

INTERSTATE COMMERCE COMMISSION
WASHINGTON

REPORT OF THE DIRECTOR
BUREAU OF SAFETY

ACCIDENT ON THE
ATLANTIC COAST LINE RAILROAD

FAYETTEVILLE, N. C.

MAY 6, 1939

INVESTIGATION NO. 2349

SUMMARY

Inv-2349

Railroad: Atlantic Coast Line
Date: May 6, 1939
Location: Fayetteville, N.C.
Kind of accident: Collision
Equipment involved: Freight train : gasoline tank
truck
Train number: Extra 1668
Engine number: 1668
Consist: 70 cars and caboose : tractor hauling
tank trailer
Speed: 15-50 m. p. h. : 15-40 m. p. h.
Operation: Timetable, train orders, automatic
block-signal and train-control system
Track: Double; tangent; level
Highway: Street crosses tracks at right angles;
slight ascending grade for westward
traffic
Weather: Clear
Time: 1:32 a. m.
Casualties: 4 killed
Cause: Truck driven upon railroad crossing
at grade in front of approaching train

Inv-2349

. June 15, 1939

To the Commission:

On May 6, 1939, there was a collision between a freight train and a gasoline tank truck at a street crossing on the Atlantic Coast Line Railroad at Fayetteville, N.C., which resulted in the death of the driver of the truck and three railroad employees.

