INTERSTATE COMMERCE COMMISSION

WASHINGTON

REPORT NO. 3370

NORFOLK AND WESTERN RAILWAY COMPANY

IN RE ACCIDENT

AT EAST PORTSMOUTH, OHIO, ON

OCTOBER 11, 1950

SUMMARY

Date:	October 11, 1950	
Railroad:	Norfolk and Western	
Location:	East Portsmouth, Ohio	
Kind of accident:	Head-end collision	
Equipment involved:	Engine	: Track motor-car 89 and trailer
Engine number:	1222	
Estimated speed:	5 m. p. h.	: Standing
Operation:	Signal indications	
Track:	Yard track; 12° curve; 3.2 percent ascending grade westward	
Weather:	Clear	
Time:	7:45 a. m.	
Casualties:	1 killed; 4 injured	
Cause:	Failure to provide adequate protection for movement of track motor-car	

INTERSTATE COMMERCE COMMISSION

REPORT NO. 3370

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

NORFOLK AND WESTERN RAILWAY COMPANY

November 30, 1950

Accident at East Portsmouth, Ohio, on October 11, 1950, caused by failure to provide adequate protection for the movement of a track motor-car.

REPORT OF THE COMMISSION[1]

PATTERSON, Commissioner:

On October 11, 1950, there was a head-end collision between an engine and a track motor-car on the Norfolk and Western Railway at East Portsmouth, Ohio, which resulted in the death of one maintenance-of-way employee, and the injury of four maintenance-of-way employees.

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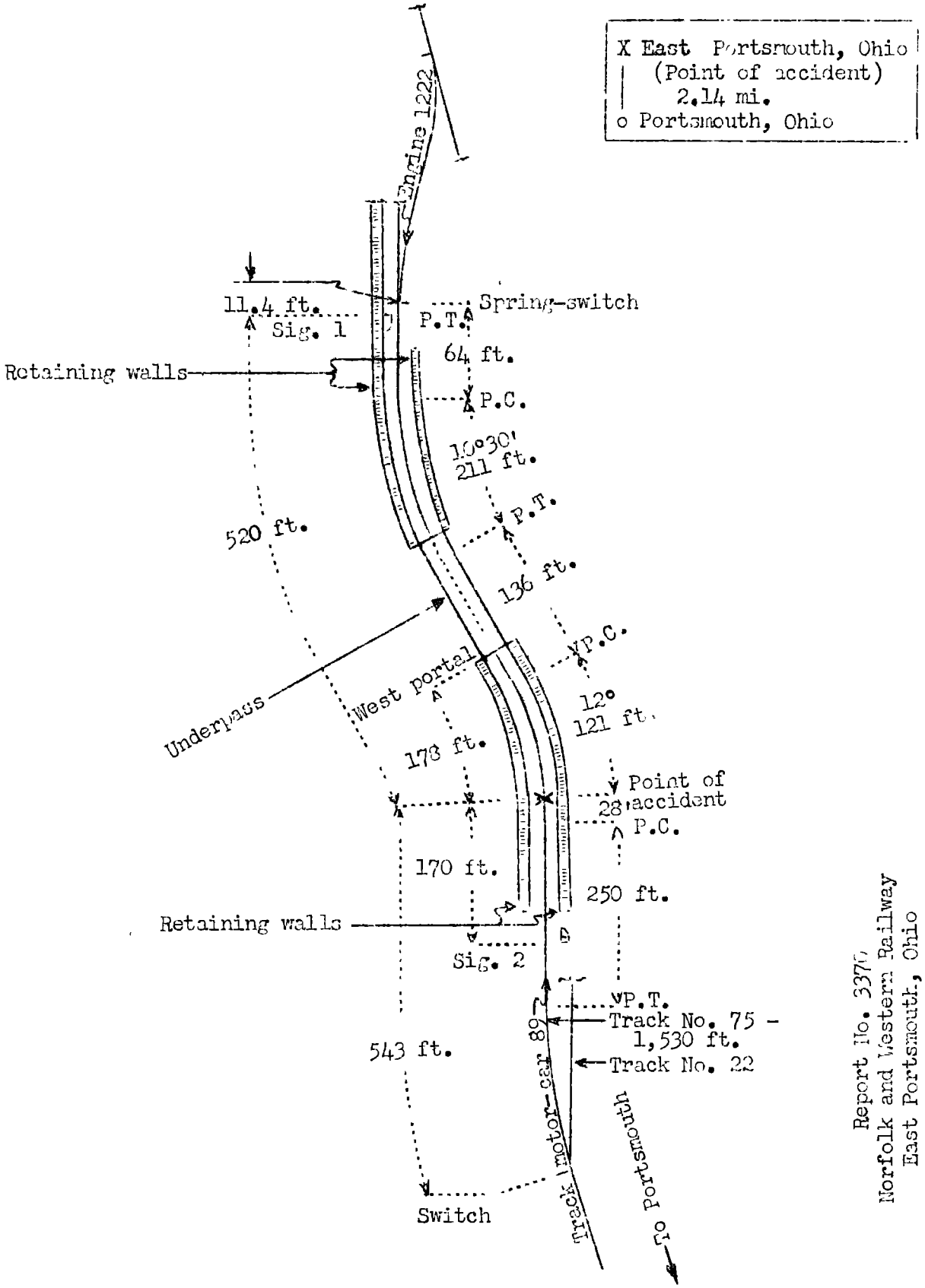
[1] Under authority of section 17 (2) of the Interstate Commerce Act the above-entitled proceeding was referred by the Commission to Commissioner Patterson for consideration and disposition.



