

DEVELOPMENT OF REVISED METHODOLOGY TO COLLECT ORIGIN-DESTINATION DATA

PROBLEM STATEMENT

Trip Origin and Destination (O-D) data is needed to support continuing analyses and implementation of Florida's Strategic Intermodal System (SIS). The data can also be used to support the Florida Department of Transportation's (FDOT) traffic count program and can provide data for specific projects for improvements to the SIS. These projects can help to improve mobility, safety, and economic vitality for Florida's traveling public.

The data obtained from O-D studies can be used to help produce a series of alternatives to be evaluated for future growth in specific corridors of the SIS, and as inputs into the Statewide Highway and Freight Models. These data may also be used as a baseline for future data monitoring and surveys on the state's limited access highway system. However, the traditional roadside intercept interview method used to collect automotive O-D data on major highways with high traffic volumes no longer seems safe. A revised methodology that minimizes the interruption to traffic flow is needed.

OBJECTIVES

The major objectives of the research project were to study approaches for collecting valid O-D data and to develop a methodology that does not involve interruption of traffic flow. The main focus of this methodology will be on the collection of O-D data related to intercity or interregional travel, with an additional emphasis on freight movements. The developed methodology will be tested and evaluated in a subsequent project

FINDINGS AND CONCLUSIONS

The literature review results show that the license plate survey method has been successfully used for external surveys in several FDOT Districts. Potentially problematic driver privacy issues have been addressed very well by employing a toll-free number and/or by sending a cover letter and frequently asked questions and answers to survey recipients. Drivers' addresses can be obtained from DHSMV at low cost, because the requestor of the license owner records is a governmental agency. To obtain passenger transportation data, researchers determined that the best approach would be to identify external survey recipients based on license plate information, and then to mail them surveys that could either be returned with a postage-paid return envelope (provided) or on the internet.. Since only in-state vehicle owners' mailing addresses can be collected through DHSMV, to minimize the data bias, an additional postcard survey at rest areas or off-ramp intersections was recommended to be used to collect O-D data that would include out-of-state vehicles.

To study freight movements, the research team recommends that a combination of fax, mail, and internet surveys be sent to warehouse and distribution centers to gather data on intra-regional trips, and that roadside interviews at appropriate facilities be performed to gather data on inter-regional travel. Researchers developed a map of weigh stations, rest areas, state roads, and Traffic Analysis Zones (TAZ) to identify potential survey sites, and a list of contact information for warehouse and distribution centers in Florida.

BENEFITS

The findings from this project should enhance the FDOT's ability to collect useful origin-destination data. The final report recommends that a variety of data collection methodologies be used to capture data from the wide variety of roadway users. Some of these methodologies have recently been used for collecting O-D data and refining the traveler information survey process. Future work will collect origin-destination data for use in the statewide models and SIS corridor analysis.

The primary focus of this project was to identify methods of data collection that would minimize the disruption to traffic flow caused by data collection efforts. Implementation of the results should improve the safety of data collection personnel and the traveling public. The recommended methodologies are also designed to improve the number of useful responses such that the Department has better and more meaningful origin-destination data. Some of the methodologies identified in the report utilize the latest advancements in digital imaging and optical character recognition, while others rely on more common approaches, such as telephone or postcard surveys.

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