



February 6, 2017

Honorable Christopher A. Hart
Chairman
National Transportation Safety Board
490 L'Enfant Plaza
Washington, DC 20594

Re: Metro-North Commuter Railroad's Proposed Findings and Recommendations
Submission with Regards to the Valhalla, New York Commerce Street Highway Rail
Grade Crossing Accident
NTSB File No.: DCA-15-MR-006

Dear Chairman Hart:

Metro-North Commuter Railroad respectfully submits the following proposed findings and recommendations with respect to the February 3, 2015 Commerce Street highway rail crossing accident in Valhalla, New York. Metro-North requests that the NTSB consider this submission prior to issuing its final report and that this submission become part of the official public record. We invite any questions following your review of this submission and we would be pleased to meet and discuss any of the issues addressed.

We also thank the NTSB for its assistance, cooperation and guidance during the investigative process and for allowing Metro-North an opportunity to participate in the investigation. Metro-North wishes to convey its deepest sympathy to the families of those who were fatally injured and those passengers who were injured in this tragic accident. We would also like to commend the extraordinary efforts of all of the emergency personnel in the aftermath of this accident.

I. Metro-North's Submission with Regards to the Commerce Street Crossing Collision in Valhalla N.Y. on February 3, 2015

A. Factual Background

The collision occurred on February 3, 2015 at approximately 6:26 p.m. when a 2011 Mercedes Benz ML 350 sports utility vehicle ("the SUV") and northbound Metro-North Railroad passenger Train Number 659 ("Train 659") collided in the Commerce Street Highway-Rail Grade Crossing, also identified as U.S. DOT Grade Crossing No. 529902V ("Grade Crossing"), located near the Commerce Street intersection with the Taconic State Parkway in the Town of Mount Pleasant.

Based on the factual findings in the NTSB's reports and the supporting documentation contained within the public docket, on February 3, 2015, the SUV driver was running late to a scheduled 6:30 p.m. meeting in Scarsdale, N.Y. Because of an earlier motor vehicle accident and resulting heavy traffic conditions on the Taconic State Parkway, she used her cell phone to speak with her husband to obtain an alternate route to her meeting as she was unfamiliar with the area. At approximately 6:26 p.m., the SUV driver was driving eastbound on Commerce Street when she drove onto and then stopped the SUV on the grade crossing fouling the tracks.

The Grade Crossing was equipped with passive and active warning devices, including R15-1 cross-buck signs, flashing lights, and automatic gates, which were all in good working condition and in full compliance with federal and state regulations on the date in question. Additionally, on the approach to the Grade Crossing, a W10-1 approach sign that read "RR" was positioned 150 feet from the nearest rail and an R8-8 sign that read "Do Not Stop On Tracks" was present 65 feet from the nearest rail. As noted on page 6 of the NTSB Highway Factors and Railroad Grade Crossing Factual Report, "the signs, at the time, met the Federal Manual on Uniform Traffic Control Devices (FED MUTCD) and New York State Supplement to the Manual on Uniform Traffic Control Devices (NYS MUTCD) standards."

The active grade crossing warning system consisted of flashing lights and gates. Eight, 12-inch flashing light-emitting diode (LED) light units, and 2 gate arms mounted on two signal masts were arranged to provide warning for both directions of highway traffic on Commerce Street. A single gate arm extends across the westbound direction of Commerce Street while the second gate arm extends across the eastbound direction of traffic approaching the railroad tracks. Each aluminum/fiberglass gate arm had alternating red and white retroreflective striping and were equipped with three, 3-inch LED light units mounted along the top. When the grade crossing warning system was activated, the light unit mounted at the tip of the gate arms was constantly lit, while the other two light units flashed alternately.

While the SUV driver was fouling the tracks and stopped in the crossing, the railroad flashing lights activated and the crossing gates fully lowered into their down position. When the crossing gate lowered, it contacted the rear portion of the SUV. According to a witness, the SUV driver then exited the SUV, walked to the back of the vehicle and touched the crossing gate making contact with the rear of her vehicle. During this time the LED light units mounted on the gate arm and the signal mast were active and flashing as were the gate arm and mast on the opposite side of the crossing. In addition, the horn and headlamp of the approaching Train 659 were operational and sounded on the train's approach. The SUV driver then walked back to the driver's side of the SUV, entered the SUV, and proceeded forward (east) across the crossing where the SUV and Train 659¹ collided.

¹ Consumer Reports noted in its February 18, 2015 article "Can unfamiliarity with a shifter-gear lever cause a tragedy? Unusual transmission controls could increase risk of accidents" that there have been complaints about the Mercedes shifters since the design was introduced more than 10 years ago. The article states that Consumer Reports noted in its ML 350 road test, "Selecting Reverse seems unintuitive, Park is engaged with a separate button on the lever's tip, and it is way too easy to mistake the small shift lever for a wiper stalk and shift the car into Neutral". Jake Fisher, director of auto testing for Consumer Reports also commented "If someone isn't familiar with one of these systems, they could

At approximately 6:26 p.m., Train 659 was traveling at 58 mph in a 60 mph track speed area. Train 659's locomotive engineer operated the train's horn in accordance with Metro-North's operating rules on approach to the crossing. Beginning at approximately 6:25:34 and concluding at 6:25:50, the locomotive engineer sounded the usual horn cadence for approaching the crossing (long, long, short, long). The locomotive engineer further sounded the horn at 6:25:56, 6:26:02 and 6:26:07. After observing what the train engineer characterized as "a vehicle partially fouling the crossing," the train engineer activated the emergency brakes about 230 feet before the collision. Finally, the last horn activation, consisting of a succession of short sounds lasting four seconds, started about the time of the emergency brake application. The train had slowed down to 51 mph at the time of the collision.

