



U.S. Department  
of Transportation

Urban Mass  
Transportation  
Administration

## **DEMAND MANAGEMENT:**

### **STRATEGIES TO MITIGATE TRAFFIC**

Selected References from the  
Transportation Research Information Service  
UMTRIS  
Database  
Provided by the Transportation Research Board

Prepared for the UMTA Fifth Annual Symposium:  
**The Private Sector and Public Transit: New Directions, New Opportunities**  
April 23 - 25, 1989  
Denver, Colorado

**Office of Technical Assistance and Safety**

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474843 DA

**TECHNIQUES FOR MANAGING FREEWAY TRAFFIC CONGESTION**

Ju, RS; Cook, AR; Maze, TH

Eno Foundation for Transportation, Incorporated

*Transportation Quarterly* VOL. 41 NO. 4 Oct 1987 pp 519-537 1 Tab. Refs.

SUBFILE: HRIS

AVAILABLE FROM: Eno Foundation for Transportation, Incorporated P.O. Box 2055, Saugatuck Station Westport Connecticut 06880

Urban freeway congestion is categorized into 2 types, recurring congestion and non-recurring congestion, and their causes are noted. Recurring congestion management techniques are of two types. (1) Supply management techniques consist of entrance ramp control, exit ramp control, mainline control, priority control, and corridor control. (2) Demand management techniques include work rescheduling, ridesharing, park-and-ride facilities, and transit service improvements. Geometric improvement techniques are another approach to managing recurring congestion. Non-recurring congestion may be managed by freeway surveillance systems (motorist call systems, citizen-band radio, police and service patrols, aerial surveillance, closed-circuit television, detector-based surveillance, cooperative motorist aid system), and freeway incident management systems. Integrated motorist information systems (IMIS) designed to encourage mainline motorists upstream of the incident to use an alternate route to bypass the incident site) are also described.

474388 DA

**TRANSPORTATION EMPLOYMENT AS A SOURCE OF REGIONAL ECONOMIC GROWTH: A SHIFT-SHARE APPROACH**

Toft, GS; Stough, RR

Transportation Research Board

*Transportation Research Record* N1079 1986 pp 24-36 11 Tab. 10 Ref.

SUBFILE: HRIS

AVAILABLE FROM: Transportation Research Board Publications Office 2101 Constitution Avenue, NW Washington D.C. 20418

The U.S. economy is experiencing major structural and regional adjustments as it develops into an information-oriented society. Traditional (heavy) manufacturing is threatened by overseas competition while young high technology and service industries are burgeoning. In addition, a major shift in population and employment is observed from Old North to Old South and to the West. Such economic and societal transformations can be expected to affect significantly the transportation economy. By means of a shift-share analysis, the changing size and distribution of transportation employment between 1969 and 1982 is documented. The Northeast and Midwest are losing competi-

tive share in all two-digit standard industrial classification (SIC) transportation categories except transportation services. In this paper background is provided for regional theorists interested in regional configurations, transportation planners, and economic development specialists determined to capitalize on comparative advantages of their respective states and localities. The aim is to document, rather than explain, regional shifts in transportation employment. This paper appeared in *Transportation Research Record* N1079, Land Development Simulation and Traffic Mitigation.

474301 DA

**SAFEGUARDING SUBURBAN MOBILITY**

Cervero, R

Transportation Research Board

*Transportation Research Record* N1079 1986 pp 16-23 4 Tab. 20 Ref.

SUBFILE: HRIS

AVAILABLE FROM: Transportation Research Board Publications Office 2101 Constitution Avenue, NW Washington D.C. 20418

The suburban office boom of the past decade has flooded the outskirts of many metropolitan areas with unprecedented traffic, leading to major tie-ups that previously afflicted only downtown motorists. Some have forewarned that suburban congestion could become the dominant transportation issue in the late 1980s and 1990s. The congestion threat posed by rapid office growth on the metropolitan fringes is examined in this paper. The focus is on the roles of design, land use, and transportation management toward safeguarding suburban mobility. A national survey showed that extremely low densities and detached designs have rendered many new suburban office parks almost entirely dependent on the automobile. The absence of onsite consumer services, such as restaurants, as well as gross imbalances in the siting of jobs and housing along most suburban corridors have further reinforced workers' preferences for solo commuting. Some private-sector initiatives have been encouraging, notably ridesharing incentive programs, flextime work schedules, and cofinancing of needed infrastructure. Ordinances requiring developers to introduce such programs have also been enacted in several places around the country. Overcoming numerous institutional and logistical obstacles to traffic management in suburbia, however, remains a lofty, though not insurmountable, challenge. This paper appeared in *Transportation Research Record* N1079, Land Development Simulation and Traffic Mitigation.

473220 DA

**PEAK PERFORMANCES**

Fulton, W

American Planning Association

*Planning* VOL. 53 NO. 7 Jul 1987 pp 12-16 2 Phot.

SUBFILE: UMTRIS

AVAILABLE FROM: American Planning Association 1313 East 60th Street Chicago Illinois 60637

TSM looks ever more promising with a new name and new applications.

472754 DA

**TOWARD A POLICY FOR SUBURBAN MOBILITY**

Orski, CK

Institute of Transportation Engineers 525 School Street, SW, Suite 410

Washington D.C. 20024

1986 25p

REPORT NO: IR-039

SUBFILE: UMTRIS

AVAILABLE FROM: Institute of Transportation Engineers 525 School Street,

SW, Suite 410 Washington D.C. 20024

Contents: Introduction; The Suburban Office Boom: Implications for Metropolitan Mobility; Cooperative Financing; Reallocating the Burden of Infrastructure Financing; Traffic Mitigation: The Public and Private Sector Roles; Institutional Response; Conclusion: A New Strategy for Suburban Mobility; and Bibliography.

