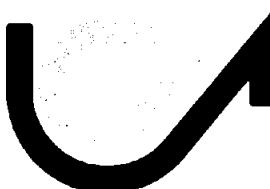


# Economic Impacts of Transportation Restraints

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A REPORT OF THE  
TRANSPORTATION TASK FORCE  
OF THE

**URBAN**   
FOR TECHNOLOGY INITIATIVES

Supported by



U.S. DEPARTMENT OF TRANSPORTATION

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The Urban Consortium for Technology Initiatives was formed to pursue technological solutions to pressing urban problems. The Urban Consortium is a coalition of 37 major urban governments, 28 cities and 9 counties, with populations over 500,000. These 37 governments represent over 20% of the nation's population and have combined purchasing power of over \$25 billion.

Formed in 1974, the Urban Consortium represents a unified local government market for new technologies. The Consortium is organized to encourage public and private investment, develop new products or systems which will improve delivery of local public services and provide cost-effective solutions to urban problems. The Consortium also serves as a clearinghouse in the coordination and application of existing technology and information.

To achieve its goal, the Urban Consortium identifies the common needs of its member cities, establishes priorities, stimulates investment from Federal, private and other sources and then provides on-site technical assistance to assure that solutions will be applied. The work of the Consortium is focused through 10 task forces: Community and Economic Development; Criminal Justice; Environmental Services; Energy; Fire Safety and Disaster Preparedness; Health; Human Resources Management; Finance and Personnel; Public Works and Public Utilities; and Transportation.

Public Technology, Inc. is the applied science and technology organization of the National League of Cities and the International City Management Association. It is a nonprofit, tax-exempt public interest organization established in December 1971 by local governments and their public interest groups. Its purpose is to help local governments improve services and cut costs through practical use of applied science and technology. PTI sponsors the nation's largest local government cooperative research, development, and technology transfer program.

PTI's Board of Directors consists of the executive directors of the International City Management Association and the National League of Cities, plus city managers and elected officials from across the United States.



# **Economic Impacts of Transportation Restraints**

**September 1980**

**Prepared by**

**PUBLIC TECHNOLOGY, INC.  
1140 Connecticut Avenue, N.W.  
Washington, D.C. 20036**

**Secretariat  
to the**

**URBAN CONSORTIUM  
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## PREFACE

This is one of ten bulletins in the fourth series of Information Bulletins produced by the Transportation Task Force of the Urban Consortium for Technology Initiatives. Each bulletin in this series addresses a priority transportation need identified by member jurisdictions of the Urban Consortium. The bulletins are prepared for the Transportation Task Force by the staff of Public Technology, Inc. and its consultants. In 1980, Transportation of Hazardous Materials was identified as a priority need by both the Transportation and the Fire Safety and Disaster Preparedness Task Forces of the Urban Consortium. The Information Bulletin addressing that need was prepared under their joint direction.

Nine newly identified transportation needs are covered in this fourth series of Information Bulletins:

- Economic Impacts of Transportation Restrictions
- Parking and Traffic Enforcement
- Pedestrian Traffic Safety
- School Bus Use for Non-School Transportation
- Street Management Information Systems
- Taxicabs as Public Transit
- Transportation Construction Management
- Transportation of Hazardous Materials
- Transportation System Management, Air Quality, and Energy Conservation

One Information Bulletin covering a need identified in 1979 is being updated and expanded:

- Transportation Energy Contingency Planning

The needs highlighted by Information Bulletins are selected in an annual process of needs identification used by the Urban Consortium. By focusing on the priority needs of member jurisdictions, the Consortium assures that resultant research and development efforts are responsive to local government problems.

Each bulletin provides a nontechnical overview, from the local government perspective, of issues and problems associated with each need. Current research efforts and approaches to the problem are identified. The bulletins are not an in-depth review of the state-of-the-art or the state-of-the-practice. Rather, they serve to identify and raise issues and as an information base from which the Transportation Task Force selects topics that require a more substantial research effort.

The Information Bulletins are also useful to those, such as elected officials, for whom transportation is but one of many areas of concern.

The needs selection process used by the Urban Consortium is effective. Priority needs selections have been addressed by subsequent Transportation Task Force projects:

- Five Transit Actions regional meetings were held between January 1979 and May 1979 to address the need for Transit System Productivity. The product of these meetings is a Transit Actions Workbook that features techniques currently being used to improve transit system performance and productivity.
- To facilitate the provision of Transportation for Elderly and Handicapped Persons, five documents were developed: one on local government approaches, a planning checklist, an information sourcebook, a series of case studies, and a chief executive's summary.
- To help improve Center City Circulation, two new projects have been completed. Center City Environment and Circulation: Transportation Innovations in Five European Cities is the second of three volumes showing how cities use transportation and pedestrian improvements to help downtown revitalization. Another project, addressing the coordination of public transportation investments with real estate development culminated in a national conference--the second Joint Development Marketplace in Washington, D.C., in June 1980. The Marketplace was attended by over 500 persons, including exhibitors from cities and counties around the country and representatives of private development and financial organizations.
- A series of documents relating to the need for Transportation Planning and Impact Forecasting Tools has been prepared: (1) a management-level document for local officials describing manual and computer transportation planning tools available from the U.S. Department of Transportation, (2) a series of case studies of local government and transit agency applications of these tools, and (3) a guide describing ways local governments can gain access to these tools. Additional documents are being prepared on how local governments can use U.S. Census information more effectively through these U.S. Department of Transportation computer tools.

- To help meet the need to Accelerate Implementation Procedures, a conference on the Federal-Aid Urban System (FAUS) was held in Baltimore, Maryland, in May 1980, for Federal Highway Region 3. The conference was aimed at developing communication between local, State, and Federal officials to improve implementation of and clear up misunderstandings about the FAUS program.
- To meet the need to promote use of Transportation System Management (TSM) measures, a series of five regional meetings are being held in 1980 to provide local, State, and Federal officials, and representatives of transit agencies and the business community with the opportunity to exchange information about low-cost TSM projects to improve existing transportation systems.
- To facilitate the dissemination of information on local experiences in Parking Management, a technical report describing the state-of-the-art is being prepared.
- A National Transit Pricing Forum was held at Virginia Beach, Virginia, in March 1979 to address the need for more information on Innovative Fares. Much of the Forum was directed to technical advances in areas of pricing research and practice. The proceedings of this conference are available.
- Two projects were undertaken to pursue the need for Taxicabs for Public Transportation. A handbook, Taxicabs and Federal Programs, was prepared, and five regional meetings were held in March and April of 1980. In May 1980 the Transportation Task Force sponsored the National Conference on Taxicab Innovations: Service and Regulations.

Ongoing Task Force Information Dissemination and Technology Sharing needs are currently addressed by a series of SMD Briefs. These one-page reports provide up-to-date information about on-going UMTA Office of Service and Methods Demonstrations projects. In addition, the SMD HOST Program allows transportation officials from selected jurisdictions to visit one of these projects for on-site training.

Additional Technology Sharing occurs through the National Cooperative Transit Research Program (NCTRP) which was organized jointly by Public Technology, Inc., the American Public Transit Association, the Urban Mass Transportation Administration, and the Transportation Research Board to address problems relating to public transportation identified by local and state government and transit administrators.

