

INTERSTATE COMMERCE COMMISSION

REPORT OF THE DIRECTOR OF THE BUREAU OF SAFETY IN
RE INVESTIGATION OF AN ACCIDENT WHICH OCCURRED
ON THE INTERNATIONAL RAILWAY AT ELLICOTT CREEK
ROAD, NEAR TONAWANDA, N. Y., ON OCTOBER 19, 1924.

November 6, 1924.

To the Commission:

On October 19, 1924, there was a rear-end collision between two passenger trains on the International Railway at Ellicott Creek Road, near Tonawanda, N. Y., which resulted in the death of 4 passengers, and the injury of 96 passengers and 2 employees. The investigation of this accident was made in conjunction with a representative of the Public Service Commission of New York.

Location and method of operation

This accident occurred on the Buffalo and Niagara Falls High Speed Division, an electric line extending between Buffalo and Niagara Falls, N. Y., a distance of 23.20 miles, over which trains are operated under time-table authority, train orders are not used, nor is there any block-signal system. The point of accident was at the station at Ellicott Creek Road. Approaching this point from the north there are 1,375 feet of tangent, followed by a 3° curve to the right 1,358 feet in length; the track is then tangent to the point of accident, a distance of 638 feet. The grade is 0.7 per cent descending for southbound trains for a distance of 1,740 feet, followed by 1,135 feet of level track. About 60 feet north of the point of accident is a bridge over Ellicott Creek and the framework of this bridge, which is 240 feet in length, interferes with the view when an approaching train is approximately 1,000 feet from the station, but at a point 1,500 or 2,000 feet from the station it is possible to see a train standing at the station and to determine on which track it is standing. There is no speed limit in the vicinity of the point of accident. The weather was clear at the time of the accident, which occurred at 1.10 p.m.

Description

Southbound passenger train No. 23 consisted of three cars, of wooden construction, in charge of Motor-man Rison and Conductor Fuhrman; Conductors Lynch and Triplett were on the second and third cars, respectively. (This train left Terminal Station, at Niagara Falls,

at about 12.40 or 12.45 p.m., and on rounding the curve north of the station at Ellicott Creek Road the trolley pole, which was on the third car, came off the wire and the motorman applied the air brakes, bringing his train to a stop at about 1.08 p.m., with the rear end about opposite the station, and while standing at this point the rear of the train was struck by a following passenger extra.

The following passenger extra consisted of three cars of wooden construction, in charge of Motorman Foreman and Conductor Witmer, with Conductors Exford and Cameron in charge of the second and third cars, respectively. This train left Terminal Station in the neighborhood of 12.50 p.m., made several stops en route, and collided with the rear end of train No. 23 at Ellicott Creek Road while traveling at a speed believed to have been at least 30 miles an hour.

Train No. 23 was moved ahead a distance of 40 or 50 feet as a result of the collision, and the rear car was badly damaged, while slight damage was sustained by the first two cars. The first car in the extra was telescoped at each end and the superstructure practically demolished. The head end of the second car in this train was badly damaged, while slight damage was sustained by the third car.

Summary of evidence

When running trains of two or more cars, it is the custom to use only the trolley pole on the rear car, while the conductor of that car acts as flagman. After the pole on the rear car of train No. 23 came off the wire and the motorman had applied the air brakes, Conductor Fuhrman got off, according to his statement, just before the train came to a full stop, went back to the rear of the train, saw Conductor Triplett with a red flag in his hand, and told him to go back to protect the train. He then climbed up on the roof of the rear car, found the trolley pole damaged so it could not be used, and had started to tie it down when he noticed the passenger extra approaching bridge 4, which is approximately 3,000 feet north of the point of accident. As the extra was rounding the curve Conductor Fuhrman saw that the trolley pole on the rear car of that train had also come off the wire, the speed of the train seemed to slacken, and thinking it could be brought to a stop, he continued his work of tying down the damaged pole on his own train, and he said he had just completed this work when the collision occurred. He had not heard any whistle signals sounded by the motorman of the following train and he said the last time he saw Conductor Triplett the latter was about at the northern end of the bridge over

Ellicott Creek Conductor Fuhrman had not looked at his watch until just after the occurrence of the accident, at which time it was about 1.11.30 p.m. He was not sure how long his train had been standing at the time of the accident, but estimated this period to have been from two to five minutes.

