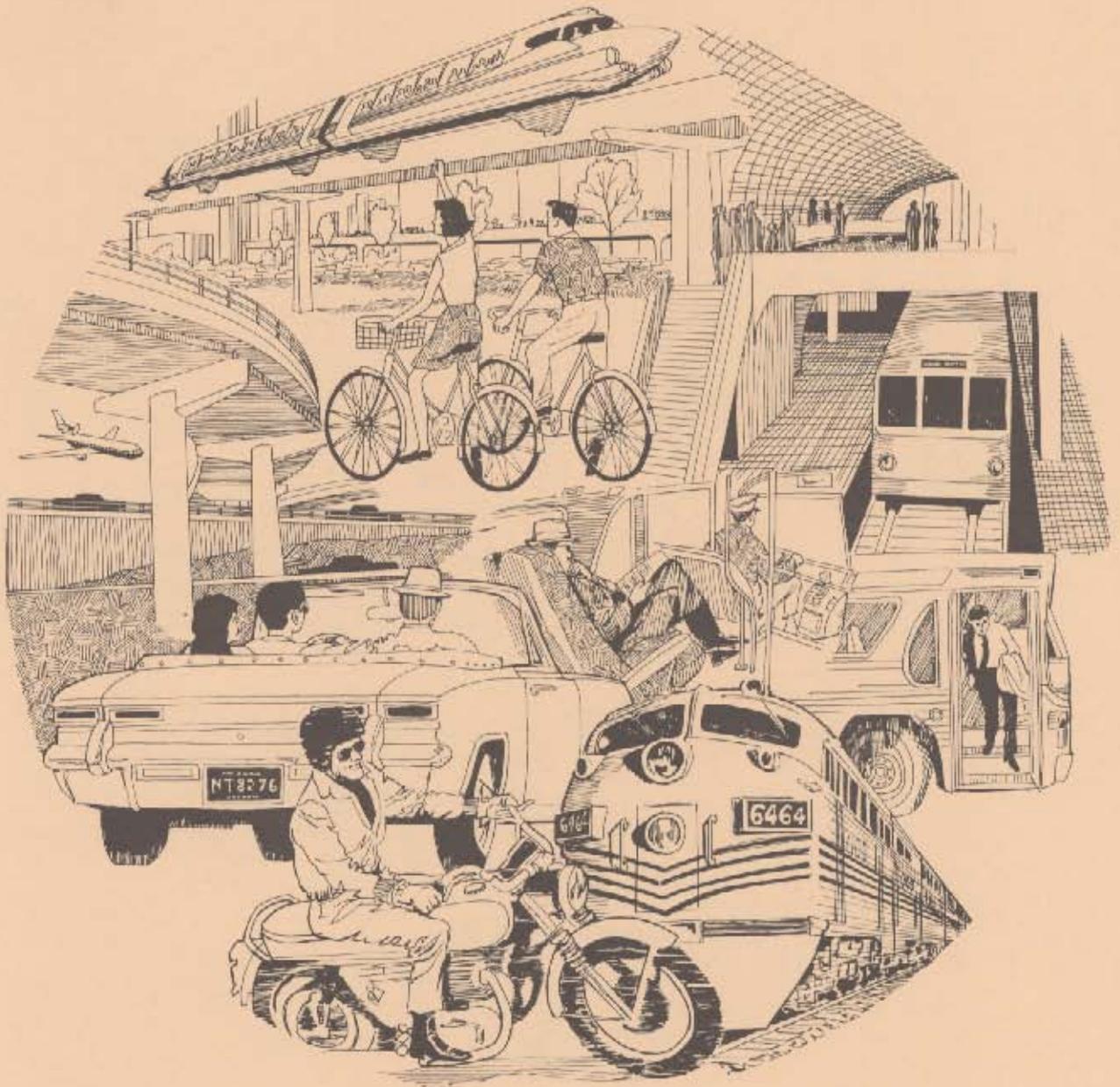


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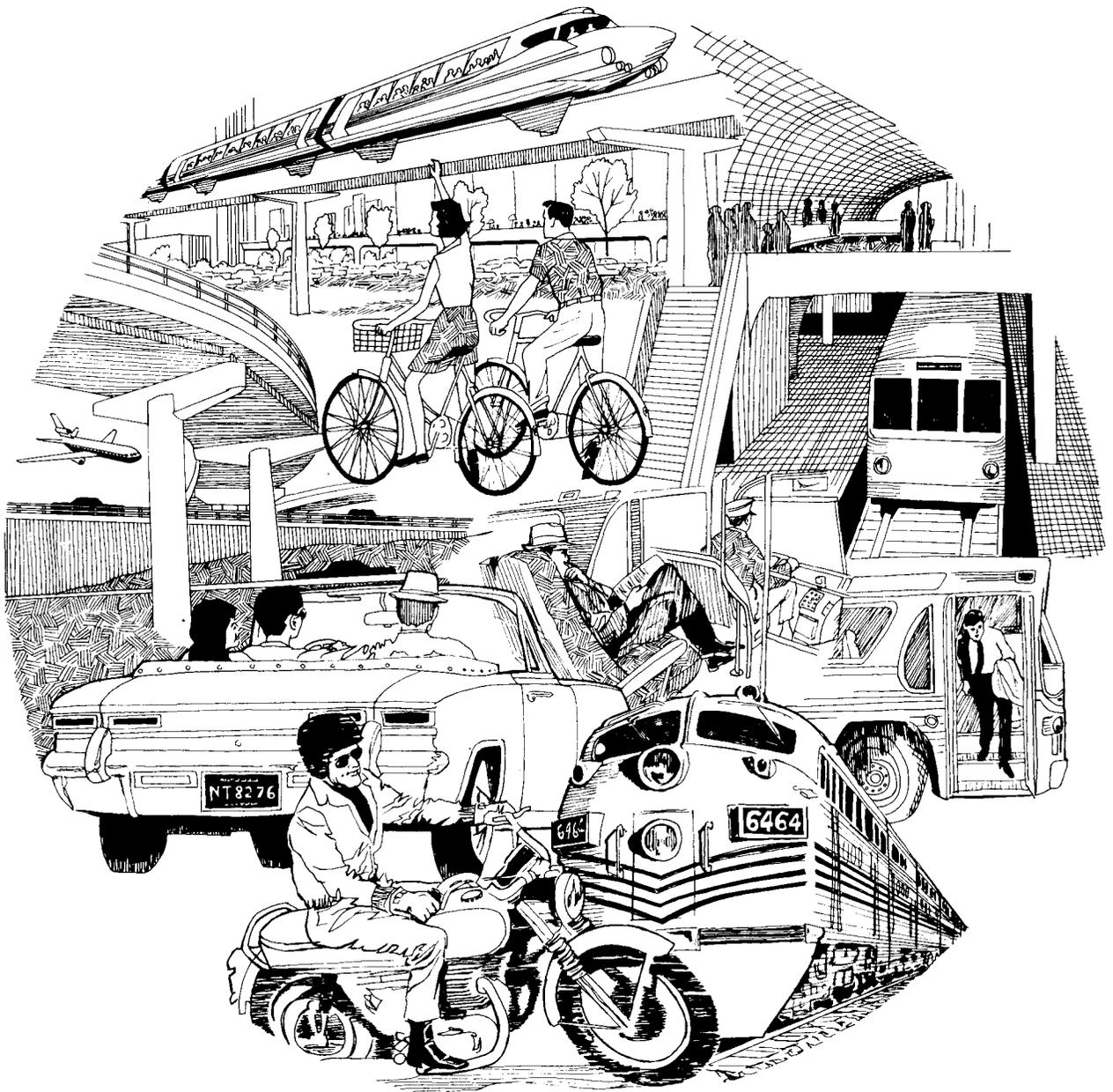
Toward More Balanced Transportation: New Intergovernmental Proposals



**ADVISORY COMMISSION ON
INTERGOVERNMENTAL RELATIONS**

WASHINGTON, D. C. 20575

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Wayne F. Anderson
Executive Director

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PREFACE

Pursuant to its statutory responsibilities outlined in Section 2 of Public Law 380, passed by the first session of the 86th Congress and approved by the President September 24, 1959, the Commission singles out particular problems impeding the effectiveness of the federal system for study and recommendation.

Metropolitan transportation was identified as such an important intergovernmental problem by the Commission in June 1973. The staff was then directed to prepare a report examining the intergovernmental financial and institutional means by which the various urban transportation modes might be more effectively provided to meet the needs of the nation's metropolitan areas.

As the study proceeded, it became increasingly apparent that non-metropolitan regions also faced similar needs for integrating the planning and provision of several transportation modes through improved intergovernmental programs and institutions. Consequently, this report addresses regional transportation needs in both metropolitan and non-metropolitan areas.

This report was approved at a meeting of the Commission on December 13, 1974.

Robert E. Merriam
Chairman

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Summary

TOWARD MORE BALANCED TRANSPORTATION:

NEW INTERGOVERNMENTAL PROPOSALS

The Intergovernmental Transportation Problem

Transportation is one of the most pervasive, most expensive, and most intergovernmental of all governmental functions. It costs about \$26-billion per year in public funds alone, about one-third of which involves intergovernmental aid from one level of government to another.

Every level of government in the United States has transportation responsibilities, but these differ widely from one level to another with respect to the various modes and the geographic extent of the different transportation systems. These variations are the heart of this study, for they determine needed intergovernmental relationships.

Modes and Governments. By far the greatest public transportation effort in recent years has been highways. Airports are a distant second, followed by water transport, mass transportation, and parking. Only the local governments are engaged in all five, and here mass transportation receives more attention than at any other level. The state transportation role is most heavily concentrated on a single mode—highways—while the Federal government is now attaining a relatively judicious balance among highway, mass transportation, airport, and water transport functions, with the recent mass transportation increases. So, from the standpoint of the different modes and their inter-twined public financing arrangements, transportation is a complex intergovernmental problem.

Geographic Extent of Different Systems. Geographically, it is no less complicated. The national airport, railroad, water transport, and interstate highway systems are nationwide in importance and extent. At the same time, the primary highway systems, and certain portions of rail, air, and water transport systems are basically statewide in significance. The secondary rural and urban systems of highways, and mass transportation systems, however, are of primary significance only to individual metropolitan areas and non-metropolitan regions. Of course, there are also local roads and transit systems which have little significance beyond an individual city or county. Yet, all of these systems with their varying geographic impacts add up to a total transportation system for the whole nation. More and more, their interdependence is being realized, and responsibility for them is being shared among all levels of government.

Regional Structure. Perhaps the most difficult transportation problems appear at the regional level — in both metropolitan and non-metropolitan areas. Here, there usually is no authoritative governmental mechanism which can integrate the various transportation modes to assure the efficient movement of people and goods within the whole region, and to coordinate these transportation systems with the overall community development objectives. Instead, what is relied upon generally at the regional level is an advisory regional planning body (with some degree of comprehensiveness), and perhaps one or two separate and independent special districts or authorities for single transportation functions, such as airports or transit. Meanwhile, responsibilities for financing, regulating, and developing the region and its transportation systems are divided among anywhere from 11 to several hundred independent local units, depending upon the size of the metropolitan area or region. Thus achieving coordinated planning and implementation of regional transportation systems and comprehensive development policies has been an almost impossible task.

The Regional Focus of This Report

In light of this problem, the Commission's report focuses on "regional" transportation systems, primarily in the nation's metropolitan areas, but also in its non-metropolitan regions. These regional transportation systems supplement the national, statewide, and strictly local systems, and tie them together to assure area-wide ease of movement of both people and goods. They encompass all modes, operating characteristics and facilities. The challenge is to find a means of linking the planning for one mode with the planning for another, while at the same time linking intermodal transportation plans with comprehensive development policies for the whole region, and then linking all of this planning at the areawide level with coordinated implementation programs. All three levels of government have a role in meeting this complex challenge.

Major Points Recommended

To meet this challenge, the Commission recommends the following nine point program:

1. The Federal urban system, secondary highway system, and mass transportation programs should be merged into a single block grant to be distributed among metropolitan and non-metropolitan

regions largely according to a formula based primarily on population.

2. This new unified grant program could be used for any mode and for either capital or operating purposes, and it would be supported by a combination of earmarked monies from the national Highway Trust Fund and by Congressional appropriations from the general fund.

3. The funds would be channeled through the states for regions wholly within a single state if the state has — as the Commission believes every state should — a strong intermodal DOT responsive to overall policy control by the governor, and a substantial intermodal program of financial assistance for regional systems; funds would go directly to the regional planning bodies in those states not meeting these criteria and in all interstate regions.

4. Ultimately the funds would be passed on to the appropriate construction, maintenance, and operating units, and perhaps even to the individual transportation users, by designated regional planning bodies in accordance with their own plans and policies.

5. All of the regional bodies designated for these important Federal aid roles would be required to have well defined authoritative decision making powers, but their form could vary: a strengthened regional council similar to the one in Minneapolis-St. Paul, a city-county consolidated metropolitan government like that in Jacksonville, Nashville, and Indianapolis, or even a state agency, in some cases, working closely with the locally controlled regional body having responsibilities under the state's substate districting system and OMB Circular A-95.

6. These regional bodies would have expanded powers to plan and program regional transportation systems and to initiate and/or approve or disapprove transportation projects in accordance with their comprehensive regional plans and policies; they also would be empowered to monitor and participate in the regulatory proceedings of bodies which set transportation fares and prices, community development controls, environmental controls and other related rules, so that regulatory decisions will be more likely to be coordinated with comprehensive planning policies.

7. The states would authorize an areawide intermodal transportation authority which would have the power to raise funds, coordinate and assist the activities of existing transportation provider organizations, subsidize certain classes of transportation users—like the elderly or the poor—and directly provide such needed transportation facilities or services as may otherwise be unavailable. These authorities could exercise their powers only in accordance with decisions of the regional policy bodies.

8. State and local transportation financing policies should be made more flexible, so that impediments removed from the Federal aid programs would not be perpetuated by outdated state and local limitations.

9. Finally, the Congress and state legislatures should consider consolidating the various transportation regulatory bodies they have established, creating single intermodal ones charged with considering—in addition to economic criteria—modal productivity and efficiency, energy conservation, desired community development, environmental protection, enhanced mobility, and improved access.

A Consolidated Regional Program. In choosing this regional transportation model for the 1970's, the Commission affirms that all "regional" transportation programs should be consolidated into a single intermodal program and made the responsibility of effective regional bodies. At the same time, purely local transportation would remain a local government responsibility, and transportation systems reaching beyond the region would be of state or Federal concern. Effective intergovernmental coordination would be used to help assure that (1) a state or Federal project would not disrupt local and areawide communities unnecessarily or arbitrarily, (2) local projects would be consistent with regional ones, (3) regional transportation systems would connect with and complement the nationwide, statewide, and local systems. To help achieve this intergovernmental coordination the regional policy body would be primarily under the control of local elected officials, but direct state representation is also provided.

Shared Responsibilities. What the Commission has done in these recommendations, then, is to give each level of government its due, but to recognize that there is no way to completely separate responsibilities. In-

stead, these responsibilities must be shared through systems calling for appropriate representation, reviews, concurrences, and approvals. Yet, this process shouldn't mean passing the buck; each level of government must pull its own weight. So, along with the sharing of responsibilities comes the need to build greater capacities at each level.

Modal and Operating Flexibility. The Commission's recommendations are intended to provide for greatly increased flexibility in the use of Federal aid transportation programs at the regional level, and the means by which state and local governments and their regional bodies can build the capacity to use this flexibility creatively in meeting the unique needs of each region.

Precedents for Recommendations

The major features of these recommendations are based upon existing precedents:

- Intermodal flexibility of Federal aid funds for both highway and transit purposes has been introduced by the *1973 Highway Act*. Several states now permit similar discretionary use of funds.
- Flexibility for using Federal aid transit funds for either capital or operating purposes has been introduced in the *1974 Mass Transportation Act*.
- Metropolitan transportation planning associated with land use planning and certain other types of areawide planning is now universal throughout metropolitan America. In addition, most non-metropolitan regions have established regional planning bodies. Forty-four states have statewide systems of substate districts, and some of these are serving as vehicles not only for establishing comprehensive regional planning with local involvement, but also for coordinating the decentralized operations of state government and improving state planning and budgeting processes.
- Under the *1973 Highway Act*, the Federal government has asked the governors of the states to designate a single metropolitan body for transportation planning in all three Federally assisted modes—highways, transit, and airports—stipulating that these bodies should also be the general purpose planning and A-95 Federal aid review and comment clearinghouses designated for their regions.

- The recommended type of policy control over planning and decision making for overall regional development and transportation systems is exhibited currently in the Twin Cities Metropolitan Council in Minneapolis-St. Paul. The council links comprehensive planning with functional planning, and broad systems planning with specific project implementation decisions.
- The recommended involvement of the regional policy body in regulatory proceedings has a precedent in Florida where all developments having an areawide impact are considered by a regional planning body in the course of ordinary land use control (zoning and subdivision) cases to which it becomes a party. This body may appeal a local decision which is contrary to regional interests to a state adjudicatory unit.
- The models for the Commission's intermodal transportation authority are the New York Metropolitan Transportation Authority and the Chicago Regional Transportation Authority.
- The state DOT recommendation is an extension of the current situation in which 27 states and the Federal government have already established such units. Several, such as California, New York, and Maryland exhibit most of the features recommended by this Commission.

Applying the Recommendations

The Commission is aware that despite these precedents, widespread adoption of its recommendations will not be easy. Intermodal conflict, institutional rigidities, and fiscal fears combine to make change in this area an arduous achievement. This report, however, underscores the importance of cooperative intergovernmental relations in meeting regional transportation challenges and the Commission believes that only through concerted action can its recommendations be implemented.

At the Federal Level. The initial reactions to the *1973 Highway Act* and the intergovernmental changes it is bringing about, clearly indicate that establishing new patterns of shared responsibilities can be difficult. The Federal government's assignment of more responsibility to governors — for designating single metropolitan bodies to administer planning funds and to make key multimodal transportation decisions — has disturb-

ed earlier relationships with many state and local units of government and transportation agencies. Moreover, as Federal transportation funds have been put to multimodal purposes, the modal administrations within DOT and some states have had to abandon their "tunnel vision" and acquire a broader perspective. These changes do not come easily.

In the States. As states create departments of transportation which successfully address intermodal issues, the independence and predominance of the powerful state highway units must subside, and governors are forced to involve themselves deeply in reorganization and coordination battles — another arduous adaptation effort. When state financial assistance is authorized for local and regional transportation systems other than highways, still another new and controversial issue confronts political leaders and administrators.

Regional. Below the states, most regional bodies are still relatively new and inexperienced. In many cases, their image is weak and political leaders as well as transportation experts wonder whether these bodies are up to meeting their growing role and the rising expectations many people have for them. And this is a source of anxiety at all levels.

Local. Finally, many local political leaders feel that between the increasing Federal and state influence in transportation and the newly emerging role for regional organizations, the independence of their jurisdictions is threatened. Participating in a regional body, after all, is not the same as actually controlling one's own destiny. Yet, can any local government nowadays — save perhaps for the few major city-county consolidations — really control its own transportation destiny without the help and cooperation of other units and levels of government?

Intergovernmental. So, we come full circle to the concept of sharing responsibilities. The Commission believes that more financial assistance from the state and Federal levels is needed for transportation, but that more responsibility and authority for planning and action programs needs to be given to the local and regional levels. The Commission also believes that all levels of government must collaborate in this. Whether this particular approach proves successful is largely up to the political leadership up and down the line.

Generalists and Specialists. A basic question posed by the Commission's recommendations is the degree to

which the generalists should take increased responsibility for transportation decisions. This is a tough political question, because it implies that legislators, governors, mayors, and chief elected county officials will have to assert their authority over the transportation bodies and administrators in their efforts to (1) revamp long established and deeply rooted bureaucracies, (2) bring the modes together, and (3) relate transportation to other critical concerns of the states, regions, and localities — including the environment, energy, community and economic development, equal opportunities, and tax burdens. If elected legislators and chief executives don't take on these coordinative responsibilities increasingly — as representatives of all the people — then many of the specialists in the bureaucracies and lobby groups will continue as before to prevail with their more limited objectives which preclude the greater good. So, the nation's elected officials face the biggest challenge in bringing the Commission's recommendations to fruition.

Adapting to Each Area. The Commission fully recognizes the rich political, governmental, economic, and social diversity within the regions composing metropolitan and non-metropolitan America. Thus, it has sanctioned a variety of possible regional bodies, ranging from strengthened regional councils to reorganized or consolidated local governments to state agencies in certain situations.

With respect to the intermodal areawide transportation authority, there are also several options. It could be the designated policy body acting in an operating role or it could be a separate but subordinate organization. In addition, this authority could actually build and operate transportation systems, or pass funds through to others to provide transportation services, or simply coordinate existing satisfactory services so that they would operate more effectively as a unified system. The intermodal flexibility conferred on the policy body and its operating authority does not force the use of any particular mode where it makes no sense, and it mandates no particular division of funds between capital and operating purposes.

All of these options are to be exercised at the regional level insofar as they do not adversely affect state or national interests. Again, it is up to elected officials to exercise these options wisely at the regional level.

Adopted Recommendation Language

The full set of transportation recommendations officially adopted by the Commission conclude this sum-

mary. More detailed explanations and justifications of them may be found in the full report, where: *Chapter I* outlines the place of transportation in urban and rural America; *Chapter II* deals with existing planning responsibilities; *Chapter III* discusses the implementation of those planning endeavors; and *Chapter IV* discusses integration of these fragmented planning and implementation activities and presents the Commission's six recommendations.

* * * *

Recommendation 1. Strengthening Areawide Transportation Planning and Decision Making

The Commission finds that areawide transportation planning and decision making should be strengthened in both metropolitan and non-metropolitan areas. This strengthening should be achieved by means consistent with the Commission's recent series of reports and recommendations on *Substate Regionalism and the Federal System*. Thus, in many areas the most feasible approach would be to start with existing regional councils and regional planning commissions, recognize them officially for all areawide Federal aid and state transportation planning purposes, and strengthen their decision making powers. A second approach arises in cases where areawide local government reorganizations have taken place; here the strategy would be to use these areawide jurisdictions for regional transportation programs. A third possible approach, using state agencies with local ties, arises where the states are already major providers of transportation in metropolitan areas. Hence. . .

A. The Commission recommends that all Federal aid transportation programs requiring, based upon, or supporting areawide planning rely primarily on designated areawide local governments, where such have been established, or where none exists, on the single designated general purpose regional body in each area established for purposes of OMB Circular A-95 by (1) the statewide systems of substate districts in intrastate areas where the states have set up such systems, or (2) joint action of the local governments in intrastate areas where the states have not acted, or (3) joint Federal-multistate compacts, or interlocal agreements in interstate areas. In order to facilitate this action, the*

*These interstate mechanisms are recommended for those metropolitan areas (currently numbering 38) which cross state lines. This recommendation is consistent with Recommendation No. 5 of the Commission's report entitled *Regional Decision Making: New Strategies for Substate Districts* (1973).

Federal Aid Highway Act should be amended to modify the "urbanized area" definition of the geographic basis for areawide transportation planning and urban systems funding to permit consistency with Part IV of OMB Circular A-95. Transportation programs for rural and small urban systems and non-metropolitan areas should be subject to the same type of areawide regional planning and decision making single organization designations and geographic criteria.

B. The Commission also recommends that in those intrastate cases where the governor of a state determines by specific findings that the state has an overriding interest in and commitment to the regional transportation system of one or more designated sub-state areas, by reason of state agency activities and substantial state financial involvement, and where the state has a strong intermodal department of transportation and intermodal flexibility in using its transportation funds in accordance with overall state policies approved by the governor,* a comprehensive multimodal state transportation agency may be established in such areas to assume required Federal aid transportation planning and decision making functions with the assistance of a coordinating committee of local elected officials, provided, of course, that any resulting plan or plans shall be subject to review and concurrence by the appropriate areawide A-95 clearinghouse.

C. The Commission further recommends that the areawide or state units, designated for multimodal Federal aid transportation planning and decision making in accordance with components A and B of this recommendation, should be empowered, but not necessarily limited, by Federal and state laws and administrative regulations to**:

(1) develop a unified intermodal planning and decision making work program in conjunction with other appropriate planning and implementation agencies;

(2) plan all transportation facilities, routes, services, and operations — of whatever mode — within its geographic jurisdiction which

have multijurisdictional or areawide impact, including annual revision and adoption or readoption of such plans;

(3) resolve — or, in the case of a state unit designated pursuant to component B of this recommendation, help to resolve — any inconsistencies between such transportation plans and other areawide plans for community development, other public facilities, and related servicing programs;

(4) develop a multi-year program of specific transportation projects and services which would implement the transportation plan;

(5) initiate, review, approve or disapprove, and/or modify all transportation projects of whatever mode having multijurisdictional or areawide impact which are not part of a statewide or national system of transportation before such projects may be funded or implemented;

(6) review and concur in any transportation project proposed for the area which would be part of a statewide or national system of transportation, provided however that the governor(s) of the state(s)* involved may override an adverse decision of the areawide body by a written finding that such decision is in conflict with officially adopted state plans, policies, or action having a statewide impact or in conflict with officially adopted plans, policies, or actions of another such areawide unit;

(7) monitor and participate in regulatory proceedings affecting the provision of transportation services in its area and related development, mobility, and accessibility issues;

(8) in the case of a unit designated under component A of this recommendation, provide or contract for the provision of areawide or inter-jurisdictional transportation facilities and programs; provided that where such a unit is not an areawide local government such action must be agreed upon by more than fifty (50) percent of the designated general purpose regional body's

*In accordance with Recommendation No. 5 of this report.

**The planning and decision making elements enumerated here are consistent with current Federal laws and regulations governing Federal aid transportation systems. The intent here is to support these practices and recommend parallel state laws and regulations.

*More than one state, and therefore more than one governor, would be involved in interstate areas for which a single areawide planning and decision making body is designated pursuant to component A of this recommendation.

constituent local governments representing at least sixty (60) percent of the population; and

(9) study and consider the present and potential roles of private sector transportation providers—including transit, taxi, trucking, parking, railroad, airline, shipping, and pipeline companies—as well as public implementation and finance units, and provide for their needs as may be appropriate to encourage and facilitate needed and desirable participation by them in the coordinated provision of transportation services in the area.

** * * **

Recommendation 2. Improving Areawide Transportation Delivery

The Commission finds that responsibilities for implementing transportation plans and providing transportation services in many metropolitan and rural areas are currently divided among a very large number of independent private and governmental organizations, making it very difficult to unify intermodal transportation services to serve effectively and efficiently the needs of the public. Hence. . .

The Commission recommends that states, local governments, and policy units designated pursuant to Recommendation No. 1 develop broader and more systematic institutional approaches to the delivery of areawide transportation services. Specifically, the Commission recommends that states enact legislation which:

A. establishes or provides for designation by the instrumentality called for in Recommendation No. 1 of an areawide multimodal transportation authority to provide directly, coordinate, or assist in financing existing and needed areawide transportation services, and to consolidate or otherwise integrate the transportation activities of existing areawide transportation operating

B. authorizes a range of possible forms for areawide transportation authorities, including:

(1) a reorganized county containing seventy (70) percent or more of a metropolitan or non-metropolitan area's population,

(2) a city acting extraterritorially when it already

performs the bulk of the area's non-highway transportation services,

(3) a joint city-county transportation department whose jurisdiction contains seventy (70) percent or more of the metropolitan or non-metropolitan area's population,

(4) a multipurpose or multimodal regional service authority,

(5) a state department of transportation or a state subordinate multimodal regional transportation agency, or

(6) the instrumentality designated pursuant to Recommendation No. 1;

C. authorizes financing of the areawide transportation authority's operations through a combination of areawide taxes, assessments of constituent local governments, fees, and service charges;

D. authorizes the areawide transportation authority to:

(1) designate, concurrently with the instrumentality called for in Recommendation No. 1, major urban and rural regional transportation routes and set the conditions for transport operations along these routes,

(2) reserve, develop, and maintain (a) exclusive or priority travel routes for mass transit, and (b) sites for areawide transport facilities;

E. authorizes general policy control over the designated areawide transportation authority by the planning and decision making units called for in Recommendation No. 1;

F. authorizes delivery of supplementary local transportation services by all units of general purpose local government in metropolitan and rural areas either directly, jointly, or by contract, provided that such services have not been assumed by the designated areawide transportation authority, and provided further that the plans and programs for such services be reviewed by the instrumentality called for in Recommendation No. 1 in order to resolve any inconsistencies between such plans and programs and the officially adopted areawide transportation policies and plans.

Recommendation 3. Providing More Balanced Federal Financing for Regional Transportation Systems

The Commission finds that the present financing of transportation in urban and rural areas lacks adequate flexibility to meet the multimodal fiscal requirements of these areas. In particular, the Commission finds that mass transportation modes have suffered from this lack of flexibility. The Commission also finds that the current Federal transportation grants-in-aid to urban and rural areas are often complex to administer, not always properly allocated, and fail to provide adequate discretion to urban and rural officials. Hence. . .

*The Commission recommends that Federal transportation finance policies be substantially revised to provide more flexible intermodal funding of regional transportation systems. Specifically, the Commission recommends that the Federal government revise its transportation funding policies by:**

*A. enacting a unified multimodal regional transportation program** which is:*

(1) funded by earmarking of the Highway Trust Fund supplemented with funds appropriated from general revenues;

*(2) provided with funds for intrastate regions channeled to those states*** which have*

*Congressman Fountain dissents from the parts of this recommendation favoring the diversion of Federal Highway Trust Funds to a regional transportation block grant and the removal of all restrictions against the use of Federal urban and rural transportation systems funds for operation and maintenance programs.

**This program would consolidate the urban system portion of the Highway Trust Fund and the UMTA capital grants program in urban areas, and those portions of the Federally aided state highway systems which serve only the internal circulation of non-metropolitan regions in rural areas. It would not include the other existing Federal aid highway systems, Federal railroad assistance, the airports trust fund program, or the water transport programs of the Corps of Engineers. This consolidated program could be used for projects of any transportation mode not funded by another Federal aid transportation program.

***Governor Evans supports the creation and use of effective state departments of transportation. However, he believes that the Federal aid funds provided for in this recommendation should be channeled to the states in all cases, even though such a department may not yet have been created. Therefore, he dissents from those portions of this recommendation which make channeling conditional.

(a) strong multimodal departments of transportation, and*

*(b) substantial intermodal funding from their own sources for regional transportation,** or otherwise directly to the policy units called for in Recommendation No. 1; and in the case of funds for interstate regions channeled directly to the policy units called for in Recommendation No. 1;*

(3) allocated among the states, with the exception of 15 percent which shall remain as a discretionary fund for use by the Secretary of Transportation in regions with special transportation needs, primarily according to the relative population of the states;

(4) allocated among the regions

(a) in states that qualify for channeling, by a formula developed by the states in collaboration with the policy unit(s) called for in Recommendation No. 1 and approved by the Secretary of Transportation, such formulas to take into account factors similar to those in the Federal formula — provided that 15 percent of all such state area funds be reserved for use at the Governor's discretion in regions with special transportation needs — and

(b) in interstate regions and in states not qualified for channeling, by a Federal formula taking into account the same factors as the formula used for state area allocations — provided that 15 percent of the funds available in these areas in accordance with the formula for allocation of funds among the states may remain as a discretionary fund for use by the Secretary of Transportation in those regions in this group having special transportation needs;

(5) allocated within regions among eligible provider organizations, both public and private, by

*In accordance with Recommendation No. 5 of this report.

**This builds upon previous Commission recommendations in its *State Aid to Local Government* (1969) and *Federal Approaches to Aid State and Local Capital Financing* reports (1970).

*the policy unit called for in Recommendation No. 1 for projects and programs that conform to this unit's officially adopted policies, plans and programs;**

B. *removing all restrictions against the use of Federal urban and rural transportation system funds for operation and maintenance programs.*

* * * *

Recommendation 4. Improving State and Local Transportation Financing Policies.

State and local governments together finance about two-thirds of all transportation outlays. However, the Commission finds that state and local units frequently face fiscal, structural, and legal constraints that prevent them from targeting their fiscal resources on their most urgent transportation needs. The Commission believes that the time has come to remove these financial shackles from state and local governments so that they can develop more flexible transportation finance policies. Hence. . .

Consistent with its past reports on this subject, the Commission urges the states to modernize their transportation finance programs through appropriate constitutional and statutory enactments which would:

A. *permit flexible use of state highway user revenues in order to achieve better funding balance among different transportation modes.** In light of developments since adoption of this Commission's report entitled State Aid to Local Government, the Commission also urges states to consider the creation of an expanded multimodal transportation trust fund permitting recipient units to spend such assistance for any transportation project that is in conformance with the areawide transportation plan adopted by the policy unit called for in Recommendation No. 1;*

B. *expand the state financial role in directly aiding a full range of non-highway transportation services including, as appropriate, but not necessarily limited to, airports, mass transit, water, and rail transport;*

*Subject, of course, to the state override noted in Recommendation No. 1.C.(6) of this report.

**This builds upon recommendations already made in the Commission's report, *State Aid to Local Government* (1969).

C. *authorize an appropriate state agency* to review and approve the transportation revenue bond issues of all state, areawide, and local units of government in order to avoid any type of revenue bond obligation which would cause (a) excessive service charges for the use of transportation facilities, or (b) impediments to the development of a balanced system of transportation facilities;*

D. *authorize state, areawide, and local governments to divert, to the extent that existing indentures allow or can be amended to allow diversion, the surplus revenues of dependent and independent transportation special districts within their jurisdiction for the support of transportation programs that are operating at a deficit; provided that the state government guarantees the bonds of any transportation districts which have had their surplus revenues so diverted;*

E. *authorize local and state governments to provide financial subsidies to private transportation providers and consumers.*

*Furthermore, the Commission recommends that, with state authorization where appropriate, local governments revise their transportation financing policies by adopting transportation pricing programs — parking taxes, group fares for taxis, airport landing fees, congestion tolls for urban highways, and the like — that would contribute to more effective use of these transport modes in reducing congestion, protecting the environment, and promoting the most efficient use of the nation's energy resources.***

* * * *

Recommendation 5. Modernizing State Transportation Planning and Decision Making.

The Commission finds that the transportation programs of most states are still predominantly oriented to highways, and that even in many of those states

*This agency might be the one already called for in the Commission's report, *City Financial Emergencies: The Intergovernmental Dimensions* (1973) to supervise local financial management responsibilities.

**The Commission previously has urged that local governments support the finances of general purpose regional planning and decision making bodies that would have a major role in planning more efficient transportation systems. See Recommendation No. 3 in Volume I of the Commission's 1973 report on *Substate Regionalism and the Federal System*.

having multimodal departments of transportation strong and effective coordination among the modes has not been achieved. In addition, many states influence their urban and rural regional transportation systems without the benefit of an adequate intermodal perspective. Though these deficiencies at the state level arise partly from the lack of financial flexibility referred to in *Recommendations No. 3 and 4*, a substantial share of it comes from certain structural inadequacies within state governments. Hence. . .

The Commission recommends that each state enact legislation establishing a broad intermodal "Department of Transportation," if it has not already done so, and that all such departments now existing or hereafter created should be headed by a chief administrator:

(1) appointed by and responsible to the Governor of the state, with appointment subject to legislative confirmation where that is the state practice;

(2) directly vested with strong and effective intermodal planning, policy making and budgeting capabilities; and

(3) supported by adequate staff to enable him to carry out these responsibilities; provided that policy decisions concerning regional transportation plans and projects made by the state DOT shall be subject to approval by the Governor acting with the advice of the state's comprehensive planning agency and A-95 clearinghouse and such other state agencies and appropriate local and regional advisory groups as he may designate, and that no applications shall be submitted by the state for Federal regional transportation funds without his approval.

* * * *

Recommendation 6. Reforming Independent Regulatory Bodies to Better Meet Areawide Intermodal Transportation Needs.

The Commission finds that the regulation of routes, fares and other operational aspects of transportation services has too frequently been based on narrow economic objectives, and that the widespread use of separate regulatory agencies for the different transportation modes has hindered solutions to the broader problems of modal productivity and efficiency, intermodal competition and coordination, energy conservation, community development, environmental protection, mobility and access. The Commission also finds that regulations governing land use, the environment and human rights vitally affect the success of transportation programs, but too frequently have been exercised on a different basis than has been used for the regulation of transportation systems. Hence. . .

The Commission recommends that the Congress and state legislatures consider amending their respective laws and interstate compacts establishing the independent transportation regulatory bodies with a view toward (1) consolidating them to combine separate transportation modes, where appropriate, in independent intermodal regulatory bodies; and (2) broadening the public policy objectives which shall be considered and promoted to the extent possible by these independent regulatory bodies to include — in addition to the traditional ones of safety and economics — modal productivity and efficiency, energy conservation, desired community development, environmental protection, enhanced mobility, and unhindered access.

INTRODUCTION

In recent years, the Federal government has become increasingly concerned about the appropriate role of local communities in planning and providing public facilities and services. The local and areawide decision making processes for public works planning and for the implementation of authorized plans have received particular attention. Central to this concern is the jurisdictional fragmentation and diffusion of related public works functions at these local and areawide levels, since they combine to make planning and program decisions in this field both complicated and difficult.

Nowhere is this more apparent than with transportation, where a serious gap has grown up between general planning and project implementation. Recent legislative efforts to provide for more coordination and for greater community participation in both planning and implementation have not substantially reduced this gap.

With recent Federal legislation requiring the creation of areawide planning agencies in those metropolitan areas expecting to receive Federal funds, there is mounting pressure to plan consistently and to carry out projects in conformance with these plans. The areawide agencies are being encouraged to develop single agency capability for planning, financing, and implementing transportation and other work programs. But there is meager evidence to show that areawide agencies have integrated effectively these functions.

PURPOSE OF THE STUDY

The primary objective of this report is to answer three basic questions:

1. To what extent should regional transportation planning be linked more closely to comprehensive (multivalued) areawide (metropolitan and non-metropolitan regional) planning and specifically to project implementation activities (including finance, construction, management, and regulation)?
2. To what extent are current practices achieving the goal of stronger linkage?
3. To the extent that they are not, how could closer linkages between the functions of planning and implementation be developed?

To provide answers to these questions, this study examines in depth the broad issue of integrating transportation planning and implementation activities in

order to determine both the feasibility of and the need for establishing specific institutions, organizations, agencies or procedures capable of planning, implementing, financing, and programming transportation projects in a coordinated fashion in urban and rural areas. Alternative solutions to this problem also are probed.

This first chapter sets forth a general survey of the nature and history of the metropolitan transportation problem. It places this challenge in the broader context of overall metropolitan development goals, and provides important substantive background for the examination of the governmental organization issues treated in later chapters. The movement of both persons and goods, the volume and character of urban transportation, and the impacts of transportation on the urban environment and on the community-at-large are all covered.

Certain non-metropolitan divisions of these topics are also noted. The original focus of this study was restricted wholly to the metropolitan transportation problem — and this is reflected throughout most of the study. Yet, events occurring during the course of the project led ultimately to the inclusion of recommendations on non-metropolitan transportation as well. This came about too late to permit additional major research on non-metropolitan transportation. The Commission's previous work on substate regionalism,¹ however, indicates that many of the basic governmental problems of local fragmentation, financial limits, and constraints on functional and program capabilities confront non-metropolitan as well as metropolitan areas. Indeed, some of these difficulties are even more severe in the non-metropolitan areas. So, while the bulk of this report deals with metropolitan areas, brief references are made to the non-metropolitan situation at several points, and the Commission believes that there is ample justification for applying a substate regional approach to non-metropolitan transportation problems consistent with the approach in metropolitan areas.

THE PLACE OF TRANSPORTATION IN URBAN AND RURAL AMERICA

Transportation is an essential part of urban and rural America. It pervades everyday life, and enables the economy to function. Without modern transportation, modern society would not be possible.

Americans are among the most mobile people the world has ever known, and a very large share of this mobility takes place within the nation's metropolitan areas or between them. Because the nation is largely urban, many of its transportation problems are urban as

well. Though, for the most part, our transportation is the most comfortable, least expensive, and fastest which has ever been available, it is not without its problems.

Congestion

Many urban transportation systems are clogged with congestion. During the work day the rush hours find countless citizens sitting idly in traffic; downtown streets are often clogged by trucks making deliveries; good transit service is not available to help reduce congestion; and ways of attracting enough transit riders to significantly reduce congestion have not been found. On the weekend, many suburbanites can hardly get into and out of their shopping centers. In the summertime, roads to the beaches are clogged. Air travelers arriving at major metropolitan airports for a trip to another urban area are frequently unable to park, and often find themselves jostled about in an overcrowded terminal. It may take longer to get to and from the airport than for the flight itself. Furthermore, when changing from the plane to a train or bus or subway, the traveler frequently finds that the terminals or transfer points are separated by many miles of congested highways or transit lines. All of this costs the individual extra time and money, and places him under added physical and mental stress.

Safety

Many travelers have been in traffic accidents at one time or another. Even those who have not are well aware of the risks they run each time they get into their cars. About 50 percent of all fatal accidents are transportation related. Traffic deaths, injuries, and damage to property are reflected in spiraling insurance rates.

Loss of Productivity

The average employed adult spends about one-third of his "free" time traveling. Most of these workers experience days when they can not get to work because of the weather. Now, they are beginning to experience days when their driving is restricted because of air pollution or gasoline shortages. For example, Washington, D.C., experienced 17 days of air pollution restrictions in 1973, and 1974 saw nationwide shortages of gasoline which cut non-essential driving drastically, caused a nationwide reduction in highway speeds, and forced many people onto transit. Railroad and

regular airline services also are being curtailed in some urban and rural areas — because of economic problems and fuel shortages — thereby curtailing economic growth. Goods which have been ordered often arrive late and damaged, because of inefficient freight handling systems. For example, 85 percent of a truck's time is spent parked waiting to load or unload. Sometimes freight costs are artificially high, because of outmoded regulations requiring empty back-hauls.

Unequal Access to Opportunities

Most people have experienced being unable to go somewhere because they did not have a car, or the busses were on strike, or they were sick, or didn't have the money needed for the trip. For most, these occurrences are just occasional inconveniences. But many people in our society are permanently barred, or barred for long periods of time, from going where they need to go to find jobs, to do their shopping, to receive services, or to take advantage of many other opportunities offered in urban areas. In rural areas, where alternatives to the private automobile are even more restricted, the problems are still more serious. The people most affected by these problems are chiefly the poor, the young, the old, and the handicapped. The general lack of emphasis on public transportation designed to meet these special needs denies equal opportunities to many of the nation's citizens.

Declining Public Transit

Even as the need for better public transportation begins to be more fully recognized, many of the nation's transit systems are losing riders (40 percent since 1955) and getting into greater financial trouble; fares are rising and ownership is changing increasingly from private companies to public bodies. Over 80 percent of all transit passengers are now carried by publicly owned transit companies.

Community Disruption

The building of urban transportation systems displaces many homes and businesses. Such construction also changes the character of many neighborhoods, and sometimes splits them apart physically. Moreover, the increased traffic noise and visual impact of new facilities are often disruptive. The affected citizens frequently lose in

terms of money, mental anguish, or reduction in the quality of their lives — costs which have not usually been charged to the traveling public. In addition, major new transportation facilities frequently attract development nearby; so when these facilities are not coordinated with overall development plans, they may create pressures for other community facilities — not previously anticipated. This, in turn, creates public service gaps and increases the cost of government.

Pollution and Waste Disposal

Emissions from automobiles produce anywhere from 45 to 90 percent of the major pollutants in the air in metropolitan centers. In addition, over 7-million autos are scrapped each year, contributing to the problems of waste disposal and the consumption of many valuable resources. Transportation also contributes to water pollution and noise problems.

Energy Consumption

Transportation services consume almost 60 percent of all petroleum produced and 30 percent of all energy used in the United States today — largely because of an over-emphasis on the use of large private automobiles.

These problems, of course, are not as serious in some areas as in others; even their manifestations may differ from one place to another. For example, rail rapid transit is probably appropriate in only one or two dozen of the largest, most densely developed areas, while buses, car pools, and other means may serve the same function in other areas. Nevertheless, most metropolitan and non-metropolitan areas have at least some of the problems cited above to a degree severe enough to require serious attention. These difficulties have combined to produce a transportation challenge of national dimensions.

