

INTERSTATE COMMERCE COMMISSION
WASHINGTON

INVESTIGATION NO. 2485
THE BALTIMORE & OHIO RAILROAD COMPANY
REPORT IN RE ACCIDENT
AT TAKOMA PARK, D. C., ON
FEBRUARY 26, 1941.

SUMMARY

Railroad: Baltimore & Ohio
Date: February 26, 1941
Location: Takoma Park, D. C.
Kind of accident: Rear-end collision
Trains involved: Freight : Freight
Train numbers: Extra 4804 : Extra 4444
Engine numbers: 4834 : 4444
Consist: 44 cars and : 53 cars and
caboose caboose
Speed: Standing : 5-10 m. p. h.
Operation: Automatic block-signal system
Track: Double; tangent; 0.78 percent
descending grade eastward
Weather: Clear
Time: About 2:55 p. m.
Casualties: 1 killed; 1 injured
Cause: Accident caused by failure to provide
adequate flag protection for preced-
ing train and by failure properly to
control speed of following train in
compliance with signal indications

INTERSTATE COMMERCE COMMISSION

INVESTIGATION NO. 2485

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

THE BALTIMORE & OHIO RAILROAD COMPANY

April 21, 1941

Accident at Takoma Park, D. C., on February 26, 1941, caused
by failure to provide adequate flag protection for pre-
ceding train and by failure properly to control speed of
following train in compliance with signal indications.

REPORT OF THE COMMISSION¹

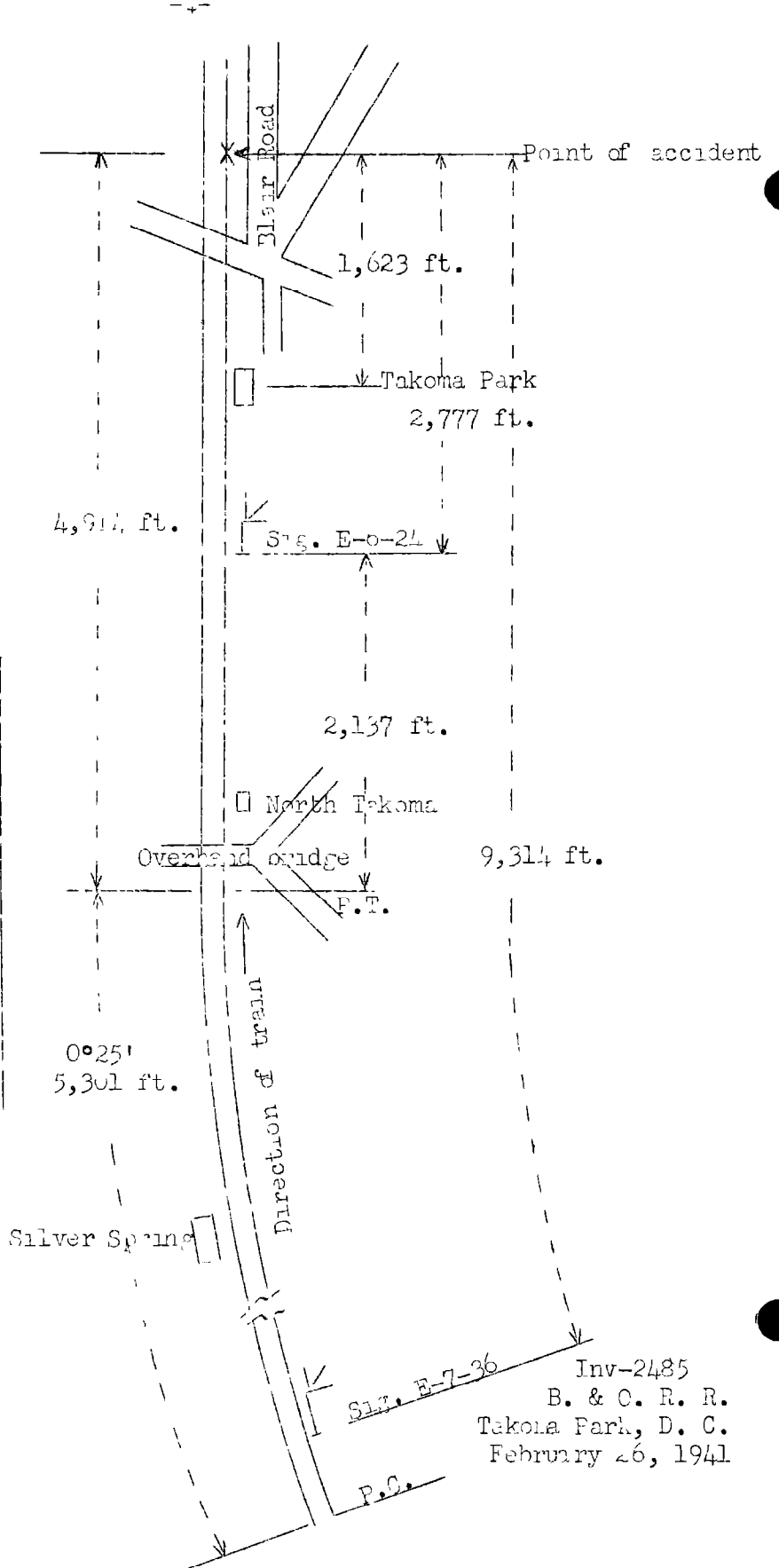
PATTERSON, Commissioner:

