



EFFECTIVE PRACTICES IN RAIL TRANSIT ACCIDENT INVESTIGATIONS

Background

The Federal Transit Administration's (FTA) adoption of the Safety Management System (SMS) framework elevated the approach to safety in public transit. FTA defines an SMS as "a formal, top-down, organization-wide approach to managing safety risk and assuring the effectiveness of the transit agency's safety risk mitigation" that includes systematic procedures, practices, and policies for managing risks and hazards. Event investigation is central to identifying causal or contributing factors in events, including accidents. Investigations are conducted for early detection and identification of hazards and address safety concerns in a permanent and effective manner, reduce the agency's exposure to risk, promote continuous improvement, and elevate the safety of employees and the riding public. Effective accident investigations can lead to the institution of modified policies, procedures, and practices that can prevent future transit accidents. 49 Code of Federal Regulations (CFR) § 673.27 requires transit agencies to include the investigation of safety events as part of their safety assurance process in their Public Transportation Agency Safety Plan. An investigation evaluates the effectiveness of safety risk control methods and should result in corrective actions to improve those control methods where gaps are identified, providing a platform for continued monitoring, modification, and continuous improvement.

Objectives

These practices are intended to improve investigator analytical and critical thinking skills, which are necessary to accurately identify root causes and contributing factors leading to short-term, intermediate, and long-range Corrective Action Plans to address key findings in accident investigations.

The objective of this study was to determine whether federal investments in urban circulator projects have a significant impact in creating, supporting, or preserving jobs, spurring local business growth, and increasing transportation accessibility among certain households. The urban circulator projects studied include the Cincinnati Bell Connector, Charlotte CityLYNX Gold Line, Sun Link Tucson Streetcar, Atlanta Streetcar, and the Salt Lake Sugar House Streetcar. The results of this research will serve to inform policymakers about the extent to which streetcar investments support USDOT strategic goals.

Findings and Conclusions

These practices provide leading transit industry practices for performing rail transit accident investigations and tools and resources to support the transit event investigation process.

As part of FTA's effort to promote continuous safety improvement in the public transit industry, these practices were developed to provide Rail Transit Agencies with leading transit industry practices for performing investigations. Each public transit agency is responsible for tailoring its event investigation processes to its unique operating environment, the complexity of the operation, and the transit modes provided. Locally-developed processes should correspond to a transit agency's existing Standard Operating Procedures or emergency plan.

The practices are organized into four sections: Section 1: Investigation Perspective, Section 2: Accident Scene, Section 3: Post On-Scene Investigation, and Section 4: Report Development and Corrective Action Plans. Included are tools and resources to support the transit event investigation process and a section on what to expect when the National Transportation Safety Board (NTSB) is actively engaged in a corresponding investigation process.

Benefits

Rail Transit Agencies will benefit from knowledge about leading transit industry practices for performing investigations, and investigator analytical and critical thinking skills will be improved to accurately identify root causes and contributing factors leading to Corrective Action Plans. Effective accident investigations can lead to modified policies, procedures, and practices that can prevent future transit accidents..

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This research project was conducted by K&J Safety Consulting Services and the USF Center for Urban Transportation Research (CUTR). For more information, contact FTA Project Manager Raj Wagley at (202) 366-5386 or Raj.Wagley@dot.gov.

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