471943 DA

**DEALING WITH THE TRAFFIC IMPACTS OF URBAN FREEWAY RECONSTRUCTION: MITIGATION MEASURES**

Bay, PN

Transportation Research Board

Transportation Research Board Special Report N212 1987 pp 55-57

SUBFILE: HRIS

AVAILABLE FROM: Transportation Research Board Publications Office 2101

Constitution Avenue, NW Washington D.C. 20418

The following six areas of impact come quickly to mind when discussing plans for managing traffic in highway construction zones: (1) Actual delay to motorists, especially peak period commuters, involving significant increases in daily travel time; (2) day-to-day uncertainty in travel time; (3) losses to businesses adjacent to highway work zones whose normal access has been disrupted; (4) major delays and disruptions to truckers and to those businesses throughout an urban area that rely on regular, timely truck deliveries; (5) accidents and safety problems for motorists and highway construction workers; and (6) political problems that arise when the public's perception of construction impacts may hamper completion of needed highway programs. Possible mitigation measures to deal with these six areas are presented in this paper. They include (1) mitigation through design techniques, (2) mitigation through construction techniques, (3) mitigation through traffic system management techniques, and (4) mitigation through im-

proved public communication. The effectiveness and financing of mitigation measures are briefly discussed. This paper appeared in Transportation Research Board Special Report 212, Transportation Management for Major Highway Reconstruction, Proceedings of the National Conference on Corridor Traffic Management for Major Highway Reconstruction, Chicago, Illinois, September 28 - October 1, 1986.

471901 DA

**SURVEY OF CURRENT PRACTICES FOR IDENTIFYING AND MITIGATING TRAFFIC IMPACTS**

Institute of Transportation Engineers

*ITE Journal* VOL. 57 NO. 5 May 1987 pp 38-44 Tabs. 1 App.

SUBFILE: HRIS

AVAILABLE FROM: Institute of Transportation Engineers 525 School Street,

SW, Suite 410 Washington D.C. 20024

Effort has been made to determine the current practice for traffic impact study requirements and the assessment of fees to fund site-generated transportation improvements. This report presents the results of a study to identify current policies and experience in the States of Colorado and Wyoming. A survey was used to identify the current practice in 4 areas related to the traffic impact of new or improved developments: warrants for traffic studies; format/standard references for study submittals; traffic impact fee requirements and fee structures, and developer participation in funding offsite transportation improvements. The findings of the survey are summarized.

469563 DA

**REDUCING TRANS-HUDSON CONGESTION**

Liburdi, LC

Eno Foundation for Transportation, Incorporated

*Transportation Quarterly* VOL. 42 NO. 3 Jul 1988 pp 333-348 1 Fig. 1 Tab.

SUBFILE: HRIS

AVAILABLE FROM: Eno Foundation for Transportation, Incorporated P.O. Box 2055, Saugatuck Station Westport Connecticut 06880

New York City's regional transport system, and the positions taken by various local political jurisdictions and governmental entities in dealing with the problem of trans-Hudson congestion are presented. The article describes the role the Port Authority of New York and New Jersey should play in solving the trans-Hudson problems and supporting programs that are underway in the region. The background to the problem, and the factors leading to today's conditions are described, and future projections and New York City's transportation capacity are discussed. The way in which transportation needs may be met are discussed. The forging of a regional action plan is described. It is noted that the answers will be found in a demand management system that

includes new efforts in car/vanpools, express transit services, direct bus routes, additional equipment, extension of bus routes, and park-and-ride facilities. Employer transit subsidies will complement these approaches.

469140 DA

**A RIDESHARING MARKET ANALYSIS SURVEY OF COMMUTER ATTITUDES AND BEHAVIOR AT A MAJOR SUBURBAN EMPLOYMENT CENTER**

Glazer, LJ; Curry, DA

Transportation Research Board

*Transportation Research Record* N1130 1987 pp 9-13

SUBFILE: HRIS; UMTRIS

AVAILABLE FROM: Transportation Research Board Publications Office 2101

Constitution Avenue, NW Washington D.C. 20418

This survey was part of a project to prepare a transportation systems management plan for the Irvine Business Complex (IBC), a developing, suburban employment center 50 miles south of downtown Los Angeles. Because manufacturing and warehousing employees were undersampled, there may be some bias in the survey results. About 90 percent of the respondents were driving to work alone. The average commuting distance was 12 miles one way. Average commuting time was about 30 minutes, each way. The trip-length distribution was quite similar to that of the Los Angeles region. More than three-quarters of the commuters started work between 7:30 and 8:30 a.m. About 60 percent left between 4:00 and 5:30 p.m. Only 12 percent of this white collar work force had schedule flexibility of more than 30 min. Almost two-thirds felt that commute traffic was growing worse. Free parking was enjoyed by 94 percent of respondents; parking was abundant. The average duration of employment in the IBC was almost 3 years. More than two-thirds of the survey respondents were female. The five most common reasons cited for not ridesharing were (a) Prefer freedom of driving alone (45 percent); (b) Might need car due to overtime (42 percent); (c) Need car for business (32 percent); (d) Run other errands en route (30 percent); and (e) Irregular working hours (26 percent). However, 41 percent of the solo drivers expressed positive attitudes toward using some other commute mode, and 11 percent requested ridesharing information. Combining ridesharing with the other demand management techniques of parking management, work rescheduling, and telecommuting, the market shares of which are harder to quantify, the maximum potential market share or participation rate will likely be between one-half and two-thirds of all IBC commuters. This paper appeared in *Transportation Research Record* No. 1130, Recent Ridesharing Research and Policy Findings.

