March 6, 2026 HIR-26-01

Collision between School Bus and Combination Vehicle, with Postcrash Fire

Rushville, Illinois
March 11, 2024

On Monday, March 11, 2024, about 11:29 a.m. central daylight time, a 2020 Micro Bird MB II 25-passenger school bus was traveling east on US Highway 24 (US-24) near Rushville, Schuyler County, Illinois.[1] As the school bus negotiated a right-hand curve, it crossed the centerline and collided head-on with a westbound 2001 Mack CH613 truck-tractor in combination with a 2001 Vantage 39-foot end-dump semitrailer. The impact ignited an immediate fire involving the school bus. Both vehicles then departed the north side of the roadway, where the combination vehicle's semitrailer overturned. The postcrash fire spread, engulfing both vehicles. As a result of the crash, the drivers of both vehicles and the three student passengers on the school bus were fatally injured.

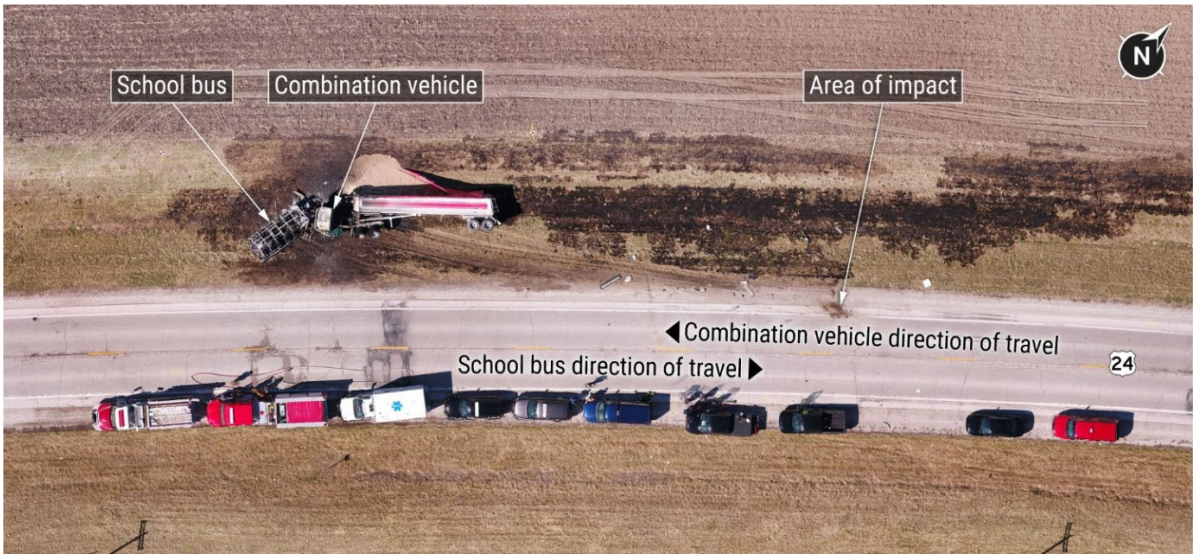

Figure 1. Postcrash orthomosaic aerial image showing final rest positions of the school bus and combination vehicle. Emergency and first-responder vehicles are parked on the south shoulder and were not present at the time of the crash. (Source: Illinois State Police; annotated by NTSB)

[1] (a) In this report, all times are central daylight time. (b) Visit ntsb.gov to find additional information in the public docket for this NTSB investigation (case no. HWY24MH005). Use the CAROL Query to search safety recommendations and investigations.

Location	US-24, just east of mile marker 7.0, near Rushville, Illinois (see figure 2)
Date	March 11, 2024
Time	11:29 a.m. central daylight time (the time change from standard time occurred the previous day)
Involved vehicles	2
Involved people	5
Injuries	5 fatal (school bus driver, 3 school bus passengers, combination vehicle driver)
Weather	Daylight, clear, and dry
Roadway information	Two-lane, undivided asphalt concrete highway with one eastbound and one westbound travel lane. Lanes were divided by a broken yellow centerline and delineated from the shoulders by a white edge line