THE METROPOLITAN TRANSPORTATION PROBLEM

To a considerable extent, transportation problems in urban areas are related to the growth in these areas. The economic, social, and environmental qualities of such areas depend heavily on the ability to move goods and people from place to place relatively efficiently. Economic activities (including work trips) are recognized as being particularly important. Yet the movement of goods and people has grown more and more difficult in many areas. This difficulty has occurred despite

extensive planning efforts in almost all metropolitan areas, and despite available transportation technology that could be (but is not) used effectively to solve the problem.

Today's urban transportation problems have been well defined since at least the 1950's. In one study undertaken a decade ago, it was observed that despite the importance of transportation "... large cities, not only in America, but throughout the world are frustrated by the inadequacies of their internal transportation system [so that] ... some men cannot complete their journeys to work in our larger urban areas in the time in which other men can orbit the globe. . . ."2

Almost seven years later the problem remained so unchanged and looked so intractable that one journal in its examination of transportation in cities observed "... Americans somehow seem to think that it is nobler to move three men 1-million miles than to move 1-million men three miles."3

The deficiencies of our metropolitan transportation networks are reflected in a variety of ways. Their enumeration helps to define the problem.

1. The rise in traffic congestion and its associated increase in the loss of time and vehicle operating costs. Congestion is particularly troublesome during the peak hour demands of the journey to work and weekends and holidays.

2. The rise in automobile ownership which has permitted more dispersed urban development which in turn has reinforced the need for automobile trips. This has been generally associated with the decline in the availability of public transit and has contributed to public transit's inability to provide services in an era of growing cities and expanding metropolitan areas.

3. The decline in urban transit use which has resulted in some companies going out of business, and in most others operating with major financial deficits. Major byproducts have been low rates of equipment replacement and cutbacks of service with the resulting inconvenience and discomfort added to time losses and general unreliability. Not only have routes been dropped, but the frequency of service on remaining routes has been reduced.

4. The lack of attention to coordinating other modes of transportation, taking advantage of new technologies and innovative approaches to the movement of people and goods.

5. The expanding impacts on city configuration including the allocation of large areas of the city to transport functions because of the requirements for streets, freeway, and parking facilities. In addition, the automobile encourages a pattern of development not easily served by high density type of line-haul carriers such as characterize many of the larger and older cities in the United States — like New York, Boston, and Chicago.4

6. The growth in health and safety hazards from the increasing levels of air, noise, and water pollution associated with heavy traffic volumes; and traffic accidents have added to the distractions of living in an urban environment.

7. The institutional deficiencies which reduce the ability to identify and implement solutions to the problems previously described. It is not the transit companies' unwillingness to grow (though poor management is frequently a contributing factor), it is unwillingness to set up institutions that can somehow deal with the problem. These institutional weaknesses include:

- fragmented political organizations and jurisdictions;
- limited budgets whether for funding, staffing, or operating systems (e.g., subsidies);
- inflexibility in use of available funds from state and local levels; and
- too much reliance on special purpose governmental units with narrow program goals, and not enough on general purpose units with broader citizen oriented goals.

8. The continued lack of clarity and consistency in urban development strategies which has resulted in uncoordinated objectives for the shape and character of cities and suburbs, densities, and zoning policies, and transport requirements.

These basic components of the metropolitan transportation challenge dominate most of this report. The remainder of this chapter discusses in some detail how these difficulties emerged, how the wide range of different transportation demands affects the various modes as well as the metropolitan communities themselves, and how the transportation challenge can be dealt with more effectively.

Historical Background and Perspective

In order to fully understand the current problem, a brief historical review of urban transportation is helpful. Since many of its features are rooted in the growth of urban areas resulting from the industrial revolution and rapid technological change, this review must start before the turn of the century, and examine the relationship between the public and private sectors of urban transportation.⁵

Urban transportation in the United States probably started some time in the 1830's with the introduction of horse drawn carts (generally called omnibuses) that seated about eight passengers and travelled on the existing streets. The introduction of these omnibuses was coincidental with the evolving practice of separating the place of work from the home – a phenomena directly associated with the industrial revolution.

The growing industrialization during the 19th and 20th centuries required substantial concentrations of labor which could be found only in urban areas. These areas expanded by concentrating employment in centers where people had to travel from their residences. At the beginning of the 19th century, only five cities in the United States had a population of over 8,000. By 1840, this number had risen to 44, and by 1860 there were 141 such cities. Similarly, the percentage of urban population in the United States increased from about 3.3 percent in 1790, to 8.5 percent in 1840, 40 percent in 1900, and 67 percent in 1970.⁶

One major by-product of these changes was substantial expansion of city boundaries. Up to the late 1800's, the boundaries of a city rarely extended more than two miles from the core, partly the result of the slow speed of omnibuses and the reluctance of users to engage in trips exceeding 30 minutes. Of particular importance was the invention of cable drawn railcars in 1873 which permitted speeds of nine miles per hour (about twice as fast as a horse drawn vehicle). By 1890, these systems were moving 375-million passengers annually and had succeeded in pushing the development horizons of the city to over four miles from the city core.

Not until electric streetcars appeared in the 1880's, however, did substantial growth in transit patronage really occur. Streetcars (taking advantage of existing rights-of-way originally used by horse-cars and the operating procedures developed by these systems) again accelerated the growth of city boundaries. The more flexible and less costly technology of these vehicles enabled routes to be extended well beyond the de-

veloped boundaries to a wide range of destinations including satellite towns.

By the start of the 20th century, the transit industry was in very strong financial condition, with streetcar enterprises and the rapid rail counterparts earning very high profits. Yet by World War I, revenues had declined to a point where many operators were in serious financial difficulty. In 1921 (alone), 116 companies with more than 2,000 route miles had fallen into receivership.⁷ After considerable study, the Federal Electric Railway Commission (appointed by President Woodrow Wilson) attributed the cause primarily to poor financial practices and low fares which combined to produce large negative cash flows. In retrospect, it is fairly clear that the underlying reasons were the low densities at the extremes of the service corridor and the failure to adopt higher fares to compensate for the declining average line densities.

Generally fares had originally been negotiated at 5 cents in the latter part of the 19th century in order to be able to obtain the exclusive service franchises. As the boundaries of the city expanded and travel distances increased, the operating costs in serving these more distant riders were not compensated by the fares, generally resulting in growing transit industry operating losses.

By the middle of the 1920's, the automobile had begun to assert itself as a major form of transportation. With prosperity and mass production, automobile ownership and acquisition expanded quickly. In 1900, there were only 8,000 registered automobiles in the United States, but by 1925 the number had risen to 17-million.⁸ By the late 1920's, a pattern of competition between the private automobile and public forms of transportation in urban areas had emerged.

Table 1-1 summarizes transit trends from 1924 to 1958, and *Table 1-2* summarizes transit traffic trends from 1935 to 1970. These two tables together provide an accurate picture of the general decline in transit patronage – a decline which continued throughout the period except for the interlude of World War II. *Table 1-2*, in particular, confirms the sharp drop in passengers using transit systems. For example, by 1970, total passenger traffic had declined to under 6-million, and there is no indication that these trends will be reversed, given present preferences for automobiles.

In response to growing suburbanization and the growing competition from the private automobile, the public transportation industry in the 1920's began to shift from rail on exclusive rights-of-way to buses traveling on streets with automobiles. In 1922, almost all transit patrons were carried by streetcar and rapid rail,

Table I-1

TRANSIT TRENDS IN THE UNITED STATES: 1924 — 1958

Year	Total Vehicles	Total Vehicle Miles (millions)	Total Passengers Carried (millions)	Rides Per Capita
1924	NA	NA	16,301	271
1926	86,166	2,669.7	17,234	274
1928	88,292	2,748.0	16,989	257
1930	86,263	2,707.0	15,567	226
1932	80,403	2,363.0	12,025	172
1934	76,759	2,312.0	12,038	169
1936	76,039	2,433.0	13,146	182
1938	73,137	2,434.0	12,645	173
1940	75,464	2,596.0	13,098	176
1942	86,893	3,047.7	18,000	239
1944	89,160	3,284.5	23,017	309
1946	89,845	3,304.3	23,372	282
1948	90,507	3,311.1	21,368	252
1950	86,310	3,007.6	17,246	195
1952	82,336	2,814.5	15,119	167
1954	76,198	2,548.8	12,392	135
1956	70,373	2,366.6	10,941	117
1958	67,149	2,201.0	9,732	104

NA = Not Available.

SOURCE: Wilbur Smith and Associates, *Future Highways and Urban Growth* (New Haven, Connecticut: Wilbur Smith and Associates, 1961).

but by 1925 over 1-billion passengers were being carried annually by buses. By 1930, this number had risen to 2.5-billion.

The shift away from the fixed guideway type of right-of-way put the public transportation industry into competition for patronage on the private automobile's own ground where the latter performed considerably better. One important byproduct of this shift to buses (in addition to its impact on the economics of the public transit industry) was the less disciplined, sprawling development of the urban areas.

In the almost three decades since World War II, the urban public transit industry in the United States has continued its economic decline. Even though fares have more than kept pace with the consumer price index, patronage has not grown rapidly enough to offset

increased costs. More and more systems have experienced operating deficits and many privately owned systems have either ceased to operate or sold their depleted operations to the municipalities they served.

Cause of Decline in Mass Transit

The emergence of public transportation and its decline can be attributed to a number of interdependent causes.

1. The urban population has grown rapidly outside the central cities in which most public transportation systems are located. (From 1960 to 1970 alone the population outside central cities in

Table I-2

TRANSIT TRAFFIC TRENDS: 1935 — 1970

Year	Passengers			Vehicle Miles			Number Of	
	Rapid Transit	Street Transit	Total	Rapid Transit	Street Transit	Total	Passengers Per Vehicle Mile Street	Rapid
	(Millions)							
1935	2,252	7,530	9,782	439	1,888	2,327	4.0	4.4
1945	2,555	16,427	18,982	458	2,796	3,254	5.9	5.6
1950	2,113	11,732	13,845	443	2,565	3,008	4.6	4.8
1960	1,670	5,851	7,521	391	1,752	2,143	3.3	4.3
1970	1,574	4,358	5,932	407	1,476	1,883	3.0	3.9

SOURCE: Above data compiled from American Transit Association, '70 - '71 *Transit Fact Book* (Washington, D.C.: American Transit Association, undated).

the United States increased by about 34 percent as against 1.5 percent in central cities.)

2. Suburban living in the United States is largely automobile oriented, because housing and population densities are low and parking space is usually freely available. Moreover, because of these low population densities and the wide dispersion on origins and destinations, conventional public transit normally cannot operate profitably and is usually not even available to the suburbanite.

3. Automobile ownership has increased dramatically. The evidence for this trend is widely documented. Even over the last decade there continued to be marked change. Automobile ownership per household between 1960 and 1970 increased from 1.09 to 1.27; the number of two or more automobile households rose from 13 percent in 1960 to almost 30 percent in 1970 (*Table I-3*). By 1970, only 20 percent of households were without automobiles. These, of course, were concentrated among the poor, old, or too young, who are frequently considered to be "captive riders" of public mass transit systems.

4. Public transit fares generally have escalated while extensive freeway construction has contributed to the diversion from the use of public transit systems to the use of private automobiles (for which ubiquitous rights-of-way are available).

Table I-3

AUTOMOBILE OWNERSHIP IN THE U.S.: 1960 AND 1970

Item	1960	1970
Automobiles In Use		
Per Capita	0.32	0.39
Per Household	1.09	1.27
Percent Of Households Owning Automobiles	75.5	79.2
One Automobile Only	62.1	50.3
Two Or More Automobiles	13.4	29.3
Percent Of Household With No Automobiles	24.5	20.4

SOURCE: Automobile Manufacturers Association, Inc., *Automobile Facts and Figures, 1968* and *Automobile Facts and Figures, 1971* (Detroit, Michigan: Motor Vehicle Manufacturers Association, undated), various pages. Data estimated by the association from Census information.

5. Lack of innovative management and marketing in the transit industry has contributed to the difficulties of public transportation.

6. Federal programs to assist different modes have been enacted and administered inconsistently with respect to one another, frequently accentuating the problems of urban transportation. For example, the funding of highway construction from the Highway Trust Fund has not only encouraged the use and ownership of automobiles, it has introduced rigidities and misallocations in transport investment decisions. (These rigidities are only beginning to be eliminated through more unified transportation legislation.) Conversely, public transportation has had a relatively low priority.

7. The use of Federal funds for constructing and maintaining urban transport networks, until very recent times, has been restricted. Most of the Federal contribution has encouraged road building – often without careful consideration of the economic, social, and environmental impacts.

8. Finally, Federal planning funds for comprehensive urban planning available from the Department of Housing and Urban Development have been only partly coordinated with other trans-

portation planning funds available from the Urban Mass Transportation Administration and the Federal Highway Administration. Despite the best efforts of these agencies, these programs, to a considerable extent, have been not only uncoordinated but largely unrelated to implementation activities.

9. During most of the period in which the nation's urban mobility problems were developing, states and the Federal government were largely concerned with the problems of transportation *between* urban areas. It is only in the last few years that real attention has been focused on the transportation needs *within* these areas, though by no means has this shifting interest and concern caught up with needs.

The Diversity of Metropolitan Transportation Needs – Moving People and Goods

In examining metropolitan transportation, it is relatively easy to fall into the customary pattern of simplifying its scope and character. But the urban transport network is not simple: it is varied in terms of system and consumer needs *within* any given urban area as well as *between* urban areas. In the sections that

Table I-4

HOME BASED TRIPS BY TRIP PURPOSE FOR TEN URBANIZED AREAS IN THE UNITED STATES

Urban Area	Year	Popula- tion (000's)	Work	Percent Of Home Based Trips To And From					All Purposes
				Business	Shop- ping	Social- Recrea- tional	School	Other	
Philadelphia	1960	4,007	34.8	9.8	12.7	17.1	6.6	19.0	100.0
Boston	1963	3,541	28.3	9.9	17.5	17.0	11.5	15.8	100.0
Baltimore	1962	1,608	39.7	8.1	15.1	15.6	12.0	9.5	100.0
Seattle	1962	1,347	27.8	14.7	16.5	20.9	9.2	10.9	100.0
Milwaukee	1963	1,221	32.8	25.2	16.7	3.6	9.6	12.1	100.0
Denver	1960	779	29.3	12.8	15.5	31.1	1.1	10.2	100.0
Springfield	1964	531	30.1	9.6	16.5	18.3	13.6	11.9	100.0
Richmond	1964	418	34.2	13.0	16.6	18.1	11.0	7.1	100.0
Lehigh Valley	1964	333	31.0	11.8	15.9	14.8	13.2	13.3	100.0
Columbia	1964	196	25.3	7.9	16.9	20.2	14.9	14.8	100.0

SOURCE: Wilbur Smith and Associates, *Patterns of Car Ownership, Trip Generation and Trip Sharing in Urbanized Areas* (New Haven, Connecticut: Wilbur Smith and Associates, June 1968), Table 2.1, p. 7.

follow, this diversity will be explained in some detail, because it is one of the basic reasons why coordination of planning and implementation is so difficult to bring about.

Metropolitan transportation should be viewed as a hierarchy of systems. Within any metropolitan area, transportation systems may be unpeeled like the layers of an onion, with each layer interrelated and interacting with another. For example, public transportation systems usually operate to provide scheduled fixed route services, while simultaneously the private automobile provides personalized door-to-door transportation. Alongside these two services, taxis provide an intermediate form of door-to-door services, while special transportation facilities (for the elderly or handicapped) may interface with all these systems.⁹ Also related are the school buses, car pools, jitneys, trucks, and airport and limousine services (to mention only a few of the subsidiary systems).

This diversity of metropolitan transportation involves not only the different modes of travel but also the trip purposes, the time of day, and the specific places in the metropolitan area to which people wish to travel. Another way to describe this diversity is to say that individuals have widely variegated transportation needs in terms of time and place — both for themselves and their goods.

Where People Want to Go in the Urban Area. Data showing where people wish to travel are developed mainly from home interviews and traffic surveys showing origins and destinations. Obviously, the findings of these surveys depend on the characteristics of the particular metropolitan area. But it is possible, in general terms, to describe the array of trip purposes and their relative importance.

Table 1-4 summarizes the purpose of trips which either begin or end at home (home based) for ten urbanized areas in the United States. The data show that work trips account for the largest proportion of any of the trip purposes — amounting to between 25 and 40 percent of all home based trips and these are the trips which usually contribute most to street and road congestion. The data also confirm the great diversity between metropolitan areas — reflecting, of course, their varied patterns of development.

By far, the second largest category of trips are those taken for social and recreational purposes — falling in the range of 15 to 20 percent of all home based trips. If these trips are taken in conjunction with shopping trips, they usually account for as many home based trips as the work trip. This explains why congestion is fre-

quently found on weekend or even during the week at recreation facilities and shopping centers, including those located in suburban areas.

Finally, it may be seen that school trips tend to account for about 10 to 14 percent of home based trips, and are a relatively stable share among the metropolitan areas shown in *Table 1-4*. This similarity in size is largely explained by the fact that the proportion of school-age children in the population does not vary widely between cities, and schooling (of course) is compulsory.

Of considerable interest is the fact that non-home based trips account for about 15 to 20 percent of the total, reflecting the relatively large number of trips taken between business locations or from shopping center to shopping center (to cite but two examples). Many of the non-home based trips generate substantial volumes of midday traffic in the central portions of cities — a problem which merits special attention.

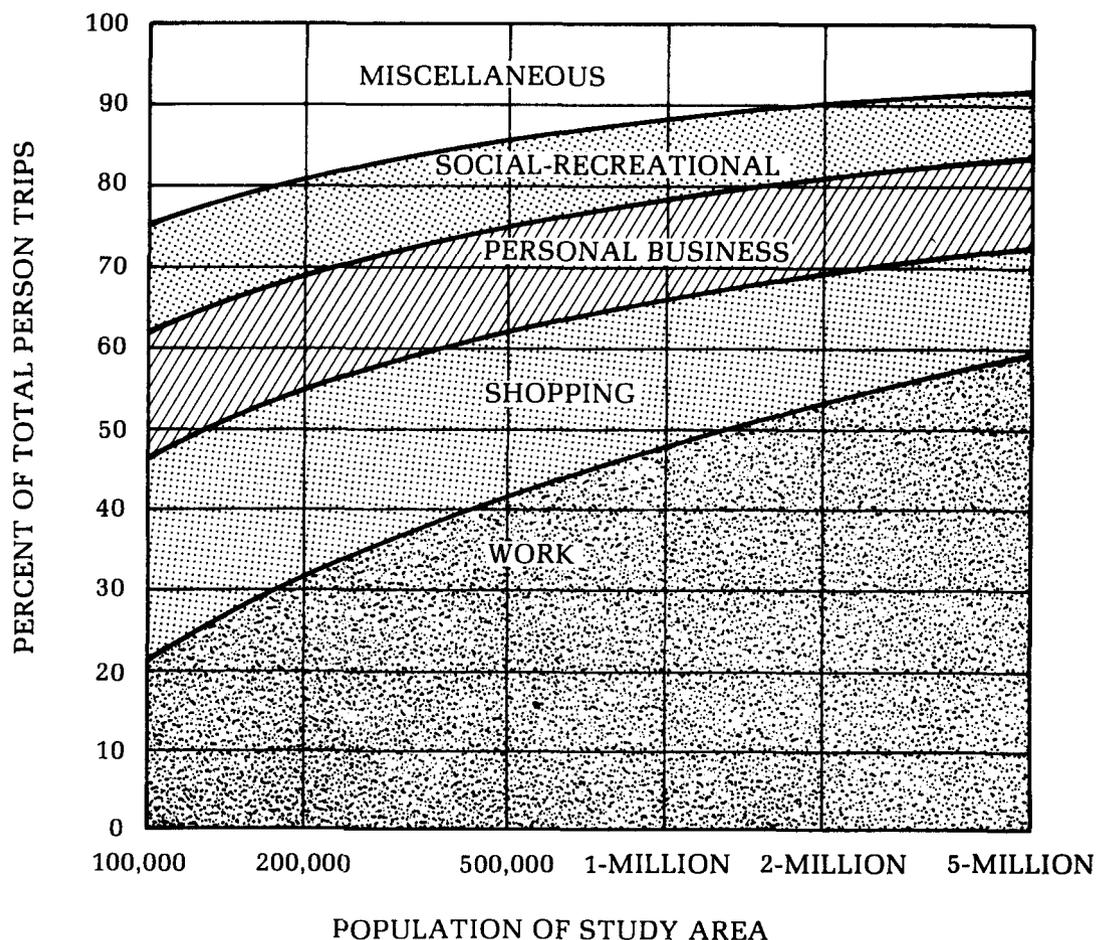
Available data suggest that the distribution according to purpose of trips by persons varies by size of urban area. Composite data in one study of central business district (CBD) trips indicated that the journey to work ranged from 20 percent of total person-trips to the CBD in areas of 100,000 population to about 60 percent in urban areas of 5-million.¹⁰ *Figure 1-1* shows this relationship for all trip purposes. Variations in density and land use patterns, of course, play an important part in the volume of trips and the types of transport (mode) selected, especially during the most congested times of the day.

Using the same study, *Table 1-5* illustrates the variation in the proportion of CBD land devoted to streets and parking in various U.S. cities. As may be seen, in 1960 the CBD of the City of Los Angeles with its relatively more dispersed characteristics devoted about 59 percent of its land area to streets and parking in contrast to 41 percent in Chicago and similar high density CBD cities.

As might be anticipated, the variation in density implied by these data is also reflected in the mode used to travel into the CBD's of most urban areas. *Table 1-6* summarizes peak hour CBD person-movements entering and leaving the CBD by various modes for 12 large metropolitan areas. As may be seen, private transportation in 1960 accounted for 10 percent of the total CBD volumes in New York City, while public transportation there accounted for about 90 percent. Los Angeles shows a sharp contrast, with private transportation (largely automobile) accounting for almost 60 percent of the total, while public transportation accounted for the remaining 40 percent. Similar variations may be seen in a wide range of cities in and out of the

Figure I-1

CENTRAL BUSINESS DISTRICT TRIP PURPOSE PERCENTAGE DISTRIBUTION BY SIZE OF URBAN AREA (Population On Ratio Scale)



SOURCE: Wilbur Smith and Associates, *Transportation and Parking for Tomorrow's Cities* (New Haven, Connecticut: Wilbur Smith and Associates, 1966), p. 55.

United States. These variations, of course, reflect the differing levels of available public transportation, as well as differing land use density patterns in each of these cities.

When People Want to Travel in Urban Areas. Perhaps the most severe and really apparent metropolitan transportation problem is the "rush hour" congestion associated with the journey to and from work. Most work trips take place in a one or two hour period in the

morning and again in the evening, temporarily overcrowding traffic facilities. Consequently, capacities for all modes are generally designed to meet these peak demands as much as possible. The problem is compounded by the fact that trips are not only peaked in time but in space as well. In most American cities, work trips are concentrated in the intensively developed central parts of the urban area, thereby contributing further to the congestion problem.

These pronounced variations in urban traffic con-

gestion occur daily, resulting in high costs, considerable irritation, and loss of time by commuters. The weekday commuter peaks cause mismatches in supply and demand that can be readily observed throughout the transportation network with long lines of vehicles on freeways and with crowding on the subways and buses.¹¹

To some extent in the larger metropolitan areas, the extreme peak demands of the journey to work have prompted some deliberate spreading of the peak period, particularly as automobile users try to plan their trip to avoid congestion, and as employers stagger their hours to accommodate this desire. In many cities, this results in the commuting peaks stretching over two hours or more – usually from about 7:00 a.m. to 9:30 a.m. in the morning, and again from about 4:00 p.m. to 6:30 p.m. in the evening. Within these two-and-a-half hour periods, one hour generally accounts for the major part of the congestion. However, it is important to keep in mind

that there is considerable variation in the speed and sharpness of these peaks from city to city.

On the west coast where work frequently begins at 8:00 a.m., the morning peak is more concentrated and earlier. As an illustration, *Table 1-7* shows total persons entering downtown Los Angeles during the morning hours of May 1970. The data shows that the morning peak in Los Angeles occurs between the hours of 7:00 a.m.-9:00 a.m., in contrast to the somewhat later peaks on the east coast. Similar data can be developed for any metropolitan area and would reflect the peculiarity of that area.

As might be expected, the peaking patterns of different modes vary considerably. One recent study suggested that peak hour commuter railroad trips typically account for 20 to 25 percent of the total daily travel nationally; while rail rapid transit trips account for 15 to 20 percent; buses for 10 to 15 percent; and the

Table 1-5

PROPORTION OF CBD LAND DEVOTED TO STREETS AND PARKING FOR VARIOUS YEARS AND CITIES

Central Business District	Year	Total Acres	Per Cent Of CBD Land Devoted To		
			Streets	Parking	Streets And Parking
Los Angeles	1960	400.7	35.0	24.0	59.0
Chicago	1956	677.6 ¹	31.0	9.7	40.7
Detroit	1953	690.0	38.5	11.0	49.5
Pittsburgh	1958	321.3 ¹	38.2	2	2
Minneapolis	1958	580.2	34.6	13.7	48.3
St. Paul	1958	482.0	33.2	11.4	44.6
Cincinnati	1955	330.0	2	2	40.0
Dallas	1961				
Core Area		344.3	34.5	18.1	52.6
Central District		1,362.0	28.5	12.9	41.4
Sacramento	1960	350.0	34.9	6.6	41.5
Columbus	1955	502.6	40.0	7.9	47.9
Nashville	1959	370.5	30.8	8.2 ³	39.0
Tucson	1960	128.9	35.2	2	2
Charlotte	1958	473.0	28.7	9.7	38.4
Chattanooga	1960	246.0	21.8	13.2	35.0
Winston-Salem	1961	334.0	25.1	15.0	40.1

¹Excludes undevelopable land.

²Not itemized.

SOURCE: Wilbur Smith and Associates, *Transportation and Parking for Tomorrow's Cities* (New Haven, Connecticut: Wilbur Smith and Associates, 1966), p. 59.

TABLE I-6

**PEAK HOUR CBD CORDON* PERSON MOVEMENTS BY MODE
FOR SELECTED URBAN AREAS**

Urban Area ³	Year	Per Cent Of Total Cordon Volumes		
		Private	Public Transportation Local	Rapid
New York City ¹	1960	10.2	7.4	82.4
London, England ¹	1961	8.8	12.5	78.7
Chicago	1961	19.4	14.4	66.2
Philadelphia ²	1955	28.5	18.1	53.4
Boston ²	1954	30.8	4.5	64.7
Toronto	1956	26.8	42.8	30.4
Average ⁴		20.8	16.5	62.7
Los Angeles	1957	59.4	40.6	—
Detroit	1956	48.7	51.3	—
St. Louis	1957	57.7	42.3	—
Washington ²	1961	65.3	34.7	—
Baltimore	1955	56.2	43.8	—
Montreal	1960	29.0	71.0	—
Average ⁴		52.8	47.2	—

¹CBD over nine square miles.

²CBD over 1.5 square miles.

³Detailed appendix tabulations of cordon counts in each city.

⁴Averages are unweighted.

*A "cordon" is a line drawn around the CBD. Traffic is generally counted on all (or major) roads passing through this line as they pass over the cordon line entering or leaving.

SOURCE: Wilbur Smith and Associates, *Transportation and Parking for Tomorrow's Cities* (New Haven, Connecticut: Wilbur Smith and Associates, 1966), p. 69.

automobile for 8 to 10 percent.¹² It is difficult to develop composite data because each case is usually city specific. Yet, one study that developed a composite of the hourly variation for auto and transit confirmed the sharper peak characteristics.¹³ The study noted that transit trips are far more concentrated during the rush hours than those of automobile drivers and passengers, with about 8 to 10 percent of all person-trips by automobile and 12 to 16 percent of all trips by transit taking place in the peak hour.¹⁴

Seasonal and Weekly Variations in Urban Travel. In addition to the variation in person movements throughout the day, there is a wide range of differences between

the days of the week and months of the year. Traffic counts for the Dan Ryan Expressway in Chicago are summarized in *Tables I-8 and I-9* to illustrate these variations.

As may be seen in *Table I-8*, Friday has the highest average traffic volume of any day in the week, largely reflecting the weekend exodus. In many metropolitan areas, particularly in areas close to seashore and recreation facilities, specific highways may carry the bulk of the weekly traffic during 10 to 12 hours on the weekends.¹⁵

Table I-9 presents seasonal data for 1970 in Chicago and illustrates the variation in traffic by month. As might be anticipated for a city with a relatively difficult

Table I-7

**MORNING PEAK CORDON
COUNTS OF PERSONS
ENTERING DOWNTOWN
LOS ANGELES: MAY 1970**

Time Period	Total Persons Entering	
	Number	Per Cent
6:00-7:00	33,863	5.5
7:00-8:00	87,180	14.1
8:00-9:00	63,566	10.3
9:00-10:00	41,630	6.7
10:00-11:00	39,452	6.4
16 Hour Total	617,742	

SOURCE: City of Los Angeles, Department of Traffic, *Cordon Counts* (May 1970).

winter season, traffic volumes are lowest during the months of January and February and highest in May and June. The impact of the weekend recreation trip is clearly seen in a comparison between the column "Average Weekday" and "Average Saturday." During the summer months of May and June, the average traffic on an average Saturday is consistently higher than on an average weekday.

Through Traffic. As has been noted, the heavy demand for access to the central areas of most metropolitan regions — especially the CBD — generates a significant part of the repetitive daily congestion that characterizes our cities. However, in most urban areas, there is a relatively large proportion of motor vehicle traffic that does not have destinations in the center of the city, and, therefore, does not need to pass through the CBD. This traffic is generally referred to as "through" traffic, and can be identified as: (1) interurban "through" traffic traveling long distances with no need to pass through any part of the city, and (2) intraurban "through" traffic with origins and destinations located on the periphery of the city (or at least not within the heavily congested core). Generally, traffic engineers have tried to separate "through" vehicles from traffic with origins and destinations within the core area of the city, mainly to alleviate downtown traffic congestion problems.

One of the most widely used methods for bypassing

Table I-8

**VOLUME AND PERCENT OF TRAFFIC ANALYZED BY DAY OF WEEK,
CHICAGO, ILLINOIS, DAN RYAN ESPRESSWAY: 1970**

Day Of Week	Number Of Days In Year	Volume Of Traffic	Average Per Day
Sundays And Holidays	56	4,806,460	85,830
Mondays	51	4,859,790	95,290
Tuesdays	52	5,123,660	98,532
Wednesdays	52	5,069,560	97,492
Thursday	52	5,095,820	97,997
Fridays	52	5,332,360	102,545
Saturdays	50	4,867,830	97,357
Year	365	35,155,480	96,316

SOURCE: State of Illinois, Department of Public Works and Buildings, Division of Highways, Bureau of Planning, *Illinois Count Data 1970*, Count Station 001, Dan Ryan Expressway at Taylor Street, direction — south, p. 20.

Table I-9

**AVERAGE DAILY TRAFFIC ANALYZED BY MONTHS,
CHICAGO, ILLINOIS, DAN RYAN EXPRESSWAY: 1970**

Month	Average Weekday	Average Saturday	Average Sunday and Holiday	Average Day Of Month
(Number Of Vehicles)				
January	89,141	88,120	73,830	87,001
February	95,388	99,008	84,645	94,370
March	97,395	98,093	87,808	95,939
April	96,085	101,270	88,380	95,749
May	102,240	100,970	86,550	99,039
June	102,443	103,360	95,083	101,584
July	97,261	82,773	82,802	93,527
August	101,777	105,002	92,924	100,869
September	100,840	98,370	84,068	97,715
October	99,376	95,494	84,543	96,836
November	101,246	101,600	87,553	98,554
December	97,906	91,438	79,478	94,693
Year	98,383	97,357	85,830	96,316

SOURCE: State of Illinois, Department of Public Works and Buildings, Division of Highways, Bureau of Planning, *Illinois Count Data 1970*, Count Station 001, Dan Ryan Expressway at Taylor Street, direction — south, p. 18.

“through” traffic is the use of grade separated, controlled access routes which circle the city — often called beltways. Beltways are usually planned so as to be placed in the first large band of uninhabited land just beyond the city limits or in built-up suburban residential areas. These circumferential routes act both to bypass traffic with interurban origins and destinations and to facilitate intraurban traffic. Beltways also provide an almost ideal site for the performance of truck-to-rail transfers, particularly at points of intersection with rail facilities, and they are ideal locations for certain industries and distribution functions.

As a result of the interstate highway construction program, most large cities have some form of circumferential facility; many of these, however, are not completed or are fragmentary in nature. In some cities (Los Angeles and New York), beltways do not take on a circular character, while in others (e.g., Washington, D.C., or Baltimore, Maryland), they literally circle the entire city.

Although data measuring the extent of “through” traffic are scarce, those available indicate that the proportion of “through” traffic will vary from city to city, depending upon the inclusiveness of the definition

(e.g., intraurban traffic, interurban traffic, vehicles not parking, etc.), the time period considered (e.g., peak or all day), and the area of study (e.g., metropolitan region, the central city, or CBD), as well as the available freeways and travel patterns of the particular area. Despite the scarcity of data, it is apparent that in the central city of most urban areas, “through” traffic can account for a substantial share of the total traffic volume (even at peak hours). Data on the CBD’s of medium sized cities (although somewhat out of date) suggest considerable variations — ranging from 30 to 70 percent.¹⁶

More recent data for the CBD’s of large U.S. cities are also scarce. However, from the limited data available, it appears that “through” traffic probably would account for no more than a third of total traffic in these areas and the proportion probably tends to increase in the medium sized and smaller cities, depending upon their highway and street systems and locations *vis-a-vis* major interstate routes. If the central city as a whole is considered (in contrast to only the central business district), the proportion of “through” traffic would probably be even less, perhaps about 5 to 20 percent of total traffic in most medium and large sized cities.¹⁷

In addition to beltways, some cities have developed an "inner loop" to keep through traffic out of their CBD's. These "inner loops" are situated at the outer edges or just beyond the downtown and function primarily as distributors for traffic moving in and out of the CBD. This form of distributor may be found less frequently than outer beltways, though Rochester, New York, and Dallas, Texas, are good examples of cities with inner loops. In some instances, inner loops may have bus service but not as a rule. Outer beltways rarely have bus service although growing environmental and energy concerns have encouraged some express bus lanes.

The Transit Dependents. Though all of the previous data suggest a wide range of transportation needs in most metropolitan areas and auto dominance for most trips (especially for non-CBD destinations) in most cities, there remain groups who cannot use automobiles and are therefore transit dependent. These groups deserve close examination, because the transportation options available to them reflect conditions that have important implications for public transportation and transportation planning generally.

In most urban areas, the users of the public transportation systems tend to be largely those who are either unable to own a car, have no license, or cannot drive. They consist largely of the elderly, the economically disadvantaged, the young, and the handicapped. Thus many people who most frequently need basic social, welfare, and/or medical services find their mobility and access to these services limited. Many (especially the very poor or the very young) cannot afford even public transportation, while others (the elderly and handicapped in particular) reside in areas poorly served by public transportation or cannot use public transportation systems because of design and service features which create difficult maneuverability and orientation problems for them.

The precise level of transit dependency is not fully known, but several items are suggestive. For example, the 1970 Census indicates that there are about 20-million Americans 65 or older – about 10 percent of the population.¹⁸ Income data (for 1969) indicate that almost 20 percent of those 65 years or older are in the low income group (defined as those below \$1,750 per year).¹⁹

As might be expected there is close correlation between the handicapped and the elderly. As one observer noted recently at testimony before the Senate Special Committee on Aging: "A little more than half of the handicapped are elderly; a little more than a third of the elderly are handicapped. . . the total number, with no

double counting, is approximately 26.5-million persons."²⁰

The elderly tend to be unevenly distributed throughout the United States, and there is considerable variation in the percentage of elderly in urban areas. The percentage 65 or over may vary from metropolitan area to metropolitan area. Even among metropolitan areas with 200,000 population or more, the proportion of elderly (and the level of concern) will vary from 5 percent in the Ann Arbor metropolitan area to almost 20 percent in the Fort Lauderdale region.²¹

Independent travel by the very young also is limited by availability of public transit, mainly because they have little income and cannot drive. In a recent national study of the personal characteristics of tripmakers for the period 1969-1970, it was found that for the 5 to 15 year old groups, about 70 percent of their trips were as auto passengers and about 22 percent were in school buses.²² Less than 5 percent of their trips were on other bus or rail transit systems – suggesting the level of constraints for this major segment of the population. In 1970, the population under 18 accounted for over 34 percent of the population.²³

Though it may be difficult to think of the young as "disadvantaged," it is quite clear that they have major mobility problems. These problems and associated frustrations have helped to generate their desire to obtain automobiles at the earliest opportunity, even though such cases may have dangerous mechanical defects.²⁴

As for the 30-million poor with incomes under \$4,000 annually (about 15 percent of the population)²⁵ auto ownership is seldom possible, or possible only with considerable hardship. They are left to use whatever means they can get, including public transportation. Yet, public transportation, in the face of the immense changes that have occurred in land use in most metropolitan areas, often does not give them adequate access to employment, social services, and welfare opportunities. Furthermore, even when they have automobiles, the vehicles are frequently unreliable. Available data suggest that about two-thirds of the automobiles owned by the poor are over six years old, and information about the Watts district in Los Angeles suggest that 20 percent of these automobiles are not in a condition for safe driving and 40 percent are uninsured.²⁶

Finally, there are those who are handicapped physically and can not easily use present public transport systems. Their problems generally require improved design or special scheduling. Data for 1970 indicate that about 11 percent (22.2-million) of the total population had some sort of activity limitation, and about one-third of these were elderly.²⁷

Though it is not possible to say how many in each of the transit dependent categories suffer from some form of mobility restriction, there can be little doubt it is a significant share. As shown earlier, the elderly account for almost 10 percent of the total population; the younger (under 18) account for over 34 percent; the handicapped around 11 percent and many of the handicapped (about 36 percent) are 65 years or older.

Moving Goods. There is little doubt that the movement of goods plays a major part in the economic growth and development of metropolitan areas. Its impact on planning is substantial, and is reflected in the location of industrial and commercial establishments, the siting of terminal facilities, the mix of vehicles during the peak period, and environmental conditions. Hence, it is essential that planners carefully consider and understand these impacts.

Despite the importance of the movement of goods within cities (and the general recognition of this fact by most professional urban and transportation planners), there are still relatively limited data available on the subject. Few urban transportation plans do more than nod in the direction of goods movement problems in the metropolitan region. It is only in the last few years that any data at all have been collected on this subject.

One major effort in measuring the impacts and scope of the goods movement has been made in the New York metropolitan region. Though the New York metropolitan region is hardly representative of the typical urban area, it illustrates dramatically the amount and purposes of the movement of motor vehicle freight transportation in the metropolitan area.

New York's motor vehicle freight requirements reflect (as is the case in most cities) the economic character of its region as an employer, consumer,

Table I-10

INTERNAL AND EXTERNAL TRUCK TRIPS FOR SELECTED URBAN AREAS AND SURVEY YEARS

Year Of Survey	Urban Areas	Study Year Population (000's)	Internal	Vehicle Trips External	Total	Internal As Percent Of Total
1964	Lewiston-Auburn-Lisbon, Maine	73.0	23,121 ¹	5,334 ²	28,455	81.3
1964	Manchester, N.H.	112.8	30,192	6,709	36,901	81.8
1958	Charlotte, N.C.	202.3	51,918	18,729	70,647	73.5
1960	Chattanooga, Tenn.	241.7	64,022	13,894	77,916	82.2
1965	Baton Rouge, La.	245.1	81,430	16,147	97,577	83.5
1962	Albuquerque, N.M.	267.3	104,049	7,018	111,067	93.7
1965	Oklahoma City, Okla.	574.0	148,290	13,801	162,091	91.5
1962	Southeastern Region, Va. (Norfolk, Portsmouth, etc.)	602.0	106,829	9,132	115,961	92.1
1957	St. Louis, Mo.	1,275.4	280,262	37,274	317,536	88.3
1962	Baltimore, Md.	1,607.9	403,632	32,279	435,911	92.6
1963	Boston, Mass.	3,584.4	878,288	40,660	918,948	95.6
1959	Chicago Metropolitan Area	5,169.7	1,363,042	113,253	1,476,295	92.3

¹Internal trips are trips made wholly within the study area, defined as one way travel from origin to destination on a typical weekday.

²Includes local trips with one end inside the study area, and through trips on a typical weekday.

SOURCE: Wilbur Smith and Associates, *Motor Trucks in the Metropolis* (New Haven, Connecticut: Wilbur Smith and Associates, August 1969), Table A-6, pp. 147-149.

producer, warehousing and transshipment center. The interaction between the forces of demand and supply within the huge regional market, and between the region and the outside, results in a set of interrelated markets which determine the freight transportation needed by the region for feeding, clothing, housing, and amusing the metropolitan population; in moving raw materials in and finished products out; and in performing the region's role as an international gateway, business headquarters, and warehouse and distributing center.

The market structure found within the New York metropolitan region is typical of most major metropolitan areas of 1-million population or more – including Atlanta, Chicago, San Francisco, and Los Angeles. First and usually foremost, is the *internal market* made up of “local market” industries serving the population in the region. Its transportation origins and destinations are largely residential and population oriented, and involve relatively short hauls within the region, mainly using light vehicles.

A second major market is the *national market* comprised of industries largely dependent on the particular economic advantages of the region. The transportation demand of these nationally oriented industries has its origin or destination closely tied to employment centers in the region as well as to market points outside which require longer hauls and heavier vehicles.

Finally, in those cities where there is a *port facility* – such as New York, Baltimore, San Francisco, Norfolk, and Seattle – and a complex of associated industries, transportation needs include terminal and handling facilities required for the movement of merchandise to and from the port as well as linkages to the points in and outside the metropolitan region.

The magnitude and character of all these movements depend on the character of the particular urban area, and determines its intraregional and interregional linkages and demands. Obviously, there are substantial variations between cities on this score also. For example, the Tri-State Transportation Commission estimated that the New York region in 1962-63 handled about 520-million tons of freight each year. Domestic intraregional freight movements accounted for 268-million tons (52 percent), and interregional freight accounted for 252-million tons (48 percent – including 162-million tons in-bound and 90-million tons out-bound).²⁸ Data for 1963 for the United States confirmed the relatively large share of local traffic – about 59 percent for the United States as a whole.²⁹

Table 1-10 summarizes for a variety of city sizes the relative share of internal and external trips by trucks. As

may be seen, internal trips account for 80 to 90 percent of all trucks and confirms the importance of these trips in metropolitan areas.

Of particular importance to the goods movement in urban areas is the fact that truck traffic (both inter- and intraregional) must share common facilities with private automobiles, taxis, and buses. It is also true that all these vehicles frequently must share the same facilities at about the same times of the day. It is not very surprising, therefore, that highway and street systems become acutely congested at specific times and places.

Again using the New York metropolitan region as an illustrative case, data for vehicles crossing the Hudson River indicate for a typical weekday in 1965 that trucks accounted for about 25 percent of the traffic in the Holland Tunnel and about 12 percent in the Lincoln Tunnel.³⁰ These tunnels are used most extensively by trucks because of their strategic access to manufacturing, wholesaling, and port activities in the city.

In other cities, the congestion conflicts between trucks and other vehicles are somewhat less. In a study of trucks and metropolitan areas, a comparison of the hourly distribution of urban truck and auto trips indicated that the former were less peaked and somewhat more dispersed throughout the day.³¹

As might be anticipated, conflicts between trucks and other vehicles are often most acute during the peak hours. For example, in 1960 in New York City during the peak hours of 7:00 a.m. to 10:00 a.m., trucks accounted for 49 percent of the motor vehicles entering the New York CBD on a typical business day; this is in sharp contrast to 33 percent over a 24 hour period. These observations are generally applicable to other areas as well. For example, in the same truck study cited previously, data for cities of varying sizes and functions showed that “trucks are in transit generally between 9:00 a.m. and 11:00 a.m. and between 4:00 p.m. and 6:00 p.m., and are being loaded and unloaded usually between 11:00 a.m. and 4:00 p.m.”³²

Thus, the most critical competition for space occurs in the morning hours during the journey to work, and it becomes most acute when the various motor vehicle subsystems (auto, truck, taxi, and bus) converge. This is particularly true in cities with restricted gateways (e.g., bridges and tunnels).

