

Triangle Area HOV/Congestion Management

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HOV/Congestion Management Study (1999 through 2005)

In 1999, the NCDOT and Parsons Brinckerhoff Quade & Douglas, Inc., began a congestion management study, including an investigation of the feasibility of high occupancy vehicle (HOV) lanes on Triangle freeways.

- Phase 1, completed in August 2000, examined several Congestion Management strategies such as travel demand management (TDM), intelligent transportation systems (ITS), transportation system management (TSM) strategies, and HOV lanes. As part of the Phase 1 analysis, a 100-mile regional HOV network was identified as feasible by 2025 in terms of attracting sufficient traffic demand.
- A Phase 2 Study, substantially completed in November 2002, examined four types HOV configurations for 27 miles of I-40 between Chapel Hill and Raleigh, ranging from simple to complex. Cost estimates ranged from \$300 million to over \$1 billion. A hybrid configuration also was developed in December 2003 with an estimated construction cost of \$1.2 billion.
- A financial opportunities study is presently being conducted for the corridor. Preliminary results indicate potential for significant partial funding of managed lanes as high occupancy toll (HOT) lanes and through congestion pricing.

Next Steps for the Managed Lanes Study

The work to date determined HOV lanes are feasible on 100 miles of the Triangle's freeways, such lanes would vary in their design by location and potential demand, and a portion of the construction cost could be financed. The next step is developing an implementation plan for a cost-effective managed lanes program for Triangle freeways. Such a plan would confirm managed lane feasibility using the current regional travel demand model, determine where managed lanes should be built, identify their type, determine their cost, present a financing plan, and establish implementation priorities.

To shorten the time to program implementation, the implementation plan should be developed within the context of a Programmatic (or Tier 1) Environmental Impact Statement (EIS). Normally, development of a transportation improvement program is followed by individual project-specific environmental impact studies. The use of a Programmatic EIS will create a partial overlap between program development and environmental impact studies that can reduce the time to the start of project construction by several years. With the normal process, each project-specific environmental study starts almost from scratch, beginning with re-justifying the need for the project. A Programmatic EIS process will "lock-in" the program decisions. Tier 2 project-specific environmental work can then start where the Programmatic EIS left off, allowing projects to move quickly to final design and construction.

Financial Opportunities Study

As a follow-up to the Phase 2 study, a Financial Feasibility or Opportunities Study is being prepared. It is examining the merits of tolls and other innovative financing options for managed lanes, again focusing on 27 miles of I-40. Preliminary findings include:

- Potential toll revenues vary depending traffic demand and managed lane characteristics. Preliminary estimates (currently being updated) are that between \$149 and \$277 million could be raised over 30 years assuming two managed lanes in each direction of travel.
- Other potential methods of innovative financing include tax increment finance districts (region wide or corridor specific), developer impact fees, special assessment districts, senior revenue bonds, Transportation Infrastructure and Innovation Act (TIFIA) loans, sales taxes, and other local taxes.