Inv-2306

INTERSTATE COMMERCE COMMISSION

WASHINGTON

REPORT OF THE DIRECTOR

BUREAU OF SAFETY

ACCIDENT ON THE

CHICAGO, ROCK ISLAND & PACIFIC RAILWAY

AND THE

CHICAGO, BURLINGTON & QUINCY RAILROAD

COUNCIL BLUFFS, IOWA

NOVEMBER 6, 1938

INVESTIGATION NO. 2306

SUMMARY

Inv-2306

Railroads:	Chicago, Rock Island & Pacific	: Chicago, Burlington & Quincy
Date:	November 6, 1938	
Location:	Council Bluffs, Iowa	
Kind of accident:	Side collision	
Trains involved:	C.R.I. & P. freight	: C.B. & Q. passenger
Train numbers:	Extra 2699	: No. 20
Engine numbers:	C.R.I. & P. 2699	: C.B. & Q. 2943
Consist:	6 cars, caboose	: 4 cars
Speed:	7-10 m.p.h.	: 15-17 m.p.h.
Operation:	Timetable and train orders; stop boards at railroad grade crossing	
Track:	Both roads single track at crossing; tangent and practically level	
Weather:	Cloudy and light snow	
Time:	9:20 a. m.	
Casualties:	10 injured.	
Cause:	Failure to maintain proper lookout and to operate both trains under proper control prepared to stop at railroad crossing at grade.	

To the Commission:

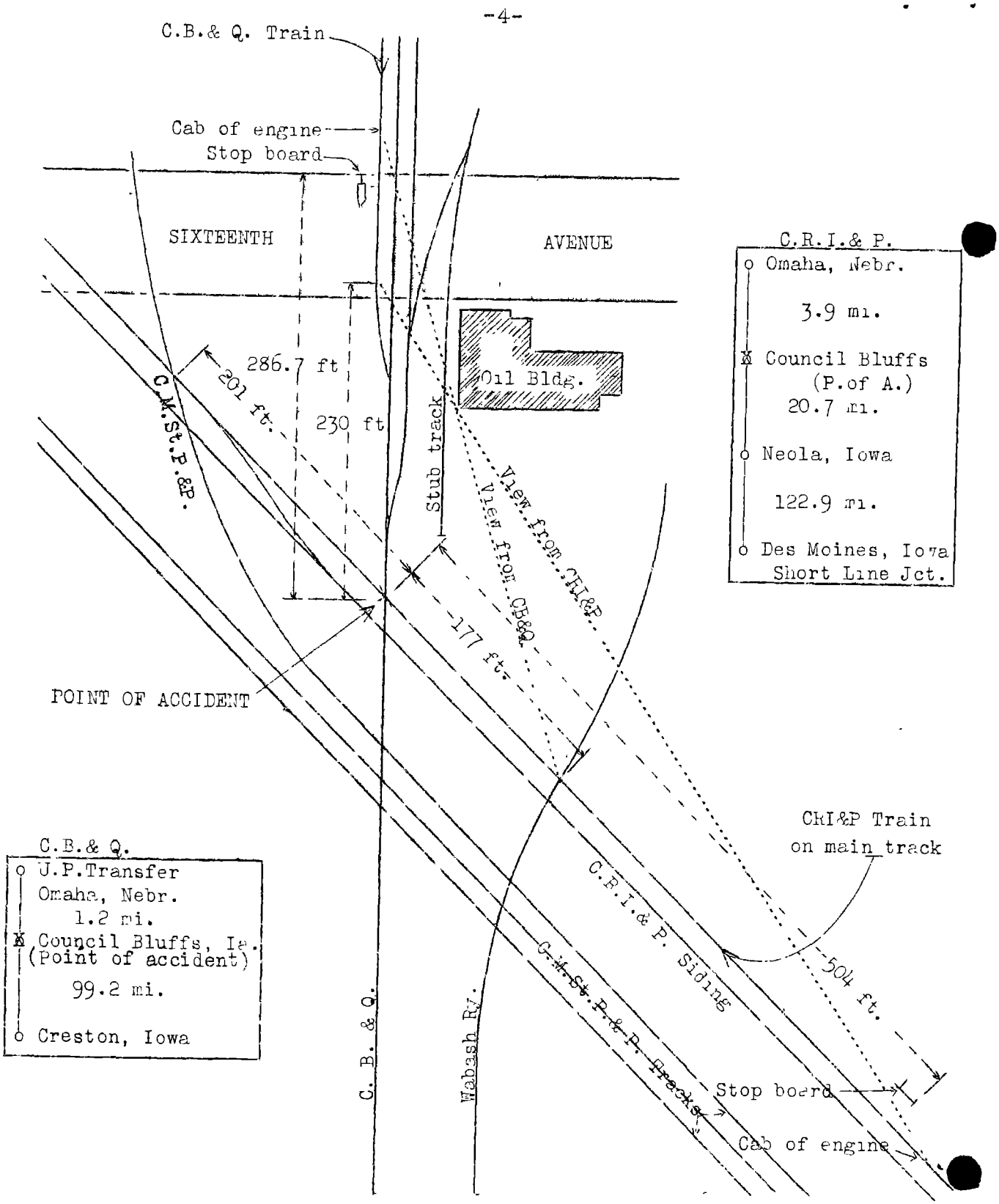
On November 6, 1938, there was a side collision between a freight train of the Chicago, Rock Island & Pacific Railway and a passenger train of the Chicago, Burlington & Quincy Railroad at the intersection of their tracks at Council Bluffs, Iowa, which resulted in the injury of one passenger, one express messenger-baggageman, four dining car employees, three employees on duty and one employee off duty. This accident was investigated in conjunction with the Iowa State Commerce Commission.