Report No. 3370
Norfolk and Western Railway
East Portsmouth, Ohio
October 11, 1950

Location of Accident and Method of Operation

This accident occurred on the Scioto Division, in the yard at East Portsmouth, Ohio. At East Portsmouth Yard, auxiliary track No. 75, 1,530 feet in length, connects the yards on either side of the hump track. Track No. 75 is primarily used for engine movements between the receiving yards and the engine terminal, and movements over this track are governed by signal indications. It is a depressed track and extends under the hump track through a concrete underpass. Retaining walls are provided on either side of track No. 75 a distance of about 320 feet west of the west portal of the underpass. Auxiliary track No. 22 connects with track No. 75 at a point 873 feet west of the west portal of the underpass. The accident occurred on track No. 75 at a point 178 feet west of the west portal of the underpass. At the underpass, track No. 75 is about 23 feet below the level of the hump track. At the point of accident the retaining wall on the north side of the track is 10.5 feet above the level of the track and the retaining wall on the south side is 5 feet above the level of the track. From the east on track No. 75 there are, in succession, a tangent 64 feet in length, a 10°30' curve to the left 211 feet, a tangent 136 feet and a 12° curve to the right 121 feet to the point of accident and 28 feet westward. The grade for west-bound movements is, successively, approximately level a distance of 200 feet, from 3.4 percent to 4.43 percent descending 450 feet, approximately level 150 feet, 1.8 percent ascending 100 feet and 3.2 percent ascending 87 feet to the point of accident. From the east there are, in succession, a tangent 250 feet in length and the curve on which the accident occurred. The grade varies between 2.52 percent and 3.2 percent descending and is 3.2 percent descending at the point of accident.

Signal 1, governing west-bound movements on track No. 75, is located 520 feet east of the point of accident. Signal 2, governing east-bound movements on track No. 75, is located 170 feet west of the point of accident. These signals are of the position-light dwarf type, are continuously lighted, and each displays two aspects. They normally indicate Stop. Approach-clearing track circuits extend 216 feet and 375 feet, respectively, in approach of signals 1 and 2. The control circuits are overlapped through the approach-clearing track and are so arranged that aspects to proceed cannot be displayed simultaneously for opposing movements. The aspects and corresponding indications of these signals are as follows:

Aspect	Indication
Two amber lights in horizontal position	Stop
Two amber lights in diagonal position to the right	Move at Restricted Speed

This carrier's operating rules read in part as follows:

DEFINITIONS

Low (Restricted) Speed--A speed that will permit stopping short of another train or an obstruction, but not exceeding 15 miles per hour.

Signals

7. Employes whose duties may require them to give signals must provide themselves with the proper appliances, keep them in good order and ready for immediate use.

8. Flags of the prescribed color must be used by day, and lights of the prescribed color by night.

12. Hand, Flag and Lamp Signals

Note--The hand, or a flag, moved the same as the lamp, * * * gives the same indication * * *

* * *

12(c). PROCEED

Raised and lowered vertically

12(d). BACK

Swung vertically in a circle at half arm's length across the track.

* * *

Section Foremen

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RULES FOR THE OPERATION OF MOTOR CARS

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691. * * * All occupants of cars, as well as the motor car operator, must keep a constant and sharp lookout in both directions for trains, motor cars or obstructions. * * *

* * *

692. * * *

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Necessary precaution must be taken at curves and cuts where the view is obstructed, or where the side clearance is not sufficient to take the car off the track. * * *

The maximum authorized speed at the point of accident was 15 miles per hour.

Description of Accident

After Extra 1222 West arrived at East Portsmouth, Ohio, engine 1222 was detached from the train about 7:42 a. m. It then moved to track No. 75, passed signal 1, which indicated Move at Restricted Speed, and while moving at an estimated speed of 5 miles per hour it struck track motor-car 89 at a point 520 feet west of signal 1.

