

Tour de HOV . . . An Overview of Recent HOV Milestones

Tim Lomax, Texas Transportation Institute



In preparing for this presentation, I have thought of myself as a tour guide. I will be discussing some of the events that have occurred in HOV facilities and issues since the last HOV conference—both aspects that have changed and those that have not. I will only highlight a number of projects and issues that will be discussed in more detail in other sessions during the conference.

I would like to start out by discussing what has not changed with HOV facilities. For example, when you come to Los Angeles, you think of Tommy Lasorda—he is just as obnoxious as ever.

The growth rate of HOV projects also has not changed. There continues to be a steady increase in the number of facilities and the miles of operating projects. Over the last ten years, the number of miles of HOV projects has increased from 120 miles to almost 550 miles. The types of projects have also increased, with more projects focusing on low-cost alternatives with shorter implementation times.

Cost effectiveness concerns continue to be discussed. HOV facilities are seen not just as a way to increase the efficiency of transit, but also to increase the efficiency of the whole corridor. The requirements of the ISTEA and other recent legislation has also increased interest in HOV facilities in many areas.

A number of HOV lanes around the country focus primarily on serving carpools. This is especially true of recent projects located on non-radial freeways in suburban areas. Support facilities and programs continue to be a major focus of HOV projects throughout the country. These include enforcement areas and enforcement techniques, park-and-ride lots, transit centers, integrated bus terminals, exclusive entrance and exit lanes, special incident response vehicles, and vanpool and carpool

programs.

Although these trends are continuing in many areas, a number of changes have also occurred related to HOV facilities. For example, there now appears to be a clear relationship between HOV facilities and sport championships. Houston and the soon-to-be NBA champion Rockets, Dallas and the Super Bowl Champion Cowboys, Toronto and the World Series Champion Blue Jays, and New York and Stanley Cup Champion Rangers—all of these cities also have HOV lanes. It is no surprise that HOV lanes are being considered in Atlanta now that the Braves are not doing well.

Many existing HOV lanes around the country are being extended. These include the HOV facilities on I-84 in Hartford, the Gulf Freeway in Houston, I-5 and I-90 in Seattle, and a number of projects in California. The California facilities will be discussed in more detail in the next session this morning.

There are also a number of new HOV lanes throughout the world. The project on the A-1 Freeway in Amsterdam represents the first facility in Europe open to carpools. A new HOV lane is also being developed in Madrid. The Century Freeway here in the Los Angeles area, along with Route 57 and Route 99 provide examples of new projects in California. HOV lanes have also been opened on I-495 in Long Island, I-80 in New Jersey, and I-65 in Nashville.

Many more HOV projects are in design or under construction. Examples of these facilities include I-270 in Maryland, I-287 in New Jersey, several freeways in the Toronto area, the Stemmons and the LBJ Freeways in the Dallas area, the Eastex Freeway in Houston, I-25 in Denver, and I-95 in Northern Virginia. A number of arterial street HOV lanes have also been opened or **are in** the planning and design stages. These include arterial street HOV lanes in Seattle and Toronto.

The use of HOV lanes to help respond to the recent earthquake in the Los Angeles area provides additional experience the HOV community can learn from. The ability to quickly implement these projects at relatively low costs provides good examples of the role HOV lanes can play in responding to incidents and accidents.

Advanced technologies are continuing to be explored to enhance the operation and management of HOV facilities. Automatic Vehicle Identification (AVI), which would be used with the HOV congestion pricing demonstrations being discussed, and the use of advanced technologies to monitor vehicle occupancy levels represent just two examples.

Supporting programs and facilities continue to be important parts of many HOV projects. Marketing materials, park-and-ride lots, transit stations, rideshare programs, and other activities are moving forward in

many areas. An NCHRP Synthesis on HOV facilities, written by Chuck Fuhs, has been published by TRB. Additional information and guidelines are available from states, the ministries in Canada, and local transit agencies as well. If you are considering an HOV lane, much more information is currently available than was five years ago.

There are still a number of important issues related to HOV facilities that need to be addressed. The first is the air quality impacts of different types of HOV facilities and how HOV lanes can be used to meet the requirements of the Clean Air Act Amendments and other legislation. More areas are discussing the potential of lane conversions. This is related to air quality concerns, but also has cost and public acceptance implications. The vehicle occupancy requirements for HOV facilities are also being discussed in many areas. Capacity is being reached on some lanes which use a two person vehicle-occupancy requirement. Increasing the vehicle occupancy requirement to three persons is an option being seriously considered in many areas. This has the potential of reducing utilization levels, however, and may cause "empty lane syndrome" perception problems. The issue may be that we just do not have enough 2.5 person carpools. I will leave you with the challenge of determining how we generate 2.5 person carpools.

Thank you.

A National and International Status Report

Charles Fuhs, Parsons Brinckerhoff Quade & Douglas, Inc.



I appreciate the opportunity to be here this morning. Summarizing the recent experience with HOV facilities around the country and around the world is a difficult task. This year we thought we would take a little different approach to presenting an update on HOV activities. To accomplish this, a video has been developed with the

assistance of individuals responsible for HOV projects throughout the world.

The following projects were highlighted in the video.

- **Chicago, Illinois.** The Illinois Department of Transportation (IDOT) is currently designing the first HOV lanes in the Chicago area. The selected design for the Stevenson Expressway is a concurrent flow facility with the HOV lanes located in the center median of the freeway. Implementation should occur in the next four years.

- **Boston, Massachusetts.** By the spring of 1995, two HOV projects will be in operation in the Boston area. These facilities, accounting for 14-lane miles, are located on I-93. In ten years, approximately 25 miles of HOV lanes should be in operation. These are part of a long-range HOV plan developed by a multi-agency planning group. The Massachusetts Highway Department is responsible for developing the I-93 HOV lane. Constraints for designing the contraflow HOV lane included limited rights-of-way and environmental issues.

- **Long Island, New York.** The HOV lanes on the Long Island Expressway are buffer-separated concurrent flow lanes. A 2+ occupancy requirement is used. Traffic is monitored by the Information for Motorists System (INFORM). Access and egress are by tapered acceleration and deceleration lanes. A 14-foot shoulder is provided on the left for enforcement and incident management. The Long Island Expressway HOV Task Force, which was formed in 1991, assisted in developing the operating guidelines for the facility. The Task Force is comprised of legislative representatives, the county executive, individuals from transportation, enforcement, and transit agencies, and representatives from the business community. The Task Force was instrumental in developing an outreach program to explain and promote use of the lane.

- **New Jersey.** The Diamond Express lanes on Route 80 in North New Jersey opened in March of 1994. These are 10-mile long concurrent flow HOV lanes. The facilities were developed in response to growing traffic congestion in suburban areas of the state. These lanes were originally intended to be general purpose lanes. Midway through construction, and even after a segment had been opened to general-purpose traffic, it was decided to make them HOV lanes. After six weeks of operations, the lanes appear to be well utilized, with volumes greater than originally estimated. In the morning peak-period, approximately 2,500 vehicles, carrying 6,300 people, are using the lanes. The travel time savings for HOVs using the lanes has been estimated at 10 to 15 minutes. The