Location and Method of Operation

This accident occurred within yard limits at the intersection of the track of the Chicago, Rock Island & Pacific Railway, hereinafter referred to as the C.R.I. & P., and the track of the Chicago, Burlington & Quincy Railroad, hereinafter referred to as the C.B. & Q. Council Bluffs is located on that part of the Des Moines Division of the C.R.I. & P. designated as Sub-Division 5 which extends between Short Line Junction, Des Moines, Iowa, and Omaha, Nebr., a distance of 147.5 miles, and also on that part of the Ottumwa and Creston Divisions of the C.B. & Q. designated as the Omaha-Creston Sub-division which extends between U.P. Transfer, Omaha, and Creston, Iowa, a distance of 100.4 miles.

At the crossing involved, known as Main Street crossing and located near Sixteenth Avenue, both roads are single-track lines; this crossing is not protected by interlocking. East of the crossing, the C.R.I. & P. is a single-track line over which trains are operated by timetable, train orders and an automatic block-signal system, the end-of-block sign being located 907 feet east of the intersection, while north of the crossing the C.B.& Q. is a double-track line to a point 81 feet north of the intersection and single-track from that point southward, trains being operated by timetable, train orders and an automatic block-signal system, except for a dead section in the track circuit 173.4 feet in length which embraces five railroad crossings, hereinafter mentioned, including the crossing involved. The C.B. & Q. extends north and south, and the C.R.I. & P. extends northwest and southeast and crosses the C.B. & Q. at an angle of 45°40'. Timetable directions on both roads are east and west, but compass directions are used in this report.

Approaching from the east on the C.R.I. & P., the track is tangent 1,175 feet to the crossing involved and a considerable distance beyond; the grade is 0.13 percent descending westward.



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C.R.I.& P. Ry.
and the
C.B.& Q. R.R.
Council Bluffs
Iowa
Nov. 6, 1938.

Approaching from the north on the C.B. & Q., the track is tangent 1,463 feet to the crossing involved and a considerable distance beyond; the grade is practically level.

Stop boards are located on all four sides of the crossing. The C.R.I. & P. stop board involved is located 504 feet east of the crossing involved and about 16 feet north of the track; this stop board governs westward movements over three railroad intersections, namely, the Wabash, C. B. & Q. and the C.M.St.P. & P. crossings; the Wabash and C.M.St.P. &P. crossings are industry tracks located 177 feet east and 201 feet west, respectively, of the C.B. & Q. crossing involved. The C.R.I. & P. depot is located 558 feet west of the crossing involved, on the north side of the track. A siding parallels the C.R.I. & P. main track on the south from a point 1,502 feet east of the crossing involved, and extends west thereof and into the train yard at Council Bluffs. Under the C.R.I. & P. timetable rules, there is a maximum speed restriction of 10 miles per hour over railroad crossings not protected by interlocking.

