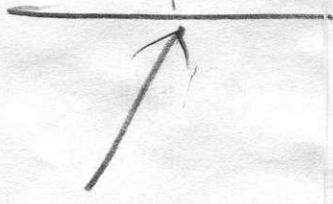


~~Handwritten~~
JUN 20 noted 5/24/66
J. H. M. - J.W. 6/14
a lesson here
for all of us.
J.W. 5/20

GFMKG



RAILROAD ACCIDENT INVESTIGATION

REPORT NO. 4071

THE NEW YORK CENTRAL RAILROAD COMPANY

WORTHINGTON, OHIO

DECEMBER 18, 1965



INTERSTATE COMMERCE COMMISSION

WASHINGTON

SUMMARY

DATE: December 18, 1965

RAILROAD: New York Central

LOCATION: Worthington, Ohio

KIND OF ACCIDENT: Collision

EQUIPMENT INVOLVED: Passenger train Earthmover

TRAIN NUMBER: 15

LOCOMOTIVE NUMBERS: Diesel-electric units
4077, 4005

CONSISTS: 12 cars Tractor-scraper

ESTIMATED SPEEDS: 70 m.p.h. Slow

OPERATION: Signal indications

TRACK: Single; tangent; 0.10
percent descending
grade southward

HIGHWAY: 18° curve; 2.3 percent
descending grade east-
ward; crosses track at
angle of 90°

WEATHER: Clear

TIME: 11:03 a.m.

CASUALTIES: 1 killed; 43 injured

CAUSE: Failure of the NYC crossing flagman to
protect the rail-highway grade crossing
as required, resulting in the earthmover
entering the crossing immediately in front
of an approaching train.

INTERSTATE COMMERCE COMMISSION
RAILROAD SAFETY AND SERVICE BOARD

RAILROAD ACCIDENT INVESTIGATION

REPORT NO. 4071

THE NEW YORK CENTRAL RAILROAD COMPANY

DECEMBER 18, 1965

SYNOPSIS

On December 18, 1965, a New York Central Railroad passenger train struck an earthmover at a rail-highway grade crossing at Worthington, Ohio. The driver of the earthmover was killed and 43 persons on the train were injured.

The accident was caused by failure of the NYC crossing flagman to protect the rail-highway grade crossing as required, resulting in the earthmover entering the crossing immediately in front of an approaching train.

LOCATION AND METHOD OF OPERATION

The accident occurred on that part of the Ohio Central Division extending between BE interlocking station, near Cleveland, and Columbus, Ohio, a distance of 123.3 miles. In the accident area this is a single-track line over which trains operate by signal indications of a traffic control system. The timetable directions are east and west. In the territory involved, however, trains move north and south by geographical directions. These directions are used in this report in lieu of timetable directions.

The collision occurred on the main track, 113.6 miles south of BE and 1.8 miles north of the Worthington interlocking station, where the main track is crossed at grade by a private road.

In the accident area, two main tracks of the Norfolk and Western Railway parallel the NYC main track on the west at distances of 67 and 80 feet.

The private road crosses the N&W main tracks at an angle of 81 degrees and crosses the NYC main track at an angle of 90 degrees, as shown in the sketch appended to this report. The road was built by a construction company to facilitate the construction of a highway bridge over the NYC and N&W tracks.

A NYC conductor and a N&W employee were assigned as crossing flagmen at the NYC and N&W crossings, respectively. A shanty for the NYC flagman and one for the N&W flagman were located, respectively, 13 feet southeast and 50 feet southwest of the NYC crossing.

Details concerning the track, private road and crossing, railroad carrier's operating rules, train, earthmover, damages and other factors are set forth in the appendix.