The support of the U.S. Department of Transportation's Technology Sharing Division in the Office of the Secretary, Federal Highway Administration, National Highway Traffic Safety Administration, and Urban Mass Transportation Administration has been invaluable in the work of the Transportation Task Force of the Urban Consortium and the Public Technology, Inc. staff. The guidance offered by the Task Force members will continue to ensure that the work of the staff will meet the urgent needs identified by members of the Urban Consortium for Technology Initiatives.

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## Chapter 1

### ISSUES AND PROBLEMS

Throughout history transportation has played a major role in determining the economic character of cities. Today, American urban transportation is dominated by the private automobile. This has caused central areas of major cities and the highways radiating from them to become congested with automobiles during portions of the day. Traffic congestion, lack of parking spaces, and pollution problems related to the internal combustion engine contribute to the declining quality of many urban centers. To combat these problems, many cities are implementing restraints to discourage or restrict automobile use, especially in downtown areas.

There is, however, concern among private businesses and local and regional government officials over the economic consequences of such actions. Members of the Transportation Task Force of the Urban Consortium expressed their concern for the Economic Impacts of Transportation Restrictions by selecting this subject as a priority issue. The major concerns raised by local elected and appointed officials in cities and counties with populations of 500,000 or more relate to the effects of traffic restrictions on local businesses, on an area's tax base, and on traffic and businesses outside a restricted zone.

This Information Bulletin addresses these concerns by discussing the following issues:

- The diversity of restrictions now in use in U.S. cities.
- The known effects of transportation restrictions on economic, business, commercial, and recreational activities.
- Information gaps.
- The need for further work.

#### BACKGROUND

The use of transportation restrictions to achieve economic objectives is not a new idea. During the past 20 years more than 70 U.S. cities have converted some commercial vehicular streets into pedestrian malls with the major goal of revitalizing the area's declining retail economy.<sup>1</sup> More recently, Federal policies have encouraged other forms of transportation restraints to help achieve environmental and social, as well as economic, objectives.

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<sup>1</sup> Brambillo, Banning the Car Downtown, pp. xi.

In 1975, the Urban Mass Transportation Administration (UMTA) and the Federal Highway Administration (FHWA) issued joint regulations requiring metropolitan areas to consider Transportation System Management (TSM) elements in their urban transportation planning processes.<sup>2</sup> Selected Transportation System Management elements include--

- Actions to ensure the efficient use of existing road space through:
  - Traffic operations improvements to manage and control the flow of motor vehicles.
  - Appropriate provisions for pedestrians and bicycles.
  - Management and control of parking.
  - Changes in transit fare structure and automobile tolls.
- Actions to reduce vehicle use in congested areas through:
  - Diversion, exclusion, and metering of automobile access to specific areas.
  - Area licenses, parking surcharges, and other forms of congestion pricing.
  - Establishment of car-free zones and closure of selected streets to vehicular traffic or to through traffic.
  - Controlling urban goods movement.

Many of these actions can be classified as transportation restrictions.

The Federal Environmental Protection Agency and the U.S. Department of Transportation have also issued joint guidelines requiring that transportation control measures be included in transportation-air quality control plans.<sup>3</sup> Control measures are designed to minimize air pollution and to discourage excessive travel and are generally classified as transportation restrictions.

As a result of these Federal requirements, a much wider variety of transportation restrictions is now being tested to achieve transit, environmental, and economic objectives. Despite Federal requirements and recent local testing, there is limited understanding of what the economic effects of restrictions will be or of methods to measure and evaluate them once they are known. As a result, local transportation planning decisions are being made without an appreciation of the nature or significance of their economic consequences. Local metropolitan planning organizations noted these deficiencies in a recent FHWA and UMTA Transportation System Management program review. These planning officials felt there was:

- Limited intention to monitor impacts.
- Limited knowledge of fiscal impacts.
- Few analytical tools available for thorough analyses.
- A lack of documented experience regarding impacts.<sup>4</sup>

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<sup>2</sup> 40 Fed. Reg. 42976 (Sept. 17, 1975); 23 C.F.R. Part 450.

<sup>3</sup> Environmental Protection Agency and U.S. Department of Transportation, Transportation-Air Quality Planning Guidelines, Washington, D.C., 1978.

<sup>4</sup> U.S. Department of Transportation, Development and Evaluation of TSM Strategies, 1978, pp. 2-3.

## DIVERSITY OF RESTRICTIONS

Understanding the impact of transportation restrictions is made more difficult by the wide variety that are available. Such restrictions can, however, be grouped into four basic categories.

- Physical measures
- Operational measures
- Regulatory measures
- Economic measures

Examples of each are given in Table 1.

Table 1  
TRANSPORTATION RESTRICTIONS

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I.	PHYSICAL MEASURES	III.	REGULATORY MEASURES
	<ul style="list-style-type: none"><li>● Channelization</li><li>● Street closing</li><li>● Street barricades</li><li>● Street narrowings</li><li>● Sidewalk widenings</li><li>● Speed bumps or ramps</li><li>● Cul-de-sacs</li><li>● Placement of parking facilities</li><li>● Number of parking spaces</li><li>● Ring roads and bypasses</li><li>● Medians or islands</li><li>● Traffic circles or diverters</li></ul>		<ul style="list-style-type: none"><li>● Speed or stop signs</li><li>● Warning signs</li><li>● Area permits</li><li>● Goods or passenger loading and unloading zones</li><li>● Parking restrictions</li><li>● Vehicular regulations</li><li>● Staggered work hours</li><li>● Land use regulation</li><li>● Regulation of vehicle ownership</li><li>● Improved surveillance, enforcement, and adjudication</li></ul>
II.	OPERATIONAL MEASURES	IV.	ECONOMIC MEASURES
	<ul style="list-style-type: none"><li>● Signalization systems</li><li>● Directional controls</li><li>● Ramp meters</li><li>● Variable route signing</li><li>● Turn restrictions</li><li>● Special use lanes</li><li>● One-way streets, entrances, or exits</li></ul>		<ul style="list-style-type: none"><li>● Special area or vehicle licenses</li><li>● Parking rates</li><li>● Taxes on parking</li><li>● Tolls</li><li>● Parking surcharges</li><li>● Congestion pricing</li><li>● Fuel tax</li><li>● Gas rationing</li></ul>

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Source: Adapted from U.S. DOT, Transportation System Management; An Assessment of Impacts, p. 147.

Some of these transportation restrictions can also--

- Prohibit all vehicles or limit access to particular vehicles, such as emergency vehicles, buses, trucks, or taxicabs.
- Limit access at particular times of the day or days of the week.
- Apply to a single block, an entire area, or selected streets.

Boston, Massachusetts, has successfully employed a variety of these restrictions in its Downtown Crossing project with little adverse effect on traffic movement in the surrounding area (see Figure 1). The type of restraint and the kind of vehicle prohibition are normally determined by the accessibility needs of the immediate area, the need for through traffic or access to other parts of the city, and the alternatives that are available. For example, in one variation of the pedestrian mall, the transit mall, buses remain on the roadway, sidewalks are widened, and private vehicles are excluded. The Chestnut Street Mall (Philadelphia, Pennsylvania), the Nicollet Mall (Minneapolis, Minnesota), the Portland Mall (Portland, Oregon), and the State Street Mall (Madison, Wisconsin) are all transit malls. In each of these cases, the affected area is somewhat larger than the usual pedestrian mall, and good public transit service is provided.

