

INTERSTATE COMMERCE COMMISSION

REPORT OF THE DIRECTOR OF THE BUREAU OF SAFETY IN RE
INVESTIGATION OF AN ACCIDENT WHICH OCCURRED ON
THE BALTIMORE & OHIO RAILROAD AT GAITHERSBURG, MD.,
ON MARCH 14, 1925.

July 7, 1925.

To the Commission.

On March 14, 1925, a passenger train on the Baltimore & Ohio Railroad struck an automobile on Frederick Road at a grade crossing at Gaithersburg, Md., this accident resulting in the death of two ladies who were occupants of the automobile. This investigation was undertaken after the Commission had received a communication from a member of the faculty of Hood College, Frederick, Md., of which faculty the ladies who were killed in this accident were also members; in this communication the view was expressed that this accident was due to the fact that the watchmen stationed at that crossing used a green instead of a red light as a stop signal for highway traffic.

At the grade crossing where this accident occurred the highway runs approximately north and south and the railroad east and west. The automobile involved was northbound while the train was running westward. Approaching the crossing from the south the highway is straight and the view of the crossing unobstructed for a distance of approximately a third of a mile. Trees and buildings to the right of the highway obstruct the view of the railroad track toward the east, although at various points on the highway within a thousand feet of the crossing parts of the railroad east of the crossing can be seen, and for a distance of about 150 feet from the crossing there is a clear view from the highway of the railroad track eastward from the crossing practically to the station some 1500 feet distant. Approaching the crossing from the east, the track is tangent from a point some distance east of the station. At this crossing the railroad is a double-track line, and the highway is an oil-bound macadam road, both the track and the highway being maintained in good condition.

The crossing is protected by a signal located nearly 200 feet south of the crossing, which gives a red flashing signal as a warning to motorists that they are approaching a railroad crossing, also by two red flash-light signals, located approximately 30 feet from the nearest track, which are lighted alternately, giving the aspect of a swinging red light, whenever a train is approaching the crossing, these latter signals

are controlled automatically by track circuits, the control circuits extending to a point approximately a mile east of the crossing. A watchman is also stationed at this crossing between the hours of 7.00 a.m. and 9.00 p.m., who during the daytime displays a stop disc held in his hand whenever it is not safe for highway traffic to proceed over the crossing, and after dark uses a green lantern for the purpose of giving signals to govern highway traffic.

The accident occurred at about 6.30 p.m.; at that time the weather was partly cloudy, twilight was falling and lights were beginning to be used.

The train involved was local passenger train No. 37, consisting of a locomotive and four cars, with Conductor Deavers and Engineman Pumphrey in charge. This train left Washington at 5.45 p.m., made a station stop at Gaithersburg at 6.29 p.m., departed about half a minute later, and had attained a speed of 25 or 30 miles per hour when the accident occurred.

The automobile was proceeding northward on the highway and when approaching the crossing was running at a speed of 25 or 30 miles an hour; it was driven past both flash-light signals, which were operating properly, past the crossing watchman who was standing on the highway giving stop signals with his green lantern, and upon the track directly in front of the approaching train. The locomotive pilot struck the automobile, a Ford coupe, just in front of the right rear wheel, and threw it to the north side of the track. One of the occupants of the car was instantly killed while the other died shortly afterward without regaining consciousness. The automobile was badly damaged.

According to statements made by members of the train crew, the electric headlight of the locomotive was burning brightly, the bell was ringing and a crossing whistle-signal was sounded a short distance east of the crossing. The engineman did not see the automobile before the accident occurred as it was approaching from the opposite side. The fireman was sitting on his seat-box and saw the automobile approaching the crossing at a speed of 25 or 30 miles an hour and saw the crossing watchman signalling the driver to stop, the automobile was then about 300 feet from the crossing and the train was about the same distance from the crossing. The automobile continued to approach the crossing without reducing speed, however, and when he realized it was going upon the crossing ahead of the train the fireman called a warning to the engineman who immediately applied the brakes in emergency, and the train came to a stop with the rear car on the crossing. Other members of the train crew knew nothing of the accident until the brakes were applied in emergency.

