

INTERSTATE COMMERCE COMMISSION  
WASHINGTON

---

REPORT OF THE DIRECTOR  
BUREAU OF SAFETY

---

ACCIDENT ON THE  
PENNSYLVANIA RAILROAD

---

LAWSONHAM, PA.

---

JULY 21, 1938.

---

INVESTIGATION NO. 2282

SUMMARY

Inv-2282

Railroad: Pennsylvania  
Date: July 21, 1938  
Location: Lawsonham, Pa.  
Kind of accident: Head-end collision  
Trains involved: Work : Freight (PR-1)  
Train numbers: Work Extra 3297 : Extra 190 West  
Engine numbers: 3297 : 190  
Consist: 13 cars, caboose : 13 cars, caboose  
Speed: 8-10 m.p.h. : Standing  
Operation: Timetable, train orders and manual  
block-signal system  
Track: Single; sharp compound curve; side-  
hill out; grade slightly descending  
westward  
Weather: Clear  
Time: 4:57 p. m.  
Casualties: 1 injured  
Cause: Work extra made movement within work-  
ing limits without proper flag pro-  
tection

August 25, 1938.

To the Commission:

On July 21, 1938, there was a head-end collision between a work train and a freight train on the Pennsylvania Railroad near Lawsonham, Pa., which resulted in the injury of one employee.

#### Location and method of operation

This accident occurred on the Low Grade Branch, Renovo Division, extending between Driftwood and Red Bank, Pa., a distance of 110 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 a manual block-signal system. The accident occurred at a point 3,253 feet west of the west switch of the siding at Lawsonham. Beginning at the switch, and approaching this point from the east, there is a compound curve to the left 1,677 feet long, then 761 feet of tangent, followed by a compound curve to the right 815 feet to the point of accident, this latter curve extending for more than a mile beyond and having a maximum curvature of 90°; a curvature of 60° existed at the point of accident. The grade is slightly descending westward.

In the vicinity of the point of accident the track is laid in a side-hill cut along the north bank of Red Bank Creek, approximately 35 feet above the creek bed; the hillside, which is heavily wooded, rises approximately 500 feet above the track level. Due to the dense underbrush on the hillside, and the height of the cut on the north or inside of the curve, the view of opposing trains is limited to approximately 200 feet.

The weather was clear at the time of the accident, which occurred about 4:57 p.m.