The C.B. & Q. stop board involved is located 286.7 feet north of the crossing involved and about 8 feet west of the track; this stop board governs southward movements over five railroad intersections, namely, the C.R.I. & P. main track involved, the C.R.I. & P. siding, and three parallel tracks of the C.M.St.P.& P. located about 75 feet south of the C.R.I. & P. siding. The C.B. & Q. depot is located 1,933 feet north of the crossing involved and on the east side of the tracks. Yard tracks parallel the C.B. & Q. main track on each side to within 15 feet of the C.R.I. & P. crossing. Sixteenth Avenue crosses the tracks immediately south of the C.B. & Q. stop board.

The view was restricted by a building located in the northeast angle of the crossing; the south side of this building was 134 feet north of the crossing. From the engineman's side of the cab of a westward C.R.I. & P. engine standing at the C.R.I. & P. stop board, the view across to the C.B. & Q. was restricted to a distance of 230 feet north of the crossing. From the fireman's side of the cab of a southward C.B. & Q. engine standing at the C.B. & Q. stop board, the view across to the C.R.I. & P. was restricted to a distance of 177 feet. A stub track was located between the building and the C.B. & Q. and extended about 100 feet south of the building.

Rules 14 (b) and 98, and General Order No. 44 of the C.R.I. & P. provide as follows:

14 (b) - - (Two long blasts of the engine whistle.) *** to be given by engineman before crossing a non-interlocked railway crossing at grade.

98. Trains must approach *** railroad crossings at grade *** prepared to stop ***. Where required by rule or law, trains must stop.

All trains approaching railroad crossings at grade, not protected by interlocking signals, will stop at point designated by stop board, and not proceed until track is clear ***.

At railroad crossings where trains are required to stop and the view in each direction is not clear for at least 800 feet, a trainman must precede the train and give signal from the crossing if safe to proceed.

General Order No. 44, Des Moines, July 6, 1937. Sub-Division 5 Council Bluffs, Wabash-C.B. & Q.-Milwaukee. Since removal of oil storage and other buildings north of main track, Council Bluffs, it is not necessary for trainmen to precede train and give signals from crossing in compliance with Rule 98.

Rule 98 of the C.B. & Q. provides as follows:

98. Trains must approach *** railroad crossings at grade *** prepared to stop ***. Where required by law, trains must stop.

The Iowa State Law relative to unprotected grade crossings provides as follows:

*** all trains run upon any steam railroad in this state which intersects and crosses any other railroad upon the same level, shall be brought to a full stop at a distance of not less than two hundred nor more than eight hundred feet from the point of intersection or crossing, before such intersection or crossing is passed.

The weather was cloudy and it was snowing lightly at the time of the accident, which occurred about 9:20 a. m.

Description

Extra 2699, a west-bound C.R.I. & P. freight train, consisted of six cars and a caboose, hauled by engine 2699, and was in charge of Conductor Dinges and Engineman Freel. This train left Short Line Junction at 7 p. m., November 5, according to the train sheet, performed work en route, passed Neola, 122.9 miles distant, at 8:51 a. m., November 6, approached Council Bluffs, 20.7 miles beyond, stopped at the C.R.I. & P. stop board, sounded two blasts on the engine whistle, proceeded and attained a speed estimated at 7 to 10 miles per hour, and on reaching the crossing involved the right front end of the engine was struck by C.B. & Q. train No. 20.

No. 20, a C.B. & Q. east-bound passenger train, consisted of one combination mail-baggage car, one combination passenger-baggage car, one coach and one diner-parlor car, in the order named, hauled by engine 2943, and was in charge of Conductor McAuliff and Engineman Hunt. The first three cars were of all-steel construction, and the rear car was a steel-underframe car with wood superstructure and steel plating. This train left Omaha at 9 a. m., according to the train sheet, on time, left U. P. Transfer, 2.7 miles beyond, at 9:13 a. m., three minutes late, left Council Bluffs at 9:17 a. m., three minutes late, stopped at the C.B. & Q. stop board, sounded two blasts on the engine whistle, proceeded and attained a speed estimated to have been from 15 to 17 miles per hour, and on reaching the crossing involved it collided with Extra 2699.

