INTERSTATE COMMERCE COMMISSION

REPORT OF THE DIRECTOR OF THE BUREAU OF SAFETY IN RE INVESTIGATION OF AN ACCIDENT WHICH OCCURRED ON THE NEW YORK CENTRAL RAILROAD AT W. 124th St., RIVERSIDE PARK, NEW YORK, N.Y., ON DECEMBER 10, 1930.

January 13, 1931.

To the Commission

On December 10, 1930, there was a rear-end collision between two freight trains on the New York Central Railroad at W. 124th St., Riverside Park, New York, N.Y., resulting in the death of one employee and the injury of two employees.

Location and method of operation

This accident occurred on the branch line of the Electric Division which extends between Spuyten Duyvil and 30th St., New York, N.Y., a distance of 10.06 miles, this is a double-track main line over which trains are operated by time-table, train orders, yard rules, and an automatic block-signal system. In the immediate vicinity of the point of accident there are five tracks, these tracks parallel the Hudson River and are designated from north to south as follows Park 5, which is a yard track; track 1, the westbound main track, track 2, the eastbound main track, section 8, a yard track, and section 8F, also a yard track. The accident occurred within yard limits, on the eastbound main track, directly opposite Grant's tomb, at a point 5.06 miles east of Spuyten Duyvil, approaching the point of accident from the west, the track is tangent for a distance of 1,685 feet, there is then a 6° curve to the right 103 feet in length, 212 feet of tangent, a 6° curve to the left 96 feet in length, 311 feet of tangent, and a 2°51' curve to the left 511 feet in length, the accident occurring on this last-mentioned curve at a point about 333 feet from its western end. The grade for eastbound trains is 0.65 per cent descending at the point of accident. Under the rules, within yard limits the main track may be used, protecting against first-class trains, second-class and extra trains must move within yard limits prepared to stop, unless the main track is seen or known to be clear.

The weather was clear at the time of the accident, which occurred about 5.15 a.m.

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Location and method of operation

This accident occurred on the branch line of the Electric Division which extends between Spuyten Duyvil and 30th St., New York, N.Y., a distance of 10.08 miles, this is a double-track main line over which trains are operated by time-table, train orders, yard rules, and an automatic block-signal system. In the immediate vicinity of the point of accident there are five tracks, these tracks parallel the Hudson River and are designated from north to south as follows. Park 5, which is a yard track, track 1, the westbound main track; track 2, the eastbound main track, section 8, a yard track, and section 6F, also a yard track. The accident occurred within yard limits, on the eastbound main track, directly opposite Grant's tomb, at a point 5.08 miles east of Spuyten Duyvil, approaching the point of accident from the west, the track is tangent for a distance of 1,685 feet, there is then a 0° curve to the right 103 feet in length, 312 feet of tangent, a 6° curve to the left 96 feet in length, 311 feet of tangent, and a 2°51' curve to the left 511 feet in length, the accident occurring on this last-mentioned curve at a point about 333 feet from its western end. The grade for eastbound trains is 0.65 per cent descending at the point of accident. Under the rules, within yard limits the main track may be used, protecting against first-class trains, second-class and extra trains must move within yard limits prepared to stop, unless the main track is seen or known to be clear.