Conductor Triplett, in charge of the rear car in train No. 23, said he opened the door of the rear vestibule before the train stopped, getting off as soon as it had stopped, and then looked up at the trolley pole. Conductor Fuhrman was then at the rear car and Conductor Triplett said he stepped back into the car to obtain a red flag and while he was getting it Conductor Fuhrman told him to go back and flag, which he did as rapidly as he could go across the bridge. As he neared the northern end of the bridge he saw the passenger extra rounding curve and began waving his flag, but no attention was paid to it, and he stepped over to the Northbound track, practically at the northern end of the bridge, and the train passed him at a speed he estimated to have been 45 or 50 miles an hour. He did not notice any fire flying from the wheels. Conductor Triplett further stated that the motorman of the extra was sitting in about the usual position for a motorman, with his hand apparently on the controller, looking directly ahead and not moving in any way. He did not see any one in the vestibule with the motorman. He estimated that a period of two or three minutes had elapsed between the time at which his train stopped and the time of the accident.

Motorman Rison, of train No. 23, said that as soon as his train stopped he went back to look at the condition of the trolley pole and as he went around the rear of the train he called to Conductor Triplett to protect by flag and the latter, who had already been told by Conductor Fuhrman to protect the train and had a red flag in his hand, started back across the bridge. Motorman Rison said he turned to pull out the trolley rope, then turned toward the rear again and noticed the passenger extra approaching across bridge 4, while Conductor Triplett was running back waving his flag, near the northern end of the bridge. Motorman Rison at once started to run toward the head end of his own train with the idea of moving it out of the way if possible, but he said he had not quite reached that point when the accident occurred. He looked at his watch after the occurrence of the accident and it was then 1.10 p.m., he had not looked at it prior to this time, but estimated his train had been standing at the station about two minutes.

Conductor Lynch, of the second car in train No. 23, did not at first know the reason for the stop and by the time he had gotten off his car the motorman, as well as the conductor of the first car, had gone back to the rear of the train, the conductor going up on the roof of the rear car while the conductor of that car was starting back to flag. Conductor Lynch's further statements brought out no additional facts of importance, except that he said Conductor Furman did not have time to tie down the damaged trolley pole before the accident occurred.

Motorman Foreman, of the passenger extra, said that before leaving Terminal Station he understood that train No. 23 had departed 15 minutes previously, it being the custom for regular trains to depart every half hour, with an extra in between, making the service consist of a train each 15 minutes. After leaving Terminal Station, stops were made at four points en route. As his train was approaching Ellicott Creek Road at a speed he estimated to have been more than 60 miles an hour he did not see anything of train No. 23, or the flagman, until his own train had rounded the curve and had reached the short tangent just north of the point of accident, while the only flagman he saw was about 15 feet from the rear of train No. 23. Motorman Foreman said he applied the air brakes in emergency, then placed the motors in reverse and moved the controller around about seven or eight notches, in the meantime opening the door connecting the vestibule with the smoking compartment and calling to the people riding there to go back to the rear of the car. He did have time to acknowledge the signals of the flagman and had not left the front end of the car when the accident occurred, at which time his train was moving at a speed he thought to have been about 20 miles an hour. Motorman Foreman further stated that the air brakes had worked satisfactorily at all times.

Motorman Foreman went off duty at 2.48 a.m., October 18, after 14 hours and 30 minutes on duty, and did not again begin work until 3.24 p.m., having gotten up at 11 a.m. Beginning at 3.24 p.m., October 18, he had worked as follows:

		On duty		Off duty
		Hours	Minutes	Hours
On duty	3.24 p.m. to 12.46 a.m.	9	12	
Off	" 12.36 a.m. " 3.00 a.m.	2	24	
On	" 3.00 a.m. " 3.20 a.m.	1	20	
Off	" 3.20 a.m. " 4.47 a.m.	1	27	
On	" 4.47 a.m. " 9.15 a.m.	4	28	
Off	" 9.15 a.m. " 11.15 a.m.	2	-	
On	" 11.15 a.m. " *1.10 p.m.	1	55	
		15	55	5
				51

* Time at which accident occurred.