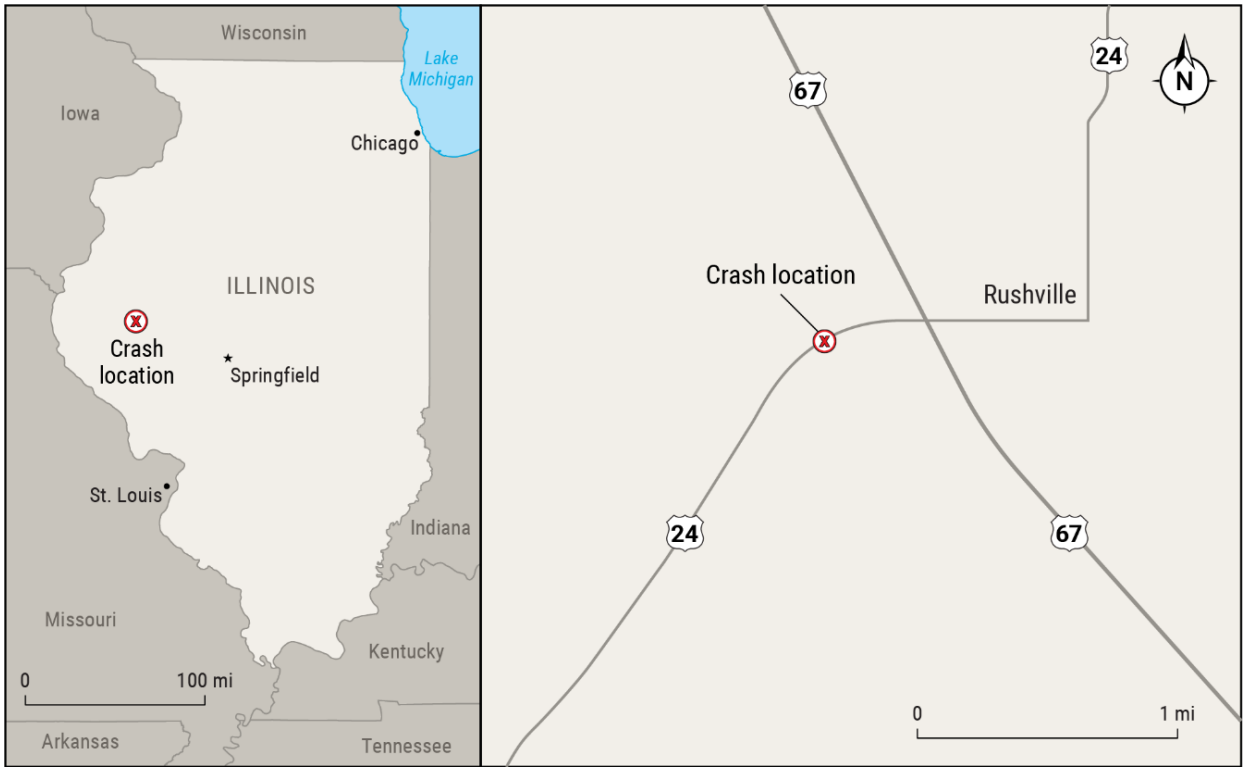

Figure 2. Map showing the crash location on US-24 near Rushville, Illinois. (Source: Google Earth; annotated by NTSB)

1. Factual Information

1.1 Background

On Monday, March 11, 2024, about 11:29 a.m. central daylight time, a 2020 Micro Bird MB II 25-passenger school bus was traveling east on US Highway 24 (US-24) near Rushville, Schuyler County, Illinois. The school bus was occupied by a 57-year-old driver and three preschool-age passengers. At the same time, a 2001 Mack CH613 truck-tractor in combination with a 2001 Vantage 39-foot end-dump semitrailer, operated by a 72-year-old driver, was traveling west on US-24. The school bus crossed the centerline as it negotiated a right-hand curve and collided with the combination vehicle in the westbound lane.

At the crash location, US-24 was an undivided, two-lane, asphalt concrete roadway consisting of one eastbound lane and one westbound lane bordered by asphalt and crushed-aggregate shoulders. Lanes were divided by a broken yellow centerline. The eastbound lane varied in width from 11.0 to 12.4 feet and the westbound lane ranged from 10.3 to 11.8 feet. The roadway had a horizontal curve with a radius of 2,865 feet. Vegetated drainage ditches were located beyond both shoulders. The posted speed limit was 55 mph, and the roadway met guidelines by the American Association of State Highway and Transportation Officials (AASHTO) for a 55-mph design speed. No sight line restrictions or obstacles were present.

1.2 Event Sequence

The school bus was traveling eastbound on US-24 at an estimated speed of 55 mph when it entered a right-hand curve, as indicated by a witness (an off-duty firefighter) who was following behind the school bus.[2] About 302 feet before the point of impact, the school bus crossed the broken yellow centerline into the westbound lane. The witness confirmed that the bus gradually crossed over into the oncoming lane. He did not report seeing any brake lights, and no pre-impact tire marks from the school bus were documented. The combination vehicle was traveling westbound at an estimated speed of 46–52 mph.[3] Figure 3 shows the approximate location of where the school bus

[2] The witness traveling behind the school bus said he was driving at 55 mph and maintaining a consistent separation from the school bus. His estimate was corroborated using calculated range-of-impact speeds for the school bus, conservation of linear momentum, and Monte Carlo Analysis. A *Monte Carlo Analysis* is a statistical simulation technique that uses repeated random sampling to estimate uncertain variables.

[3] The precrash speed of the combination vehicle was estimated using surveillance video from a nearby gas station. The estimate was corroborated using calculated range-of-impact speeds for the combination vehicle, conservation of linear momentum, and Monte Carlo Analysis.

departed its travel lane, and the location of the combination vehicle when the driver of the combination vehicle (truck driver) began an evasive response to the school bus entering his travel lane.

