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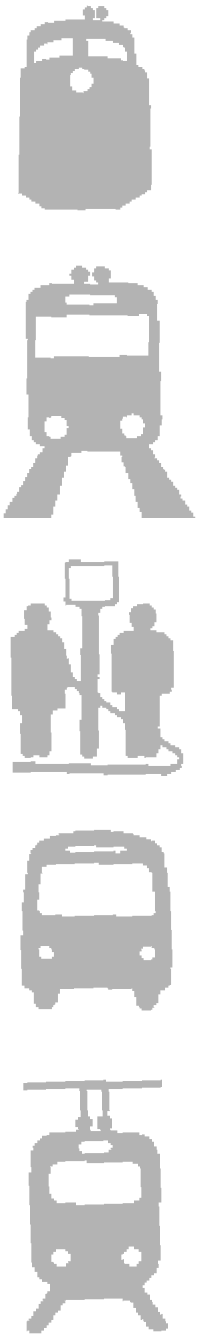

NEWSLINE

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Transit-Related HOV Lane Research Is Assembled

High-occupancy-vehicle (HOV) lanes have become important transit factors in a number of cities. Even so, the lack of transit-specific research on HOV lanes results in failure to indicate what transit's interests are or how they are best served in HOV facility design and operations. Researchers preparing *Transit Implications of HOV Facility Design* assembled many segments of available transit-related HOV research into a single document. The report embraces technical aspects of HOV design and operations by dividing the domain into two components: freeways and arterials.

In the study's first part, HOV lanes are characterized as at least a partial solution to the problems of severe traffic congestion and poor air quality. HOV lanes are also promoted as a way to speed the trips of transit vehicles and other multiple-occupancy vehicles. The aim of the HOV lane is to reduce the negative effects of single-occupancy-vehicle (SOV) travel by stressing person throughput rather than vehicle throughput. The typical HOV facility offers rideshare passengers time savings over the SOV. Moreover, HOV modes are thought to make more efficient use of existing roadway capacity by moving more people per vehicle trip while reducing vehicle trips and congestion.

The treatment of arterials and freeways is distinctly different. For example, buses using arterials must interact with pedestrians and bicycles, and most buses on arterials will stop frequently. The delay for HOVs on arterials is due primarily to signalized intersections, and arterial speed limits are lower than those of freeways. Arterial lanes are usually narrower than freeway lanes and have fewer access restrictions. Through traffic on arterials has to compete with right- and left-turning vehicles, and the complex movements of traffic complicate HOV enforcement on arterials. The arterial HOV facility most often improves local access as opposed to long-haul access. On freeways there are three types of HOV lanes typically intended to be shared by buses and carpools: physically separated HOV lanes, concurrent-flow HOV lanes, and contraflow HOV lanes. In some cases, roadway shoulders are converted to HOV use during peak hours.

For both freeways and arterials, constructing a new HOV lane is more expensive than converting an existing lane. Restriping can be used to add a lane as long as it does not cause an unacceptable decrease in the widths of existing lanes. HOV lanes should be no narrower than the adjacent mixed-flow lanes. Reversible HOV lanes are appropriate in corridors that have a peak direction split in excess of at least 65 to 35 peak to nonpeak.

For more information contact G. Scott Rutherford, Stephanie MacLachlan, or Kathleen Semple, Washington State Transportation Center, University of Washington, Box 354802, University District Building, 1107 NE 45th Street, Suite 535, Seattle, Washington 98105-4631 (206-685-2481). The report (WA-26-9001-97-1) is available through the National Technical Information Service, 5285 Port Royal Road, Springfield, Virginia 22161 (703-487-4650).

Transportation Planning Can Improve Access to Jobs

Job access is an important part of public transportation's mission. *Transportation Planning for Access to Jobs: Job Access and the Metropolitan Planning Process in Hartford, St. Louis, and Detroit* reviews innovative transportation planning efforts. The aim is to improve access to jobs for current welfare recipients and other low-income residents. Each of the case studies contains a review of local conditions, the planning process, the transportation solutions involved, and the conclusions reached.

Melissa Laube was the primary author and analyst for the Hartford and St. Louis studies. Philip van der Wilden took the lead in writing and analyzing the Detroit study. The access to jobs case studies were carried out under the direction of Project Manager William Lyons. Questions regarding the Access to Jobs Initiative can be directed to Sean Libberton at 201-366-0055. Copies of the report may be requested from the Volpe Center at 617-494-3260.