Motorman Foreman said that during the time he was off duty between 12.36 a. m. and 3 a. m. he had laid down on a bench and slept, leaving a call with the dispatcher. He stated, however, that he did not feel drowsy and that he had often worked longer hours.

Conductor Witwer, in charge of the first car in the extra, said his train left Terminal Station between 12.50 and 12.52 p m. Approaching the point of accident the train was moving at the highest rate of speed of which it was capable. Conductor Witwer was near the front end of the car, having gone there to be in readiness to get off and register at Falls Junction, the next station beyond Ellicott Creek Road. He said he did not see the rear end of train No. 23, or the flagman, until his own train had rounded the curve and had reached the tangent track. Conductor Witwer's statements differed from those of the motorman in that he thought the flagman was just across or north of the bridge giving stop signals. He also expressed the opinion that the rear of train No. 23 could not have been seen by the motorman while rounding the curve and apparently was of the opinion that both he and the motorman had seen the rear end of train No. 23 as soon as it was possible to have done so. Conductor Witwer also said that there was nothing in the appearance of Motorman Foreman to lead him to believe that the motorman was not in normal condition.

Conductor Exford, of the second car in the extra, said he thought the speed of his train was about 40 miles an hour when approaching the curve north of the point of accident. As the train rounded the curve he could feel that power was not being used and after the train had passed around the curve he felt the brakes being applied and then felt an emergency application; his other statements brought out no additional facts of importance.

Conductor Witwer, in charge of the third car, said the trolley pole on his car came off the wire as the train was rounding the curve, that he gave a signal but received no reply, and finally the pole came in contact with the bridge over the creek and was broken from the car; the collision occurred immediately afterwards and Conductor Witwer said he had not noticed any application of the air brakes. He was unable to estimate the speed of his train but said it was very high and he did not think it had been decreased at the time of the accident.

The cars involved in this accident weight about 30 tons, are equipped with four motors and are geared to operate at a speed of about 55 miles an hour. The automatic brake system is used on trains of two or more cars, carrying a brake-pipe pressure of 70 pounds. It appeared from the evidence that all the cars involved had been examined and tested as to their condition before being turned over to the train crews. Several inspections had been made at different times and places, on October 18, and 19, of the equipment making up the passenger extra, the last having been made by Assistant Foreman Kaufman at Cold Springs less than three hours prior to the occurrence of the accident, this inspection being made over the pit. It further appeared from the statements of Motorman Bursaw, who had operated this equipment from 3 30 a. m. to 10 30 a.m. on the day of the accident, that the air brakes were in good condition and that he had experienced no difficulty with them at any time.

Starter Lambert, on duty at Terminal Station, said trains were being operated on a 10-minute headway on account of extra traffic, that regular trains were started ahead of schedule when necessary to maintain this headway, that no written orders to this effect were issued, but that he instructed each motorman to watch out for trains ahead. Starter Lambert said train No. 25 departed at 12.40 p m., five minutes in advance of its schedule, that the following extra left at 12 50 p m., and that he told Motorman Foreman the train ahead had departed 10 minutes previously. The company does not maintain a train sheet showing the time of the arrival and departure of trains at Terminal Station and the dispatcher, who is located at Lockport, knows nothing of the movement of southbound trains from Niagara Falls until they arrive at Falls Junction, the next station south of the point of accident, and the only registering point en route.

Conclusions.

This accident was caused by the failure of Motorman Foreman, of the passenger extra, to maintain a proper lookout and to note that there was a train standing at the station at Ellicott Creek Road.

According to the statement of Motorman Foreman he did not see the rear end of train No. 25 until his own train had reached the tangent track within a few hundred feet of the point of accident. Tests made under weather conditions similar to those prevailing at the time of the accident showed that the train could have been seen from a point 1,500 feet distant. On account of the fact that the framework of the bridge over the creek interferes with the view

as a train nears the end of the curve, it is necessary for the motorman to look across the inside of the curve if he expects to see a train standing at the station in time to enable him to bring his own train to a stop. Had Motorman Foreman looked across the curve he could have seen train No. 23 and would have had ample distance within which to have stopped his train.

