Inv-2264

INTERSTATE COMMERCE COMMISSION

WASHINGTON

REPORT OF THE DIRECTOR

BUREAU OF SAFETY

ACCIDENT ON THE

CHICAGO GREAT WESTERN RAILROAD

CLARE, ILL.

APRIL 3, 1938.

INVESTIGATION NO. 2264

SUMMARY

Inv-2264

Railroad:	Chicago Great Western	
Date:	April 3, 1938.	
Location:	Clare, Ill.	
Kind of accident:	Head-end collision	
Trains involved:	Passenger	: Freight
Train numbers:	1	: 54
Engine numbers:	735	: 879
Consist:	4 cars	: 52 cars and caboose
Speed:	Standing	: 5-10 m.p.h.
Track:	Tangent; 0.53 percent ascending east-bound	
Weather:	Clear	
Time:	10:00 or 10:01 p.m.	
Casualties:	18 injured	
Cause:	Failure of an inferior train to clear the time of a superior train and to furnish flag protection; failure of the superior train to stop short of block signal displaying stop indication.	

To the Commission:

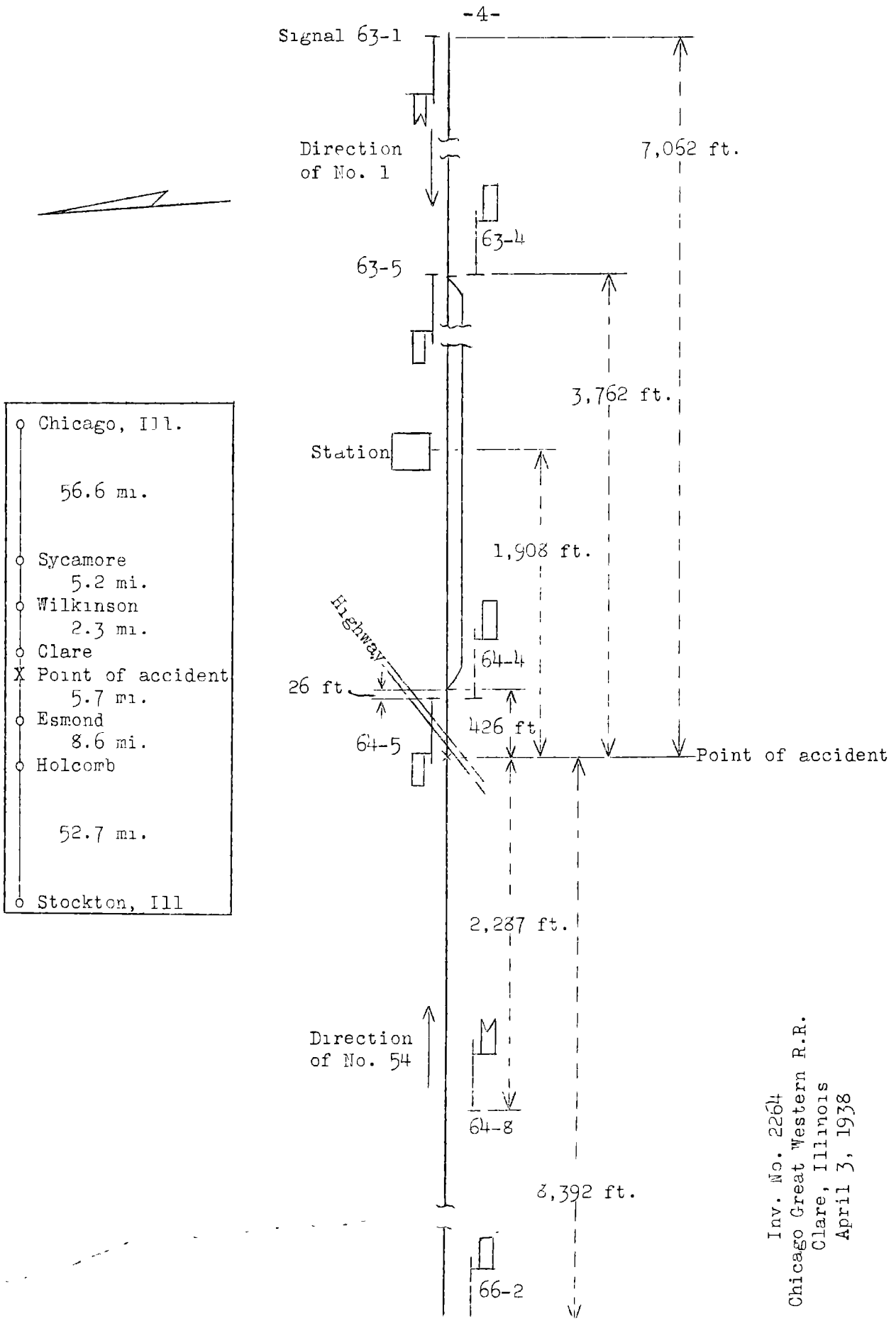
On April 3, 1938, there was a head-end collision between a passenger train and a freight train on the Chicago Great Western Railroad at Clare, Ill., which resulted in the injury of 12 passengers, 1 mail clerk, 1 express messenger, 2 Pullman employees and 2 railroad employees.