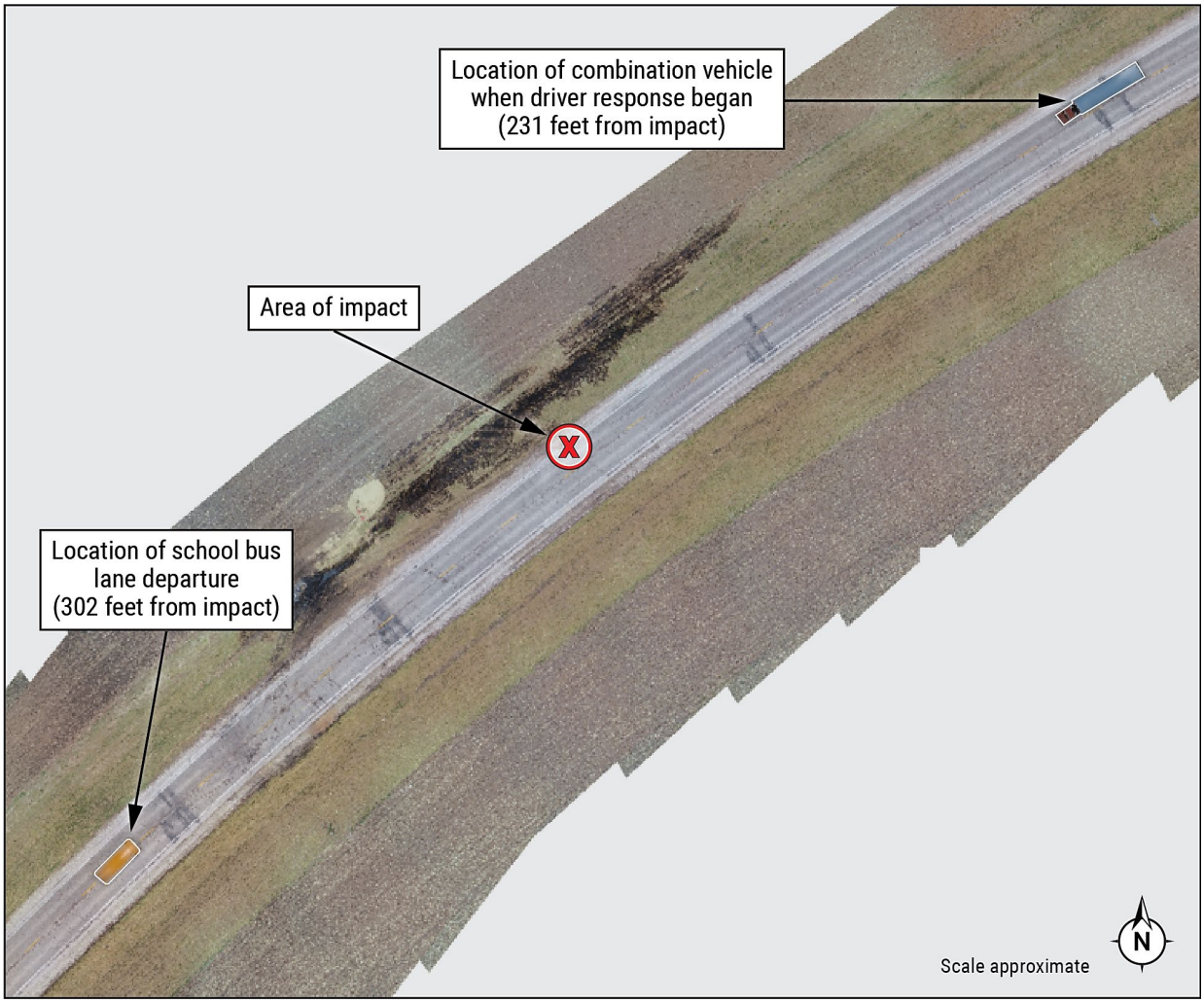

Figure 3. Screenshot of orthomosaic aerial image, depicting the approximate locations of the school bus and the combination vehicle when the school bus began crossing over into the oncoming lane.

Tire friction marks from the combination vehicle's left-side tires began 118 feet east of the impact in the westbound lane and terminated in the westbound lane. Tire friction marks from the combination vehicle's right side measuring 113 feet began in the westbound lane, crossed the white edge line, and ended on the asphalt paved portion of the north shoulder. Figure 4 is a westbound view of the combination vehicle tire marks leading to the area of impact.

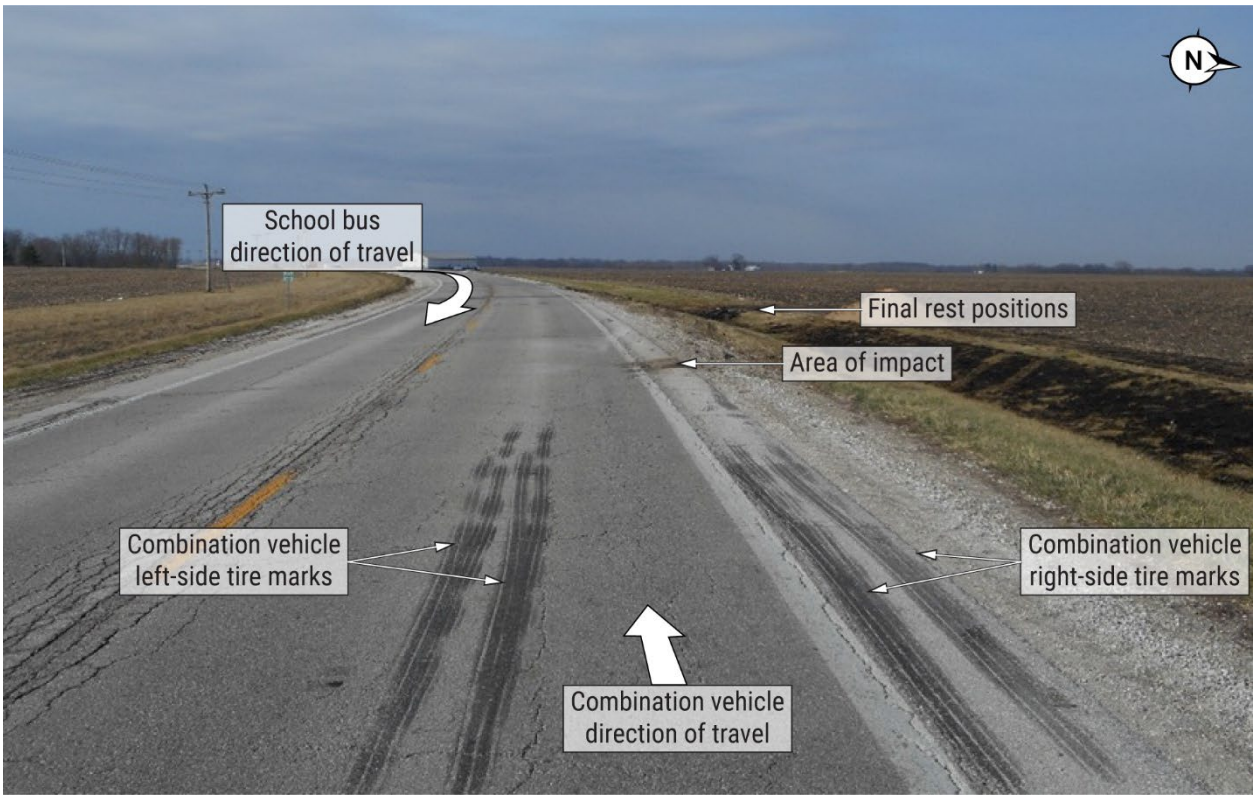

Figure 4. View looking west at the combination vehicle tire marks leading to the area of impact.

The vehicles collided head-on in the westbound lane and north shoulder of the road. The estimated speed of the combination vehicle at impact was 22–30 mph.[4] The combination vehicle was loaded with sand and weighed about 79,680 pounds.[5] The school bus had an empty weight of about 7,178 pounds and a gross vehicle weight rating (GVWR) of 10,360 pounds.[6] According to the witness traveling behind the school bus and as captured by surveillance video from a nearby Illinois Department of Justice Services facility, the school bus caught fire immediately upon impact. The heavier combination vehicle continued west and redirected the lighter school bus west. The two entangled vehicles crossed the paved and crushed-aggregate shoulder on the north side of the roadway before entering a vegetated drainage ditch, where the combination vehicle's semitrailer overturned. The vehicles came to rest about 157 feet west of the impact area, and the postcrash fire spread to engulf both vehicles.

