2500, 2552, 2550, and 2501, coupled in multiple-unit control, departed south-bound from the siding at

Gentry at 3:04 p. m., passed signal 43RB, which indicated Restricting, and while moving at an estimated speed of 20 miles per hour it collided with track motor-car 1393.

The track motor-car, which was not derailed, was moved southward approximately 443 feet to the point where Extra 2500 South stopped. The track motor-car was badly damaged, and the front of the first Diesel-electric unit of Extra 2500 South was slightly damaged.

Two of the maintenance-of-way employees who were on the track motor-car were killed, and the foreman and two maintenance-of-way employees were injured.

The weather was clear at the time of the accident, which occurred about 3:06 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 13.6 trains and 5.13 helper locomotives.

Track motor-car 1393 was of the 4-wheel type, equipped with 4-wheel brakes, powered by a 2-cylinder 8-12 horse-power gasoline motor, and was insulated to prevent the shunting of track circuits. It was equipped with a top and a safety-glass windshield, and had seating capacity for eight persons.

Discussion

On the day of the accident a maintenance-of-way bridge force was engaged in making repairs to a bridge at Yeadon, 6.1 miles north of Jackson. The bridge foreman said that about 2:30 p. m., immediately after a north-bound freight train had passed Yeadon, he called the train dispatcher by telephone and requested a line-up for the movement of his track motor-car from Yeadon to Jackson. The train dispatcher told him that a helper locomotive assisting the north-bound train which had just passed would return to Gentry after assisting the train, and that there were no other trains in the vicinity. The foreman said that he made a record of this information and repeated it to the dispatcher. The foreman, accompanied by five employees, then proceeded from Yeadon to Jackson on the track motor-car. After obtaining a supply of bridge material, the foreman proceeded to the telegraph office and requested the operator to obtain a line-up for the movement of the track motor-car from Jackson to Yeadon. He said

he heard the operator inform the train dispatcher that the bridge foreman desired to go to Yeadon on a track motor-car. The operator then told him that a south-bound train had passed Willow, 34.9 miles north of Jackson. He asked the operator to ascertain the location of the helper locomotive, and, after receiving the information from the dispatcher, the operator told him that the helper locomotive was on the siding at Gentry. The foreman then left the office. He informed the employees who were accompanying him as to the location of the south-bound train and the helper locomotive, and they then moved the track motor-car from the siding to the main track and departed north-bound. The track motor-car was being operated by the foreman. As the track motor-car was approaching the south portal of O & K Tunnel, the speed was reduced to about 8 miles per hour and a lighted red fusee was displayed at the front of the car. Because of curvature of the track, after the track motor-car entered the tunnel the occupants' range of vision toward the north was restricted to a distance of about 205 feet. Because of the noise made by the track motor-car, the occupants did not hear Extra 2500 South approaching. The collision occurred immediately after the train became visible to them.

After assisting the north-bound freight train, the helper locomotive, operating as Extra 2500 South, returned to Gentry. It arrived at that point at 2:45 p. m. A short time later the engineer observed that there was smoke in the engine compartment of one of the Diesel-electric units. He called the train dispatcher from a telephone located near the south siding-switch at Gentry and informed him that he desired to take the locomotive to Jackson for inspection. He said he questioned the dispatcher regarding approaching trains which might require a helper, but track motor-cars were not mentioned during the conversation. After talking with the dispatcher, he called the operator at Jackson on a local telephone line and asked him to inform the shop foreman to be prepared to inspect the locomotive. When he left the telephone booth he observed that signal 43RB, governing movements from siding to main track, indicated Restricting. He immediately boarded the locomotive, and the train departed south-bound. As this train was approaching O & K Tunnel the enginemen and the flagman were maintaining a lookout ahead from the control compartment at the front of the locomotive. The speed was about 20 miles per hour. Each member of the crew said that when the locomotive was about 825 feet north of the north portal of the

tunnel, the engineer sounded a long blast on the pneumatic horn, lighted the headlight, and started the bell to ring. A few seconds after the locomotive entered the tunnel, the employees observed the track motor-car ahead. The engineer immediately made an emergency application of the brakes, but the collision occurred before the speed of the locomotive had been materially reduced.

The operator at Jackson said that when the bridge foreman asked him to obtain a line-up, he informed the train dispatcher that the bridge foreman, whom he designated by name, desired a line-up for the movement of a track motor-car from Jackson to Yeadon. He said the dispatcher replied that a south-bound train was approaching Willow. The operator then repeated this information to the bridge foreman and, at the request of the bridge foreman, he inquired of the dispatcher as to the location of the helper locomotive, and was informed that it was on the siding at Gentry. About 5 minutes after the bridge foreman left the office, the engineer of the helper locomotive called and asked the operator to inform the shop foreman that the helper locomotive was coming to Jackson for inspection. The operator said that while he was calling the shop foreman to inform him that the helper locomotive was en route from Gentry to Jackson, he suddenly realized that the track motor-car was moving between those stations in the opposite direction. He immediately attempted to call the engineer at Gentry by telephone. When he did not receive an immediate response, he told the train dispatcher that the track motor-car had departed north-bound from Jackson. The dispatcher informed him that the helper locomotive had departed from Gentry but that he had cautioned the engineer to look out for a track motor-car. The agent at Jackson, who was in the office during the time the bridge foreman was there, said he heard the operator inform the train dispatcher that the bridge foreman desired to go to Yeadon and had requested a line-up for that movement. A signal helper who was stationed at Hazard, 44.3 miles south of Jackson, said that about 3 p. m. on the day of the accident the maintainer instructed him to listen on the train dispatcher's telephone circuit to ascertain whether the circuit was noisy. He said that as he placed the receiver to his ear he heard some one request a line-up for the bridge foreman to move from Jackson to Yeadon. Another person, whom the signal helper assumed to be the train dispatcher, replied that a south-bound train was approaching Willow. The person who had requested the line-up then inquired as to the location of the helper locomotive, and he was informed that it was at Gentry. The information received was not repeated.

