

Analysis of Florida Transit Bus Crashes

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In 1998, the Center for Urban Transportation Research (CUTR) at the University of South Florida concluded a study of methods for *Enhancing Safety in Florida Transit Systems (Contract BB-221)*. More recently, CUTR researchers led by Joel Rey completed a follow-up study, *Analysis of Florida Transit Bus Crashes (Contract BC-137-5)*, in which they performed case studies of two large transit systems' recent safety campaigns.

In 1998, the Hillsborough Area Regional Transit Authority (HART) performed a systemwide operator refresher training course. The objective of CUTR's analysis was to examine both the systemwide and the seniority-level effects that the training had on crash occurrence. During the same year, LYNX, an independent authority that provides various transit services within Orange, Seminole, and Osceola counties, purchased and installed rear-end high density LED lights, replacing the original light assemblies on the majority of its bus fleet. In this case, CUTR's objective was to examine the systemwide effects that this vehicle safety improvement had on crash occurrence, particularly with regard to rear-end collisions.

In the first case study, the research resulted in contradictory findings. While total collision occurrences decreased following the training, preventable crashes increased, which may indicate that the course did not emphasize or specifically cover training that would have affected their incidence. However, during the period studied, HART experienced a considerable influx of new drivers, which significantly influenced the analyses and made it difficult to fairly assess the actual level of effectiveness of the refresher training program.

In the second case study, researchers were able to establish the success of LYNX's vehicle safety improvement campaign. The newly outfitted buses experienced a 7.8 percent decline in the per vehicle rear-end crash rate, while the buses without the upgrade experienced a 21.7 percent increase in the per vehicle rear-end crash rate. The comparative changes suggest that, overall, there was a 29.5 percent decline in the crash rate that could have been expected had the high density lights not been implemented.

Finally, researchers returned to the results of the previous study (*BB-221*) because of the difficulties encountered during the data collection process for each case study. Much needed information was either difficult to obtain, unavailable, or unknown. Researchers, therefore, recommended that the different transit authorities collect certain key data (i.e., that all transit authorities gather certain common and easily accessible data), which would allow for more thorough and less cumbersome analyses to be performed.

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[This article was adapted from the final report, *Analysis of Florida Transit Bus Crashes (BC-137-5)*, authored by Joel Rey for the Center for Urban Transportation Research at the University of South Florida.]