468874 DA

**TRAFFIC MITIGATION AND DEMAND MANAGEMENT. SUMMARY OF NATIONAL EXPERIENCE AND POTENTIAL APPLICATIONS IN NEW YORK. FINAL REPORT**

Oram, RL

Port Authority of New York and New Jersey Planning & Development Dept,

One World Trade Center, Rm 72W New York New York 10048; Office of the

Secretary of Transportation Technology Sharing Program, 400 7th Street, SW

Washington D.C. 20590

Jul 1987 25p

REPORT NO: DOT-T-88-02

SUBFILE: UMTRIS

AVAILABLE FROM: Office of the Secretary of Transportation Technology

Sharing Program, 400 7th Street, SW Washington D.C. 20590

This report reviews actions a number of North American cities have taken to reduce traffic congestion. It summarizes a new area of transportation planning that has received increased attention in recent years--traffic mitigation. These actions, also referred to as demand management, focus on innovative methods that manage or reduce the level of traffic demand as opposed to expanding the supply of transit services or highways.

466782 DA

**URBAN FREEWAY MANAGEMENT TECHNOLOGY**

Ahmed, SA; Cook, AR

Roads and Transportation Association of Canada 1765 St Laurent Boulevard

Ottawa Ontario K1G 3V4 Canada

Sep 1984 pp G33-G50 1 Fig. 1 Tab. 27 Ref.

SUBFILE: HRIS; TRRL; IRRD; RTAC

AVAILABLE FROM: Roads and Transportation Association of Canada 1765 St

Laurent Boulevard Ottawa Ontario K1G 3V4 Canada

This paper presents an overview of current management techniques which are aimed at improving the efficiency and productivity of urban freeways. The major topics which are addressed include supply management techniques (entrance ramp control, mainline control, corridor control, and priority control); demand management techniques (peak period dispersion, ridesharing and improving public transit); and techniques of managing non-recurrent congestion (traffic surveillance systems, incident servicing, and motorist information systems). The discussion is not intended to be exhaustive, and many details are omitted mainly due to a lack of space. For the covering abstract of the conference see IRRD 286189. (Author/TRRL) Proceedings of the International Transport Congress, Montreal, September 23-27, 1984,

Volume 3: Vehicles and Tr.

464440 DA

**TRAFFIC MITIGATION REFERENCE GUIDE: A REVIEW OF OPTIONS AVAILABLE TO THE PUBLIC AND PRIVATE SECTORS**

Brittle, C; McConnell, N; O'Hare, S  
Metropolitan Transportation Commission Ashby Avenue  
and Domingo Avenue  
Berkeley California 94705  
Dec 1984 128p  
REPORT NO: DOT-I-86-18  
SUBFILE: HRIS; NTIS  
AVAILABLE FROM: National Technical Information  
Service 5285 Port Royal  
Road Springfield Virginia 22161

The document is a reprint of a guide on how to reduce traffic impacts, through city, developer, and employer actions. It covers a wide variety of techniques, including carpooling and vanpooling programs, transit usage, parking management approaches, variable work hours, bicycle programs, and various kinds of brokerage activities. The document also includes material on incorporation of traffic mitigation techniques into local plans, policies, ordinances, and development project approvals, along with specific techniques for monitoring of compliance and enforcement. Funding of traffic mitigation activities from public or private sources is also discussed. The document should be of interest to traffic and highway planners, the transit community, staffs of elected officials, major employers, and private developers themselves.

463273 DA

**URBAN TRAFFIC CONGESTION: WHAT DOES THE FUTURE HOLD? TOWARD A POLICY FOR SUBURBAN MOBILITY**

Orski, CK  
Institute of Transportation Engineers 525 School Street,  
SW, Suite 410  
Washington D.C. 20024  
25p Tabs. Refs.  
SUBFILE: HRIS; UMTRIS  
AVAILABLE FROM: Institute of Transportation Engineers  
525 School Street,  
SW, Suite 410 Washington D.C. 20024

This paper examines the trends of rising suburban traffic congestion, changing intergovernmental allocation of responsibilities, and declining federal aid against a background of new responses and policy initiatives involving local government and the private sector. A number of public initiatives have been launched to consider the traffic crisis. Out of these initiatives has emerged a strategy for suburban mobility. It blends together targeted facility expansion, traffic flow improvements, demand management, and traffic

mitigation into a sustained attack on the suburban congestion. This strategy relies heavily on the involvement of the private sector. As the emphasis shifts toward utilization of existing capacity, pressures will grow to orient the transportation planning and engineering profession to meet the new challenge of "congestion management." This will require the melding of expertise in traffic operation, demand management, trip generation estimation, and public/private negotiations, as well as appropriate changes in academic curricula, professional development, and retraining. The article discusses in detail, the suburban office boom, cooperative financing--reallocating the burden of infrastructure financing, traffic mitigation--the public and private sector roles, and the institutional response.

462001 DA

**MOBILITY FOR MAJOR METROPOLITAN GROWTH CENTERS: A NEW CHALLENGE FOR PUBLIC-PRIVATE COOPERATION. FINAL REPORT**

Long, L  
California University, Irvine Institute of Transportation  
Studies Irvine  
California 92717; Urban Mass Transportation Administration  
Office of Service and Management Demonstrations Wash-  
ington D.C. 20590  
Nov 1985 143p Refs.  
REPORT NO: UMTA-CA-06-0196-86-1  
CONTRACT NO: UMTA-CA-06-0187; Contract  
SUBFILE: UMTRIS  
AVAILABLE FROM: National Technical Information  
Service 5285 Port Royal  
Road Springfield Virginia 22161

This document contains the proceedings of the November 1984 Workshop Conference on Mobility for Major Metropolitan Growth Centers: A New Challenge for Public-Private Cooperation. This conference was sponsored by the Urban Mass Transportation Administration in recognition of the emerging problems of mobility in high-growth suburban and exurban megacenters. Issues addressed at the Conference included social, demographic, and locational factors which have contributed to suburban traffic congestion; emerging institutional responses to the problem; the role of parking management and other strategies in the management of transportation demand and mitigation of traffic congestion; coordination of transportation and land use development; and ways in which public-private cooperation can ensure current and future mobility in high-growth sites. The document contains formal papers, reports of workshop sessions, analysis of the conference from the perspective of five constituent groups, selected references, and a list of participants. Proceedings of the November 29-30, 1984 Workshop Conference co-sponsored by the Public Policy Program, University Extension, University of California, Los Angeles.