On February 26, 1941, there was a rear-end collision
between two freight trains on the Baltimore & Ohio Railroad
at Takoma Park, D. C., which resulted in the death of one
employee and the injury of one employee.

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.

- o Washington, D. C. 5.2 mi.
- o Inwood 1,017 ft.
- X Point of accident 1,623 ft.
- o Takoma Park, D. C. 0.5 "
- o North Takoma, Md. 0.7 mi.
- o Silver Spring 31.3 mi.
- o Point of tracks 10.1 "
- o Overton, Md.



Inv-2485
 B. & O. R. R.
 Takoma Park, D. C.
 February 26, 1941

Location and Method of Operation

This accident occurred on that part of the Baltimore Division designated as the Metropolitan Sub-division which extends between Weverton, Md., and Washington, D. C., a distance of 52.3 miles. In the vicinity of the point of accident this is a double-track line over which trains are operated with the current of traffic by an automatic block-signal system, the indications of which supersede time-table superiority. The accident occurred on the eastward main track at a point 1,623 feet east of the station at Takoma Park. As the point of accident is approached from the west there is a 0°25' curve to the right 5,301 feet in length, followed by a tangent 4,914 feet to the point of accident and a short distance beyond. The grade for east-bound trains is, successively, 0.47 percent descending 412 feet, 1.027 percent descending 5,389 feet, 1.42 percent descending 1,012 feet, and 0.78 percent descending 450 feet to the point of accident and a short distance beyond.

In the immediate vicinity of the point of accident the tracks are laid on a fill 20 feet in height. Blair Road parallels the tracks on the south at a distance of about 50 feet.

Automatic signals E-7-36 and E-6-24 governing movements on the eastward track are located, respectively, 9,314 feet and 2,777 feet west of the point of accident. These signals are of the 1-arm, 3-position, upper-quadrant, semaphore type, approach lighted; their indications and names are as follows:

<u>Indication</u>	<u>Name</u>
Stop; then proceed	Stop and proceed-signal
Prepare to stop at next signal. (Train exceeding medium speed, must at once reduce to that speed.)	Approach-signal
Proceed	Clear-signal

Time-table Special Instructions provide in part as follows:

* * *

MEDIUM SPEED - One-half the normal speed, not to exceed thirty (30) miles per hour.

SLOW SPEED - One-quarter the normal speed, not to exceed fifteen (15) miles per hour.