Even after the trucks have managed to get into the CBD, the competition is not over. The search for a parking space begins. For the motor vehicle moving goods and services, it is mainly a problem of finding available loading and unloading space; for the salesman and service delivery, the problem is short term parking. Off-street facilities are most satisfactory for loading and

Table I-11

DAILY TRUCK DESTINATION TRIP ENDS PER ACRE

Land Use	Trips Per Acre By Urban Area Land Use Urban Area (Population In Thousands)				
	Monroe (96.6)	Columbia (196.0)	Little Rock (222.9)	Baton Rouge (245.1)	Richmond (417.6)
Residential	1.7	1.2	1.0	2.0	1.4
Manufacturing	5.9	1.5	0.4	1.3	2.6
Transportation — Warehouse	2.5	2.3	NA	4.0	0.9
Retail — Wholesale Trade	35.0	20.3	16.0	33.6	10.3
Services, Schools, Government	5.2	3.2	NA	2.6	4.0
All Developed Land	3.5	2.2	0.6	0.9	2.0

NA = Not Available.

SOURCE: Wilbur Smith and Associates, *Motor Trucks in the Metropolis* (New Haven, Connecticut: Wilbur Smith and Associates, August 1969), p. 65.

unloading. But most CBD's have inadequate supplies of such facilities, so curb and alley parking usually is necessary if deliveries and loading-unloading operations are to be permitted.

The problem is compounded if shipping and receiving facilities are obsolete. Obsolete loading-shipping and unloading-receiving facilities lead to competition among trucks to obtain space; the long waiting lines of trucks on Manhattan streets reflect these factors. For example, in a study of trucking in the Manhattan garment industry in 1961, it was concluded that because of delays in loading and unloading, of each hour a truck was at the curb, only 15 minutes were used in actual movement of cargo, and 75 percent of the occupied curb space hours were non-productive.³³ Nationwide data indicate that, for trucks operating on a typical 24 hour day, "in motion" time accounts for only 12 percent of the available time; 85 percent of the time the average truck is parked waiting to load or unload.³⁴

The number of daily truck trips within each urban region relates closely to the size and complexity of that region. *Table I-11*, summarizes destination trip ends per acre for five urban areas by land use. The data in the table confirm that trip generating factors for trucks vary considerably by land use, particularly at the destination end. Thus, retail and wholesale trade generate the largest

trip rates, followed by industrial activities (manufacturing, transportation, and warehousing).

Cities with high levels of industrial or commercial activities tend to be characterized by considerable volumes of truck traffic involving pickup and delivery service trips, personal business trips, and general consumer repair and service activities. Because of the important role of trucks in the movement of goods and the impact of these movements on economic growth and development of the urban area, there is generally considerable reluctance to undertake any policies which might in any way interfere with or constrain economic growth and development. The restraints on motor trucks, then, have tended to be relatively limited and difficult to implement. Even where impacts on the environment are significant (e.g., air pollution and noise), policies involving restraints on motor trucks have had little success up to now. Attempts to require evening deliveries and special time periods for truck utilization of urban street and terminal facilities have not worked well.

Table I-12 illustrates for three urban areas how these conflicts manifest themselves. For example, in Chattanooga's CBD almost 14 percent of all trucks were using illegal curb space for parking, while in New Orleans (where greater congestion and higher density of econo-

mic activity is found), the figure was almost 47 percent. The conflict is even more dramatic when trucks load and unload retail merchandise all over the city.

Urban transportation planning must deal with these conflicts between goods movements and person and vehicle movements. An important element in controlling goods movements, while perserving the benefits for economic development and growth, is control over the size and shape of the city. If the major conflict between the movement of freight and the movement of people is not to eventually strangle our cities, planning and implementing agencies will have to coordinate more closely than has been true in the past.

Solutions may involve the use of both vertical and horizontal space. For example, the height of buildings and the capabilities for vertical transportation within them are directly reflected in the congestion problems associated with truck delays on the streets of New York, where the old freight elevators are unable to handle the delivery of goods into buildings rapidly enough.³⁵ The development of appropriate vertical transportation and adequate delivery capabilities clearly is essential not only

for persons but also for goods; without them major horizontal congestion results.

Another approach is to separate truck movements from those of other vehicles. In the case of the city of Dallas, truck tunnels are to be developed as part of the overall urban development strategy. Elsewhere, many major mall type shopping centers handle these problems by putting truck access underground, auto parking on the periphery, and unhindered pedestrian access throughout the retail areas.

In some cities, clustering of trucking and related activities may be a viable solution. For example, one proposed solution is to divide the region into centers of truck activity averaging about three square miles. In each of these "centers," off-street sorting terminals would combine small shipments for delivery to other terminals. By consolidating these shipments into 12 ton loads, it is believed that transport between clusters could be reduced by 90 percent.³⁶

The entire network for goods movements then (including such components as entry points, intercity routes, and parking) poses as many problems for urban

Table I-12

CENTRAL BUSINESS DISTRICT TRUCK PARKING, BY TYPE OF FACILITY IN SELECTED URBAN AREAS

A. All Trucks — Percentage Distribution

Type Facility	Chattanooga	Nashville	New Orleans
Loading Zone	50.0	35.7	16.7
Other Legal Curb	26.2	42.2	21.6
Illegal Curb	13.9	8.8	47.3
Off Street	9.9	10.5	14.4
Off Street Loading Docks	NA	2.8	NA
Total	100.0	100.0	100.0

B. Trucks Loading And Unloading Merchandise — Percentage Distribution¹

Loading Zone	73.5	55.9	17.6
Other Legal Curb	10.1	20.7	6.3
Illegal Curb	15.7	10.7	75.0
Off Street	0.7	3.7	1.1
Total	100.0	100.0	100.0

NA = Not Available.

¹532 trucks, Chattanooga; 700, Nashville; 953, New Orleans.

SOURCE: Wilbur Smith and Associates, *Transportation and Parking for Tomorrow's Cities* (New Haven, Connecticut: Wilbur Smith and Associates, 1966), p. 261.

transportation planning as do passenger movements. Other troublesome topics include draw bridges that delay traffic on roads already saturated with traffic; rail crossings at grade that bottleneck movements of goods (truck) and persons (cars and buses) and sometimes represent a safety hazard; and in some cases bikeways and pedestrian zones. All of these demands for mobility have the potential for conflict with one another, and require some form of separation either in time or by facility design.

Reducing Transportation Demands for Vehicle Travel

As has been noted, the paramount transportation problem in urban areas is the emergence of congestion as a recurring characteristic of the network, particularly for the journey to work and social and recreational trips. Most planning dealing with the problem of congestion in the United States has been directed toward either the supply or demand side.

On the supply side, there is the possibility of (1) improving public transportation facilities and providing for increased capacity; (2) facilitating the flow on the street network through traffic management and traffic control; (3) adding to the supply of freeway and urban expressway facilities; (4) increasing the utilization of automobiles through encouragement of car pools and increased car occupancy; (5) improving utilization of public transit vehicles through priority lanes for buses or through the construction of busways; and (6) providing for separation of the movements of goods and persons.

On the demand side, approaches to the reduction of congestion have included (1) the use of staggered work hours; (2) providing for some restraints on motor vehicle use through direct or indirect pricing (parking charges, increased fuel charges, increases in title taxes, and so forth); (3) prohibiting motor vehicle use in certain areas of the city; and (4) designing urban activity systems and land use patterns that minimize or reduce the need to travel.

Clearly though, most of the effort has been on the supply side where highway construction, new fleets of buses, computerized traffic signals, and other measures are common. In dealing with demand, there have been only a few selected efforts to control congestion. Where employment patterns permit, some work hours have been staggered (prime examples being office centers like Washington, D.C., and New York City). Some tentative thinking has developed on restraining motor vehicle use

and, in response to energy shortages, these preliminary ideas might be used more. Yet, to the extent there is presently active consideration of motor vehicle restraint policies, it is largely attributable to pressure from the environmentalists – specifically the need to meet quality standards – or now perhaps from pressures emerging from the recent energy shortages.

Of considerable importance in the long run is the possibility of reducing urban congestion through changing the basic urban framework so as to minimize travel demands. This could include selection of urban growth strategies that contribute to this goal, such as new towns, clusters, radial fingers, or satellite cities. There are, of course, no “correct” or “best” solutions, since the form a city should take is largely a subjective decision. It is clear, however, that the form selected can play an important part in reducing traffic demands through careful coordination and interchange between planning (both urban and transportation), implementation, and system operations.

In the United States, considerable effort has been expended on developing this kind of coordination, but with no great success. This lack of success illustrates the difficulty of developing an authoritative coordinating mechanism within the framework of American urban political institutions, rather than any lack of effort or understanding of its importance. So urban design efforts continue to be pursued with the hope that they will be able eventually to make a significant contribution to minimizing transportation demands.

The concept of reducing travel demands through urban design has long been current among urban and transportation planners. Wilfred Owen, for example, observes that many of the problems of urban areas are attributable to poor design and/or what he calls the “accidental city.”³⁷ The way to avoid the frustrations, the congestion, and the difficulties of the “accidental city” (that has been built with only minimal planning or with little attention to the good planning which has been done), in his view, is to design outstanding accessibility and amenities as essential elements of the urban environment to which political leaders are willing to commit themselves.

Assuming that the demand for space will grow; that land outside the central areas will have to be utilized (and will be available); and that the technology for overcoming time and distance through a combination of rapid transit and instantaneous communication is available; it may be possible to design urban environments which in fact would minimize the need for travel generally, or at least would stress a policy of reduction in vehicle travel.³⁸

Owen contends:

New urban designs are revealing that the task of increasing urban mobility may not call for more transportation at all, but may depend more on such non-transportation solutions as locations, densities, and aesthetics of everything being done to accommodate urban man. In other words, transportation demands derive from the design of the community itself and from its various life support systems. These include the places people live and work, the nature of the neighborhood and its surroundings, the power, water, and sanitation systems, and methods of food supply, medical services, schools, and recreation. How these sub-systems are located and interrelated determines what resources must be spent for transportation and whether this allocation of resources will make its maximum contribution to the community.³⁹

Another important approach would be to design the city so that there is increasing separation between the various movements. Vincent Ponti has made this an essential ingredient in his urban planning for a number of cities. It is his belief that if the core is to be kept workable without overbearing traffic restrictions, considerable advance planning must be undertaken to consider the interfaces of these various movements.

Ponti's approach and solution to the problem makes considerable sense and has wide support: separate

pedestrian, automobile, truck, and mass transit into their own spheres or different physical levels. This means "...create for each a distinct and appropriate environment where there is easy circulation without mutual interference."⁴⁰ Ponti's approach is particularly relevant for goods movement, and he already has had some opportunities to put these ideas to work. Turning again to Dallas, the idea of separating traffic is reflected in an already partially constructed truck tunnel system which will separate goods movement from both the surface traffic and pedestrians. This multilevel approach may also be found in the city center of Montreal as well as in the central portion of the city of Munich. Greater use of pipelines, pedestrian bridges, bikeways, elevated rails and guideways, and other facilities multiply the possibilities for separating incompatible traffic flows, allowing each to work better.

If all these design potentials are to be realized, however, an institutional format will have to be developed whereby the functions of planning, implementation, and operation of all modes can be brought more closely together. One approach may be through an integration of the time phasing of the process especially where public works programs are involved. Frequently (particularly in the United States), the transportation planning process is divided into system planning and project planning with the implication being that project planning is the only part of the process concerned with final design, construction, and operation. But if planning is defined as the process of making choices from among

Table I-13

**URBAN PASSENGER-MILES OF TRAVEL IN THE UNITED STATES,
BY MODE OF TRAVEL: 1960 — 1970**

Mode	1960		1970		Percent Change 1960-1970
	Passenger-Miles Of Travel (Millions)	Percent Of Total	Passenger-Miles Of Travel (Millions)	Percent Of Total	
Automobile	422,300	88.2	736,689	93.9	74.0
Bus Transit ¹	28,328	5.9	20,864	2.7	-26.3
Rail Transit ²	18,504	3.9	16,928	2.2	-8.5
Commuter Rail	4,600	1.0	4,600	0.6	0.0
Taxicabs	4,868 ³	1.0	5,126	0.6	30.8
Total	478,600	100.00	784,207	100.0	63.8

¹Includes trolley coaches.

²Includes surface railway.

³Estimated.

SOURCE: U.S. Department of Transportation, 1972 *National Transportation Report* (Washington, D.C.: U.S. Government Printing Office, 1972), Table VI-1, p. 189.

Table I-14

TRAVEL IN URBAN AREAS: 1960 — 1970

Mode	1960	1970	Percent Change
Millions Of Vehicle Miles			
On Urban Streets			
Passenger Cars	284,800	494,543	73.6
Commercial Buses	1,849	1,810	-2.1
Trucks	44,687	80,606	80.4
Millions Of Revenue Vehicle Miles			
Public Transit:			
Railway			
Surface ^b	75	34	-54.7
Subway And Elevated	391	407	4.1
Trolley Coach	101	33	67.3
Motor Bus	1,576	1,409	-10.6
Taxicab	5,200	6,800 ^a	30.8

^aTaxi data for 1969.

^bIncludes street cars.

SOURCE: U.S. Department of Transportation, 1972 *National Transportation Report* (Washington, D.C.: U.S. Government Printing Office, July 1972), Table III-16, p. 78.

alternatives (whether it be for urban planning as a whole or some part of a transportation network), specific schedules ought to be incorporated for specific projects to be built sequentially in a continuing effort to accomplish recognized metropolitan objectives. Later in this report the character, nature, and phasing of that process will be described in greater detail.

While improved urban design and technology may reduce the need for some kinds of travel and minimize the conflicts between different modes, they cannot do more than redirect transportation. Historical trends suggest that when communications have improved and the flow of commerce, ideas, technical information, and cultural interchange increases, the transportation demand for persons and goods movements is stimulated. In this context, improved communication systems can bring dual forces into play: while substituting for some transportation needs, they also may create greater demands for other forms of transportation. Closed circuit television or any other new developments are not likely to change this interplay and electronic communication is no substitute for the cooperative efforts that result from face-to-face contacts and interactions. Notwithstanding these limits, technology, and urban design in particular, can play an important part in minimizing

the need for the longer trips generally characteristic in many urban areas today.

The Relative Importance of Different Transportation Modes

Measured in terms of passenger miles, the automobile is by far the most important mode of urban transportation. This has been true since at least the 1930's, and even as recently as the 1960's the pattern of urban travel by auto continued to grow. *Table I-13* summarizes passenger miles of travel within urban areas by mode for the period 1960-1970. In 1960, the automobile accounted for about 88 percent of urban passenger miles as compared to 6 percent for bus transit, 4 percent for rail transit, 1 percent for commuter rail and taxi cabs respectively. By 1970, the proportion of passenger miles by auto had increased to almost 94 percent. In terms of passenger miles, the automobile has shown the greatest growth rate over the period — about 74 percent — in very sharp contrast to public transportation where there has been either no growth at all or sharp declines. The only form of transportation that reflected any positive growth other than the private automobile was the taxi

cab, reflecting its ability to provide a service level similar to that of the private motor car.

In terms of vehicle miles, *Table I-14* shows, for the decade 1960-1970, how passenger cars, commercial buses, trucks, and public transit compare. Despite some problems of comparability, these data substantiate the relative importance of the automobile. Trucks have shown, over the decade, an even larger growth rate in miles travelled than passenger cars, and represent the second largest mode on the urban network, as measured by vehicle miles. The declines in public transit are indicated by the sharp drop (54 percent) in rail surface miles. This largely reflects the decline in trolley car operations. Many trolley cars have been replaced by trolley coaches. Yet, many of these lines and routes have been abandoned — as the sharp decline in trolley coach revenue miles suggests.

In addition to motor vehicles and public transit, other traffic sources obviously contribute to the volume of congestion in urban areas. These include airline arrivals and departures at terminals; passenger arrivals at seaports (especially in areas with growing cruise markets), pipeline activities, and even bike trails. Though all of these activities do not encompass travel exclusively within the urban area, they do (with the exception of bike trails)

create many problems at their terminal facilities. There are few people who have not fought their way through the airport congestion during the typical peak hours (whether departing or arriving).

Table I-15 summarizes forecasts of enplaned passenger data for representative urban areas. These data confirm the large number of passengers at airline terminals (including heliports), both presently and prospectively.

Similar trends can be shown at seaports serving major cruise markets and even at some railroad stations — especially since the problems of energy availability have become so acute.

Tables I-16 and I-17 summarize data for petroleum pipelines and inland waterway freight, and are intended to illustrate again the importance of providing for smooth interfaces between modes for people as well as the movement of freight.

All these data make it quite evident that the interface between terminal facilities for airports and other modes requires careful coordination, planning, and implementation among the modes. Airport terminals designed to handle large passenger volumes need not only adequate baggage and terminal facilities but also good access roads, parking, and public transit in order to minimize

Table I-15

ENPLANED PASSENGER FORECASTS FOR REPRESENTATIVE AIRPORTS: FISCAL YEARS 1971-1982 (Thousands)

Airport	Forecast (Fiscal Year)				
	1971	1972	1973	1977	1982
National (D.C.)	4,864	5,150	5,502	7,007	8,000
Dulles International	1,080	1,233	1,408	2,465	5,561
Newark	3,375	3,645	4,320	6,800	12,495
New York (JFK)	9,263	9,794	10,514	14,710	24,540
New York (LaGuardia)	5,857	6,398	6,960	10,080	16,165
New Orleans	2,004	2,167	2,459	3,753	6,259
Albuquerque	609	656	749	1,139	1,999
Oklahoma City	655	723	824	1,248	2,049
Chicago	13,648	14,520	15,995	23,360	38,440
Los Angeles International	10,612	11,387	12,582	17,613	28,972
San Francisco	6,802	7,247	7,948	11,346	19,319
Portland	1,287	1,422	1,588	2,453	4,259
Seattle	2,576	2,757	3,222	5,099	9,397

SOURCE: U.S. Department of Transportation, Federal Aviation Administration, Terminal Area Plans, EC-200, December, 1970, unpublished.

Table I-16

**PETROLEUM PIPELINES —
TOTAL AMOUNT BY
SYSTEMS: 1950-1970**

Year	Million Barrels
1950	2,740
1955	4,039
1960	4,783
1965	5,864
1970	8,147

SOURCE: U.S. Bureau of the Census, *Statistical Abstract of the United States, 1972* (Washington, D.C.: U.S. Government Printing Office, 1972), Table 927, p. 561.

congestion. In addition, there are major problems of intermodal transfers — such as from air to bus and from rail to bus. All these interfaces must be provided in the terminal facility (airport, railroad, seaport, heliport, or whatever the mode) if it is to work properly and not contribute to the problem of congestion and pollution.

Finally, if energy shortages continue or become a recurrent phenomenon over the next ten years, substantial increases in bicycle use could generate corresponding rises in demands for bike trails. Of even greater importance than bike trails will be the problem of mixing bicycles with motor vehicles. Such mixing will require careful advance planning irrespective of the fact that the volume of passenger trips or miles travelled by bicycle may be small. The potential for accidents and traffic constrictions here is very high.

THE RURAL TRANSPORTATION PROBLEM

The evidence cited above in detail is not intended to suggest that only urban areas suffer from transportation problems. Rural areas have many of the same problems, and in some ways they are more difficult to solve because the distances are longer and the origins and destinations are more dispersed. In the case of many such areas, access to adequate medical and social services for the rural disadvantaged (elderly, handicapped, the very young, and so forth) requires links to urban facilities which have not usually been provided, or even considered in most urban transportation planning.

Not surprisingly the rural transport network for moving people to their destinations is largely confined to the private automobile and the intercity bus. Though intercity bus services may be available, they usually are infrequent and in no way adequate for the kinds of interface required by the rural disadvantaged for the facilities and services they need.

Much less is known about rural transportation problems than urban ones. There have been relatively few detailed transportation surveys of rural areas and much less planning than for the urbanized areas where comprehensive transportation planning is required. Nevertheless, transportation has played an important part in the rural development programs of the Appalachian Regional Commission and the Economic Development Administration of the U.S. Department of Commerce. In addition, assistance is available from the U.S. Department of Agriculture under the *Rural Development Act of 1972* for local access roads. As shown in *Table I-18*, per capita Federal outlays for community development are considerably more in rural areas than in urban areas, and a larger share of such outlays goes for transportation

Table I-17

FREIGHT CARRIED ON INLAND WATERWAYS, BY SYSTEM: 1950 — 1970

Years	Atlantic Rivers	Gulf Coast Rivers	Pacific Coast Rivers	Mississippi River System	Great Lakes System
	(Million Ton Miles)				
1950	6,497	1,229	1,686	33,598	120,334
1955	27,042	13,860	4,736	52,019	118,850
1960	28,583	16,932	6,001	69,257	99,480
1965	27,781	21,808	6,630	96,593	109,609
1970	28,572	28,582	8,397	138,534	114,475

SOURCE: U.S. Bureau of the Census, *Statistical Abstract of the United States, 1972* (Washington, D.C.: U.S. Government Printing Office, 1972) Table 946, p. 573.

Table I-18

**PER CAPITA FEDERAL OUTLAYS FOR COMMUNITY DEVELOPMENT
ACCRUING TO METRO AND NON-METRO COUNTIES:
FISCAL YEAR 1972**

Item	Dollars Per Capita	Total	Commun- ity Develop- ment Loans	Percent Of Total			Urban Renewal
				Commun- ity Develop- ment Grants ¹	Trans- porta- tion		
Percent Of Total Outlays							
United States, Total	63	100.0	21.3	20.0	45.2	13.5	
Metropolitan, Total	58	100.0	16.0	23.2	43.1	17.7	
Large, Total	55	100.0	16.4	21.8	44.0	17.8	
Core	60	100.0	16.0	22.8	41.2	19.9	
Fringe	42	100.0	17.7	18.3	53.5	10.4	
Medium	61	100.0	15.0	26.2	40.9	17.8	
Small	66	100.0	17.1	21.4	44.7	16.8	
Non-Metropolitan, Total	77	100.0	32.0	13.5	49.5	5.0	
Urbanized:							
Adjacent To SMSA	45	100.0	29.3	24.9	35.5	10.3	
Not Adjacent To SMSA	74	100.0	25.2	19.6	44.5	10.6	
Less Urbanized:							
Adjacent To SMSA	70	100.0	34.9	10.8	50.8	3.4	
Not Adjacent To SMSA	90	100.0	33.9	12.0	49.8	4.3	
Thinly Populated:							
Adjacent To SMSA	119	100.0	31.1	6.2	62.3	0.4	
Not Adjacent To SMSA	142	100.0	33.0	6.9	59.7	0.3	

Percentages may not total to 100 because of rounding.

¹Includes health facility construction.

SOURCE: Office of Economic Opportunity data, as reported in Rural Development Service, U.S. Department of Agriculture, *Rural Development: Fourth Annual Report of the President to the Congress on Government Services to Rural America* (Washington, D.C.: U.S. Department of Agriculture, 1974), p. 25.

in the rural areas. So transportation is obviously of major importance in non-metropolitan America.

The deficiencies in rural transportation systems may be listed briefly as follows:

- 1) rail abandonments, threatened and real;⁴¹
- 2) inadequate highways, bridges, and trucking to take up the slack;⁴¹
- 3) needs for improved transportation (highway,

air, rail, and water) to promote economic development;⁴²

4) lack of public transportation to meet the needs of persons without private automobile transportation;⁴³

5) continuing highway, rail, and migrant labor bus safety hazards;⁴⁴ and

6) seasonal traffic congestion in rural recreational areas.⁴⁵

These deficiencies are difficult to overcome because of fragmented and inadequate local governments,⁴⁶ limited transportation programs, and inadequate planning of rural development strategies. At the same time, most rural areas are developing regional planning capabilities linked to statewide systems of multicounty substate districts designed to plan and promote economic development, protect natural resources, build competent governmental staffs, and take advantage of economies arising from joint activities by small local governments.⁴⁷

TRANSPORTATION'S IMPACT ON LOCALITIES AND REGIONS

The interaction between land use and transportation has been recognized for many years, and it remains critical. Not only do transportation facilities change patterns of land use, but rapidly shifting land use patterns create unexpected transportation demands. In addition to these land use impacts, many other environmental impacts of transportation facilities now are being recognized and addressed in the transportation planning process. Moreover, the opportunity of various segments of the public to participate fully in community life is significantly affected by differential accessibilities afforded different neighborhoods. Transportation clearly has an impact on personal safety and the protection of property. Finally, many highway construction programs displace residences and businesses, creating large demands for relocation programs. All of these impacts are felt through the political process. This section explores each of these impacts as a means of helping to define the scope of regional transportation programs which will be responsive to broader community needs in both urban and rural areas.

The Interplay Between Land Use and Transportation

Transportation has numerous relationships with land, all of which affect the planning and providing of transportation facilities and services. Transportation both "produces" and "consumes" land in the course of providing its services. Transportation also affects the adjacent users of land in a manner which can directly influence the type of use.

Transportation as a Force in Land Development. By merely giving access, transportation makes land usable for varying purposes. A group of 1,000 acre farms need

only one public access each and the road network needed would be relatively short in relation to the area served. Moreover, the demand in terms of daily vehicular capacity would be quite low. Service to any urban area subdivided into city blocks and then into small building lots requires a much greater street network in relation to the land area served, and it will generate traffic volumes much higher than rural volumes on the trunk routes which serve numerous local gathering or distribution streets. While larger farms, industrial users, and some large scale developers might build their own access roads, most urban land owners depend on local government to arrange for the provision of their roads and for street access — an access which is absolutely essential to the use of this land. Thus transportation "creates" land simply by making it available in a practical way.

The value created depends in part on the quality of the access, i.e., condition of paved or other surface, time required to reach destinations for which there is a widespread demand, capacity to meet peak hour traffic volumes, and most importantly, the total number of possible destinations which can be reached. The need to reach many locations in urban areas invariably produces networks of urban streets, roads, and railroads. The scope and comprehensiveness of these networks generate some of the major problems in urban transportation planning and they determine the total resources requirements. A central characteristic of almost all urban networks is that they serve various major activity centers (such as the CBD, hospitals, universities, and warehouses) which are a focus for transportation services and are junctions or terminal points for the congested high traffic volume corridors. These relationships produce the high densities of land use in major activity centers and, in turn, the high values of land observed in these centers.

In large cities, such networks are built up over very long periods of time. Early low density routes are adapted and expanded in capacity, usually in a haphazard manner, in response to the demands for service increase over the years. These networks, or even major corridors, are seldom created in one plan, and certainly not in a single period of construction. The development of new communities (including large scale recreation developments in rural areas), if considered by themselves, is an exception to this generalization but most development is not of this type.

Transportation as a Consumer of Land. Except in the very largest cities, practically all transportation facilities are on the surface and therefore occupy land which might (depending on the need for access) have been used for other purposes. One of the prime signs of the motor age is the percent of land in cities or in central business

districts which is occupied by highways, streets, and parking lots. These ratios range from 25 to 45 percent. Only in the largest cities with the highest land values and greatest volumes of traffic has the use of land for transportation been viewed so seriously that elevated and underground alternatives have been used. The multideck parking garage is the most universal example, while rapid transit and commuter rail subways, and elevated highways are others.

As shown earlier, among the transport modes the private auto unquestionably requires the greatest amount of land in relation to people moving capacity. Yet, increasing urban densities increase congestion and the demand for greater capacity. When the costs of a "sufficient" network capacity expansion become "too high," pressure is exerted for adoption of transport modes which have higher capacities per unit of space occupied, or which are easier to install in subways or on elevated structures. This has been the major context of transportation planning in major metropolitan areas since 1955.

Another range of alternatives for reducing the amount of land used by transportation is through the type of planning found in many new towns. These towns are often planned with "super blocks" having areas equal in size to several conventional blocks. These super blocks reduce the space used for streets while also reducing or limiting the access in terms of street frontage per lot or per square measurement. In addition to several smaller new towns which have followed this plan, two large cities have been brought to maturity with super blocks, Melbourne, Australia, and Taipei, Taiwan — both created in the early decades of the 20th century.

Another approach, cited earlier, has been proposed in Wilfred Owen's book *The Accessible City*. This proposes precise control of densities and of the location and juxtaposition of specific land uses. It would greatly reduce the effect of private, lot-by-lot decision making on the development of the city. While congestion would appear to be controlled in the latter case because of density limits, the total use of land for transport would probably not be reduced except by application of super block planning. World Bank studies of Bogota, Columbia, for three alternative densities of development to provide for the same population (5-million), indicate that the total development investment, public and private, does not vary much with density, but that the distribution of capital outlay between these sectors does vary widely. The spread city is characterized by low private investment and high public investment, while the dense city relies on high private investment and low public outlays.⁴⁸

Transportation's Impact on Land Uses. The cause-effect relationship between transportation and land development is a widely discussed subject on which systematically collected and statistically sound empirical data are not readily available. General observations made by laymen and planners have tempted many people to think that transportation can "control land use" — that is, induce development if it is wanted and discourage it if not wanted. The only real certainty is that land will not be developed if there is not access by at least a two lane street. If such streets are built only by a public body, effective control can be exerted. But once a basic network of two lane streets is in place, a very wide range of development can take place. While there are practical limits to the capacity of a two lane street, the effect is reduced by the ability of motor vehicle traffic to filter through a network, taking the more circuitous routes as the time required for the congested direct routes increases.

The other factor which has affected land developers, of course, is the widespread tacit understanding that local authorities will increase the capacity of the street and road networks after a major traffic generator like a shopping center is built and the public is complaining about the congestion. As long as local finance is based on real property taxation, there is no strong incentive for local authorities to refuse permits for any building that adds significantly to the tax base. They can always hope the infrastructure outlays will be "much less" or "much later."

In a broader sense, however, every example of transportation causing particular land use results (the first Toronto subway line causing high-rise apartment clustering) can be matched by illustrations of where there is no apparent relationship. Since 1930, the rapid transit capacity on the east side of Manhattan steadily declined as the old elevated transit lines were torn down. Only one line, the Lexington Avenue subway, is left. The west side is served by two subway lines, the 8th Avenue being the newest and fastest in the city. Yet the east side has developed to higher densities and higher classes of use than the west side. In the New York metropolitan region, the fastest growing residential areas have the longest travel times, the poorest public transportation service, and the need to use automobiles in a very high cost area.

An indisputable generalization is that after a substantial amount of transportation capacity is in place and operating as a network, it is increasingly difficult to find any direct relationship between specific acts of development and the character of transportation service available. Both developers and tenants have a wide range

of tolerance with respect to the quality of present transportation. It has been frequently observed that the public's assumptions about the quality of public schools had more influence on the growth of suburban counties than the quality of transportation. It also is widely observed that the interchanges of multilane, limited access highways almost always will be developed to high densities in urbanized areas, if the zoning regulations allow. Moreover, it should be noted that almost every inner city blighted area which is full of abandoned buildings has very good transportation to major activity centers, yet "development" is declining. A last observation is that the factors correlating most closely with new development and changes in land use only rarely include transportation among the two or three most important. The availability of developable land, mortgage money, obvious economic or population growth pressures, and obsolescence are the most common controlling factors as to whether a particular area will grow or decline.

Transportation Effects on the Environment

One of the major problems associated with transportation has been its generation of a number of undesirable environmental impacts.

Depending on the mode and the volume of vehicular traffic, transportation produces air and water pollution and noise which reach quantities objectionable either to immediately adjacent land users, or in the case of the worst examples of air and water pollution, affect users many miles distant from the point of origin. Obviously, airports also create noise problems which are often heard over great distances.⁴⁹

Surface and elevated transportation facilities, especially, pose a variety of planning and design problems. Neither are regarded as "attractive" portions of the

Table I-19

DISTRIBUTION OF TRANSPORTATION EMISSIONS, BY TRANSPORTATION SOURCE: 1969

Transportation Source	Carbon Monoxide (CO)	Particulates	Sulfur Oxides (SO _x)	Hydrocarbons (HC)	Nitrogen Oxides (NO _x)
Millions Of Tons					
Gasoline Powered					
Motor Vehicles	96.8	0.3	0.2	16.9	7.6
Diesel Motor Vehicles	1.0	.1	.1	.2	1.1
Aircraft (Total Emissions)	2.9	.1	.1	.4	.4
Railroads	.1	.1	.2	.1	.1
Ships	1.7	.1	.3	.3	.2
Non-Highway Use Of Motor Fuel	9.0	.1	.2	1.9	1.8
Total, All Transportation Sources	111.5	.8	1.1	19.8	11.2
Percent Of Total					
Gasoline Powered					
Motor Vehicles	86.8	37.5	18.2	85.4	67.9
Diesel Motor Vehicles	.9	12.5	9.1	1.0	9.8
Aircraft (Total Emissions)	2.6	12.5	9.1	2.0	3.4
Railroads	.1	12.5	18.2	.5	.9
Ships	1.5	12.5	27.3	1.5	1.8
Non-Highway Use Of Motor Fuel	8.1	12.5	18.2	9.6	16.1
Total, All Transportation Sources	100.0	100.0	100.0	100.0	100.0

SOURCE: U.S. Environmental Protection Agency, Air Pollution Office, unpublished data, 1971.

landscape. While elevated structures are advantageous in adding capacity and reducing conflicts between various streams of traffic, they are widely regarded as blocking air and light, intensifying objectionable noise, having an ugly or industrial image, and using scarce land which could be used better for other purposes. The more attractive underground alternative is far more expensive on all counts and has relatively seldom been used. Large open parking areas have been criticized as "deserts" devoid of the usual human activities found in urban areas, and as visually undesirable.

The intensity of public objection to these aspects of transportation has greatly increased in the last ten years, and in the last five to eight years it has had major effects on national and local policy. The result has been to give greater consideration to the interests of land users and less to the interests of transportation users. The fact that these may be the same people has produced some of the more difficult policy confrontations of the current period — confrontations which are challenging many of the long held views that transportation facilities are "good" and capacity should be expanded to meet any demand.

Aside from environmental and aesthetic impacts after systems have been completed, there are important impacts during the construction phases especially for water and noise. For example, there can be substantial erosion problems during the construction phase as land is stripped and exposed to the elements. This adds not only erosion problems, but sedimentation and flood plain problems in nearby streams and rivers. Though these aspects have not traditionally been considered in transportation planning, changes in the requirements related to planning (especially under Section 208 of the *Water Pollution Amendments of 1972*) and requirements for Environmental Impact Statements (EIS) will change this situation in the future. For example, in an EIS for I-66 in the Washington metropolitan area, careful consideration was given to the impacts on water resources, including erosion, turbidity, and sedimentation (during and after construction); general water drainage and hydrological conditions; and the impacts on aquatic, flood, and fauna conditions in the area.⁵⁰

In the past, many of these impacts were largely ignored. But increasingly, significant efforts are being made to try to introduce a balance between transport investment decisions and environmental and social considerations. Air and noise pollution in particular, are under greater surveillance as discussed below.

Reducing Air Pollution. Recent emission control legislation in the United States is expected to result in major reductions in vehicle emissions by 1977. The

emphasis on motor vehicle emissions is due to the fact that in most urban areas motor vehicles are major sources of pollution — especially of carbon monoxide (CO), hydrocarbons (HC), and nitrogen oxides (NOx). *Table 1-19* summarizes the Environmental Protection Agency's estimate for transportation sources in 1969 and confirms the role of urban transportation — especially motor vehicles — as contributors of the three pollutants enumerated above.

The high levels of air pollution found in most major American cities are the result of the very high level of vehicle miles traveled (VMT), particularly the VMT generated during the journey to work with its concentration of traffic during a few hours a day and in a concentrated area (into and out of the central business district — CBD). These concentrations of VMT (and therefore emissions) are frequently aggravated by meteorological conditions which result in stagnant air conditions. All these factors, in combination with the low level of use of public transit in most cities, has caused the level and intensity of air pollution to increase rapidly.

Numerous studies have been undertaken on ways of controlling motor vehicle emissions in urban areas. In one recent report, the corrective measures were categorized as short, medium, and long term.⁵¹ *Table 1-20* summarizes these approaches along with their estimated impact on travel patterns and motor vehicle emissions. Within the framework of two to five years, major solutions to controlling motor vehicle emissions include such programs as vehicle inspection, maintenance and the use of retrofit devices, utilization of gaseous fuel systems, improvement of traffic flow management techniques, and bypassing of through traffic.

Requiring somewhat longer lead times for implementation are the medium term transportation controls, including improvements in public transportation and motor vehicle restraints (both pricing and non-pricing alternatives).

Finally, there are the long term solutions which would require somewhere in the range of 10 to 20 years for implementation. These include major programs of work schedule changes and changes in land use control. Changes in land use controls, in particular, would require substantial changes in present public policy with respect to both comprehensive urban and transportation planning. If these approaches are to be realistically attempted, comprehensive urban and transportation planning will have to be linked more directly with actual implementation.

Reducing Traffic Noise. Substantial transportation impacts have occurred with respect to noise levels,

Table I-20

**IMPACT OF TRANSPORTATION CONTROLS ON
TRAVEL PATTERNS AND MOTOR VEHICLE EMISSIONS
(Carbon Monoxide From Light Duty Motor Vehicles Only)**

Transportation Control Candidates	Impact On Travel Patterns	Impact On Motor Vehicle Emissions
Short Term (2-5 Years)		
Inspection, Maintenance, And Retrofit	No changes in modal mix, trip generation or origin-destination patterns.	10 to 25 percent. Upper range (particularly 20 to 25 percent) decidedly less likely.
Gaseous Fuel Systems	No changes in modal mix, trip generation or origin-destination patterns.	Less than 15 percent. Appropriate only for large centrally main- tained fleets.
Traffic Flow Techniques	No changes in modal mix or origin-destination. Possible increase in trip generation as a result of improvements.	Less than 20 percent. However, emissions appear to decrease for only the year following implementation.
Bypassing Thru Traffic	No changes in modal mix or origin-destination. Possible increase in trip generation as a result of improvements in traffic flow.	Less than 5 percent. Measures requiring new construction (e.g., circumferential routes) not implementable within five years.
Medium Term (5-10 Years)		
Improvements In Public Transportation	Changes in modal mix by improvements in public transport; no change in trip generation or origin-destination patterns at least in the short term.	Less than 5 percent. Improvements in public transport are a necessary but not sufficient condition for reducing motor vehicle emissions.
Motor Vehicle Restraints	Changes in modal mix by improvements in public transport and motor vehicle restraints.	5 to 25 percent. Potential emission reductions depend upon the severity of restraints.
Long Term (10-20 Years)		
Work Schedule Changes	Changes in modal mix, possible reduction in trip generation (particularly for the journey to work).	Less than 3 percent. Work trips would be reduced but increased leisure time would probably generate additional recreational trips.
Land Use Controls	Change in modal mix; change in origin-destination patterns; change in trip generation.	Could not be implemented with any appreciable effect on emissions in the short term.

especially in urban areas, and some legislation has been enacted to begin reducing the relative levels of noise pollution. However, while air pollution is widely viewed as a serious problem to be dealt with immediately, noise pollution is not (despite mounting evidence that noise can have deleterious psychological and physiological effects on human beings). Moreover, while people normally prefer a quiet to a noisy environment, they will tolerate a noisy one, though this seems to be changing. According to one prestigious U.S. panel which studied the subject:

At present most people seem not to be greatly concerned or aware of the noise problem. . . . However, the panel finds that the level of awareness of noise pollution is rising. . . because of the great upswing of interest in environmental quality, the panel believes that a demand to combat noise is now in the making.⁵²

Most of the noise generated in urban areas and in the central business districts of metropolitan areas is generally traffic noise. A three year study of the city of Chicago confirmed that the most prevalent city noise was the traffic itself. This was the case in industrial as well as residential areas, though in residential areas where fewer trucks operate, the levels were considerably lower.

Solutions to the noise problem can be approached at a number of different levels. To begin with, just as motor vehicles, airplanes, and rail equipment might be redesigned to reduce the air pollutants they emit, they also might be redesigned to reduce noise. For any given class of vehicles, such redesign might include the engine, intake and exhaust silencers, brakes, gear boxes, engine enclosures, fan, and tires. In addition, the design of the vehicle itself might be changed to reduce wind noise. In this context, it is probably unlikely and probably not practical to consider all of these redesign elements for all classes of vehicles. Major efforts are likely to be made only with those vehicles that contribute the most annoying sounds.

In addition to noise reduction policies which relate to the design of the vehicle, other areas of noise abatement could help to reduce the impact on the metropolitan area. Specifically, these would involve:

1. Planning metropolitan areas so as to prevent the construction of inadequately protected buildings in noisy zones, and to reduce motor vehicle trips (and thus, presumably, noise) by providing alternative means of transportation.
2. Designing highways and related facilities to

minimize vehicle noise from the interaction of the vehicle on the road and to abate the effects of whatever noise is created by this interaction by properly locating and shielding adjacent buildings.

3. Operating the streets and highways in order to minimize noise resulting from stop-and-go traffic.
4. Restricting either motorist behavior or vehicles to prevent noise in particular parts of the city.

Finally, at least in theory, a metropolitan area could be planned to reduce the effects of traffic noise by clustering facilities that have to be served by noisy vehicles – particularly trucks. If such facilities – industrial parks, and shopping centers, for example – were set in what amounted to a greenbelt, the resulting traffic noise would affect relatively few people. But, practically speaking, the land surrounding either industrial parks or shopping centers may be too valuable to be used just for acoustical screening, and, many people seem anxious to move close to noisy activity centers for the sake of convenience. Careful design, foresight, and considerable common sense will be needed to create greenbelt noise buffers.

Noise control zoning is one way of controlling the levels, in much the same way as building codes protect people against violations in construction and construction methods. Here specific zones, perhaps with maximum permissible sound levels, would be established to exclude users who would be unduly bothered by the noise in that zone. Such techniques might be especially appropriate in dealing with airport noise problems, rail yards, and industrial areas which generate large amounts of truck traffic. In the noisiest areas, no residential buildings would be permitted. In slightly less noisy areas, residential buildings would be permitted but only if buildings were specifically constructed to shield the residents from outside noises. In quieter zones, normally constructed residences would be permitted, though hospitals and schools would have to be acoustically insulated. The fourth zone, presumably the quietest, could be settled with normally constructed homes, hospitals, and schools. This type of zoning system has been considered by Paris, and the Swiss and Japanese specify maximum noise levels for several noise level zones.

Equal Opportunity Transportation

With the growth of automobile usage, particularly for the work trip outside of the central business district, there have been serious impacts on the mobility and

economic opportunities of people with low incomes. In some instances, these difficulties exist regardless of income. Living within the inner city sections of most metropolitan areas are large numbers of unemployed and underemployed persons, generally members of poor and minority communities. Large numbers of elderly and physically handicapped persons also reside in these same neighborhoods. These people have extensive requirements for medical, social assistance, and rehabilitation services in addition to the usual trips of daily life such as shopping, church, and social visits.

Because urban growth and employment have shifted rather extensively into the suburbs without matching shifts in public transportation services, and because the poor inner city residents frequently cannot own an automobile, they often find it difficult to obtain these new jobs. In rural areas, employment has shifted from farms to distant industrial plants, also putting the poor at a disadvantage in terms of transportation.

The flow of urban workers from the CBD and central city areas outward to jobs (sometimes called "the reverse commute") is clearly the opposite of the traditional flow of suburbanites commuting to central city jobs. It highlights the special needs of the poor or low income (and often minority) groups for better transportation facilities.

Several studies have been undertaken of this "reverse commute" transportation problem. The evidence indicates that it will exist for some time — and that the volume, perhaps, will even increase as job locations tend to move more and more into the suburbs.⁵³ Based on the Granz data, it appears that the reverse commute which accounted for about 7 percent of all home to work trips in 1960 (within all metropolitan regions) will probably increase by 1985 to 14 percent of the new total. In view of the earlier data showing the substantial volume of non-automobile owners, particularly in city households and especially in the inner city area, the problem of employment access to the suburbs obviously is of major significance. It will require more effective development of public transportation and land use controls throughout metropolitan areas. It also underscores the importance of linking transportation planning and implementation with overall areawide community planning.

Transportation within, to, and from urban and rural areas also needs to accommodate at least the following services for the elderly, handicapped, and the poor not in the active work force: access to social service offices and centers; to education and training locations; to the full range of health and medical services; and to shopping and recreation. These trips tend to be dispersed and the trip generation rates per household are low,

commonly regarded as an impossible market for public transportation. Often these needs generate cross town trips in urban areas where public transit is now scant, and in rural areas public transportation for these purposes is even less available. The Urban Mass Transportation Administration, through a series of demonstration projects, has developed several important conclusions about low volume routes.