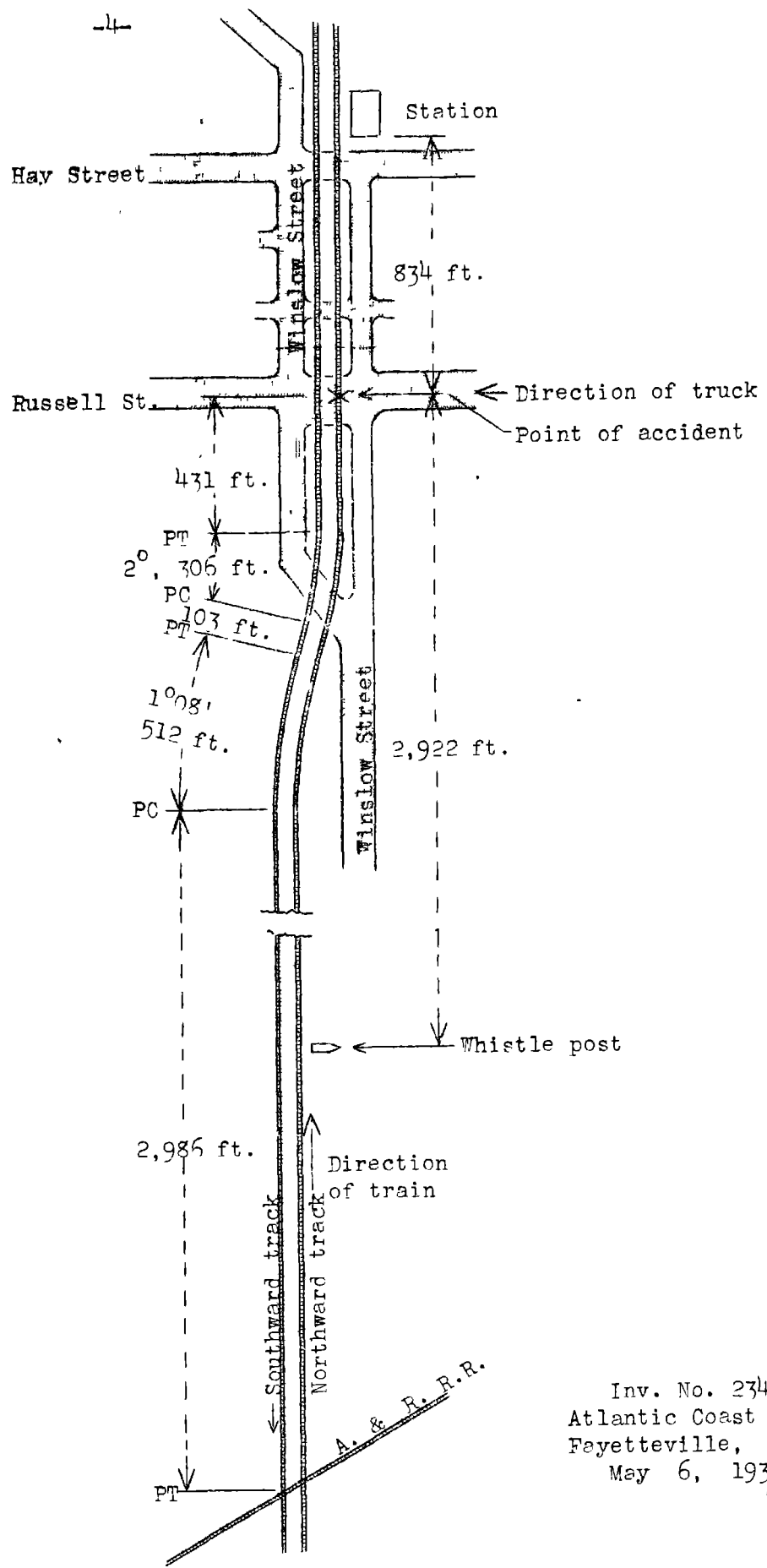
Location and Method of Operation

This accident occurred on that part of the Richmond District, Northern Division, which extends between Florence, S.C., and Rocky Mount, N.C., a distance of 172.3 miles. This is a double-track line over which trains are operated by timetable, train orders, and an automatic block-signal and automatic train-stop system. In the immediate vicinity of the point of accident the tracks are located in the middle of Winslow Street which is approximately 61 feet in width. The accident occurred on the northward track at the intersection of Winslow and Russell Streets, 834 feet south of the passenger station. Approaching from the south there is a tangent 2,986 feet in length, a 1008' curve to the right a distance of 512 feet, a tangent 103 feet in length, a 20° curve to the left a distance of 306 feet, followed by a tangent 431 feet in length to the point of accident; this tangent extends some distance beyond. The grade for north-bound trains is undulating, but is practically level at the point of accident.

Russell Street extends east and west and crosses Winslow Street at right angles; it is paved with concrete and is 40 feet in width, except that it is 79 feet in width at the point where it crosses the tracks. The two lanes of Winslow Street also are paved, each lane being 18 feet wide, but that portion of Russell Street which crosses the tracks, a distance of 25 feet, is constructed of bituminal mixture on crushed stone. Approaching the crossing the grade for west-bound vehicles is slightly ascending; the crossing is level and in good condition.

A building 35 feet by 50 feet, located in the southeast corner of the crossing, materially restricts the view toward the south of the driver of a west-bound vehicle. When the driver is from 177 to 122 feet from the center-line of the northward track he can see diagonally behind the building the headlight of an engine 245 feet south of the crossing. When at a point 25 feet from the center-line of the northward track, the driver has a

o Rocky Mount, N.C.
89.7 mi.
o Fayetteville, N.C.
X Point of accident
83.0 mi.
o Florence, S. C.



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clear view of a headlight of an approaching train a distance of 2,850 feet. No signals or warning sign of any type are installed at this crossing.

A whistle post is located 2,922 feet south of Russell Street and governs the sounding of the whistle signal for seven crossings between that point and the passenger station. Rule 14(1) of the Rules and Regulations of the Operating Department provides that approaching public crossings at grade two long and two short blasts shall be sounded on the engine whistle.

Special time-table instructions provide a maximum speed of 35 miles per hour for all trains through Fayetteville.

Section 103, of the Motor Vehicle Laws of North Carolina, establishes a speed limit of 20 miles per hour for motor vehicles in any business district, and 25 miles per hour in any residence district.