459505 DA

**URBAN FREEWAY TRAFFIC MANAGEMENT TECHNOLOGY**

Ahmed, SA

American Society of Civil Engineers

*Journal of Transportation Engineering* VOL. 112 NO. 4 Jul 1986 pp 369-379

1 Fig. 1 Tab. 36 Ref.

REPORT NO: ASCE Paper 20753

SUBFILE: HRIS

AVAILABLE FROM: American Society of Civil Engineers  
345 East 47th Street  
New York New York 10017

This paper presents an overview of current management techniques that are aimed at improving the efficiency and productivity of urban freeways. The major topics that are addressed include capacity management techniques (entrance ramp control, mainline control, corridor control, and priority control); demand management techniques (peak-period dispersion, ridesharing, and improving public transit); and techniques of managing nonrecurrent congestion (traffic surveillance systems, servicing, and motorist information systems).

458972 DA

**TACKLING TRAFFIC CONGESTION IN THE SAN FRANCISCO BAY AREA**

McConnell-Fay, N

Eno Foundation for Transportation, Incorporated

*Transportation Quarterly* VOL. 40 NO. 2 Apr 1986 pp 159-170 Refs.

SUBFILE: HRIS

AVAILABLE FROM: Engineering Societies Library 345 East 47th Street New York New York 10017

The Metropolitan Transportation Commission (MTC) is the regional transportation planning organization for the nine-county San Francisco Bay Area. MTC has been actively engaged in promoting traffic mitigation in the Bay Area for several years. Traffic mitigation programs are designed to relieve traffic congestion during peak commute hours. The programs aim to shorten vehicle trip lengths, change the timing of commute-hour trips, and encourage the use of transit, carpools, vanpools, bicycling, and walking. Also included under the traffic mitigation umbrella are efforts to promote alternative work hours and to provide housing close to jobs to thereby shorten trip lengths. This article discusses the MTC program and the issues involved.

458120 DA

**MITIGATING THROUGH TRAFFIC IN RESIDENTIAL AREAS: ISSUES AND PERSPECTIVES**

Swartz, RD

Eno Foundation for Transportation, Incorporated

*Transportation Quarterly* VOL. 39 NO. 4 Oct 1985 pp 467-481

SUBFILE: HRIS

AVAILABLE FROM: Engineering Societies Library 345 East 47th Street New York New York 10017

Efforts to reduce through traffic in residential areas are rarely initiated by government agencies responsible for traffic regulation or neighborhood security. Instead, these efforts largely result from citizen irritation with through traffic and a willingness to organize grass roots responses for undertaking the sometimes arduous task of correcting the problem. This response is in recognition of occasional indifference of local traffic agencies and others with countervailing interests (e.g., emergency vehicle operations). This paper discusses the subject background and mitigation mechanisms, including signs, roadway alterations, barriers and roadway changes, and others.

457590 DA

**STUDY OF CURRENT AND PLANNED HIGH OCCUPANCY VEHICLE LANE USE: PERFORMANCE AND USE**

Southworth, F; Westbrook, F

Oak Ridge National Laboratory Post Office Box X Oak Ridge Tennessee 37830

Dec 1985 81p

REPORT NO: ORNL/TM-9847

SUBFILE: HRIS; NTIS

AVAILABLE FROM: National Technical Information Service 5285 Port Royal Road Springfield Virginia 22161

This report details the results of a nationwide study of HOV lanes: their characteristics and performance as traffic congestion mitigating and rideshare enhancing facilities. The study took the form of telephone interviews with a variety of planning agencies in each of the 48 contiguous states and Hawaii over the period April through June 1985, with subsequent receipt of the most current documentation on regional HOV lane operations. The most up-to-date evidence on each lane's performance is presented: its hourly and peak period person throughput vis-a-vis the highway's adjacent, conventional mixed traffic lane(s), its vehicle throughput and occupancy, travel speed and travel time savings for HOVs, lane rule violation rates, lane construction and maintenance costs and accident data. Estimates are provided of the growth in ridesharing over the life of the HOV-only lanes, of the number of vehicles removed from the highway through ridesharing, and of the subsequent fuel savings attributable to HOV lane projects. The relationship between bus patronage and carpool/vanpool mode adoption is looked at, and it is concluded that both forms of HOV can do well on properly planned lanes. The authors also point out the very partial nature of the existing evidence upon which to base HOV lane project evaluation, and the

subsequent difficulty associated with "selling" the HOV lane concept to many planners and members of the public. They identify those characteristics associated with clearly successful HOV lane projects. Finally, the current state of planning for new HOV lanes in cities around the nation is described, and the major reasons given for rejection or abandonment of HOV lane projects are discussed.

453116 DA

**PLEASANTON TSM ORDINANCE: A NEW APPROACH TO TRAFFIC MITIGATION**

Curry, D; Fraser-Middleton, K (Crain and Associates, Incorporated; Hacienda Business Park Owners Association) Transportation Research Board

*Transportation Research Record* N1018 1985 pp 41-46 1 Tab. 2 Ref. 1 App.