- New methods of transportation will have to be used, particularly demand actuated systems as well as franchised jitney operations.
- Improved marketing and service information systems are required to improve techniques of merchandising, particularly to minority communities.
- New approaches to sharing costs between the user and the employer will be required in order to find a viable pattern for subsidizing commuter routes that are not self-supporting.⁵⁴

A vital factor in coping with the problems of poverty transportation, the reverse commute, and low density rural movements is the basic reaction of users of these services. Initial response to the new services provided has been generally favorable. But as unemployed workers obtained income, a decline in the utilization of the service was brought on by the purchase of automobiles. This, in turn, caused a relative decline in the level and the volume of traffic utilizing these services. In providing for equal economic opportunities then, planning directly related to land use and to overall transportation systems becomes particularly important in the long run as a means of correlating projected locations of employment to residential opportunities. The only extensive examples of such activities to date have been in model cities neighborhood programs and some HEW financed programs designed especially for the elderly. A basic deficiency of these programs has been the temporary nature of the Federal financing — usually for one to three years. Local sources for continuation have been slow to materialize.

Safety

An important impact of transportation systems is the level of fatality, personal injury, and property damage accidents associated with their operations. Based on an analysis undertaken for the 1972 National Transportation Needs Study, transportation associated accidents appear to account for about 50 percent of all accident fatalities.⁵⁵ Reliable data showing urban trans-

Table I-21

ESTIMATED TRANSPORTATION ACCIDENT COSTS: 1970

Mode	Dollar Cost (Billions Of Dollars)	Percent Of Total
Highway:		
Automobile	16.48	84.2
Urban Transit	.10	.5
Schoolbus ¹	—	—
Intercity Bus	.04	.2
Truck	1.92	9.8
Total	18.54	94.7
Non-Highway:		
Railroad ²	.18	.9
Commerical Aviation	.21	1.1
General Aviation	.39	2.0
Pleasure Boat	.12	.6
Merchant Vessel ³	.14	.7
Total	1.04	5.3
Total, All Modes	19.58	100.0

¹Insufficient data on property damage and other cost factors.

²Includes damage to railroad property only; i.e., excludes cargo damage.

³U.S. flagships and public vessels on any water and foreign ships in U.S. waters.

NOTE: Includes estimated costs of property damage, injuries, and fatalities.

SOURCE: U.S. Department of Transportation, 1972 National Transportation Report (Washington, D.C.: U.S. Government Printing Office, 1972), p. 82, Table III-45.

portation accident experience separate from other transportation associated accidents are hard to come by. But in general, it may be assumed that the high level of vehicle miles in urban areas and the levels of congestion probably account for a relatively large share, or perhaps even a disproportionate share, of the accidents.

Good data on the cost of transportation accidents are also difficult to find. The 1972 National Transportation Report, however, provided an estimate of transportation accident costs in 1970 (*Table I-21*). Though these data are based on relatively tentative information, they give some indication of the magnitude of accident costs and fatalities.

Automobile accidents accounted for 84 percent of the almost \$20-billion total of accident costs, with trucks accounting for an additional 10 percent of the total. Non-highway associated accidents accounted for about 5.3 percent, mainly in the sectors of general aviation and commercial aviation; however, these are not

uniquely associated with the urban environment and generally occur in intercity movements.

Though not directly concerned with safety, there are serious security problems associated with truck travel. In addition to noise, air pollution, and accidents, there are substantial economic losses associated with goods movements, largely due to pilferage and inefficiencies in the operation which result in damage to goods. Many of the problems associated with goods damage and pilferage could be reduced through more efficient operations and more effective design and location of terminals.

The Need to Relocate People and Businesses

Transportation is just one of the many causes of forced relocation of homes and businesses. Any major land use change, including those caused by private owners and developers, causes relocations. Trans-

portation was not a significant relocation problem until after the creation of the interstate highway program in 1956. The geometric standards promulgated by the Federal Bureau of Public Roads required interchanges occupying two to four city blocks of area, and rights-of-way that were 150 to 200 feet wide in total. These large traffic arteries often only infrequently crossed by local street networks, created new cleavages through old neighborhoods, and tended to "fence off" areas which might have facilities that were formerly shared. The Dallas and Kansas City CBD's are classic cases of areas surrounded with interstate highway moats. Boston and Chicago have residential areas which have been drastically channeled by depressed expressways. The action of the interstate highway program in cities accelerated until the very late 1960's, when public resistance to more urban highways began actively to retard it.

Once a city has been developed, the only means of adding transportation capacity without major displacements are (1) to change operating practices on surface streets, such as establishing one-way patterns, banning of on-street parking, widening streets, computerizing traffic control, and reversing lanes; or (2) to put the rights-of-way above or below ground. There are severe limitations to how much capacity can be added by surface changes; underground rights-of-way are very costly; and elevated ones are criticized by environmentalists. Moreover, disruption of property and consequent relocations are only reduced, not eliminated, by surface improvements or grade separations. Although changing operating practices is technically and operationally practical, if not desirable, public officials have found highway capacity maximization very difficult. Everyday habits of the public must be changed, and attitudes about the right to use street space for personal convenience are directly challenged. Up to the present, political decisionmakers have shunned this alternative. But now environmental and energy conservation pressures may provide support not previously available for some difficult decisions on behalf of "efficiency" in use of present streets. This could help, along with efforts to decrease dependence on private autos, to reduce the number of home and business dislocations.

The human impacts of dislocation have been ameliorated by some improvements in benefits since 1960. The major hardships have been those suffered by small businesses, many of which have disappeared rather than move, and by poor residents who could not find sound and suitable housing at prices they could afford. Some relief has been provided through the *Uniform Relocation Act of 1970* which requires that adequate relocation be provided before the displacement action can be taken.

Included are provisions for the displacing programs (like transportation) to use their own funds to provide relocation housing if such housing is not otherwise available. Yet, many difficult, practical, relocation problems remain to be solved in individual cases before transportation projects can move ahead, and this creates significant delays in a number of cases.

The Politics of Transportation

Transportation has been a continuing issue of varying interest and impact in local politics. Because it affects almost everybody everyday, it is always lurking about ready to be used as a club or a podium depending on whether the user is in or out of office. After street paving and lighting, the big issues during the 1880-1920 period were the streetcar monopolies and the regulatory commissions which were often alleged to favor the interests of these monopolies. After cities began to do more than provide a uniform street network, local office holders enjoyed many years of the full fruits of public works politics—control over the spending of large amounts through local contractors, creation of cash jobs for the needy, ribbon cuttings, and claims of "I got action on . . ." Suddenly, in the mid-1960's what was pleasant and rewarding became subject to attacks by a variety of groups with contrary interests in the city, groups which had not been active in opposing public works before. Neighbors had always objected to disruption of their property or street, but there usually had not been fundamental opposition from the larger community.

While generalizations are risky in such an apparently dynamic situation, it appears that political decisionmakers are currently caught in a crossfire between traditional supporters of public works outlays, particularly highways, and numerous groups who oppose highways as a matter of planning principle or because of their environmental effects. Transportation and highway issues which had always been looked upon favorably by local elected officials as "winners" are suddenly unattractive and are posing situations in which it is impossible to "win."

This, incidentally, is exactly the situation Congress has been in with most non-public works transportation legislation for many years. Congressmen must be careful in dealing with transportation issues which involve major clashes among important interest groups, classically the truckers, the railroads, and the waterway operators. These interests see every proposed change as an effort to change the distribution of traffic among them.

The modal choice, where it is possible to make a real choice, provides some of the most interesting interplay

between planning and politics at the local level. Until now, most studies have not seriously examined alternative modes. The elected decisionmakers simply reached a judgment as to the most favorable thing to do and did it.

In big cities, where there has been a willingness to consider non-highway transport, this provided the opportunity to choose between buses and rapid transit, usually rail. One vein of reaction has been that no more highways should be built, that buses were old fashioned, slow, and socially undesirable, and that rapid rail was the "new" approach and just what the voters would reward at election day. Atlanta and Baltimore provide interesting case histories of the politics of rapid transit selection. In the case of Atlanta the planner's choice, "busways," was reversed by the politicians after the defeat of a bond issue. In the Baltimore case, no serious study of alternatives was ever made — the controlling groups of local government officials simply decided that rapid transit was the only thing that would be seriously considered and supported by the public.

In somewhat smaller cities, there are equally strong views that rapid transit is vastly expensive, dirty, socially undesirable, a hole-in-the-ground. Decisionmakers frequently are no more willing to consider non-highway alternatives than the transit advocates are to consider more highway lanes.

Relief from this polarization at the local political level has been found only in cases where no decision was made, because the elected representatives believed that any change would have a "no win" result, and in a few cases where the planners appear to have had a discernible influence, as in Denver and the Twin Cities. The latter are not necessarily "better" decisions, and their merits, in fact, are strongly debated among planners in both cases. But at least, a greater range of options was considered and the political choice was opened to public scrutiny.

WHY DIFFERENT AREAS HAVE DIFFERENT TRANSPORTATION NEEDS

As might be expected, there are direct and ascertainable relationships between the physical and geographical characteristics of a region and the character of its transportation. Yet, efforts to establish predictive cause-effect relationships have not been productive up to now. It is possible in many cases to find clear relationships, particularly in a metropolitan area that experienced a sustained period of fast growth. But applying broad conclusions from such case studies to other locations

ignores the problem of too many exceptions, too many variables, and too much evidence that every area is unique. Rather sophisticated statistical techniques, however, such as those applied in a General Motors report,⁵⁶ might make classification and correlation possible.

Observation of the most notable cases among the dozen or so largest metropolitan areas indicates that transportation history has had more effect on shaping transportation networks than the present physical layout and characteristics of these areas. The older areas with strong CBD's and major transportation networks oriented to their CBD's experienced their periods of fastest growth between 1880 and 1920 or 1930. The effects of suburban railroads in those cities large enough to attract such service before 1920 are still strikingly clear. The "Main Line" suburbs of Philadelphia are a classic case. Manhattan was the scene of the first grade separated rail system. This system started a trend of residential and employment density which produced the world's largest rail rapid transit system and a city in which about 90 percent of the home to work trips even now are made on public transportation, a ratio far above any other U.S. city. The new cities of the south and west are the classic cities of the auto age. As these cities experienced their fastest growth in the period after 1920 (based upon mass use of the auto and availability of cheap land for tract housing), they emerged as classic "spread cities" — cities in which virtually all urban functions tended to spread and become auto dependent, and in which there often were no dominating central business districts.

Patterns of urban development established in the periods of fastest growth then appear to attain a momentum that carries on for many years, even after actual "needs" would appear to have changed. Washington, D.C., for instance, is one of the few cases in the United States where employment in the CBD is increasing, yet the trend toward dispersing suburban housing continues almost unabated. The tendency to continue in the ways of the past affects transportation as well as land development. The coastal strip in Palm Beach, Broward, and Dade Counties, Florida, has had a very rapid increase in density as 20 story apartment buildings and motel-hotel-shopping complexes crowd a strip less than five miles wide. All of this is served with a most conventional auto transportation system and very little bus service. While this system is blocked by congestion for several months a year, no alternative or addition has been seriously considered except by Dade County.

The General Motors research study *Classification of Metropolitan Areas for the Study of New Systems of*

Arterial Transportation is an attempt to establish similarities and, perhaps, causes and effects, or "good fits" and "bad fits," in urban transportation. The research objectives are clearly stated in the introduction from which the following passage is quoted:

Research Objectives: The intent, is to improve the state of the art of urban transportation planning through analysis of the similarities and differences between metropolitan areas of the United States with respect to their arterial transportation needs. This will aid the processes of designing or specifying transportation systems which best meet the needs of metropolitan areas in regard to commuter, crosstown, and other arterial transportation needs. . . .

The first and most important task was to identify those locations which would become large enough in area or population to warrant consideration for limited access arterial transportation facilities. Analysis of various existing localities indicated threshold parameters of 468,000 or more population and an area of 170 or more square miles. Projections to 1985 revealed there then would be 81 such localities. The similarities and differences of these 81 areas were then tested through factorial analysis of 53 variables which described a wide array of characteristics. The analysis showed that 15 factors, each consisting of a single variable representing a group of variables, accounted for 86 percent of the observed variations in the empirical data.

Applying recently developed statistical procedures, the 81 urbanized areas were divided into a number of

Figure I-2

PRELIMINARY CLASSIFICATION OF LARGE URBANIZED AREAS INTO GROUPS SUITABLE FOR APPLICATION OF TRANSPORTATION PLANNING CRITERIA

Areas Ranked By Representatives In Each Group (9-Group Level)

Group 1	Group 4	Group 6	Group 7	Group 9
(1) New York	1. Nashville	1. Milwaukee	1. San Jose	1. Omaha
	2. Memphis	2. Grand Rapids	2. Fort Worth	2. Davenport
Group 2	3. Birmingham	3. Cincinnati	3. Houston	3. Utica
(1) Chicago	4. Jacksonville	4. Syracuse	4. Phoenix	4. Duluth
(1) Los Angeles	5. Atlanta	5. Columbus	5. San Antonio	5. Lansing
	6. Charlotte	6. Akron	6. San Bernardino	6. Dayton
Group 3	7. Mobile	7. Toledo	7. San Diego	7. Youngstown
1. St. Louis	8. New Orleans	8. Rochester	8. Beaumont	8. Minneapolis
2. Boston	9. Knoxville	9. Cleveland	9. Dallas	9. Tucson
3. Detroit	10. Louisville	10. Hartford	10. El Paso	10. Wichita
4. Philadelphia	11. Norfolk	11. Albany	11. San Francisco	11. Madison
5. Pittsburgh	12. Honolulu	12. Bridgeport		12. Flint
6. Baltimore		13. Salt Lake City	Group 8	13. Albuquerque
7. Washington	Group 5	14. Wilmington	1. Fort Lauderdale	14. Newport News
	1. Kansas City	15. Sacramento	2. West Palm Beach	
	2. Oklahoma City	16. Buffalo	3. Miami	
	3. Denver	17. Worcester	4. Tampa	
	4. Portland	18. Richmond	5. Orlando	
	5. Seattle			
	6. Springfield			
	7. Indianapolis			
	8. Providence			
	9. Tulsa			
	10. Tacoma			

SOURCE: Golob, Canty, and Gustafson, *Classification of Metropolitan Areas for the Study of New Systems of Urban Transportation*, Research Publication GMR-1225 (Warren, Michigan: General Motors Corporation, August 7, 1972), p. 83.

test groups on the basis of similarities and differences and prepared in a manner which would improve the use of classifications for predictions. Specific efforts were made to reveal the effects of latent traits of urbanized areas.⁵⁷ The end result was a proposed grouping of the locations into either eight or nine categories, which statistically speaking, were homogenous and consistent.

Figure 1-2 presents the nine groups of cities. While all could justify grade separated arterial transportation services, the groups are ranked by degree of need for such services – that is, the relative proportion of total urban transportation which might occur on grade separated ways. Within each group, the cities are ranked in terms of their conformance with group norms, or their “typicality.”

Group 1 consists of a single, unique city, New York. It now has, and probably always will have, by far the highest proportion of all trips on public transportation among U.S. cities.

Group 2 consists of the next two largest cities in the U.S. It is not a very homogenous group as Chicago ranks second in present development of grade separated public transportation and Los Angeles has practically none. Although total population is similar, densities and density distributions are different. Work places are dispersed in both areas, although Chicago has a strong CBD. This group is not useful for transportation planning.

Group 3 comprises, with one exception, old industrial cities of the northeast with relatively strong CBD's and with well defined and populated industrial areas. The exception is Washington which, despite being a relatively new city, has strong concentration of work places in and near the CBD, like the others. In terms of both residential and transportation line haul densities, these cities are relatively homogenous.

Group 4 comprises, with only one exception, all of the older cities of the southeastern U.S. These now have or have had important industrial development, and all have relatively important CBD's. They now have a wide range of population and industrial functions. The “out-cast” is Honolulu, a city which moved around many times from one group to another during the analytical work and does not fit comfortably in any group. Relative density was the deciding factor for assignment to this group.

Group 5 comprises three medium sized cities of the northeast with relatively old infrastructure, plus larger and older cities of the middle west and the Pacific northwest. All of the latter have, or had, relatively strong CBD's and all have had important industrial

development, usually related to regional natural resources.

It is clear that in the case of groups 4 and 5, three factors are important: age, strong CBD, and an industrial base, although the latter now is of widely varying importance.

Group 6 comprises the medium sized cities of the northeastern U.S. and is the largest group. Although size and development history vary, these cities are of similar densities, and industrial cities clearly predominate. Salt Lake City is a relatively dense western city and Sacramento is relatively large, being one of three urbanized areas of over 1-million population in this category.

Group 7 comprises new cities of California and the southwestern U.S. While some have important industrial development, market and institutional characteristics tend to predominate. Three of these cities are actually components of large urban regions, San Jose, San Bernardino, and Beaumont, and are strongly impacted by their surroundings. The inclusion of San Francisco in this group is indicative of the need for refinement in the statistics.⁵⁸

Group 8 consists entirely of new cities of the motor age in central and south Florida, mostly with weak or non-existent CBD's. Three of these cities, in fact, form a single continuous strip development along the Atlantic coast from Palm Beach to the Florida Keys. As was noted earlier, this area presents challenging transportation planning problems which should be resolved on a regional basis.

Group 9 consists of medium sized cities (except for Minneapolis) in the area west of the Alleghenies (except for Newport News) and east of the Rockies (except for Tucson). They are a mixed group of older industrial and market center cities, plus some new cities of the motor age with very low densities and underdeveloped CBD's. Except for Minneapolis they are representative of the lower levels of population which met the test set in the GM study.

The above highlights the work to date of the GM study. The next stage in this analysis would be to relate the significant transportation characteristics to individual areas, and then to groups of urbanized areas, both on an areawide and a principal corridor basis. Obvious factors for analysis would include trips by different modes and for different purposes as related to residential density and relative dispersion of work places.

Yet, the most recent work on this approach by the Transportation Systems Center at DOT seems to indicate that *generalized metropolitan characteristics may not be useful in predicting which cities need or could establish successful rail rapid transit or other fixed guideway*

systems.⁵⁹ Site-specific factors are just too important.

In the absence of precise measurements, a few observations based on extended study of urban transportation may be made.

- Clearly the highest public transportation use is found in the large older cities where many grade separated facilities were put in place before 1930. Many of these are locations in which bodies of water restrict the number of approaches to the CBD and where severe bottlenecks occur in the use of autos.
- The use of public transportation is unquestionably made more effective and practical by relative concentration of work places into a few rather dense areas, and by the existence of dominant CBD's and other major activity centers. Conversely, dispersion of work places and weak CBD's are unfavorable to public transportation, and tend to be a result of the mass availability of autos.
- A relatively recent factor which could have a potentially strong impact on urban transportation choices is control of air quality — especially control of combustion emissions of all types. Yet, air quality is a resultant not only of the total volume of emissions but of meteorological and topographic conditions. Where pollution from fixed sources (such as heating, electrical generation, and smelting) is not extensive, vehicular emissions are troublesome only in a few cases of very large quantities of emission and of unfavorable local ventilation and temperature conditions. Denver, which has a low volume of total emissions compared to many larger cities, suffers from periodic temperature inversions which cause major deterioration of air quality. Washington, D.C., which has very little emission from fixed sources has very high volumes of motor vehicle traffic, and is a case where most of the public enforcement of reduced emissions will fall on automobile use. This type of situation will require more extensive public transportation and will act to increase the density of development and shorten average travel distances.

PROJECTED URBAN TRANSPORTATION NEEDS

The urban transportation literature is filled with statements of "needs" or "demands," usually expressed in terms of number of trips and then in estimates of the money amount of investments required to accommodate

the number of trips under one or more assumptions as to the use of alternative transportation systems. In practical terms these estimates represent reactions to congestion, responses to spreading urban development, and projections into the future of crudely observed past trends in urban transportation relationships. These reactions, responses, and projections are sometimes modified by assumed changes in the use of transportation modes, availability of modes, and land use and development policies.

Since the development of powered rail transport in the mid-19th century, and the development of road motor vehicles in the early part of the 20th century, urban development and urban transportation have been in a continuous state of rapid change — historically speaking. However, few significant surveys of facilities and needs were performed until after the first national report in 1955, and even then most have been in the very largest urban areas. Surveys generally were not performed in areas under 2-million until after 1962. Thus, we have no really comprehensive, empirically based view of the evolution of trip generation by purpose, by residential and job locations, by household description, or by relationships to the availability of autos. Regarding the last item, it should be noted that the cost of vehicles and fuel had been relatively stable, even trending downward, during the period of 1960-1972. In relation to other household expenditure objectives and to real income increases, the private automobile system was becoming less costly to the user. In view of current environmental and energy problems, it seems doubtful that this trend will continue.

Due to the lack of certain empirical data and careful comparative compilations of the data which exist, it is necessary to estimate the future range of aggregate urban transportation expenditures by projecting the relationships identified from existing plans onto other cities of similar size and density. The Institute of Public Administration has prepared such estimates for the decade 1970-1980. Originally prepared in 1969, these estimates were revised in 1971 and 1973. *Table 1-22* presents national estimates for public transportation services excluding any type of public street and highway construction.

A somewhat comparable survey was performed as part of the 1972 Transportation Survey by the U.S. Department of Transportation, and the results are reported in the department's *1972 National Transportation Report*.⁶⁰ The compiled "needs" from the surveys returned by the states, covering the period 1970-1990, totaled \$232,131-million — \$169,802-million being estimated for "highway needs" (exclusive of "local roads"

and interstate system completion costs), with \$62,329-million for public transportation. The department then presented a set of estimates assuming budgetary constraints ("Alternative III") for the period 1974-1990: total expenditures were \$127,129-million; highways, excluding local roads and completion of the interstate system, amounted to \$96,235-million; and public transportation was \$30,894-million. The latter figure would be consistent with the IPA estimate which is unconstrained by budgetary considerations. The DOT estimates are presented on the basis of population size of urban areas rather than by mode. The public transportation expenditures of \$30,894-million in the department's 1974-1990 program would be distributed as follows: large urbanized areas of over 2-million population, \$23,997-million; more moderate sized areas between 1 and 2-million, \$3,673-million; and all others, \$3,224-million.

SOME GOALS FOR TRANSPORTATION IN METROPOLITAN AND OTHER REGIONS

The traditional concept of balanced transportation has centered on the question of how many highways there should be for private automobiles in a specific urban area versus how many mass transportation lines. This concentration on modes has tended to overshadow consideration of how all the different transportation needs in an area can be met simultaneously, with effective and acceptable services, efficiency, economy, and minimal adverse impact on the community. This concluding section examines the present balance and how it needs to be changed to meet more fully the diversity of urban and regional transportation needs.

One of the popular charges against urban transportation as it presently exists in the large metropolitan areas is that it is "unbalanced" — either in favor of the auto or against public mass transportation. The substance of this charge is that the effects of public policies and expenditures for 40 years (from 1920 to 1960) were to make private auto transportation more attractive (comfortable, fast) and less costly to the motorist. These policies also provided a structure of prices and taxes which did not reflect the full economic and social costs of the service. The impact of the interstate highway program on certain urban areas, coupled with near collapse of commuter railroad services in the northeast, produced a wave of support during the years 1958-1962 for having the Federal and state governments "do

Table I-22

1970-1980 PROJECTED OUTLAYS TO MEET URBAN MASS TRANSPORTATION NEEDS¹ (Millions Of Dollars)

Rail Rapid Transit	\$25,060
Suburban Commuter Railroads	2,704
Busways (Fixed Facilities)	2,829
Buses (Fleet Trend And Replacements)	3,498
People Movers In Central Business District	523
Total	\$34,614
Additional Buses Due To Potential Expansions Of Exclusive Lane Or Busway Services	1,500
Total	\$36,114

¹Excludes street and highway construction and purchase of autos, trucks, and school buses.

SOURCE: Institute of Public Administration, Washington, D.C., estimates for the decade revised in 1973.

something." Since then a long series of policy statutes has been passed and money appropriated at both the Federal and state levels, and many cities have become active in financing public transportation.

This three level involvement in urban transportation is really quite new. For many years, Federal transportation policies and programs were concerned almost solely with the goals of interstate commerce — moving people and goods over long distances between cities rather than over short distances within cities. These interests were first reflected in Federal support for canals and railroads. Then, in the early part of this century (1916) when the automobile became popular, the highway program was started in rural areas largely to take care of farm-to-market needs. Before the Civil War, harbor and navigable waterways began to get attention from the U.S. Corps of Engineers. In 1946, a national airport program was started, but even now the emphasis remains on transportation between cities rather than within them.

Large scale Federal concern with the peculiar problems of urban transportation did not begin until it emerged as a side effect of the interstate highway system, first authorized in 1944 but not funded in a major way until 1956. By 1962, this concern had

developed to the point where urban planning was required before any more highways could be built in major urban areas. At about the same time, the first Federal transit programs were started, but substantial funding did not become available until 1970. It was not until 1974 that Federal transit programs were extended to small communities and rural areas.

So, there has been a long history of developing separate Federal transportation programs, but most of them were not designed to meet local community needs until very recently. State transportation programs have tended to follow the same pattern, and local governments, with their more restricted financial resources, have been reluctant to provide more than essential local access without Federal and state support. Consequently, in most urban areas, public transit remained the responsibility of private companies until quite recently, when disappearing profits made public takeover essential. And in most rural areas there has been no alternative to the private automobile except for the occasional intercity bus.

The current "balance" among transportation modes, then, is largely a result of historical accident. It was not planned; it just happened. Integrated urban transportation planning for multiple modes is now a Federal requirement, but it is too new to have produced many results. In rural areas, there is still no requirement for such planning.

In the past ten years, with very few local exceptions, there has been a continuation of previous declining trends in transit ridership. The 1972 transit ridership was below any year back to 1920. More precisely, it was 20 percent below five years ago, 30 percent below 1960 (12 years ago), and 48 percent below 1935. These data underscore the long term trend which current public efforts propose to reverse. The American Transit Association has testified that 1973 will have had the smallest decrease of any recent year and suggests that, coupled with gasoline shortages, the downward trend is bottoming out.⁶¹ But it will be years before it will be clear whether this is a real reversal.

Many urban studies completed since 1960 demonstrate that transportation in an urbanized area must be considered as a single system or network composed of many modes and facilities which may or may not be used interchangeably, depending on availability between any particular origin and destination. Resulting proposals for changing the present "balance" involve modifications in the roles or actions of various components of the urban transportation system. But seeking change means taking actions in the future. And the many uncertainties, which can be foreseen, must be

taken into account. It seems clear that the future will contain a variety of :

- technological developments which may improve on, or supplant, existing vehicle systems;
- changes in public attitudes about how urban land should be developed, used, and serviced;
- continuing increases in the total number of urban dwellers and concomitant increases either in the effects of congestion or in the spreading of traffic congestion to areas not now experiencing it;
- shifts in attitudes regarding the standards for air quality and other environmental quality measures, which may directly affect the modes in use and the role of particular vehicle systems; and
- changes in the costs and absolute availability of various energy sources – implying the need to adapt to an extended period of reduced use of one or more forms of energy such as gasoline.

In such a milieu, the "balance" among the modes of transportation will be a dynamic one – with the fulcrum continuously shifting. This is viewed as highly upsetting in many quarters, because many interests after all see "balance" as something fixed, which will guarantee a certain portion of both government and household budgets flowing continuously in specific channels. For example, the auto industry with its related services is one of the nation's largest economic agglomerations, and major shifts in its share of the urban and rural transportation markets could have serious economic consequences.⁶² So, changes in the balance among transportation modes may have unintended effects difficult to deal with.

Major Factors in Changing the Present Balance

If the "public" desires a change in the present balance of governmental efforts relating to each of the transportation modes, strong support will have to be provided for the newer, less well established intermodal planning and transit programs. Presumably the direction of change would be towards reducing the dependence on private automobiles and increasing the quality, quantity, and coverage of the various modes of public transportation, including taxi type services. Yet, automobile travel clearly is popular and people are quite satisfied to

use it even when the out-of-pocket costs, including tolls and parking, are much higher than public service alternatives. This suggests that, aside from stringent pollution controls or fuel restrictions which curb free choice, improvements in public transportation will have to approximate as many as possible of the following private auto service characteristics to attract riders:

- unrestricted choices in time of departure and in point-to-point travel routings;
- comparatively fast door-to-door travel times;
- high standards of physical comfort and individual privacy; and
- a cost to the user which seems reasonable for the service received.

Many of the dial-a-bus, dual-mode, subway feeder bus, personalized transit, fringe parking, and similar systems currently being developed and tested are efforts to respond to these criteria.

Special Needs for Transit Improvements in Urban Areas

Even for the majority of tripmakers in most urban areas who are able to use private autos, the transportation system is marred by its excessive use of physical space and fuel and by its high rate of air pollution. The excessive use of limited space is what causes traffic congestion, lengthens travel times, and raises the cost of convenient parking at many locations.

Yet the private auto system cannot be used by many urban tripmakers – often referred to as “transit dependents” or “captive riders.” Even in the United States, there is still only one car for every two people and a somewhat lesser ratio in the largest cities. For those without their own cars, the best alternative is often some form of car pooling – getting a ride with someone else who can furnish the precise transportation desired and provide the flexibility and comfort the auto alone has offered. This most often occurs within the family, the chauffeuring of school age children being one of the most common activities of housewives (despite the time and fuel it wastes). But, even so, a large number of people remain dependent upon public transit.

From the standpoint of public transportation finances, most “captive riders,” except those regularly employed, cannot pay their way. They do not ride regularly enough, and their destinations are too scat-

tered. Survey data indicate that the status of regular employment is the most important single factor in generating urban travel, while the ownership of an auto is the next most important. School students form one of the largest groups of transit dependents, but their use is often accompanied by fare discounts, lack of regular use in the summer months, and competition from school buses in many localities. The other major groups of transit captives are the elderly and other non-working adults. These groups include unemployed persons and those on welfare – now very numerous in some of the larger central city neighborhoods which were the basis of the route structure of traditional transit systems. In sum, all of the unemployed groups have a low per capita trip generation factor and low incomes – which are very sensitive to fare levels. And many have very dispersed travel patterns not oriented to central business districts and other major activity or employment centers traditionally served by transit.

The handicapped and elderly have generally not been well served by public transit because of physical as well as economic barriers. The need, however, to serve them better has now been recognized in Federal legislation,⁶³ making it likely that such service will improve. Nevertheless, there will be extra public costs involved, as well as many of the other problems of serving the “transit dependents.”

A major reason for the long standing decline in transit ridership is the combination of rising fares and the continuous erosion of service quality as headways are lengthened and routes are cut back to control costs. Not only do public transportation improvement programs have to provide a price-service package that will seem a reasonable alternative to an auto user, but they must provide a price-service package which appeals to the “captive riders” as worthwhile.

One solution to the urban transportation problem advocated by auto enthusiasts is to break up the large cities and thus reduce congestion by dispersal of dense residential and major activity centers. However, even if permitted by considerations relating to natural resource consumption, such dispersals are no answer for transporting riders who do not have access to autos. The relative cost for collective transportation services merely becomes higher.

A New Concept of Balanced Transportation

No single, fixed balance can be achieved among transportation modes in terms of availability of services which could be applicable to all urban areas, or even to

any substantial number of them. Each area is physically different, and each area's present transportation needs are different. And, of course, rural communities exhibit still different characteristics and needs.

Thus, appropriating so much for one mode and so much for another in Congress or a state legislature, which is the way public transportation resources are allocated now, makes little sense. Instead, the balance among the modes should evolve from the continuous planning process for an individual urban or rural area. Such a process should be designed to meet general standards for providing transportation services with the best combination of modes at any point in time. Such "performance" standards might include the following.

1. The system should provide for the efficient movement of people and goods, taking care to reduce conflicts between them.
2. It should be designed to meet peak demands where they occur at different times of the day, week, or month, to the extent this can be done efficiently.
3. Land use patterns – to the extent feasible – should be designed to minimize the peaks in vehicle usage, and other measures such as staggered work hours should be taken to reduce peak passenger movements.
4. The system should provide equal access by all segments of the population to jobs, services, and other opportunities, at affordable prices, with reasonable convenience, and substantial choice of modes and schedules.
5. It should provide for the safe movement of people and goods, while protecting non-traveling persons and property from damages caused by transportation facilities or activities.
6. It should curb adverse impacts on the environment.
7. It should minimize and compensate adequately for any displacement of residences or businesses caused by transportation improvements.
8. The transportation system should reinforce the areawide community development plan in terms of the location and sequencing of land conversion, economic growth, and public facilities.

9. The system should emphasize the most economical and energy conserving modes of transportation commensurate with reasonable standards of service.

10. It should provide the best transportation service possible within the limits of available financing.

Needless to say, all of these standards cannot be met either to their fullest extent or simultaneously. They are mutually exclusive to some degree. Yet, to borrow a mathematical concept, they can be considered together as an algebraic problem to be solved by simultaneous equations. This inevitably will produce a transportation system using a mixture of modes under sufficiently harmonious conditions to be considered as balanced.

Because the nation's urban areas are at the hubs of long distance travel between cities and its rural areas contain most of the natural and agricultural resources which keep the national economy running, areawide transportation planning for both urban and rural areas has a basic responsibility for linking up with, and accommodating the needs of railroads, ports, and airports. So, this planning must interface with all modes – whether intraurban, interurban, or rural.

Achieving Better Balance by Linking Planning and Implementation Programs

If the kind of balanced intermodal planning described above is to be effective, it must be linked directly to project implementation activities. Presently, the nation has neither the integrated planning needed nor the implementation linkages.

- Current planning for different transportation modes is frequently done by different organizations at different times, and the planning for land use and other non-transportation development features is frequently done by still other agencies at other times.

- On the implementation side, the state and local governments do part of the job while the Federal government provides much of the financial support needed along with various restrictions and incentives; special districts and authorities with considerable independence from the regularly constituted units of government perform still other implementation activities; and private companies

provide a great deal of the mass transportation and all of the long range common carrier transportation.

- Although there are a number of regulatory and Federal aid project review procedures designed to modify the independence of some of these action agencies, there is still more independence than coordination.

From these points, it is evident that the nation's transportation planning and implementation responsibilities are not now assigned organizationally in such a way that the transportation problems of urban and rural communities can be defined in terms of the above set of

integrated performance standards. There is just too much fragmentation to allow anyone to feel responsible for the whole system and to take on the job of balancing it to achieve the optimum combination of transportation services, efficiency, environmental protection, safety, and conservation of community values.

In the following two chapters these existing situations are examined—first the existing planning responsibilities in *Chapter II*, and then the present implementation responsibilities in *Chapter III*. *Chapter IV* examines what can be done about integrating these fragmented implementation activities, and presents the Commission's recommendations for achieving better balanced transportation in America's urban and rural communities.

Footnotes

¹ Advisory Commission on Intergovernmental Relations, *Substate Regionalism and the Federal System*, six volumes (Washington, D.C.: U.S. Government Printing Office 1973-74).

² Lyle Fitch and Associates, *Urban Transportation and Public Policy* (San Francisco: Chandler Publishing Company, 1964), p. 9.

³ *Newsweek*, January 18, 1971, p. 45.

⁴ These older systems were designed to (and still do) serve the residents within the city and not those traveling from the suburbs to the central business district (CBD). In contrast, the recent metros (e.g., BART and Washington Metro as well as proposals for Atlanta and Baltimore) are designed to serve primarily suburban commuters for their work trips into the CBD. These latter day systems are closer to the suburban rail systems of the 1920's than to the earlier rapid rail systems built in our larger cities.

⁵ The term public is used to refer to the right of the general public to have access to riding or use of the vehicle. It does not refer to ownership of the system, since there are both public and privately owned public transportation systems. Private transportation is generally used in this paper to refer to privately owned vehicles for which the user has total cost responsibility.

⁶ Historical data is drawn largely from a recent study by the Institute of Public Administration for the Urban Mass Transportation Administration, *The Present Condition and Characteristics of the Transit Industry and How They Evolved* (Washington, D.C.: Institute of Public Administration, 1971).

⁷ *Ibid.*, p. A-4.

⁸ U.S. Department of Transportation, Federal Highway Administration, *Highway Statistics, Summary to 1965* (Washington, D.C.: U.S. Government Printing Office, 1967), p. 12.

⁹ For example, small specialized van systems are more and more being organized by social service agencies to provide transport to the disadvantaged, who are (as noted earlier) frequently the "captive riders" of public transit systems.

¹⁰ Wilbur Smith and Associates, *Transportation and Parking for Tomorrow's Cities* (New Haven: Wilbur Smith and Associates, 1966), p. 54, especially *Figure 28*.

¹¹ Eric Mohr, "Urban Transportation Peaks and Work Schedule Innovations," in *Proceeding, Transportation Research Forum*, Volume XIV, No. 1 (Oxford, Indiana: Richard B. Cross Company, 1973).

¹² Department of Transportation, *1972 National Transportation Report* (Washington, D.C.: U.S. Government Printing Office, 1972), p. 189.

¹³ Wilbur Smith and Associates, *Transportation and Parking for Tomorrow's Cities* (New Haven: Wilbur Smith and Associates, 1966), p. 99 and especially p. 49.

¹⁴ *Ibid.*, p. 98.

¹⁵ Fitch, *Urban Transportation and Public Policy*, p. 10.

¹⁶ These data cover Buffalo, Milwaukee, New Orleans, Atlanta, and Detroit. See Institute of Public Administration, *Evaluating Transportation Controls to Reduce Motor Vehicle Emissions in Metropolitan Areas, An Interim Report*, prepared for the Environmental Protection Agency (Washington, D.C.: Institution of Public Administration, March 16, 1972), pp. 4-8 ff.

¹⁷ National Capital Regional Transportation Planning Board, *Current Planning on the Outer Beltway*, Information Report Number 14 (Washington, D.C.: Council of Governments, December 1968), p. 5.

¹⁸ U.S. Bureau of the Census, *County and City Data Book, 1972*, (A Statistical Abstract Supplement) (Washington, D.C.: U.S. Government Printing Office, 1973), Table 1A.

¹⁹ *Ibid.*, p. xxxvii.

²⁰ Benjamin O. Davis, Jr., Assistant Secretary for Environment, Safety, and Consumer Affairs, Department of Transportation, *Testimony, Before the Senate Special Committee on Aging*, February 29, 1974 (Washington, D.C.: U.S. Government Printing Office, 1974).

²¹ U.S. Bureau of the Census, *Statistical Abstract of the United States: 1972* (Washington, D.C.: U.S. Government Printing Office, 1972), p. 840.

²² U.S. Department of Transportation, Federal Highway Administration, *Nationwide Personal Transportation Study, Report Number 9, Mode of Transportation and Personal Characteristics of Tripmakers* (Washington, D.C.: Federal Highway Administration, 1973), Table 1, Appendix C.

²³ *Statistical Abstract of the United States: 1972*, Table 36, p. 31.

²⁴ *1972 National Transportation Report*, p. 69 ff.

²⁵ *Ibid.*, p. 68.

²⁶ *Ibid.*

²⁷ *Statistical Abstract 1972*, Table 121, p. 81.

²⁸ Tri-State Transportation Commission, *Regional Profile: Freight Traffic*, Volume 1, No. 1 (New York: Tri-State Transportation Commission, June 1966), p. 4.

²⁹ Wilbur Smith and Associates, *Motor Trucks in the Metropolis* (New Haven: Wilbur Smith and Associates, August 1969), Table 2, p. 14.

³⁰ Port of New York Authority, *Trans-Hudson Vehicular*

Origin and Destination Survey, Annual Report (New York: Port of New York Authority).

³¹Wilbur Smith and Associates, *Motor Trucks in the Metropolis*, p. 50 ff., especially see Figures 18 and 19.

³²*Ibid.*, p. xi.

³³City of New York, Department of Traffic, *A Study of Trucking Problems in the Garment District*, prepared by Edwards and Kelcey, February 1961, see pp. 5 ff.

³⁴Wilbur Smith and Associates, *Motor Trucks in the Metropolis*, Table 18 and pp. 54 ff.

³⁵New York Department of Traffic, *Trucking Problems*, pp. 5 ff.

³⁶Wilfred Owen, *The Accessible City* (Washington, D.C.: The Brookings Institute, 1972), p. 61.

³⁷Owen, *The Accessible City*, p. 50.

³⁸*Ibid.*, p. 56.

³⁹*Ibid.*, pp. 56-57.

⁴⁰Vincent Ponti, "Transportation and Its Environment", Fourth International Urban Conference, *Official Proceedings* (Pittsburgh: International Urban Conference, 1969), p. 38.

⁴¹U.S., Congress, Senate, Committee on Agriculture and Forestry, 93rd Congress, 1st Session, *The Immovable Feast: A Series of Papers Examining the Growing Crisis in Rural Transportation* (Washington, D.C.: U.S. Government Printing Office, 1973).

⁴²U.S. Department of Agriculture, Economic Research Service, Chapter 6, "Transportation and Rural Development," *Transportation in Rural Areas* (Washington, D.C.: U.S. Government Printing Office, 1974).

⁴³*Ibid.*, Chapter 7, "Transportation of People in Rural Areas."

⁴⁴U.S., Congress, House, 93rd Congress, 2nd Session, *Transportation and the New Energy Policies (Truck Sizes and Weights)*, Hearings before the Subcommittee on Transportation of the Committee on Public Works, Series No. 93-H28, Part 2 (Washington, D.C.: U.S. Government Printing Office, 1974).

⁴⁵*National Recreational Access Study*, Volume I "Summary Report," prepared for the U.S. Department of Transportation and Interior by YTN Consolidated, Inc. (Irvine, California) in association with Midwest Research Institute (Kansas City, Missouri) under contract with the Office of Environmental Affairs, Office of the Secretary, U.S. Department of Transportation (Washington, D.C.: U.S. Government Printing Office, November 1974).

⁴⁶Advisory Commission on Intergovernmental Relations Chapter VI, "The Non-Metropolitan Governmental Pattern," *The Challenge of Local Governmental Reorganization* (Washington, D.C.: U.S. Government Printing Office, 1974), pp. 111-125.

⁴⁷Advisory Commission on Intergovernmental Relations, Chapter VIII, "Districting in Non-Metropolitan Areas," *Regional Decision Making: New Strategies for Substate Districts* (Washington, D.C.: U.S. Government Printing Office, 1973), pp. 253-276.

⁴⁸Timothy James Powell and Brian William Gower-Roberts, "An Examination of Alternative Patterns of Development in Rapidly Growing Cities" (based on World Bank Bogota Study), unpublished article for Transportation and Road Research Laboratory, London, England.

⁴⁹Michael L. Dworkin, "Planning for Airports in Urban Environments", *The Urban Lawyer*, Vol. 5, No. 3 (Summer 1973), pp. 472-503.

⁵⁰Howard, Needles, Tammen and Bergendoff, and others, *I-66 Corridor Transportation Alternates Study: Draft Environmental Impact/Section 4 (f) Statement* (Alexandria, Virginia: Howard, Needles, Tammen, and Bergendoff, and others, November 1973).

⁵¹Institute of Public Administration, *Interim Report: Evaluating Transport Controls to Reduce Motor Vehicle Emissions in Metropolitan Areas* (Washington, D.C.: Institute of Public Administration, March 1972).

⁵²Report of the Panel on Noise Abatement, Commerce Technical Advisory Board, *The Noise Around Us: Findings and Recommendations, 1970* (Washington, D.C.: U.S. Government Printing Office, 1970).

⁵³Alexander Granz, *Emerging Patterns of Urban Growth* (Cambridge, Massachusetts: Massachusetts Institute of Technology, January, 1969).

⁵⁴John L. Crain, *The Reverse Commute Experiment: A \$7-Million Demonstration Program*, SRI MSU-598, prepared for the Urban Mass Transportation Administration (Menlo Park, California: Stanford Research Institute, 1970), especially see pp. 25 ff. for conclusions.

⁵⁵1972 *National Transportation Report*, pp. 62 ff.

⁵⁶Golob, Canty and Gustafson, *Classification of Metropolitan Areas for the Study of New Systems of Urban Transportation*, Research Publication GMR-1225 (Warren, Michigan: General Motors Corporation, August 7, 1972).