DESCRIPTION AND DISCUSSION

No. 15, a southbound first-class passenger train consisting of two diesel-electric units and 12 cars, passed BE at 9:04 a.m. and passed Burt, 68.2 miles south of BE, at 10:25 a.m., 5 hours 48 minutes late. About 38 minutes later, it approached the private road crossing involved at 80 miles per hour, as indicated by the speed-recording tape. According to the engineer, he initiated a service brake application about 0.3 mile north of the crossing to reduce speed as required before entering a speed-restriction zone located a short distance south of the crossing. He stated that he then began to sound the prescribed signal on the locomotive horn, as the train approached the crossing-whistle sign 1,021 feet north of the crossing. Shortly afterward, he saw a westbound earthmover on the private road move over the crossing in front of the train, then saw an eastbound earthmover move slowly eastward onto the crossing. The engineer immediately applied the train brakes in emergency. A few moments later, the train entered the crossing at 70 miles per hour and struck the eastbound earthmover, derailing the locomotive units and the first to eighth cars, inclusive.

The earthmover involved was loaded with an estimated 36 tons of shale and dirt. It was proceeding eastward on the private road when it entered the NYC crossing and was struck on its left side, in front of the rear wheels, by the train.

The operator of the earthmover was killed. The engineer, fireman, conductor, assistant conductor, 2 brakemen, 2 train baggage-men, 6 dining-car employees, 2 sleeping-car employees and 27 passengers were injured.

About 7:25 a.m. on the day of the accident, a NYC conductor reported for duty as a crossing flagman at the private road crossing involved. He subsequently telephoned the Columbus operators on two occasions for information concerning NYC train movements. He stated that the operators did not inform him on either of these occasions that No. 15 was running late or make any mention of No. 15. About 10:55 a.m., after cleaning dirt and mud from the NYC crossing, the flagman returned a shovel and broom to the N&W crossing-flagman's shanty and accepted a cup of coffee from the N&W flagman. About eight minutes later, both flagmen heard the locomotive horn of No. 15 being sounded. The NYC flagman said he immediately ran out of the shanty with a red flag and ran diagonally onto the private road in front of the earthmover moving eastward toward the NYC crossing. He said he then fell down on the road about six feet from the crossing. At this time, according to his statements, the flagman saw the loaded earthmover pass him. He stated the earthmover seemed to stop with its tractor fouling the NYC track, and that it then continued eastward on the crossing. Immediately afterward, while moving over the crossing at slow speed, the earthmover was struck by No. 15.

According to the timetable, No. 15 is scheduled to pass Burt, 45.4 miles north of the accident point, at 4:37 a.m. The third trick Columbus operator stated that the crossing watchman called him about 7:15 a.m. on the day of the accident for information about train movements. He said that in addition to providing the crossing flagman with information about other trains, he informed the crossing flagman that No. 15 was running 4 hours late. The first trick operator stated that the crossing flagman called him about 8:30 a.m. He said that in addition to providing information about other trains, he also informed the crossing flagman that No. 15 was running late.

The NYC crossing flagman had worked this assignment since October 6, 1965. According to his statement, he had not received any instructions from the carrier regarding the flagging procedures

to be followed at the crossing. He stated, however, that he had reached an understanding with supervisors of the construction company involved that drivers of construction equipment were free to move over the NYC crossing at any time unless he displayed stop signals to indicate a train was approaching.

FINDINGS

It is evident in this case that the NYC crossing flagman failed to protect the private road crossing while a train was approaching as required, and the accident resulted from this failure.

CAUSE

This accident was caused by failure of the NYC crossing flagman to protect the rail-highway grade crossing as required, resulting in the earthmover entering the crossing immediately in front of an approaching train.

Dated at Washington, D. C., this 14th day of April 1966

By the Commission, Railroad Safety and Service Board.

H. NEIL GARSON
Secretary

(SEAL)

APPENDIX

Track

The main track is tangent a considerable distance north and south of the accident point. The grade in this area is 0.10 percent descending southward.

Private Road and Crossing

The private road crosses the main track at an angle of 90 degrees. It consists of clay and shale with a compacted surface width of 30 feet. From the west there are, in succession, a tangent for a considerable distance, and an 18-degree curve to the left 40 feet to the accident point. The grade for an eastbound

vehicle is successively, level 70 feet, 2.3 percent descending 30 feet to the crossing, and practically level over the crossing.