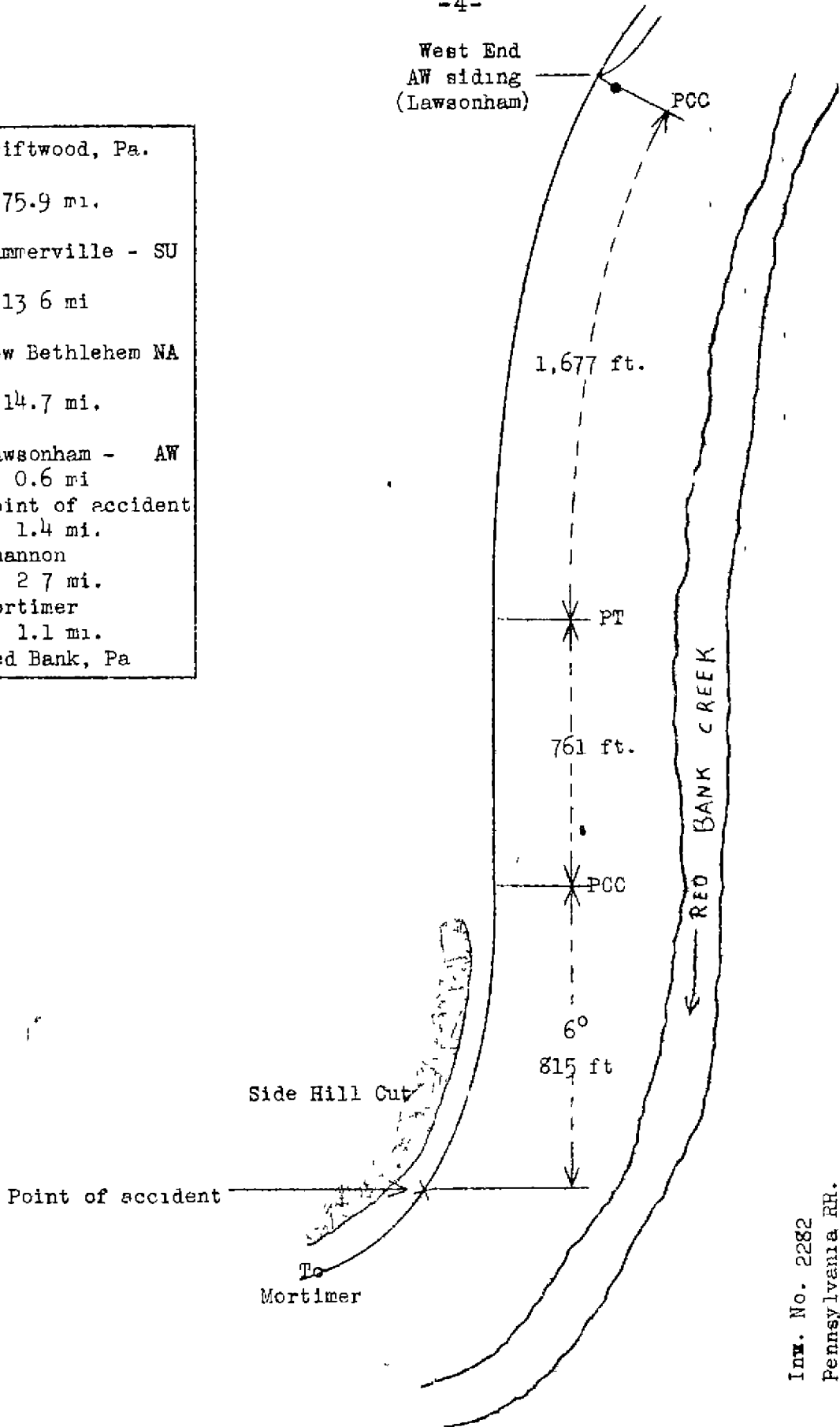
#### Description

Work Extra 3297 consisted, from east to west, of 8 cars, a caboose, engine 3297, headed east, and 5 cars, and was in charge of Conductor Hetrick and Engineman Tribbley. This crew held train order No. 65, Form 19, reading as follows:

Eng 3297 work extra 1130 eleven thirty AM  
until 501 five naught one PM between AW and Mortimer.

AW Block Station is located at Lawsonham, which is 4.7 miles east of Mortimer. Work Extra 3297 at first performed ditching, and then a slide that covered the track just west of Shannon, 2 miles west of Lawsonham, was removed about 4:30 p.m. About 4:45 p.m. this train started eastward for Lawsonham and about 4:57 p.m., while

○	Driftwood, Pa.	
		75.9 mi.
○	Summerville - SU	
		13.6 mi.
○	New Bethlehem NA	
		14.7 mi.
○	Lawsonham - AW	
		0.6 mi.
X	Point of accident	
		1.4 mi.
○	Shannon	
		2.7 mi.
○	Mortimer	
		1.1 mi.
○	Red Bank, Pa.	



Inv. No. 2282  
 Pennsylvania RR.  
 Lawsonham, Pa.  
 July 21, 1938

rounding the curve involved, at a speed of about 8 or 10 miles per hour, it collided with Extra 190 West.

Extra 190 West, symbol PR-1, a local freight train, consisted of 12 cars, a caboose, and 1 milk tank-car, in the order named, hauled by engine 190, and was in charge of Conductor Hess and Engineman Lawson. At NA Block Station, New Bethlehem, 14.7 miles east of Lawsonham, the crew received a copy of train order No. 65, previously quoted. Extra 190 West arrived at Lawsonham at 3:50 p.m. and was held at that point until 4:50 p.m., according to the train sheet, when it proceeded under a permissive block indication received from the operator at SU Block Station, Surrerville, located 28.3 miles east of Lawsonham. While rounding the curve involved the work train was observed approaching from the opposite direction; Extra 190 West was immediately brought to a stop and while standing it was struck by Work Extra 3297.

None of the equipment in either train was derailed. Engine 190 sustained slight damage, and three cars in Work Extra 3297 were damaged. The employee injured was the head brakeman of Extra 190 West.