Transportation restrictions have also been used in many residential areas to reduce traffic congestion, parking problems, noise, air pollution, and accident potential.<sup>5</sup> In general, residential applications have consisted of physical design changes, parking controls, and traffic operational measures. UMTA is currently sponsoring two Service and Methods Demonstration projects in Hermosa Beach and Santa Cruz, California, to test traffic and parking control strategies in residential neighborhoods.

## ECONOMIC FACTORS

The major question raised by many local officials is: What are the economic impacts of transportation restrictions? The owners of downtown businesses ask city officials what will happen to their sales if customers cannot drive to their stores. Merchants want to know how many and what type of customers will be attracted to their shops and what shopping habits will be. They also want to know how long construction of any new facilities will take, what arrangements will be made for deliveries, and what will happen to their property values and rents.

Although the concerns will vary from site to site, local officials generally must consider three types of economic effects:

- Immediate and long-term effects on the area.
- Fiscal effects.
- Cooperative venture effects.

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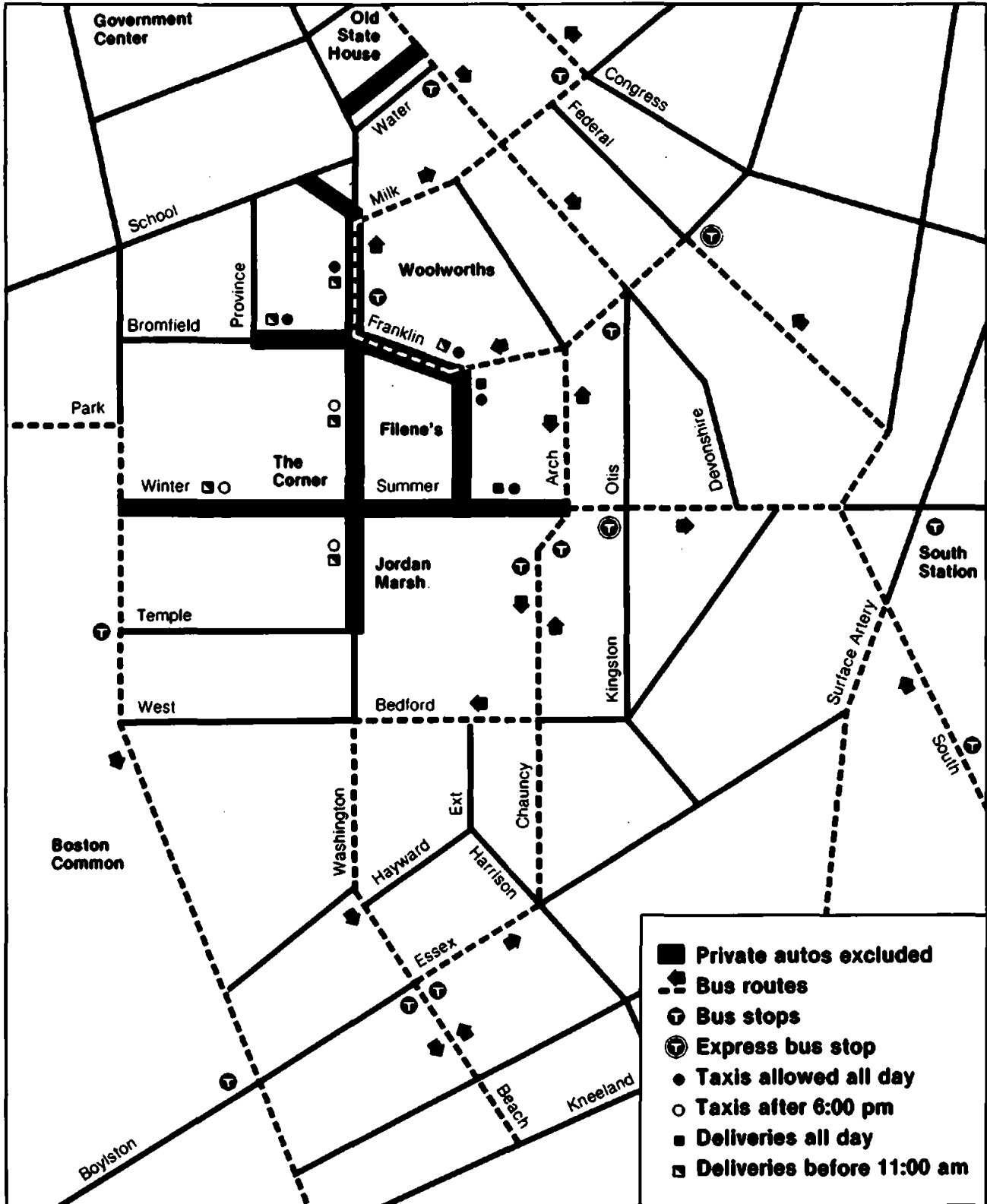
<sup>5</sup> In 1978 and 1979 the Urban Consortium's Transportation Task Force identified Neighborhood Traffic Controls as a top priority research and development need. These Information Bulletins are available from Public Technology, Inc.



Figure 1



# Circulation Pattern



## Immediate and Long Term Effects

If the initiation of transportation restrictions in an area involves street or sidewalk reconstruction, affected merchants will immediately want to know:

- How long construction will take.
- What and when activities are scheduled.
- What publicity or marketing information the city will provide.
- What arrangements will be made for continued access to their stores.
- What economic impacts to expect during this period.

Merchants express concern that during construction their stores will be less accessible, encouraging customers to shop elsewhere and thereby causing significant loss of business. In the short-term, these concerns are somewhat justified.

- Despite an increased marketing campaign during construction of the Downtown Crossing in Boston, some merchants experienced a drop in sales.
- Rapid and careful phasing of construction activities on Philadelphia's Chestnut Street Transitway did not prevent retail sales from declining 18% during the construction year.
- Observations in downtown Madison, Wisconsin, indicated that access to some stores was difficult during construction of the State Street Mall.

Marginal and small retail businesses are particularly sensitive to disruptions caused by construction. Often these businesses cannot afford any cash flow disruption.

Public officials and merchants are concerned about the long-range and regional economic consequences of transportation restriction projects. Transportation restrictions may have impacts on future regional business location decisions that can adversely or positively affect downtown vacancy rates, retail trade, and economic development.

The nature of long-term impacts depends partly on whether the restraints are viewed as triggers for a renewal of downtown vitality, or as constraints on future growth; as representing a basic change in how the downtown sees itself and how its customers see it, or as short-lived cosmetic changes. The impacts also depend on whether downtown redevelopment is perceived as a threat to other areas in the region.

Public perceptions of the restriction project and of the resulting effects can significantly affect the project and future economic development in the project area. These perceptions may be influenced by marketing and promotional efforts, local values, and other intangible factors, as well as current national, regional, or local economic climates. Even recent crime reports can be influential. All of these factors exert a real force in determining the acceptance of the project, the public's behavior, and the eventual economic impacts.

The following public perceptions are especially important to any proposed restriction project:

- Accessibility of the restricted area by auto, transit, taxi, and walking.
- Quality of the downtown shopping environment vs. the quality of outlying shopping malls.
- Safety, crime, and police protection in the immediate and surrounding areas.
- Aesthetic qualities, such as cleanliness, noise, congestion, pollution, and amenities.

