



CURRENT TRAVEL PATTERNS AND FUTURE TRAVEL FORECASTING



113 US 113 North / South Study

Origin-Destination Study

Last summer, on three Saturdays in July and August, DeIDOT conducted the US 113 Origin-Destination Survey at 17 intersections in Sussex and Southern Kent Counties.

A mail-back survey form was used to collect information on current travel patterns. The survey included a map so that travelers could indicate exactly where their trip began and ended.



The percentage of shopping trips have doubled between 1987 and 2003, reflecting the growth in shopping destinations in the US 113 Corridor and the effect the Rehoboth Outlets has had on regional travel patterns.

Trip Purpose

Trip Purpose	Percentage of Trips	
	Previous Survey	Latest Survey
Work	8.2%	6.5%
Shopping	7.1%	15.4%
Recreation/Social	81.6%	68.3%
Other	3.0%	9.8%
Total	100%	100%

Origins and Destination by State

Origin State	Number	Percentage
Connecticut	1	0.4%
Washington DC	1	0.4%
Delaware	77	32.0%
Florida	1	0.4%
Massachusetts	1	0.4%
Maryland	38	15.8%
North Carolina	1	0.4%
New Hampshire	1	0.4%
New Jersey	14	5.8%
New York	11	4.6%
Pennsylvania	87	36.1%
Rhode Island	1	0.4%
Virginia	5	2.1%
West Virginia	1	0.4%
Unknown*	1	0.4%
Grand Total	241	100%

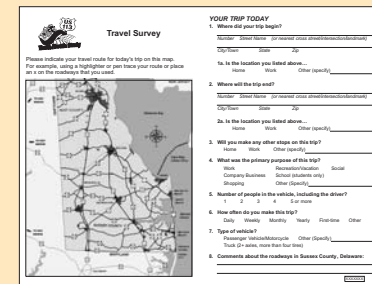
Destination State	Number	Percentage
Delaware	129	53.5%
Maryland	94	39.0%
New Jersey	1	0.4%
New York	1	0.4%
Pennsylvania	2	0.8%
Virginia	11	4.6%
Unknown*	3	1.3%
Grand Total	241	100%

Source: Station 12 on Southbound US 113 Near Georgetown

Travel Forecasting

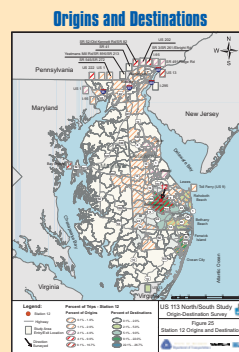
Trying to predict the future is a risky proposition for anyone, but DeIDOT's planners have to do just that to assess when and what type of improvements will be required to address the US 113 corridor's future transportation needs. Fortunately, with the aid of computer modeling, the job becomes a little easier and more scientific.

Right now, DeIDOT's planners are working on a new model that will allow them to predict the travel patterns that occur throughout the year and during the peak summer travel season. It's called the Peninsula Model because it covers the entire state of Delaware and Maryland's eastern shore, two thirds of the Delmarva Peninsula. The model has several key components:



Overall, 21,070 surveys were distributed and 2,161 responses were received - a 10% response rate. Station 12 had the highest number of surveys given out (over 2,600) and Station 14 had highest return rate (15%).

The survey information was entered into a computer database that allowed DeIDOT's planners to match drivers' origins and destinations and to analyze common travel patterns. The following two panels contain examples of the types of information obtained from the survey responses.



A map like this was developed for each of the survey stations. It shows how the trip origins and destinations were spread around the state and outside the state, with the darker shading being the higher percentage origins and destinations.

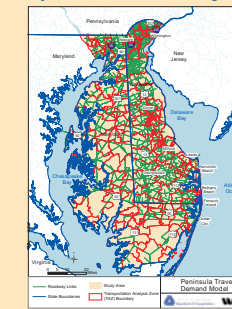


This map shows the percentages of origins and destinations that formed a connected trip for each survey station. Notice, for example, that 35% of the travelers surveyed at Station 9, on SR 20 near Millsboro, started their trip in Bethany Beach and ended it beyond the Bay Bridge. This was, by far, the highest recorded trip.

Key Survey Findings

- At Station 12, 59% of the 241 survey respondents had either an origin or destination in Delaware; the remaining 41% was through traffic (neither trip end in Delaware).
- 27% of those responding at Station 12 had both trip ends in Delaware.
- At Station 8, on northbound US 113 near Selbyville, 38% of the 140 survey respondents had either an origin or destination in Delaware, the remaining 62% was through traffic (neither trip end in Delaware).
- Coming from the west, about an equal number of drivers destined for Rehoboth (approx. 2,000 per day) use Route 16 and Route 404/18.
- At Station 4, on eastbound Route 404 west of Bridgeville, about twice as many drivers use Route 404 to reach Bethany as they do to reach Rehoboth.
- At Station 15, on Route 1 south of Milford, about 30% of traffic is destined for Bethany Beach or points farther south.

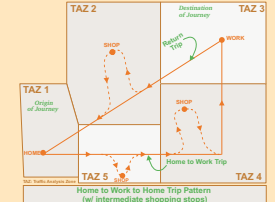
Transportation Network and Analysis Zones



Socioeconomic Information

Trip Type	Code	Description
Home-Based Work	HBRW	Home and work
Home-Based Destination	HBRD	Home and noncommercial destination
Home-Based Shopping	HBRSH	Home and store or restaurant
Regional Shopping	RSRSH	Home and Regional Shopping Centers
Home-Based Other	HBO	Home and any location not listed above (includes school trips)
Non-Home-Based Non-Work	NBRW	Neither end at home or work
Commuting to Work	CTW	Work and non-home

Travel Patterns



Once all the information is properly entered, the model is then 'run' for present conditions and adjusted until it reasonably predicts current traffic patterns, including those from the Origin-Destination survey. An old modeling adage is that "you need to be able to accurately predict the present before you can reasonably predict the future." When the planners are convinced the model is ready, it will be run for a variety of conditions, predicting the amount of traffic that will use the transportation network as far as twenty years into the future.