Both engines were derailed but remained practically upright; neither tender was derailed. C.R.I. & P. engine 2699 passed in front of C.B. & Q. engine 2943 and dragged it to the west a short distance, resulting in the right side of C.R.I. & P. engine 2699 being raked about half the length of its boiler, while the appurtenances and part of the front end of C.B. & Q. engine 2943 were torn off. The employees injured were the C.R.I. & P. fireman, the head brakeman and the flagman.

Summary of Evidence

Engineman Freel, of Extra 2699, stated that he stopped his train at the C.R.I. & P. stop board at Council Bluffs, turned on the bell ringer and sounded the whistle. The fireman said, "All clear over here"; the engineman replied, "All clear over here", and the train proceeded. After passing over the Wabash crossing he neither saw nor heard any train and he did not hear an engine whistle in this locality. He then looked westward preparatory

to passing over the third or C.M. St.P. & P. crossing. When he was very close to the C.B. & Q.-C.R.I. & P. crossing, however, at which time his own engine was working a little steam, he saw the C.B. & Q. train approaching about 100 feet from the crossing at a speed of about 15 miles per hour or probably faster. He immediately applied the air brakes in emergency when about 40 feet from the crossing, at which time the speed of his own train was about 10 miles per hour, and he at first thought that his own train might stop before reaching the crossing, but it did not, and the pilot of his own engine just got over the C. B. & Q. rails at the crossing when it was struck; he saw the C. B. & Q. engine strike his own engine at the pilot beam. He said that he made every effort to protect his own train and estimated that he would have been able to stop within 30 additional feet. The air brakes had been tested and functioned properly. Under the Federal hours-of-service law his 16-hour limit of duty expired at 9:30 a. m., and the accident occurred about 9:20 a. m., but he said that his train would only have had to travel about four city blocks beyond the crossing to the yard office where he would have been relieved.

Fireman Douglas, of Extra 2690, gave testimony similar to that of his engineman as to what transpired at the C.R.I. & P. stop board. He was on the left seat box and from that position he did not have a view of conditions to the right of the engine. The speed was about 10 miles per hour and his first knowledge of anything wrong was when the engineman applied the air brakes and within a very few seconds the impact occurred. He did not hear any whistle signals sounded other than those given by his own engine at the stop board. He thought that the C. B. & Q. engine collided with his own engine as he did not see the C.B. & Q. engine in front of his own engine.

Conductor Dinges, Head Brakeman Baker and Flagman Arendts, of Extra 2699, were in the caboose. Their statements were to the effect that when the stop was made at the C.R.I. & P. stop board two blasts of their engine whistle was sounded and immediately thereafter the train proceeded and attained a speed of between 7 and 10 miles per hour. The head brakeman was in the cupola on the right side and he saw the exhaust from the C.B. & Q. engine when it slipped; he thought it was a switch engine. At that time it was about 150 feet north of the crossing, while his own engine was about 40 feet east of the crossing. When he first determined that the other engine was a passenger engine it was working steam and traveling about 15 miles per hour. The air brakes on his train were applied in emergency before the impact occurred. The conductor and the flagman were at the desk and they were not aware of anything wrong until their train stopped suddenly. Sufficient time remained in their 16-hour periods to tie up without violating the hours-of-service law, provided the

accident had not occurred. The speed restrictions were not exceeded. The air brakes were tested and functioned properly. After the accident the conductor and the head brakeman went forward; it appeared to them that the C.B. & Q. engine ran into the C.R.I. & P. engine.

Engineman Hunt, of No. 20, stated that his train left the depot at Council Bluffs and proceeded to the C.B. & Q. stop board and stopped about 15 or 20 feet north thereof. His fireman, who was sitting on the left seat box, sounded the whistle by means of the whistle valve located on the left side, for the crossing involved and called, "All clear over here." The engineman looked to the right or west and all was clear on that side. He accepted the fireman's word that the way was clear from the left or east; he opened the throttle, attained a speed of 15 to 17 miles per hour, and was not aware of anything wrong until the accident occurred, at which time he was working steam hard; no air brake application was made. He did not pay any attention to the fireman's actions after being told that everything was clear on the left side, and he did not receive any warning of danger from the fireman after that time. He was on the right side of the cab, maintaining a lookout ahead through the clear vision window, and did not see anything of the C.R.I. & P. train prior to the accident. This was his regular fireman, who had been on this run for a number of years. There was another engineman on the C.B. & Q. engine, qualifying for the run, and this engineman stood beside him but did not block his view of the fireman. The air brakes had been tested and functioned properly. His engine was in good condition and it did not slip at any time between the stop board and the point of accident, as he was using sand. He could not say whether his own engine struck the C.R.I. & P. engine, but after the accident it looked to him as though the pilot beams of both engines had come together. It was his understanding that after stopping at the stop board the first engine to sound the whistle obtained the crossing; also, provided the other train had not gotten close a passenger train would proceed over the crossing first. After coming to a stop for a railroad crossing it was his responsibility until passing over the crossing to maintain a lookout ahead from his own or right side of the engine cab to determine whether anything was coming from that direction, and he depended entirely on the fireman to inform him as to conditions on the left side of the engine. He said that with the train he had and at the speed it was traveling he could have stopped within a distance of 5 feet.