⁵⁷Golob, Canty and Gustafson, *Classification*, pp. 17-19 and 24-28.

⁵⁸Work currently underway at DOT's Transportation Systems Center in Cambridge, Massachusetts, is highlighting defects in the presently used "urbanized area" definitions. Major improvements of these types may be needed for transportation planning purposes.

⁵⁹Report to the Secretary of Transportation from the administrator of UMTA, dated April 30, 1974.

⁶⁰Pp. 248-249.

⁶¹Testimony of L. Ronis, Vichr. ATA Legislative Committee, before U.S. Senate Public Works Committee, December 11, 1973.

⁶²"Selected Highway Statistics for 1972", U.S. Department of Transportation, Federal Highway Administration, indicates 53.6 percent of all vehicle-miles of travel occur in urban areas as defined by the Bureau of the Census.

⁶³*Older Americans Act, Amendment of 1973*, and *Federal Highway Act of 1973* — including changes in UMTA requirements.

METROPOLITAN PLANNING FOR TRANSPORTATION AND RELATED MATTERS: EMERGING CAPABILITIES AND COMPREHENSIVENESS

Metropolitan planning is a relatively new activity in the United States. Only two decades of experience with it can be found in most of the nation's metropolitan areas. Such planning, then, is still evolving in both theory and practice.

Metropolitan planning is usually considered to be of two types: comprehensive planning and functional planning. The functional planning, and especially that in the field of transportation, is more fully developed and frequently is carried out in much greater detail than comprehensive planning. Nevertheless, most would agree that functional planning should be pursued as an integral part of the comprehensive planning process. Most observers also agree that if metropolitan planning is to be worthwhile, it must have a direct and significant — even demonstrable — influence upon the implementation of projects and programs within the metropolitan area. But, despite consensus on these two points, the linkages between comprehensive and functional planning on the one hand, and between metropolitan planning and implementation activities on the other, are still quite weak.

The reasons for such weak linkages are more difficult to unravel than some would concede. One reason, undoubtedly, is the institutional setting within which metropolitan planning takes place. On the other hand, the planning profession itself has not fully developed metropolitan planning processes adequate to provide these linkages even if the institutional framework were available to support them. Witness the plight of areawide comprehensive planning in some of those few metropolitan areas that possess reorganized governments. It might be argued that if the metropolitan institutions were such that they would demand these linkages, the necessary planning process would be developed. But this identifies a “chicken and egg” dilemma. What seems certain is that both ingredients — adequate metropolitan institutions and adequate planning capabilities — are necessary, and that both must be improved simultaneously if success is to be achieved.

The twofold purpose of this chapter is (1) to trace the development of metropolitan planning as an activity and evaluate its current capabilities, and (2) to provide a profile of current metropolitan institutions for areawide planning in general and for metropolitan transportation planning in particular. This double barreled analysis will lead to conclusions about the improvements in metropolitan planning processes and institutions which might be necessary to equip metropolitan transportation planning for the task of guiding related implementation activities.

A BRIEF HISTORY OF METROPOLITAN PLANNING

The history of metropolitan planning in the United States is divided roughly into three eras. After the early growth of comprehensive metropolitan planning through local initiative and later Federal support (1920-1960), the 1960's saw a proliferation of Federally encouraged functional planning programs which fragmented the metropolitan planning scene by establishing overlapping planning requirements, and by promoting several separate areawide planning organizations within most metropolitan areas. By the end of the 1960's, this development had led to substantial efforts to coordinate these separate metropolitan planning efforts. Each of these eras merits some examination.

Early Growth of Comprehensive Metropolitan Planning

Comprehensive metropolitan planning as it is known today was first introduced around 1920 in the New York metropolitan area by a private organization, the Regional Plan Association. The plan prepared by this organization was quite comprehensive in its coverage of physical, economic, and social factors. In fact, it still stands today as an example of good thorough planning for a whole area encompassing multiple jurisdictions.¹

At about the same time, county planning began to be authorized by the states.² In many cases even today, such planning is broad enough in geographic terms to cover whole metropolitan areas. A little later, city-county planning commissions began to appear, and then the currently more common multijurisdictional metropolitan planning commissions representing two or more cities and/or counties emerged. Rapid growth of multijurisdictional metropolitan planning commissions began in the 1950's (see *Table II-1*). These commissions, usually established under state enabling legislation, were charged with preparing "comprehensive" regional plans. For the most part, such plans dealt with physical development patterns and supporting public facilities.

Beginning in the middle 1950's a few metropolitan areas began to establish councils of governments directly sponsored by the local governments of the area.³ But it was not until 1965, when the Federal government began to show preference for such councils in its planning assistance programs that they experienced real growth (see *Table II-1*). The chief distinction between a council of governments (sometimes referred to as a regional council or COG) and a metropolitan or regional planning

Table II-1

GROWTH OF REGIONAL COUNCILS, BY TYPE OF COUNCIL

	1954	1960	1965	1967	1969	1970
COG's	1	13	35	103	146	223
RPC's	10	43	126	216	248	253
Totals	11	56	161	319	394	476

SOURCE: National Association of Regional Councils, *Regionalism: A New Dimension in Local Government and Intergovernmental Relations* (Washington, D.C.: 1971), p. 6.

commission (RPC) is that a COG is composed primarily of elected officials from general purpose local governments, while the planning commission is composed of non-elected officials and citizen appointees for the most part. Because of Federal guidelines in the HUD program of comprehensive planning assistance (the so-called "701" program),⁴ most metropolitan planning commissions have either combined with the COG in their area, or changed their composition so that they are now a regional council themselves. All metropolitan areas now have an areawide planning commission or regional council, most of which are funded with HUD planning money and designated by OMB as "A-95" Federal aid review and comment clearinghouses. In 255 of these 263 areas the same organization has been designated by both HUD and OMB, while different organizations have been designated for these two functions in only five cases.⁵

The Era of Functional Specialization in Metropolitan Planning

Yet, this is not the whole story of metropolitan planning in the United States. By 1973, there were 17 Federal programs in addition to 701 and A-95 that could provide planning assistance or standards, or other financial assistance, to metropolitan organizations for purposes of carrying out special purpose Federal program objectives.⁶ None of these programs, which are listed and described in *Table II-2*, existed before 1961. Their enactment produced a new era of functional specialization in metropolitan planning.

As is evident from *Table II-2*, three of the special purpose Federal grant programs available to metropolitan organizations — airport systems planning, urban

mass transportation planning, and comprehensive urban transportation planning — are for transportation planning purposes. Through these three programs, the Federal government assured transportation planning a prominent position as a functional specialty separately identified and embodied in virtually all metropolitan planning processes. Of the 156 metropolitan regional councils reporting in a 1972 survey, transportation policies were the fourth most commonly adopted type, being present in 80 percent of the cases.⁷ The three types of metropolitan policies adopted even more commonly — land use, water-sewer, and open space — like transportation, are also subject to Federal aid planning requirements. Although the Federally supported comprehensive urban transportation planning is not always done by an area's regional council, such planning is now underway in all metropolitan areas identified in the 1970 Census.⁸

While most of the special purpose Federal aids to metropolitan areas require metropolitan planning, most (as shown in *Table II-2*) also have the potential for creating separate metropolitan organizations to carry out their purposes. In many cases, these separate organizations may be special purpose non-profit corporations having responsibilities only for planning — not for implementation of the planned programs. The three programs which do not create new metropolitan organizations — open space, water-sewer facilities, and new communities — are implementation programs designed to assist existing units of local government and developers; they focus on the metropolitan level only through a planning requirement. A 1972 survey of regional councils showed an overall average of 5.6 Federally supported areawide programs in each metropolitan area, 49 percent of them operating within the general purpose regional council and the remaining 51 percent operating outside of the council in other organizations.⁹

Against the general pattern of *ad hoc* advisory planning, three programs — Appalachian local development district assistance, areawide waste treatment management, and comprehensive services for older Americans — are oriented toward areawide metropolitan public agencies having both planning and implementation abilities. Although these programs are in the minority, they do establish a precedent for Federal guidelines which link planning and implementation within the same metropolitan organization.

The three transportation planning programs in this list of Federal metropolitan aids do not uniformly require metropolitan planning, and they are not tied directly to implementation activities (see *Table II-2*). Airport systems planning, which most commonly is done at the state level, is not required at the metropolitan

level. However, grants for metropolitan airport planning may be, and in a few cases have been, made to metropolitan planning organizations. In such cases, a general purpose public agency is preferred, but it need have only planning authority. Both of the other transportation planning programs — urban mass transportation planning and comprehensive urban transportation planning — require both metropolitan planning and metropolitan organizations meeting DOT certification requirements in any area where the related Federal implementation funds are to be used. While the mass transportation program has preferred general purpose planning organizations for this purpose for some time, the comprehensive urban transportation planning program showed no such preference until late in 1973 when as a result of the *1973 Highway Act*, DOT asked the governor of each state to designate a single general purpose metropolitan planning agency in each area to perform the required planning under all three of its planning assistance programs. In each case, non-profit corporations are acceptable and they need have only planning authority. Thus, none of the three Federal aid, transportation planning programs is oriented at present toward institutionalizing transportation planning in a general purpose public agency with implementation authority as well as planning responsibilities.

This recent phase of metropolitan planning history, then, can be summarized in this fashion: virtually all metropolitan areas in the nation now have broad, general purpose planning programs being carried out by regional councils or metropolitan planning organizations, but they are overlaid by a variety of more or less coordinated functional metropolitan planning programs, most of which have little direct relationship to action programs.

Recent Attempts to Coordinate Comprehensive and Functional Elements of Metropolitan Planning

Recognizing that the functional specialization in metropolitan planning has fragmented authority by placing it in competing and overlapping metropolitan organizations, the state and Federal governments have begun to consolidate metropolitan (as well as non-metropolitan) regional planning programs. The primary means of doing this so far have been (1) to establish statewide systems of substate districts, (2) to give the resulting areawide district organizations or previously existing regional bodies Federal aid review powers and other coordinative planning responsibilities, and (3) to designate these bodies for as many Federal and state areawide

Table II-2

**SELECTED CHARACTERISTICS OF FEDERAL AID PROGRAMS
AFFECTING METROPOLITAN PLANNING: 1973**

Name Of Program	Year First Enacted	Requirement For Metropolitan Planning		Potential For Creating Metropolitanwide Organization		Type Of Organization Required		Legal Status Of Federally Encouraged Metropolitan Organization			Type Of Authority Required In Metropolitan Organization	
		Yes	No	Yes	No	General Purpose	Special Purpose ⁴	Public Agency	Public Or Non-Profit	Co-ordinating Committee	Planning Only	Planning Depends And Upon The Implementation Project
1. Air Pollution Control	1967		X	X			X ⁵	X ¹				X ⁷
2. Airport Systems Planning	1970		X	X		X		X			X	
3. Appalachian Local Development District Assistance	1965	X		X		X			X ²			X ⁸
4. Areawide Comprehensive Health Planning	1966	X		X			X		X		X	
5. Areawide Waste Treatment Management	1972	X		X			X		X			X ⁹
6. Community Action	1964		X	X			X		X			X
7. Comprehensive Services For Older Americans	1973	X ⁶		X			X		X			X ¹⁰
8. Comprehensive Urban Transportation Planning	1962	X		X		X ¹²			X ³		X ¹¹	
9. Economic Development Planning	1965	X		X			X		X		X	
10. Law Enforcement Planning	1968	X		X			X			X	X	
11. Manpower Planning	1968 ¹³		X ¹⁴	X		X ¹⁵		X ¹⁵				X ¹⁵
12. New Communities	1965		X		X							
13. Open Space	1961	X			X							

Table II-2 (Cont.)

Names Of Program	Year First Enacted	Requirement For Metropolitan Planning		Potential For Creating Metropolitanwide Organization		Type Of Organization Required		Legal Status Of Federally Encouraged Metropolitan Organization			Type Of Authority Required In Metropolitan Organization		
		Yes	No	Yes	No	General Purpose	Special Purpose ⁴	Public Agency	Public Or Non-Profit	Co-ordinating Committee	Planning Only	Planning And Implementation	Depends Upon The Project
14. Regional Medical Program	1965	X		X			X		X			X	
15. Solid Waste Planning Grants	1965		X	X			X		X				X
16. Urban Mass Transportation Planning	1964	X		X		X			X		X		
17. Water-Sewer Facilities	1965	X			X								
TOTALS		11	6	14	3	5	9	3	10	1	6	7	1

¹A coordinating committee is acceptable in interstate areas.

²Preference is for a public agency.

³A coordinating committee is also acceptable, although unusual.

⁴Organization for carrying out the programs marked in this column may be general purpose or multifunctional, in some cases, and they may have policy boards composed partially of local elected officials, but they do not have to be general purpose in scope. Other general purpose areawide organizations may exist along side these special program organizations.

⁵These regions are seldom funded as separate organizations. Most grants go to the regular general purpose units of state and local government.

⁶For only those metropolitan areas designated by the states.

⁷Planning only in interstate areas.

⁸Implementation may be only in the sense of administrative support of development activities.

⁹While planning and implementation may be done by different organizations, the approved plans control the implementation projects.

¹⁰All implementation funds are provided to the metropolitan organization and used directly or passed on to the action agencies in accord with the area plan approved by the state.

¹¹The 1973 Highway Act gives the comprehensive urban transportation planning organizations approval authority over new segments of the "urban system" of highways, but these systems do not constitute the bulk of planned transportation facilities.

¹²The Federal preference for a general purpose organization was applied to this program late in 1973.

¹³Major new legislation passed in 1973 which dropped the previous requirement for metropolitan planning in favor of more directly involving the major general purpose local governments having implementation powers, but areawide consortiums of such units are still encouraged.

¹⁴An additional 10 percent is added to funding where a consortium of eligible local governments is formed encompassing at least 75 percent of the area's work force.

¹⁵All eligible local governments are general purpose public bodies with powers to implement as well as plan, but some consortiums actually may be special purpose units serving a middleman role subordinate to those general purpose governments.

program purposes as possible in preference to establishing separate single purpose bodies for new programs.

Statewide systems of substate districts are appropriate because regional planning on a multijurisdictional basis has been taking place in non-metropolitan as well as metropolitan areas.¹⁰ This non-metropolitan planning has been encouraged by many of the same Federal programs described above, plus five others sponsored by the U.S. Department of Agriculture.¹¹ Between the metropolitan and non-metropolitan programs of the Federal government, every state in the union has been affected by the regional planning movement, and 45 of the states have reacted by developing statewide systems of substate districts.¹² Regional planning organizations have been established or recognized for approximately 60 percent of the 523 substate districts.¹³

The two most common goals of the statewide systems of substate districts are: to coordinate state activities and Federal aid programs in a given region through a single planning organization, or at least to make the planning for each program comparable through the use of the same geographic district and basic data, and to reorganize and coordinate state agency administrative planning districts so that they conform to each other and to the locally based regional planning programs. These goals are sought by the states as they (1) establish the district boundaries, (2) give official recognition to the substate district organizations, (3) vest these organizations with public agency status, (4) designate the local jurisdiction membership, (5) strengthen the regional organization's financial base, and (6) delegate state planning responsibilities, where feasible, to the regional organizations. These goals have not yet been reached in many cases, largely because most of the substate district systems have existed only a few years. Yet continuing state efforts to attain these objectives are still underway.

One dilemma which has arisen in the creation of statewide systems of substate districts is the question of whether to separate metropolitan areas from their rural hinterlands, or to combine urban and rural areas into a small, more manageable number of substate districts using a growth center concept. Both approaches have been used.¹⁴ In a few states, the dilemma has been solved by establishing larger districts, but allowing metropolitan subdistricts within them.

Most of the substate districting activity has occurred since January 1967 when the U.S. Office of Management and Budget (OMB) issued Circular A-80. This circular urged the use of common boundaries and planning resources in regions supported by Federally supported areawide programs. It was superseded in 1969 by Part IV

of Circular A-95, which provided the governors a review role over the establishment of new districts and established the policy that Federal districts should conform to state districts where they have been established. This followed the precedent established by a few states, like Georgia, which already had established substate district systems. The National Governors' Conference, HUD, and EDA have all played major roles in helping to spread statewide systems of substate districts throughout the nation. As recently as October 1971, Vice President Agnew wrote to all the governors inviting them to work with OMB and the Federal Regional Councils to conform the boundaries of the Federally encouraged multicounty districts to state established substate district boundaries.

Yet, even as the programs of Federal aid to metropolitan areas have focused primarily upon establishing areawide organizations having only planning responsibilities, most of the substate districts established by the states have an equally limited role. Most have advisory authority, hence they must be content with reviewing and commenting upon implementation projects in the context of existing planning. The A-95 Federal aid review and comment mechanism is the primary means for carrying out this role.¹⁵ In a few states, this same type of advisory review has been extended, by state legislation, to include certain state and local projects not involving any Federal funds.¹⁶ But, in almost every case, the Federal, state, or local agency receiving the metropolitan planning agency comments are free to act independently. With this kind of role, the quality of the planning and the ability of the planning agency to persuade action agencies that they should comply voluntarily with metropolitan plans is the key to the usefulness of such plans. Too often, this has not been enough; the metropolitan plans have gone unheeded and the effort put into preparing them has been largely wasted.

The Metropolitan Council of the Twin Cities (Minneapolis-St. Paul, Minnesota) is the only general purpose metropolitan planning agency whose state legislative base gives it the authority to make binding decisions in its review of projects of certain action agencies within its area.¹⁷ Moreover, there are some consolidated or federated city-county governments — Miami-Dade, Nashville-Davidson, Jacksonville-Duval, and Indianapolis-Marion — which cover most if not all of their metropolitan areas and join at least some of their planning and implementation functions within a single government.¹⁸ And there are also a few municipalities which, through annexation, provide a single government

basis for metropolitanwide integration of planning and implementation.¹⁹

These models, however, are neither perfect nor universally applicable. For example, while the Twin Cities Metropolitan Council and Metropolitan Dade County have both been designated as the official transportation planning bodies for their areas, the Tennessee Department of Highways acts on behalf of Nashville-Davidson for this purpose, and separate county planning agencies have the responsibility in Jacksonville and Indianapolis.

Actually, the use of separate planning bodies is still quite common among both cities and counties, quite apart from the question of metropolitan jurisdiction.²⁰ Planning was one of the focal points of the "good government" reforms at the local level which occurred during the early 1900's.²¹ It started as a citizens' movement, and gradually "watchdog" planning commissions were established by law to keep the cities and counties "honest." Not until the last two decades has there been a substantial movement to place the planning staffs within the departmental structures of local government, subject to chief executive direction and close association with city and county governing bodies. In most cases where this unifying transformation has occurred, the planning commissions have been retained as citizen advisory bodies reporting to the elected executive or local governing body, but they are no longer independent decisionmakers.

At the metropolitan level, planning appears to be in the second stage of this evolution in most places, having progressed from a citizens' organization for good government, to an accepted unit of government. But, except for the few cases cited above, there are no metropolitan governments to which metropolitan planning bodies can report, or of which they can be made a part. Even in single county metropolitan areas where the county could logically become a strong areawide government, this has not often happened.²² Consequently, important opportunities for a general purpose metropolitan planning body in putting across an areawide point of view has come to include reporting to the state legislature (with legislative proposals) and to Federal agencies (with A-95 Federal aid project reviews). This has become every bit as important (if not more so in some cases) as reporting to their constituent cities, counties, and special districts because these subunits often lack the geographic or functional breadth to appreciate, or be capable of accommodating, the metropolitan point of view.

The lack of direct linkages between metropolitan planning and transportation implementation units then is not unique. It reflects a general situation which applies

to almost all metropolitan planning regardless of type. Attempts up to now to coordinate the several, still separate metropolitan planning processes in most areas and to link coordinated planning with action programs have been only partially successful at best.

THE DEVELOPING CONTENT OF METROPOLITAN PLANNING

This brief history of metropolitan planning has indicated that metropolitan planning has been around in one form or another for two decades or more and that Federal aid planning requirements have been a major factor in determining the contents of this planning. *Table II-2* showed the 17 Federal programs with metropolitan planning ramifications and these cover almost the full range of physical development programs (including transportation), as well as a significant sampling of human resource programs. With the so-called 701 comprehensive planning assistance program of HUD and the A-95 project review and comment program of OMB, 19 of these programs now affect in some way the type of planning that is being done in the nation's metropolitan areas.

Table II-3 shows that 17 of these 19 programs require either comprehensive planning or functional planning or both at the metropolitan level. Eight of these include a comprehensive planning requirement, while 14 include functional planning, and six include grant packaging on an annual basis of all Federal funds to be requested from a given program to implement the planning done under the applicable Federal requirements. This grant packaging requirement amounts to a partial capital improvement program within a larger multi-year program for total Federal, state, and local capital expenditures. For the most part, the 14 programs with functional planning requirements demand multi-year project programming as one element. Since these plans are prerequisite to the allocation of Federal funds in metropolitan areas for the related projects, programming is generally done by metropolitan planning agencies. Fourteen of these 19 programs require that their planning be coordinated with other related planning efforts in the area, and 13 require that such plans be updated either continuously or on an annual basis.

In addition to their functional planning requirements, all 19 programs are subject to governmentwide requirements for A-95 review and comment, non-discrimination in the impact of implementation projects, and the analysis of environmental impacts. Backing up these general governmentwide requirements, ten of the programs specifically include procedures for assuring

Table II-3

SELECTED CHARACTERISTICS OF FEDERALLY REQUIRED METROPOLITAN PLANS: 1973

	Comprehensive And/Or Functional Planning Required ¹	Coordinate With Related Planning Specifically Required ²	Updating Of Plans Required Continuously Or Annually ³	Civil Rights Requirements Explicitly Specified ⁴	Environmental Requirements Explicitly Specified ⁶	Citizen Participation Specifically Required ⁷
19 Federal Areawide Programs Available In Metropolitan Areas	17 ⁸	14	13	10	14	14
Airport Systems Planning	X ⁵	X ⁵			X ⁵	
Comprehensive Urban Transportation Planning	X	X	X	X	X	X
Urban Mass Transportation Planning	X	X	X			X

¹ACIR, *Regional Decision Making*, Table VI-22.

²*Ibid*, Table VI-11.

³*Ibid*, Table VI-23.

⁴*Ibid*, Table VI-24.

⁵If metropolitan planning is undertaken. National planning will suffice; metropolitan airport systems planning is not required and is seldom undertaken by metropolitan organizations. State airport systems planning, like its metropolitan counterpart, is advisory to FAA.

⁶*Ibid*, Table VI-25

⁷*Ibid*, Table VI-26.

⁸Eight include comprehensive planning, while 14 include functional planning, and six include grant packaging.

non-discrimination, and 14 specify how environmental impacts are to be dealt with. An additional requirement for citizen participation has been imposed in 14 of the programs.

Against this general background of Federally imposed metropolitan planning requirements, *Table II-3* shows how the three Federal aid transportation planning programs compare. The comprehensive urban transportation planning program required by the *1973 Highway Act* has all of the elements cited above. The urban mass transportation planning program has no special requirements in the civil rights and environmental fields, but has all of the other characteristics mentioned.²³

Federal aid airport systems planning is a little different, in that it is not required at the metropolitan level. Statewide planning done by the state aviation agency is not even required, though it may receive Federal assistance. Assistance for metropolitan systems

planning is offered at the discretion of the state and Federal authorities. Where such planning is undertaken, it must include functional planning and programming which is adequately coordinated with related comprehensive and other functional planning. Any metropolitan planning must be prepared as part of a statewide planning effort. FAA recommends continuous updating of both the state plans and the metropolitan plans, but this is not required and there is no regular Federal assistance for it. Environmental impact elements are required of the metropolitan airport systems plan, but there are no special requirements for non-discrimination or citizen participation.

Obviously, some lack of uniformity in content and form exists among the three Federal aid transportation planning programs. Nevertheless, there are precedents in the transportation field for meeting all of the Federal planning specifications which have been instituted by

Federal areawide planning programs. And there is now a major effort underway to establish intermodal transportation planning in metropolitan areas which is expected gradually to bring about more uniformity.

The Range of Adopted Planning Policies

Federal planning requirements are sometimes on the books for many years before they produce real results in the field. Hence, for each of the functional areas requiring metropolitan planning, it is pertinent to ask how much of this planning is actually going on?

Table II-4 shows that a good deal of it is actually

going on. Those programs in the physical development field have produced an 80 percent or better incidence of adopted planning policies. Transportation planning, including the highway and transit functions, is among these programs and has achieved the 80 percent level of adoption among regional councils, despite the fact that many of the official metropolitan transportation planning agencies are not regional councils themselves. Solid waste planning has reached a 63 percent adoption level despite the absence of a mandatory requirement for such planning and all of the other physical planning programs supported by the Federal government at the areawide level (except for air quality planning) fall in the 40 to 50 percent range.

Table II-4 shows that in the human resources area where functional planning has been required much more recently, between 7 and 39 percent of the regional councils have adopted policies. The point here, however, is that even in such functional planning as drug abuse control, the aged, the unemployed, the poor, and youths, where planning theory is less fully developed and where programs are relatively new, there are regional councils in existence which have brought their planning to the point where it has served as the basis for adopting program policies. Moreover, 26 percent of the regional councils reporting have adopted anti-discrimination policies. Over three-quarters of the regional councils provide staff support for citizen participation activities, and more than one-third make use of officially appointed citizen advisory committees (see Table II-5).

Table II-4

TYPES OF PLANNING POLICIES ADOPTED BY METROPOLITAN REGIONAL COUNCILS: 1972

Program Areas	Number Of Councils	Percent Of All Councils
Total, All Metropolitan Councils Reporting	156	100
Physical Development		
Water-Sewer	141	90
Land Use	135	87
Open Space	127	81
Transportation	125	80
Solid Waste	98	63
Housing	76	49
Economic Development	75	48
Airport	73	47
Resource Conservation	64	41
Air Quality	26	17
Human Resources		
Health	61	39
Law Enforcement	60	38
Manpower	44	28
Antidiscrimination	41	26
Drug Abuse	26	17
Aged	25	16
Unemployment	15	10
Fiscal Disparity	16	10
Antipoverty	13	8
Youth Programs	11	7
Other	24	15

SOURCE: ACIR, *Regional Decision Making*, Table VIII-15.

The Quality of Metropolitan Planning

This report does not attempt a major evaluation of the quality of metropolitan planning. This would be a highly judgmental and controversial task at best, and would require detailed field work throughout the nation for which ACIR is not equipped. The literature is full of criticisms of the metropolitan planning that has been done thus far. Much of this planning has not been very effective, and most areas have not had metropolitan governments as clients which could make use of area-wide plans. Instead, these advisory documents usually have been subject to implementation by a large number of local governments and special purpose districts which often have not been fully involved in their preparation.

Yet, metropolitan planning continues to evolve. The mere fact that it is being done in more and more areas each year, and that the content of such planning is continually expanding, can be taken as an indication that metropolitan planning has not been a complete failure. While it may not be a complete success, it is an increasingly pervasive fact of life.

Table II-5

CITIZEN PARTICIPATION IN REGIONAL COUNCILS: 1972

Measure Of Participation	Number Of Regional Councils	Percent Of Regional Councils Reporting
Use Of Formal Citizen Advisory Committees (N=264)	95	36%
Provision For Citizen Review And Comment On (N=264):		
Specific Programs Or Projects	183	69
Capital Improvement Programs	72	27
Current Work Program	124	47
Involvement In The Citizen Participation Program By:		
Executive Director (N=271)	209	77
Staff (N=222)	167	75
Involvement In Public Information Program		
Executive Director (N=271)	229	84
Staff (N=222)	168	76

SOURCES: HUD/NARC survey of regional councils, 1970, and ACIR/ICMA survey of regional council executive directors, 1972.

The literature on metropolitan planning is growing and the American Institute of Planners has found enough specialized interest among its members to establish a special department to serve the needs of metropolitan and regional planners. Thus, in addition to the widespread practice of metropolitan planning and the very considerable policy acceptance of planning products, the nation has a specialized profession which is concentrating upon the improvement of the quality of metropolitan planning. Continuing efforts in this direction can be expected.

Piecing together present Federal aid planning requirements, policy statements of such organizations as the American Institute of Planners (AIP) and the American Association of State Highway and Transportation Officials (AASHTO),²⁴ and the current practice of regional planning organizations, it quickly becomes evident that a high quality metropolitan planning process is thought to be composed of the following elements:

- 1) interrelated planning for multiple functions;
- 2) metropolitan areawide geographic coverage;
- 3) a problem solving goals orientation centered

around constituent citizen groups or "consumers;"

4) adequate attention to long range outcomes of present policy decisions and implementation activities, coupled with the assurance that long range plans are translated into immediate action proposals of direct relevance to current policy options;

5) the evaluation of alternatives for policy action which shows both the long range and short range outcomes based upon criteria which measure functional and multifunctional effectiveness, economic soundness, and the minimization of adverse impacts upon the community;

6) timely availability of well founded planning advice to responsible decisionmakers; and

7) an element of credibility based upon proven evaluation techniques, quantification of facts, and sensitivity to the more intangible expressions of citizen and political values in the community.

While many metropolitan planning efforts do not measure up to these ideals, and adequate resources to meet them have not always been available, some progress is being made toward them.

Probably the most significant criticism of metropolitan planning at the present time is that it is not being implemented, and in fact may not be implementable in its present form.²⁵ As implied by the above criteria for a "good" metropolitan planning process, the quality of the overall process is just as dependent upon its "implementation" success as it is upon its other qualities. This means that there may have to be compromises between the objective criteria and standards used in the technical part of the planning process, and the value judgments added to reflect community acceptability. In other words, the "best" plan may be one which has a clear potential for improving the current situation, rather than one which sets perfection in the future as a goal but provides no way to reach that goal.

A mandate to keep metropolitan planning realistic or "implementable" creates numerous restraints. It requires that every planning proposal be one which some existing organization (or some new organization with a good chance of being created) has the authority, funds, and inclination to implement. If the proposal is too broad in scope to be addressed by an existing unit of government or an established combination of such units, then by definition it is not realistic. If it is too broad to be funded from the available categorical grants, trust funds, or other uncommitted revenue sources, it is not realistic. If the proposal is made by one level of government for implementation by another not in a direct line of responsibility and authority, implementation is likely to be blocked by the differing geographic perspectives and political power bases of the implementing agencies. If the proposal involves new technologies or new programs not yet institutionalized, it must compete against the already institutionalized technologies and programs and win its case before it can be classed as realistic. This is realism from the implementation viewpoint.

From the metropolitan problem solver's point of view, realism is finding a way to meet some sort of performance criteria—like increased accessibility of various individuals and groups to different types of opportunities and services. Given free rein, the planner may be able to specify any number of "solutions," but applying implementation restraints may rule out all which meet the established performance criteria. So, too strict implementation restraints can foreclose realistic problem solving.

The remedy is to be sought in conforming both planning and implementation machinery to the current definitions of metropolitan problems. In the architect's phrase, "form must follow function." That is why *Chapter 1* of this report came first. The nature of the metropolitan problems to be solved, with all of their

interrelated complexities, determines the nature of the metropolitan institutions needed, and sets the performance standards for judging the quality of the joint planning-implementation effort. The breadth and interrelatedness of the problems outlined in *Chapter 1* show the need for exceptionally broad planning mandates at the metropolitan level and for parallel breadth and flexibility in the implementation agencies that are linked to the areawide planning-decision making process. Furthermore, this areawide process needs to link general long range planning of the transportation system to specific planning of individual projects through a cooperative programming technique which documents implementation commitments.²⁶ These factors of breadth, flexibility, parallelism, and linkage provide the potential for, though not the assurance of, high quality metropolitan transportation planning, and they can be used as surrogate criteria for evaluating the quality of the planning.

Larger Contexts for Metropolitan Planning

While metropolitan planning might seem quite all encompassing in a geographic sense to those looking up from local government, it appears quite small and parochial to those looking down from above. Many multicounty substate districts are much larger than the metropolitan areas at their cores. States and multistate regions which represent political and resource bases important to the economic, fiscal, and other concerns of metropolitan areas are obviously much larger than individual metropolitan areas. This goes also for river basins many of which are politically organized for planning purposes. And of course, the Federal government, with its nationwide concerns and national revenue producing powers and its ten Federal regions, has already been shown to be one of the most powerful influences on the metropolitan scene.

Yet, many of these higher levels of government, especially the state and Federal governments, have little if any systematic planning policy to offer metropolitan areas as a framework for metropolitan planning. Such policies as do exist at these levels are often fragmented, uncodified, and largely invisible.²⁷ At the multifunctional coordinating level the lack of state and Federal policy is almost complete.

Yet, by building upon some of the systematic planning which has been done at these upper levels in individual functional fields, a new comprehensiveness is beginning to emerge. Moreover, few states have undertaken comprehensive planning efforts to coordinate their many and diverse functional planning

programs, and the Federal government has been considering the enactment of a program which would require statewide planning for land use and would assist such planning with substantial funds. The *1970 Housing Act* included a provision which requires the President to submit every two years to the Congress a report on national growth. The first of these reports was issued in 1972,²⁸ and the proposed national land use planning act would strengthen this effort.

Of course, planning by river basin commissions, multistate economic development commissions, and multicounty substate districts which are larger than their metropolitan areas has been pursued for several years in a number of areas.

So, at the suprametropolitan level, as at the metropolitan level itself, there is a planning process begun but still largely unfulfilled. The difference is that multi-functional coordinative policy planning above the metropolitan level has even less of a record, less expertise, and less legitimacy than planning at the metropolitan level. Until such planning evolves a great deal further, metropolitan planning will be handicapped by the need to work within a predictable policy context provided by higher level governments. Ideally, the planning at each level — local, metropolitan, regional, state, and Federal — should nest within each other in a coordinated fashion.

A DEVELOPING CONSENSUS ABOUT THE APPROPRIATE CHARACTERISTICS OF URBAN TRANSPORTATION PLANNING

In the 18 years since enactment of the *Federal Aid Highway Act of 1956*, there have been four national conferences of knowledgeable officials and other experts concerned with the urban transportation planning process. The 1956 act expanded the urban highway system and provided major trust fund financing for the interstate system. This initiated the largest public works program in the history of the nation. The impact was greatest in urban areas where it caused the greatest disruption. By 1962, the need for special urban transportation planning processes was well enough recognized that they were established by Federal law as prerequisites to continued Federal aid highway construction.

The first of the four conferences which have helped to define the nature of urban transportation planning, was held in 1958 at the Sagamore Center of Syracuse University.²⁹ The title of the conference was "Highways and Urban Development." Its purpose was to promote

close coordination of highway and community development through intergovernmental team work. This conference called for full and regular consultations among the various Federal, state, and local officials involved in urban transportation programs, and recommended the establishment of regional planning programs in metropolitan areas by act of the state legislatures. But, it spoke primarily of the community planning responsibility being lodged with local governments and backed up by state planning efforts in those cases where the local governments failed to act. The state highway departments were recognized as the units responsible for the implementation of highway projects. The content of comprehensive planning for the metropolitan area was described as including physical development, land use, and transportation (including transit) policies. Special attention was directed to the need for more certain land use controls and a five year urban highway improvement program. There was also a call for all levels of government to help strengthen city and regional planning, to properly organize and staff state highway departments for the urban planning function, and for all agencies of government to seek public support and adequate financing for the highway program. While urban transportation planning had gotten started in a number of areas before this, it was still not generally practiced in most areas, and there was a recognized need to exchange success stories in an effort to start such planning in more areas. But there was almost no talk of transit or other modes of transportation.

The second conference took place in Hershey, Pennsylvania, in 1962, the year that urban transportation planning was first required by the Federal government.³⁰ The emphasis of the Hershey conference was still on the highway system. It focused on the interstate system as a shaper of urban communities and a provider of opportunities and benefits. It called for greater teamwork between state and city officials and among the various professions needed to prepare adequate transportation plans. Federal interagency coordination, involving all urban programs, also received considerable mention. Prime responsibility for community planning again was placed upon city government. Land use and transportation planning were defined as inseparable. For the first time, coordination of interstate freeways with other transportation elements was called for. By this time, the need to avoid adverse freeway impacts had become obvious, and section-by-section custom designing of freeways to integrate them into their environment with minimum impact was recommended. Planning to meet ultimate urban values, rather than to achieve minimum first costs of facilities, was urged. It was recognized that

community consensus was needed, and that a more effective public information program should be developed to help achieve such consensus. More research on urban design and urban living patterns was called for, as were in-service training programs to sensitize transportation planners to the needs of these newer planning challenges.

The Williamsburg Conference in 1965 stressed the multiple use of land to meet transportation and other purposes at the same time on the same site.³¹ It also called for beautification of the highway system in recognition of esthetic values, making maximum use of arterial and collector streets so that disruptive freeway projects might be minimized. But, there was still little emphasis on transit.

The Williamsburg Conference continued the call for increased coordination among Federal, state, and local governmental units involved in both transportation and development planning. And it added a new call for greater participation of decisionmakers as opposed to technicians. This signaled greater attention to the implementation of plans. Multijurisdictional public financing of the implementation of plans as well as the planning process was recommended. Integration of traffic control systems on an areawide basis and advance reservation of freeway rights-of-way also were recommended.

The Williamsburg Conference pushed the "community values" idea strongly. Beyond coordination with urban development objectives, it recommended the use of urban evaluation criteria in the fields of safety, comfort, beauty, convenience, and economy. This inaugurated the use of a consumer oriented set of evaluation criteria.³³ To support this broadened concept of planning, it was again recommended that public understanding be sought, and that more research be done to give planners the tools they need in dealing with emerging urban values.

The fourth conference was held in 1971 at Mt. Pocono, Pennsylvania.³³ At last, the highway focus was put in perspective. Multimodal transportation planning was recognized, and the focus turned heavily toward implementation efforts. The title of the conference, "Organization for Continuing Urban Transportation Planning," signaled these changes. The call for coordinating planning efforts as a means of achieving orderly development of metropolitan regions and of relating such efforts more closely to decision making processes at all levels was stated in "urgent" terms. It was urged that metropolitan planning be strengthened through legislative authorization and bolstered by equitable local representation. Areawide veto of local land use control actions that would adversely affect transportation systems was recommended, along with new powers for

areawide initiation of transportation improvements. All comprehensive and functional planning, including multimodal transportation planning, should be integrated, according to the report, and a wide range of alternatives should be tested. In addition, areawide planning should be detailed to a much greater extent than in the past and be reflected in relevant near term programming of implementation activities. These plans and programs should then be followed up closely with a monitoring process. Areawide housing, relocation, and environmental elements were proposed as parts of the metropolitan planning process. The "3 C" (comprehensive, coordinate, and continuing) planning process, emphasizing multimodal planning, was recommended to be established by Federal initiative at all levels of government – Federal, state, regional, and local. The report went on to urge that this more inclusive kind of planning be backed up by flexible funding from the Federal level to avoid a preference for any given mode, so as not to unbalance specific urban transportation systems contrary to local goals and priorities. The Pocono Conference again called for expanded training and research, fuller and more effective citizen participation, and major new increases in the funding for metropolitan planning to allow the deeper and fuller analysis required if metropolitan plans are to be detailed to the level where they will have relevance for implementation programs.

Through these four conferences, the urban transportation planning process evolved from one with a primary focus on highways and a separation between planning and implementation, to one which is truly multimodal and every bit as much concerned with implementation as with the planning process itself. In the course of this evolution, the scope of community values to be considered continually expanded and major emphasis was placed on incorporating citizen's views and the deliberations of local decisionmakers.

Two other major documents produced in 1971 and 1973 also have served to build the consensus about the appropriate nature of urban transportation planning. The first summarizes a series of metropolitan transportation planning seminars held by the American Institute of Planners during 1971 at the request of the U.S. Department of Transportation.³⁴ The six seminars focused on means of improving the transportation process, and they involved a considerably larger number of practicing planners, urban transportation providers, and other experts than could be represented in the four previous conferences cited. Again, they confirmed the need to gain control over the land development process, to deal with the problem of local public transportation,

and to broaden the planning and evaluation process beyond its original technical orientation.

Specific recommendations emanating from the AIP seminars called for greater intergovernmental coordination, greater Federal agency coordination — especially between HUD and DOT in their joint certification procedures — and common criteria for reviewing land use and individual transportation modal plans. Also called for were the consolidation of all areawide planning efforts in a single representative metropolitan organization, and the removal of narrow categorical restrictions on Federal aid transportation funds so as not to distort local priorities. Federal operating subsidies for transit were recommended, as was the use of highway trust funds and other Federal transportation monies to compensate for detrimental social and economic impacts caused by the transportation programs. Broad community goals, citizen participation, evaluation of a wide range of land use and transportation mode alternatives, and immediate action programming were called for. Finally, the development of national and state land use policies was urged as a framework for regional and local policies.

In 1973, the American Association of State Highway and Transportation Officials, in cooperation with FHWA, published *A Policy on Design of Urban Highways and Arterial Streets*.³⁵ This manual of current practice includes two chapters on urban transportation planning. It is intended as a guide for urban transportation planning practitioners and a statement of “good practice” which they should follow. While it does not incorporate all of the previously cited conference and seminar recommendations, it recognizes most of them. Among other things, it calls for all inclusive incorporation of Federal, state, and local decision making officials in the policy and technical committee structures of the metropolitan planning agency. It recommends that the required urban transportation planning be incorporated into the program of the established metropolitan planning agency responsible for comprehensive planning for the region. It promotes transportation planning as part of comprehensive urban planning and sees transportation as a means to broad economic and social progress rather than as an end in itself. A continuous process, a locally determined balance between modes, effective citizen participation, strong public information programs, and many other proposals consistent with the national conferences and seminars, are recommended. It also noted that the appropriate area for such planning often goes beyond the expected area of urban development in order to coincide with the boundaries of local government, thus

acknowledging the practice in many parts of the nation of using the standard metropolitan statistical area (SMSA) rather than the politically less meaningful “urbanized areas” of the Bureau of the Census to which the Federal requirement for urban transportation planning is tied by legislation.

The only major characteristic of urban transportation planning developed by the national conferences and seminars which is not reflected in the AASHTO policy manual is the newly emerging link with implementation. The manual assigns implementation responsibilities to “others” except in those few situations in which a real metropolitan government might exist. In the usual case, the manual states that “. . . implementation. . . is not a part of the planning process.”³⁶

Thus for this group, the question of what to do about linking planning and implementation activities appears to remain as the major unresolved issue in urban transportation. The AASHTO manual merely recommends greater communications between planners and implementation officials, while the Pocono Conference suggested a more direct linkage between the planning and implementation processes.

NEW APPROACHES TO DECISION ORIENTED TRANSPORTATION PLANNING

As shown by the summary of national urban transportation conferences and seminars and by the evolution of Federal aid transportation planning requirements, many approaches already are available for linking such planning directly to implementation activities. We already have intermodal metropolitan transportation studies, intermodal departments of transportation at the state and Federal levels, impact statements to point up necessary interrelationships, and the continuing operations plan with its certification, surveillance, annual report, and programming elements. The theoretical framework for a major new programming technique, which would require cross-functional priority setting and more precise scheduling — known as regional improvement programming (RIP) — is already on the horizon. There is even one regional council — the one in the Twin Cities area of Minnesota — which provides an organizational and political framework at the metropolitan level which directly links metropolitan planning to the activity of certain implementation units. What is lacking then is not so much the theory of what could be done, but the decisions, the resources, and the organizations to put this theory into practice.

This section examines these new techniques and

indicates how they might apply in the field of urban transportation.