SUBFILE: HRIS; UMTRIS

AVAILABLE FROM: Transportation Research Board Publications Office 2101

Constitution Avenue, NW Washington D.C. 20418

A transportation system management (TSM) ordinance adopted by the city of Pleasanton, California, in October 1984 requires all employers of 50 or more persons, and all employers in complexes, to implement a TSM program designed to achieve a 45 percent reduction in the number of peak-period commute trips that would occur if all such trips were made by solo drivers. The reduction can take place over several years. The ordinance includes requirements for annual surveys of employee commute modes and assigns most monitoring and enforcement responsibilities to a task force drawn from large employers and complexes plus the Downtown Merchant's Association. The task force feature was important in obtaining employer support for adoption of the ordinance because it provides for specification of remedial TSM measures by peers, instead of by city staff, in case of need. The Pleasanton TSM ordinance avoids many of the problems with other types of traffic mitigation ordinances, particularly failure to reach all employers and predetermination (by guesswork) of the effectiveness of given TSM measures. Other cities will find much to emulate in Pleasanton's approach, although several precautions are offered on the transfer of Pleasanton's experience to other cities. This paper appeared in *Transportation Research Record* N1018, *Transportation for Elderly and Handicapped Persons, Paratransit, and Ridesharing*.

451472 DA

**A STUDY ON FUTURE DIRECTIONS OF PUBLIC TRANSPORTATION IN THE UNITED STATES**

American Assn of State Hwy and Transp Officials 444 North Capitol Street, NW, Suite 225 Washington D.C. 20001

1985 53p Figs. Tabs.

SUBFILE: UMTRIS

AVAILABLE FROM: American Assn of State Hwy and Transp Officials 444 North Capitol Street, NW, Suite 225 Washington D.C. 20001

An important component of a total transportation system, public transportation serves significant national, state, and community objectives. It is now facing an uncertain future. Loss of support from traditional funding sources, increased labor and fuel costs, and new institutional relationships are serious potential threats to the survival of many public transportation systems and services. This study investigates

current problems confronting public transportation, examines the innovative actions being adopted throughout the country to solve these problems, and identifies key components of a national and state public transportation strategy. Public transit, paratransit, and ridesharing are defined; and basic assumptions are outlined. The current status of public transportation is summarized, as are its problems. Six key problems areas are explored: the financial, institutional, operational, regulatory, organizational, and technological environments in which public transportation exists. Capital needs, rising operating deficits, and competition for tax dollars are discussed. The institutional issues reviewed are political leadership, travel demand management, private sector involvement, intergovernmental conditions, investment management, role of labor, and goals articulation. Four critical areas in the regulatory environment and interstate transportation, intrastate transportation, labor relations, an equal opportunity and minority business practices. In the organizational environment, three types are described: the "full service" transit authority, the areawide transit funding agency, and the multiple transit service organization. Funding future transit capital and operating costs is the most important issue facing public transport today. Reducing and possible elimination of federal operating assistance, fiscal problems at state and local levels, and fear of ridership losses after fare increases add to an uncertain future, which is aggravated by lack of definitive and consistent goals and policies. Current financing and operating expenses are examined, and the way continuation of current conditions will result in large shortfalls is demonstrated. Capital needs are addressed and attention directed to existing financing sources and possible new funding mechanisms. The institutional framework of public transportation is described. Alternative roles and responsibilities are discussed, and issues to be considered are emphasized; these are service continuity, service expansion, effectiveness in service coverage, and efficiency in service delivery. The public transportation industry has moved through several technological changes, each with its impact on costs and service level. Current technology is discussed, along with innovations anticipated in the next decade. Included are paratransit services, standard bus operations, automated guideway transit dual mode transit, system integration, and rural transporta



tion. Analyzed to determine the future scenario are the following factors: funding and management alternatives, private-public sector joint efforts, political cooperation, technological advances, and industry involvement. Conclusions are drawn and recommendations made.

440622 DA

**A GUIDE TO TRANSPORTATION DEMAND MANAGEMENT PLANS FOR EMPLOYERS**

Anderson, SM; Gerwig, KL; Shirazi, E

US Dept of Transportation Technology Sharing Reprint Series Sep 1988 28 pp English

Report no: DOT-T-88-22

SUBFILE: UCITS; TLIB

Prepared by Commuter Transportation Services, Inc project staff: Stuart

M. Anderson, Katherine L. Gerwig, Elham Shirazi September 1988

No abstract available.

436880 DA

**TRAFFIC INTEGRATION: ENVIRONMENTAL TRAFFIC MITIGATION IN DENMARK**

Russell, JRE

Edinburgh College of Art/Heriot-Watt University

Research paper ; no 13 -untraced series n13 Dec 1986 33 pp English

SUBFILE: UCITS; TLIB

Illustrated. December 1986 Bibliography: p. 33

427575 DA

**TRAFFIC MITIGATION & DEVELOPERS**

Orski, CK

Urban Land VOL. 47 NO. 3 Mar 1988 PP 16-19 English

SUBFILE: UCITS; TLIB

Includes description of the Silver Spring Transportation Management District

427127 DA

**PENINSULA ROUTE 101 STUDY REPORTS**

Metropolitan Transportation Commission Berkeley Calif

Dec 1983 English

SUBFILE: UCITS; TLIB

Submitted for review by the PENTAP Committee December 5, 1983. Summary of preliminary findings and recommendations -- short-range transit improvements and long-range issues -- coordinated traffic mitigation plan for Route 101 corridor -- highway improvement program and long-range issues

426183 DA

**SUBURBAN ACTIVITY CENTER TRANSPORTATION DEMAND MANAGEMENT (TDM) MARKET RESEARCH STUDY**

Valdez, R

National Research Council Transportation Research Washington DC

1988 27 pp English

SUBFILE: UCITS; TLIB

Paper presented at the 1988 Annual Meeting of the Transportation Research Board, Washington, D.C

No abstract available.