Fireman Carl, of No. 20, stated that when his train stopped north of the C.B. & Q. stop board he sounded two blasts on the engine whistle, and called, "All clear", to the engineman. The train then proceeded and he looked ahead again from the left side and saw the crossing. All was clear as far as he could see. After moving about 25 feet he got down and put about 10 scoopfuls of coal on the fire, and just as he returned to his seat box the accident occurred, at which time his train was moving at a speed of about 15 miles per hour. He did not see anything of the C.R.I. & P. train prior to the accident and consequently did not give the engineman any warning of conditions on the left side. He said that he was not relieved of the responsibility of maintaining a proper lookout from the left side for conflicting train movements after making the stop for the stop board, and it was his duty to remain on the fireman's side and watch for trains coming from the east until his own train had passed over the crossing. In this instance, however, he felt that it was safe to get down and put in a fire while approaching the crossing when he could see that far and he thought he would get back up before reaching the crossing. Before making the stop at the C.B. & Q. stop board his practice is to listen and depend upon hearing the whistle of any other engine as to whether it whistles first for the crossing and if he does not hear any such whistle he then obtains the crossing. On this occasion he did not hear the C.R.I. & P. engine sound the whistle. He was throughly familiar with the territory at the crossing involved.

Engineman Bird, of the C.B. & Q., was making this trip on engine 2943 in order to qualify to run in that territory. He stood back of and alongside Engineman Hunt. He was looking ahead out of the window for a railroad crossing beyond and after leaving the stop board he did not pay any attention to the actions of the fireman, and did not see or hear anything of the approach of the C.R.I. & P. train, his first knowledge of anything wrong being when the impact occurred. After the accident he looked at the engines and he thought that they reached the crossing simultaneously. He said that the engineman personally observes whether any train is approaching from the right or west side of the engine at the crossing, and depends entirely on the fireman to warn him of any approaching train from the left or east side. After a stop is made at the stop board and the crossing is seen to be clear the whistle is sounded, and the engine that whistles first for the crossing then proceeds over the crossing first. It was the fireman's duty to maintain a proper lookout until the crossing was passed. He did not hear the C.R.I. & P. engine whistle sounded on this occasion.

Conductor McAuliff and Brakeman Phillips, of No. 20, were not aware of anything wrong prior to the accident. They did not see or hear anything of the C.R.I. & P. train, and they estimated the speed of their own train to have been about 15 miles per hour when the impact occurred. They did not know which engine reached the crossing first. They said that whoever stops and whistles first has the right to the crossing.

Yardmaster Christensen, of the C.B. & Q. at Council Bluffs, stated that no cars extended south of the oil building on the stub track, located between the C.B. & Q. track and the building, that would further obscure the view across the northeast angle of the crossing of the tracks involved.

Train Rules Examiner McHugh, of the C.R.I. & P., stated that prior to removal of oil storage and other buildings north of the C.R.I. & P. main track, flag protection had been afforded over the crossing. After removal of the building and tanks, however, the flag requirements were removed, saying that the other railroads did not afford flag protection there. Provided it is known that a passenger train of another line is coming, then the first-class train is given preference at a railroad grade crossing.

Observations of the Commission's Inspectors

Engines were placed at the stop boards on the respective railroads to test the range of vision as observed from the cabs of the locomotives, and it was found that neither engine could be seen. The C.B. & Q. engine was then moved forward a distance of 56.7 feet before it could be seen from the cab of the C.R.I.& P. engine standing at the C.R.I. & P. stop board. The C.B. & Q. engine was then returned to the C.B. & Q. stop board and the C.R.I.& P.engine was moved forward to a point 244.3 feet east of the crossing before the C.B. & Q. engine was observed.

