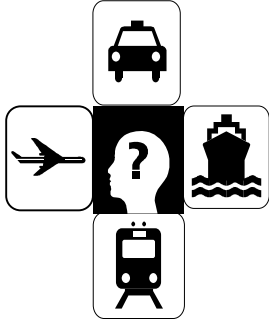


JERSEY DOT'S



Tech Brief

DEVELOPMENT AND IMPLEMENTATION OF AN AWARENESS, EDUCATION AND ENFORCEMENT CAMPAIGN REGARDING ILLEGAL TRUCK MOVEMENT ALONG ROUTE 17 IN PARAMUS, NJ

FHWA-NJ-2006-009

August 29, 2007

SUMMARY

Initiated from a perception that trucks were traveling illegally in the left lane of Route 17 in Paramus, New Jersey, a study was conducted to determine the extent of the problem, and to develop and test methods to alleviate the problem. Three main techniques were employed in this study: partnerships primarily between and among three levels of police, a New Jersey State Senator, the NJDOT, and NJIT; technological instruments to capture the extent of the problem; and, educational tools to assist in alleviating it.

BACKGROUND

Route 17 in Bergen County is one of the State's most heavily traveled truck routes. The average daily number of trucks traveling between MP 4.0 (Rutherford) and MP 26.0 (Mahwah) has grown steadily from 26,191 in 2002 to 27,217 in 2005. In addition to being a destination for truck hauled freight, the corridor also serves as a through route for these vehicles. Located near two non-truck routes: the Garden State Parkway and the Palisades Interstate Parkway,

Route 17 provides trucks access to the New York State Thruway for freight destinations beyond New Jersey.

Illegal truck movement, specifically trucks traveling in the left lane of a three lane highway, has been occurring on various NJ state highways, including Route 17. According to NJ Statute Title 39:4-88e Traffic on Marked Lanes:

“When such roadway had been divided in such a manner that there are 3 or more lanes for traffic in any one direction, no truck of 10,000 pounds registered gross weight or over shall be driven in the farthest left-hand lane, except when and to the extent necessary to prepare for a left turn, or when necessary to enter or leave such roadway by entrance or exit to or from the left lane or when reasonably necessary in response to emergency conditions.”

Either some truck operators are unaware of this law, or they are just not abiding by it. This problem has been observed by motorists and law enforcement officials; however, the magnitude of the problem has not been documented.

RESEARCH APPROACH

The research approach for this project consisted of several steps:

1. Establishment of a Working Group: The foundation of this research effort was the creation of the Route 17 Working Group comprised of various stakeholders with jurisdictional responsibilities and interests in the outcome.
2. Development of a Traffic Pattern Video Monitoring System: A unique technology was created and deployed for this study to determine and document trucks in the left lane. The Traffic Pattern Video Monitoring System, comprised of four high-resolution Day/Night capable Digital Signal Processing cameras, two specialized license plate imaging

cameras, and a digital recording system was designed for this study by EarthCam, was installed on two overhead sign structures along Route 17 in the study area.

3. Conduct of a Truck Movement Monitoring Program: Truck movement was observed in two phase (pre and post education campaign) by the Traffic Pattern Video Monitoring system and manual truck counters.
4. Development and Implementation of an Education Campaign: In an effort to deter trucks from using the left lane, the following educational tools were used: variable message signs; new, permanent signs; notices published in various trade publications, conveyed via email and fax, and read on XM radio; and, warning notices mailed to violators whose vehicles were captured via the License Plate Imaging Cameras.

FINDINGS AND CONCLUSIONS

The truck restriction analysis provided several results which are summarized as follows:

- At Century Road there is a 23 percent reduction in trucks in the left lane that can be attributable to the educational campaign.
- At Linwood Avenue, there a 27 percent reduction in trucks in the left lane in the northbound direction and 8 percent in the southbound direction that can be attributable to the educational campaign.
- There are no distinct changes in the percentage distribution of trucks by truck classification in the left lane between the pre- and post-campaign period.
- At the Century Road overpass, in the pre-campaign period the average hourly violation rate for the northbound and southbound is 4.3 percent and 4.4 percent, respectively. In the post-campaign period the average hourly

violation rate is 0.9 percent and 3.0 percent for the northbound and southbound directions, respectively.

- At the Midland Avenue overpass, the average hourly violation rate for the northbound and southbound directions during the pre-campaign period is 5.5 percent and 4.3 percent, respectively, with violation rates as high as 11.5 percent during the 5:00 PM to 6:00 PM. period. There were almost no trucks using the left lane in the post-campaign period, resulting in a violation rate of almost zero percent.
- At the Paramus Park overpass, during the pre-campaign period the average hourly violation rate for the northbound and southbound directions is 5.1 percent and 5.4 percent, respectively, with violation rates as high as 9.1 percent during the 5:00 PM to 6:00 PM period. There were almost no trucks using the left lane in the post-campaign period, resulting in a violation rate of almost zero percent.
- At the Ridgewood Road overpass, the average hourly violation rate for the northbound and southbound directions is 3.5 percent and 3.0 percent, respectively, with violation rates as high as 9.4 percent during the 1:00 PM to 2:00 PM period. The post-campaign violation rate is 0.2% for both the north and southbound directions.
- The data indicates that trucks are generally moving into the left lane at a rate of:
 - 5 trucks per hour between Century Road and Midland Avenue (northbound) in the pre-campaign and 6 trucks per hour during the post-campaign
 - 10 trucks per hour between Midland Avenue and Century Road (southbound) during both the pre- and post-campaign periods

- 6 trucks per hour between Midland Avenue and Paramus Park (northbound)
- 6 trucks per hour Paramus Park and Midland Avenue (southbound)
- 6 trucks per hour between Paramus Park and Ridgewood Road (northbound)
- 6 trucks per hour Ridgewood Road and Paramus Park (southbound)

RECOMMENDATIONS

The following recommendations have been developed by the Route 17 Working Group:

- As the installation of new signs proved successful in reducing the number of trucks in the left lane, it is recommended that the NJDOT paint “No Trucks in Left Lane” on the roadway pavement on the northbound segment of Route 17 just north of Farview Avenue where Route 17 changes from two to three lanes.
- As a permanent Variable Message Sign exists in the study area, it is recommended that NJDOT post “No trucks in Left Lane” messages at various times throughout the day and night.
- It was determined, through use of the License Plate Imaging Cameras that Canadian drivers are violating the left lane regulations. This may be a result of Canadian drivers not being aware of this law, and potentially other laws pertaining to truck operations. It is recommended that the State of New Jersey contact Canadian trucking organizations and provide them with “rules of the road” information.
- The Traffic Pattern Video Monitoring System installed in the study area proved to be beneficial in capturing traffic along Route 17 in portions of the study area. It is recommended that the cameras remain in place for

purposes such as: investigating driver behaviors, providing real time video to police headquarters and vehicles, and obtaining traffic counts for NJDOT purposes.

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