

Executive Summary

At 09:05 on November 17, 2024, a city bus of route 212 operated by CitiAir Bus Co. (hereinafter referred to as the occurrence vehicle), was traveling eastward on Section 1 of Zhongxiao East Road in Zhongzheng District, Taipei City, approaching the intersection of Zhenjiang Street. Without braking, the bus crashed into the left rear of another city bus of route 49 operated by Metropolitan Transport Corporation (hereinafter referred to as the bus at the front), which was awaiting to make a right turn. The crash caused the bus at the front to be pushed forward and strike a pedestrian and a commercial passenger vehicle on the opposite lane at the Zhenjiang Street. The occurrence resulted in 1 death, 1 person sustained serious injury, and 15 sustained minor injuries.

In accordance with the Transportation Occurrences Investigation Act, the Taiwan Transportation Safety Board (TTSB) is the independent transportation occurrence investigation agency responsible for conducting the investigation. The investigation team also included members from the Ministry of Transportation and Communications (MOTC), Highway Bureau of MOTC, Department of Transportation of Taipei City Government, CitiAir Bus Co., and Metropolitan Transport Corporation.

The draft for this investigation report was completed in March 2026, and then, according to procedures, sent to relevant agencies (institutions) for their opinions. The investigation report was published after review and approval by the 85th Board Meeting on April 10, 2026.

After comprehensive investigation and analysis of the factual data, a total of 12 findings and 7 safety recommendations were obtained.

I. Investigation Findings

Findings Related to Probable Causes

1. The occurrence driver failed to notice that the left rear of the bus at the front was still within the outer lane of the intersection when it was awaiting to turn right. Without any attempt to evade or brake, the occurrence driver struck the left rear of the bus at the front at a speed of approximately 45 km/h, which then pushed the bus at the front forward and struck a pedestrian and a commercial passenger vehicle in the opposite lane.

Findings Related to Risks

1. The occurrence driver had been sleep-deprived for two consecutive nights prior to the occurrence. Her mental state and vigilance continued to decline on the day of the occurrence. She was also wearing a single earphone without noise cancellation while driving. Therefore, the possibility of her already experiencing fatigue symptoms such as dazedness, inattention, and reduced short-term memory before the occurrence was not ruled out.
2. The occurrence driver had experienced long working hours twice consecutively in the past three months prior to the occurrence, as well as consecutive early morning shifts, and high driving hours, which may indicate long-term fatigue due to accumulated workload and sleep deprivation.
3. Considering that the occurrence driver had a history of two head injuries and cognitive decline symptoms between 2018 and the time of the occurrence, and that medical theory and research show that head injuries can cause behavioral and cognitive changes, the possibility of a temporary decrease in the occurrence driver's cognitive ability that could lead to an increase in the risk of unsafe driving operations was not ruled out.
4. When arranging the duties of its drivers, CitiAir Bus failed to allow for

flexibility in duty scheduling, resulting in drivers' working hours and rest time failing to comply with the Labor Standards Act and the Regulations for Automobile Transportation Operators. Furthermore, the drivers may swap shifts privately with one another after the schedule is established, but CitiAir Bus fails to verify whether their actual attendance schedule complies with regulations.

5. The current management method of Taipei City Public Transportation Office is to randomly choose one day per month for conducting checks. Making it difficult to determine whether an individual driver's consecutive attendance status complies with the relevant provisions of Article 19-2 of the Regulations for Automobile Transportation Operators.
6. The driver of the bus at the front was operating on the left side of the outermost lane, resulting in a reduction of safe lateral clearance on the left. Furthermore, due to the characteristics of buses making a turn, the left rear of the bus extends beyond the outermost lane into the intersection, posing a risk of being rear-ended by vehicles in other lanes.
7. The traffic volume of buses turning right and going straight at the intersection of Section 1 of Zhongxiao East Road and Zhenjiang Street is both high. Although the lane width of Section 1 of Zhongxiao East Road near the intersection of Zhenjiang Street meets regulatory requirements, it adopts the minimum value provided in the Design Standards of Urban Roads and Accessory Works. As a result, buses going straight and turning right within the extension range of this intersection cannot maintain a wide and safe lateral clearance. Moreover, there may be a risk of rear-end collision between buses going straight in the middle or outer lanes and buses awaiting to turn right in the outermost lane.