The top images in figure 5 show an exemplar school bus and combination vehicle. The bottom images show the crash-involved vehicles at the time of postcrash

[4] To estimate the impact speed of the combination vehicle, investigators applied a Monte Carlo Analysis in conjunction with conservation of linear momentum principles. The calculation incorporated vehicle mass, pre-impact motion and braking, collision dynamics, and final rest positions.

[5] The combination vehicle was weighed after being loaded 44 minutes before the crash.

[6] *Gross vehicle weight rating* is the total maximum weight that a vehicle is designed to carry when loaded, including the weight of the vehicle itself plus fuel, passengers, and cargo.

examination. The school bus sustained collision damage to the front end, which resulted in crumpling, tearing, and rearward displacement of components above the frame. Hot exhaust components were displaced into the school bus's fuel tank area, but the exact ignition source of the fire at impact could not be determined due to the severity of the damage.

Figure 5. Top, an exemplar school bus and combination vehicle. Bottom, the crash-involved vehicles at the time of examination.

The postcrash examination of the school bus found no operational issues with the electrical, steering, or brake systems, nor with its powertrain, suspension, tires, or wheels. Postcrash examination of the combination vehicle showed no indication of mechanical defects or deficiencies.

The school bus was equipped with driver assistance technologies, including a lane keeping system (LKS), sometimes referred to as a lane departure prevention system.[7] However, due to the fire damage, investigators could not determine whether the LKS system had been enabled at the time of the crash. The combination vehicle was not equipped with any driver assistance technologies.

As a result of the crash, the drivers of both vehicles and the three school bus passengers were fatally injured. The school bus was equipped with lap belts in all

[7] A *lane keeping system* (LKS) or *lane keeping assist* (LKA) system alerts the driver when the vehicle begins to drift from its travel lane, and then—if the driver does not respond—actively intervenes to return the vehicle to its lane.

25 passenger seating positions, and the three preschool-age passengers, ages 3 to 5, were wearing lap belts.[8] The National Highway Traffic Safety Administration (NHTSA) recommends that preschool-age children transported in school buses be restrained with a child restraint system that meets Federal Motor Vehicle Safety Standard (FMVSS) 213.[9] The school bus was not equipped with supplemental aftermarket or integrated child safety restraint systems (CSRS). The 57-year-old female school bus driver was restrained by a lap/shoulder belt. The 72-year-old male driver of the combination vehicle was unrestrained.

The witness following behind the school bus notified emergency dispatch of the crash at 11:31 a.m. and then tried to render aid. The first ambulance from Schuyler County Emergency Medical Services arrived at the scene at 11:35 a.m., followed by responders from the Schuyler County Volunteer Fire Protection District, the Rushville Volunteer Fire Department, the Schuyler County Sheriff's Office, and the Rushville Police Department at 11:37 a.m. In total, eight local and state emergency services agencies responded to the scene.[10]

1.3 Additional Information

1.3.1 Driver Information

1.3.1.1 School Bus Driver Information

The 57-year-old female school bus driver received a Class B commercial driver's license (CDL) with school bus passenger endorsement 7 months before the crash, and she held a 1-year Illinois medical certificate.[11] However, her most recent Physical Examination and Certificate for Illinois School Bus Driver form did not accurately reflect her medical history. For example, her health history checklist was marked "no" for "injury where there was lost time from work" and "permanent defect due to injury." Before transitioning to school bus driver, she worked as a school bus radio operator and school bus aide. She completed multiple school bus driver training programs, including a school bus driver training course provided by the local Illinois Regional Office of

[8] At the time of purchase, Illinois did not require school buses to be equipped with seat belts. Beginning July 1, 2031, all newly purchased school buses will be required to be equipped with lap/shoulder belts in Illinois (Public Act 104-0075).

[9] For more information, see FMVSS 213 and Guideline for the Safe Transportation of Pre-school Age Children in School Buses.

[10] Additional agencies responding to the crash were the Schuyler County Coroner's Office; the Illinois State Police, including the Traffic Crash Reconstruction Unit; and the Illinois Department of Transportation.

[11] School bus drivers in Illinois are required to be medically evaluated every year in accordance with *92 Illinois Administrative Code* Section 1035.20.

Education, the federally required entry-level driver training program (ELDT), and school bus driver recertification training.[12] According to the Commercial Driver's License Information System (CDLIS), the school bus driver had not been involved in any accidents nor had any licenses revoked.[13] However, in August 2022, she was cited and convicted for speeding in Iowa while operating a non-commercial vehicle.

The school bus driver worked Monday through Friday driving a large 65-passenger bus on morning and afternoon routes and a 25-passenger bus on a midday route. Her morning route typically started between 6:00 and 6:30 a.m., the midday route was from 10:30 to 11:30 a.m., and the afternoon route ended about 5:00 p.m. The crash occurred near completion of the midday route.

Efforts by the Illinois State Police and the NTSB to extract and analyze data from the bus driver's mobile phone were unsuccessful due to the severe damage caused by the crash and subsequent fire. However, NTSB investigators were able to obtain and review cell phone records, which included call logs, text messages, and activity from native phone applications. The records did not show any calls or texting activity at the time of the crash.

The school bus driver had a documented history of medical conditions and had been receiving Social Security Disability Insurance benefits since 2016. Her qualifying conditions included chronic neck and arm pain resulting from cervical fusion surgery. According to her Social Security Administration medical file obtained by the NTSB, she also self-reported chronic fatigue syndrome (which friends and family also confirmed), fibromyalgia, anemia, arthritis, and hepatitis as disabilities that prevented her full-time employment.[14] Various physician groups and several pharmacies prescribed her multiple medications, including promethazine, baclofen, gabapentin, tramadol, and phentermine, to help her manage these conditions. A US Department of Transportation (USDOT) random urine drug test, conducted February 8, 2024, was negative for the five main classes of illegal drugs: amphetamines, cocaine, marijuana, opiates, and phencyclidine (PCP).[15]

[12] For more information, see CFR: 49 *CFR* Part 380 Subpart F -- Entry-Level Driver Training Requirements On and After February 7, 2022. The school bus driver completed initial certification training in March 2023, then took part in the annual refresher training in October 2023.