The weather was clear at the time of the accident, which occurred at 1:32 a. m.

Description

Extra 1668, a north-bound freight train, consisted of 54 loaded and 16 empty cars, and a caboose, hauled by engine 1668, and was in charge of Conductor Collins and Engineman Buchanan. This train departed from Pembroke, N.C., 31.7 miles south of Fayetteville, at 12:39 a. m., according to the train sheet, passed Parkton, 13.2 miles south of Fayetteville and the last open office, at 1:13 a. m., and while traveling at a speed variously estimated to have been from 15 to 50 miles per hour it struck a gasoline motor-truck at Russell Street crossing.

The motor truck involved was a 1937 G. M. C. tractor, type T-33, equipped with an enclosed cab, hauling a Columbian semi-trailer, loaded with 4,000 gallons of gasoline. The truck was owned by the Petroleum Carrier Corporation of Jacksonville, Fla., and was driven by George W. Barbee, of Fayetteville. The truck was en route to Marion, N.C., and had left the Gulf Oil Company's plant, about 2.3 miles east of the point of accident, at 1:15 a. m.; it proceeded westward on Russell Street and while moving over the northward track at a speed variously estimated to have been between 15 and 40 miles per hour the trailer was struck by Extra 1668.

The trailer was torn in two parts, and gasoline which became ignited was sprayed a distance of several hundred feet. The tractor, headed south, and the front half of the trailer were thrown into the southward lane of Winslow Street about 12 feet

west of the southward track and 15 feet north of the north sidewalk of Russell Street. The tractor remained upright and was not damaged by the collision, but was badly damaged by the fire. The rear portion of the trailer was carried to a point about 400 feet north of the crossing and was thrown into the northward lane of Windslow Street. The engine, with all cars remaining coupled, stopped at the north end of the station umbrella shed, 1,346 feet north of the point of accident, and sustained only slight damage from the collision; none of the equipment was derailed. The engine and first 27 cars were damaged by the fire. Three houses in the northwest corner of the crossing were destroyed by fire, and several automobiles were burned.

The employees killed were the engineman, the fireman, and the head brakeman.

Summary of Evidence

Conductor Collins stated that an air-brake test was made before leaving Florence; a test of the air brakes was made after cars were picked up at Elrod, 46 miles beyond, and the brakes functioned properly en route. Approaching A. & R. crossing, which is located 4,338 feet south of Russell Street, he felt an application of the air brakes, at which time the speed was about 35 miles per hour. The brakes were then released, and after the train had traveled a distance of about 30 car lengths he felt another application and saw through the cupola window the flare of the explosion; the speed at that time was about 15 or 18 miles per hour. He thought that the second brake application was an emergency application, although he did not think that the full effect was obtained because there had not been sufficient time to re-charge the brake system since the previous application. He stated that his train entered Fayetteville at a lower rate of speed than usual because an opposing passenger train was past due at Fayetteville, and under the rules his train was not permitted to run between the passenger train and the station which is located east of the northward track. He thought that the engineman may have planned to enter the siding to clear for a following passenger train.

Flagman Bullard stated that he felt an application of the air brakes about 1 mile south of A. & R. crossing, and the speed had been reduced to 18 miles per hour as the caboose passed over the crossing. The brakes were then released, and when he felt a second application he knew something was wrong; he estimated the speed to have been about 20 miles per hour at that time.

Operator Smith, at A. & Y. interlocking tower situated approximately 2,054 feet north of the point of accident, stated

that according to the indicator Extra 1668 entered the circuit, which extends about 2 miles south of his office, at 1:27 a. m. He saw the headlight of the approaching train and saw the flare of the explosion when the accident occurred. He recorded the arriving time of Extra 1668 as 1:32 a. m., but this was only an estimate as he failed to note the exact time because of the excitement incident to the accident.