422697 DA

**SURVEY OF CURRENT PRACTICE FOR IDENTIFYING AND MITIGATING TRAFFIC IMPACTS**

*ITE Journal* vol. 57 NO. 4 May 1987 PP 38-44 English

SUBFILE: UCITS; TLIB

By the Colorado Wyoming Section of ITE Illustrated

No abstract available.

419528 DA

**LAND DEVELOPMENT SIMULATION AND TRAFFIC MITIGATION**

Transportation Research Board National Research Council *Transportation Research Record* ; n1079 1986 36 pp English

SUBFILE: UCITS; TLIB

ISBN: 0309040736 charts

No abstract available.

414415 DA

**REDESIGNING LOCAL TRANSPORTATION SERVICES**

Tevanian, JE; Orski, CK

International City Management Association

*MIS Report* ; VOL 18, N 4 APR 1986 -26 PP English

REPORT NO: 986

SUBFILE: UCITS; TLIB

Alternative approaches taken by local governments in addressing transportation issues include privatization, contracting out, establishing coordinated programs and traffic mitigation. Ordinances developed by Janice E. Tevanian ... With contributions by Ken Orski

411152 DA

**JOBS HOUSING BALANCE FOR TRAFFIC MITIGATION : INTERSTATE 680 AND INTERSTATE 580 CORRIDOR STUDY**

Association of Bay Area Governments Oakland Calif

Nov 1985 44 pp English

SUBFILE: UCITS; TLIB

Measures to bring employment and housing closer together in central and eastern Contra Costa County and the Pleasanton-Livermore area of Alameda County.

390277 DA

**THE POTENTIAL FOR FUEL SAVINGS FROM URBAN TRANSPORT MANAGEMENT (UTM) IN THE UK. THE FUEL CONSUMPTION IMPACT OF UTM MEASURES**

Ferreira, LJA (Adelaide University, Australia)  
Gordon and Breach Science Publishers Limited  
*Transportation Planning and Technology* VOL. 9 NO. 1 1984  
pp 61-76 1 Fig. 5 Tab. 47 Ref.

SUBFILE: TRRL; IRRD; HRIS

The main objectives of UTM and the range of measures, either adopted or proposed, to achieve those objectives are reviewed and the problems associated with the quantification of energy impacts of UTM measures are highlighted. This is followed by the estimation of the fuel consumption impacts of traffic engineering and demand management measures such as traffic signal coordination, speed limits, bus priority measures, cordon restraint, parking controls, car pooling and public transport incentives. It is concluded that most management measures, which are practically and politically feasible at present, have very limited fuel saving potential at the national level. However, computer controlled traffic coordination offers a very cost effective means of savings in urban fuel consumption. (Author/TRRL)

390199 DA

**WORKSHOP ON URBAN-MICROSCALE PLANNING. WORKSHOP SUMMARY. TRAVEL ANALYSIS METHODS FOR THE 1980'S**

Steinmann, RP (Urban Mass Transportation Administration)

Transportation Research Board  
Transportation Research Board Special Report N201 1983  
pp 34-36

SUBFILE: HRIS; UMTRIS

AVAILABLE FROM: Transportation Research Board  
Publications Office 2101

Constitution Avenue, NW Washington D.C. 20418

Serving demands in the urban-microscale context will be made difficult in the 1980s by constraints on funding for new facilities and services. More private involvement in transportation in the microscale environment is seen likely. Concern has been expressed about the gap between the state of the art and the state of the practice. Often planning has concentrated on design of specific solutions without adequate consideration to defining the problem to be addressed. Barriers in such a process include; (1) lack of knowledge by planner and decision maker about available alternatives; (2) institutional arrangements prohibit planner from broad considerations of alternative solutions; (3) objectives for planning are often poorly or inexplicitly specified by the decision maker; (4) decision makers often select among alternatives; (5) analytical techniques are often inadequate to assess all alternatives. Work is necessary in the travel demand impacts of the following microscale strategies:

Parking management, transit fare policies, ridesharing incentives, automobile use restrictions; pedestrian demand accommodation; and alternative transit-service types. It was felt that methods were in existence to properly assess the following with the primary need being to disseminate methods and results: Fixed-route transit service; demand-management measures, bicycle enhancement, and goods movement data collection. Proceedings of a conference held October 3-7, 1982, Easton, Maryland.

387617 DA

**URBAN TRANSPORT MANAGEMENT (UTM) AND ENERGY CONSUMPTION -A REVIEW OF EVIDENCE**

Ferreira, LJ  
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34p 1 Fig. 7 Tab. 59 Ref.

REPORT NO: Report 60

SUBFILE: TRRL; IRRD; HRIS; UMTRIS

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This paper reports on the potential energy savings that are likely to result from UTM measures. Throughout the paper the term transport is used in preference to traffic (eg, urban traffic management) to reflect a broader range of measures than are usually associated with traffic management (eg, those measures which have a direct impact on modal choice decisions such as public transport fares policy). The main objectives of UTM and the range of measures, either adopted or proposed, to achieve those objectives are reviewed and the problems associated with the quantification of energy impacts of UTM measures are highlighted. This is followed by the

quantification of the energy impacts of traffic engineering and demand management measures such as traffic signal coordination, speed limits, bus priority measures, cordon restraint, parking controls, car pooling and public transport incentives. It is concluded that most management measures, which are practically and politically feasible at present, have very limited fuel saving potential at the national level. However, computer controlled traffic coordination offers a very cost effective means of savings in urban fuel consumption. (Author/TRRL)

386363 DA

**THE MTC COMMUTE ALTERNATIVES PROGRAM EVALUATION**

Bachman, S

Metropolitan Transportation Commission Ashby Avenue  
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Jan 1984 v.p. 15 Tab. 7 App.