8. Because the occurrence driver was not wearing a seatbelt, she fell under the seat upon impact and was unable to appropriately operate the vehicle in time.

Other Findings

1. The occurrence driver had a habit of not wearing a seatbelt while on duty, which violated Article 89 of the Regulations Governing Road Traffic Safety. Although CitiAir Bus used in-vehicle cameras to check drivers' operating conditions, it failed to effectively improve the unsafe situation of which the occurrence driver was involved in.
2. In Taiwan, the medical examination items and procedures for professional drivers under the age of 59 are no different from those for typical drivers, and relatively lenient compared to foreign countries. Furthermore, medical personnel have not provided any clear guidance or instructions for assessing how a driver's physical condition affects his or her performance on operating a vehicle. When medical information is not fully accessible, and medical examination items and procedures are relatively simple, the supervisory authority cannot be effectively informed of the physical condition of professional drivers under the current medical examination system when issuing and validating professional driver's licenses.
3. The occurrence bus and the bus at the front both belong to the M3 category, for which there are no regulations specifying the type of seats. Operators may choose different types of seats due to operational considerations. The bus at the front had low-back seats, whose height and material could not effectively protect the head and neck of passengers. Furthermore, since most passengers were not wearing a seatbelt, their bodies were thrown off the seats and crashed into the hardware and amenities inside the bus upon impact, causing abrasions and contusions to other parts of their bodies.

II. Safety Recommendations

To CitiAir Bus Co.

1. When drivers need to take leave or change shifts, the operator should ensure that their actual duty schedule after the adjustment complies with the attendance, rest time and driving hours regulated in the Labor Standards Act and the Regulations for Automobile Transportation Operators, so as to avoid the possibility of fatigue caused by the drivers' scheduling.
2. When recruiting drivers, the operator shall review their past occurrence records or frequency of violations through the Motor Vehicle Driver Information Service of Highway Bureau of MOTC, and require them to proactively disclose any health history that may affect their driving in order to assess their competence for the job. Additionally, the operator must ensure that all drivers are wearing a seatbelt correctly while on duty.

To Taipei City Government

1. Examine intersections with similar road types and traffic flow patterns to the occurrence site, and apply traffic control or other improvement measures to reduce the influence on road safety when buses making a right turn.
2. Strengthen the existing management methods for Metropolitan automobile transportation operators in the jurisdiction, monitor the basic status of drivers' driving hours and consecutive working days, such as making good use of the collected vehicle information (including driver identification function) for data analysis, so as to ensure that drivers can have proper duty scheduling even when labor inspections cannot be carried out frequently.
3. Supervise CitiAir Bus to comply with the provisions of attendance, rest time and driving hours regulated in the Labor Standards Act and the Regulations

for Automobile Transportation Operators in order to prevent the possibility of driver fatigue due to improper duty scheduling.

To the Highway Bureau, MOTC

1. Reassess the current medical examination items for professional drivers, and ensure the accuracy and reliability of the self-declarations filled out by drivers during the medical examination process. In addition, a clear examination procedures, standards, or relevant guidelines should be established to facilitate professional medical personnel in screening drivers with high-risk physical conditions.

To the Ministry of Transportation and Communications

1. Promote awareness among bus operators, seat manufacturers, and vehicle manufacturers regarding the height of the passenger seatback for head and neck protection, providing operators with a reference for selecting seats on city buses. In order to reduce the risk or severity of passenger injuries in traffic occurrences.