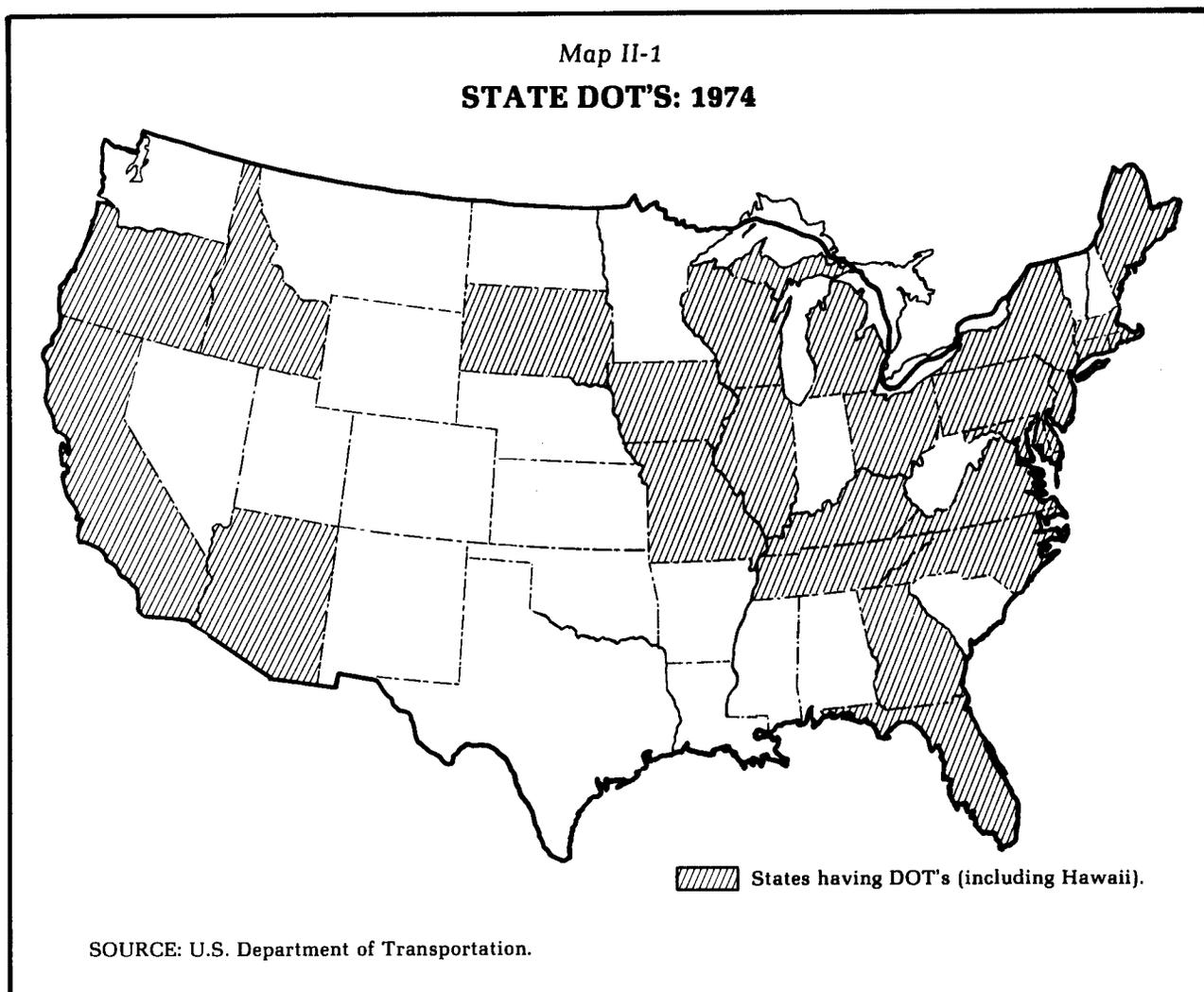
Some New Approaches Already Coming into Practice

Intermodal Planning and Organization. As was indicated earlier, about 61 percent of those metropolitan areas which are required to develop intermodal transportation planning as a consequence of receiving Federal assistance from two or more modal administrations, have unified work programs for intermodal planning approved by the U.S. Department of Transportation. Thus, intermodal metropolitan transportation studies are well on their way to becoming accepted practice. However, a major question remains about the proper scope of such studies. Currently, by far the largest number of these

unified work programs include only highway and transit elements. Airway, waterway, pedestrian way, and bike-way elements appear only in a few cases.

Intermodal activities also have begun at the state level. By 1974, 27 states had created state departments of transportation (see *Map II-1*). While the combinations of modes and functions within these departments and the effectiveness of their intermodal coordination efforts vary considerably, the concept has been firmly established. The major questions that remain are (1) the extent, scope, and quality of planning that has been achieved at the state level, and (2) the degree to which this planning is done by an intermodal planning group in or near the secretary's office instead of or in addition to the planning done in the individual modal administrations.

Impact Statements. The 1969 *National Environmental*



Protection Act inaugurated the impact statement mechanism in government. These statements are now required for all Federal and Federally assisted projects which would have any substantial effect on the environment. While the administration of this requirement has not yet been fully satisfactory,³⁷ large numbers of environmental impact statements are being prepared, public hearings are being held on them, and environmental matters are beginning to receive much greater attention than they did prior to the passage of this act.

The *Uniform Relocation Act of 1970* also is slowly beginning to have a similar effect. All Federally assisted displacement agencies are now required to make provisions for the relocation of families, individuals, and businesses before any displacement action can be taken. Displacement and relocation plans are now required to be filed with the metropolitan A-95 clearinghouses for review and comment in certain cases,³⁸ and it is proposed that this requirement be expanded to include all relocation plans in the near future.³⁹ This amounts to a social and economic impact statement of limited scope.

Other social and economic impact statements have not yet been required in such formal fashion. However, HUD guidelines for the administration of the Section 701 Comprehensive Planning Assistance Program suggest that each recipient file a civil rights statement showing the effects of policy proposals contained in planning documents produced under the program. In addition, the application materials for future planning must indicate "those work activities which will contribute to correcting the effect of past discrimination and the manner in which they will do so, and describe how those work activities that relate to the provision of opportunities, services, and facilities will benefit residents of the planning area on a non-discriminatory basis."⁴⁰ These provisions might constitute what could be referred to as a civil rights impact statement.

The energy crisis has spawned informal discussion of the need for energy impact statements, and DOT requested that special transportation energy conservation plans be developed for each metropolitan area in the first few months of 1974.

Continuing Operations Plans. A number of Federal programs, particularly HUD and DOT programs, require that the planning agency and its planning program be certified as meeting Federal requirements. In the case of the highway program, this certification requirement is part of the "continuing operations plan" which DOT must approve for each urban transportation planning process which has reached the continuing phase. This

plan also includes requirements for continuing surveillance of the community and its transportation characteristics, an annual report on such surveillance, and any needed updating of transportation plans.⁴¹ While not a requirement, it is recommended that the annual report be used "as a means of publishing the short range (five year) improvement program."⁴²

Two issues are raised by the current form of the continuing operations plan memorandum. First, the surveillance data called for include items such as increased population growth and the growth of transportation volumes, rather than consumer oriented items like safety, comfort, beauty, convenience, and economy, as was called for in the Williamsburg report. Secondly, there is the question of whether existing urban transportation planning organizations, as currently funded and staffed, are capable of providing adequate surveillance and reappraisal services on an annual basis and in enough detail to be relevant to those responsible for plan implementation.

The Urban Mass Transportation Planning Program also has a certification procedure, and it is linked with HUD certification advice.⁴³ DOT is also considering extension of its coordinated certification requirements to the airport program.

The great advantage of these certification procedures is that they bring planning into an annual cycle which can be synchronized with the budget cycles of implementation agencies. They also go far toward bringing a new sense of accountability into the planning process. By requiring an annual review, and by placing this review before the public and the various planning and implementation agencies, it provides a means of sensitizing the planning to the needs of these important elements in the community.

While certification procedures have not always run smoothly, they have now been in effect long enough so that they can be seen to work adequately, if not superbly. Effective dates of certification requirements initially had to be postponed in some cases, and certification documents in many cases leave a lot to be desired, but at least they are available.

Regional Improvement Programming: A New Technique on the Horizon. At the city and county level, capital improvement programming techniques have been used for many years.⁴⁴ Such programs typically have covered all of the capital improvements of the locality, regardless of the function to be served. Transportation, parks, schools, libraries, public office buildings, civic centers, and other facilities have all been included in a single document and acted upon in a single resolution by

the local governing body. This has called for trade-offs, not only among geographic areas within the locality, but also among the various functions of government.

While these local level decisions usually have been a matter of political judgment and compromise, they do permit greater degrees of systematic planning analysis than was formerly the case. Similar programming at the Federal level for multiple use water resource projects for many years, has spurred the development of techniques for computing cost-benefit ratios and other forms of economic analysis which help to formalize the criteria used for making trade-offs among diverse types of projects.⁴⁵ Counting benefits and costs in common units of dollars has allowed a reasonable amount of comparability to be established even among widely different projects. While this has by no means solved all of the problems involved, it can facilitate their resolution.

More recently the World Bank has adopted economic analysis of alternative investment opportunities as a major requirement for foreign investments.⁴⁶ And state transportation agencies are beginning to take seriously programming and economic analysis techniques.⁴⁷ Meanwhile, back at the local level, capital programming of projects on a multi-year basis has been expanded to include non-capital projects and programs, plus long range fiscal planning.⁴⁸

At the metropolitan level, most programming of projects has been for a single function alone. This has been true of the open space and water-sewer programs required by HUD, and of the highway, mass transportation, and airport programming required by DOT. In a few cases, where community action programming and overall economic development programs, required respectively by OEO and EDA, have been prepared at the metropolitan level, a multifunctional approach has been adopted involving non-capital as well as capital projects. But usually, community action programs have not been carried out at the multijurisdictional metropolitan level, and the EDA program most often has been non-metropolitan. Consequently, multifunctional programming at the metropolitan level remains a rarity.

To overcome this problem, the National Association of Regional Councils undertook some demonstration work with HUD's support in late 1972 and early 1973. This work was designed to show that multifunctional, multi-year capital project and services programming could be carried out successfully at the metropolitan level.⁴⁹ Five regional councils, three of which are metropolitan, were used to demonstrate the feasibility of this regional improvement programming (RIP). The four functions included were — transportation,

water-sewer, open space, and housing. Because of earlier Federal certification work done by the five regional councils, they were able to pull together staff documents within three months showing some of the interrelationships among the functions and presenting in one document a three year picture of those projects currently competing for attention. A one year, follow up demonstration began in April 1974 to demonstrate, if possible, that such a document could successfully be processed through the metropolitan political decision making process to create an adopted regional program.

In large, complex metropolitan areas, there is no doubt that such a programming process would place great demands upon planners to develop and use better quantitative analytical tools that would help rank priorities and schedule projects more precisely. Cost-benefit ratios can be used to tell whether a project is worthwhile in its own right and to compare the desirability of one project against another. Economic feasibility studies can be used to determine whether the community can really afford to pursue a given project or not. Investment analysis can be used to determine the point in time at which a project might begin to "pay off."

Of course, political judgment and compromise will always remain important factors in metropolitan programming, just as they do in local, state, and national programming and project authorization processes. And for smaller metropolitan areas, the more complex quantitative analytical methods may not be as necessary or as cost effective as for the larger ones. In these cases, simple listing and mapping techniques, with tabular comparisons, may be adequate to assist decision making.

Placing Regional Programming in a Position to Influence Implementation

Leaving aside the question of how adequately these techniques can be applied in current practice, the next issue is how to place the programming process organizationally and politically within the metropolitan context so that it is likely to influence the activities of implementation units. There are at least three precedents to follow in this regard. In one case, a regional council has been given authoritative decision making power by state law over functional implementation organizations, and in two cases Federal legislation has provided similar powers for single functions on a nationwide basis.

In the state case, it was recognized that previously created metropolitan advisory planning units had been having very poor success in getting their plans implemented. To remedy this, the Metropolitan Council of Minneapolis and St. Paul was created and given authority

in 1967 to coordinate the projects and programs of several areawide special districts with its own comprehensive planning policies. Actual approval was required by the Metropolitan Council for the capital programs of the Metropolitan Transit Commission and the Metropolitan Sewer Board. Airport locations and the zoning of surrounding territory which is locally imposed also must be approved by the Metropolitan Council.

The three single purpose Federal aid programs which require approval by the recognized metropolitan planning body for any follow-up are DOT's Federal aid "urban system" highway program, DOT's urban mass transportation program, and EPA's areawide waste treatment management program. In these cases, the project to be funded must be included in the metropolitan plan if it is to be eligible for Federal funding.

Two issues are raised by these metropolitan programming techniques for linking planning with decision making authority over implementation activities. First, in most cases, such authority is negative — that is, it takes the form of a veto rather than a metropolitan initiative to promote a project. This is not true, however, in the case of the Twin Cities Metropolitan Council's relationship to the Metropolitan Sewer Board. In that case, the Metropolitan Council appoints the members of the board, reviews the board's detailed plans, its operating budget, capital budget, and capital improvement programs, and actually borrows the money to finance the board's capital programs.

The second issue, of course, has to do with the scope of programs under metropolitan decision making authority. In all cases, this scope has been limited to a certain single or a few isolated governmental functions. Even within the highway program, for example, the metropolitan planning bodies' approval authority extends only to those highways within the "urban system." This system currently (1974) contains only a small fraction of the total highway system in any given area, but it will be expanded in 1975 to include 30 percent of an area's highways under provisions of the *1973 Highway Act*.

Expanding the functions subject to metropolitan planning and decision making increases the potential for creative problem solving through multiprogram inputs, and reduces the tendency for simply supplying efficient service within a single functional program, or developing projects which will use available funds. Multiple valued and integrated metropolitan policy making can take place only if the decision making authority for various functional programs is placed within a single metropolitan organization. Of course, it is also essential that discretionary program funds, whether internally generated or from outside sources, be available for purposes

decided upon by the metropolitan policy body. This means that the local, Federal, and state units which might either fund or carry out the project decided upon by the metropolitan policy body must have similar scope and flexibility in their decision making and implementation authority. So, a parallelism in programs and organizations at all of these levels would be a great facilitator of decision oriented metropolitan planning. Without it, broad gauged metropolitan planning would not be realistic.

The transportation field has been particularly subject to narrow categorization in the use of funds. This applies not only among funds for transit, airports or highways, but also within highway funds which are earmarked for different types of facilities — urban, rural, arterial, primary, secondary, interstate. Operating funds, as opposed to funds for capital facilities and new equipment, have not been provided by the Federal government up to now, so there has been still another constraint built into the planning processes.

In addition to parallel organization and financial arrangements at other levels of government, metropolitan planning can benefit from parallel planning programs at those levels. Obviously such things as the interstate highway system, airport systems, and rural-urban balance have major impacts upon metropolitan areas, but they cannot be determined within the borders of individual metropolitan areas alone. Only statewide, multistate, or national planning can provide adequate frameworks for considering these elements of the metropolitan plan.

Metropolitan planning itself, has a similar relationship to local planning. It sets the broader framework within which local options and details can be developed.

If the metropolitan planning and decision making body could become the reviewer of local plans — as is the case with the Atlanta Regional Council, the Twin Cities Metropolitan Council, and certain other bodies — it would be well placed to help influence consistency among local plans. If this body could provide major inputs into state planning and budgeting (as is the case with Georgia, Oregon, and a few other systems of substate districts) then it would also be in a position to influence state action. Metropolitan policy body inputs to national planning, as is the case currently in FAA's airport systems planning program, could provide a position of influence over Federal programming. In addition, extending the Federal A-95 concept through state legislation to require similar reviews of projects totally funded and sponsored by state and local governments, as is done already in a few statewide systems of substate districts, would provide additional

metropolitan policy body influence over implementation programs. Upgrading such reviews to provide a stronger influence than simple “comment” also would strengthen the hand of the comprehensive metropolitan policy-makers.

Substitutes for Metropolitan Policy Making Bodies

Creating and strengthening an interjurisdictional regional policy making body in each metropolitan area is, of course, not the only way to bring areawide planning and implementation activities under the influence of a single body. Consolidation of local governments, or at least their areawide functions, into metropolitan governments; assumption of areawide functions by the state; the creation of interstate compact bodies to perform areawide functions where metropolitan areas cross state lines; and the use of voluntary intergovernmental service agreements are credible alternatives which have received attention in some places. Each of these approaches merits examination.

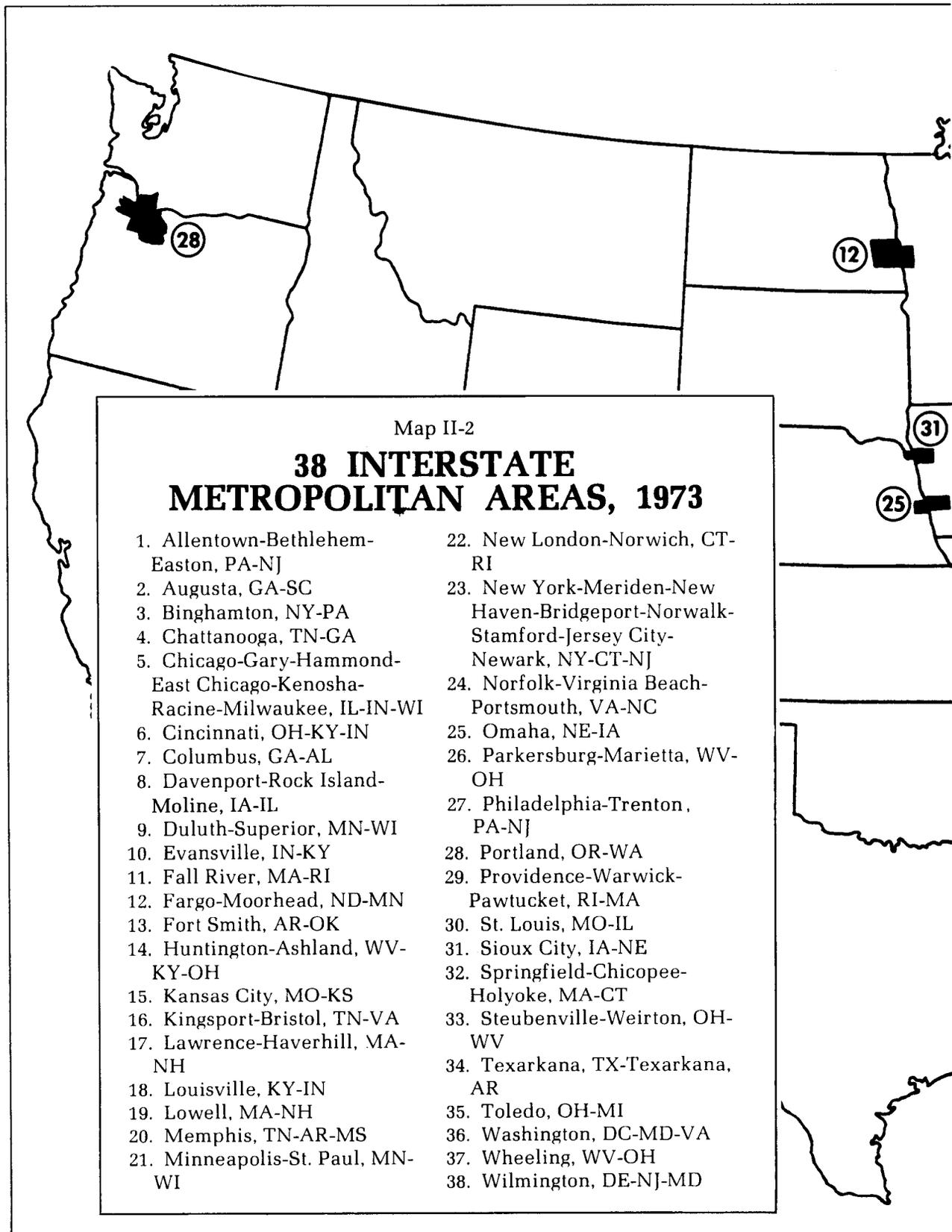
Metropolitan Government. If municipal annexation, the assumption of urban powers by counties, or consolidation of existing small local governments into larger ones had kept pace with metropolitan growth and the expanding needs for local service, local governments themselves would be meeting regional needs without relying upon a new layer of regional units. But this has simply not happened in most cases.⁵⁰ Of the more than 250 metropolitan areas in the nation, only 11 have consolidated governments, and only one of these covers the whole metropolitan area as defined by the Federal government. The others either have omitted territory within them, or cover only a single county in a multicounty metropolitan area, or both. Of the 127 single county SMSAs in the United States in 1970, only three were city-county consolidations, and no multicounty mergers have taken place. Although county governments in metropolitan areas are slowly modernizing, a majority still do not have strong chief executives, urban functions, or areawide service delivery capabilities in many important fields.⁵¹

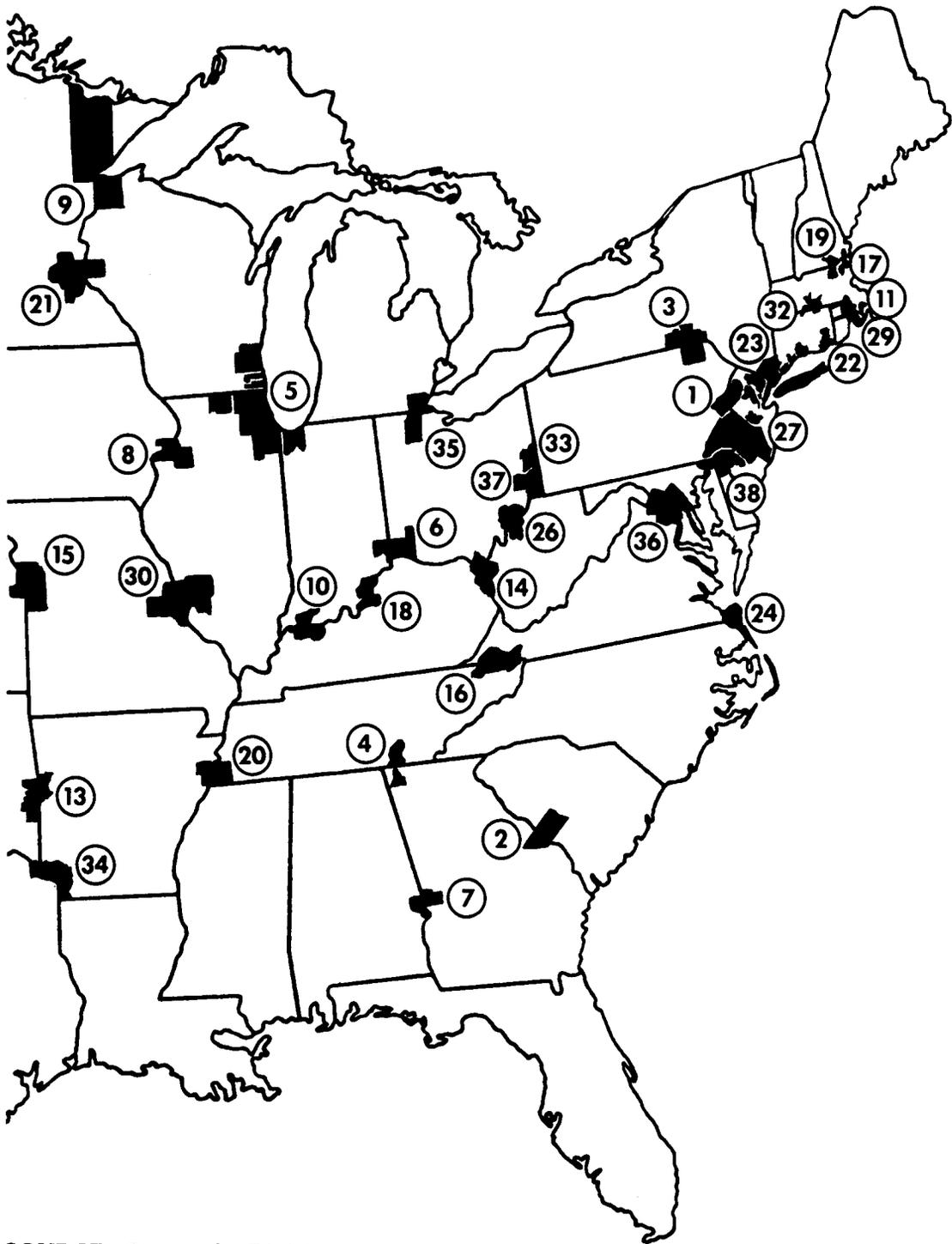
So, multijurisdictional regional planning districts and special purpose service districts have been created to meet the people’s areawide needs even where the few examples of metropolitan government exist. Nevertheless, field work in five areas having “metropolitan government” seems to indicate that despite their deficiencies “the metros, on balance have built a record of achievement. They have generally done well the things

they set out to do — and they almost always seem to have done them with more skill than was displayed in the metropolitan area prior to the restructuring.”⁵² Therefore, where adequate geographic coverage can be attained by a single unit of general local government, this unit may have considerable advantages in effectiveness not currently available through most regional councils. This is most likely with strengthened county governments responsible for all areawide functions,⁵³ or with city-county consolidations in single county SMSAs responsible for all local and areawide governmental functions. Customary government planning and capital improvements programming by such a unit, and recognition of the unit by Federal agencies as the administrator of Federal areawide grant programs would provide a very strong basis for achieving superior metropolitan action.

The State as a Metropolitan Decision Maker. Several Federal aid planning programs seek to establish statewide planning capabilities in state governments as well as areawide planning capabilities at the local level.⁵⁴ Transportation planning under the *Highway Act* is one such program. As in several other Federal aid planning programs, the transportation planning funds destined for metropolitan areas are channeled through the states. In many areas, such funds reach the metropolitan planning organization relatively unencumbered, but in other areas the states retain a significant voice in the use of these funds. In about 17 percent of the cases, the transportation planning funds are retained by the state, and the metropolitan planning is done by state agencies. But, in either situation, the metropolitan transportation planning is simply advisory to the state highway agency. Thus, with respect to highway proposals coming out of this planning, the states make the final decisions about projects for which Federal aid will be sought. In this sense, then, the state is the decisionmaker for initiating Federal aid highway projects in metropolitan areas.

The transportation planning program is not alone in taking this approach. Federally sponsored manpower planning, criminal justice planning, and health planning all take a similar approach. But, the operational response of the states varies greatly from one to another. Despite the uniform state channeling feature of the Federal aid legislation, the states retain great flexibility in the amount of weight given to independent metropolitan planning. So, by state action, metropolitan planning could be made dominant if the state rubber stamps it, could be completely dominated by the state if it retains the planning funds within its own agency and relies for local area inputs only upon a state appointed advisory





SOURCE: Geography Division, U.S. Bureau of the Census, unpublished data, September 1973.

committee of local people, or could fall somewhere between these two extremes through a genuine sharing of responsibilities and funds with metropolitan agencies.

Clearly, the state is in a legal position to make decisions for the metropolitan areas. Except in interstate metropolitan areas, which by no means can be ignored, the state has the geographic scope and the sovereignty necessary to act as a metropolitan decisionmaker. In a few relatively small states such as Maryland, Massachusetts, New Jersey, and Connecticut, the states have already moved strongly to become the metropolitan transportation decisionmakers.⁵⁵ These are highly urban states where the governors are assuming major executive powers, and where the metropolitan areas are relatively dominant in state affairs. All of them have departments of transportation which are directly responsible to the governor, and two of them, Maryland and Massachusetts, have dominant intrastate metropolitan areas. This has resulted, for example, in the Section 134 metropolitan transportation planning processes for the Baltimore and Boston areas being carried out by state agencies — the state DOT in Boston and the regional planning council in Baltimore.⁵⁶

Nevertheless, there are several reasons why state absorption of metropolitan decision making responsibilities has not been generally practiced. These include the interstate problem, the need to decentralize large states, and political pressures for local and regional home rule. Each of these factors deserves brief attention here.

Thirty-eight metropolitan areas, involving two-thirds of the states, cross state boundaries (see *Map 11-2*). In these cases, not even a state government has the necessary geographic scope to act independently on behalf of the whole metropolitan area. If areawide action is to be taken, some sort of interstate body is required.⁵⁷

All states have recognized the need for decentralizing certain governmental functions. This is one reason for having local governments which are literally "subdivisions of the state." Likewise, state agencies very commonly divide the state into a variety of administrative districts for their own purposes. The inadequacy of existing local governments in terms of geographic coverage, especially in the metropolitan areas of the states, has led to the creation of regional planning organizations and regional councils of local governments. This recent trend has so greatly complicated the overlapping of substate units that the states in the last few years have begun establishing uniform statewide systems of substate districts.⁵⁸ Forty-four states have taken official action on this front to consolidate competing

and overlapping regional organizations and to bring about conformance between locally oriented regions and state agency administrative districts.⁵⁹

The political pressures for local control over local affairs has led to local elected official control over the regional planning bodies established within the substate districts in most cases. Yet, most of these organizations remain primarily or exclusively advisory in nature. Thus, only in those very few cases where such regional organizations have been given independent decision making authority, do they constitute a real effective alternative to state decision making for the metropolitan area or metropolitan inaction. But, where given a choice between metropolitan decisions being made by the state or by locally controlled regional councils, most local elected officials would choose the latter.⁶⁰

From a purely geographic and practically political point of view, then, it is difficult for most states to operate simultaneously as the metropolitan government of each of its metropolitan areas. Decentralization is often expressed, therefore, not simply as an administrative necessity, but as a desirable political philosophy. Hence, governmental functions should be decentralized to the level closest to the people at which services can be efficiently and effectively rendered. This translates into local home rule for local functions, and regional home rule for areawide functions. The closer the decision making body is to where the action is needed, so the argument goes, the more likely it is that the people's wishes can be fully expressed to the decisionmakers and understood by them. If these decisionmakers are elected officials, then they also can be held directly responsible by the people for their decisions.

A state administered program is more likely, than a local or regional one, to turn its metropolitan decision making authority over to appointees who are aloof from the electoral process and who may feel little need to explain or defend their policies or actions. These points have been recognized even in Canada where the provinces have traditionally taken a much stronger role than our states in local government reform and the establishment of metropolitan governments.⁶¹ So, there are strong philosophical reasons for decentralizing at least some decision making authority to metropolitan policy bodies. In some instances, state legislatures already have given up their metropolitan decision making roles in favor of a strong metropolitan body. Three areas in which this has happened are Minneapolis-St. Paul, Atlanta, and Indianapolis.

Several technical reasons exist for decentralizing metropolitan decision making to an areawide body.

Table II-6

EVALUATION OF STATE PLANNING AGENCIES: 1972

	Evaluation						Total States	
	Significant		Moderate		Limited		Number	Percent
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Development Plan	9	18	14	28	27	54	50	100
Functional Planning								
Coordination	9	18	28	56	13	26	50	100
Regional Coordination								
And Allocation	5	10	29	58	16	32	50	100
Development Controls	5	10	13	26	32	64	50	100
Budget Coordination	6	12	12	24	32	64	50	100
TOTAL	34	14	96	38	120	48	250	100

SOURCE: A. J. Cantanese, "An Evaluation of State Planning," *Planning*, Vol. 38, No. 7, August 1972, p. 157.

Recent surveys of state planning programs have shown that by and large there is not a strong planning basis for state decision making. For example, an evaluation of state planning agencies has shown that overall development plans, development controls, and coordination with state budget controls are very limited in most states. This is reflected in *Table II-6*, which also indicates that coordination among state functional planning activities and among regions within the state is somewhat more effectively pursued, but still only to a moderate extent. Truly significant statewide planning encompassing both general development policies, as well as functional and regional coordination, occurs in only about 14 percent of the states.

Statewide transportation planning is similarly limited. The National Highway Research Board found in 1972 that "although there is interest in multimodal statewide transportation planning, much of the past and present effort has been directed toward highways and airport facilities, with the other modes receiving little or no attention."⁶² Compared with combined land use/transportation planning in 80 percent of the regional councils, and DOT approved intermodal planning programs in over 60 percent of the metropolitan areas, the states appear to be far behind.

Despite these general tendencies, several states are doing good planning, do have relatively strong governors who can lend political legitimacy to executive decision making, are highly urbanized, and are small enough so that one or a few large metropolitan areas dominate their political processes and make the state government reasonably representative of these metropolitan areas. In such cases, substitution of state decision making for decision

making by a representative metropolitan policy making body might be appropriate. With the states ranging in size from Rhode Island, the smallest, to Alaska, which is 483 times larger, and with a variety of other apparent differences, there may well be justification for different approaches from one state to another. Even so, the interstate variation must be kept in mind as an exception to using the state instead of a metropolitan body for those metropolitan areas which cross state lines.

Interstate Compacts. In the 38 interstate metropolitan areas (*Map II-2*), neither metropolitan government nor state decision making can assure coordination of areawide planning and implementation decisions. Instead, some kind of interstate body is needed.

A formal interstate compact body — or a joint Federal-multistate compact body, as recommended by the Advisory Commission on Intergovernmental Relations in Volume 1 of its *Substate Regionalism* report — would be more appropriate bodies for use in these interstate metropolitan areas, and potentially the most fully empowered as well. The compact itself is a formal written agreement, enacted or ratified by each affected state and the U.S. Congress, which establishes an agency of government empowered to act throughout a specific geographical area including all or part of two or more states under a single grant of authority and a single set of operating rules. Except as may be limited by state constitutions — perhaps with respect to taxing authority in some cases — such a compact could delegate to the interstate body any function normally delegated by the states to local governments, special districts, and sub-

state planning and development districts. Compact bodies are usually permanent, and provision of the compact are subject to change only through formal amendments enacted by the legislatures of the participating states.

Despite the well known availability of the interstate compact mechanism, formal interstate compact bodies are quite rare in metropolitan areas. In fact, they have been limited chiefly to five functions — transportation, regional planning, air and water pollution control, parks and recreation, or labor-management relations.

As shown in *Table II-7*, only five very large metropolitan areas (with populations well over 1-million) are affected by the 12 existing compacts, and only the largest one (New York) has compacts for all five functions. In two cases, Philadelphia and Washington, D.C., there is more than one compact in a single function (transportation). *Table II-8* shows that all five of these metropolitan compact areas have transportation compacts, and that the areas with more than one compact for a single function both involve transportation. Thus, there are precedents for interstate transportation authorities created by compacts in the largest interstate metropolitan areas. But there is no precedent for transportation planning and implementation being handled by a single multipurpose interstate compact body having a general purpose grant of authority, and no assurance in these precedents that multiple transportation compact bodies might not exist side-by-side in the same area.

Intergovernmental Agreements. Instead of using compacts to establish interstate transportation bodies, most interstate metropolitan areas have used less permanent intergovernmental agreements of a voluntary nature. Most interstate transportation bodies created in this way are for planning purposes only, although construction, maintenance, and operating services can be provided through intergovernmental agreements. These agreements may establish an intergovernmental body to provide these services, or may simply provide for the purchase of services by one government from another. Usually intergovernmental service agreements are made under the provisions of general state enabling acts passed for this purpose. Forty-two states have such laws, but only 30 of them allow intergovernmental agreements across state lines. A recent survey of existing agreements under these laws showed that of the 1,308 cities responding, only 14 (or about 1 percent) had service agreements that crossed state lines.⁶³

When neither an interstate compact nor an intergovernmental cooperation agreement can be used to

Table II-7

**METROPOLITAN AREAS
HAVING INTERSTATE
COMPACTS: 1973**

Metropolitan Area	Number Of Functions	Number Of Compacts
New York	5	5
Philadelphia	2	3
Washington, D.C.	1	2
St. Louis	1	1
Kansas City	1	1
TOTALS	5*	12

*This total is less than the sum of individual cases because two of the functions are duplicated in two or more areas (see *Table II-8*).

SOURCE: ACIR, *Regional Decision Making*, Table IX-3, p. 284.

Table II-8

**FUNCTIONS OF METROPOLITAN
INTERSTATE COMPACTS:
1973**

Functions	Number Of Compacts	Number Of Areas
Transportation	7	5
Planning	2	2
Air And Water Pollution	1	1
Parks And Recreation	1	1
Labor-Management Relations In The Shipping Industry	1	1
TOTALS	12	5*

*This total is less than the sum of individual cases because three of the areas have more than one compact (see *Table II-7*).

SOURCE: ACIR, *Regional Decision Making*, Table IX-3, p. 284.

establish an interstate (or intrastate) regional body, there are still other means by which local jurisdictions can get together to form regional bodies and perform regional functions. These means include voluntary agreements having no legislative basis (except, perhaps, a general provision in local charters authorizing cooperative endeavors), and the formation of quasipublic non-profit corporations.

The Washington, D.C., area provides a good example of this last option. When the present Metropolitan Washington Council of Governments (MWCOCG) was formed in this interstate area, compacts were already being used for transportation and river basin purposes, and there was strong sentiment against creating another compact body. In addition, Maryland had no general interlocal cooperation law, and Virginia's law did not authorize cooperation across state lines. So MWCOCG — which has the Section 134 transportation planning designation, as well as the A-95, HUD planning agency and other Federal aid designations — was eventually transformed into an independent non-profit corporation sponsored by the area's local governments, following several years of operation as a completely informal committee of local officials.

Regional bodies formed by interlocal agreements, it must be emphasized, are voluntary — whether they are formed pursuant to state intergovernmental cooperation acts, enabling acts for regional planning bodies or COGs, non-profit corporation charters, or handshakes. They can be dissolved at any time, and any member jurisdiction is free to drop out of the agreement pretty much at will.⁶⁴ Since a large share of the nation's regional councils are voluntary, the Federal aid planning requirements administered by HUD, DOT, OMB, and others have had special importance. Where state laws and interstate compacts have failed to establish permanent areawide regional bodies with project review authority, Federal grant-in-aid laws have done so. In this way, a voluntary COG designated to meet A-95, Section 134, and other Federal aid requirements, for all practical purposes, now has the local governments in its area as permanent members. These localities can seldom afford to drop out because their Federal aid projects might depend to some extent upon favorable recognition by the regional body. The importance of this Federal action becomes clear when it is noted from a recent survey of regional councils that 89 percent of them are voluntarily formed: 79 percent under general enabling statutes, 4 percent by voluntary agreement, and 6 percent by non-profit charter; while only 2 percent were formed by interstate compact, and only 9 percent by specific state legislation mandating the organization.⁶⁵

Overview of New Approaches

This brief review of methods by which planning may be more directly oriented toward decision making and implementation activities has shown that methods for doing this are available and have been put into use recently in at least a few instances. While techniques are available, they would have to be much more widely used and perfected before they could be expected to have much national impact. They would need greater organizational and political legitimacy than enjoyed by most regional councils, if they are to be used seriously to affect implementation. A good deal of work also remains to be done in expanding the scope of planning, decision making, and implementation options available to metropolitan policy making bodies, or to the metropolitan governments and the states where they substitute for such bodies.

PROFILE OF URBAN AREA TRANSPORTATION PLANNING

Transportation is such a vital element of metropolitan planning that it has appeared in virtually all metropolitan plans since the very first in the 1920's. But urban area transportation planning, as it is known today, dates back to the *Federal Aid Highway Act of 1962*. That act required, as a prerequisite for continued Federal highway aid, that, not later than July 1, 1965, a comprehensive, continuing, and coordinated transportation planning process be established on an areawide basis in each area of the nation identified as urbanized by the U.S. Bureau of the Census. The act provided funding for these planning processes by allowing the states, at their own discretion, to make allocations from the 1.5 percent planning funds available to them under the Federal highway construction programs.⁶⁶

Today, there is a planning process in each such urbanized area (except those created since 1970).⁶⁷ These Section 134 planning areas and processes, named for the section of the act which requires them, often include both highway and transit modes, and follow a rather highly developed technical process outlined in numerous official issuances from the Federal Highway Administration, numerous publications of the Highway Research Board, and standards published by the American Association of State Highway and Transportation Officials.⁶⁸

These Section 134 planning requirements have had a major impact on the planning processes in all of the more than 200 urbanized areas covered by the requirement. In many, the required planning has been carried

out by the regional councils, regional planning commissions, or substate district organizations created for broader planning purposes. This has strengthened those general purpose planning agencies by providing, in many cases, one of the largest sources of funds for their planning programs. In other areas, the Section 134 planning has been carried out by existing city, county, or state agencies without the same kind of multijurisdictional metropolitanwide orientation. In still other areas, the Section 134 urban transportation planning requirement has resulted in the creation of separate special purpose metropolitan planning organizations responsible only for meeting the requirements of this one act. Such organizations have sometimes become competitors to the areawide comprehensive planning agencies.

Some of these organizational variations seem to be accounted for by differences in the size and complexity of the metropolitan areas and the substate districts which have been created there, but others do not.

Despite the comprehensiveness claimed for the Section 134 urban transportation planning process, some of these officially designated Section 134 organizations do not encompass the whole transportation planning effort in their areas. Separate organizations have sometimes done the urban mass transportation planning required by the Urban Mass Transportation Administration, and the metropolitan airport systems planning sponsored by the Federal Aviation Administration. In many cases, related land use and other types of planning have been the responsibility of still other organizations.

Table II-9

**SELECTED CHARACTERISTICS OF
FEDERAL AID URBAN TRANSPORTATION PLANNING PROGRAMS:
1973**

Program Characteristics	FHWA Section 134	UMTA Long and Short Range Planning Studies	FAA Metro Systems Planning
Number of Active Urban Area Planning Grants	218	85	15
Areas Where Required	Urbanized	SMSA and Urban	Not Required
Areas Eligible	Urbanized	SMSA and Urban	Large SMSAs ¹ (or non-SMSA region)
Non-Federal Matching Funds Required	30-10% ²	33-1/3% ³	33-1/3%
Availability of Federal Planning Funds	Annual	Annual	Possible Renewal Every 3-5 Years

¹The Federal airport systems planning assistance program is geared primarily to the states. "Generally, metropolitan and regional areas which have more than one publicly owned airport and are forecasted to have a population of 500,000 or an annual passenger enplanement level of 250,000 within a 20 year planning period . . ." FAA Advisory Circular, *The Planning Grant Program for Airports*, February 16, 1973, p. 2.

²Prior to 1974, the actual rate depended upon the proportion of construction funds allocated to the state for interstate (90:10) and other (70:30) projects. The non-Federal share (averaging perhaps 20 percent) was often supplied by the states rather than by the metropolitan planning agency. Now, under the 1973 Highway Act, the matching ratio is 70:30 unless the Secretary of DOT determines that less matching would be in the best interests of the program. The Secretary has now determined that an 80:20 ratio should be used to conform with the transit funding ratios.

³The Highway Act of 1973 amended the mass transit program to remove the matching requirement for Section 9 Technical Studies grants, and set the matching of capital project funds at 20 percent. Administratively, it has been determined that the Technical Studies grants should also be matched with 20 percent non-Federal funds.

This section of the report principally focuses upon the Section 134 areas, organizations, and process as they existed in 1973, and how they related to other governments and planning bodies in those areas. Some of the newer procedures introduced under the *Highway Act of 1973* then are probed briefly.

How Urban Transportation Planning Areas and Organizations are Designated and Funded

Each of the three separate categorical Federal grant-in-aid programs for transportation systems planning took a somewhat different approach to establishing and designating urban area planning districts and organizations prior to 1974 (see *Table II-9*). To start with, their incidence is greatly different. While both the highway planning and urban mass transit planning programs are required where Federal action money is to be spent, all of the urban areas (218) have Federal aid highways, but less than half of them have mass transit for which

Federal assistance is sought. Thus, the highway planning program pervades all of the recognized urban transportation planning areas in the nation (218), while the urban mass transportation planning program is much less widespread (85 areas in 1973). The third program, airport systems planning, is not required at either the state or metropolitan levels. As a discretionary program, most of the states have undertaken statewide airport planning (including metropolitan airports), but separate areawide airport systems planning is pursued quite rarely by metropolitan planning agencies. Only 15 were engaged in this activity in 1973.

The designation of planning areas is a second area of major interprogram differences. The highway planning program is based upon the urbanized areas as defined by the U.S. Census, while the mass transportation program covers "urban areas" — a much broader definition which includes small urban places as well as the larger urbanized areas. In SMSAs, the mass transportation program establishes guidelines which generally follow the SMSA boundaries, rather than the "urbanized areas"

Table II-10

APPROVAL PROCESS FOR FEDERAL AID URBAN TRANSPORTATION IMPROVEMENT PROJECTS: 1972

Steps Toward Approval	Responsible Party For		
	Highways	Transit	Airports
Urban Area Planning			
Comprehensive	Comprehensive Areawide Planning Agency	Comprehensive Areawide Planning Agency	Comprehensive Areawide Planning Agency
Functional	Urban Transportation Planning Body (Program Of Implementation)	Same, If Possible (Includes Plans of Implementation—Project By Project)	Same, If Possible (Includes NASP Forms)
State Functional Planning ¹	Not Required	Not Required	National Airport Systems Plan (Projects Must be Included To Be Eligible For Federal Funds)
Initiation Of Improvement Project (Application For Federal Implementation Funds)	State Program Of Desired Projects	State And Local Governments Individually	State And Local Governments Individually
Approval Of Improvement Project	State Level Of FHWA	UMTA National Office	FAA National Office

¹Since 1970, DOT has been authorized to prepare a National Transportation Study every two years. This study includes the highway, transit, and airport modes as well as parking, intercity terminals, and other transportation system components. However, it is not really a plan. Instead it is primarily an inventory of planned facilities, aggregated from state and local sources to indicate the demand for Federal assistance of each mode. U.S. DOT, 1974 *National Transportation Study, Manual II: Procedures and Data Forms* (Washington, D.C.: DOT, October 1972).