[13] CDLIS is a nationwide database that enables US states to share driver history and licensing information.

[14] Chronic fatigue is a diagnosis based on self-reported fatigue lasting at least 6 months and may be either persistent or relapsing. It can also be a symptom of other chronic diseases.

[15] Current USDOT standards for tested-for substances on USDOT urine drug testing are marijuana metabolites, cocaine metabolites, amphetamines, opioids, and phencyclidine (PCP), in accordance with 49 *CFR* Part 40.82, as detailed at 49 *CFR* Part 40.85.

Postmortem toxicology testing conducted by the Schuyler County Coroner's Office detected the central nervous system (CNS) depressants tramadol, gabapentin, and promethazine. Phentermine, a prescription amphetamine medication used to augment weight loss, was also present, along with a presumptive positive result for caffeine.[16] Testing by the Federal Aviation Administration (FAA) Forensic Sciences Laboratory was positive for promethazine, baclofen, tramadol, gabapentin, phentermine, and acetaminophen.[17] No other tested-for substances were detected. Basic descriptions of the detected substances are as follows:

- Promethazine: Commonly used for sedation and nausea. It is also a first-generation antihistamine and anti-psychotic. Promethazine generally carries a warning that its use may impair the mental and physical abilities required to operate a motor vehicle or heavy machinery due to increased risk of somnolence, blurred vision, and dizziness.
- Baclofen: A muscle relaxant used to decrease muscle spasms as a result of spinal injury. Baclofen generally carries a precaution that care should be taken when driving a motor vehicle, operating heavy machinery, or participating in activities that require alertness.
- Gabapentin: Medication used to treat seizure disorders and nerve pain associated with postherpetic neuralgia, a complication of herpes zoster (shingles). It generally carries a warning that use may cause somnolence, dizziness, and general CNS depression. Precautions are advised for operating a motor vehicle or heavy machinery until the user can assess the dosage effect on alertness and motor activities.
- Tramadol: A synthetic opioid used to treat moderate to severe pain. It generally carries a warning that use may impair the mental and physical abilities required to operate a motor vehicle or heavy machinery.
- Phentermine: An amphetamine derivative used as a short-term adjunct with diet modification and exercise to increase weight loss. It generally carries a warning that use may impair the mental and physical abilities required to operate a motor vehicle or heavy machinery.
- Acetaminophen: An over-the-counter pain reliever and fever reducer.

[16] A *presumptive positive* indicates that a substance is present on a screening test. In order to confirm presence or quantity of the detected substance, a confirmatory test must be performed. See Quest Diagnostics, Presumptive and definitive testing.

[17] The FAA Forensic Sciences laboratory has the capability to test for about a thousand substances, including toxins, prescription and over-the-counter medications, and illicit drugs.

1.3.1.2 Truck Driver Information

The 72-year-old male truck driver, who was unbelted and the sole occupant of the combination vehicle, was about halfway through his typical workday when the crash occurred. He held a Class A CDL issued in February 2019 and a medical certificate issued in January 2024. According to CDLIS, he had three convictions, two of which did not involve a commercial motor vehicle (CMV). A third 2019 conviction (for driving too fast for conditions) was associated with a CMV injury-causing crash. A 2020 CMV injury-causing crash did not result in a conviction. The truck driver typically started work at 6:30 a.m. Monday through Friday and ended each day between 3:30 and 4:00 p.m.

1.3.2 Motor Carrier Information

1.3.2.1 School District Information

The school bus was operated by the Schuyler-Industry Community Unit School District No. 5 ("SID 5 School District"), which employed 22 commercially licensed drivers. The school district served 937 students at four schools and maintained a fleet of 23 large buses (seating 47 to 84 passengers) for morning and afternoon routes and 10 small buses (seating 25 passengers) for midday routes.

Although the school system is not subject to all Federal Motor Carrier Safety Regulations (FMCSRs), it is subject to CDL requirements (stipulated at Title 49 *Code of Federal Regulations* [*CFR*] Part 383) and drug and alcohol testing (49 *CFR* Part 382).[18] A postcrash onsite Federal Motor Carrier Safety Administration (FMCSA) compliance review (CR) determined that no violations had occurred.

In Illinois, school bus drivers are not required to obtain a USDOT medical certificate under 49 *CFR* 391.41.[19] Instead, they must meet the requirements of *Title 92 Illinois Administrative Code* Section *1035.20*.[20] The medical form in use for Illinois school bus drivers at the time of the crash did not include some of the questions that were included on the federal form (MCSA-5875).[21]

At the time of the crash, the SID 5 School District did not have any safety policies, procedures, or manuals for school bus drivers or school bus operations as recommended in the Illinois State Board of Education (ISBE) *Administrator Manual for the*

[18] For more information, see 49 *CFR* Part 382 Controlled Substances and Alcohol Use and Testing, and 49 *CFR* Part 383 Commercial Driver's License Standards; Requirements and Penalties.

[19] For more information, see 49 *CFR* Part 391 Subpart E -- Physical Qualifications and Examinations.

[20] For more information, see Illinois General Assembly (ILGA).

[21] For more information on the FMCSA form, see FMCSA Medical Examination Report Form MCSA-5875.

Safe Transportation of Pupils Grade 12 and Below (ISBE 2022). The school district also did not follow the ISBE manual's guidance on keeping proper school bus maintenance records. Additionally, the school district had no policies regarding cell phone use by school bus drivers, despite Illinois law prohibiting operation of a school bus while using a cell phone, except in emergency situations.[22]

All the school buses in the SID 5 School District were equipped with a video recording system, even though such systems were not required by federal or state law. Each school bus featured three interior cameras—one at the front above the driver, showing the driver and all rows of students; one at the rear, showing the students seated at the rear of the school bus; and one on the left side behind the driver, showing the driver, several rows of students, and the boarding area. The school district did not have a policy or procedure to randomly review onboard video footage; video reviews were conducted only in response to complaints or disciplinary concerns. Additionally, the school district had never reviewed any video footage for the crash-involved driver.