While the statements are not all in accord, it does not appear that the flagman of train No. 25 had gotten back a greater distance than 300 feet, but under the circumstances it can not be definitely stated that either this flagman or the other members of the crew of train No. 23 were negligent in the performance of their duty.

Time-table rule 16 reads as follows:

"Trains moving in the same direction must keep at least one mile apart in clear weather and at least five minutes apart in foggy or stormy weather and must be under full control and be prepared to stop at Stop-or-Signal stations and crossings expecting to find the preceding train stopped or running at reduced speed."

The inadequacy of a rule of this kind for the spacing of trains has been pointed out on previous occasions and it is so obvious that further comment is scarcely necessary. It is true that in daylight when trains are within sight of each other the rule may be substantially complied with, but at night, or in foggy or stormy weather, a motorman can not tell whether or not he is operating his train five minutes behind the preceding train, and this is particularly true on a line having the density of traffic on the division on which this accident occurred. There are 35 scheduled trains in each direction on Sundays, these trains leaving at half-hour intervals, while the many extras which are operated are run in between the regular trains, providing for a train approximately every 15 minutes. As a matter of fact, however, on the day of the accident trains were being started from Terminal Station southbound on an average of one train every 12 minutes, there having been 36 trains between 5.30 a.m. and 12.30 p.m., handling approximately 5,000 passengers. It is also to be noted that six three-car trains left Terrace in Buffalo, northbound, in the period between 5.02 a.m. and 5.20 a.m. on an average of one train every three minutes. The operation of crowded excursion trains at high speed under such close headway makes it a matter of imperative necessity that in case anything occurs to delay the movement of a train, every man shall do his full duty and do it quickly if an accident is to be prevented.

In fact, it is not thought that under these conditions the company is justified in depending entirely upon the vigilance of its employees for the prevention of accidents. It is recognized that traffic of this density is not a matter of every-day occurrence, and undoubtedly occurs only in the summer season, but nevertheless it warrants the installation of a block-signal system if proper provision is to be made for the movement of these trains in safety.

The record of the service performed by Motorman Foreman shows that had he completed his run he would have been on actual duty more than 18 hours out of about 22 hours. As a matter of fact, however, one of the periods during which he is shown as having been off duty was for only 1 hour and 27 minutes, and under the conditions of this short release from work, the time having been spent in waiting for excursion passengers to be turned over to the electric line by a steam railroad entering Buffalo, it is doubtful if it interfered with the continuity of his service and under such circumstances he had been on duty 17 hours and 22 minutes at the time of the accident. It is also noted that there were two other short-release periods, one of 2 hours and one of 2 hours and 24 minutes; during the latter period he laid down on a bench and went to sleep. Motorman Foreman said he did not feel drowsy; he had, however, obtained very little sleep for a period of about 27 hours and no employee can be in proper condition to assume responsible duties under such conditions. The Federal hours of service law was enacted for the express purpose of permitting railroad employees to obtain the adequate rest which is necessary for a proper performance of their duties and to safeguard the traveling public, and in this instance at least the officials of this railway are guilty of violating the spirit and intent of the law.

Had an adequate block-signal system been in use on this line, this accident probably would not have occurred; an adequate automatic train stop or train-control device would have prevented it.

The employees involved were generally experienced in interurban service. The hours of service of Motorman Foreman, of the passenger extra, has been given previously; Conductors Titner, Enford and Cameron, of the extra, had been on duty 8 hours and 43 minutes in three different periods of service, beginning at 3 a.m., previous to which they had been off duty from 7 hours and 52 minutes to about 12 hours. Motorman Rison, and Conductors Fuhrman and Lynch, of train No. 31, had been on duty 4 hours and 59 minutes, after from 11 to 13 hours off duty; Conductor Triplett had been on duty 7 hours and 50 minutes, after more than 24 hours off duty, not having worked on the previous day.

Respectfully submitted,

T.P. DORLAND, Director.