* * *

Rules and Regulations of the Operating Department read in whole or in part as follows:

15. The explosion of two torpedoes is a signal to reduce speed and look out for a train ahead or obstruction. The explosion of one torpedo will indicate the same as two, but the use of two is required. Trains will move with caution until clear track is indicated.

* * *

99. When a train stops under circumstances in which it may be overtaken by another train, the flagman will go back immediately with flagman's signals a sufficient distance to insure full protection, placing two torpedoes, and when necessary, in addition, displaying lighted fuses.

* * *

Flagman's Signals:

Day Signals -

A red flag,
Torpedoes and fuses.

* * *

100(A). Should a train be seen or heard approaching before the flagman has reached the required distance, he will, at once, place two torpedoes on the rail, and, at night or during foggy or stormy weather, carry a lighted fuse, continuing in the direction of the approaching train.

100. * * *

When a train is stopped by a Stop and Proceed signal it may proceed-

* * *

(B). On two or more tracks at once at slow speed, expecting to find a train in the block, broken rail, obstruction or switch not properly set.

In the vicinity of the point of accident the maximum authorized speed for fast freight trains is 50 miles per hour and for slow freight and local trains 30 miles per hour.

The weather was clear at the time of the accident, which occurred about 2:55 p. m.

Description

Extra 4834 East, an east-bound local freight train, with Conductor Breittenbach and Engineman Carter in charge, consisted of engine 1834, 3 loaded and 41 empty cars and a caboose. This train departed from Brunswick, Md., 43.4 miles west of Takoma Park, at 9:20 a. m., according to the train sheet, and arrived at Lamond, 0.5 mile east of Takoma Park, at 2:32 p. m., according to the statement of the flagman. After it stood at this point approximately 23 minutes, its rear end was struck by Extra 4444.

Extra 4444 East, an east-bound freight train, with Conductor Durkin and Engineman Snyder in charge, consisted of engine 4444, 43 loaded and 5 empty cars and a caboose. This train departed from Brunswick at 1:55 p. m., according to the train sheet, passed DS Tower, 23.4 miles west of Takoma Park and the last open office, at 2:25 p. m., passed signal E-7-36, which was displaying approach, passed signal E-6-24, which was displaying stop-and-proceed, etc., while moving at a speed estimated to have been from 5 to 10 miles per hour, collided with the rear end of Extra 4834.

The caboose and the rear two cars became derailed to the right. The caboose stopped on Blair Road at the foot of the embankment, about 30 feet east of the point of collision and 50 feet from the track; it was destroyed by fire. The rear two cars stopped about halfway down the embankment and opposite their relative positions in the train. Engine 4444 became derailed, rolled down the embankment, stopped upright on Blair Road, practically parallel to the track and about 20 feet to the rear of the caboose. The engine was badly damaged; the cab was crushed. The tender stopped on its left side down the embankment at right angles to the track with its front end adjacent to the cab of the engine. The front truck of the first car of Extra 4444 was derailed; this car stopped with its front end about 60 feet east of the point of collision.

The employee killed was the engineman of Extra 4444 East and the employee injured was the fireman of Extra 4444 East.

Summary of Evidence

Engineman Carter, of Extra 1834, stated that his train left Silver Spring, Md., 1.2 miles west of Takoma Park, at 2:15 p. m., and stopped at Takoma Park where some cars were set out and others added. The train proceeded to Lamond where switching was being performed when the accident occurred. He did not sound

the whistle signal to recall the flagman before the train left Takoma Park, as he intended that the flagman would remain at that point until the train was ready to depart from Lamond.

The statements of Fireman Weddle and Front Brakeman Mathews of Extra 4834, added nothing of importance.