Discussion

According to the evidence Extra 2699 traveled a distance of 504 feet from its stop board to the crossing at a maximum estimated speed of 10 miles per hour, and No. 20 traveled a distance of 286.7 feet from its stop board to the crossing at a maximum estimated speed of 17 miles per hour. The two engines reached the crossing practically simultaneously. It is obvious, therefore, that Extra 2699 proceeded from its stop board first. The damage to the engines, and the manner in which they stopped, with the C.R.I. & P. engine having passed in front of and torn off the appurtenances and part of the front end of the C.B. & Q. engine, and the front end of the C.B. & Q. engine having raked the right side and stopped against the boiler of the C.R.I. & P. engine, indicated that the C.R.I. & P. engine reached the crossing slightly before the C.B. & Q. engine.

Two members of the C.R.I. & P. train crew saw the C.B. & Q. train before the accident. On reaching a point about 40 feet east of the crossing, at which time the speed of his own train was 7 to 10 miles per hour, the engineman of the C.R.I. & P. train saw the C.B. & Q. train about 100 feet north of the crossing, traveling about 15 miles per hour or faster, and working steam. The head brakeman, who was in the caboose, was the only other member to observe the approach of the C.B. & Q. train. Although the engineman immediately applied the air brakes in emergency, it was then too late to avert the accident.

When C.B. & Q. No. 20 stopped at its stop board, the fireman called to the enginemen that all was clear; the fireman then sounded two blasts on the engine whistle from the valve located on the left side of the cab. The engineman depended entirely on the fireman to inform him as to conditions on the left side. The train then proceeded and after moving about 25 feet the fireman began to work on the fire. The engineman did not pay any attention to the fireman's actions after proceeding from the stop board, but widened the throttle and worked steam hard, attaining a speed of about 15 to 17 miles per hour. No one on the C. B. & Q. train saw the approaching C.R.I. & P. train prior to the accident; no one heard the engine whistle sounded by the C.R.I. & P. engine at the time it stopped for the C.R.I. & P. stop board and whistled for the crossing. The members of the crew were not aware of anything wrong until the collision occurred, and no air brake application was made.

With regard to the crossing involved, Rule 98 of the C.R.I. & P. was in part modified by a general order which in effect became the same as Rule 98 of the C.B. & Q., that is, that trains must approach railroad crossings at grade prepared to stop. If either train had been approaching this crossing prepared to stop and if the crew of either train had maintained a proper lookout it is probable the accident would not have occurred.

The investigation disclosed that it was the practice for trains of both roads to stop at their respective stop boards, look ahead and see whether the crossing was clear, sound two blasts on the engine whistle and for engine crews to depend upon hearing as to whether or not any other train had whistled for the crossing, and the engine which first sounded the whistle for the crossing was entitled to proceed. It appeared that after merely looking ahead from the stop board and determining that the crossing was clear, the trains of each road would proceed, but in this case a proper lookout was not maintained across to the tracks of the other roads for approaching trains. A train standing at the stop board on one railroad was not visible from a train standing at the stop board on the other railroad.

Statements of traffic density furnished by each railroad relative to train movements over this particular crossing, covering 30-day periods prior to the accident, showed that on the C. B. & Q. there were 351 passenger, 106 freight and 630 yard movements, both directions included, or a total of 1,087 C.B.&Q. movements, while on the C.R.I. & P. there were 187 passenger, 235 freight and 120 switching movements, both directions included, or a total of 542 C.R.I. & P. movements. The total movement for both roads over this particular crossing was 1,629 movements, or a daily average of 54.3 movements. This does not take into consideration the traffic over the various crossings of other railroads in this immediate vicinity. Traffic of such density warrants greater protection than is provided at this crossing in order to prevent the recurrence of similar accidents.

Conclusion

This accident was caused by failure of both trains to maintain a proper lookout and to proceed under proper control prepared to stop when approaching a railroad crossing at grade.

Recommendation

It is recommended that responsible officers give immediate consideration to the necessity for increased protection for train movements over the crossing involved in this accident.

Respectfully submitted,

W. J. PATTERSON,

Director.