#### Summary of evidence

Supervisor of Track Bentley stated that the work train crew reported to him at the west end of Lawsonham siding about 9:45 a.m. After doing work in the yard the supervisor advised the conductor they were ready to proceed westward and ditch on the curve west of milepost 105 located 1,076 feet west of the west end of the siding. About 11:30 a.m., the conductor obtained a train order to work between Lawsonham and Mortimer until 5:01 p.m. Flagan Starr was left at Lawsonham to protect against westward movements. Work Extra 3297 then proceeded westward and started ditching about 1,800 feet west of milepost 105, working westward, and Brakeman Crawford walked westward to protect against eastward movements. While ditching was in progress and east-bound train approached and the work train moved to Lawsonham and let it by, then returned and resumed ditching. About 2:30 p.m. Brakeman Crawford returned and reported that at Shannon coal tipple, located about  $1\frac{1}{2}$  miles west of where the work train was ditching, the track was covered by a slide about 2 feet deep which extended a distance of about two rail lengths. The supervisor then instructed the conductor to return to Lawsonham to shift the order of the equipment. On arrival at Lawsonham, the operator at New Bethlehem, located 14.7 miles east, was notified of the slide, and after getting block permission the work train proceeded westward about 2:50 p.m. and arrived at the slide about 3:10 p.m., following which 8 car loads of mud were removed. While this work was in progress Section Foreman Smyth arrived from Mortimer and attached a portable telephone to the block line at a point west of the slide. About 4 p.m., either Foreman Smyth or Brakeman Crawford called him to the portable telephone to give an estimate as to the length of time required to

clear the slide, and he left the conductor, with whom he was standing, and advised the operator at Summerville, since the office at New Bethlehem closed at 3 p.m., that the slide would be cleared about 4:30 p.m. While at the telephone, however, he did not inquire as to the location of Extra 190 and was not aware that it was at Lawsonham. About 4:30 p.m., Conductor Hetrick advised him it would be necessary to return to Lawsonham for water, and that the work order expired at 5:01 p.m. He told the conductor that as soon as the last two cars of dirt were dumped the work train would return. The conductor advised the engineman accordingly, and after the cars were dumped Brakeman Crawford went to the east end of the work train to ride the east car, and the supervisor and the conductor rode on the east platform of the caboose. The train was proceeding eastward at a speed of about 10 miles per hour when he heard an engine whistle, then felt an application of the air brakes followed by the noise and jar of the collision. Supervisor Bentley said that there was no conversation between Conductor Hetrick and himself relative to the location of Extra 190, that he did not tell Conductor Hetrick Extra 190 would wait at Lawsonham for the work train, that he did not take any responsibility in the movement of the work train or placing the flagmen, and that he expected the flagman at Lawsonham to give full protection to the work train. Supervisor Bentley also stated that the slide was reported clear of the main track by Foreman Smyth after the work train departed for Lawsonham, and by himself about 6:50 p.m. to Summerville from the west end of Lawsonham siding.

Conductor Hetrick, of Work Extra 3297, stated that under the provisions of order No. 65 it was permissible for trains to enter the working limits under permissive block-indication, and the work train was required to protect while standing or moving. Flagman Starr was stationed at Lawsonham to flag westward trains; however, the conductor did not have a definite understanding with him as to clearing trains, but verbally instructed him that the work extra would clear at Lawsonham but, if necessary or occasion so required, it could clear at Mortimer. At that time he did not expect the flagman to hold westward trains, but to permit them to enter the working limits. After the track was reported obstructed by the slide, and the work train returned to Lawsonham and was shifted, the entire situation was changed and although he did not have any conversation with the flagman he assumed that the flagman would hold all trains at Lawsonham until he heard from the work train. The conductor could not recall having had any definite understanding with his engineman as to where they were going to clear for trains, except the same kind of an understanding as was had with the flagman that the work train probably would clear for trains at Lawsonham, but if necessary at Mortimer. When the slide had been cleared up and the work train was ready to depart the conductor told the engineman that after the two cars were dumped the work train would go to Lawsonham, that it was all right to go, and that the local would be there but he did not say anything to the super-

visor to the effect that they would have to go quickly as the water was getting low. The work train departed eastward from the scene of the slide about 4:40 or 4:45 p.m., with ample time to reach Lawsonham to clear for Extra 190 before the expiration of the work order. En route the speed was about 8 or 10 miles per hour and the first the conductor knew of anything wrong was when he heard the engine whistle sounded by Extra 190; at the same time his brakeman on the front end of the leading car applied the air brakes in emergency by opening the angle cock, following which the impact occurred. The conductor said that while the supervisor was not in charge of the work train, nevertheless the supervisor was his superior, and that the conductor made the eastward movement involved without proper protection on the strength of information which he said was given him by the supervisor, that Extra 190 would remain at Lawsonham until the work train arrived there. The conductor said he assumed that the supervisor made all arrangements to hold everything at Lawsonham when the supervisor went to the telephone there at the time the work train was being shifted. The conductor stated that he was not aware that a portable telephone had been installed at the scene of the slide, while the debris was being removed, and he thought the supervisor should have informed him that a telephone had been installed. Conductor Hetrick said that the eastward movement should not have been made until a definite understanding was had with the flagman, but he assumed that the local would be held at Lawsonham until the work train arrived there, at which time he intended personally to report the slide cleared, saying that he did not suppose anybody else would report the track cleared.