Table II-11

TYPES OF SECTION 134 TRANSPORTATION PLANNING ORGANIZATIONS: 1973

Characteristics Of Section 134 Areas	Total (A)	Regional Council		Special Transportation Study		State		County		City	
		Number	Percent Of A	Number	Percent Of A	Number	Percent Of A	Number	Percent Of A	Number	Percent Of A
TOTAL	218	81	37.16	7	3.21	92	42.20	28	12.84	10	4.59
Population Group											
Over 10-Million	1	1	100.00	0	0.00	0	0.00	0	0.00	0	0.00
5 To 10-Million	3	3	100.00	0	0.00	0	0.00	0	0.00	0	0.00
1 To 5-Million	25	16	64.00	1	4.00	4	16.00	4	16.00	0	0.00
500,000 To 1,000,000	32	9	28.12	3	9.37	18	56.25	1	3.13	1	3.13
250,000 To 500,000	60	25	41.66	1	1.67	25	41.67	7	11.67	2	3.33
50,000 To 250,000	97	27	27.84	2	2.06	45	46.39	16	16.49	7	7.22
Geographic Division											
More Than One Division	15	12	80.00	1	6.67	3	20.00	1	6.67	1	6.67
New England	15	0	0.00	0	0.00	15	100.00	0	0.00	0	0.00
Middle Atlantic	19	2	10.53	0	0.00	17	89.47	0	0.00	0	0.00
South Atlantic	36	19	52.78	0	0.00	10	27.78	7	19.44	0	0.00
East South Central	13	3	23.08	0	0.00	5	38.46	0	0.00	5	38.46
West South Central	34	6	17.65	1	2.94	26	76.47	0	0.00	1	2.94
East North Central	39	11	28.21	3	7.69	6	15.34	16	41.03	0	0.00
West North Central	16	10	62.50	0	0.00	0	0.00	4	25.00	2	12.50
Mountain	15	6	40.00	0	0.00	8	53.33	0	0.00	1	6.67
West	16	12	75.00	2	12.50	2	12.50	0	0.00	0	0.00
Geographic Region											
Northeast	35	3	8.57	0	0.00	32	91.43	0	0.00	0	0.00
North Central	60	26	43.33	4	6.67	7	11.67	20	33.33	3	5.00
South	85	29	34.12	1	1.18	42	49.41	7	8.23	6	7.06
West	31	18	58.06	2	6.45	10	32.26	0	0.00	1	3.23
More Than One Region	7	5	71.42	0	0.00	1	14.29	1	14.29	0	0.00

Table II-11 (cont.)

Characteristics Of Section 134 Areas	Total (A)		Regional Council		Special Transportation Study		State		County		City	
	Number	Percent Of A	Number	Percent Of A	Number	Percent Of A	Number	Percent Of A	Number	Percent Of A	Number	Percent Of A
Number Of States												
Intrastate	183	33.33	61	45.36	6	3.28	83	45.36	24	13.11	9	4.92
Interstate	35	57.14	20	25.71	1	2.86	9	25.71	4	11.43	1	2.86
Number Of Counties												
One County	74	29.73	22	47.30	1	1.35	35	47.30	11	14.86	5	6.76
Multicounty	127	45.67	58	32.28	6	4.72	41	32.28	17	13.39	5	3.94
Part Of County(ies)	17	5.88	1	94.12	0	0.00	16	94.12	0	0.00	0	0.00

SOURCES: U.S. Department of Transportation, *Directory of Urbanized Councils, Regional Council Directory: 1973* (Washington, D.C.: NARC, Area Transportation Planning Program: 1972 (Washington, D.C.: U.S. Government Printing Office, 1972). National Association of Regional

of the highway program. Separate metropolitan airport systems plans are limited by administrative guidelines to large SMSAs generally having a population of 500,000 or more.

The highway planning program is the only Federal planning assistance program which uses the urbanized area rather than the SMSA in metropolitan areas. While areas of future development are to be added beyond the urbanized area boundaries, a good deal of local discretion is allowed in developing the planning district boundaries. Little guidance is provided by FHWA, and definitive accounting of the boundaries finally established is not maintained in Washington.

These differences in approaching the designation of planning areas are summarized in *Table II-9*. That table also indicates that while the required non-Federal matching has been 33.3 percent for both the UMTA and FAA system planning programs, it has been a combined rate of perhaps 20 percent for highway planning, depending upon the mix of 10 percent and 30 percent funds for different highway construction programs which jointly fund the planning process. With passage of the *1973 Highway Act*. The matching ratios for highway and transit planning can be set by the Secretary of DOT, and he has taken this opportunity to set both at 20 percent for the non-Federal shares. Before the 1973 act, the non-Federal matching funds for the highway planning money usually were provided by the state, while the non-Federal share for the other two programs usually was supplied by the metropolitan jurisdictions. Now, with the urban planning funds specially earmarked for metropolitan bodies for the first time by the *1973 Highway Act*, it is not clear which level of government will supply the non-Federal funds.⁶⁹

Another difference among these programs, shown in *Table II-9*, is the cycle of funding. Both the highway and mass transportation planning programs are set up to provide annual renewal and support of a continuing staff and a continuing planning process. On the other hand, the airport systems planning program recommends continuing updates, but does not provide staff support year after year. Typically, a one or two year planning project supplies the metropolitan airport systems plan with Federal assistance, and then with minor exceptions the Federal assistance will not be available again for three to five years at which time the area's plan may be thoroughly redone if intervening events warrant. Despite this intermittent funding approach, FAA does recommend that someone should adjust the plan in the interim between Federally assisted efforts. The intermittent approach to planning dates back to the days when plans were conceived more as independent advisory documents than as integral parts of a governmental manage-

ment system primarily aimed at implementation activities. It is a far different approach than that now taken in the two other Federal aid transportation planning programs.

How Federal Aid Transportation Implementation Projects are Approved

Table II-10 shows that there are significant differences in the processes established in these three modes for achieving approval of Federal aid improvement projects which grow out of the assisted planning. To start with, even though all three programs recognized the need for transportation planning to be coordinated with and made a part of comprehensive areawide planning, only two of the programs – transit and airports – stated a preference for their planning to be carried out by the comprehensive metropolitan planning agency. The third program, sponsored by FHWA often established separate urban transportation planning bodies in the past, and then relied upon coordinating procedures between this body and the comprehensive agency. Now, under the *1973 Highway Act*, there is a unified DOT preference for the governors of the states to designate the same planning organization for all three of these Federal aid transportation planning programs as well as for comprehensive planning which includes land use, physical development, and human resource programs.

The functional planning requirements in the planning programs of FHWA and UMTA include “programs of implementation” which are generally multi-year listings of projects or program priorities. The FAA systems planning requirements are not this specific, but do envision that plan recommendations would include the location of specific facilities and would result in the submission of forms requesting projects to be included in the National Airport Systems Plan (NASP). As will be seen later, the improvement program resulting from the FHWA sponsored metropolitan planning creates the eligibility for Federal funding of highway projects within the area. But it does not initiate a request for Federal funding, because that must come from the state. The metropolitan transit program establishes the definitive list of projects for which implementation agencies are free to request Federal funding. The NASP forms resulting from airport planning, on the other hand, are simply inputs of an advisory nature to the FAA national planning process; project eligibility is established by FAA’s Washington headquarters.

Table II-10 also shows the role of state functional

planning in the overall improvement project approval process. With respect to highways, the state must prepare a program of “desired projects” which amounts to the application for the use of Federal funds on a project-by-project basis. State planning is not required in the transit program and is usually absent. In the airport planning program, state planning is not required either, but in most cases it is done, and it incorporates any metropolitan and regional system plans which might have been prepared, as well as plans for the airport system of the whole state. The statewide airport systems plan, like the metropolitan one, results in NASP forms which become inputs to FAA’s national airport plan.

Table II-10 shows, further, that Federal functional planning is not required for the highway and transit programs, but is required for the airport program. In order for an airport improvement project to be eligible for Federal funding, it must be included in the National Airport Systems Plan.

Transit and airport improvement projects may be initiated by individual states and local governmental units which apply for the individual projects that they plan to carry out. For highway projects, however, the “state program of desired projects” is the only acceptable application for Federal assistance for implementation funds. This basic fact remains unchanged despite provisions of the *1973 Highway Act* which give the local jurisdictions and metropolitan transportation planning bodies new authority to “initiate” requests for projects. However, the new act, for the first time, does limit state requests for funding “urban systems” projects to those which survive the urban planning process.

Federal approval of implementation projects is provided for highways by a state level office of FHWA, but by national level offices in Washington for transit and airport development. Yet, the *1973 Highway Act* provides an alternative procedure under which state project approvals may substitute for Federal ones if the governor and the U.S. DOT Secretary agree that state procedures are adequate.

Complaints heard for many years about the limitations placed upon planners in solving transportation problems, as opposed to simply developing projects to spend categorical funds, are reflected in provisions of the *1973 Highway Act* which create new intermodal flexibility in the use of implementation money. This act provides, for the first time, that some of the funds appropriated for highway purposes may be used for transit projects, provided the affected state, local, and regional bodies can all agree. But, none of the above functional planning and categorical grant approval procedures are changed. So, the situation appears to be one

of robbing Peter to pay Paul. Controversies can be expected when specific transfers of funds are requested, and administrative procedures specifying whether transit or highway project approval procedures, or a combination of both, will apply. Thus, while planning flexibility may be enhanced, implementation complexities may be magnified.

Organizations Designated for Urban Transportation Planning: 1973

The following tables show the types of organizations which were designated to do the comprehensive, coordinated, and continuing transportation planning required in all urbanized areas by Section 134 of the *1962 Highway Act*. Although new designations were made in late 1973 and early 1974 under provisions of the *1973 Highway Act*, these tables already had been developed and are offered here to indicate how the urban transportation planning process had been operating up through 1973 and how it might be expected to change under DOT's new guidelines. Under these new guidelines, DOT requested the governors of the states to reconsider the designations of Section 134 organizations and choose a single organization to receive not only highway planning funds but also transit and airport planning funds. DOT strongly recommended that the agencies chosen be the ones also designated to carry out the Federal aid review and comment procedures under OMB Circular A-95.

As of 1973, there were 222 designated Section 134 transportation planning areas in the United States and Puerto Rico. These account for the 252 urbanized areas enumerated in the 1970 Census.⁷⁰ Nine Section 134 areas combine more than one "urbanized area" as defined by Census, explaining the difference in totals. These cases of multiple jurisdictions are found in California, Ohio, Pennsylvania, Illinois, Connecticut, New Jersey, and New York. The New York area, alone, includes ten urbanized areas in three states. Excluding the four urbanized areas in Puerto Rico, this report describes the 218 Section 134 areas located in the 50 states and the District of Columbia.

Table II-11 shows that the largest number of organizations which were designated for Section 134 urban transportation purposes as of 1973 were state agencies (42 percent) — usually the highway departments. About one-quarter of the states utilized these agencies as the organizations which prepared some or all of the required Section 134 transportation plans within their borders. Although this number is high, it may be somewhat misleading because Section 134 of the *Highway Act of 1962* requires that local officials be involved in the

transportation planning process in urban areas through policy advisory committees representing the cities and counties in the metropolitan area. These committees are formed by memoranda of agreement with the state highway departments and meet regularly even where the state itself is doing the urban planning.

Table II-11 also shows that state agencies were designated for Section 134 planning most often for the smaller urbanized areas and for those urbanized areas which are located on the East Coast. As would be expected, the intrastate — rather than the interstate — areas use state agencies for the required urban planning.

Regional councils were the second most common type of Section 134 planning organizations, as indicated by *Table II-11*. They accounted for about 37 percent of the designations recognized in 1973, including most of the larger metropolitan and interstate areas. These councils were most often designated in the West and in multicounty areas.

Individual cities and counties accounted for most of the remaining Section 134 organizations — over 17 percent of the total in *Table II-11*. Special transportation study organizations, having staff of their own for Section 134 purposes alone, accounted for only about 3 percent of the cases.

Almost 95 percent of the Section 134 transportation planning organizations recognized in 1973 were public agencies (see *Table II-12*). This high percentage of public agencies can be explained by the fact that most of the transportation planning was done by established state and local governments or by official regional planning bodies. The only agencies without legal status, or with non-profit status, were the few *ad hoc* transportation study organizations remaining from earlier years before regional councils became popular, and some of the regional councils based on neither state enabling legislation nor interstate compacts. Organizations other than public agencies were most often encountered in the West, in interstate areas, in multicounty areas, and in areas having 500,000 to 1-million population (see *Table II-13*).

Other Governmental Units in Section 134 Areas

Tables II-14 through II-22 show some of the other governmental organizations within the Section 134 urban transportation planning areas. These planning areas have from one to 15 counties, from one to three states, from one to seven substate districts which are part of statewide systems of substate districts, and from one to 381 municipalities. *Table II-14* shows that almost

Table II-12

**SECTION 134 TRANSPORTATION PLANNING ORGANIZATIONS, BY
TYPE AND LEGAL STATUS: 1973**

	Number Of Organizations (A)	Legal Status Of Organizations					
		Public Agency		Coordinating Committee Without Legal Status		Non-Profit Corporation	
		Number	Percent Of A	Number	Percent Of A	Number	Percent Of A
TOTAL	218	206	94.50	8	3.67	4	1.83
Regional Council	81	75	92.59	2	2.47	4	4.94
State Agency	92	92	100.00	0	0.00	0	0.00
County	28	28	100.00	0	0.00	0	0.00
City	10	10	100.00	0	0.00	0	0.00
Special Transportation Study Organization	7	1	14.29	6	85.71	0	0.00
Substate District	34	31	91.18	3	8.82	0	0.00

SOURCES: U.S. Department of Transportation, *Directory of Urbanized Area Transportation Planning Program: 1972*, (Washington, D.C.: U.S. Government Printing Office, 1972). National Association of Regional Councils, *Regional Council Directory: 1973*, (Washington, D.C.: NARC, 1973). NARC/ACIR, "Substate Regional Agency Questionnaire," Washington, D.C., 1972. Supplemental telephoning.

Table II-13

LEGAL STATUS OF SECTION 134 TRANSPORTATION PLANNING ORGANIZATIONS: 1973

Characteristics Of Section 134 Areas	Number Of Agencies (A)	Public Agency		Coordinating Committee Without Legal Status		Non-Profit Corporation	
		Number	Percent Of A	Number	Percent Of A	Number	Percent Of A
TOTAL	218	206	94.50	8	3.67	4	1.83
Population Group							
Over 10-Million	1	1	100.00	0	0.00	0	0.00
5 To 10-Million	3	3	100.00	0	0.00	0	0.00
1 To 5-Million	25	23	92.00	1	4.00	1	4.00
500,000 To 1,000,000	32	28	87.50	3	9.38	1	3.12
250,000 To 500,000	60	55	91.67	3	5.00	2	3.33
50,000 To 250,000	97	96	98.97	1	1.03	0	0.00
Geographic Division							
More Than One Division	15	14	93.33	1	6.67	0	0.00
New England	15	15	100.00	0	0.00	0	0.00
Middle Atlantic	19	19	100.00	0	0.00	0	0.00
South Atlantic	36	35	97.22	0	0.00	1	2.78
East South Central	13	13	100.00	0	0.00	0	0.00
West South Central	34	32	94.12	1	2.94	1	2.94
East North Central	39	35	89.74	4	10.26	0	0.00
West North Central	16	16	100.00	0	0.00	0	0.00
Mountain	15	13	86.67	0	0.00	2	13.33
West	16	14	87.50	2	12.50	0	0.00
Geographic Region							
Northeast	35	35	100.00	0	0.00	0	0.00
North Central	60	55	91.67	5	8.33	0	0.00
South	85	82	96.47	1	1.18	2	2.35
West	31	27	87.10	2	6.45	2	6.45
More Than One Region	7	7	100.00	0	0.00	0	0.00
Number of States							
Intrastate	183	173	94.54	6	3.28	4	2.18
Interstate	35	33	94.29	2	5.71	0	0.00
Number Of Counties							
One County	74	71	95.95	1	1.35	2	2.70
Multicounty	127	118	92.91	7	5.51	2	1.58
Part Of County(ies)	17	17	100.00	0	0.00	0	0.00

SOURCES: U.S. Department of Transportation, *Directory of Urbanized Area Transportation Planning Program: 1972*, (Washington, D.C.: U.S. Government Printing Office, 1972). National Association of Regional Councils, *Regional Council Directory: 1973*, (Washington, D.C.: NARC, 1973). NARC/ACIR, "Substate Regional Agency Questionnaire," Washington, D.C., 1972. Supplemental telephoning.

Table II-14

**GOVERNMENTAL UNITS WITHIN SECTION 134 TRANSPORTATION
PLANNING AREAS, STATE BY STATE: 1973**

State	Total Number Of Section 134 Areas (A)	Number Of Counties ³		Number Of States ⁴			Number Of Municipalities ⁵					
		One	More Than One Number Percent Of A	One	More Than One Number Percent Of A	One	2-5 Number Percent Of A	6-10 Number Percent Of A	Over 10 Number Percent Of A			
Alabama	6	2	4 66.7	6	0 0	2	3 50.0	0	0	1	16.7	
Arizona	2	2	0 0	2	0 0	0	1 50.0	1	50.0	0	0	
Arkansas	3	1	2 66.7	2	1 33.3	0	3 100.0	0	0	0	0	
California	10	7	3 30.0	10	0 0	4	3 30.0	1	10.0	2	20.0	
Colorado	4	2	2 50.0	4	0 0	2	1 25.0	0	0	1	25.0	
Connecticut	1	0	1 ¹ 100.0	1	0 0	0	1 100.0	0	0	0	0	
Delaware	1	0	1 100.0	0	1 100.0	0	0 0	1	100.0	0	0	
District of Columbia	1	0	1 100.0	0	1 100.0	0	0 0	0	0	1	100.0	
Florida	10	5	5 50.0	10	0 0	4	1 10.0	1	10.0	4	40.0	
Georgia	6	0	6 100.0	4	2 33.3	2	3 50.0	0	0	1	16.7	
Hawaii	1	1	0 0	1	0 0	0	0 0	0	0	1	100.0	
Idaho	1	1	0 0	1	0 0	0	1 100.0	0	0	0	0	
Illinois	9	3	6 66.7	6	3 33.3	2	4 44.4	2	22.2	1	11.1	
Indiana	8	3	5 62.5	7	1 12.5	1	4 50.0	3	37.5	0	0	
Iowa	5	3	2 40.0	4	1 20.0	0	5 100.0	0	0	0	0	
Kansas	2	0	2 100.0	2	0 0	1	1 50.0	0	0	0	0	
Kentucky	3	1	2 66.7	2	1 33.3	2	0 0	0	0	1	33.3	
Louisiana	6	3	3 50.0	6	0 0	1	5 83.3	0	0	0	0	
Maine	2	1 ¹	1 ¹ 50.0	2	0 0	1	1 50.0	0	0	0	0	
Maryland	1	0	1 100.0	1	0 0	1	0 0	0	0	0	0	
Massachusetts	9	1 ¹	8 ¹ 88.9	6	3 33.3	5	2 22.2	1	11.1	1	11.1	
Michigan	10	4	6 60.0	10	0 0	1	7 70.0	1	10.0	1	10.0	
Minnesota	3	1	2 66.7	2	1 33.3	1	1 33.3	0	0	1	33.3	
Mississippi	2	0	2 100.0	2	0 0	0	2 100.0	0	0	0	0	
Missouri	5	1	4 80.0	2	3 60.0	2	1 20.0	0	0	2	40.0	
Montana	2	2	0 0	2	0 0	2	0 0	0	0	0	0	
Nebraska	2	1	1 50.0	1	1 50.0	1	1 50.0	0	0	0	0	
Nevada	2	2	0 0	2	0 0	0	2 100.0	0	0	0	0	
New Hampshire	2	1 ¹	1 ¹ 50.0	2	0 0	2	0 0	0	0	0	0	
New Jersey	2	2	0 0	2	0 0	2	0 0	0	0	0	0	

Table II-14 (Cont.)

**GOVERNMENTAL UNITS WITHIN SECTION 134 TRANSPORTATION
PLANNING AREAS, STATE BY STATE: 1973**

State	Total Number Of Section 134 Areas (A)	Number Of Counties ³		Number Of States ⁴			Number Of Municipalities ⁵							
		One	More Than One Number Percent Of A	One	More Than One	One	2-5		6-10		Over 10			
					Num-ber	Per-cent Of A		Num-ber	Per-cent Of A	Num-ber	Per-cent Of A	Num-ber	Per-cent Of A	
New Mexico	1	0	1	100.0	1	0	0	0	1	100.0	0	0	0	0
New York	7	0	7	100.0	5	2	28.6	0	3	42.9	2	28.6	2	28.6
North Carolina	9	3	6	66.7	9	0	0	5	4	44.4	0	0	0	0
North Dakota	1	0	1	100.0	0	1	100.0	0	1	100.0	0	0	0	0
Ohio	12	1	11	91.7	9	3	25.0	1	4	33.3	1	8.3	6	50.0
Oklahoma	3	1	2	66.7	3	0	0	1	1	33.3	0	0	1	33.3
Oregon	3	1	2	66.7	2	1	33.3	1	1	33.3	0	0	1	33.3
Pennsylvania	11	4	7	63.6	9	2	18.2	0	3	27.3	1	9.1	7	63.6
Rhode Island	1	0	1 ¹	100.0	0	1	100.0	0	0	0	1	100.0	0	0
South Carolina	3	0	3	100.0	3	0	0	0	2	66.7	1	33.3	0	0
South Dakota	1	1	0	0	1	0	0	1	0	0	0	0	0	0
Tennessee	4	0	4	100.0	2	2	50.0	2	1	25.0	1	25.0	0	0
Texas	22	11	11	50.0	21	1	4.5	9	8	36.4	2	9.0	3	13.6
Utah	3	1	2	66.7	3	0	0	0	0	0	2	66.7	1	33.3
Virginia ²	6	0	5	83.3	6	0	0	2	4	66.7	0	0	0	0
Washington	2	1	1	50.0	2	0	0	0	1	50.0	0	0	1	50.0
West Virginia	3	0	3	100.0	1	2	66.7	0	0	0	2	66.7	1	33.3
Wisconsin	5	3	2	40.0	5	0	0	0	2	40.0	2	40.0	1	20.0
Totals	218	77	140	64.2	184	34	15.6	61	89	40.8	26	11.9	42	19.3

¹The counties in the New England states are partial counties since Section 134 Transportation Planning areas are designed to conform to town boundaries, rather than county.

²The Southeastern Virginia Regional Transportation Study has no counties within its boundaries.

³The average (mean) number of counties per Section 134 area is 2.92, while the range is from 0 to 24.

⁴The average (mean) number of states per Section 134 area is 1.18, while the range is from one to three.

⁵The average (mean) number of municipalities per Section 134 area is 11.17, while the range is from one to 381.

SOURCES: U.S. Department of Transportation, *Directory of Urbanized Area Transportation Planning Program: 1972* (Washington, D.C.: U.S. Government Printing Office, 1972). U.S. Bureau of the Census, *Census of Governments, Volume I* (Washington, D.C.: U.S. Government Printing Office, 1972). U.S. Bureau of the Census, *1970 Census of Population, Volume I* (Washington, D.C.: U.S. Government Printing Office, 1972).

Table II-15

**SECTION 134 TRANSPORTATION PLANNING AGENCIES HAVING
CERTAIN ADDITIONAL FEDERAL PLANNING DESIGNATIONS: 1973**

Characteristics Of Section 134 Areas	Number Of Section 134 Agencies (A)	Number Of Section 134 Agencies Having Certain Additional Federal Planning Designations								MEAN
		701		A-95		UMTA		FAA		
		Number	Percent Of A	Number	Percent Of A	Number	Percent Of A	Number	Percent Of A	
TOTAL	218	92	42.20	69	31.65	40	18.35	18	8.26	1.00
Population Group										
Over 10-Million	1	1	100.00	1	100.00	0	0.00	0	0.00	2.00
5 to 10-Million	3	2	66.67	1	33.33	3	100.00	1	33.33	2.33
1 to 5-Million	25	15	60.00	11	44.00	14	56.00	7	28.00	1.88
500,000 to 1,000,000	32	11	34.38	6	18.75	9	28.13	6	18.75	1.00
250,000 to 500,000	60	27	45.00	26	43.33	9	15.00	3	5.00	1.08
50,000 to 250,000	97	36	37.11	24	24.74	5	5.15	1	1.03	0.68
Geographic Division										
More Than One Division	15	12	80.00	12	80.00	5	33.33	0	0.00	1.93
New England	15	1	6.67	0	0.00	1	6.67	1	6.67	0.20
Middle Atlantic	19	2	10.53	1	5.26	4	21.05	6	31.58	0.68
South Atlantic	36	18	50.00	14	38.89	8	22.22	1	2.78	1.14
East South Central	13	3	23.08	3	23.08	1	7.69	0	0.00	0.54
West South Central	34	6	17.65	4	11.76	1	2.94	0	0.00	0.32
East North Central	39	21	53.85	12	30.77	4	10.26	0	0.00	0.95
West North Central	16	12	75.00	9	56.25	5	31.25	4	25.00	2.00
Mountain	15	6	40.00	6	40.00	5	33.33	1	6.67	1.20
West	16	11	68.75	8	50.00	6	37.50	5	31.25	1.88
Geographic Region										
Northeast	35	4	11.43	2	5.71	5	14.29	7	20.00	0.51
North Central	60	38	63.33	26	43.33	13	21.67	4	6.67	1.35
South	85	28	32.94	22	25.88	10	11.76	1	1.18	0.72
West	31	17	54.84	14	45.16	11	35.48	6	19.35	1.55
More Than One Region	7	5	71.43	5	71.43	1	14.29	0	0.00	1.57
Number Of States										
Intrastate	183	74	39.19	52	28.42	28	15.30	16	8.74	0.93
Interstate	35	18	51.43	17	48.57	12	34.29	2	5.71	1.40

Table II-15 (Cont.)

Characteristics Of Section 134 Areas	Number Of Section 134 Agencies (A)	Number Of Section 134 Agencies Having Certain Additional Federal Planning Designations								MEAN
		701		A-95		UMTA		FAA		
		Number	Percent Of A	Number	Percent Of A	Number	Percent Of A	Number	Percent Of A	
Number Of Counties										
One County	74	29	38.36	20	27.40	7	9.59	2	2.74	0.78
Multicounty	127	61	48.41	48	38.10	32	25.40	15	11.90	1.24
Party Of County(ies)	17	2	11.76	1	5.88	1	5.88	1	5.88	0.29

SOURCES: U.S. Department of Transportation, *Directory of Urbanized Area Transportation Planning Program: 1972* (Washington, D.C.: U.S. Government Printing Office, 1972). U.S. Department of Housing and Urban Development, "Comprehensive Planning Assistance Grants to Metropolitan Planning Organizations: FY 1972-73," unpublished list. U.S. Office of Management and Budget, *Directory of State, Metropolitan,*

and Regional Clearinghouses Under the Office of Management and Budget Circular No. A-95 (Revised) (Washington, D.C.: September 11, 1972), [offset]. Urban Mass Transportation Administration, "Technical Studies Grants Approved Through June 20, 1972," unpublished list. Federal Aviation Administration, "Approved Planning Projects: FY 1973," unpublished list.

two-thirds of the Section 134 areas are multicounty, while more than 15 percent are interstate, and about 72 percent have more than one municipality. Thus, most Section 134 areas clearly are multijurisdictional.

Many of the Section 134 transportation planning organizations have at least one additional Federal planning designation (see *Table II-15*). Over 42 percent have been recognized by HUD for its Section 701 comprehensive planning program, while nearly 32 percent have been recognized by OMB for the A-95 Federal aid review and comment process. Only about 18 percent, however, were receiving UMTA planning funds for mass transit, and less than 1 percent were receiving FAA airport planning funds in 1973. The 701 and A-95 designations of Section 134 organizations were most common in the North Central and Western states. Interstate and multicounty areas were also more often designated than others.

In those cases where the designations for these four programs were not given to the Section 134 organization, the legal status of the alternative agency designated was almost always the same as the Section 134 organization. But, there were different geographic boundaries in about half of the cases (see *Table II-16*). Separately designated UMTA and FAA planning organizations tended to have jurisdictions smaller than the Section 134 area, while HUD 701 and A-95 areas tended to be larger. These relationships remained fairly constant regardless of population size, region of the nation, or the intervention of state and county boundaries (see *Tables II-17 through II-20*). Most of the HUD 701 and A-95

designations that did not go to Section 134 agencies were given to regional councils. On the other hand, most of the UMTA designations not given to the Section 134 agencies were given to single purpose transit organizations (see *Table II-21*). Similarly, about one-half of the FAA designations not given to the Section 134 organizations went to special airport planning organizations.

Geographic Differences Between Section 134 Areas and Other Areas

Great differences, of course, exist in the size of different Section 134 transportation planning areas — reflected in *Tables II-22 through II-25*. It should be noted at the outset, however, that information about the precise boundaries of the required urban transportation planning areas was not available for this study. These boundaries are determined by local officials and are not approved or recorded in Washington. The designated areas always must include at least the whole urbanized area as defined by Census. Yet, they also must include additional territory where urbanization is projected to occur in the next 20 years. Usually, the Standard Metropolitan Statistical Areas (SMSA) as defined by the Bureau of the Census meet this requirement for additional territory. Moreover, it is convenient to use as the planning area, because its boundaries coincide with local political lines.⁷¹ Most of the time then, SMSAs and Section 134 transportation planning areas are the same. But, there are some cases where the SMSA includes very large rural areas not intended for Section 134 planning.

Table II-16

LEGAL AND GEOGRAPHICAL DIFFERENCES BETWEEN SECTION 134 TRANSPORTATION AGENCIES AND OTHER FEDERALLY DESIGNATED PLANNING AGENCIES: 1972

Other Federally Designated Planning Agencies Type	Number	Legal Status			Geography		
		Weaker than 134	Same As 134	Stronger Than 134	Smaller Than 134	Same As 134	Larger Than 134
UMTA	96	1	92	3	36	57	3
FAA	8	0	7	1	4	2	2
A-95	102	4	93	5	20	56	26
701	102	3	95	4	19	58	25

SOURCES: U.S. Bureau of the Census, *City-County Data Book: 1972*, (Washington, D.C.: U.S. Government Printing Office, 1972), and same as *Table II-15*.

Table II-17

**ORGANIZATIONAL AND GEOGRAPHIC DIFFERENCES BETWEEN
SECTION 134 TRANSPORTATION AGENCIES AND SEPARATE
URBAN MASS TRANSIT AGENCIES: 1972**

	Total Number Of Separate UMTA Agencies	Legal Status			Geography		
		Weaker Than 134	Same As 134	Stronger Than 134	Smaller Than 134	Same As 134	Larger Than 134
Total	96	1	92	3	36	57	3
Population Group							
Over 10-Million	1	0	1	0	1	0	0
5 To 10-Million	2	0	2	0	0	2	0
1 To 5-Million	17	0	17	0	7	9	1
500,000 To 1,000,000	20	1	17	2	6	13	1
250,000 To 500,000	24	0	24	0	9	15	0
50,000 To 250,000	32	0	31	1	13	18	1
Geographic Division							
More Than One Division	10	0	10	0	3	7	0
New England	6	0	6	0	2	4	0
Middle Atlantic	12	0	12	0	5	7	0
South Atlantic	13	0	13	0	3	10	0
East South Central	8	0	8	0	1	6	1
West South Central	13	0	12	1	9	4	0
East North Central	15	0	14	1	5	9	1
West North Central	9	1	8	0	5	3	1
Mountain	6	0	5	1	3	3	0
West	4	0	4	0	0	4	0
Geographic Region							
Northeast	22	0	22	0	7	15	0
North Central	23	0	22	1	10	12	1
South	37	0	36	1	14	22	1
West	12	0	11	1	5	7	0
More Than One Region	2	1	1	0	0	1	1
Number Of States							
Intrastate	79	0	77	2	28	48	3
Interstate	17	1	15	1	8	9	0
Number Of Counties							
One County	29	0	28	1	10	17	2
Multicounty	60	1	57	2	23	36	1
Part Of County(ies)	7	0	7	0	3	4	0

SOURCES: Same as Table II-16.

Table II-18

**ORGANIZATIONAL AND GEOGRAPHIC DIFFERENCES BETWEEN
SECTION 134 TRANSPORTATION AGENCIES AND SEPARATE
FEDERAL AVIATION ADMINISTRATION AGENCIES: 1972**

	Total Number Of Separate FAA Agencies	Legal Status			Geography		
		Weaker Than 134	Same As 134	Stronger Than 134	Smaller Than 134	Same As 134	Larger Than 134
Total	8	0	7	1	4	2	2
Population Group							
Over 10-Million	1	0	1	0	1	0	0
5 To 10-Million	0	0	0	0	0	0	0
1 To 5-Million	1	0	1	0	1	0	0
500,000 To 1,000,000	1	0	1	0	0	1	0
250,000 To 500,000	1	0	1	0	0	0	1
50,000 To 250,000	4	0	3	1	2	1	1
Geographic Division							
More Than One Division	1	0	1	0	1	0	0
New England	1	0	1	0	0	1	0
Middle Atlantic	2	0	2	0	0	0	2
South Atlantic	0	0	0	0	0	0	0
East South Central	0	0	0	0	0	0	0
West South Central	2	0	1	1	2	0	0
East North Central	1	0	1	0	1	0	0
West North Central	1	0	1	0	0	1	0
Mountain	0	0	0	0	0	0	0
West	0	0	0	0	0	0	0
Geographic Region							
Northeast	2	0	2	0	1	1	0
North Central	1	0	1	0	1	0	0
South	5	0	4	1	2	1	2
West	0	0	0	0	0	0	0
More Than One Region	0	0	0	0	0	0	0
Number Of States							
Intrastate	5	0	5	0	2	1	2
Interstate	3	0	2	1	2	1	0
Number of Counties							
One County	1	0	1	0	0	0	1
Multicounty	7	0	6	1	4	2	1
Part Of County(ies)	0	0	0	0	0	0	0

SOURCES: Same as Table II-16.

Table II-19

**ORGANIZATIONAL AND GEOGRAPHIC DIFFERENCES BETWEEN
SECTION 134 TRANSPORTATION AGENCIES AND SEPARATE HUD
701 PLANNING AGENCIES: 1972**

	Total Number Of Separate 701 Agencies	Legal Status			Geography		
		Weaker Than 134	Same As 134	Stronger Than 134	Smaller Than 134	Same As 134	Larger Than 134
Total	102	3	95	4	19	58	25
Population Group							
Over 10-Million	0	0	0	0	0	0	0
5 To 10-Million	0	0	0	0	0	0	0
1 To 5-Million	11	0	11	0	2	9	0
500,000 To 1,000,000	16	1	13	2	3	8	5
250,000 To 500,000	24	1	22	1	7	12	5
50,000 To 250,000	51	1	49	1	7	29	15
Geographic Division							
More Than One Division	14	0	14	0	2	9	3
New England	11	0	11	0	2	9	0
Middle Atlantic	16	0	16	0	3	8	5
South Atlantic	7	1	6	0	3	3	1
East South Central	22	1	21	0	2	8	12
West South Central	13	0	11	2	4	8	1
East North Central	3	0	2	1	0	2	1
West North Central	5	1	4	0	2	3	0
Mountain	3	0	3	0	1	0	2
West	8	0	7	1	0	8	0
Geographic Region							
Northeast	31	0	31	0	4	25	2
North Central	17	0	15	2	4	11	2
South	42	2	39	1	9	14	19
West	11	0	10	1	1	8	2
More Than One Region	1	1	0	0	1	0	0
Number Of States							
Intrastate	88	1	83	4	16	49	23
Interstate	14	2	12	0	3	9	2
Number Of Counties							
One County	35	0	34	1	3	22	10
Multicounty	52	3	46	3	13	25	14
Part Of County(ies)	15	0	15	0	3	11	1

SOURCES: Same as Table II-16.

Table II-20

**ORGANIZATIONAL AND GEOGRAPHIC DIFFERENCES BETWEEN
SECTION 134 TRANSPORTATION AGENCIES AND SEPARATE
A-95 CLEARINGHOUSES: 1972**

	Total Number Of Separate A-95 Agencies	Legal Status			Geography		
		Weaker Than 134	Same As 134	Stronger Than 134	Smaller Than 134	Same As 134	Larger Than 134
Total	102	4	93	5	20	56	26
Population Group							
Over 10-Million	0	0	0	0	0	0	0
5 To 10-Million	0	0	0	0	0	0	0
1 To 5-Million	10	0	10	0	2	8	0
500,000 To 1,000,000	18	1	14	3	4	9	5
250,000 To 500,000	25	2	22	1	7	13	5
50,000 To 250,000	49	1	47	1	7	26	16
Geographic Division							
More Than One Division	13	0	13	0	1	9	3
New England	11	0	11	0	3	8	0
Middle Atlantic	17	0	17	0	3	10	4
South Atlantic	6	1	5	0	3	2	1
East South Central	23	2	21	0	2	9	12
West South Central	15	0	11	4	5	8	2
East North Central	1	0	1	0	0	0	1
West North Central	3	1	2	0	2	1	0
Mountain	4	0	4	0	1	0	3
West	9	0	8	1	0	9	0
Geographic Region							
Northeast	27	0	27	0	4	22	1
North Central	15	0	12	3	5	7	3
South	46	3	42	1	9	18	19
West	13	0	12	1	1	9	3
More Than One Region	1	1	0	0	1	0	0
Number Of States							
Intrastate	88	2	81	5	17	47	24
Interstate	14	2	12	0	3	9	2
Number Of Counties							
One County	37	0	36	1	3	23	11
Multicounty	52	4	44	4	15	23	14
Part Of County(ies)	13	0	13	0	2	10	1

SOURCES: Same as Table II-16.

Table II-21

**SELECTED FEDERAL DESIGNATIONS OF METROPOLITAN
PLANNING AGENCIES: 1972**

Type Of Agencies	Designation			
	701	A-95	UMTA	FAA
Total	194	171	136	26
Section 134 Transportation Agency	92	69	40	18
Regional Councils [Not Section 134's]	90	95	18	4
Metropolitan Planning (701) [Not 134's Nor Regional Councils]	12	-	-	-
Metropolitan Clearinghouse (A-95) [Not 134's Nor Regional Council]	-	7	-	-
Other [UMTA And FAA]	-	-	78	4

SOURCES: U.S. Department of Transportation, *Directory of Urbanized Area Transportation Planning Program: 1972* (Washington, D.C.: Government Printing Office, 1972). U.S. Department of Housing and Urban Development, "Comprehensive Planning Assistance Grants to Metropolitan Planning Organizations: FY 1972-73," unpublished list. U.S. Office of Management and Budget, *Directory of State, Metropolitan, and Regional Clearinghouses Under the Office of Management and Budget Circular No. A-95 (Revised)*, (Washington, D.C.: September 11, 1972, offset printing). Urban Mass Transportation Administration, "Technical Studies Grants Approved Through June 20, 1972," unpublished list. Federal Aviation Administration, "Approved Planning Projects: FY 1973," unpublished list.

In these cases, SMSA boundaries have not been followed by local officials setting the Section 134 planning boundaries. The San Bernardino-Riverside-Ontario SMSA in California, which extends a hundred miles into the mountains and desert beyond the urbanized area, is a good example of this situation. Despite these occasional problems, the tables presented here use the SMSA land areas and populations as proxies for the Section 134 planning areas.

On the average, each Section 134 area includes somewhat more than one SMSA, somewhat more than one urbanized area, and somewhat more than one central city (see *Table II-22*). The number of these components tends to increase as the overall size of the planning area increases. The largest Section 134 planning area, New York, includes 11 SMSAs, ten urbanized areas, and ten central cities. Interstate planning areas average somewhat more SMSAs, urbanized areas, and central cities than do the areas within a single state. Single county transportation planning areas, of course, contain only one SMSA and one urbanized area, although they average slightly more than one central city each.

Most urban transportation planning areas are encompassed within a single substate district (see *Table II-23*). The main exception to this is in interstate areas where there is usually a separate substate district in each state. In the most extreme case, the Section 134 planning area includes all or part of seven substate districts.

The SMSAs for which urban transportation planning is required range in geographic size from 30 square miles to 414,560 square miles (see *Table II-24*). The related urbanized areas range from ten square miles to 2,980 square miles. The land area classified in central cities of Section 134 planning areas ranges from less than ten square miles to 770 square miles. The West tends to have the largest SMSAs because of the extraordinary size of some of its counties. The West and South tend to have the largest central cities, probably because of relatively liberal annexation policies. Interstate urbanized areas tend to be larger than those completely contained within a single state and multicounty SMSAs and urbanized areas, as might be expected, tend to be larger than single county ones.

The Section 134 transportation areas have populations which range from about 50,000 to over 17.5-million (see *Table II-25*).

Status of Intermodal Transportation Planning

Since the Section 134 comprehensive transportation planning requirements were enacted in 1962, the goal of

transportation planning has been to coordinate the different modes, and then relate the total transportation system to overall community development planning. With establishment of the U.S. Department of Transportation in 1966, efforts to bring about coordination of the individual modal planning programs slowly have gained momentum. Beginning in 1972 with the publication of its first National Transportation Study, DOT has embarked upon a program of publishing such a report every two years. This effort involves an assessment of the needs in each functional area of the transportation field, and recommendations to Congress for appropriate actions to meet these various needs in a coordinated fashion. Thus, there is now available a document at the national level which has begun to look at the relative needs of different transportation modes. This has begun to spur serious actions by DOT to coordinate its many programs.

The legislative underpinning for an intermodal coordinating mechanism was provided by the *1962 Highway Act* through its requirement in Section 134 for comprehensive urban transportation planning processes in each urbanized area. This process may include highway planning, transit planning, and planning for all parking and intercity terminal facilities. Presumably this includes railroads, airports, and waterports. However, typically the urban transportation process funded by FHWA has primarily stressed highway planning, has often treated transit planning as a residual, and usually has not treated other modes at all. Thus, it really has not been, in practice, comprehensive transportation planning. Instead, real transit planning of equal caliber to the highway planning has come about only with the expansion of UMTA's planning program in the last three years or so, and airport planning has been a completely separate activity supported sporadically, if at all, either by the airport systems planning funds available in the last three years, or through Section 701 funds from HUD. At the same time the need to unify DOT's three transportation systems planning grant programs at the metropolitan level has not been ignored.