Conductor Brenttnerch, of Extra 4834, stated that at Silver Spring he communicated by telephone with the operator at Point of Rocks, 36.5 miles west of Takoma Park, who informed him that Extra 4144 had passed Point of Rocks at 1:51 p. m. When Extra 4834 crossed over to the eastward main track at Silver Spring the conductor left a note for the flagman at the crossover switch, containing information concerning Extra 4444. This was for information only, as the flagman was required to protect the rear of his train at all times. His train arrived at Takoma Park about 2:20 p. m. and consumed about 10 minutes while performing work at that point. The train proceeded to Lamond where switching service was performed and the conductor was assisting in the work. The accident occurred about 2:50 p. m. Because of track curvature he could not see the rear end of his train and he did not see the flagman until after the accident occurred. He considered his flagman competent. The conductor was last examined on the operating rules on September 30, 1940. His understanding of Rule 99 was that on tangent track in automatic block-signal territory a flagman should proceed to the rear a distance of 25 or 35 car lengths to insure full protection; however, in manual-block territory, or where no block system exists, this distance is insufficient. He had observed that his flagman usually placed torpedoes before he returned to his train. The conductor understood that after torpedoes are exploded a train is required to move with caution until the next signal which displays clear is reached.

Flagman Albert, of Extra 4834, stated that when his train departed from Silver Spring he placed one torpedo on the eastward track. When Extra 4834 stopped at Takoma Park the rear end was about 6 or 10 car lengths west of signal E-6-24. He alighted just before the train stopped, proceeded to the rear and placed two torpedoes on the rail. His train was at Takoma Park about 10 minutes and it started to leave at 2:30 p. m. He boarded the caboose and rode to Lamond where his train stopped at 2:32 p. m. As he was occupied with other duties within the caboose, he did not proceed promptly to the rear to provide flag protection. When his duties within the caboose were completed he alighted and stood about one or two car lengths to the rear of the caboose for several minutes. He observed Extra 4444 as it rounded the curve under the overhead bridge 4,837 feet west of the point where his caboose stood. He could see that signal E-6-24 was displaying stop-and-proceed and expected the following train

to stop at that signal. When he saw Extra 4444 pass the signal he started toward that train and waved his red flag. He heard the engine exhausting as though the reverse lever was in position for backward motion. When he became aware that a collision was imminent he ran to his caboose to save his personal property. The collision occurred at 2:55 p. m., at which time the weather was clear. He was last examined on the operating rules on April 19, 1939. He understood the requirements of Rule 99. He said that he failed to protect the rear of his train properly. He said he does not depend upon automatic signals to assist in providing protection; however, if this had been manual-block territory, or territory where there was no block system, he would have gone a greater distance to the rear.

Fireman Duffy, of Extra 4444, stated that at Brunswick a terminal air-brake test was made and the brakes were reported as functioning properly. En route between Brunswick and the point where the accident occurred the engineman appeared to be normal and alert. The fireman called all signal indications and the engineman replied. As his train was approaching the point where the accident occurred the speed was about 50 miles per hour. Signal E-7-30 displayed an approach indication; he called its indication to the engineman, who replied and then closed the throttle. From a distance of about 2,100 feet west of signal E-6-24, the fireman observed that it displayed stop-and-proceed, which was called by the front brakeman, the engineman, and himself. The engineman made a heavy brake-pipe reduction, which was not released; about 10 car lengths west of signal E-6-24 he placed the brake valve in emergency position but the train failed to stop and it passed the signal at a speed of 15 miles per hour. The fireman observed the caboose and also the flagman, who was giving stop signals from a point about 3 or 4 car lengths to the rear of the caboose. Soon afterward the engineman placed the reverse lever in position for backward motion and opened the sander valve and the throttle. The fireman said he told the engineman that their train would collide with the caboose but the engineman replied that the train would stop short of it. Fireman Duffy jumped when the engine was about 6 car lengths west of the caboose. The speed of his train was about 10 miles per hour at the time of the accident. He did not hear the explosion of any torpedoes in the vicinity of either Silver Spring or signal E-6-24. He was last examined on the operating rules in 1939. He understood that an approach indication required a train to reduce to medium speed, not exceeding 30 miles per hour, and to prepare to stop at the next signal. He was not alarmed that his train would not stop short of signal E-6-24; therefore, he did not caution the engineman to take action immediately at signal E-7-30. He was regularly assigned with the engineman involved, who, in his opinion, was alert, capable, and fully acquainted with the physical characteristics of the territory.