Flagman Starr, of Work Extra 3297, corroborated the statement of Conductor Hetrick with respect to the provisions of order No. 65. The verbal understanding he had with the conductor was that westward trains would be permitted to enter the working limits and drive the work train in at Mortimer, and that eastward trains would be permitted to enter the working limits and drive the work train in at Lawsonham. Flagman Starr was at AW Block Station when the work train came to Lawsonham to clear for the east-bound train and also when it returned to shift the cars to go to the slide and he did not see or converse with the conductor on either of these occasions. When Extra 190 arrived he stopped it at AW Block Station; the flagman was at the west telephone booth. He said that Extra 190 had been at Lawsonham about  $1\frac{1}{2}$  hours when the telephone rang and he answered it. The person calling wanted to talk to Extra 190 saying that the slide was cleared and the train could get through. That was the first information the flagman had that the slide was cleared and he thought that some arrangement had been made to let Extra 190 through. This train received instructions over the telephone to proceed but from whom he did not know. He rode down the west end of the siding and cautioned Engineman Lawson to proceed carefully as the work train might be coming back, and Extra 190 departed about 4:55 p.m. Under the conditions the flagman did not know what kind of movements the work train was making, and he thought they might be moving either way, consequently, he cautioned the engineman so that

he would approach there safely. There was no question in his own mind but that it was all right for the train to go, otherwise he would have held it. Flagman Starr said that his conductor should have gotten in communication with him in order to have arranged for proper protection for the eastward movement.

Brakeman Crawford, of Work Extra 3297, stated that when the slide was cleared he thought the conductor had used the portable telephone and had communicated with Flagman Starr instructing him to hold westward trains at Lawsonham. Brakeman Crawford rode the east end of the leading car and the speed was about 8 or 10 miles per hour. He saw Extra 190 rounding the sharp curve from the opposite direction when it was only about three car lengths distant, and he heard an engine whistle signal which was given by that train. He immediately opened the angle cock and the brakes were applied in emergency; the impact followed immediately; however, the opposing train was stopped just prior to the impact. He said that before the slide occurred the conductor, flagman and he understood that eastward trains would drive the work train in at Lawsonham, and westward trains at Mortimer; however, no definite instructions were given by the conductor. Brakeman Crawford also said that if the conductor did not communicate with the flagman to hold west-bound trains then the brakeman should have preceded the work train to protect the eastward movement to Lawsonham.

Engineman Tribbley, of Work Extra 3297, stated that in the morning the conductor told him that the work train would clear for all trains at Lawsonham, that the flagman would be there, and these were the only instructions that the engineman received during the day from the conductor. It was the understanding of the engineman all during his tour of duty on the work extra that the flagman at Lawsonham would hold westward trains there until the work train returned. After the slide was cleared up Brakeman Crawford told him that the work train would go to Lawsonham and then the conductor informed him Extra 190, the local, would be cleared at Lawsonham. Engineman Tribbley could not see to the front end of his train with the caboose and 8 cars ahead of the engine while rounding the sharp curve. His first knowledge of anything wrong was when he heard the whistle of the opposing train, at which time the speed of his train was about 10 or 12 miles per hour, and immediately thereafter Brakeman Crawford opened the angle cock on the leading end of the forward car; then the collision occurred. The air brakes had been tested and functioned properly in making about 15 or 20 stops during the course of the day.

Statements of Fireman Nelson, of Work Extra 3297, were similar to those of Engineman Tribbley.

Engineman Lawson, of Extra 190, stated that he received a copy of work order No. 65 at New Bethlehem and he understood that under its provisions it was permissible for trains to enter the working



limits under permissive block signal, and that the work train was required to protect itself while standing or moving. He received a permissive block indication at Lawsonham at 4:30 p.m. He then moved to the west end of the siding and set off a car, after which the work train flagman told him to "take it pretty steady going down there, those fellows may be coming back." Engineman Lawson started into the working limits and moved at a speed of about 6 miles per hour. While rounding the curve he saw the work train approaching, about  $3\frac{1}{2}$  car lengths distant, whereupon he immediately applied the air brakes in emergency and his train stopped within a distance of about one car length and was standing when the collision occurred.