Location and method of operation

This accident occurred on the First District, Illinois Division, which extends between Stockton and Chicago, Ill., a distance of 151.1 miles. In the vicinity of the point of accident this is a single-track line over which trains are operated by timetable, train orders and an automatic block-signal system. The accident occurred at a point 426 feet west of the west switch of the siding at Clare, or 1,908 feet west of the station. Approaching this point from the west the track is tangent for more than 8 miles, and this tangent extends eastward for an additional distance of approximately 4 miles. The grade for east-bound trains is slightly ascending for more than 2 miles, with a maximum gradient of 0.8 percent; this is followed by descending grade varying from 0.01 to 0.96 percent, for a distance of 7,500 feet, and then ascending grade, varying from 0.2 to 0.82 percent, for a distance of 6,350 feet to the point of accident, and is 0.53 percent at the point of accident. Approaching from the east the grade is descending for more than 1 mile, varying from 0.06 to 0.70 percent.

The siding at Clare is 5,293 feet in length, and parallels the main track on the south.

The automatic block-signal system is the overlap system, consisting of home signals at station sidings, distant signals approaching stations, and intermediate signals between stations. The signals are of the 2-position upper-quadrant, semaphore type, approach lighted; night indications of distant signals are yellow for approach home signal with caution, and green for proceed; night indications of home signals are red for stop and green for proceed. The signals governing west-bound movements are distant signal 63-1, home signal 63-5 and home signal 64-5, located 7,062 feet, 5,762 feet, and 400 feet, respectively, east of the point of accident. Intermediate signal 66-2 and distant signal 64-8, governing east-bound movements are located 8,392 feet and 2,287 feet respectively west of the point of accident; eastward home signal 64-4 is located 26 feet west of the west switch of the siding at Clare.



Inv. No. 2264
Chicago Great Western R.R.
Clare, Illinois
April 3, 1938

The maximum authorized speed for passenger trains is 60 miles per hour and for freight trains 45 miles per hour.

Rule 87 reads as follows:

> An inferior train must keep out of the way of opposing superior trains and failing to clear the main track by the time required by rule must be protected as prescribed by rule 99.

Rule 39 reads in part:

> At meeting points between trains of different classes the inferior train must take the siding and clear the superior train at least five minutes, and must pull into the siding when practicable.

Rule 27 reads in part:

> A signal imperfectly displayed, or the absence of a signal at a place where a signal is usually shown, must be regarded as the most restrictive indication that can be given by that signal, ***.

Instructions under example 4 relating to time orders, Form "E", reads as follows:

> The train, or trains, named must not pass the designated points before the times given. Other trains receiving the order are required to run with respect to the time specified at the designated points or any intermediate station where schedule time is earlier than the time specified in the order as before required to run with respect to the schedule time of the train, or trains, named.

The weather was clear at the time of the accident, which occurred at 10:00 or 10:01 p.m.

Description

No. 54, an east-bound freight train, consisted of 52 loaded cars and a caboose, hauled by engine 879, and was in charge of Conductor Shortell and Engineman Stocker. This train departed from Stockton, 67 miles from Clare, at 7:30 p.m., according to the train sheet, 1 hour 10 minutes late, and arrived at Holcomb, 14.3 miles from Clare, at 9:19 p.m. A brake beam was repaired at this point, and the crew received a clearance card and a copy of train order No. 60, Form 19, reading:

No. 1 eng 735 wait at Wilkinson until nine fifty eight 9 58 p m for No 54 eng 879

No. 54 departed from Holcomb the last open office, at 9:36 p.m., passed the distant signal at Clare displaying a caution indication, and on approaching the west siding-switch it collided with No. 1 while traveling at a speed estimated to have been between 5 and 10 miles per hour.