Video recordings from the crash-involved school bus were unavailable because the hard drive storing them was damaged by the impact and fire. However, investigators reviewed 39 recordings spanning 5 days from the video monitoring system on the 65-passenger school bus assigned to the driver, including from the morning of the crash. Evaluation of the available video revealed that the driver interacted with her cell phone while operating the school bus 38 times during the 5 workdays preceding the crash. She also frequently engaged in other distracting behaviors while driving, such as adjusting music on a portable speaker using her phone, taking her eyes off the road and hands off the wheel to transfer liquid to a tumbler, repeatedly moving the shoulder strap of her seat belt so that it was placed across her upper arm instead of on her shoulder, rubbing her neck and shoulders, looking in the rear view mirror to interact with student passengers, and at times removing her hands from the steering wheel. Additionally, frequent passenger movement onboard the school bus, including students leaving their seats, appeared to divert the driver's attention from the road.

1.3.2.2 Combination Vehicle Motor Carrier Information

The combination vehicle was owned and operated by Beaird Transport, Incorporated, a locally based interstate short-haul carrier using the 150-air-mile radius exemption.[23] As such, the carrier was not required to have electronic logging devices, instead recording hours of service on its daily dispatch sheets and load tickets. Beaird Transport employed 19 drivers, and its fleet consisted of 34 truck-tractors,

[22] For more information, see Illinois General Assembly - 625 ILCS 5/ Illinois Vehicle Code.

[23] The FMCSA defines short-haul carriers (or drivers) as operating within a 150 air-mile radius of their normal work reporting location, returning to that location and being released within a 14-hour duty period.

48 semitrailers, and 3 dump trucks. The FMCSA conducted a comprehensive CR after the crash that discovered 10 violations, which resulted in a Conditional Safety Rating.

1.3.3 Postcrash Actions

In November 2025, the ISBE updated the Illinois Professional School Bus Driver Training curriculum and exam to include information about prohibited cell phone use while transporting students. The ISBE also distributed a memorandum to all Illinois student transportation providers, which included a link to the Illinois statute prohibiting cell phone use while operating a school bus except in emergency situations.

After the crash, the SID 5 School District developed a transportation handbook for use by the school district's school bus drivers and administrators. The updated procedures were approved by the SID 5 school board in December 2025. The handbook outlines several policies, including a policy that prohibits the use of cell phones by school bus drivers unless for emergency use, and procedures for random periodic review of school bus video footage to ensure safety policies are being followed.

In 2026, the Illinois secretary of state revised the form Physical Examination and Certificate for Illinois School Bus Driver, introducing new questions regarding medication disclosure, sleep disorders, and additional health history details not included on prior versions of the form.[24]

2. Analysis

2.1 Exclusions

At the time of the crash, it was daylight, clear, and dry. US-24 met all AASHTO guidance for roadway design, and no sight line issues or obstacles were present. The truck driver was properly licensed and held a valid medical certificate.

Although the fire prevented a complete assessment of the school bus, nothing indicated pre-existing mechanical defects or deficiencies that would have caused the school bus to cross the centerline. Hot exhaust components were displaced into the school bus fuel tank area, but the exact ignition source of the immediate fire could not be identified due to the severity of the damage, which indicated that the crash energy exceeded the integrity standards of the bus's fuel system.[25]

[24] The updated Illinois form is available at https://www.ilsos.gov/content/dam/publications/pdf_publications/dsd_sb21.pdf.

[25] For more information about fuel system integrity standards, see 49 *CFR* Part 571.301 (S6.5).

First responders provided a timely and adequate level of response. Fire departments arrived 6 minutes after notification and extinguished the fire within 15 to 20 minutes of arrival.

2.2 Crash Analysis

The school bus was traveling east at an estimated speed of 55 mph when it entered a curve, gradually crossed the centerline, and collided with the combination vehicle in the westbound lane. The witness following behind the school bus stated that no brake lights were illuminated, and investigators found no tire marks on the roadway to suggest that the school bus driver braked to avoid the collision.

The westbound combination vehicle was estimated to be traveling between 46 and 52 mph before the truck driver braked and steered right in response to the bus's lane intrusion. Although the truck driver reacted appropriately, he had insufficient time for the emergency maneuver to prevent the collision.[26] The combination vehicle's estimated speed at impact was between 22 and 30 mph. The collision occurred in the westbound lane and north shoulder, and the school bus immediately ignited as reported by the witness and seen in video surveillance footage. Both vehicles came to rest off the north side of the road, about 157 feet west of the impact point. The combination vehicle's semitrailer overturned, and the fire engulfed both vehicles.

The lap/shoulder-belted school bus driver and the three lap-belted student passengers were fatally injured in the crash. The best protection for the preschool-age children would have been proper restraint in a CSRS, as recommended by NHTSA. However, given the crash severity with an estimated change in velocity (delta-V) between 81.3 and 140.2 mph and the immediate and intense postcrash fire that engulfed the school bus, it is unlikely that proper use of a CSRS would have prevented the fatal injuries to the school bus passengers.[27]

The truck driver was unbelted at the time of the crash. Based on the injuries documented by the forensic pathologist and the minimal delta-V of 1.5 to 7.5 mph experienced by the combination vehicle, it is likely that had the truck driver been restrained by the available lap/shoulder belt as required by FMCSA regulations and

[26] The estimated time from the truck driver's perception of the threat to impact was about 3.7 seconds.

[27] *Delta-V* is a measure of the severity of a traffic collision, defined as the change in velocity between pre-collision and post-collision trajectories of a vehicle. See https://onlinepubs.trb.org/onlinepubs/conferences/2011/RSS/1/Shelby,S.pdf. In the Rushville crash—based on the pre-impact roadway evidence, post-impact off-roadway evidence, damage profiles, and final rest configuration—investigators determined that the two vehicles traveled together to their final rest positions, which indicates a common post-impact speed. The impact speed, combined post-collision speed, and change in velocity ranges of the bus and combination vehicle were solved using a Monte Carlo Analysis in conjunction with conservation of linear momentum.

