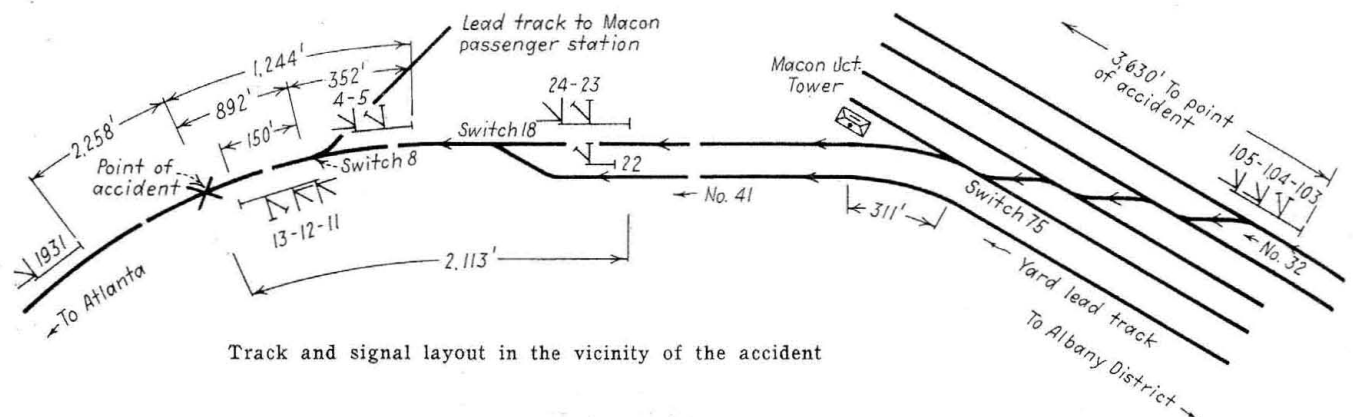


Collision Entering C.T.C. Line Due to Inadequate Signal

What was termed "an inadequate centralized traffic control installation" in the report of the investigation of the Interstate Commerce Commission was found to have caused a rear-end collision on the Central of Georgia at Macon Junction, Ga., August 31, which resulted in the death of one employee and the injury of 34 passengers, one person carried under contract, and 5 employees. The investigation was conducted under the supervision of Chairman Patterson.

At Macon Junction the road's Albany district and Atlanta district converge, while a lead track branches off from the

rear, but no flag protection was provided for the train, although there was an ample supply of fuseses and torpedoes on the yard engine, and although flag protection, the report said, was required under the rules. It was explained that it had been the practice for some years to allow Atlanta-bound trains to occupy the main track at this point without flag protection when three white lights were displayed at the Macon Junction interlocking tower, these lights being displayed to inform the helper engine crew to return to the junction from a specified point further along the line.



Track and signal layout in the vicinity of the accident

Atlanta district single-track main line to reach the Macon passenger station. Passenger trains from the Albany district enter the Atlanta district line at the junction, clear the passenger lead switch, then back into the station. Freight trains moving from the Macon classification yard to the Atlanta district also enter the main track at Macon Junction. Movements at the junction are controlled at an interlocking tower, while trains on the Atlanta line are operated by signal indications.

The trains involved in the accident were No. 41, a 44-car freight moving from the classification yard through the junction into the Atlanta district main track, and No. 32, a 20-car passenger train moving from the Albany district into the Atlanta district main track preparatory to backing into the passenger station lead. The collision occurred at a point 892 ft. beyond the station lead switch, the rear of the standing freight being struck by No. 32 while moving about 20 m.p.h.

No Flag Protection—The freight had proceeded from the yard lead switch into the Atlanta main line, and had stopped, about 18 minutes before the collision, at signal 1931, displaying a stop aspect. Signal 1931, which was 3,150 ft. beyond the station lead switch, was of the semi-automatic type, and was beyond interlocking limits. A Diesel-electric yard locomotive, coupled to the rear of No. 41 as a helper, was displaying a white light to

The accident occurred on an ascending grade on a 4 deg. 32 min. curve to the left at 6:35 a.m., at which time it was dark and foggy. The authorized speed through the interlocking was 15 m.p.h., while from that point to Atlanta it was, for passenger trains, 60 m.p.h.

Signal Lay-out—Approaching the point of the accident from the east, No. 32 passed, in order, an interlocking signal (displaying proceed-at-slow-speed-prepared-to-stop), a switch by which it entered the Atlanta district main line, and then, at points 2,113 ft. and 1,244 ft., respectively, east of the point of collision, two interlocking signals, each displaying proceed-at-slow-speed-prepared-to-stop. The latter signal, designated as No. 4-5, was of the two-arm, upper-quadrant semaphore type. The upper unit was connected into the Atlanta district C.T.C. system and authorized movement to signal 1931 (at which the freight had stopped). The lower unit of signal 4-5 was not controlled by a track circuit, but its operating lever was provided with an electric lock, operative in normal position, and its control extended about 2,000 ft. beyond signal 1931.

Operations in the territory involved were by signal indication, and the rules provided that trains moving under a slow-speed indication, as was No. 32, should be prepared to stop, but slow speed was not defined by rule or special instruction. It was necessary for this train to proceed

about 800 ft. beyond the point of collision in order for its rear to clear the switch to the station lead, so the back-up movement could be started.

Dual-Purpose Signal—After the freight had passed signal 4-5, which had displayed slow-speed-prepared-to-stop for it also, the leverman should have returned the signal to normal position, as required by the rules, the commission's report explained, but "in accordance with past practice, he permitted it to continue to display the same indication for the passenger train. This signal was so arranged that if he had returned it to stop position after the preceding train passed it, he would have been unable to change the indication as long as the track between that signal and signal 1931 was occupied. "Signal 4-5 was used both as an interlocking signal and as the signal governing

entrance to centralized-traffic-control territory. Section 405 of the Commission's order of April 13, 1939, prescribing rules, standards, and instructions for centralized-traffic-control systems, requires that signals shall be automatically controlled by continuous track circuits on main tracks and on other tracks where medium speed is permitted. The lower arm of signal 4-5 was not provided with track-circuit control, and, therefore the centralized-traffic-control installation was in violation of the Commission's order. Under the conditions which existed at the time of this accident and the practices which were being followed at this point, this signal displayed the same indication regardless of whether the track immediately beyond it was occupied. If this signal had been arranged to indicate track occupancy as required by the Commission's order, a stop indication would have been displayed for No. 32, and the accident would have been averted.

"It is found that this accident was caused by an inadequate centralized-traffic-control installation."