No. 1, a west-bound passenger train, consisted of one combination mail and baggage car, one baggage car, one coach and one Pullman cafe-sleeping car, all of all-steel construction with the exception of the baggage car which was a steel-underframe car, hauled by engine 735, and was in charge of Conductor Maloney and Engineman Sheffer. This train departed from Chicago, 64.1 miles from Clare, at 8:15 p.m., according to the train sheet, on time. At Sycamore, the last open office, 7.5 miles from Clare, the crew received a copy of train order No. 60, Form 19, as quoted above. No. 1 left Sycamore at 9:50 p.m., 7 minutes late, passed Wilkinson at 9:58 p.m., according to the statements of the crew, passed the home signal at the east end of Clare siding displaying a proceed indication, passed home signal 64-5 near the west switch of the siding, displaying a stop indication, and had just been stopped when it was struck by No. 54.

Train No. 1 was shoved back a distance of about 190 feet; none of the equipment in either train was derailed except the lead truck of engine 735 of No. 1. The front end of engine 735, the buffer between the engine and tender, and the draft gear at the rear end of the tender were badly damaged. The front end of engine 879 of No. 54 was also badly damaged. The employees injured were the conductor and the flagman of No. 1.

Summary of evidence

Engineman Stocker, of No. 54, stated that he started from Holcomb about 9:33 p.m. and that it was about 9:36 p.m. when the caboose passed the station. Passing through Esmond, 5.7 miles from Clare, he looked at his watch and it was 9:47 p.m.; figuring 10 minutes running time from Esmond to Clare he thought he could reach the west switch at Clare before No. 1 would leave Wilkinson. He realized that he would not be in the clear by 9:58, but he expected to provide flag protection. He was figuring that No. 1 would not be due at Clare until 9:58 plus the running time from Wilkinson to Clare. He was anxious to get to Sycamore, 7.5 miles beyond Clare, because if he had to stay at Esmond he would be delayed 30 minutes. Going over the top of the hill about 2½ miles from Clare, he saw No. 1 approaching around the curve east

of Wilkinson. He looked at his watch and as it was not quite 9:54 he still thought he had enough time to reach Clare. He was operating his train at a speed of about 45 or 50 miles per hour when he made the first brake-pipe reduction just west of the distant signal which was displaying a caution indication denoting that No. 1 was close. At that time the headlight of No. 1 was blinked several times, and he answered by blinking his headlight. Had there been a brakeman at the switch he would have understood this to mean that the switch was lined for his train to enter the siding, but as he did not see a brakeman, he made a second brake-pipe reduction, drawing off about 15 pounds in the two reductions, and reducing the speed to about 10 or 12 miles per hour. He said that he was going to make a good stop at the west siding-switch; he could see the red indication of the home signal at intervals, but not steadily on account of the glare of the headlight of No. 1. Shortly after making the second reduction, the approaching headlight became brighter, but he did not realize that a collision was imminent until the headlight of No. 1 was shut off from view by the front end of his engine; he then made an emergency application of the air brakes. He estimated the speed of his train to have been from 5 to 8 miles per hour at the time of the accident. Engineman Stocker further stated that he had a good running train, with one of the best engines on the road, and carried full steam pressure; the brake-pipe pressure registered 72 pounds, and the brakes functioned properly en route. He had been informed by the crew that handled the train just before he took charge that the cab lights were very dim but they appeared to him to be satisfactory. The headlight switch was in bright position; the headlight was not as bright as some, but its reflection carried the prescribed distance. The visibility was very good on the night of the accident. He had registered his watch before leaving Stockton and compared time with his conductor and fireman; it was approximately the same as the conductor's and about 8 or 9 seconds fast with the fireman's watch. He did not know the time when the collision occurred.

The statements of Fireman Friddle, of No. 54, corroborated those of the engineman with regard to time of passing various points, the speed of the train, and the brake applications. He thought that they would make a good stop at the west switch, and while he realized that they would delay No. 1, he expected that train to stop at the west switch; nothing was said about providing flag protection. He jumped from the engine about 2 or 3 car lengths from the point of accident, and estimated the speed of his train to have been 8 or 10 miles per hour at the time of the accident. He further stated that he did not have a clear understanding regarding the time No. 1 was due at Clare under the wait order.