Crossing Watchman Melvin, located at Hay Street immediately south of the passenger station, stated that he heard the engine whistle before the train came around the curve south of the A. & R. crossing; he then saw the headlight as it approached that crossing, and he continued to watch the train until it rounded the curve south of Russell Street and thought it was traveling at the usual rate of speed of northward freight trains. He then stepped over to the middle of Hay Street and stood on the southward track, facing east, flagging motor-vehicle traffic when the accident occurred. He was unable to say whether the engine bell was ringing.

R. D. Itterly, a resident of Fayetteville, stated that about 1:30 a. m. he was walking eastward on Russell Street toward Winslow Street when he heard the engine whistle of Extra 1668 which was near the A. & R. crossing, and he also saw the headlights of the gasoline truck approaching from the east on Russell Street. He crossed the tracks and when he last saw the train it was about one block south of the crossing. The truck passed him at a speed of about 15 or 20 miles per hour, at which time he was about in the middle of the block. As the truck neared the crossing the speed was reduced, and he thought he heard the gears being shifted; the speed was then increased as though it was trying to beat the train across, and then he heard the noise of impact. The whistle signal was being sounded continuously, apparently a warning signal, and the engine bell was ringing. He estimated the speed of the train to be 30 or 35 miles per hour at the time of the accident.

Sam Ford, a resident of Fayetteville, stated that he was walking on the east side of Winslow Street when he heard the whistle signal sounded by Extra 1668 and it sounded like one long blast; he looked back and saw the headlight. When he first heard the train it was working steam, but later it was drifting. He first saw the truck when it was about 300 feet from the crossing and it was traveling at a high rate of speed. When it was within 100 feet of the tracks the driver apparently saw the headlight of the train or heard the train approaching as the reflection of the red lights on the rear of the truck indicated that he had applied the brakes; the brakes were then released and the speed increased. Ford stated that he had to run across Russell Street to get out of the way of the truck. The train was close enough

for the driver to have seen it, and Ford was of the opinion that the driver saw the train, but was too close to the crossing to stop and therefore decided to try to beat the train across; the train was almost at the crossing when the truck started over the track, and the engine struck the trailer at about its center. He estimated that the speed of the train was about 35 miles per hour and the speed of the truck about 38 or 40 miles per hour. Ford stated the truck made a great deal of noise.

Raymond Hogan stated that he was walking southward on the west side of Winslow Street toward the crossing when he saw the approaching train which at that time was north of the A. & R. crossing. He saw the truck approach at a speed of about 20 miles per hour; the driver then reduced speed but proceeded to the crossing. He heard the engine whistle sounded when the train was about 1,400 feet south of the crossing; he estimated that the speed of the train was about 50 miles per hour, although the engine was not working steam.

Mrs. Sykes and George Burns, who live on Winslow Street one block north of Russell Street, stated that they heard the engine whistle sounded as the train approached the crossing and it continued to be sounded up to the time of the accident. Burns estimated the speed of the train to have been about 35 miles per hour as it passed his home, although the brakes were applied. He stated that he frequently watches oil trucks pass over this crossing and they never stop before proceeding over the tracks.

Four occupants of an automobile which was stopped by the crossing watchman at Hays Street stated that they heard the engine whistle sounded as the train approached Russell Street.

Mechanical Foreman Herring stated that when he arrived at the scene of accident at 1:45 a. m. the front portion of the train was on fire. He was the first to enter the engine cab; he found the automatic brake valve in emergency position, the throttle half open, and the reverse lever in the notch in front of center. He did not notice the position of the sand valve, but later saw sand on the rails under the sand pipe. It was necessary to bleed the air from the cars to release the brakes before the cars could be moved.

Highway Patrolman Simpson stated that when the tractor was removed from the scene of accident, it was found in second gear and the hand brake was applied.

O. D. Spiney, service agent at Fayetteville for the Petroleum Carrier Corporation, stated that about 12:20 a. m. he called Driver Barbee for his trip, and the driver was in good spirits and in normal condition. He left with the tank loaded at 1:15

a. m. So far as he knew the truck was in good condition. Driver Barbee had been a regular driver out of Fayetteville for the Petroleum Carrier Corporation about 6 months, and he was familiar with traffic conditions at Fayetteville.