To a large extent these perceptions are subjective and, thus, subject to change.

Another part of the perception issue involves semantics. The term transportation restriction implies constraining, reducing, and redirecting private automobile traffic, rather than increasing other modes of transportation. Many businessmen will oppose any action that they fear may restrict access to their shops or offices.

Because the objectives of the transportation restriction may be positive for businesses, such as increasing retail sales and improving the economic vitality of an area, it is essential to avoid negative titles that may foster negative ideas. Areas where motor vehicle entry is limited were initially called "auto-restricted zones." Local officials feel some of the early opposition to implementing such strategies was caused by negative connotations generated by this name. Many of these areas are now being referred to as "auto-free" or "car-free" areas.

### Fiscal Effects

Local officials are also concerned about how private economic impacts will affect their jurisdiction's fiscal status. A healthy retail economy can increase sales tax revenues, cause property and assessed valuations to increase, stimulate new investments, create additional jobs, and generally improve the city's economic base. In some cases, this may determine an urban area's future economic survival.

However, officials are also concerned about possible negative impacts. Imposing transportation restrictions without compensating access improvements may cause downtowns to deteriorate further and worsen a city's economic base. Transportation restrictions require public investments and additional services, such as public transportation and street and sidewalk maintenance. Municipal parking revenues may also decline if fewer automobiles are permitted downtown or restrictive parking policies are imposed.

### Cooperative Venture Impacts

Practically all city officials agree on the need to encourage and develop active support for transportation restriction projects by the business community. The issue is when this support should be solicited. Many local officials feel they can foster early commitments and maintain

continued support for the project if they include businesses during the initial planning and design stages of the project. In fact, a cooperative spirit between business and government is seen as being the most important ingredient for determining the economic success of a transportation restriction project.

If a strong business commitment is made, local officials also find it easier to secure private financial participation. Part of the cost of pedestrian and transit malls is frequently borne by local private interests or made possible through merchants' willingness to be taxed. About three-fourths of Nicollet Mall's (Minneapolis) initial construction costs, and all operating and maintenance costs, are met by local property assessments. Similarly, in Chicago, the cost of the State Street Mall was underwritten by area merchants, and all Mall property owners are now assessed a special tax to pay for maintenance and promotions.

Joint public and private economic investments are being encouraged by the Federal government. FHWA's Federal Aid to Urban Systems (FAUS), UMTA's Urban Initiatives, and the U.S. Department of Housing and Urban Development's Action Grant funds can be used for complementary transportation and urban economic development projects. For example, Toledo, Ohio, is constructing a downtown bus loop and related pedestrian walkway and parking garage projects using such funds. In addition, the Economic Development Administration of the U.S. Department of Commerce, through its Section 302(a) planning grants, is encouraging cities to undertake comprehensive planning to stimulate transportation and economic development.

Nonetheless, conversations with city officials and private business representatives indicate that cooperative efforts are often difficult. Different backgrounds, values, interests, and limited understanding between these groups cause friction and disagreements. Several downtown businessmen commented that City Hall representatives do not understand private entrepreneurial and business needs. Conversely, local officials sometimes feel that downtown businessmen understand only how to maximize immediate profits and are not interested in larger and long range public concerns for urban transportation and economic development. These communication difficulties were summed up by one Boston merchant: "We speak different languages."

#### INFORMATION GAPS

Transportation planners realize that if limitations are placed on a automobile access without supplying acceptable alternative means of reaching downtown, there will be adverse impacts on downtown business. Although there is sufficient information on what combination of incentives and disincentives can be used to encourage people to continue coming downtown without driving private automobiles, this information has not been widely disseminated. Only sketchy data are available on the effects that transportation restrictions have in communities where public transportation is heavily used.

Local decision makers and planners need better information on how people currently travel and how the proposed restriction will affect travel behavior. Although most metropolitan transportation agencies have access to U.S. Census data on local journey-to-work patterns, off-peak shopping and discretionary trip data are usually not readily available. Although there are several reports on joint transportation and economic development, these may or may not be related to transportation restrictions and, in any event, cover only large scale capital transportation investments, such as those for fixed rail systems and stations.<sup>7</sup> Furthermore, most of the literature on transportation restrictions emphasizes planning, design, and construction issues; it does not deal with travel patterns or resulting economic effects. The notable exception is literature on pedestrian and transit malls, although even here most of the information is outdated, limited, or provides only general descriptions of implementation results. Table 2 outlines the impacts of 16 U.S. pedestrian and transit malls. Although most of these data are from the 1960's, in every case retail sales increased, or at least improved, relative to those in other areas of the city.

UMTA's Service and Methods Demonstration Program is sponsoring and evaluating transportation restriction projects. It has evaluated three recently-constructed transit malls and produced preliminary findings on two auto-restricted zones and a downtown parking restriction project. According to its findings--

- Although there is no evidence of retail sales increase, the transit malls in Philadelphia and Minneapolis may have stabilized declining retail sales.<sup>8</sup>
- Preliminary results from Boston's Downtown Crossing auto-restricted zone project indicate that some people are shifting from automobiles to other modes of travel. There also appears to be an increase in the frequency with which people are visiting this area. The total number of purchases from stores in the area has increased significantly. Weekday surveys indicate a 19% increase in purchases from 1978 to 1979, with the primary increase in the lower purchase value categories (Table 3).

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<sup>7</sup> Case study examples of joint transportation and economic development projects include: Administration and Management Research Association of New York City, Transit Station Development: Strategies for Implementation, (Final Report), (New York, 1976); Urban Land Institute, Joint Development: Making the Real Estate Transit Connection, (Washington, D.C., 1979); and U.S. DOT, Value Capture and Joint Development Applications: Chicago, Louisville, Los Angeles, (Washington, D.C., 1977).

<sup>8</sup> U.S. DOT, Streets for Pedestrians and Transit, pg. 194.