The crossing watchman stated that the flash-light signals were operating properly and he saw the locomotive headlight before the train stopped at the station; he took his position on the highway at the crossing before the train left the station and he heard the crossing whistle signal shortly after the train left the station. At about that time he saw the automobile approaching. As it neared the crossing he began to wave his green lantern, and as it continued to approach he waved his lantern more violently and shouted to the driver not to try to pass over the crossing. Instead of stopping, however, the speed seemed to be increased, and he stepped to one side to avoid being struck by the automobile.

Investigation disclosed that the driver of the automobile was a young woman about 30 years of age. She owned the car and had had several years' experience as an automobile driver. Earlier in the day she and her companion had driven from Frederick to Washington to do some shopping, on the return trip they stopped to call upon a friend in the suburbs of Washington, who said they did not appear particularly concerned about getting back quickly and there was nothing to suggest that the driver was not in proper mental and physical condition to operate her car safely.

On the day following the accident an inquest was held, the verdict of the coroner's jury being that the occupants of the automobile "came to their death by their own negligence."

It is apparent from the investigation that this accident was caused by the automobile being driven upon the crossing directly in front of the approaching train. While the reason for the automobile being driven upon the crossing is not a matter almost wholly of conjecture as both of the occupants were killed, possible reasons have been given careful study with a view of arriving at some conclusion in respect to means which might be taken to prevent the occurrence of similar accidents in future.

One theory which was advanced was that the driver stepped on the accelerator, by mistake, instead of the brake, or that the brake or other part of the mechanism became inoperative and prevented the driver from properly controlling the car. There was no evidence to support this theory. Eye-witnesses of the accident stated that the driver did not appear to be making any effort to stop or reduce speed, and while the automobile was badly damaged examination subsequent to the accident did not indicate that prior to the accident there was any defect in the brakes or other mechanism.

Another theory was that the driver was racing the train in an attempt to cross the track before the train reached the crossing. The statement of the crossing watchman in a measure supports this theory as he said that in spite of the stop signals which were displayed the speed of the automobile as it neared the crossing seemed to increase. It appears scarcely credible that the driver of this automobile was unaware of the danger of proceeding upon the crossing, as she had first the warning of the flashing signal indicating that she was approaching a railroad crossing, secondly, the warning of the flashing red signals at the crossing indicating that a train was approaching, thirdly, the warning of the crossing watchman who was standing in the roadway signalling and calling to her not to cross over, and lastly there was a clear view of the approaching train for ample distance from the crossing to enable her to stop. Furthermore, there was another highway paralleling the railroad into which she could have diverted the automobile to avoid proceeding upon the crossing if for any reason she had been unable to stop. If it were not for the frequent occurrence of accidents of this character which are apparently caused by automobile drivers attempting to cross directly in front of approaching trains, it would be almost equally incredible that the driver of this automobile would proceed upon the crossing had she fully realized the circumstances, she had reached an age of maturity and attained a position of responsibility, she had had considerable experience as an automobile driver, and her reputation as a safe driver was good, she had driven over this crossing on previous occasions and no doubt was sufficiently familiar with the location and nature of this crossing to realize that she should, as a matter of ordinary and reasonable precaution, approach the crossing with her car under complete control. So far as could be learned, there was no reason for haste in arriving at her destination, and certainly nothing which warranted the risk of attempting to cross the track in front of the approaching train.

The third theory which has been advanced is that the signals which were displayed at this crossing were misleading or confusing. There were two red signals of the flashing-light type, one on the highway indicating the approach to a crossing and the other at the crossing indicating that a train was also approaching. There was nothing confusing about these two signals, although it was noted that the former, because of its location, somewhat obscured the view of the latter, and these two signals should have given ample warning to the driver of this automobile to be prepared to stop short of the crossing. However, the stop signals of the crossing watchman were given by waving a green light and the suggestion has been made that because green lights are in many places used to signal street and highway traffic to "GO" the driver of the automobile involved in this accident may have mis-

interpreted the crossing watchman's signals and understood that he was waving for her to come on. Whether or not there is any foundation in fact for this theory is wholly a matter of conjecture, but even assuming that it was well founded, the fact remains that the approaching train came into full view when the automobile was far enough back to be stopped before reaching the crossing. The Baltimore & Ohio Railroad Company's instructions to highway crossing watchmen provide in part as follows.