SUBFILE: UMTRIS

AVAILABLE FROM: Metropolitan Transportation Commission Ashby Avenue and Domingo Avenue Berkeley California 94705

The Commute Alternatives Program (CAP) originated during the 1979 energy shortage when MTC began to promote flexible work hours among San Francisco Bay Area employers. This report evaluates the success of CAP over its first 3 years to make recommendations for improvement. It is concluded that: (1) Effect of marketing CAP training to employers has accumulated slowly but steadily; (2) Current MTC training course meets the basic needs of new coordinators; (3) Coordinators encounter needs for added training, particularly in the marketing area; (4) In downtown areas with limited parking and good transit service, CAP can be successful in a short time; (5) In suburban areas with adequate parking and less transit service, CAP success requires significant coordinator time, resources for marketing, sincere employer commitment, and coordinators with initiative, creativity and persistence; (6) In suburban areas travel behavior changes slowly; (7) Several cities now require CAP to mitigate traffic impacts of new development. See also Commute Alternative: A Manual for Transportation Coordinators (TRIS 378931) and Carpool Handbook (TRIS 378932).

880836 DA

**ENERGY CONSERVATION THROUGH TRAVEL DEMAND MANAGEMENT**

Ontario Ministry of Transportation & Communic, Can Transportation Energy Management Program Downsview Ontario M3M 1J8 Canada; Ontario Ministry of Energy 56 Wellesley Street, West, 12th Floor Toronto Ontario M7A 2B7 Canada

Mar 1983 Monograph 12p 2 Fig.

SUBFILE: TRRL; IRRD; HRIS; UMTRIS; RTAC

AVAILABLE FROM: Ontario Ministry of Transportation & Communic, Can 1201 Wilson Avenue Downsview Ontario M3M 1J8 Canada

Flex-time, multi-family residential construction, and parking fees, are only a few of the measures that promise relief to municipalities in their search for creative solutions to transportation and energy challenges. This booklet contains a full range of other measures as well - ways that land can be used, alternative work schedules, innovative parking strategies, and zoning to restrict automobile traffic. Not only have these measures proved successful in reducing road congestion, saving fuel, and making better use of public transit; they are also economical. What they require of the municipality are planning and management rather than capital expenditure. (Author/TRRL)

366702 DA

**MEASURES OF EFFECTIVENESS OF TRANSPORTATION SYSTEMS MANAGEMENT. FINAL REPORT**

Smith (Wilbur) and Associates 100 Boylston Street Boston Massachusetts

02116; Tri-State Regional Planning Commission One World Trade Center, 56

South New York New York 10048

Apr 1981 43p

REPORT NO: UMTA-IT-09-0089-81-1

SUBFILE: UMTRIS

AVAILABLE FROM: National Technical Information Service 5285 Port Royal

Road Springfield Virginia 22161

The purpose of this study was to perform a comprehensive analysis of potential Transportation System Management (TSM) applications within the context of the Tri-State New York Region, which includes 12 counties. This report is a summary of detailed user-oriented information contained in the Technical Memoranda and Evaluation Framework/User Guide that was submitted earlier to the Tri-State Regional Planning Commission. The study develops the basic concepts of TSM by providing simple classification schemes, geographic conditions of applicability, relative measures of effectiveness, and techniques for quantification. This report emphasizes two key elements: 1) coordination of transportation activities and 2) maximization of efficiency and productivity. Some of the findings of this study are that: 1) traffic engineering improvements increase capacity up to 100 percent with 10 or 20 percent gains; 2) demand management measures achieve reductions in vehicle miles of travel (VMT) up to 5 percent at specific locations, that is, an effective ridesharing program would reduce VMT at 0.2 percent in suburbs and 0.1 percent in New York City (about \$0.2/VMT reduced and about \$20 to \$50 per capita); and 3) bus lanes save bus passengers 1 to 5 minutes per mile, and priority entry treatments will save 1 to 3 minutes per ramp depending on the amount of congestion.

361081 DA

**TWO WAYS OF THINKING ABOUT PRODUCTIVITY AND RIDESHARING**

Jones, DW, Jr

Transportation Research Board

Transportation Research Board Special Report N193 1981 pp 32-35 3 Ref.

SUBFILE: HRIS

AVAILABLE FROM: Transportation Research Board Publications Office 2101

Constitution Avenue, NW Washington D.C. 20418

This paper considers how knowledge from research could help ride sharing organizations increase productivity. Managing for short-term results and managing for long-term results are discussed. Ridesharing managers admit a produc-

tivity problem and characterize it in terms of low closure rates. Ridesharing organizations try hard to increase efficiency by increasing volume and velocity of operations, but this does not increase the rate of closure. It is suggested that the closure rate may be improved by less volume and slower velocity. Characteristics of programs that have achieved the most success are listed. The constituency-development model of ridesharing is seen as a better formula for productivity than the volume and velocity model. It is important that research be undertaken to assess the accumulated returns of the two organizational approaches. The question of what agencies are best equipped to generate employer involvement and commitment also needs to be researched. The stimulation of corporate involvement in ridesharing and broader traffic mitigation efforts is another area for research. This paper also explores the contribution that ridesharing can make to the productivity of the transportation system. This paper appeared in Transportation Research Special Report No. 193, Ridesharing Needs and Requirements: The Role of the Private and Public Sectors.