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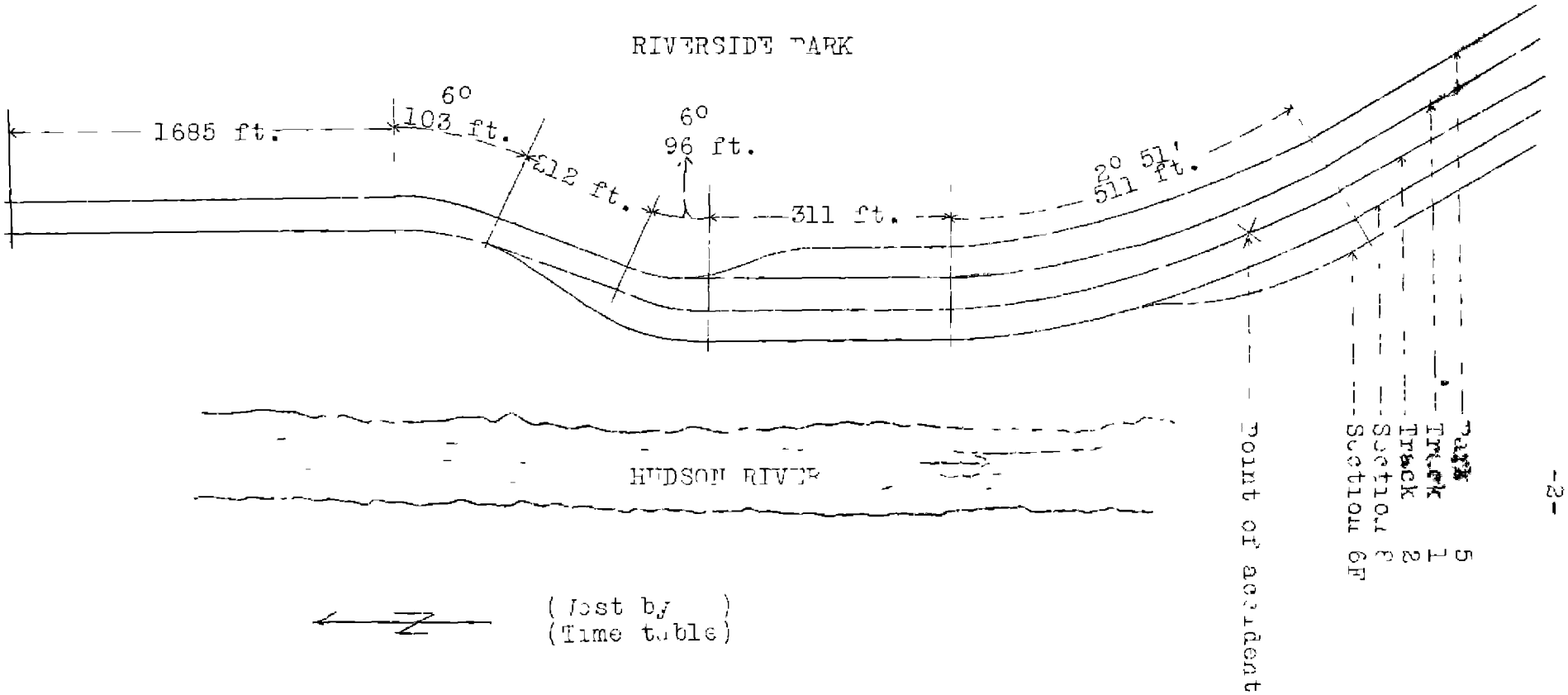

Inv. No. 1681
New York Central R.R.,
New York, N. Y.,
December 10, 1930.

Description

The trains involved in the accident were freight trains moving toward 50th St., eastbound, according to time-table directions, and were known as symbol trains KN-4 and HN-4, these trains are not scheduled in the time-table, but are scheduled by bulletin notice. The train movements leading up to the accident were as follows Extra FJ-2, engine 1544, with a train of empty cars, had stopped at 108th St., in order to put the train away, and extra 2719, a light engine towing Deisel engine 1530, came to a stop behind extra FJ-2, at 113th St. Eastbound symbol train KN-4, which consisted of 33 loaded cars and a caboose, hauled by engine 3744, and was in charge of Conductor Stahl and Engineman Card, left Spuyten Duyvil at 4.35 a.m., and came to a stop behind extra 2719, with the rear end of the caboose just west of W. 124th St. After standing at this point about one minute, or less, according to the testimony, it was struck by train HN-4.

Eastbound symbol train HN-4 consisted of 9 loaded cars and a caboose, hauled by engine 2757, and was in charge of Conductor White and Engineman Hager. This train left Spuyten Duyvil at 4.39 a.m., and collided with the rear of train KN-4 while traveling at a speed shown by the speed-recorder tape on the engine to have been 18 miles per hour,

The rear of the caboose of train KN-4 was crushed in for a distance of about 4 feet and its forward end was telescoped about a similar distance by the car ahead of it; the wreckage caught fire, the superstructure of the caboose being consumed. None of the other equipment in train KN-4 was derailed and it was pulled away from the burning caboose. Engine 2757, of train HN-4, was not derailed and was only slightly damaged. The employee killed was a brakeman of train KN-4, while the employees injured were the conductor and flagman of that train, all of whom were in the caboose at the time of the collision.

Summary of evidence

Conductor Stahl, of train KN-4, stated that his train had only been standing about 30 seconds when the accident happened. Flagman Skupen started toward the rear door of the caboose, which door was closed, and shouted a warning of danger immediately prior to the accident. The yard limits begin at W. 138th Street, but Conductor Stahl stated that his flagman had been in the habit of flagging east of W. 162nd St., even within

yard limits, when the train stopped on a curve or when weather conditions made visibility poor; on this occasion, however, it was dark, but visibility was good. Conductor Stahl also said that after leaving Spuyten Duyvil, his train stopped before reaching the yard limits, and the following train, HN-4, was flagged at that time. It also appeared from the conductor's statement that between Spuyten Duyvil and the point of accident, he looked at the markers and they were burning brightly.