The NYC crossing is 42 1/2 feet wide. Planking is laid between the rails, and along the outside of each rail, throughout the width of the crossing.

Railroad Carrier's Operating Rules

14.

ENGINE WHISTLE SIGNALS

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

SOUND	INDICATION

(1) — — o —	(1) Approaching public crossings at grade. To be prolonged or repeated until crossing is reached.
	(2) Approaching points where tracks or bridges are undergoing repairs and reduced speed is required.

32. Watchmen stationed at public crossings at grade must use stop signals when necessary to stop trains. They will use prescribed signals to stop highway traffic.

951. They (crossing watchmen) must be constantly on duty during prescribed hours, *** If necessary for crossing watchmen to absent themselves in emergency, gates or other devices must be arranged to protect the crossing until they return.

954. Crossing watchmen must be constantly on the lookout for approaching trains or engines, and make every possible effort to prevent traffic from crossing the track unless it can be done safely. Hand signals must not be given to traffic to proceed over the crossing.

Train

No. 15 consisted of car-body type diesel-electric units 4077 and 4005 coupled in multiple-unit control, 2 baggage-mail cars, 1 baggage-dormitory car, 2 sleeping cars, 3 coaches, 1 dining car, 2 express cars and 1 mail car, in that order. The cars were of all-steel construction. The 3rd to 9th cars, inclusive, were equipped with tightlock couplers. The train brakes had been tested and had functioned properly when used en route. As the train

approached the accident point, the engineer and fireman were in the control compartment at the front of the locomotive. The other crew members were at various locations in the cars.

Earthmover

The earthmover, a wheel tractor-scraper Caterpillar 631, series B, was owned and operated by V.N. Holderman & Sons, Inc., Worthington, Ohio. The tractor was powered by a 360-horsepower six-cylinder diesel engine. Its control compartment was ahead of the forward wheels and to the left of the engine. It was equipped with a windshield and metal canopy roof.

The scraper was attached to the rear of the tractor through a swivel arrangement and consisted of a hydraulically controlled bowl, apron and ejector. The rear of the scraper was supported by single axle wheels.

The overall length of the earthmover was 43 feet 9 inches and the overall width was 12 feet 6 inches. Its lightweight was 37 tons. At the time of the accident the earthmover was filled to capacity with shale and dirt, and its gross weight was 73 tons.

Damages

The train stopped with the front end 470 feet south of the collision point. The two diesel-electric units, all trucks of the first seven cars, and the front truck of the eighth car were derailed. The derailed equipment stopped in various positions as shown in the sketch appended to this report. Separations occurred between the two diesel-electric units and at both ends of the 1st, 3rd and 6th cars.

The two diesel-electric units were heavily damaged. The first and second cars were destroyed; the third, fourth, fifth and sixth cars were heavily damaged, and the seventh, eighth and ninth cars were slightly damaged.

The tractor of the earthmover stopped about 130 feet south of the collision point and 12 feet east of the main track. The scraper portion stopped 240 feet south of the collision point and 40 feet east of the main track. The tractor was heavily damaged and the scraper was destroyed.

Other Factors

The accident occurred at 11:03 a.m., in clear weather.

The maximum authorized speed for trains in the accident area is 79 miles per hour, but is restricted to 60 miles per hour a short distance south of the accident point.

During the 30-day period immediately preceding the day of the accident, the average daily railroad movement over the crossing was 9.3 trains. In the 24-hour period beginning 5:00 a.m., January 24, 1966, a total of 859 highway construction vehicles moved over the crossing.

Because of two highway bridge piers and vegetation on the west side of the main track, the view is considerably restricted between eastbound vehicles and southbound trains approaching the crossing. However, when the eastbound vehicle is within 20 feet west of the crossing, the driver's view of the track northward extends about one mile.

