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INTERSTATE COMMERCE COMMISSION,  
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REPORT NO. 3401

CHICAGO, NORTH SHORE & MILWAUKEE RAILROAD COMPANY

IN RE ACCIDENT  
AT MUNDELEIN, ILL., ON  
APRIL 11, 1951

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SUMMARY

Date: April 11, 1951

Railroad: Chicago, North Shore & Milwaukee

Location: Mundelein, Ill.

Kind of accident: Collision

Equipment involved: Passenger-equipment : Multiple-unit  
train car

Train number: Extra 153 North :

Consist: 1 car :

Estimated speeds: 40 m. p. h. : Standing

Operation: Special instructions

Track: Station track; tangent; 0.24 percent  
ascending grade northward

Weather: Dense fog

Time: 5:25 a. m.

Casualties: 2 killed; 3 injured

Cause: Failure to operate train in  
accordance with instructions  
governing movements on a station  
track

INTERSTATE COMMERCE COMMISSION

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REPORT NO. 3401

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

CHICAGO, NORTH SHORE & MILWAUKEE RAILROAD COMPANY

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June 29, 1951

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Accident at Mundelein, Ill., on April 11, 1951, caused  
by failure to operate a train in accordance with  
instructions governing movements on a station  
track.

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REPORT OF THE COMMISSION<sup>1</sup>

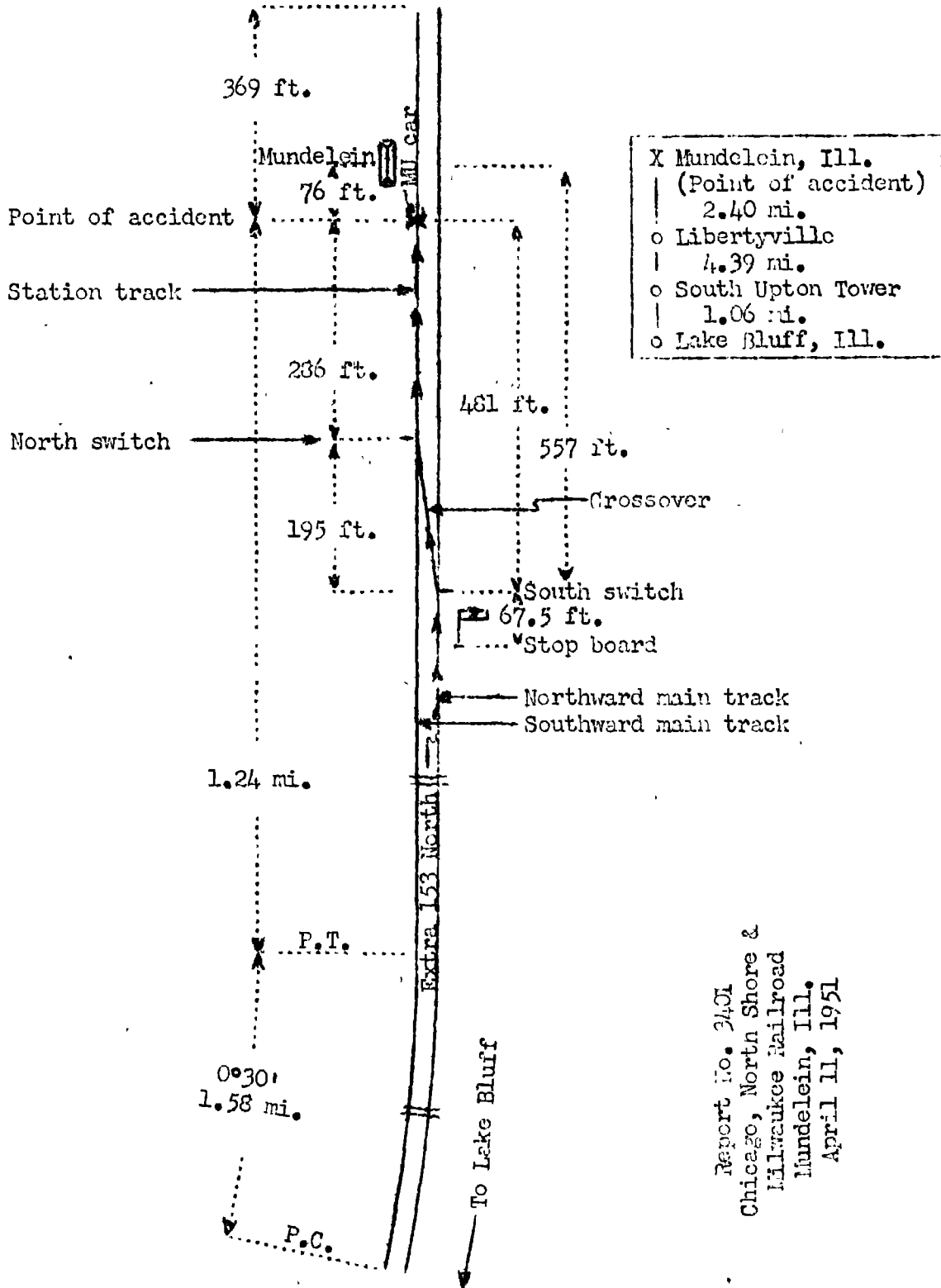
PATTERSON, Commissioner:

On April 11, 1951, there was a collision between a  
passenger-equipment train and a multiple-unit car on the  
Chicago, North Shore & Milwaukee Railroad at Mundelein,  
Ill., which resulted in the death of one train-service  
employee and one employee not on duty, and the injury of  
one train-service employee and two employees not on duty.

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



Location of Accident and Method of Operation

This accident occurred on that part of the railroad extending between Lake Bluff and Mundelein, Ill., 7.85 miles. In the vicinity of the point of accident this is a double-track line, over which trains moving with the current of traffic are operated by timetable and train orders. There is no block system in use. This line is equipped with an overhead trolley system for the electric propulsion of trains. At Mundelein a facing-point crossover 195 feet in length connects the two main tracks. The south switch of the crossover is 557 feet south of the station. The north end of the southward main track is located at the north crossover-switch. A station track extends from the north crossover-switch to the station and parallels the northward main track on the west. The accident occurred on the station track at a point 481 feet north of the south crossover-switch and 76 feet south of the station. From the south there is a  $0^{\circ}30'$  curve to the left 1.58 miles in length and then a tangent 1.24 miles to the point of accident and 569 feet northward. The grade varies between 0.08 percent and 0.64 percent ascending northward throughout a distance of 1 mile immediately south of the point of accident, and is 0.24 percent ascending northward at that point.

The crossover is provided with a No. 10 turnout and a spring switch at each end. The south switch is normally lined for movement from the northward main track, through the crossover, to the station track, and the north switch is normally lined for movement from the station track to the southward main track. The switch stand at the south switch is of the intermediate-stand type and is located 8 feet 2-1/2 inches east of the center-line of the northward main track. It is equipped with an oil-burning lamp, which displays a yellow aspect when the switch is lined for entry to the crossover. When the switch is in this position a dart-shape yellow target 12 inches in height and 18 inches in length is displayed at right angles to the track. The target and the lamp are, respectively, 5 feet 11 inches and 7 feet 8 inches above the level of the tops of the rails.

A stop board, governing north-bound movements on the northward main track, is located 67.5 feet south of the south crossover-switch and 9 feet 7 inches east of the center-line of the track. This stop board is mounted on a

mast, 4 feet 10-1/2 inches above the level of the tops of the rails, and bears the word "STOP" in red letters 6 inches high on a white background 12-1/2 inches high and 37 inches long. It is equipped with an oil-burning lamp, which displays a red aspect in the direction of approaching trains.

Timetable special instructions read in part as follows:

During foggy \* \* \* weather motormen must not make up time, but take extraordinary precaution at stations, switches and junction points. \* \* \* Under conditions above mentioned delays are expected and it should be understood by all that SAFETY is the first consideration.

SPEED RESTRICTIONS. \* \* \*

Mundelein, before entering station track . . . . Stop.

Bulletin special instructions read in part as follows:

SUBJECT: Stop Boards - Mundelein \* \* \*

Effective at 9:00 A.M. Saturday, January 17, 1948, Stop Boards affecting northbound trains will be installed on right hand side of northbound track, at the following \* \* \* locations:

40 feet south of facing point switch entering station track at Mundelein Station.

\* \* \*

Northbound trains must stop at these STOP boards, and then may proceed with caution if track to be used is clear of other trains.

SUBJECT: Safety in Operation of Trains

When the motorman's range of vision is restricted by fog \* \* \* he must take extraordinary precautions.

\* \* \*

The safety of the train depends on the motorman being able to stop within the distance he can see the track to be clear.

There was no maximum authorized speed for passenger trains on the line on which this accident occurred.

### Description of Accident

Extra 153 North, a north-bound passenger-equipment train, consisted of multiple-unit passenger car No. 153. The car was of all-steel construction. This train departed from Lake Bluff at 5:14 a. m., passed South Upton Tower, the last open office, 1.06 miles north of Lake Bluff, at 5:17 a. m., passed the stop board south of the crossover at Mundelein, entered the station track, and while moving at an estimated speed of 40 miles per hour it struck a multiple-unit passenger car which was standing on the station track at a point 481 feet north of the south crossover-switch.