Head Brakeman Payton, of No. 54, stated that he rode in the engine cab out of Holcomb for the purpose of reading the train orders and to be in position to provide flag protection if necessary. He was on the deck of the engine cab and heard the engineman say something to the fireman about water. He later saw the engineman reach up and blink his headlight which lead him to believe that No. 1 was at the west switch. He did not look out ahead and was not aware of anything wrong until he saw the fireman jump from the gangway. He understood that under the wait order his train had until 9:58 to clear at Wilkinson.

Conductor Shortell, of No. 54, stated that his watch was about 10 seconds fast when he compared and registered it at Oelwein, and it was also 10 seconds fast with Engineman Stocker's watch when they compared time at Stockton. After picking up the orders on leaving Holcomb he looked at his watch and it was 9:35 p.m. On receiving train order No. 60 he figured that as No. 1 could not reach Clare before 10:00 p.m., his train could reach the west switch at Clare, but would not get into clear before the arrival of No. 1, and he was depending on his engineman to send out a flagman, and also upon No. 1 stopping at the signal. He understood that the rules required the inferior train to clear the superior train at least 5 minutes, which meant in this case that his train should have been into clear at Clare at 9:53, but because of the straight track and good visibility, he did not feel there was any risk in proceeding. His caboose passed the station at Esmond at 9:47 p.m. and after tipping over the hill just west of Clare he looked at his watch again and it was 9:56 p.m. He could see the reflection of the headlight of No. 1; he saw it being blinked twice and the headlight on his own engine was blinked once. When he was about one mile from the home signal he saw its red indication and he knew that No. 1 was west of the westward distant signal east of Clare. He estimated the speed of his train to have been about 45 miles per hour when the first application of the air brakes was made, and the speed had been reduced to about 10 miles per hour when the accident occurred. He observed the headlight on his engine at Stockton and noted that it was in good condition. After the accident he observed the indication of the westward signal at the west switch at Clare and found that it was displaying a stop indication; he made this observation from a point about 10 car lengths west of the east switch. Immediately after the collision he noted that it was 10:00 p.m.

Flagman Welch, of No. 54, stated that he and the conductor agreed that their time was short to go to Clare for No. 1, but they thought they could make it. He observed the headlight on No. 1 being blinked three times.

Engineman Sheffer, of No. 1, stated that the air brakes were tested before leaving their initial terminal and they functioned properly en route. He registered his watch and compared time with his fireman and conductor. His train passed Wilkinson at 9:53 p.m., and as No. 54 was not there he expected that it would stay at Esmond, since the siding at Clare held only 50 cars. Approaching Clare the home signal at the east switch displayed a clear indication, and shortly after passing the east siding-switch he saw in the distance a dim headlight which he thought was a light engine on the siding. He did not think that it was No. 54 because he had received a clear indication at the home signal, and also because No. 54 would not have any right on the main track without flag protection. When he was 300 or 400 feet east of the station, he saw the red indication of signal 64-5, located at the west siding-switch, and he then realized that the headlight was some distance beyond. At that time the speed of his train was between 55 and 58 miles per hour, and he made a 15-pound brake-pipe reduction. After passing the station he realized that he was not going to stop short of the switch and he placed the brake valve in emergency position but did not get the emergency effect. He thought his train stopped about 4 car lengths beyond the west switch and had been standing from 10 to 15 seconds when the collision occurred. He was unable to release the brakes in time to start a back-up movement. Engineman Sheffer also stated that the headlight of an automobile which was standing south of the tracks on a highway just west of the west switch, may have prevented him from seeing signal 64-5 sooner than he did, especially since the light on this signal was a poor light. He did not at any time blink his headlight and he did not see the headlight on No. 54 being blinked. His engine was stoker fired and he has known of instances of stoker engines being shut off suddenly when smoke drifting in front of the headlight would cause the appearance of the headlight being blinked. The wind was from the south, but not very strong, and he did not think there was a possibility of the smoke drifting down over the headlight. He stated that when block-signal indications were obscured by fog or from other causes it was customary to run with the expectation of stopping as soon after the indication became visible as possible in the event of an unfavorable indication. In this case, however, he thought he still had time to stop at the signal when the indication became visible. He gave the time of the accident as 10:01 p.m.

