

Urban Transportation Planning in the United States

Edward Weiner

Urban Transportation Planning in the United States

History, Policy, and Practice

Fourth Edition



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Preface

Urban transportation planning is carried out primarily by state and local agencies. Over the years, much experience has been gained in the planning and evaluation of urban transportation systems. This knowledge can be useful to planners and decision makers in the development and implementation of transportation system changes. In this context, it is important to understand the transportation and planning options which have been tried, and how they developed into the approaches we have today. This book describes the evolution of urban transportation planning over the last 80 years.

This is the fourth edition of the book which was first published in 1987. The third edition discussed urban transportation planning to mid-2006. This edition updates the evolution of urban transportation planning and policy to mid-2012. It also contains some additions and revisions to the earlier edition. This book is an updated version of “Evolution of Urban Transportation Planning” which was first published in 1979 as Chap. 15 in *Public Transportation: Planning, Operations and Management*, edited by George E. Gray and Lester L. Hoel. It was revised and published in 1992 as Chap. 3 in *Public Transportation*, Second Edition, edited by George E. Gray and Lester L. Hoel.

The book focuses on the key events in the evolution of urban transportation planning including developments in technical procedures, philosophy, processes, and institutions. But, planners must also be aware of changes in legislation, policy, regulations, and technology. These events have been included to provide a more complete picture of the forces that have affected and often continue to affect urban transportation planning.

Summarizing so much history in a single book requires difficult choices. The efforts of many individuals and groups made important contributions to the development of urban transportation planning. Clearly, not all of these contributions could be included or cited. This book concentrates on the key events of national significance and thereby tries to capture the overall evolution of urban transportation planning. Focusing on key events also serves as a convenient point to discuss developments in a particular area.

The book is generally arranged chronologically. Each period is titled with the major theme pervading that period as viewed by the author. Not all key events fit precisely under a particular theme, but many do. The discussion of the background for some events or the follow-on activities for others may cover more than one time period and is placed where it seemed most relevant.

The book takes a multimodal perspective and attempts to provide a balanced view among a number of subject areas including:

- Significant Federal legislation
- Major, relevant Federal regulations and policies
- Highway concerns
- Transit concerns
- Environmental issues
- Energy issues
- Safety issues
- Climate change concerns
- Financing
- Relevant conferences
- Technological developments
- Transportation service alternatives
- Manuals and methodological developments
- National transportation studies
- National data resources
- Local events with national significance.

Over the years, the author has discussed these events with many persons in the profession. Often they had participated in or had firsthand knowledge of the events. The author appreciates their assistance, even though they are too numerous to mention specifically.

In preparing this book, the author was directly aided by several individuals who provided information on specific events. Their assistance is appreciated: Jack Bennett, Barry Berlin, Susan Binder, Norman Cooper, Frederick W. Ducca, Sheldon H. Edner, Christopher R. Fleet, Charles A. Hedges, Kevin Heanue, Donald Igo, Anthony R. Kane, Thomas Koslowski, Ira Laster, William M. Lyons, James J. McDonnell, Florence Mills, Camille C. Mittelholtz, Norman Paulhus, Elizabeth A. Parker, John Peak, Sam Rea, Carl Rappaport, Elizabeth Riklin, James A. Scott, Mary Lynn Tischer, Martin Wachs, Jimmy Yu, and Samuel Zimmerman.

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Any errors of fact or interpretation are the responsibility of the author.

Edward Weiner
June 2012

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List of Abbreviations

3C	Continuing, comprehensive, and cooperative
3R	Resurfacing, restoration, and rehabilitation
4R	Resurfacing, restoration, rehabilitation, and reconstruction
AASHO	American Association of State Highway Officials
AASHTO	American Association of State Highway and Transportation Officials
AGT	Automated guideway transit
ANPRM	Advanced notice of proposed rulemaking
APTA	American Public Transit Association
ATA	American Transit Association
BART	Bay area rapid transit
BMS	Bridge management system
BOB	Bureau of the Budget
BPR	Bureau of Public Roads
BRAC	Base Closure and Realignment Commission
BRT	Bus rapid transit
BTS	Bureau of Transportation Statistics
CAFE	Corporate average fuel economy
CAMPO	Capital Area Metropolitan Planning Organization
CATI	Computer-assisted telephone interviewing
CATS	Chicago Area Transportation Study
CBD	Central business district
CEQ	Council on Environmental Quality
CFS	Commodity flow survey
CMS	Congestion management system
COG	Council of Governments
CTRMA	Central Texas Regional Mobility Authority
CUTD	Characteristics of urban transportation demand
CUTS	Characteristics of urban transportation systems