Extra 153 North stopped with the front end about 40 feet north of the point of accident. The front truck was derailed, and the front end of the car was crushed inward a distance of 11 feet. The center sill was twisted, and the car was otherwise badly damaged.

The multiple-unit car which had been standing on the station track was moved northward a distance of about 40 feet, and it struck a second car which was standing with its south end 15 feet north of the north end of the first car. The second car was moved northward, and it struck a third car which was standing with its south end 2 feet north of the north end of the second car. The south truck of the first car was derailed, both draft gears were broken, both vestibules were crushed inward, and the car was otherwise badly damaged. The vestibule at the south end of the second car was crushed inward, and the car was badly damaged. The third car was slightly damaged.

The motorman of Extra 153 North was killed, and the conductor was injured.

There was a dense fog and day was breaking at the time of the accident, which occurred about 5:25 a. m.

Multiple-unit car 153 was 56 feet 3/4 inch in length and weighed 90,300 pounds. It was provided with two 4-wheel trucks spaced 32 feet 8 inches between truck centers and was powered by four 140-horse-power traction motors. It was equipped with Westinghouse AMU pneumatic brake equipment, with a U-4 universal valve and M-23 brake valves. The regulating devices were adjusted for 70-pound brake-pipe pressure and 85-pound to 100-pound main reservoir pressure. Motorman's controls were located

in the vestibule at each end of the car. Each controller was so arranged that power would not be supplied to the traction motors unless the controller handle was held down against spring tension. Multiple-unit car 153 was not equipped with a speed indicating or recording device. A hand brake was located in each vestibule on the side of the car opposite the motorman's controls. The last general inspection of this car was completed April 9, 1951. The accumulated mileage since the last inspection was 102.

### Discussion

Mundelein is a terminal station on this line of the railroad. Passenger cars arriving in trains during the late afternoon and evening are customarily left on the station track to be used in making up south-bound trains leaving Mundelein the following morning. The car which was struck by Extra 153 North arrived at Mundelein in a north-bound passenger train about 12:54 a. m., and was left standing at the point where the collision occurred.

The crew of Extra 153 North was assigned to operate a passenger-equipment train from Highwood, 5.66 miles south of Lake Bluff, to Mundelein. They were to assemble the equipment for several south-bound passenger trains at Mundelein, and then operate a south-bound passenger train leaving Mundelein at 6:23 a. m. The brakes of Extra 153 North were tested at Highwood, and the train departed from that point at 5:05 a. m. Several stops were made at Lake Bluff, where the crew operated hand-throw switches in crossing from one track to another, and the brakes functioned properly. After the train departed from Lake Bluff the motorman was alone in the control compartment in the front vestibule of the car, and the conductor and several employees not on duty were seated near the front of the car. The headlight was lighted, and the power windshield wiper on the window in front of the motorman was in operation. The door of the control compartment was open. The conductor, who was seated in a location from which he could see the motorman, said that the motorman had not placed his portable seat in the control compartment and that he was standing at the controls and maintaining a lookout ahead. Surviving employees said that they noticed nothing unusual in the operation of the train before it entered the crossover at Mundelein. The speed was properly controlled through the interlocking limits at South Upton Tower, and it was reduced at Libertyville, 5.45 miles north of Lake Bluff, in compliance



with a speed restriction at that point. These employees were unable to estimate the speed as the train approached Mundelein, but they said that there was no application of the brakes and that no station-approach whistle signal was sounded. Until the train entered the crossover they were not aware that it was closely approaching the station.

The control compartment of multiple-unit car 153 was destroyed in the collision, and the position of the control levers at the time of the accident could not be determined. The brake equipment was so badly damaged that it could not be tested after the accident occurred. Examination of the rails and of the wheels of the car disclosed no indication of the rails having been sanded or of the wheels having been sliding. Considering the extent of the damage to the equipment, the master mechanic estimated that the speed of Extra 153 North was not less than 40 miles per hour when the accident occurred.

The lamps on the south crossover-switch and the stop board were examined a short time after the accident occurred, and were found to be lighted.

The special instructions of this carrier required that Extra 153 North be stopped before it entered the station track at Mundelein. The motorman was killed in the accident, and it could not be determined why the train was not operated in accordance with the special instructions. However, visibility was restricted by fog to a distance of less than 100 feet, and it appears probable that he was confused as to the location of the track. Until the train entered the crossover he was standing at the controls and apparently was alert.

#### Cause

It is found that this accident was caused by failure to operate a train in accordance with instructions governing movements on a station track.

Dated at Washington, D. C., this twenty-ninth day of June, 1951.

By the Commission, Commissioner Patterson.

(SEAL)

W. P. BARTEL,  
Secretary.