Statements of Conductor Hess and Brakeman Sey and Wildauer, all of whom were on the caboose, were to the effect that their train left the west end of Lawsonham about 4:55 p.m., and the accident occurred about 4:57 p.m., at which time the speed was about 6 miles per hour. They said that the work train conductor should have gotten into communication with the flagman at Lawsonham before starting the eastward movement, or flagged ahead of the work train to Lawsonham.

Train Dispatcher Dougherty stated that the slide near Shannon was reported clear at 4:50 p.m. and a notation to that effect was made by him but he did not recall who made the report to him, nor of having any conversation over the telephone with anyone concerning the work at Shannon slide prior to 4:50 p.m.

#### Discussion

Form H work order No. 65 gave engine 3297 authority to work extra 11:30 a.m., until 5:01 p.m., between Lawsonham and Mortimer. Under the provisions of the work order it was permissible to allow trains in either direction to enter the working limits under a permissive block-indication, and the work extra was required to protect itself against extras in both directions, whether standing or moving. In the morning it was planned only to do ditching work, but in the afternoon a slide occurred just west of Shannon, making it necessary for the work train to remove it. A portable telephone was installed at the slide by a track foreman. The work train conductor stationed a flagman at Lawsonham, but did not have a definite understanding with him or the engineman as to clearing trains, but said he verbally instructed the flagman and the engineman that the work extra would clear at Lawsonham, but if necessary or occasion so required it could clear at Mortimer; at that time he did not expect the flagman to hold westward trains, but to let them enter the working limits. When the slide occurred, however, the situation was changed and the work train conductor assumed that the flagman would not let any train into the working limits and that trains would be held at Lawsonham until the flagman heard from the work train. The work train returned to Lawsonham twice during the day, once about

1 p.m., when it was driven in by an eastward train, and again to shift equipment after the brakeman who went to Mortimer to protect against eastward trains reported the slide about 2:30 p.m. The conductor did not see the flagman at either time the work extra returned to Lawsonham, and said he did not know that a portable telephone had been installed at the scene of the slide while the work of removing the debris was in progress. The flagman at Lawsonham understood that westward trains would be permitted to enter the working limits and drive the work train in at Mortimer, and eastward trains would drive it in at Lawsonham. The brakeman at Mortimer had the same understanding before the slide occurred, but said that no definite instructions were given by the conductor. The engineman understood all during his tour of duty that the flagman at Lawsonham would hold westward trains there until the work train returned. The supervisor of track was with the work train and at about 4 p.m., when requested to do so, he advised the operator at Summerville as a matter of information that the slide would be cleared about 4:30 p.m., but while at the telephone the supervisor did not inquire from the operator at Summerville as to the location of Extra 190, and he was not aware that it was at Lawsonham. When the work of removing the slide was completed and the work extra was ready to depart eastward, about 4:40 or 4:45 p.m., the conductor said there was plenty of time to reach Lawsonham before the expiration of the work order at 5:01 p.m., and he permitted the eastward movement to be made on the strength of information given him by the supervisor that Extra 190 would remain at Lawsonham until the work train arrived there. He assumed that the supervisor had made arrangements over the telephone at Lawsonham to hold everything at that point at the time the work train returned to that point around 2:30 p.m. On the other hand, the supervisor asserted that he did not tell the conductor that Extra 190 would wait at Lawsonham for the work train. The slide was reported clear of the main track after the work train departed for Lawsonham.

As a result of the misunderstanding between the conductor and the other members of the work train crew, also with the supervisor of track, who was with the work train, that the local, Extra 190, would remain at Lawsonham until the work train arrived there, no protection was afforded for the eastward movement of the work extra when it started to Lawsonham about 4:45 p.m. Shortly thereafter the track foreman reported the slide cleared up, at 4:50 p.m., according to a notation in the train dispatcher's book, and about 4:55 p.m. Extra 190 departed from Lawsonham and entered the working limits under a permissive block-indication. It proceeded with caution, moving at a speed of about 6 miles per hour, prepared to stop short of train or obstruction, and when the engineman saw the leading car of Work Extra 3297 rounding the sharp curve in the side-hill cut and about  $3\frac{1}{2}$  car lengths distant, he immediately stopped his train.

The work train conductor should have had a definite understanding with all concerned as to what was intended; he should either have communicated with his flagman at Lawsonham before starting the eastward movement and made certain that his flagman would hold all west-bound trains until the work train arrived, or flagged ahead of the work train to Lawsonham.

Conclusion

This accident was caused by the work extra making a movement within working limits without proper flag protection.

Respectfully submitted,

W. J. PATTERSON

Director.

Page 1