Table 2  
**IMPACTS OF U.S. PEDESTRIAN/TRANSIT MALLS**

PEDESTRIAN/TRANSIT MALLS U.S.A.	MERCHANTS' ATTITUDES		RETAIL SALES		NEW CONSTRUCTION
	BEFORE CONSTRUCTION	AFTER CONSTRUCTION	DURING CONSTRUCTION	AFTER CONSTRUCTION	
ALLENTOWN, PA. Hamilton Mall 1973	N.A.	N.A.	N.A.	N.A.	+ Extensive new development and renovation downtown.
ATCHISON, KANS. 1963	N.A.	N.A.	N.A.	+ 25%	+ \$4 million.
BURBANK, CA. Golden Mall 1968	- Strong opposition.	+ Almost all in favor.	+ Improved	+ 22%	+ Little new construction; lowest vacancy rate since 1939.
DANVILLE, ILL. 1967	+ Merchants main force behind mall.	+ Almost all in favor.	O No loss	+ 10-19%	+ Remodeling, store-front improvements, expansions.
FRESNO, CA. Fulton Mall 1964	+ Merchants main force behind mall.	+ Almost all in favor.	- Some loss	+ 25% (+43% first 2 yrs.)	+ \$41 million. Some banks & hotels replacing retail.
HONOLULU, HA. Fort & Hotel St. 1969	N.A.	+ Almost all in favor.	- 5-10%	+ 7-20%	+ New retail space added.
KALAMAZOO, MICH. Burdick Mall 1959	N.A.	N.A.	N.A.	+ 15%	+ \$16 million. 84% of stores remodelled.
LOUISVILLE, KY. River City Mall 1973	+ Businessmen played major role in planning	N.A.	N.A.	+ 15-25%	+ 2.5 million sq. ft. of new construction.
MIAMI BEACH, FL. Lincoln Rd. Mall 1960	N.A.	N.A.	N.A.	+ 10-25%	N.A.
MINNEAPOLIS, MINN. Nicollet Mall 1968	+ Businessmen initiated mall proposal.	+ Great support.	+ Gains up to 65%	+ 14-30%	+ \$250 million directly adjacent or within 1/2 block.
OAKLAND, CA. Washington St. 1961	- Merchants opposed.	- Apathetic.	- Some loss	+ Up, first few years, then level.	- Area slated for renewal. 3 blocks cleared; no new construction.
POMONA, CA. Pomona Mall 1962	+ Merchants main force behind mall.	+ Optimism waned, but returning.	- 10%	+ 16%	+ \$7.7 million. Small stores closing, dept. stores expanding.
PROVIDENCE, R.I. Westminster Mall 1965	N.A.	+ Many in favor.	O No loss	- 1.5% (-20% rest of city.)	N.A.
RIVERSIDE, CA. Main St. Mall 1966	+ Mostly in favor.	+ Almost all in favor.	- Some loss	O No losses (rest of city had losses)	+ Office and bank construction planned.
SALISBURY, MD. Downtown Plaza 1966	+ Merchants main force behind mall.	+ 100% happy	O No loss	+ Up every year	+ New businesses attracted.
WASHINGTON, D.C. F St. Mall 1966	+ Most in favor.	+ Most in favor.	N.A.	+ 4.8% (+5.4% rest of city.)	N.A.

KEY TO SYMBOLS: + POSITIVE - NEGATIVE

Source: William R. Louzon, Wayne M. Trenchard, and Clifford R. Kern, *Auto Restricted Zone Demonstration in Boston, Massachusetts*, prepared for the U.S. Department of Transportation by Cambridge Systematics, Inc., Cambridge, Massachusetts, March 1979, p. 1-14.

Table 3

WEEKDAY PURCHASES REPORTED IN THE BOSTON AUTO-RESTRICTED ZONE

VALUE OF PURCHASES	1978 BEFORE CONSTRUCTION	1979 AFTER COMPLETION
Less than \$5.00	20,384	26,220
\$5.01 to \$25.00	14,502	18,235
\$25.01 to \$100.00	7,168	6,949
Over \$100.00	1,343	1,453
Total	43,397	52,857

Source: Louden, "Preliminary Evaluation of the Boston Auto-Restricted Zone," p. 26.

- First year results from Memphis, Tennessee's, auto-restricted zone and the new HUSTLE Bus service from the nearby Medical Center to the mall also show significant increases in the number of purchases, but slight declines in the average downtown shopper's expenditures. This may be attributable to an increase in the number of meals purchased, which are typically in the lower dollar ranges.<sup>9</sup>

While findings to date are encouraging, local officials are concerned about publicizing overly-optimistic initial reports.<sup>10</sup> Boston officials note that the downtown Fanueil Hall redevelopment impacts have not been separately identified, and this adjacent project may have caused more favorable economic impacts to accrue to Boston's Downtown Crossing.

Another issue that was noted in Boston was the difficulty of gaining access to private business economic data. Merchants are not usually willing to release their retail sales, employment, and other financial records. What effect this will have on the accuracy of reported results has not been determined.

Individual members of each community will have different types of concerns. Citizens and businesses raise both general and specific concerns; planners want historical and project planning data; and decision-makers want facts on which to base public policy decisions. City officials believe that answers to the following questions would provide the type of information they need:

- Who travels downtown, when do they travel, and what are the purposes of their trips?
- What form of transportation do they use and what alternatives are available?
- Why do they use their current transportation means?
- What is the parking supply, where is it located, and how much does it cost?
- What are customer and business reactions to individual and combinations of transportation restriction strategies?
- How dependent are businesses on direct automobile access?
- What techniques and arrangements can be made to insure adequate goods delivery?
- How do provisions for elimination of, and changes in, bus service and automobile restrictions affect different types of businesses?
- What can merchants and local officials do to alleviate business disruptions during construction?
- Will different numbers and types of people travel downtown after restrictions are imposed and for what purposes?

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<sup>9</sup> CRA, Evaluation of First Year of Memphis ARZ, pgs. 91-94.

<sup>10</sup> A final evaluation report on the Boston project should be available from U.S. DOT, UMTA, Service and Methods Demonstrations in 1981.



- What changes have occurred to office, retail, and hotel establishments before, during, and after the project (such as turnover, independent vs. chain, etc.)?
- What changes would probably have occurred without implementing restraints?
- Is there a causal relationship between the restriction project and retail sales, property values, rents, vacancy rates, and tax revenues?
- What effects do different transportation means have on future business location decisions?
- To increase downtown retail trade, should future public funds be spent on pedestrian, transit, or auto-oriented projects?

#### **FUTURE WORK**

Issues relating to the economic impacts of transportation restrictions that have been identified during the preparation of this Information Bulletin as needing further work include:

- Local officials do not know what their opportunities are or which strategies would be most appropriate for their areas. A list and classification of transportation restrictions by city, characteristics of the areas, dates of implementation, and costs needs to be compiled as an information resource.
- Downtown businesses realize they have a stake in the future of central cities, and they are vitally interested in public actions, such as transportation restrictions, that may affect their economic livelihood. Yet at the same time, many businesses are unwilling to release retail sales, employment, and other information to public agencies. Procedures need to be developed to obtain relevant market information.
- The most important ingredient in determining the economic success of business affected by transportation restrictions is the level of commitment by both private and public representatives. Federal government programs and conferences encourage public and private cooperation and investment. These activities should be continued, and projects should be closely monitored so that evaluation results can be made available to interested jurisdictions and organizations.
- A major, local, public concern is the effect of the transportation restriction on private business and the urban fiscal condition. Both positive impacts, such as increased tax revenues, as well as negative impacts, such as the need to provide more public services, may result. Although some of these impacts have been recorded, data from various transportation restrictions need to be more thoroughly documented.

- Long-term and regional economic implications can be expected from local transportation restrictions, yet short-term and local impacts have not yet been adequately identified. Local agencies need information about the factors that affect private investment and locational decision-making, so that they can begin to monitor the impacts that transportation restrictions have on this process.
- Guidelines for local officials interested in prototypical projects are needed.
- Local public perceptions can significantly influence the acceptability of restraints and the resulting economic impacts. Perceptions, however, will vary according to individual local values and other intangible factors, making them extremely difficult to quantify. Nevertheless, public officials understand the influence of perceptions on behavior, and more attention should be directed to conducting and analyzing user and non-user attitudinal surveys.
- The terminology used to discuss transportation restrictions is often negative. This can lead to erroneous preconceived notions and misdirected opposition to proposed projects. If transportation restrictions are to be used to stimulate positive economic impacts, a more positive approach is needed.

