



Florida Department of Transportation Research

Evaluating the Effectiveness of Various Truck Lane Restriction Practices in Florida: Phase II
BD543-10 (1/08)

The Florida Department of Transportation imposes truck lane restrictions on some sections of multi-lane freeways to reduce lane changing and improve safety and traffic flow. FDOT commissioned a study to evaluate the results of lane restrictions and develop a truck lane planning tool for statewide application.

In part one of a three-part study, researchers at the Florida A & M University - Florida State University College of Engineering created traffic simulations of a section of I-95 in south Florida to determine how truck lane restrictions impact vehicle flow on limited access freeways. The simulations showed that traffic moves more quickly in lanes from which trucks are restricted. In non-restricted lanes, especially during peak travel hours, traffic is slower, more prone to change lanes, and more likely to form long queues at merge and exit points.

In part two, the researchers analyzed urban freeway crash data collected before and after the restrictions began to determine if truck lane restrictions improve safety. The results varied somewhat among the locations studied. Overall, the presence of a truck lane restriction was largely statistically insignificant in influencing the overall number of crashes occurring on an urban highway sections.

In part three, the researchers simulated truck lane restrictions on non-limited access urban arterial roadways. They found that restricting trucks to the right lane could provide a limited travel speed improvement in the non-restricted lanes and reduce the number of lane changes. Restricting trucks to the left or center lanes would cause excessive lane changes, which can result in accidents, reduce travel speed, and increase queue lengths and traffic delays.



Trucks on Interstate highways are restricted from the left lane.

The studies show that truck lane restrictions on limited-access freeways with three or more through lanes can benefit traffic operations. Lane restrictions are of less benefit on non-limited access roadways. Based on these studies, standard language for truck lane restrictions on multi-lane freeways has been developed and incorporated into the FDOT Traffic Engineering Manual and is being implemented statewide.

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