Fireman Green, of No. 1, stated that his engine was about 3 car lengths east of the station when he first saw the red indication of signal 64-5 and called it to the engineman. He thought the engineman made two service applications of the air brakes as the second application did not sound like an emergency application. When he first saw the reflection of the headlight of No. 54 it appeared to be at Esmond; he later saw that it was

on the east side of the hill; the headlight was not bright but it appeared to him to be burning with the switch in the dim position. He jumped off the engine just after passing over the road crossing, and at that time the speed of his train was about 20 miles per hour. The engine, tender and first two cars passed him and his train had just stopped, approximately 6 car lengths beyond the west switch, when No. 54 struck it. He estimated the speed of No. 54 to have been about 15 miles per hour. Fireman Green further stated that the light on signal 64-5 was not a bright red light, but he did not think that the automobile standing at the crossing interfered with his vision to any extent. The headlight on his own engine was not blinked at any time.

Conductor Maloney, of No. 1, stated his train passed Wilkinson at 9:58 and that just prior to the accident he felt an application of the air brakes; it was his thought that his train was going to saw by No. 54. He thought his train was moving at the time of the impact.

Flagman Randall, of No. 1, stated that shortly after passing the east switch at Clare he felt the application of the air brakes and it was also his opinion that they would saw by No. 54. He thought the train was moving very slowly at the time of the impact.

Signal Maintainer Gustafson stated that he arrived at the scene of accident soon after its occurrence; he found all the signals involved displaying their most restrictive indications. He immediately checked all the signal circuits and found them entirely free of grounds. While the wreckage was being cleared and when the trains started to move he watched the signals and found that the proper indications were displayed at all times. He made a second check after the trains departed and found that there were no grounds, and that all signals worked properly.

Supervisor of Telegraph and Signals Klass stated that on the evening following the accident the light on westward signal 64-5, located at the west switch at Clare, was checked and found to be somewhat out of line and did not show as well as the other lights, but it could been seen from the east switch at Clare, a distance of 5,376 feet.

Information furnished by the railroad company showed that on the arrival of engine 879, of No. 54, at Oelwein roundhouse on April 3, Electrician Reisner checked the headlight generator and light equipment on the engine and found that the equipment was working satisfactorily. The headlights on both engines were destroyed as a result of the accident.

Coach Mechanic Sailer stated that he made an air brake test of the cars in No. 1 at Chicago before its departure on the day of the accident and the brakes on all the cars were working properly. Car Inspector Gabryel made an air brake test after the engine had been attached and he found all the brakes working properly.

Discussion

The evidence indicates that all of the members of the crew of No. 54 read and understood train order No. 60 requiring No. 1 to wait at Wilkinson until 9:58 p.m. for their train, and they were fully aware that their train was being operated on short time to Clare. The train passed Esmond, 5.7 miles from Clare and the last point at which they could have cleared for No. 1, at 9:47 p.m., which gave them only 6 minutes to reach Clare and properly clear No. 1. The crew figured, however, on using 10 minutes to reach the west switch at Clare and then providing flag protection. As No. 54 approached Clare, No. 1 was seen approaching, the distant signal displayed a caution indication and the home signal a stop indication, and the engineman made two brake-pipe reductions with the intention of bringing the train to a stop at the west switch. The engineman, the fireman, the conductor and the flagman, of No. 54 stated that the headlight of No. 1 was blinked several times, which led them to believe that No. 1 was at the switch or would stop clear of the switch. The engineman of No. 1, however, stated that at no time did he blink his headlight nor did he see the headlight of No. 54 being blinked, and his statement was corroborated by that of Fireman Green.

Engineman Sheffer, of No. 1 was operating his train at a speed of 55 or 58 miles per hour, and shortly after passing the east siding-switch at Clare he saw a dim headlight ahead, but did not see the red indication of signal 64-5 until he was about 1,800 feet from the signal. He then made a service application of the air brakes but when he realized that he was not going to stop short of the switch he placed the brake valve in the emergency position, but did not obtain the emergency effect.

On the evening following the accident, signal 64-5 was inspected and although the light was found to be slightly out of line it could be seen from the east siding switch, a distance of 3,376 feet; however, had Engineman Sheffer operated his train in compliance with the terms of Rule 27 he would have stopped short of signal 64-5 and the accident might have been averted.

The statements of the various employees involved indicate that there is a lack of proper understanding with regard to

application of the rules, and the observance of, and obedience to, signal indications.

Conclusion

This accident was caused by the failure of an inferior train to clear the time of a superior train and to furnish flag protection as required by the rules, and the failure of the superior train to be stopped short of a block signal displaying a stop indication.

Respectfully submitted,

W. J. PATTERSON,

Director.