## Chapter 2

### CONTACTS AND CURRENT PROGRAMS

#### CONTACTS

#### U.S. DEPARTMENT OF TRANSPORTATION

##### Federal Highway Administration

- **Office of Highway Planning**  
Concerned with parking management strategies and analyses.  
Contact: Wayne Berman  
(HHP-32)  
Room 330 Nassif Building  
400-7th Street, S.W.  
Washington, D.C. 20590  
(202) 426-0210
  
- **Office of Research**  
Concerned with neighborhood traffic problems and impacts of different traffic control strategies.  
Contact: John C. Fegan  
(HRS-41)  
Room 6328 Nassif Building  
400-7th Street, S.W.  
Washington, D.C. 20590  
(202) 426-9710
  
- **Office of Traffic Operations**  
Traffic Control Systems Division  
Concerned with signs, markings, and signals.  
Contact: Robert E. Connor  
(HTO-20)  
Room 3419F Nassif Building  
400-7th Street, S.W.  
Washington, D.C. 20590  
(202) 426-0411
  
- **Office of Highway Planning**  
The Transportation System Management Branch is concerned with integrating highway projects and urban needs. Under the Federal Aid to Urban Systems program, local jurisdictions can help determine how to spend their highway funds. Federal highway funds can now be used for traffic control systems, signs, pavement and street markings, grade separations, exclusive bus lanes, bus stop shelters, and parking facilities.

Contact: Gary Maring  
Office of Highway Planning (HHP-32)  
Room 3303, Nassif Building  
400-7th Street, S.W.  
Washington, D.C. 20590  
(202) 426-0210

Office of the Secretary

- Office of Transportation Economic Analysis  
Concerned with Federal policies on transportation and economic development.

Contact: Edward Weiner  
(P-34)  
Room 10301B, Nassif Building  
400-7th Street, S.W.  
Washington, D.C. 20590  
(202) 426-4441

Urban Mass Transportation Administration

- Office of Planning Assistance  
Concerned with joint development projects involving public transportation and the private sector.

Contact: Charles H. Graves  
Director, Office of Planning  
Assistance (UPM 10)  
Room 9314, Nassif Building  
400-7th Street, S.W.  
Washington, D.C. 20590  
(202) 426-2360

- Office of Service and Methods Demonstrations  
Provides financial assistance for and administers demonstration programs.

Contact: Ronald J. Fisher  
Director, Office of Service and Methods  
Demonstrations (UPM-30)  
Room 6418, Nassif Building  
400-7th Street, S.W.  
Washington, D.C. 20590  
(202) 426-4995

Conventional Transit Service Innovations Section  
Concerned with impacts of various types of auto-restricted zones and transit and pedestrian malls.

Contact: Joseph Goodman (UPM-30)  
Room 6418, Nassif Building  
400-7th Street, S.W.  
Washington, D.C. 20590  
(202) 426-4984

Pricing Policy Innovations Section  
Concerned with parking management and pricing strategies.  
Contact: Bert Arrillaga (UPM-33)  
Room 6418 Nassif Building  
400-7th Street, S.W.  
Washington, D.C. 20590  
(202) 426-4984

- Office of Grants Assistance  
Administers Urban Initiative funding program for transit-related projects that enhance urban development, encourage economic growth, stimulate employment, and generally contribute to the economic revitalization of cities. Administers capital and operating assistance programs, under Sections 3 and 5 of the Urban Mass Transportation Act, as amended.  
Contact: Appropriate UMTA Regional Office. See Table 4.

#### Transportation Systems Center

- Office of Systems Research and Analysis  
Concerned with the impact of transportation policies on the spatial distribution of retail activity and evaluation of UMTA's Service and Methods demonstration projects.  
Contact: David Rubin  
Urban and Regional Research Division  
Transportation Systems Center (DTS-24)  
Room 6-43  
Kendall Square, 55 Broadway  
Cambridge, MA 02142  
(617) 494-2160

#### U.S. DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT

- Administers the Urban Development Action Grants (UDAG) program that supports joint public and private investments in urban areas. Funds can be used for complementary transit and economic development activities. Awards are made on a nationally competitive basis and administered by the Regional HUD offices.  
Contact: David Cordish  
Director of Urban Development Action Grants  
HUD Building  
451-7th Street, S.W.  
Washington, D.C. 20410  
(202) 472-3947

Table 2

UMTA FIELD OFFICES

Region I	Regional Director, Transportation Systems Center, Kendall Square, 55 Broadway, Suite 904 Cambridge, MA 02142, Tel: (617) 494-2055; FTS 837-2055.
Region II	Hiram Walker, Regional Director, Suite 14-130, 26 Federal Plaza, New York, NY 10007, Tel: (212) 264-8162; FTS 264-8162.
Region III	Peter N. Stowell, Regional Director, Suite 1010, 434 Walnut Street, Philadelphia, PA 19106, Tel: (215) 597-8098; FTS 597-8098.
Region IV	Carl B. Richardson, Acting Regional Director, Suite 400, 1720 Peachtree Road, N.W., Atlanta, GA 30309, Tel: (404) 881-3948.
Region V	Joel Ettinger, Regional Director, Suite 1740, 300 S. Wacker Drive, Chicago, IL 60606, Tel: (312) 353-2789; FTS 353-2789.
Region VI	Glen Ford, Regional Director, Suite 9A32, 819 Taylor Street, Fort Worth, TX 76102, Tel: (817) 334-3787; FTS 334-3787.
Region VII	Lee Waddleton, Regional Director, Suite 100, 6301 Rock Hill Road, Kansas City, MO 64131, Tel: (816) 926-5053; FTS 926-5053.
Region VIII	Lou Mraz, Regional Director, Suite 1822, Prudential Plaza, 1050 17th Street, Denver, CO 80265, Tel: (303) 837-3242; FTS 327-3242.
Region IX	Dee Jacobs, Regional Director, Suite 620, Two Embarcadero Center, San Francisco, CA 94111, Tel: (415) 556-2884; FTS 556-2884.
Region X	Terry Ebersole, Acting Regional Director, Suite 3142, Federal Building, 915 Second Avenue, Seattle, WA 98174, Tel: (206) 442-4210; FTS 399-4210.
TTC	Transportation Test Center, Gunars Spons, UMTA Programs, Director, Pueblo, CO 81001, Tel: (303) 545-5660, FTS 326-9111.

## LOCAL PROGRAMS

- **City of Boston**  
Downtown Crossing--A contiguous downtown area of about 25 blocks where automobile traffic has been totally or partially restricted, curb parking eliminated, parking rates increased, taxi stands and loading zones designated, a pedestrian mall created, and transit service increased. Preliminary results show little or no adverse effects on traffic and an increase in the number of visits and volume of retail sales in the area.  
Contact: Mathew Coogan  
Boston Redevelopment Authority  
City Hall - 9th Floor  
Boston, MA 02201  
(617) 722-4300 ext. 266
- **City of Chicago**  
State Street Transit Mall--A 3/4-mile long portion of a main commercial street within the downtown loop was narrowed to two exclusive bus lanes, and sidewalks were doubled in width. Through traffic is restricted to buses and emergency vehicles, designated delivery zones are on side streets and alleyways, while cross-streets remain open to all traffic. Surrounding parking lots have also increased rates. An evaluation of impacts is planned for 1981.  
Contact: Christopher Krueger  
Bureau of Transportation Planning  
Chicago Department of Public Works  
320 N. Clark Street - Room 411  
Chicago, IL 60610  
(312) 744-7740
- **City of Minneapolis**  
Nicollet Mall--An 11-block major retail and office core street, restricted to bus transit (on a serpentine transitway) and pedestrians. One of the initial 5 projects funded under the UMTA Section 3 program is documented as a highly successful cooperative public and private project. The Mall's effects on transit, pedestrian, and economic conditions are included in an evaluation report, sponsored by U.S.DOT in 1978-79.  
Contact: Lawrence Irvin  
Director of Planning  
301 M Street, City Hall  
Minneapolis, MN 55415  
(612) 348-2580
- **City of Madison**  
State Street Mall and Parking Policy--Although the program was delayed by a transit strike, the City converted 2,000 parking spaces from metered to attendant-controlled parking and imposed a morning peak-period parking surcharge to increase availability of short-term parking to shoppers. Shuttle bus services to downtown have increased, no private autos are permitted on State Street Transit Mall, and discount bus passes are available. An evaluation of the economic impacts is currently underway.