The first-trick train dispatcher said that the bridge foreman called from Yeadon several times on the day of the accident and requested information as to the location of various trains. Because the dispatcher assumed that the foreman desired this information in connection with repairs to the bridge, he did not make a record of the conversations. He said that at no time did the foreman request a line-up for the movement of a track motor-car, and he did not know until afterward that the track motor-car had moved from Yeadon to Jackson.

The second-trick train dispatcher went on duty at 2:57 p. m. He said that about 2:58 p. m. the operator at Jackson inquired as to the location of the south-bound train. He told the operator that the train should be approaching Willow. The operator then inquired as to the location of the helper locomotive, and he told him that it was at Gentry. A short time later the engineer of the helper locomotive informed the dispatcher that it would be necessary to take the locomotive to Jackson for inspection. The dispatcher said he replied that he would line the route for the movement but, because he had just gone on duty and did not know what track motor-car movements were being made, it would be necessary for the engineer to watch for track motor-cars. He said that after a conversation with reference to trains which might require a helper locomotive he again warned the engineer to watch for track motor-cars. He then lined the route for the movement of the train from Gentry to Jackson. Before the train passed signal 43RB, the operator at Jackson told the dispatcher that the bridge foreman had departed north-bound from Jackson on a track motor-car. The dispatcher immediately transmitted the code to cause signal 43RB to indicate Stop, but the train passed the signal before the code was completed. The dispatcher said he did not know that the information which he gave the operator regarding the location of trains was to be used in connection with the operation of a track motor-car, and until the operator told him that the bridge foreman had departed from Jackson he did not know that this track motor-car movement was to be made.

The rules and special instructions of this carrier provide that before starting a trip the operator of a track motor-car must, if practicable, obtain a line-up of train movements in the vicinity. If he is unable to obtain a line-up, the movement of the track motor-car may be made only under flag protection. Both the dispatcher and the employee who receives a line-up are required to make a record of the information contained in the line-up. Employees are

instructed that a line-up may not be used more than 2 hours after the time it is issued. The superintendent said that if a train movement is to be made which was not contemplated at the time a line-up was issued, either the train is held until 2 hours have elapsed after the time the line-up was issued or the train is required to run at reduced speed to avoid collision with the track motor-car. The bridge foreman said he had been instructed that flag protection through tunnels was not required if he had a line-up showing that no train was close enough to constitute a hazard to the movement.

This carrier does not maintain a record of track motor-car movements. The investigation disclosed that either many track motor-car movements were being made without line-ups or the train dispatchers were issuing line-ups without recording them. The operator at Jackson performs miscellaneous duties in and about the station, and the greater part of his time on duty is spent outside the telegraph office. He said that the line-up which was requested for the movement of track motor-car 1393 from Jackson to Yeadon was the first line-up he had been requested to obtain during his 2-year tenure as operator at Jackson. He was of the opinion that the operators of track motor-cars usually obtained their line-ups directly from the train dispatchers. The train dispatchers involved said that employees at Jackson frequently had called and inquired as to the location of trains, but they could not recall a specific instance of issuing a line-up to any one at Jackson. When the train dispatchers' train-order books covering the 30-day period from November 12 through December 11, 1951, were examined, it was found that two general line-ups, each covering train movements over a portion of the district, were issued about 6:30 a. m. each day except Saturday and Sunday. During the period from November 12 to December 4, inclusive, only six line-ups in addition to the regular morning line-ups were recorded. On December 4, the day of the accident, there was no record of a line-up having been issued after 7:42 a. m. During the 7-day period immediately following the day of the accident, 116 line-ups in addition to the regular morning line-ups were recorded.

The practice, as disclosed in this investigation, of train dispatchers and track motor-car operators in depending upon their memory of telephone conversations for information to be used in connection with the operation of track motor-cars does not provide proper safeguards. The rules of this carrier provide that the operators of track motor-cars will, if practicable, obtain written line-ups. The

form of line-up used on this division indicates the locations of trains at the time the line-up is issued. Such line-ups furnish information as to the locations of trains at the time they are issued. However, trains are not restricted by the issuance of line-ups, and the responsibility for computing the running times of trains and judging the approximate arriving times at stations and at other points is placed on the operators of track motor-cars. This method of operation does not provide adequate protection for track motor-car movements.

Since January 1, 1944, the Commission has investigated 36 collisions, including the present case, which were caused by failure to provide adequate protection for the movement of track motor-cars. These accidents resulted in the death of 68 persons and the injury of 119 persons. In reports upon accidents of this nature the Commission has repeatedly recommended that the carrier involved should take measures to provide adequate protection for the movement of track motor-cars on its line. Two of these accidents, which resulted in the death of 6 persons and the injury of 3 persons, occurred on the Louisville and Nashville Railroad, and this recommendation was included in the Commission's report of October 23, 1946, covering investigation of the accident near Morton, Ky., in which 5 employees were killed.

Cause

It is found that this accident was caused by failure to provide adequate protection for the movement of a track motor-car.

Recommendation

It is recommended that the Louisville and Nashville Railroad Company provide adequate protection for the movement of track motor-cars on its line.

Dated at Washington, D. C., this sixth day of March, 1952.

By the Commission, Commissioner Patterson.

(SEAL)

W. P. BARTEL,

Secretary.