Flagman Skupen, of train KN-4, stated that west of Fort Washington cut, Fort Washington being located 2.58 miles east of Spuyten Duyvil, and near eastbound automatic signal 822, his train came to a stop and then started ahead, he saw train HN-4 coming right behind and he had a lighted fusee in his hand and stood on the rear end of the caboose, holding the fusee as his train moved eastward, not deeming it necessary to drop off the fusee as the following train was so close and would have to stop at signal 822. When his train stopped at W. 158th St., he saw the reflection of the headlight of the following train just as the engine came out of Fort Washington cut, and went back about four or five car-lengths, taking red and white lanterns with him, the following train whistled an acknowledgment, moved down very slowly, and stopped about an engine-length behind the caboose, his own train started ahead just about the time the following train stopped. When his own train came to a stop at W. 124th St., he got up and looked at his watch, and when he looked around he saw the reflection of the headlight of the following train, realized that a collision was inevitable, and shouted a warning of danger, the accident occurring immediately afterwards.

Engineman Card, of train KN-4, stated that he was flagged by the flagman of light engine 2719, which was towing Deisel engine 1530, for the stop at W. 158th St. and also for the stop at W. 124th St., while Flagman MacDougall, of light engine 2719, stated that his engine in turn was stopped by the flagman of the first train, FJ-2. After the accident, Brakeman Nelson, of train HN-4, flagged the following train, BN-10.

Engineman Hager, of train HN-4, stated that he brought his train to a stop at automatic signal 822, which was displaying a stop indication. After proceeding through Fort Washington Cut, he saw the train ahead and closed up and brought his own train to a stop about nine car-lengths behind it. He saw the caboose markers, but they did not display a bright red, being dull and smoky, and he also saw the flagman on the rear end of the caboose, holding a lighted fusee. The next stop his train made was at W. 158th St., at automatic signal 822,

which was displaying a stop indication, this was at the beginning of yard limits. At this point the engineman went back to the tender, and on returning to the engine cab the indication of signal 682 had changed to yellow, and the train proceeded, passing the engine of an opposing milk train in the vicinity of W. 129th St., although the milk train in no way obscured his view ahead. Steam had been worked to about this point and then Engineman Hager shut off and permitted the train to drift down the hill. When in the vicinity of the south end of the viaduct, located at W. 135th St., approximately 1,185 feet west of the point of accident, he told Fireman Brown to look out for a caboose ahead and the fireman informed him that he did not see anything, at which time the fireman was sitting on the seat box with the side window about half open, looking ahead out of that window. Shortly afterwards, the fireman suddenly gave warning of the train ahead, about 25 feet distant, and Engineman Hager immediately applied the brakes in emergency, but it was then too late to avert the accident. Engineman Hager stated that he saw the right-hand caboose marker just prior to the accident. Engineman Hager further stated that he knew there was a train just ahead of his own train, and he expected to find it somewhere between W. 158th St. and W. 79th St., performing work. He also understood that his own train should have moved within yard limits prepared to stop unless the main track was seen or known to be clear, and said that the fireman appeared normal and alert, that signals were called to each other en route, and that he could offer no explanation as to why Fireman Brown did not see the caboose ahead, across the inside of the curve, until their own train had almost reached it.

Fireman I.M.Brown, of train HN-4, stated that he had been employed as a fireman on this railroad for 11 years and that he is a qualified engineman. After proceeding through Fort Washington cut, his train was brought to a stop and he saw the caboose markers ahead, while waiting for the indication of the automatic signal at W. 158th St. to change, he again saw the caboose markers ahead. After leaving W. 158th St. he remained on his seat box continuously, with both the side window and the storm window open, he had previously cleaned the front window and the storm window at Poughkeepsie. He did not notice the engineman shut off steam in the vicinity of where his train passed the milk train, but did notice that smoke went up and he put on the blower. Neither the smoke from his own engine nor from the milk-train engine interfered with his vision, and he knew of no reason why he should not have had a clear and unobstructed view of conditions ahead from W. 131st St.,

a distance of 1,776 feet. When going over the road at W. 125th St., the engineman told him to look out for the caboose ahead and at that time he was on his seat box looking ahead through the storm window and had an unobstructed view across the inside of the curve, for about 12 to 15 carlengths. He did not see the caboose markers ahead, however, although both of them were burning and displaying red to the rear, until they were only 50 or 75 feet distant, when he saw the left marker first, he shouted a warning of danger and heard the air brakes apply immediately, the collision occurring very shortly afterwards. Fireman Brown said that there seemed to be a narrow diffusion of the rays of the marker light, and he also stated that while it was dark, yet the weather was clear and visibility was good. Statements of Conductor White, Head Brakeman Kane and Brakemen S.G.Brown and Nelson, of train HN-4, all of whom were riding in the caboose at the time of the accident, developed nothing of additional importance, with the exception that after the accident Brakeman Nelson went back and flagged the following train, BN-10, Head Brakeman Kane said that the reason he was riding in the caboose was because his train HN-4, consisted of only eight or nine cars and he did not think that any exception would be taken to his riding there.