Illinois state law, he may have survived the initial impact and been able to self-extricate from the truck cab.

2.3 Prescription Drug-Impaired Driving

Many prescription and over-the-counter medications can impair driving ability, and the risks significantly increase when multiple medications are used together. Communicating these risks to patients remains a persistent challenge, and the NTSB has advocated for clearer, more consistent drug labeling and increased driver awareness.

In 2022, the NTSB published a safety research report titled *Alcohol, Other Drug, and Multiple Drug Use Among Drivers*, which examined the prevalence and impact of various substances on driving safety (NTSB 2022). The report underscores the ongoing need to raise awareness about drug-impaired driving and includes several recommendations, such as urging the Food and Drug Administration (FDA) to conduct and publish a study about how prescription drug labeling and over-the-counter drug labels could be modified to increase user understanding and compliance with driving-related warnings.[28]

After the Rushville crash, postmortem toxicology testing revealed multiple CNS depressants in the school bus driver's system, including promethazine, baclofen, tramadol, and gabapentin, as well as phentermine, an amphetamine. CNS depressants can cause drowsiness, slowed reaction times, impaired coordination, and reduced attention, all of which negatively affect driving performance (Couper and others 2024). The effects of individual CNS depressants are well documented:

- Promethazine: Causes sedation; according to NHTSA data, the drug is associated with a 120% increase in crash risk (LeRoy and Morse 2008).
- Baclofen: Limited data, but similar muscle relaxants impair motor skills and raise crash risk (LeRoy and Morse 2008).
- Gabapentin: The school bus driver was prescribed 3.6 grams/day (upper limit). Doses greater than 1.8 grams/day increase adverse effects such as dizziness and gait issues (Bunn and others 2014). Gabapentin can also impair cognitive and psychomotor functions (Peterson 2009).
- Tramadol: Primary pain medication; opioid use is linked to 72% higher fatal crash risk (Guohua and Stanford 2019). Chronic opioid use in older women increases visual disturbances and crash risk (Hetland and Carr 2014). Although tolerance may reduce some effects over time, combining opioids with other CNS depressants impairs executive functions (Dassanayake and others 2012).

[28] See NTSB Safety Recommendation H-22-36 (current status: Open—Acceptable Response).

The school bus driver's use of multiple CNS depressants and opioids likely contributed to the crash. Each of these medications typically carries FDA warnings about impaired ability to operate motor vehicles or heavy machinery.

Several pieces of evidence suggest the school bus driver was also fatigued on the day of the crash. The driver self-reported, and friends and family confirmed, that she suffered from chronic fatigue, likely from chronic pain and the medications she was taking for the pain. She was also taking medications that can cause insomnia and negatively impact sleep quality, such as phentermine (National Institutes of Health National Library of Medicine 2020). Investigators determined through interviews and cell phone records that she awoke earlier than normal on the day of the crash, having a maximum of 6 hours of sleep opportunity. Additionally, the switch from central standard time to central daylight time occurred the previous day. Waking earlier than usual, combined with the time change, caused her to wake 1.5 hours earlier than her typical schedule.

Under FMCSRs, drivers taking certain medications may be disqualified unless further medical evaluation is conducted.[29] The NTSB has long recognized the importance of school bus drivers' health history and medication use. For example, as a result of a 2014 school bus crash in Anaheim, California, the NTSB issued safety recommendations to school transportation organizations to inform school bus drivers about the impact their health may have on the safe transportation of school children, their responsibility to accurately and completely report their health history and medications, and the legal consequences of dishonesty on the medical examination report (NTSB 2016).[30]

A 2025 study analyzing NTSB accident data found that 31% of medically related transportation accidents involved operators failing to disclose conditions or medications during regulatory exams (Minsinger and others 2025). The NTSB has also recommended that the FMCSA provide explicit guidance encouraging certified medical examiners to request a complete list of medical conditions and medications from commercial drivers' healthcare providers.[31]

In Illinois, school bus drivers are not required to obtain a USDOT medical certificate under 49 *CFR* 391.41.[32] Instead, they must meet the requirements of 92 *Illinois Administrative Code* Section 1035.20.[33] However, NTSB investigators noted that the form

[29] See 49 *CFR* Part 391 Subpart E -- Physical Qualifications and Examinations.

[30] See NTSB Safety Recommendation H-16-7 (issued to three recipients. The status for two of them is Open—Await Response; the status for the third, Closed—Acceptable Action).

[31] See NTSB Safety Recommendation H-18-7 (status: Open—Unacceptable Response).

[32] For more information, see 49 *CFR* Part 391 Subpart E -- Physical Qualifications and Examinations.

[33] For more information, see ILGA.

titled Physical Examination and Certificate for Illinois School Bus Driver, which was in use at the time of the Rushville crash, was limited in scope. Although the state examination form prompted examiners to inquire about communicable diseases and required tuberculosis screening, it lacked several key elements found in the federal form (MCSA-5875). Notably, the Illinois medical form in use at the time of the Rushville crash did not include questions in two areas commonly linked to commercial vehicle crashes: disclosure of medications and sleep disorders (FMCSA 2016). As noted earlier in this report, in 2026, the Illinois form was modified to include these types of questions.

Although the state medical form at the time did not include these questions, the school bus driver also failed to reveal some of her medical conditions to the medical examiner that were included on the form, such as injury where there was lost time from work, and hepatitis. When a driver's health history is missing or incomplete, medical examiners are at a disadvantage when completing the driver's medical examination, particularly if there are no obvious findings from a physical exam related to a medical condition, as in this case.

2.4 School District Policies

Although the SID 5 School District had a drug and alcohol testing policy, it lacked comprehensive oversight and critical safety measures at the time of the crash. The district did not establish formal policies, standard operating procedures (SOPs), or provide a safety manual or school bus driver handbook specific to school bus operations. Although the district had the *ISBE Administrator Manual for the Safe Transportation of Pupils Grade 12 and Below*, the manual was neither distributed to the school bus drivers nor supplemented with locally tailored guidance, such as prohibiting personal radio or cell phone use while driving. Furthermore, the district did not routinely review onboard video footage that could have identified the school bus driver's risky behaviors, such as interacting with her cell phone, taking both hands off the steering wheel, engaging with student passengers while the bus was moving, and other forms of distracted driving.