Front Brakeman Christian, of Extra 4444, stated that this was one second trip he had made over this sub-division and he was not familiar with the physical characteristics. As his train was approaching the point where the accident occurred he was in front of the fireman on the seatbox. The engineman called out approval indication of signal E-7-56 and both the front brakeman and the fireman repeated it. After the train entered the tangent east of Silver Spring two torpedoes were exploded, and the engineman acknowledged them by two short sounds of the whistle, then applied the air brakes. As the train approached signal E-6-24 speed was not materially reduced. The fireman remarked that he could not see the indication of signal E-6-24 and the brakeman was unable to distinguish it until the engine reached it; then he could see that it displayed stop-and-proceed. There was no condition of the engine, the weather or buildings near the track that could have obscured the view ahead; however, the position of the semaphore arm was difficult to determine. The brakeman expressed the opinion that the engineman applied the brakes in emergency near the stop signal, but the speed did not seem to be materially reduced until after the engineman had placed the reverse lever in position for backward motion. After the train passed the signal, he observed the caboose, and the flagman waving a red flag and standing near the caboose. When he and the fireman jumped, the speed was less than 20 miles per hour. Because of inexperience in riding engines in fast-freight service, he was unable to estimate the speed at signal E-7-56. In his opinion, action was not taken to reduce speed until the engine was near signal E-6-24. He was unable to describe the manner in which the brakes were manipulated but he thought the brakes were released when the engine was near signal E-6-24 and then immediately reapplied. He had not been examined on the operating rules. In his opinion the flagman should have proceeded a greater distance to the rear to provide proper flag protection.

Conductor Duncan, of Extra 4441, stated that at Brunswick a terminal air-brake test was made and the brakes functioned properly. Brake-pipe pressure of 70 pounds was being maintained. As his train was approaching the point where the accident occurred he was in the caboose and the speed was between 35 and 40 miles per hour. When the caboose was near Silver Spring station the engineman made a brake application, which was held about 1 or 1-1/2 minutes, when the brakes were released; the conductor heard the exhaust of the brake-cylinder pressure when the brake of the caboose released just west of the overhead bridge, which is 2,060 feet west of signal E-6-24. Based on the average length of 53 freight cars, the engine was either at signal E-6-24 or beyond it.

The speed at that time was 18 or 20 miles per hour. After a short interval a second application, which he thought was a service application, was made and the speed was gradually reduced. The speed was 5 or 6 miles per hour at the time of the accident, which occurred at 2:55 p. m. He said that, based on observation, following a service application it requires about 2 minutes fully to restore brake-pipe pressure on 53 cars.

The statement of Flagman Berger, of Extra 4444, added nothing of importance.

Harold Busser, Wholesale Manager of Good Humor Ice Cream Company, Washington, D. C., stated that he was moving eastward on Blair Road in his automobile and observed the flagman of Extra 4834 standing several feet to the rear of the caboose; then the flagman ran westward about 50 feet, frantically waving his red flag. The engine of Extra 4444 passed the station at Takoma Park at a speed of 20 or 25 miles per hour. The flagman continued to wave his red flag until Extra 4444 was about 10 car lengths from him, then he ran to the caboose, went inside momentarily and jumped off on the left side. The engineman of the following train did not appear to be excited, as he remained in his usual position in the cab and made no effort to jump until the engine turned over.

Car Inspectors Simons and Feaster, at Brunswick, stated that they tested the air brakes on the equipment of Extra 4444 before that train departed and all brakes applied and released properly.

According to data furnished by the railroad, after the occurrence of the accident the brakes of the cars of Extra 4444 were tested at Washington, D. C., and each brake applied and released properly.

The flagman of the preceding train was employed as a brakeman in 1913. The engineman of the following train was employed as a fireman in 1907 and was promoted to be an engineman in 1920.