On the day following the accident, vision tests were conducted under weather conditions similar to those that prevailed at the time of the accident, a caboose was placed at the point of collision, with the markers burning, and an engine of the same type as the one involved was used. From a point 2,245 feet west of the point of collision the caboose markers could be seen through the front windows of the cab from both sides of the engine, although the markers did not show up strongly, appearing as points of red light, there being no spread or diffusion of the rays of light. While the lights could be readily seen when the line of vision was directly toward them, yet the light was not sufficiently strong to attract attention. Starting from this point, the engine was moved slowly towards the standing caboose, and it was found that the markers could be seen at all times from the fireman's side of the cab, appearing with steadily increasing sharpness as the intervening distance lessened, at a distance of 800 feet the markers showed up strongly, and at 400 feet the reflection from the headlight revealed the outline of the caboose. From the engineman's side, the markers could be seen the same as from the fireman's side up to a point 1,185 feet from the point of collision, however, at that point the front end of the engine cut off the view of the markers and they could not be seen again until a point 30 feet from the caboose was reached, when the marker on the right side could be seen by leaning out of the side window, the same

marker could not be seen through the front window until a point within 50 feet of the caboose was reached. The markers used in the test were of the same type as those involved in the accident, standard New York Central markers, but there is reason to believe that the test markers were in better condition. The test markers had been thoroughly cleaned just prior to making the test, and were giving the maximum light for that type of lamp, whereas, the markers involved in the accident were last cleaned on December 6, 1930, following which they had been used on two trips prior to the trip on which the accident occurred, at the time of the accident they had been burning more than 10 hours. Following the accident pieces of marker lenses were found on the track, and examination disclosed areas of incrusted dirt in the ring joints, covering but a small percentage of the surface, apparently not having the effect of reducing the power of the light more than 5 per cent. The test markers, undoubtedly, were stronger to some degree, undetermined, than the markers involved in the accident. During the time of these tests, Fireman I.M.Brown sat on the seat box in the same way and looking ahead in the same manner as at the time of the accident, and, based on the tests, he could offer no explanation as to why he should not have seen the caboose ahead in time to have prevented the accident.

Conclusions

This accident was caused primarily by the failure of Fireman I.M Brown, of train HN-4, to maintain a proper lookout on a curve to the left and to notify the engineman of the caboose ahead.

The evidence is clear that Engineman Hager told Fireman Brown to watch out around the curve, and that he was depending on the fireman to notify him promptly of any danger ahead. Fireman Brown said there was no reason why he should not have had an unobstructed view of the caboose ahead for a distance of 1,778 feet, and that he was sitting on his own seat box, looking ahead, he could offer no explanation, though, as to why he did not see the caboose in time to prevent the accident. Head Brakeman Kane should have been riding on the fireman's side of the engine cab, maintaining a proper lookout ahead, instead of being back in the caboose.

Under the rules, train HN-4 was required to be operated prepared to stop unless the main track was seen or known to be clear. The speed-recorder tape on engine 2757 showed that shortly after leaving Spuyten Duyvil at 4.33 a.m., the speed of train HN-4 was increased to 15 miles per hour and maintained at that rate for a short distance. It then dropped to 10 miles per hour and did not again exceed that figure until starting down the grade 3,550 feet from the point of accident, the speed gradually increased on this grade until it was 18 miles per hour at the time of the accident, at 5.15 p.m. The operation of train HN-4 in this manner was reasonably within the requirements of the rules, and would have enabled the engineman to stop had he received any proper warning from his fireman. The engineman's own view, even from the side window, was only 60 feet. It is believed, therefore, that in this case Engineman Hager had a right to depend on his fireman.

The employees involved were experienced men. At the time of the accident Engineman Hager and Fireman I.M.Brown had been on duty 9¾ hours, prior to which they had been off duty for 11 hours or more, the other employees involved had been on duty for 8¾ hours or less, prior to having been off duty 12 hours or more.

Respectfully submitted.

W. P. BORLAND,

Director.