**Contact:** Ross Patronskey  
Project Manager  
Department of Transportation  
City of Madison  
111 City-County Building  
Madison, WI 53709  
(608) 266-4761

- **City of Memphis**  
Mid-America Mall--Sidewalk extensions for 3-1/2 blocks from the existing 10-block downtown pedestrian mall, a major transit terminal, two bus shelters, and a CBD shuttle service are designed to improve transit service and discourage automobile use in downtown Memphis. An evaluation of the retail business impacts is underway.

**Contact:** Fred M. Gillman  
General Manager  
Memphis Area Transit Authority  
701 North Main Street  
P.O. Box 122  
Memphis, TN 38101  
(901) 528-2887

- **City of Philadelphia**  
Chestnut Street Transitway--A 12-block downtown retail core was converted from a three-lane, one-way, heavily trafficked street to a two-lane bus and emergency vehicle-only street. Taxis are permitted at night and on one block during the day. Deliveries are restricted to cross streets or during off-hours by special permit.

**Contact:** Robert Gancarz  
Delaware Valley Regional Planning Commission  
1819 J.F. Kennedy Boulevard  
Philadelphia, PA 19103  
(215) 567-3000

- **City of Portland, Oregon**  
Portland Mall--An 11-block area on two major downtown streets, has been reserved for bus travel. It is open to auto traffic for access to hotels and parking garages. The Mall's effects on transit, pedestrian, and economic conditions are included in an evaluation report, sponsored by U.S. DOT in 1978-79.

**Contact:** Paul Bay  
Tri-Met  
520 S.W. Yamhill Street  
Portland, OR 97204  
(503) 238-4879

#### **Other Programs**

The International Downtown Executives Association (IDEA) is a professional organization of downtown improvement specialists dedicated to the development and revitalization of downtowns and their adjacent neighborhoods. Currently more than 40 cities are



providing base data on downtown economic indicators, including assessed value, employment, retail sales, office space, parking, transit, housing, hotel space, and public and private investment, to IDEA for publication in an Annual Downtown Data System Report.

Contact: Kent Moore  
Executive Director, IDEA  
915 15th Street, N.W.  
Suite 900  
Washington, D.C. 20005  
(202) 783-4963

- The Organization for Economic Cooperation and Development (OECD) is an instrument for intergovernmental cooperation among 24 industrialized countries on matters relevant to economic and social policy. Within this organization, a group of experts on Traffic Policies for the Improvement of the Urban Environment was created to evaluate the effects of traffic limitation policies and programs. Some of the group's major accomplishments have been city case studies, a synthesis report approved by the OECD Council, an overview report concerning evaluation methodology, and a 1979 "Seminar on Urban Transport and the Environment." Further work is scheduled on improving the urban environment through the control of unwanted vehicular traffic while maintaining accessibility by an appropriate mix of public and private transport. Reports and publications are available in the United States.

Contact: Publications and Information Center  
Organization for Economic Cooperation  
and Development  
1750 Pennsylvania Avenue, N.W.  
Washington, D.C. 20006  
(202) 724-1857



## Chapter 3

### ANNOTATED BIBLIOGRAPHY

This bibliography lists selected recent materials that address transportation restrictions and related economic issues of interest to local officials. Documents marked NTIS are available through the National Technical Information Service, Springfield, Virginia 22151.

Administrative and Management Research Association of New York City, Inc. Transit Station Area Joint Development: Strategies for Implementation (Final Report). Washington, D.C.: U.S. DOT, UMTA, 1976.

Gives general findings on value impacts and techniques of joint development and presents numerous case studies on both large and small scale projects.

Algin, Jane. "Boston's Downtown Crossing: Its Effects on Downtown Retailing." Paper prepared for the Boston Redevelopment Authority. Boston: 1980.

Discusses the major initial effects of restricting auto traffic and creating a pedestrian shopping area in downtown Boston. Economic, physical, and psychological impacts are outlined from both the city's and the retailer's points of view. Overall, this project has been viewed as a success.

Apel, J.K. "Auto-Restricted Zones and Street Closures." Chicago: Northeastern Illinois Planning Commission, 1977.

Inventories auto-restricted zones and street closures in the Chicago metropolitan area in various stages of planning, implementation, or completion. Six major evaluation criteria and likely impacts are discussed, including private sector economic impacts and fiscal impacts. Guidelines for defining areas of development suitability in other communities are also given.

Brambilla, Roberto and Gianni Longo. Banning the Car Downtown: Selected American Cities. Washington, D.C. Department of Housing and Urban Development, National Endowment for the Arts, President's Council on Environmental Quality, 1976.

An outgrowth of the travelling exhibit and essays, "More Streets for People," which circulated in 1974. Sixteen examples of North American cities' efforts to create pedestrian malls to revitalize downtown retail economics are presented. Each city's profile, planning history, project description, design features, and community impacts are included.

Brambilla, Roberto and Gianni Longo. For Pedestrians Only: Planning, Design, and Management of Traffic Free Zones. New York: Whitney Library of Design, Watson-Guptill Publications, 1977.

Summarizes the results of traffic-free zoning projects, including traffic management, economic revitalization, legislation, and financial strategies used in 20 European and North American cities. Several economic impacts and conclusions are cited and the appendix includes a compendium of American urban malls.

Braun, Ronad R. and Marc F. Roddin. Quantifying the Benefits of Separating Pedestrians and Vehicles. National Cooperative Highway Research Program Report 189. Washington, D.C.: Transportation Research Board, 1978.

Reports on a comprehensive methodology for evaluating the social, environmental, and economic impacts of facilities that separate pedestrians and vehicles. The user's guide portion is designed for use by practitioners, describing methodology applications and presenting instructions to use measurement techniques for 36 evaluation variables.

Carlson, D. "Pedestrian Mall: Its Role in Revitalization of Downtown Areas." Urban Land (May 1974).

Discusses experiences of 25 pedestrian malls with regard to retail sales, new construction property values, and tax revenues.

Charles River Associates, Incorporated. Evaluation of the First Year of the Memphis Auto-Restricted Zone Demonstration. Cambridge, Mass: U.S. Department of Transportation, 1980.

Describes the major effects observed over the first year of operation of the Memphis Auto-Restricted Zone Demonstration project. Changes in downtown purchasing behavior and related economic impacts are discussed.

Community Research Group. Handbook for Community Economic Development. Washington, D.C.: NTIS, 1979.