The records of the Petroleum Carrier Corporation show that Driver Barbee had been employed by this company since November 1, 1938; he was 34 years of age and had a good service record. He had been off duty 30 hours prior to the occurrence of the accident.

A description of the truck involved is as follows: The overall length of tractor and trailer was 36 feet 10 inches; the light weights of tractor and trailer were 7,000 pounds and 8,000 pounds, respectively. The rear axle of the tractor and the axle of the trailer were equipped with dual wheels. The wheels of the tractor were equipped with Lockheed hydraulic brakes combined with BK booster; the trailer wheels were equipped with Bendix brakes combined with BK booster brakes having double-action control.

Observations of Commission's Inspectors

Inspection by the Commission's inspectors of the tractor at a garage at Fayetteville after the accident disclosed that while the glass in the side cab windows was broken out, the carriages were rolled to the top and welded to the window channels by the heat of the fire, indicating that the windows were closed at the time of the accident.

A check of traffic at Russell Street crossing for a 24-hour period showed a total of 27 trains and a total of 2,920 motor vehicles, of which 701 were trucks, 58 being gasoline trucks. The crossing whistle signal was sounded by the enginemen of all the trains.

Train movements covering a 30-day period showed an average daily movement of 32.4 trains.

Discussion

The investigation developed that the crossing whistle signal was sounded by Extra 1668. The whistle was heard by some witnesses when the train was 4,338 feet distant, and others stated that it was sounded continuously as it neared the crossing involved. According to a time-table rule the maximum authorized speed was 35 miles per hour and the preponderance of evidence was to the effect that this speed was not being exceeded. The statements of two eye-witnesses of the occurrence of the accident indicate that when the truck approached the crossing the driver re-

duced speed slightly and then increased the speed in an attempt to beat the train across. One of these witnesses stated that the truck approached at a high rate of speed, that the brakes were momentarily applied, and the speed then was increased. This witness crossed Russell Street immediately in front of the truck, and he was of the opinion that the driver saw the train but was too close to the crossing to stop. He estimated the speed of the truck to have been about 38 or 40 miles per hour. The other eyewitness stated that the truck passed him at a speed of 15 or 20 miles per hour when he was about half a block from the crossing, and he thought that he heard the driver shift the gears as it neared the crossing and then increase the speed. A North Carolina State law restricts the speed of motor vehicles in any business district to 20 miles per hour and in any residential district to 25 miles per hour. The view is very much restricted by a building located in the southeast corner of the crossing; however, when the driver of a motor vehicle is 25 feet from the crossing he has a clear view of northward trains a distance of 2,850 feet. Had the driver approached the crossing at a moderate rate of speed, he could have stopped his truck in time to avert the accident. The evidence indicates that at the time of the accident the cab windows of the truck were closed. Had they been open when the truck approached the crossing it is probable that the driver would have heard the whistle signals.

This crossing is not protected in any manner, no crossing signals, crossing signs or traffic signs being provided, yet a check of the motor traffic indicates a heavy volume of traffic over this crossing. A 24-hour check showed that 2,920 vehicles, which included 58 gasoline trucks, passed over this crossing.

In previous reports of this Bureau, attention has been called again and again to the dangers attendant upon the transportation of gasoline and other inflammable or explosive commodities on the highways, as well as the necessity for the drivers of all motor vehicles to exercise proper care before attempting to pass over railroad crossings at grade.

Conclusion

This accident was caused by a gasoline tank truck being driven upon a railroad crossing at grade immediately in front of an approaching train.

Recommendation

In view of the heavy volume of traffic over this crossing,

it is recommended that stop signs be installed or that crossing signals be provided to give warning when a train is approaching.

Respectfully submitted,

W. J. PATTERSON,

Director.