Observations of the Commission's Inspectors

The Commission's inspectors observed that signal E-6-24 could be seen from the west a distance of 2,150 feet, and the point where the accident occurred could be seen a distance of 4,927 feet. This observation was made when the weather was cloudy. The automatic brake-valve of engine 4444 was in emergency position, the independent brake-valve was in running position, the front sander valve open, the reverse lever in position for backward motion, the throttle fully open, and the drifting-valve throttle latched open in the fourth notch.

Discussion

According to the evidence, Extra 4834 East stopped at Lamond at 2:32 p. m. to perform switching service, with its rear end standing 2,777 feet east of signal E-6-24, and at 2:55 p. m. its rear end was struck by Extra 4444 East, which was moving at a speed of 5 to 10 miles per hour.

Under the rules, when the preceding train stopped, the flagman was required to proceed to the rear immediately with flagging equipment at a distance sufficient to insure full protection. According to the flagman's statement, while his train was standing at Takoma Park he placed torpedoes on the rail about 1,000 feet west of signal E-6-24. When his train departed from Takoma Park he boarded the caboose and remained there until some time after his train had stopped at Lamond, 0.5 mile east of Takoma Park. After he completed his duties within the caboose, he stood a short distance to the rear of the caboose until Extra 4444 came into view at a point 1,014 feet west of the caboose, then started to walk westward toward the approaching train. He observed that signal E-6-24 was displaying stop-and-proceed and he expected Extra 4444 to stop at that signal. When the following train did not stop at this signal, he ran some distance toward the train and waved stop signals with a red flag, then ran back to the caboose to remove personal property. His reason for not being farther to the rear of his train was that he expected the following train to stop at signal E-6-24. He said that if his train had been operating in manual-block territory, or in a territory where no block system was in use, he would have proceeded to the rear a greater distance. According to the rules, since he was not recalled when his train departed from Takoma Park he was required to remain in that vicinity until he was recalled or relieved by another flagman. If he had remained in that vicinity his flagging signals would undoubtedly have been given at a distance sufficient for the engineman of the following train to take action in time to stop short of the train ahead.

The following train received an approach indication at the second signal to the rear of the preceding train, and the three members of the crew that were on the engine called the indication properly. This indication required the engineman to reduce the speed to not in excess of 30 miles per hour and to control the speed so that he could stop the train short of the next signal, which was 6,107 feet beyond; however, a speed of 35 to 50 miles per hour was maintained throughout the first two-thirds of the length of this block and the train passed the next signal, which was displaying stop-and-proceed, at a speed of not less than 15 miles per hour and struck the rear end of the preceding train 2,777 feet beyond. The weather was clear and the employees on the engine could see the signal that was displaying stop-and-

proceed a distance of 2,100 feet. There was some difference in the statements with regard to the brake-pipe reductions made when the following train was approaching the point where the accident occurred. According to the statement of the fireman, a brake-pipe reduction was made when the engine was about 2,100 feet west of the signal that displayed stop-and-proceed and, without releasing the brakes, the engineman moved the brake valve to emergency position when the engine was about 450 feet from the signal. According to the statements of the conductor and the front brakeman, the brakes were released when the engine was near this signal and soon afterward were reapplied. The brakes functioned properly prior to the brake-pipe reductions involved and when they were tested at Washington a short time after the accident occurred. The following train exploded two torpedoes at a point about 1,000 feet in advance of the signal displaying stop-and-proceed, or about 3,775 feet to the rear of the preceding train. The rules require that when torpedoes are exploded the train must be operated with caution until the track is seen to be clear. Why the engineman failed to comply with the indications of the two signals involved and the rule pertaining to the explosion of torpedoes is not known, as he was killed in the accident.

Cause

It is found that this accident was caused by failure to provide adequate flag protection for the preceding train and by failure properly to control the speed of the following train in compliance with signal indications.

Dated at Washington, D. C., this twenty-first day of April, 1941.

By the Commission, Commissioner Patterson.

W. P. BARTEL,

Secretary.

(SEAL)