Designed for community development organizations and discusses the background of community economic development and the development process. This process includes initial assessment, investment strategy, individual project planning and packaging, implementation and evaluation. A glossary of terms and a list of Federal community economic development programs are included.

Gladstone Associates. Economic Impact and Implications of the Transitway/Mall. Washington, D.C.: Gladstone Associates, 1978.

Identifies potential effects of Denver's proposed Transitway/Mall on the downtown economy, with specific reference to downtown retail activity and directly related market supports. Economic effects on downtown malls and transitways in other areas and existing conditions of the Denver region are studied.

Kenton, E. City Redevelopment (A Bibliography with Abstracts).  
Springfield, Va: NTIS, 1979.

Gives information on the revitalization and renewal of cities as related to transportation planning, housing improvement, community development, neighborhood upgrading, and industrial programs. Emphasis is on the central business district.

Kraft, Ove. Retailing and Traffic Restrictions: An Analysis of Economic and Other Effects. Gothenburg, Sweden: University of Gothenburg, 1980.

Discusses the effects of six types of traffic restrictions on city center retailing, as part of a larger study conducted in several Swedish cities.

Lane, Jonathan S. No-Action Alternative: Impact Assessment Guidelines. National Cooperative Highway Research Program Report No. 217. Washington, D.C.: Transportation Research Board, 1979.

Guidelines focus on the social, economic, and environmental consequences of not constructing a transportation facility. It deals with the role of this alternative, the definition of alternatives, the impact assessment process, the recommended assessment techniques for 13 categories of social, economic, and environmental impact, and the techniques for plan evaluation.

Louden, William R. "Preliminary Evaluation of the Boston Auto-Restricted Zone." Paper prepared for the Transportation Research Board Annual Meeting. Washington, D.C.: 1980.

Presents evaluation results from the first nine months of the downtown Boston auto restriction demonstration project. Impacts reported on are: traffic volumes and patterns, pedestrian volumes, transit ridership, construction's effects on pedestrian activity, commercial activities, attitudes of users and merchants, and socio-economic make-up of area users.

Public Technology, Inc. Center City Environment and Transportation: Local Government Solutions. Washington, D.C.: Government Printing Office, 1978.

Prepared for the U.S. Department of Transportation with direct local government input and participation. Document describes projects in seven cities that are using innovative investment strategies and transportation restraint as tools for revitalizing central cities. The cities are Detroit, San Francisco, Seattle, Buffalo, Houston, New York, and Los Angeles.

Public Technology, Inc. Center City Environment and Transportation: Transportation Innovations in Five European Cities. Washington, D.C.: GPO, 1980.

Prepared for the U.S. Department of Transportation as the second study in a series concerned with helping American cities provide better access to and mobility within their downtown centers. An introductory overview and five European case studies are included. The cities are Paris and Caen, France; Delft, Netherlands; Gothenburg, Sweden; and London, England.

Ram, Dorothy V. Traffic Restraint: A Bibliography. Evanston, Illinois: Northwestern University, 1974.

Shostack, Helen. "City Centre Pedestrian Systems: A State of the Art Review." Working paper. Montreal: Canadian Surface Transportation Administration, Urban Transportation Research Branch, 1978.

Documents Canadian experience with pedestrianization. European and U.S. surveys are included for perspective. Major findings are that economics is the most crucial factor in the decision to create a downtown pedestrian mall; vehicular access is a key consideration in the type of scheme implemented, as well as seemingly responsible for the success or failure of the mall; North American cities usually provide broad guidelines for downtown development but do not direct development for pedestrians by the private sector beyond that. Pedestrian planning has not yet become integrated and standardized as evidenced by the lack of monitoring studies. Case studies are provided in the Index.

Urban Land Institute with Gladstone Associates. Joint Development: Making the Real Estate Transit Connection. Washington, D.C.: Urban Land Institute, 1979.

Describes the public and private sectors' roles in jointly developing real estate projects that are closely linked to public transportation facilities and services.

U.S. Department of Transportation. Auto-Restricted Zone/Multi-User Vehicle Systems Study. Washington, D.C.: GPO, 1977.

Investigates auto-restricted zones and multi-user vehicle systems' experience, evaluates their feasibility as concepts applicable to urban transportation systems, identifies potential demonstration sites, and designs demonstration and evaluation programs. A nine volume report including technical appendices on each site was prepared.

U.S. Department of Transportation. Innovations in Urban Transportation in Europe and Their Transferability to the United States. Washington, D.C.: GPO, 1980.

Summarizes and assesses several European transportation innovations and relates them to changes occurring or contemplated in the United States. Five topics are treated specifically: central city traffic rerouting and restraint, integrated transit, HOV priority treatment, coordination of transportation and land use, and residential neighborhood traffic restraint. The results of the Organization for Economic Cooperation and Development's 1979 Seminar on Urban Transport and the Environment are summarized in several appendices.

- U.S. Department of Transportation. Measures of Effectiveness for Multimodal Urban Traffic Management. Washington, D.C.: GPO, 1979.

Contains "A Guide for Transportation Managers" and outlines TSM planning requirements, basic strategies, and a set of measures of effectiveness to determine the degree to which projects achieve their objectives. Some attention is devoted to economic issues.

- U.S. Department of Transportation. Opportunities for Downtown Improvement: Recent Projects in Transportation and Urban Design. Cambridge: Moore-Heder, 1977.

Summarizes UMTA's Auto-Restricted Zone program and plans in Boston, Burlington, Memphis, Providence, and Tucson. Designed to aid city managers, political or business leaders, and urban planners. Projected economic impacts and potential opportunities are outlined. Impacts include: merchant attitudes, retail sales, pedestrian volumes, and new construction.

- U.S. Department of Transportation, Urban Mass Transportation Administration. Streets for Pedestrians and Transit: An Evaluation of Three Transit Malls in the United States. Washington, D.C.: GPO, 1979.

Report was written to acquaint the planning community with transit malls. It quantifies the benefits and disadvantages of the Nicollet Mall in Minneapolis, the Chestnut Street Transitway in Philadelphia, and the Portland Mall in Portland, Oregon. The following topics are analyzed: maintenance and construction costs; transit service improvements; the level of service provided; environmental impacts; pedestrian and bicyclist safety; traffic diversion; parking; goods delivery; enforcement; and economic impacts.

- U.S. Department of Transportation, Federal Highway Administration. Study of Parking Management Tactics. Washington, D.C.: GPO, 1979.

Volume 2, subtitled "Overview and Case Studies," is designed for use by transportation planners and traffic engineers. It discusses the strengths and limitations of six types of parking management actions and assesses the energy, environmental, economic, and transportation impacts of such actions.

- U.S. Department of Transportation, Office of Policy and Programs Development. Transportation Systems Management: An Assessment of Impacts. Washington, D.C.: GPO, 1978.

Provides a conceptual approach to TSM in terms of understanding overall interrelationships and impacts among TSM actions. A summary report, supporting papers, and technical appendix are included. Of particular interest are sections on truck restrictions and auto restricted zones.

U.S. Department of Transportation, Office of the Secretary. Value Capture and Joint Development Applications: Chicago, Louisville, Los Angeles. Springfield, Va.: NTIS, 1977.


Studies issues and evaluates value capture possibilities. Provides case studies for the three cities named.





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