The NTSB explored multiple avenues to determine whether distraction also contributed to the school bus driver's actions leading to the crash. Although onboard video footage from the crash-involved school bus was unrecoverable due to impact and fire damage, NTSB investigators analyzed 5 days of video footage from the larger school bus the driver operated during morning and afternoon routes, including the day of the crash. This review revealed a pattern of distracted driving, including numerous interactions with her cell phone while operating the school bus. The elimination of distracted driving has been a focus of NTSB recommendations and advocacy for many years.[34] According to NHTSA's Fatality Analysis Reporting System (FARS) and Crash

[34] For more information about the NTSB's advocacy, see Distracted-Driving.

Report Sampling System (CRSS), 3,275 lives were lost and 324,819 people were injured due to distracted driving crashes in 2023 (National Center for Statistics and Analysis 2025). The NTSB has previously issued recommendations to the FMCSA, motor carriers, and organizations in trucking, bus, and student transportation sectors, emphasizing the importance of proactive and recurring monitoring of onboard video footage to aid in driver training and ensuring compliance with critical safety regulations.[35]

Although no evidence indicates that the school bus driver was distracted at the time of the lane departure into the oncoming lane, had the SID 5 School District implemented regular video reviews, the driver's previous frequent distracted driving behaviors, including using a cell phone while driving, could have been identified and addressed. The lack of comprehensive policies and procedures before the crash reflects a missed opportunity by the school district to foster a robust safety culture and to proactively manage school bus operations. Since the crash, the SID 5 School District has implemented corrective measures aimed at preventing similar future incidents.

In addition, the training material and examination for ISBE school bus drivers at the time of the crash lacked any reference to *Illinois Statutes* Section 625 ILCS 5/12-813.1, which prohibits school bus drivers from using cell phones except in emergency situations. In November 2025, ISBE updated its training materials for school bus drivers to include information on the cell phone use regulation and prohibition.

2.5 Vehicle Technology

The school bus was equipped with driver assistance technologies that included a lane keeping system (LKS) that detects and tracks the road lane markings using a camera mounted near the interior mirror. The system could be deactivated by the driver, and due to impact and thermal damage, the on/off status of the system at the time of the crash could not be determined.

The school bus was traveling above the LKS minimum operational speed of 37 mph, and the roadway's horizontal curve radius of 2,865 feet was well within the design limits for lane keeping technology effectiveness (Wang and others 2025). Environmental conditions and roadway features such as lane markings, pavement conditions, weather, and lighting were also unlikely to have prevented the LKS from functioning.

If the LKS had been activated, it likely would have alerted the driver that the school bus was unintentionally departing its lane and provided temporary steering assistance to return the bus to its lane.

[35] See NTSB Safety Recommendations H-22-4, H-24-23, and H-15-2.

The NTSB has recognized the importance of lane departure prevention systems, such as LKS, for school buses and heavy vehicles and has previously recommended to NHTSA that all newly manufactured commercial motor vehicles with GVWR above 10,000 pounds be equipped with lane departure prevention systems.[36] Based on a review of lane departure crashes in NHTSA's Crash Investigation Sampling System (CISS), researchers estimated that lane keeping systems were 60 ± 16% effective at preventing run-off-road and head-on crashes (Dean and Riexinger 2022).

Although driver assistance technologies have demonstrated effectiveness, their real-world impact may be limited by user behavior. A 2018 study by the Insurance Institute for Highway Safety found that up to 49% of nearly 1,000 passenger vehicle lane maintenance systems, including systems like the LKS on this school bus, inspected in service departments had been disabled. Surveyed drivers cited distracting or unnecessary alerts as the primary reason for deactivating the systems (Reagan and others 2018). Similarly, an analysis of event data recorder (EDR) information from CISS revealed that 49% of vehicles had their lane departure warning systems turned off (Wiacek, Firey and Mynatt 2023). Lane departure prevention systems are critical safety technologies and should remain enabled to help prevent crashes.

3. Conclusions

3.1 Probable Cause

The National Transportation Safety Board determines that the probable cause of the Rushville, Illinois, crash was the school bus driver's impairment and fatigue from multiple prescription medications, which resulted in the school bus crossing the centerline into the path of the combination vehicle.

3.2 Lessons Learned: Understanding the Risks of Prescription Drug Use, and Ensuring that Driver Assistance Technologies Are Enabled

Although school buses are one of the safest modes of transportation, the NTSB continues to advocate for further improvements in school bus safety.[37] The Rushville crash emphasizes two critical areas where improvements can significantly reduce risk: eliminating use of impairing prescription medication by school bus drivers, and ensuring that driver assistance technologies are enabled.

[36] See NTSB Safety Recommendation H-21-1 (status: Open—Acceptable Response).

[37] For more information about the NTSB's advocacy, see School Bus Safety.

The NTSB has repeatedly stressed the importance of school bus drivers being medically fit for duty. School bus drivers, and those certifying them, must fully understand the risks associated with using multiple prescription medications, especially those that may impair cognitive function, reaction time, and overall driving ability. It is essential that school bus drivers accurately and completely disclose their health history and all medications they are taking during the hiring and certification process and throughout their employment.

In addition to understanding the risk of prescription medications, driver assistance technologies must remain enabled. In the Rushville crash, the school bus was equipped with a lane departure prevention system, consistent with past NTSB safety recommendations. The circumstances of the crash likely fell within the system's operational design parameters, meaning that if the system had been active, it could potentially have issued a warning and provided temporary steering assistance as the school bus began to drift from its lane. Driver assistance technologies are important safety features that help reduce the risk of crashes and should remain enabled whenever available.

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NTSB investigators worked with the **Federal Motor Carrier Safety Administration**, the **Illinois State Police**, and the **Illinois Department of Transportation** throughout this investigation.

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