Track motor-car 89, coupled to a trailer and occupied by an assistant section foreman and 15 maintenance-of-way employees, departed from Portsmouth, 2.14 miles west of East Portsmouth, about 7:30 a. m. It moved on track No. 22 to track No. 75, where two employees proceeded eastward to provide protection for the movement of the track motor-car through the underpass. Before the flagman arrived at the east approach to the underpass, track motor-car 89 and the trailer passed signal 2, which indicated Stop, stopped at a point 170 feet east of signal 2, and was struck by engine 1222.

Track motor-car 89 and the trailer were not derailed but were moved westward 179 feet. They were badly damaged. Engine 1222 was slightly damaged.

The assistant section foreman was killed. Four maintenance-of-way employees were injured.

The weather was clear at the time of the accident, which occurred at 7:45 a. m.

Track motor-car 89 was of the 4-wheel type, equipped with 4-wheel drive and a 4-wheel brake. It was powered by a Ford Model B gasoline engine. Both the track motor-car and the trailer were insulated to prevent the shunting of track circuits.

Discussion

At the receiving yard at East Portsmouth, engine 1222 was detached from Extra 1222 West and moved to track No. 75. As engine 1222 entered the east approach to the underpass the enginemen were in their respective positions in the cab of the engine and the front brakeman was standing on the deck of the engine. Signal 1 indicated Move at Restricted Speed, and this indication was called by the engineer. None of the members of the crew was informed that the track motor-car was occupying track No. 75. Neither the engineer nor the fireman saw a flagman before the engine entered the underpass. West of the underpass, the view of the track ahead is restricted by track curvature and by the retaining wall on each side of the track. As a result, the members of the crew did not see the track motor-car before the accident occurred. They estimated that the speed of the engine was 5 miles per hour when the collision occurred.

Track motor-car 89 was stopped on track No. 22 while the switch was operated for it to proceed to track No. 75. After it entered track No. 75 the switch was restored to its normal position. One maintenance-of-way employee was instructed to proceed through the underpass to a switch in the vicinity of signal 1 to provide protection for the movement of the track motor-car through the underpass. A second employee was instructed to proceed to the hump track over the underpass to signal to the employees on the track motor-car when the flagman arrived at the switch. Neither of these employees had flagging equipment in his possession. Soon after the flagman departed, the track motor-car proceeded eastward and was stopped at signal 2. The flagman was about 150 feet east of the east portal of the underpass when he observed engine 1222 approaching. When the engine passed him he shouted a warning to the engineer to look out for the track motor-car but he did not give stop signals. The employee on the hump track also observed engine 1222 approaching the underpass and

gave hand signals which he intended as back-up signals to the employees on the track motor-car. However, the signals were interpreted by employees on the track motor-car as proceed signals. The track motor-car then proceeded eastward and a few seconds later it was struck by engine 1222.

On the track on which this accident occurred engine movements are governed by signal indications. The signals normally indicate Stop. A signal will indicate Move at Restricting Speed if its approach-clearing circuit is occupied, the block and the other approach-clearing circuit are unoccupied, and the switch located in the other approach-clearing circuit is in normal position. However, this method cannot be used for the operation of track motor-cars, because they are insulated to prevent the shunting of track circuits. The usual method of operation of east-bound track motor-cars is to reverse the switch leading to track No. 22. This action causes signal 2 to indicate Move at Restricted Speed provided the block of signal 2 and the approach-clearing circuit in approach of signal 1 are unoccupied and the switch immediately east of signal 1 is in normal position. The reversal of the switch to track No. 22 also causes signal 1 to continue to indicate Stop. An employee then is sent through the underpass as a flagman to provide protection at the switch in the vicinity of signal 1. When he arrives at the switch he operates it several times, and each operation of the switch causes signal 2 to indicate Stop. This is used by the employees on the track motor-car as a signal that the flagman has arrived at the switch and is providing protection at that point. The switch to track No. 22 is then placed in normal position, and the track motor-car proceeds through the underpass.

In the present case, the flagman was sent through the underpass to provide protection at the switch and a second employee was sent to the hump track, from which point both the employees on the track motor-car and the flagman could be seen. The switch to track No. 22 was operated to its normal position. The employee on the hump track was instructed to signal the employees on the track motor-car when the flagman arrived at the switch. The flagman said he understood that the track motor-car would not proceed until he arrived at the switch and he made no attempt to give stop signals to the crew of engine 1222. When the employee on the hump track observed engine 1222 approaching the underpass he gave a signal which was interpreted as a signal to proceed instead of a signal to back up.

Cause

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

Dated at Washington, D. C., this thirtieth day of November, 1950.

By the Commission, Commissioner Patterson.

(SEAL)

W. P. BARTEL,

Secretary.