DEIS	Draft environmental impact statement
DMATS	Detroit Metropolitan Area Traffic Study
DOD	Department of Defense
DOE	Department of Energy
DOT	Department of Transportation
DPM	Downtown people mover
EIS	Environmental impact statement
EO	Executive order
EPA	Environmental Protection Agency
ERGS	Electronic route guidance system
FAF	Freight analysis framework
FARE	Uniform financial accounting and reporting elements
FAUS	Federal aid urban system
FHWA	Federal Highway Administration
FOIA	Freedom of Information Act
FONSI	Finding of no significant impact
FTA	Federal Transit Administration
FY	Fiscal year
GARVEEs	Grant anticipation revenue vehicles
GIS	Geographic information systems
GRT	Group rapid transit
GRTA	Georgia Regional Transportation Authority
HCM	Highway capacity manual
HEW	Department of health, education, and welfare
HHFA	Housing and Home Finance Agency
HHS	Department of Health and Human Services
HOV	High occupancy vehicle
HP&R	Highway planning and research
HPMS	Highway performance monitoring system
HRB	Highway Research Board
HUD	Department of Housing and Urban Development
I/M	Inspection/Maintenance Program
ICE	Interstate cost estimate
IM	Instructional memorandum
IMS	Intermodal transportation facilities and systems management system
IPG	Intermodal Planning Group
IRT	Institute for rapid transit
ISTEA	Intermodal Surface Transportation Efficiency Act of 1991
ITE	Institute of Transportation Engineers
ITLUP	Integrated transportation and land-use package
ITS	Intelligent transportation systems
IVHS	Intelligent vehicle-highway systems

JARC	Job Access and Reverse Commute Program
LCI	Livable communities initiative
LPO	Lead Planning Organization
LRT	Light rail transit
LRV	Light rail vehicle
LUTRAQ	Making the land use, transportation, air quality connection
MIS	Major investment study
MOVES	Motor vehicle emissions model
MPO	Metropolitan Planning Organization
MSA	Metropolitan statistical area
NARC	National Association of Regional Councils
NCHRP	National Cooperative Highway Research Program
NCTRP	National Cooperative Transit Research Program
NEPA	National Environmental Policy Act of 1969
NHS	National highway system
NHTSA	National Highway Traffic Safety Administration
NMI	National Maglev initiative
NPRM	Notice of proposed rulemaking
NPTS	Nationwide Personal Transportation Study
NRC	National Research Council
NTS	National transportation system
OMB	Office of Management and Budget
OTA	Office of Technology Assessment
PATS	Pittsburgh Area Transportation Study
PCC	Electric Railway Presidents' Conference Committee
PLANPAC	Planning package (of computer programs)
PMS	Pavement management system
PPM	Policy and procedure memorandum
PRT	Personal rapid transit
PTMS	Public transportation management system
QRS	Quick response system
RITA	Research and Innovative Technology Administration
RMA	Regional Mobility Authority
SAFETEA-LU	Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users
SEWRPC	Southeastern Wisconsin Regional Planning Commission
SHRP	Strategic Highway Research Program
SIB	State Infrastructure Bank
SIP	State implementation plan
SLRV	Standard light rail vehicle
SLT	Shuttle loop transit

SMD	Service and methods demonstration
SMS	Safety management system
SMSA	Standard metropolitan statistical area
SOV	Single occupancy vehicle
STIP	Statewide Transportation Improvement Program
STP	Surface Transportation Program
SUV	Sport utility vehicle
TAG	Transportation Alternatives Group
TAZ	Transportation analysis zone
TCM	Transportation control measure
TCP	Transportation control plan
TCQSM	Transit capacity and quality of service manual
TCRP	Transit Cooperative Research Program
TCSP	Transportation and Community and System Preservation Pilot Program
TDM	Transportation demand management
TEA-21	The Transportation Equity Act For the Twenty-First Century
TIFIA	Transportation Infrastructure Finance and Innovation Act
TIGER	Transportation investment generating economic recovery
TIGER	Topologically integrated geographic encoding and reference
TIP	Transportation Improvement Program
TMA	Transportation Management Association
TMA	Transportation management area
TMIP	Travel Model Improvement Program
TOD	Transit-oriented design
TOPICS	Traffic Operations Program to Improve Capacity and Safety
TRANSIMS	Transportation simulation and analysis system
TRB	Transportation Research Board
TRO	Trip Reduction Ordinance
TSM	Transportation system management
TTC	Texas Transportation Commission
UMTA	Urban Mass Transportation Administration
UPWP	Unified Planning Work Program
UTCS	Urban traffic control systems
UTPP	Urban transportation planning package
UTPS	Urban transportation planning system
V2D	Vehicle to driver communication
V2V	Vehicle to vehicle communication
VMT	Vehicle miles of travel