(b) When a train is approaching, Watchmen must place themselves in the middle of the highway near the track and will display a stop disc by day, holding it in an upright position so that the flat side will plainly appear to any person approaching on the highway. By night, or when disc cannot be plainly seen, they will take the same position and protect the crossing with a GREEN lamp.

The use of green lights for this purpose has been the practice on the Baltimore & Ohio and other railroads for many years, the reason for the use of green instead of red no doubt being that the engineer of an approaching train would be likely to mistake a signal to highway traffic, if given by means of a red light, as a signal for him to stop his train. However, since green lights have come into somewhat general use as proceed signals for street and highway traffic, protests have been received against the continued use of green lights for giving stop signals at grade crossings. Within the past year or two efforts, state and national in their scope, have been made to establish uniformity in signals, colors and signs which are used to govern street and highway traffic, the use of green for stop is not in conformity with general practice nor with recommendations of conferences at which the subject of uniformity in traffic signals has been considered.

In discussing the matter with State authorities it was learned that the Public Utilities Commission had protested against the continued use of green lanterns by crossing watchmen for giving stop signals governing highway traffic, and the Baltimore & Ohio Railroad Company has under consideration a revision of the rules and instructions relating to highway crossing protection, that the State Highway Commission proposes to examine this crossing for the purpose, if found desirable, of requiring the re-location of the approach flash-light signal so as not to obscure the view of the flash-light signal at the crossing, and that the state law provides as follows:

"Whenever the several railroads of this State, operated by steam, shall cross any public highway at grade outside the corporate limits of cities, and any such highway shall be believed to be of such a character as to render the passage of locomotives and trains thereon dangerous to life and property, it shall be the duty of the commissioners of the county in which such point of crossing shall be located, to notify the company owning or operating the railroad at such point, by serving a written notice on the superintendent or other agent of such railroad company in said county, that the said county commissioners will, thirty days thereafter, consider the necessity of further protection against danger at said crossing, and if, after ^{the} expiration of said thirty days said county commissioners, or a majority of them, shall determine that such protection is necessary, they shall notify said railroad company through its superintendent or ticket agent in said county, that within sixty days thereafter, said railroad company shall either place a flagman at said crossing, whose duty it shall be to give timely notice to all persons using said crossing, of the approach of all locomotives or trains, or a system of electric alarm bells, to give such notice at the approach of trains, or shall erect safety-gates at said crossing, which shall be closed not less than one-half minute before the passage and during the passage of every railroad train or locomotive across said highway, or shall change the said grade crossing so as to pass said highway with an under or over grade crossing, in which case neither a flagman nor safety-gate shall be required." (1925 Edition Maryland Code, Article 23, Sec. 240, page 732).

We were informed that the protection afforded at the crossing where this accident occurred is not at present under consideration by the county commissioners.

A large amount of traffic passes over this crossing. All of the through passenger trains between eastern and western points are operated over this line, and in addition there are several freight and local passenger trains, both through and local trains are operated over this crossing at relatively high rates of speed. The highway is one of the principal automobile routes between Washington and western and northern points.

From this investigation the following conclusions have been reached:

(1) That the flash-light signals located at the crossing to indicate the approach of a train provide a distinctive aspect which is easily recognized.

(2) That other signals if used should be so located as not to interfere with the clear view of the flash-light signals at the crossing.

(3) That a crossing watchman when using a stop disc in daytime adds somewhat to the protection afforded by the automatic flash-light signals at this crossing, but when using a green light adds little or nothing to and quite possibly detracts from, the protection afforded by the automatic signals.

(4) That the character and amount of traffic over this crossing warrant serious consideration of grade separation at this point.

(5) That unless and until grades are separated the additional protection which would be afforded by crossing gates is desirable.

Respectfully,

W. P. BOPLAND,

Director,
Bureau of Safety.