Prior to the Collision, the flashing lights and gates at the crossing activated and provided more than the federally-required warning time of the train's approach. In addition, the locomotive engineer provided timely and adequate warning of the train's approach by the sounding of the train's horn seven times before the application of the emergency brake and for nearly 40 seconds before impact.

An estimated 650 passengers were aboard the train at the time of the Collision. As a result of the Collision, multiple passengers on board Train 659 sustained injuries, and five passengers and the SUV driver sustained fatal injuries.

Following the accident, the MTA and Metro-North have partnered with the State of New York in several initiatives to increase public awareness and education at grade crossings, as well as develop further law enforcement strategies for increased enforcement for both distracted drivers and drivers that deliberately drive around a lowered crossing gate arm or ignore flashing lights. Metro-North will continue to assess and develop its outreach programs and work with federal, state and local partners to effectively enhance public safety at grade crossings.

B. Proposed Findings

1. The following factors did not cause or contribute to the accident: the physical condition or actions of the engineer of Metro-North Train 659; the mechanical condition of the train and the condition of the tracks; the grade crossing warning system; the design, installation and/or maintenance of the third rail; railroad operating procedures and policies; the equipment making up Metro-North Train 659; weather; alcohol, drugs, or prescription medications; and, the location of traffic control signs on the approach to the grade crossing.
2. The SUV driver entered the crossing and fouled the tracks in violation of New York State Law.

do exactly the wrong thing in an emergency" and "I've found myself tripped up by electronic shift levers more than once". In the NTSB's February 7, 2015 telephone interview with a witness Mr. Mezzacappa, Mr. Mezzacappa similarly stated that he and his wife have made similar mistakes using the shifter-gear lever on the same model of vehicle by shifting the car into one direction while intending to go in the opposite direction.

3. The grade crossing data logs indicated that the flashing lights were operating 45 flashes per minute and the warning devices were activated for 39 seconds before the train occupied the island circuit (paved roadway) at the Commerce Street grade crossing.
4. Based on the signal system tests, physical evidence, and eyewitness accounts, including evidence of the SUV's position at the time of impact, both crossing gates lowered as designed as the SUV was fouling the tracks and stopped in the crossing.
5. The SUV driver was capable of seeing the flashing LED lights and the descending gates at the grade crossing.
6. The actions of the SUV driver, as confirmed by the eyewitness directly behind her, confirm that she saw the descending gates.
7. The SUV driver was capable of seeing the headlamp of Train 659 and hearing the train's horn.
8. The SUV driver had ample time to remove her vehicle from the crossing to avoid an accident, but failed to respond appropriately to the several warnings she received and instead attempted to cross ahead of the train.
9. Possible reasons for the SUV driver's action in crossing ahead of the train were distraction or confusion in the operation of the SUV's unconventional electronic gear shift lever, her alternative route and/or because she was running late for her appointment.
10. The design benefits of the under-running third rail over other designs include: the design protects individuals from accidental contact; the insulating cover protects the third rail from corrosion, sleet and snow spray requiring less maintenance and fewer replacements; it is bracket-bolted and more secure; and, it is reliable and performs well in snowstorms requiring fewer service interruptions, which enhances public safety by reducing situations where passengers are left on a train for extended periods with no heat or power.
11. There is no evidence that any of the passenger fatalities were caused by fire or that any passengers sustained electrical injuries.

C. Proposed Probable Cause

The probable cause of the collision between Metro-North Train 659 and the SUV Vehicle at the Commerce Street highway rail crossing in Valhalla, New York was that the driver of the SUV fouled the tracks; then drove into the path of the oncoming train after the grade crossing warning devices activated and while the locomotive engineer was sounding the train's horn.

D. Suggested Recommendations

To the MTA and Metro-North:

Continue to develop and work with federal, state and local partners to increase public education and awareness of the hazards of fouling railroad tracks or ignoring crossing warning devices through the following:

- Public Service Announcements

- Multi-agency social media campaign
- Dedicated rotating safety content on MTA home pages
- Messages on MTA transaction confirmation pages
- Safety leaflets
- Crossing safety brochures
- Expand community outreach
- Develop specialized training for law enforcement officers

Continue to develop and work with federal, state and local partners in the expansion of grade crossing enforcement efforts, including the authorization of camera enforcement and the imposition of stiffer fines and penalties for noncompliance.

Respectfully submitted,



Joseph J. Giulietti
President
Metro-North Commuter Railroad