NEWSLINE reports current research and development in public transportation. Although great effort is made to select unbiased research studies, the findings and conclusions are those of the authors and not the Transportation Research Board. The publication of *NEWSLINE* is made possible through funding under the Technical Assistance Program of the Federal Transit Administration. *NEWSLINE* is published periodically by the TRB Committee on Public Transportation Planning and Development (George M. Smerk and Mary Ann Smerk, editors; Brenda Crohn, staff; Peter L. Shaw, TRB staff). Submit research summaries and other news items to the Institute for Urban Transportation, Indiana University, 809 East 9th Street, Bloomington, Indiana 47405, or to *NEWSLINE*, Transportation Research Board, 2101 Constitution Avenue, N.W., Washington, D.C. 20418 (202-334-2966). ISSN 0148-8511.

Studies Available from University of California, Irvine

The following brief papers and working drafts are available from the Institute of Transportation Studies at the University of California, Irvine, California 92697-3600 (714-824-5989):

• *Urban Transportation* by Kenneth A. Small and Jose A. Gomez-Ibanez. Working draft. UCI-ITS-WP-97-3, ISSN 0193-5860, February 1996.

• *Hyper Congestion* by Kenneth A. Small and Xuehao Chu. UCI-ITS-WP-97-5, ISSN 0193-5860, March 1997.

• *Urban Spatial Structure* by Alex Anas, Richard Arnott, and Kenneth A. Small. UCI-ITS-WP-97-6, ISSN 0193-5860, March 1997.

• *The Potential for Integrating GIS and Activity-Based Forecasting Models* by Michael G. McNally. UCI-ITS-AS-WP-97-3, ISSN 0193-5860, June 1997.

• *Simultaneous Model of Activity Participation and Trip Change Generation by Households* by Thomas F. Golob. UCI-ITS-AS-WP-97-4, ISSN 0193-5860, August 1997.

• *Project Evaluation* by Kenneth A. Small. UCI-ITS-AS-WP-97-7, ISSN 0193-5860.

TRB and FTA Publish Information on Turnkey Applications

Proceedings of the Workshop on International Transit Turnkey and Joint Development and *Lessons Learned—Turnkey Applications in the Transit Industry* are companion volumes published by TRB and FTA, respectively. Both address the concept of a project delivery system that promises to help expedite the schedule of work, control cost, and better allocate and manage the risks of implementation. There are further benefits: turnkey deployments provide more effective cash-flow management and project control; encourage partnerships of small, medium, and large firms; help attract new sources of funding; and help foster use of innovative technology. Under the terms of the Intermodal Surface Transportation Efficiency Act of 1991, Section 3019, FTA was authorized to select several transit projects to participate in the turnkey demonstration program; the FTA publication reports the findings.

FTA is also responsible for the development of guidelines for turnkey projects on the basis of comparative cost and schedule differences between turnkey and conventional projects. To help meet this responsibility, FTA initiated an outreach program. These outreach activities were highlighted in the International Transit Turnkey and Joint Development Workshop in San Juan, Puerto Rico. The meeting, held October 15–19, 1996, was cohosted by FTA, the Transportation Research Board, and the Commonwealth of Puerto Rico.

For more information on the *Proceedings of the Workshop on International Transit Turnkey and Joint Development* (*TR Circular 483*, March 1998), contact the Transportation Research Board Business Office, 2101 Constitution Avenue, N.W., Washington, D.C. 20418 (202-334-3213, fax 202-334-2519), or access the TRB Internet Bookstore: www.nas.edu/trb/bookstore/.

Six resource papers presented at the workshop examined the core subjects of financing, project management control, identification and management of risk, quality assurance/quality control, procurement, and environmental considerations. To obtain information on *Lessons Learned—Turnkey Applications in the Transit Industry*, contact the Office of Planning Innovation and Analysis, Federal Transit Administration, U.S. Department of Transportation, 400 Seventh Street, S.W., Washington, D.C. 20590.

Researchers Address Increasing Revenue and Reducing Cost Without Harming Interests of Passengers

Operating efficiently, generating as much revenue as possible, and controlling or cutting costs are all items of major interest to transit properties. *Lessons Learned in Transit Efficiencies, Revenue Generation, and Cost Reductions* addresses these matters.

An industry that emphasizes service to its customers risks its mission if it reduces its service and raises fares when faced with a tight budget.

The purpose of the research was to make available information on how transit agencies are generating new revenues or cutting costs without harming the essential interests of their passengers. The basic idea is that transit properties can learn from each other. Seventy-five transit systems responded to a survey. More than 180 methods of saving money or increasing revenues were submitted by the transit systems. The techniques are outlined in the report.