319368 DA

**INSTITUTIONAL DIMENSION OF TRANSPORTATION SYSTEM MANAGEMENT: A BOTTOMS-UP APPROACH**

Jones, DW, Jr (California University, Berkeley) Transportation Research Board Transportation Research Board Special Report N190 1980 pp 25-27 8 Ref. SUBFILE: HRIS; UMTRIS AVAILABLE FROM: Transportation Research Board Publications Office 2101 Constitution Avenue, NW Washington D.C. 20418 A number of arguments are made in this paper: 1. The TSM plans developed by MPOs have disappointed federal reviewers and rule makers. 2. The federal view of TSM is at variance with the planning practices and decision processes of metropolitan areas. 3. Successful TSM planning does not require an elaborate areawide process based on textbook-style systems planning. 4. The key to successful TSM planning is the people involved: their expertise, their access to the political process, and their sensitivity to community values and needs. 5. MPOs can foster TSM by subvention of planning funds and procurement of project design from action agencies. 6. TSM cannot deliver consequential energy savings or pollutant reductions; therefore, the planning process for TSM should not be structured around these objectives. 7. TSM should be coordinated with long-range planning, but this can be accomplished by adjusting long-range investment plans in light of local-level TSM accomplishments. 8. The number of regions and corridors that face trade-offs between rail transit and exclusive bus lanes is limited. The TSM process should not be structured around these exceptional cases but rather around the routine requirements of traffic management, parking management, and traffic mitigation. 9. Given the TSM measures most likely to be effective and command community support, the institutional objectives of TSM

should be to (a) upgrade the traffic-operations expertise of transit agencies and state highway departments, (b) engage major employers in traffic mitigation (ridesharing, parking management, and work-hour rescheduling), (c) allow local communities to develop plans to protect neighborhoods and pedestrian areas from traffic intrusion, and (d) cultivate a concern with traffic mitigation in local land use planning and the environmental impact report process. 10. These objectives can be most effectively accomplished if MPOs procure planning from action agencies, rather than develop TSM plans at the systems level. (Author) This paper appeared in Transportation Research Board Special Report No. 190: Transportation System Management in 1980.

144136 DA

**TRANSPORTATION SYSTEMS MANAGEMENT: BIBLIOGRAPHY OF TECHNICAL REPORTS**

Oram, RL Urban Mass Transportation Administration Office of Policy and Program Development Washington D.C. 20590 UPP-L May 1976 Final Rpt. 149 pp REPORT NO: UMTA-UPP-L-76-1 CONTRACT NO: UPP-L SUBFILE: HRIS; NTIS; UMTRIS AVAILABLE FROM: National Technical Information Service 5285 Port Royal Road Springfield Virginia 22161

This document is a bibliography of readily obtainable technical reports on operational transportation improvements. It was prepared to assist in the development of Transportation System Management (TSM) plans as required by the Urban Mass Transportation Administration/Federal Highway Administration urban transportation planning regulations that were issued in Fall 1975, and in the implementation of TSM improvements. (TSM plans are intended to document the local strategy for improving air quality, conserving energy, and improving transportation efficiency and mobility through management of the existing transportation system.) Descriptions and availability information on over 150 reports dealing with low-capital, short-range, or policy oriented urban transportation improvements are included and classified into 9 sections. The first, General, includes transportation management overviews, survey reports on the various operational approaches and strategies for improved transportation efficiency, and demonstration program reports. The remaining sections contain more focused reports in the following areas: Preferential Treatment for High Occupancy Vehicles, Traffic Operations, Parking Management, Transit Improvements, Transit Management, Pooling and Paratransit, Pedestrians and Bicycles, and Transportation Demand Management. Sponsored by Department of Transportation, Federal Highway Administration and Urban Mass Transportation Administration.

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- Cost Analysis Methodology for Demand-Responsive Service, October 1988
- Demographic Change & Worktrip Travel Trends, Feb. 1985
- Directory of Urban Public Transportation Service, Aug. 1988
- Encouraging Public Transportation Through Effective Land Use Actions, May 1987
- Financing for the Future, December 1987
- Fully Allocated Cost Analysis, Guidelines, April 1987
- Guide to Transportation Demand Management Plans for Employers, September 1988
- High-Occupancy Vehicle Lanes and Transitways, Oct. 1987
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- 1988 Statistical Summaries, Grants Assistance Program

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- \_\_\_ Innovative Funding for Intercity Modes, July 1987
- \_\_\_ Key Decisions in Urban Transportation Public-Private Cooperation, May 1988
- \_\_\_ Marketing Based Transit Facility Design, February 1989
- \_\_\_ Maintenance Manager's Manual/Small Agencies, March 1988
- \_\_\_ Mass Transit Management: Handbook for Small Cities, Feb. 1988
- \_\_\_ Methanol Bus Program: Data Analysis Report, Oct. 1988
- \_\_\_ Private Sector Experience in Provision of Specialized Transportation for Elderly & Handicapped, July 1987
- \_\_\_ Region IV Transit Workshop: Harnessing the Private Sector, September 1988
- \_\_\_ Risk Management Manual for Public Transit Industry, Aug 1988
- \_\_\_ Seventh National Conference on Rural Public Transportation, Conference, February 1987
- \_\_\_ Status of the Nation's Local Mass Transportation Performance and Conditions, Report to Congress, June 1988
- \_\_\_ Suburban Mobility Program, UMTA. 1988
- \_\_\_ Technical Assistance & Safety Programs, FY 1988 Project Directory, January 1989
- \_\_\_ Test Facility Assessment, December 1988
- \_\_\_ Traffic Control & Regulation at Transit Stops, July 1987
- \_\_\_ Traffic Mitigation & Demand Management, July 1987
- \_\_\_ Transit Employee Attendance Management, 2 vols. June 1986
- \_\_\_ Transit Marketing Management Market Approach, March 1988
- \_\_\_ Transportation Revenue Forecasting Guide, June 1987
- \_\_\_ TRIS, Transportation Research Information Service. A computerized database and prime source of transportation research information in the USA. Available online worldwide.
- \_\_\_ Urban Transportation Abstracts, An UMTRIS Database Publication 1988. Subscription.

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