The study is divided into several parts. One part discusses positive opportunism, which covers such things as the sale of advertising rights and the development of facilities that help generate new revenues, including leasing rights-of-way along rail corridors to telecommunication companies or using equipment that generates new revenues. For instance, an interesting opportunity is using bus-wash equipment to clean vehicles of other public and private agencies. The study examines partnerships as an option, which might include support of a new transit service by private- and public-sector partners. This idea might partner business parks or major employers, or associations of businesses or hospitals that are interested in a new service. Public-sector partners could be major universities, public schools, or military bases. Employers who buy transit passes for their employees are another example.

Cooperation is another theme that can lead to revenue enhancement or cost cutting. Joint purchasing with other agencies is one possibility, as is sharing services, facilities, or funds. Coordination of paratransit service is another way transit agencies and paratransit services can realize savings. Negotiating an agreement with organized labor to cut cost by greater use of part-time operators is a possibility.

Other suggestions are maximizing the effect of the capital budget by using low-tech solutions to save labor and parts costs, or acquiring vehicles such as rail cars with AC propulsion systems to reduce the cost of operations and maintenance. Another idea is better management of resources through outsourcing or improving procurement methods.

The study (DOT-T-97-23) is available from the Technology Sharing Program, Research and Special Programs Administration, U.S. Department of Transportation, Washington, D.C. 20590. For more information, contact Joel Volinski, National Urban Transit Institute, Center for Urban Transit Research, University of South Florida, 4202 East Fowler Avenue, Tampa, Florida 33620-5375 (813-974-3120).

San Diego and Houston Succeed in Increasing Transit Ridership

Success in ridership development and cost control in San Diego and Houston is covered in *Secrets of Success: How Houston and San Diego Transit Providers Achieved Large Increases in Transit Ridership*.

San Diego's Metropolitan Transit System (MTS) is a confederation of several fixed-route transit providers that operate under the general oversight of the Metropolitan Transit Development Board (MTDB). MTS serves the southwestern part of San Diego County. MTDB was created in 1975 by the California State Legislature to plan, build, and operate the light rail transit system in San Diego. The San Diego Trolley and the San Diego Transit Corporation account for 90 percent of the fixed-route boardings in the MTDB service area. Additional services are provided by private firms under contract to the communities of Chula Vista and National City, the county of San Diego, and MTDB.

METRO is the publicly owned singular provider of transit services in the western two-thirds of Harris County, Texas, which embraces metropolitan Houston. It serves a low-density area.

Both MTS and METRO turned around a long-standing decline in transit ridership in their communities; in recent years both San Diego and Houston have achieved large increases in ridership. Between 1980 and 1990, MTS and its many operations increased patronage by 49 percent; Houston's METRO increased boardings by 85 percent. In the Houston area, METRO's developing and expanding express bus and transitway system uses high-occupancy-vehicle lanes in superhighways and attempts to offer residents of the area a high-performance, high-speed, and cost-effective commuter service. METRO is working on an ambitious regional bus plan that would make sensitive use of the growing transitway system; it will use minibuses to provide frequent service on low-density routes. To help curb air pollution, many METRO buses in Houston use liquid natural gas as a fuel.

Both transit systems are located in rapidly growing urbanized areas, which is an important element in their success. Aggressive service expansion was per-

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Increasing Transit Ridership
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haps more important than population increase in boosting patronage. METRO increased bus service miles by 80 percent between 1980 and 1990, and MTS increased its service miles by 47 percent in the same period. Rail car miles in the MTS area increased 2.5 times. Fare reductions were also important in attracting more riders in both systems. The essential philosophy in San Diego is to recover fairly large amounts from the fare box and to use subsidy money for capital improvements. Bus-oriented Houston's METRO, on the other hand, used the subsidy money for expanding operations.

For more information, contact John F. Kain or Chi Liu, Department of Economics, Littauer Center, 1805 Cambridge Street, Harvard University, Cambridge, Massachusetts 02138 (617-495-2144). The report (FTA-TX-08-7004-97-1) was prepared by the Federal Transit Administration. Persons interested in obtaining a copy of the report should contact the Office of Environment and Planning, HEP 1, Federal Highway Administration, 400 7th Street, S.W., Washington, D.C. 20590 (202-366-2360).

Starting in 1999

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Effective with the first issue (Volume 25, Number 1) in 1999, *NEWSLINE* will be published on the Internet. Electronic publication of *NEWSLINE* will permit continued distribution at no charge to its large readership. Paper publication will be discontinued at that time.

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