The first effort to do this was evidenced by an early 1972 FHWA memorandum which required: "By July 1, 1973, all urbanized areas receiving funding for areawide urban transportation from more than one DOT administration will be required to submit a unified work program as a condition of FHWA participation in their urban transportation process."⁷² These unified work programs were to show all of the transportation planning work going on in a given urban area no matter by whom funded. Coordination with the HUD 701 planning program also was required, and the total package was to

Table II-22

**AVERAGE NUMBER OF SMSAs, URBANIZED AREAS, AND
CENTRAL CITIES WITHIN SECTION 134
TRANSPORTATION PLANNING AREAS: 1972**

	Total Number Of Section 134 Areas	SMSAs			Urbanized Areas			Central Cities		
		Low- est	Mean	High- est	Low- est	Mean	High- est	Low- est	Mean	High- est
Total U.S.	218	0*	1.10	11	1	1.14	10	1	1.36	11
Population Group										
Over 10-Million	1	11	11.00	11	10	10.00	10	11	11.00	11
5 To 10-Million	3	2	2.67	4	1	2.33	4	2	5.33	10
1 To 5-Million	25	1	1.36	4	1	1.40	3	1	1.72	6
500,000 To 1,000,000	32	0*	0.97	3	1	1.09	3	1	1.47	3
250,000 To 500,000	60	0*	0.97	1	1	1.05	2	1	1.18	2
50,000 To 250,000	97	0*	1.00	2	1	1.01	2	1	1.12	3
Geographic Division										
More Than One Division	15	1	1.73	11	1	1.66	10	1	2.06	11
New England	15	1	1.20	3	1	1.13	3	1	1.60	3
Middle Atlantic	19	1	1.05	2	1	1.11	2	1	1.42	3
South Atlantic	36	0*	0.92	1	1	1.00	1	1	1.11	2
East South Central	13	1	1.00	1	1	1.00	1	1	1.08	2
West South Central	34	0*	1.03	2	1	1.15	3	1	1.18	3
East North Central	39	0*	1.08	3	1	1.10	3	1	1.33	4
West North Central	16	1	1.00	1	1	1.06	2	1	1.18	2
Mountain	15	0*	0.87	1	1	1.00	1	1	1.07	2
West	16	1	1.44	4	1	1.44	4	1	2.12	10
Geographic Region										
Northeast	35	1	1.40	11	1	1.37	10	1	1.77	11
North Central	60	0*	1.04	3	1	1.07	3	1	1.30	4
South	85	0*	0.98	2	1	1.06	3	1	1.13	3
West	31	0*	1.16	4	1	1.23	4	1	1.61	10
More Than One Region	7	1	1.14	2	1	1.14	2	1	1.57	3
Number Of States										
Intrastate	183	0*	1.03	4	1	1.09	4	1	1.29	10
Interstate	35	0*	1.36	11	1	1.36	10	1	1.79	11
Number Of Counties										
One County	74	0*	0.96	1	1	1.00	2	1	1.12	3
Multicounty	127	0*	1.16	11	1	1.20	10	1	1.46	11
Part Of County(ies)	17	0*	1.12	3	1	1.18	3	1	1.65	3

*Section 134 Transportation Planning Agencies are based on urbanized areas and some have not been designated by OMB as Standard Metropolitan Statistical Areas.

SOURCES: U.S. Department of Transportation, *Directory of Urbanized Area Transportation Planning Program: 1972*, (Washington, D.C.: U.S. Government Printing Office, 1972). U.S. Bureau of the Census, *City-County Data Book: 1972*, (Washington, D.C.: U.S. Government Printing Office, 1972).

Table II-23

**NUMBER OF SUBSTATE DISTRICTS WHOLLY OR PARTIALLY WITHIN SECTION 134
TRANSPORTATION PLANNING AREAS: 1973**

	Substate District First State				Substate District Second State				Substate District Third State			
	Number	Low- est	Mean	High- est	Number	Low- est	Mean	High- est	Number	Low- est	Mean	High- est
Total U.S. Population Group	216*											
Over 10-Million	1	1	1.00	1	1	1	1.00	1	1	5	5.00	5
5 To 10-Million	3	1	1.00	1	2	1	1.00	1	0	0	0.00	0
1 To 5-Million	25	1	1.00	1	5	1	1.00	1	0	0	0.00	0
500,000 To 1,000,000	30	1	1.23	3	4	1	1.00	1	1	1	1.00	1
250,000 To 500,000	60	1	1.00	1	8	1	1.00	1	1	1	1.00	1
50,000 To 250,000	97	1	1.00	1	6	1	1.00	1	1	1	1.00	1
Geographic Division												
More Than One Division	15	1	1.00	1	11	1	1.00	1	2	1	3.00	5
New England	14	1	1.07	2	0	0	0.00	0	0	0	0.00	0
Middle Atlantic	19	1	1.11	3	2	1	1.00	1	0	0	0.00	0
South Atlantic	36	1	1.00	1	2	1	1.00	1	0	0	0.00	0
East South Central	13	1	1.00	1	1	1	1.00	1	1	1	1.00	1
West South Central	34	1	1.12	3	2	1	1.00	1	0	0	0.00	0
East North Central	39	1	1.00	1	3	1	1.00	1	0	0	0.00	0
West North Central	16	1	1.00	1	4	1	1.00	1	1	1	1.00	1
Mountain	15	1	1.00	1	0	0	0.00	0	0	0	0.00	0
West	15	1	1.00	1	1	1	1.00	1	0	0	0.00	0
Geographic Region												
Northeast	34	1	1.09	3	3	1	1.00	1	1	5	5.00	5
North Central	60	1	1.00	1	10	1	1.00	1	1	1	1.00	1
South	85	1	1.05	3	7	1	1.00	1	1	1	1.00	1
West	30	1	1.00	1	1	1	1.00	1	0	0	0.00	0
More Than One Region	7	1	1.00	1	4	1	1.00	1	1	1	1.00	1

Table II-23 (Cont.)

	Substate District First State			.	Substate District Second State			.	Substate District Third State			
	Number	Low- est	Mean		High- est	Number	Low- est		Mean	High- est	Number	Low- est
Number Of States												
Intrastate	181	1	1.04	3	2	1	1.00	1	0	0	0.00	0
Interstate	35	1	1.00	1	23	1	1.00	1	4	1	2.00	5
Number Of Counties												
One County	73	1	1.00	1	0	0	0.00	0	0	0	0.00	0
Multicounty	127	1	1.05	3	24	1	1.00	1	4	1	2.00	5
Part Of County(ies)	16	1	1.06	2	1	1	1.00	1	0	0	0.00	0

*Two of the Section 134 areas are not covered by substate districts. For the nation as a whole, the average Section 134 area has 1.18 substate districts, and the range is from 0-7.

Transportation Planning Programs: 1972, (Washington, D.C.: U.S. Government Printing Office, 1972). Economic Research Service, *Status of Multi-County Planning and Development Districts*, (Washington, D.C.: U.S. Department of Agriculture 1973).

SOURCE: U.S. Department of Transportation, *Directory of Urbanized Area*

Table II-24

**AVERAGE LAND AREA OF SMSAs, URBANIZED AREAS, AND CENTRAL
CITIES WITHIN SECTION 134 TRANSPORTATION PLANNING
AREAS: 1972
(OOO'S Of Square Miles)**

	Total Number Section 134 Areas	SMSAs			Urbanized Areas			Central Cities		
		Low- est	Mean	High- est	Low- est	Mean	High- est	Low- est	Mean	High- est
Total U.S.	218	0.00*	18.49	414.56	0.01	0.21	2.98	0.00	0.07	0.12
Population Group										
Over 10-Million	1	4.32	4.32	4.32	2.98	2.98	2.98	0.26	0.26	0.26
5 To 10-Million	3	3.78	95.82	279.01	0.82	1.37	2.02	0.14	0.40	0.76
1 To 5-Million	25	0.99	3.36	6.99	0.07	0.46	1.07	0.03	0.17	0.52
500,000 To 1,000,000	32	0.00*	2.31	9.24	0.05	0.19	0.35	0.01	0.13	0.77
250,000 To 500,000	60	0.00*	9.15	414.56	0.03	0.09	0.22	0.00	0.05	0.12
50,000 To 250,000	97	0.00*	1.21	6.37	0.01	0.16	0.62	0.01	0.03	0.08
Geographic Division										
More Than One Division	15	0.11	30.05	414.56	0.02	0.70	2.98	0.01	0.06	0.26
New England	15	0.03	0.42	2.03	0.03	0.09	0.24	0.01	0.04	0.08
Middle Atlantic	19	0.50	1.77	3.78	0.02	0.15	0.82	0.00	0.03	0.14
South Atlantic	36	0.00*	1.47	4.31	0.03	0.13	0.49	0.01	0.07	0.77
East South Central	13	0.46	1.93	4.10	0.01	0.11	0.34	0.01	0.10	0.51
West South Central	34	0.00*	1.88	6.79	0.01	0.12	1.07	0.01	0.10	0.64
East North Central	39	0.00*	1.35	4.66	0.02	0.16	1.28	0.01	0.06	0.38
West North Central	16	0.66	2.08	6.50	0.01	0.51	0.72	0.01	0.07	0.37
Mountain	15	0.00*	4.21	9.24	0.01	0.10	0.34	0.01	0.06	0.25
West	16	0.60	20.95	279.01	0.03	0.31	2.02	0.01	0.13	0.76
Geographic Region										
Northeast	35	0.03	1.27	4.32	0.02	0.21	2.98	0.00	0.04	0.26
North Central	60	0.00*	1.68	7.40	0.01	0.26	1.28	0.01	0.06	0.38
South	85	0.00*	1.69	6.79	0.01	0.12	1.07	0.01	0.09	0.77
West	31	0.00*	12.85	279.01	0.01	0.21	2.02	0.01	0.09	0.76
More Than One Region	7	0.94	61.29	414.56	0.03	0.95	0.37	0.01	0.04	0.11
Number Of States										
Intrastate	183	0.00*	19.37	279.01	0.01	0.17	2.02	0.00	0.07	0.77
Interstate	35	0.00*	13.91	414.56	0.02	0.42	2.98	0.01	0.08	0.37
Number Of Counties										
One County	74	0.00*	1.70	9.24	0.01	0.14	0.62	0.01	0.04	0.32
Multicounty	127	0.00*	7.74	414.56	0.02	0.26	2.98	0.00	0.10	0.77
Part Of County(ies)	17	0.00*	0.41	2.03	0.03	0.11	0.30	0.01	0.04	0.08

*Section 134 Transportation Planning Agencies are based on urbanized areas and some have not been designated by OMB as Standard Metropolitan Statistical Areas.

SOURCES: U.S. Department of Transportation, *Directory of Urbanized Area Transportation Planning Program: 1972* (Washington, D.C.: U.S. Government Printing Office, 1972). U.S. Department of Agriculture, *Status of Multi-County Planning and Development Districts* (Washington, D.C.: U.S. Department of Agriculture, 1973). U.S. Bureau of the Census, *City-County Data Book: 1972* (Washington, D.C.: U.S. Government Printing Office, 1972).

become the basis for funding of planning activities by all DOT modal administrations.

Later that same year, the Office of the Secretary formally established intermodal planning groups in the ten Standard Federal Regions. These groups were composed of representatives of the Coast Guard, FAA, UMTA, FHWA, and the Federal Railroad Administration, plus the regional representative of the DOT Secretary – “. . .their role is to act as an advisory and coordinating group with operating responsibility remaining with the operating administrations.”⁷³ Their mandate then was to promote intermodal planning, unified work programs, and the recognition of a single agency in each metropolitan area for areawide (system or preproject) transportation planning. Another order from the Office of the Secretary in early 1973 formally required annual unified work programs for intermodal planning encompassing all three Federal aid transportation planning programs – highways, mass transportation, and airport systems.⁷⁴ In the fall of 1973, a DOT letter was sent to each governor requesting that the governor designate a single planning agency in each metropolitan area for the purpose of all three Federal aid planning programs.⁷⁵ This letter also urged governors to select the A-95 metropolitan clearinghouse in each case if at all possible, and to provide special justifications in those cases where a different designation was made. As of late 1973, unified work programs were approved by DOT in 126 urbanized areas; disapproved or not approved in 45; not required in 30; pending approval in 33; and under development in two. This adds up to a grand total of 236 such areas and a more than 60 percent approval rate.⁷⁶

Finally, the Office of the Secretary is considering uniform intermodal standards and procedures for DOT certification of transportation planning processes in urban areas. Each area would have to have such a certification covering all three DOT planning programs in order to continue receiving DOT assistance for implementation projects from those three modal administrations. The quality of planning and the planning work program, as well as the procedural arrangements for carrying it out, would be major factors in determining the certification.

Obviously, the unification of these three programs is proceeding. But, differences in matching funds and approval processes still remain. Even the Integrated Grant Administration Program, under which OMB encourages pooled funds from related Federal grant programs, cannot overcome these basic differences.⁷⁷ Water, railroad, and pedestrian modes have not yet received

attention from DOT in terms of metropolitan coordination.

Yet as earlier data have shown, transportation planning often is not done by one organization – and more than half the time it has not been done by the official comprehensive metropolitan planning body. Moreover, most of the Section 134 planning has concentrated on the highway mode alone. While this highway planning has been done in relation to services provided by other modes, positive planning for those other modes has seldom been part of the Section 134 planning process. *Tables II-26 through II-29* indicate the current status of intermodal planning.

As will be explained more fully later, DOT now requires that where Federal planning funds are being granted to a metropolitan area from two or more of DOT's planning programs (FHWA, UMTA, and FAA) a unified work program for the use of these funds – and any other transportation planning funds provided by the area itself – must be prepared by the recipient planning organizations and approved by DOT. Of the 208 areas required to have these unified work programs, 120 (58 percent) had received approval by late 1973, while 33 were pending approval, two were under development, and 45 had been disapproved (see *Table II-26*). These work programs, however, need provide only for those modes specifically being funded at the time they are prepared. In other words, they do not include all transportation modes.

Of all the certified Section 134 transportation plans on file at DOT headquarters in Washington as of October 1973, less than half included transit elements in addition to highways. Moreover, airport, railroad, water, and other elements were included in less than 11 percent (see *Table II-27*). On the average, a certified Section 134 plan included less than two modes. In contrast, almost all of the metropolitan areas for which Section 134 planning must be done have bus service, scheduled airline flights, and freight trains. In addition, over half have passenger trains, and over one-third have ports (see *Table II-28*). Logic would suggest that comprehensive transportation plans for these areas should average at least four modes – highways, transit, railroad, and airport – and one-third also should have a water transportation element.

On the brighter side, almost half of the states have recently reorganized their transportation programs into state departments of transportation. The 27 states which had done this by the end of 1974 account for 80 percent of the urbanized area population of the nation (see *Table II-29*), and 63 percent of the recognized areas. The significance of these figures is that transportation

Table II-25
**AVERAGE, LOWEST, AND HIGHEST POPULATION OF SMSAs,
 URBANIZED AREAS, AND CENTRAL CITIES WITHIN SECTION 134
 TRANSPORTATION PLANNING AREAS: 1972**
(000's)

	Total Number Of Section 134 Areas	Lowest	SMSAs		Urbanized Areas			Central Cities		
			Mean	Highest	Lowest	Mean	Highest	Lowest	Mean	Highest
Total U.S.	218	0.00*	629.25	16,111.38	44.84	540.97	17,858.24	9.86	292.24	9,376.68
Population Group										
Over 10-Million	1	16,111.38	16,111.38	16,111.38	17,582.24	17,582.24	17,582.24	9,376.68	9,376.68	9,376.68
5 To 10-Million	3	5,721.88	7,341.86	8,695.44	4,295.21	6,748.74	9,236.45	2,053.19	3,267.02	4,055.09
1 To 5-Million	25	299.00	1,794.90	4,628.20	368.74	1,640.63	4,088.21	277.74	749.97	1,676.07
500,000 To 1,000,000	32	0.00*	644.71	967.52	152.25	611.79	863.36	63.10	303.13	654.29
250,000 To 500,000	60	0.00*	325.92	767.23	96.15	229.99	558.10	9.86	143.30	322.26
50,000 To 250,000	97	0.00*	149.45	832.22	50.47	100.52	208.62	29.08	77.15	198.69

Table II-25 (Cont.)

	Total Number Of Section 134 Areas	Lowest	SMSAs		Urbanized Areas			Central Cities		
			Mean	Highest	Lowest	Mean	Highest	Lowest	Mean	Highest
Geographic Division										
More Than One										
Division	15	80.47	1,587.18	16,111.38	63.37	1,666.49	17,582.24	48.28	861.95	9,376.68
New England	15	66.59	460.81	2,753.80	60.96	401.19	2,652.57	41.78	174.27	641.05
Middle Atlantic	19	121.37	843.26	5,721.88	73.58	581.04	4,295.21	42.48	262.69	2,053.19
South Atlantic	36	0.00*	415.10	2,070.67	57.64	376.77	2,481.49	9.86	189.08	905.76
East South Central	13	79.49	350.60	821.86	53.13	516.58	663.98	50.32	194.60	623.75
West South Central	34	0.00*	365.50	2,169.13	50.47	295.55	2,015.63	29.08	220.82	1,333.04
East North Central	39	0.00*	692.20	7,608.27	69.39	581.87	6,714.57	44.63	316.12	3,692.79
West North Central	16	80.91	367.93	1,965.16	56.60	315.21	1,704.42	53.34	213.40	744.32
Mountain	15	0.00*	317.18	1,228.80	68.63	278.06	1,047.31	60.09	174.78	581.60
West	16	186.66	1,336.38	8,695.44	93.04	1,215.47	9,236.45	61.71	564.39	4,055.09
Geographic Region										
Northeast	35	66.59	1,115.58	16,111.38	60.96	989.70	17,582.24	41.78	485.19	9,376.68
North Central	60	0.00*	601.53	7,608.27	56.60	502.54	6,714.57	44.63	276.63	3,692.79
South	85	0.00*	382.79	2,169.13	50.47	361.88	2,481.49	9.86	201.39	1,333.04
West	31	0.00*	843.21	8,695.44	68.63	761.88	9,236.45	60.09	375.87	4,055.09
More Than One Region										
Region	7	165.62	554.07	1,611.06	92.94	452.52	1,201.43	48.28	194.19	568.97
Number Of States										
Intrastate	183	0.00*	508.57	8,695.44	52.47	446.53	9,236.45	9.86	230.06	4,055.09
Interstate	35	0.00*	1,260.25	16,111.38	58.57	1,150.05	17,582.24	30.50	617.35	9,376.68
Number Of Counties										
One County	74	0.00*	226.38	1,357.78	50.47	171.65	1,219.66	29.08	110.28	696.57
Multicounty	127	0.00*	892.49	16,111.38	57.65	810.80	17,582.24	9.86	415.55	9,376.68
Part Of County(ies)	17	0.00*	446.63	2,753.80	60.96	416.14	2,652.57	41.78	187.41	641.05

*Section 134 Transportation Planning Agencies are based on urbanized areas and some have not been designated by OMB as Standard Metropolitan Statistical Areas.

SOURCES: Same as Table II-24.

Table II-26

STATUS OF UNIFIED WORK PROGRAMS, STATE BY STATE: 1973

States	Approved	Not Approved	Not Required	Pending	Under Develop- ment
United States, Total					
Alabama	6				
Alaska					
Arizona	2				
Arkansas	1		2		
California	10				
Colorado	3	1			
Connecticut	7	3			
Delaware				1	
District Of Columbia	1				
Florida	10				
Georgia	6				
Hawaii	1				
Idaho		1			
Illinois	2	6			
Indiana		8			
Iowa	5				
Kansas	1	1			
Kentucky	3				
Louisiana	1		3	2	
Maine	2				
Maryland	1				
Massachusetts	1	8			
Michigan	5	4		6	
Minnesota	1	1			
Mississippi	2				
Missouri	3		2		
Montana		1	1		
Nebraska	2				
Nevada			2		
New Hampshire		2			
New Jersey		2			
New Mexico	1				
New York	5	2			
North Carolina	6	2		1	
North Dakota			1		

Table II-26 (Cont.)

States	Approved	Not Approved	Not Required	Pending	Under Develop- ment
Ohio	8	3			
Oklahoma			1	2	
Oregon	3				
Pennsylvania	2			10	
Rhode Island	1				
South Carolina	3				
South Dakota	1				
Tennessee	4				
Texas			20	5	2
Utah	3				
Vermont					
Virginia	3			3	
Washington	3				
West Virginia				3	
Wisconsin	1	4			
Wyoming					
Puerto Rico		4			
TOTAL	120	53	32	33	2
GRAND TOTAL	240				

SOURCE: U.S. Department of Transportation.

Table II-27

**MODES INCLUDED IN CERTIFIED PLANS PREPARED BY SECTION 134
TRANSPORTATION AGENCIES AND ON FILE AT DOT HEADQUARTERS IN
WASHINGTON, D.C.: OCTOBER 1973***

	MODES												MEAN
	Highway		Transit		Air		Railroad		Water		Other		
	Number	Per- cent Of A	Number	Per- cent Of A	Number	Per- cent Of A	Number	Per- cent Of A	Number	Per- cent Of A	Number	Per- cent Of A	
TOTAL	130	100.00	57	43.85	14	10.77	4	3.08	4	3.08	2	1.54	1.62
Population Group													
Over 10-Million	1	100.00	1	100.00	1	100.00	1	100.00	1	100.00	0	0.00	5.00
5 To 10-Million	2	100.00	2	100.00	1	50.00	1	50.00	1	50.00	1	50.00	4.00
1 To 5-Million	21	100.00	19	90.48	6	28.57	0	0.00	2	9.52	1	4.76	2.33
500,000 To 1,000,000	18	100.00	14	77.78	3	16.67	2	11.11	0	0.00	0	0.00	2.06
250,000 To 500,000	39	100.00	12	30.77	3	7.69	0	0.00	0	0.00	0	0.00	1.38
50,000 To 250,000	49	100.00	9	18.37	0	0.00	0	0.00	0	0.00	0	0.00	1.18
Geographic Division													
More Than One Division	7	100.00	5	71.43	1	14.29	2	28.57	1	14.29	0	0.00	2.29
New England	8	100.00	5	62.50	0	0.00	0	0.00	0	0.00	0	0.00	1.62
Middle Atlantic	13	100.00	8	61.54	3	23.08	0	0.00	0	0.00	0	0.00	1.85
South Atlantic	16	100.00	6	37.50	1	6.25	1	6.25	1	6.25	0	0.00	1.56
East South Central	10	100.00	1	10.00	0	0.00	0	0.00	0	0.00	0	0.00	1.10
West South Central	29	100.00	6	20.69	0	0.00	0	0.00	0	0.00	0	0.00	1.21
East North Central	20	100.00	11	55.00	3	15.00	1	5.00	1	5.00	1	5.00	1.85
West North Central	7	100.00	2	28.57	2	28.57	0	0.00	0	0.00	0	0.00	1.57
Mountain	11	100.00	6	54.55	1	9.09	0	0.00	0	0.00	0	0.00	1.64
West	9	100.00	7	77.78	3	33.33	0	0.00	1	11.11	1	11.11	2.33
Geographic Region													
Northeast	22	100.00	14	63.64	4	18.18	1	4.55	1	4.55	0	0.00	1.91
North Central	29	100.00	14	48.28	5	17.24	1	3.45	1	3.45	1	3.45	1.76
South	56	100.00	14	25.00	1	1.79	1	1.79	1	1.79	0	0.00	1.30
West	20	100.00	13	65.00	4	20.00	0	0.00	1	5.00	1	5.00	1.95
More Than One Region	3	100.00	2	66.67	0	0.00	1	33.33	0	0.00	0	0.00	2.00

Table II-27 (Cont.)

	MODES										MEAN		
	Highway		Transit		Air		Railroad		Water			Other	
	Number	Per-cent Of A	Number	Per-cent Of A	Number	Per-cent Of A	Number	Per-cent Of A	Number	Per-cent Of A		Number	Per-cent Of A
Number Of States													
Intrastate	111	100.00	46	41.44	11	9.91	1	0.90	2	1.80	1	0.90	1.55
Interstate	19	100.00	11	57.89	3	15.79	3	15.79	2	10.53	1	5.26	2.05
Number Of Counties													
One County	41	100.00	10	24.39	2	4.88	0	0.00	1	2.44	0	0.00	1.32
Multicounty	81	100.00	42	51.85	12	14.81	4	4.94	3	3.70	2	2.47	1.78
Part Of County(ies)	8	100.00	5	62.50	0	0.00	0	0.00	0	0.00	0	0.00	1.62

*Information available for only 130 Section 134 agencies.

SOURCE: U.S. Department of Transportation.

planning and implementation efforts in the urban areas are largely dependent upon state transportation programs. If these are not administered in an intermodal fashion, efforts to meld the modes at the metropolitan level face added difficulties. Fortunately the majority of the nation's urbanized areas are in states which are moving in this direction. Of course, the mere presence of a state DOT does not assure successful intermodal administration of transportation programs. Often a state DOT itself does not encompass all modes, and few of these DOT's have developed thoroughly integrated multimodal plans. Nevertheless, the need for this integration appears to be widely accepted at the state level. (For more on this subject, see *Chapter III*.)

The Overall Pattern

With Federal support and encouragement, transportation planning for two or more modes is being conducted in some urban areas by a single planning organization which also is Federally recognized for comprehensive community development planning and Federal aid project review and coordination purposes. But this by no means has been universal.

Yet the pattern which existed in 1973 is beginning to change as the states respond to DOT guidelines calling for a single metropolitan planning body to receive all DOT planning funds allocated to that level for highway, transit, and airport planning. This body is to be the A-95 clearinghouse recognized by OMB, wherever possible, and most of those are already HUD recognized comprehensive planning bodies. With six states still to make their new designations as of February 1974, 58 percent of the urban transportation planning bodies were A-95 clearinghouses – compared with 32 percent in 1973.

The continuing establishment and fuller development of state departments of transportation is beginning to create intermodal planning at that level to work with and encourage metropolitan planning bodies in their efforts to make urban transportation planning more comprehensive and better related to overall community development planning.

Still, much work remains to be done. The average "comprehensive" transportation plan now includes less than two modes. At the same time, almost all of the 218 urbanized transportation planning areas in the 50 states and the District of Columbia are now served by four modes, and at least one-third are served by a fifth.

Table II-28

**TYPES OF MODES OF TRANSPORTATION WITHIN SECTION 134 TRANSPORTATION
PLANNING AREAS: 1973**

Classification	Number Of Agencies (A)	Buses		Freight Trains		Passenger Trains		Commuter Trains		Public Scheduled Flights		Public-No Scheduled Flights	
		Number	Per- cent Of A	Number	Per- cent Of A	Number	Per- cent Of A	Number	Per- cent Of A	Number	Per- cent Of A	Number	Per- cent Of A
TOTAL	218	194	88.99	217	99.54	124	56.88	11	5.04	177	81.19	139	63.76
Population Group													
Over 10-Million	1	1	100.00	1	100.00	1	100.00	1	100.00	1	100.00	1	100.00
5 To 10-Million	3	3	100.00	3	100.00	3	100.00	2	66.67	3	100.00	3	100.00
1 To 5-Million	25	25	100.00	25	100.00	25	100.00	8	32.00	25	100.00	24	96.00
500,000 To 1,000,000	32	32	100.00	32	100.00	25	78.13	0	0.00	28	87.50	26	81.25
250,00 To 500,000	60	57	95.00	60	100.00	38	63.33	0	0.00	50	83.33	43	71.67
50,000 To 250,000	97	76	78.35	96	98.96	32	33.98	0	0.00	70	72.16	42	43.29
Geographic Division													
More Than One Division	15	14	93.33	15	100.00	8	53.33	2	13.33	14	93.33	9	60.00
New England	15	12	80.00	15	100.00	6	40.00	1	6.67	8	53.33	7	46.67
Middle Atlantic	19	17	89.47	19	100.00	13	68.42	3	15.79	12	63.16	15	78.95
South Atlantic	36	33	91.67	35	97.22	26	72.22	2	5.56	32	88.89	19	52.78
East South Central	13	10	76.92	13	100.00	7	53.85	0	0.00	11	84.62	7	53.85
West South Central	34	29	85.29	34	100.00	12	35.29	0	0.00	30	88.24	26	76.47
East North Central	39	34	87.18	39	100.00	21	53.85	2	5.13	31	79.49	23	59.00
West North Central	16	15	93.75	16	100.00	8	50.00	0	0.00	14	87.50	7	43.75
Mountain	15	14	93.33	15	100.00	9	60.00	0	0.00	10	66.67	11	73.33
West	16	16	100.00	16	100.00	14	87.50	1	6.25	15	93.75	15	93.75
Geographic Region													
Northeast	35	30	85.71	35	100.00	20	57.14	5	14.29	21	60.00	23	65.71
North Central	60	54	90.00	60	100.00	32	53.33	3	5.00	51	85.00	34	56.66
South	85	73	85.88	84	98.82	45	52.94	2	2.35	75	88.24	53	62.35
West	31	30	96.77	31	100.00	23	74.19	1	3.23	25	80.65	26	83.87
More Than One Region	7	7	100.00	7	100.00	4	57.14	0	0.00	5	71.42	3	42.85

Table II-28 (Cont.)

Classification	Number Of Agencies (A)	Buses		Freight Trains		Passenger Trains		Commuter Trains		Public Scheduled Flights		Public-No Scheduled Flights	
		Number	Per- cent Of A	Number	Per- cent Of A	Number	Per- cent Of A	Number	Per- cent Of A	Number	Per- cent Of A	Number	Per- cent Of A
Number Of States													
Intrastate	183	163	89.07	182	99.45	106	57.92	8	4.37	149	81.42	118	64.48
Interstate	35	31	88.57	35	100.00	18	51.42	3	8.57	28	80.00	21	60.00
Number Of Counties													
One County	74	62	83.78	74	100.00	37	50.00	0	0.00	56	75.67	41	55.40
Multicounty	127	118	92.91	126	99.21	79	62.20	10	7.87	112	88.18	90	70.86
Part Of County(ies)	17	14	82.35	17	100.00	8	47.06	1	5.88	9	52.94	8	47.06

Table II-28 (Cont.)

**TYPES OF MODES OF TRANSPORTATION WITHIN SECTION 134 TRANSPORTATION
PLANNING AREAS**

Classification	Number Of Agencies (A)	Private- No Scheduled Flights		Highways		Rapid Transit		Deep Water Ports		Marine Ports		Shallow Ports		MEAN
		Number	Per- cent Of A	Number	Per- cent Of A	Number	Per- cent Of A	Number	Per- cent Of A	Number	Per- cent Of A	Number	Per- cent Of A	
TOTAL	218	63	28.89	218	100.00	11	5.04	77	35.32	49	22.47	10	4.58	5.9
Population Group														
Over 10-Million	1	1	100.00	1	100.00	1	100.00	1	100.00	1	100.00	0	0.00	11.0
5 To 10-Million	3	3	100.00	3	100.00	2	66.67	3	100.00	3	100.00	0	0.00	10.3
1 To 5-Million	25	17	68.00	25	100.00	6	24.00	18	72.00	15	60.00	1	4.00	8.6
500,000 To 1,000,000	32	15	46.88	32	100.00	0	0.00	12	37.50	8	25.00	2	6.25	6.6
250,000 To 500,000	60	18	30.00	60	100.00	2	3.33	22	36.67	10	16.67	2	3.33	6.0
50,000 To 250,000	97	9	9.27	97	100.00	0	0.00	21	21.64	12	12.37	5	5.15	4.7

Table II-28 (Cont.)

Classification	Number Of Agencies (A)	Private- No Scheduled Flights		Highways		Rapid Transit		Deep Water Ports		Marine Ports		Shallow Ports		MEAN
		Number	Per- cent Of A	Number	Per- cent Of A	Number	Per- cent Of A	Number	Per- cent Of A	Number	Per- cent Of A	Number	Per- cent Of A	
Geographic Division														
More Than One Division	15	5	33.33	15	100.00	2	13.33	15	100.00	4	26.66	0	0.00	6.9
New England	15	2	13.33	15	100.00	1	6.67	3	20.00	4	26.67	1	6.67	5.0
Middle Atlantic	19	9	47.37	19	100.00	1	5.26	9	47.37	6	31.58	0	0.00	6.5
South Atlantic	36	7	19.44	36	100.00	3	8.33	14	38.89	10	27.78	2	5.56	6.1
East South Central	13	4	30.77	13	100.00	1	7.69	7	53.85	2	15.38	1	7.69	5.8
West South Central	34	6	17.65	34	100.00	0	0.00	10	29.41	7	20.59	1	2.94	5.6
East North Central	39	11	28.21	39	100.00	1	2.56	10	25.64	8	12.82	0	0.00	5.6
West North Central	16	7	43.75	16	100.00	0	0.00	2	12.50	0	0.00	5	31.25	5.6
Mountain	15	3	20.00	15	100.00	1	6.67	0	0.00	0	0.00	0	0.00	5.2
West	16	9	56.25	16	100.00	1	6.25	7	43.75	8	50.00	0	0.00	7.4
Geographic Region														
Northeast	35	12	34.29	35	100.00	3	8.57	13	37.14	11	31.43	1	2.86	6.0
North Central	60	19	31.66	60	100.00	2	3.33	17	28.33	10	16.66	5	8.33	5.8
South	85	17	20.00	85	100.00	4	4.71	33	38.82	19	22.35	4	4.71	5.8
West	31	12	38.71	31	100.00	2	6.45	7	22.58	8	25.81	0	0.00	6.3
More Than One Region	7	3	42.85	7	100.00	0	0.00	7	100.00	1	14.28	0	0.00	6.3
Number Of States														
Intrastate	183	50	27.32	183	100.00	8	4.37	55	30.05	40	21.85	4	2.18	5.8
Interstate	35	13	37.14	35	100.00	3	8.57	22	62.85	9	25.71	6	17.14	6.4
Number Of Counties														
One County	74	12	16.21	74	100.00	1	1.35	16	21.62	10	13.51	3	4.05	5.2
Multicounty	127	48	37.79	127	100.00	9	7.08	56	44.09	33	25.98	6	4.72	6.4
Part Of County(ies)	17	3	17.65	17	100.00	1	5.88	5	29.41	6	35.29	1	5.88	5.3

SOURCES: *Bus Ride Directory 1972* (Spokane, Washington: The Journal of Bus Transportation, 1972); "1973 Transit: City-By-City," reprint from *Modern Railroad* (Chicago: Cahners, May, 1973). Federal Aviation Administration listing of airports. North American Freight Service, *Official*

Railway Schedule (Intermodal Publisher Co., November 1973). Oceanographer of the Navy, *World Port Index* (Washington, D.C.: U.S. Government Printing Office, 1973).

Table II-29

**URBANIZED AREA POPULATION IN STATES WITH AND WITHOUT
STATE DEPARTMENTS OF TRANSPORTATION**

State And Region	States With DOT's (1974)		States Without DOT's (1974)	
	Urbanized Population (1960)	Percent Of U.S. Total	Urbanized Population (1970)	Percent Of U.S. Total
United States (118,446,566)	94,345,838	79.65	24,100,728	20.35
New England And Mideast				
New England				
Maine	171,811	.15		
New Hampshire			173,943	.15
Vermont			0	0
Massachusetts	4,334,196	3.66		
Rhode Island	745,238	.63		
Connecticut	2,101,658	1.77		
Mideast				
New York	14,267,804	12.05		
New Jersey	6,078,372	5.13		
Pennsylvania	6,921,979	5.84		
Delaware	349,674	.30		
Maryland	2,588,919	2.19		
District Of Columbia			756,510	.64
Midwest				
Great Lakes				
Michigan	5,658,843	4.71		
Ohio	6,642,374	5.61		
Indiana			2,395,133	2.02
Illinois	7,873,782	6.65		
Wisconsin	2,066,645	1.74		
Plains				
Minnesota			1,901,834	1.61
Iowa	842,154	.71		
Missouri	2,576,558	2.18		
North Dakota			53,420	.04
South Dakota	76,006	.06		
Nebraska			588,292	.50
Kansas			785,933	.66
South				
Southeast				
Virginia	2,397,006	2.02		
West Virginia			340,614	.29
Kentucky	1,120,873	.95		
Tennessee	1,488,624	1.26		
North Carolina	1,212,432	1.02		
South Carolina			649,436	.55
Georgia	1,880,160	1.59		
Florida	4,133,783	3.49		
Alabama			1,280,325	1.08
Mississippi			320,592	.27
Louisiana			1,703,126	1.44
Arkansas			378,624	.32

Table II-29 (Cont.)

State And Region	States With DOT's (1974)		States Without DOT's (1974)	
	Urbanized Population (1970)	Percent Of U.S. Total	Urbanized Population (1970)	Percent Of U.S. Total
Southwest				
Oklahoma			1,049,072	.89
Texas			6,917,345	5.84
New Mexico			297,451	.25
Arizona	1,157,541	.98		
West				
Rocky Mountain				
Montana			142,102	.12
Idaho	85,187	.07		
Wyoming			0	0
Colorado			1,424,011	1.20
Utah			733,179	.62
Far West				
Washington			1,873,418	1.58
Oregon	984,052	.83		
Nevada			336,368	.28
California	16,147,770	13.63		
Alaska			0	0
Hawaii	442,397	.37		

SOURCE: U.S. Department of Transportation. U.S. Bureau of the Census, 1970 Census of Population, Vol. I (Washington, D.C.: U.S. Government Printing Office, 1972).

SOME NEW DIMENSIONS OF URBAN TRANSPORTATION PLANNING

The 1973 Highway Act has changed relationships among the various levels of government for carrying out Federally assisted transportation programs and projects. The key word in the new act is "concurrence." While previous acts had begun to bring local officials into the Federal aid transportation programs in a consultative capacity by requiring comprehensive transportation planning processes in each metropolitan area, the 1973 act and DOT's implementing regulations require concurrent approvals by (1) local officials, (2) metropolitan transportation planning bodies, (3) state highway departments, and (4) the U.S. Department of Transportation before certain highway and public transportation projects may be carried out. The intergovernmental implications of this new situation have not yet been spelled out fully.

Principal Intergovernmental Features of the 1973 Highway Act

The most important intergovernmental breakthrough

achieved by the *Highway Act of 1973* is the enlargement of the state, local, and regional roles in decision making. This has been done in the following five ways:

1. Fixing the boundaries of "urban" and "urbanized" areas to make them larger than the areas defined by Census requires concurrence of state, local, and Federal officials. The Section 134 urban transportation planning bodies are not included as such by the legislation, but the Federal Highway Administration guidelines for implementing the act suggest that these organizations take the initiative on behalf of local officials in their areas to revise the urbanized area boundaries.

2. Designation of the "urban system" of major urban transportation routes requires concurrence of local, regional (Section 134), state, and Federal officials. Realignment of the "primary" system by state and Federal officials requires regional concurrence in urbanized areas, but not local official concurrence. Local officials, however, must concur in the realignment of the "secondary" system in rural areas. The designation of special urban high

density routes requires concurrence from all levels, while designation of priority primary routes is made by state and Federal officials after "consultation" with local officials.

3. Designation of the metropolitan planning organizations which will receive highway funds for comprehensive transportation planning is made by state governors after "consultation" with local officials and regional agencies; these designations are subject to Federal approval. The planning funds allocated to the state for this purpose will be distributed to the metropolitan areas in accordance with a formula prepared by the state and approved by Federal officials. While there is no provision in the law for consultation or concurrence by local and/or regional officials concerning this formula, the administrative regulations do require the governors to consult with affected parties. In addition, these regulations require concurrence on the formula between FHWA and UMTA.

4. The state may certify that Federal requirements are being met in its highway construction program (except for the interstate system), thereby substituting its own procedures for detailed Federal review.

5. Transit projects may be substituted for highway projects on the interstate system and may be initiated in the urban system with concurrence of all levels. Different procedures prevail in the two situations, however. A transit project funded under the urban system is subject to highway matching requirements and administrative regulations, while a project substituted in the interstate system is subject to UMTA matching and administrative requirements.

The other principal intergovernmental feature of the *1973 Highway Act* is the requirement that municipalities with populations over 200,000 be treated fairly and equitably in the allocation of urban system (capital) funds. This is achieved either through formulas prepared by the state and approved by Federal officials, or by the allocation of funds on a strict population basis. Up to 40 percent of the funds for urban system and primary routes in urban areas may be transferred between systems if the local officials of the area involved approve; no regional role in the transfer is provided for the Section 134 planning organization, although

FHWA's guidelines are for implementation of the *1973 Highway Act*, suggest that the designated Section 134 metropolitan planning organizations take initiative on behalf of local officials in urbanized areas to designate the urban system of transportation routes. Building toward this same point, another set of DOT administrative guidelines defines "responsible local officials" as the chief elected officials of general purpose local governments acting together through the designated Section 134 regional transportation planning organization.

Evaluation of Intergovernmental Impact

These 1973 changes in Federal transportation programs appear to:

- 1) recognize that the transportation function is shared among all levels of government,
- 2) broaden the scope of planning and begin to provide flexible funding for implementation activities consistent with broad planning objectives,
- 3) provide a decision making role for areawide agencies so their planning may affect project implementation, and
- 4) refrain from encouraging new special purpose transportation organizations.

But despite these moves in the right direction, the changes still leave several important intergovernmental issues unresolved:

- Even after the 1973 requirement for pass through of transportation planning funds to a general purpose metropolitan planning agency, 26 percent of the designations are still being given to individual city or county governments, state agencies, or separate regional bodies not responsible for comprehensive metropolitan planning and A-95 reviews.⁷⁸ Nevertheless, almost three-quarters of the newly designated organizations are general purpose metropolitan bodies, and the prevailing picture of the immediate past, where the most common recipients of Section 134 planning funds were the state highway agencies, has been reversed.
- In three cases, the legislation provides for urban highway decisions to be made with the involvement of "local officials" but without specific reference to a regional body or to the designated

Section 134 transportation organization. These cases are: (1) the designation of priority primary routes which traverse urban areas, (2) the transfer of urban highway funds between the urban system and the urban sections of the primary system, and (3) the deletion of an interstate highway in an urbanized area. Nevertheless, it is recognized by DOT that these are subjects about which metropolitan transportation plans should contain a good deal of advice, particularly if such plans have successfully integrated project planning with systems planning. Therefore, DOT has adopted in several of its recent regulations definitions of "responsible local officials" which embrace the principal elected officials of general purpose local governments *acting through the designated metropolitan planning organization*. While there was significant local opposition from some quarters when these regulations were originally proposed, they seem to be firmly established now.

- Rural public transportation demonstrations and mass transportation projects in "other than urbanized areas" have recently been authorized, but the law makes no specific provision for involving state, local, or regional officials in these programs.

- The substitution of public transportation projects for highway projects, and the deletion of segments of the interstate highway system, appear to present difficult negotiating situations. With the necessity of getting concurrence from the usually powerful highway officials, the authorized transfers may seldom be realized. Moreover, the differing administrative procedures and funding ratios will make the process technically difficult.

- The "fair treatment" provision for allocating urban systems funds to municipalities with populations greater than 200,000 has begun to run into opposition from some governors who feel that their discretion in setting priorities within their states is being unwisely limited. Thus, there may be an effort to increase this population floor to 400,000. Here again, the designated Section 134 regional planning organizations ought to be in a good position to take the initiative to suggest transportation priorities for the governors to consider.

- Federal aid operating subsidies for public transportation were not authorized in 1973, but finally

were in 1974. So, planning for the use of Federal transportation funds is just now being unleashed from the limits of capital intensive proposals.

A CAUTIONARY NOTE ABOUT PLANNING

Metropolitan planning, of course, does not have all the answers for perfecting the nation's urban areas and serving them with better balanced transportation systems. As necessary as it is, and despite the promise it appears to hold for making improvements possible, metropolitan planning itself remains imperfect in technique, dependent upon imperfect data, and subject to public decision making processes which consider other factors to a greater or lesser extent from place to place and from time to time. Planning can only try to provide and effectively communicate fuller and better information for use in increasingly better informed public decision making processes in the legislative and executive branches of the Federal, state, and local governments and in regional policy making bodies.

CONCLUSION

Having explored the development of metropolitan planning and the transportation element thereof, including some new approaches to decision oriented planning, some basic findings are in order and the issues currently facing metropolitan transportation planning should be highlighted.

Summary of Findings

The seven basic findings of this chapter may be summarized as follows:

- 1** Metropolitan planning is a soundly developing discipline now being practiced in each of the nation's metropolitan areas. Although such planning often is not as comprehensive or directly linked to implementation authority as it could be (see finding 4 and 6 below), many metropolitan areas, especially the larger ones, have 20 years of experience with this kind of planning, and a few have as much as 50 years experience. The American Institute of Planners, to which most professional planners in the nation belong, has recognized metropolitan planning as a specialized discipline by establishing a special unit within the institute to serve the needs of metropolitan planners. Metropolitan and regional planning is now supported by at least 19 Federal aid programs, and metropolitan planning bodies throughout

the nation have adopted policies in a wide range of physical development and human resources program areas. Most prominent among the policies adopted are those in the fields of water and sewer facilities, land use, open space, and transportation. Such policies have been adopted by at least 80 percent of the metropolitan planning bodies.

A high quality metropolitan planning process is now defined to include the following elements:

- Metropolitan areawide geographic coverage.
- Interrelated planning for multiple functions such as land use, transportation, water and sewer facilities, open spaces, housing, environmental protection, and human resources development.
- A problem solving goals orientation centered around constituent citizen groups or "consumers."
- Adequate attention to long range outcomes of present policy decisions and implementation activities, coupled with assurance that long range plans are translated into immediate action proposals directly relevant to the task of choosing among current policy options.
- The evaluation of alternatives for policy action and long range outcomes based upon criteria which measure functional and multifunctional effectiveness, economic soundness, and the minimization of adverse impacts on the community.
- Timely availability of well founded planning advice to responsible decisionmakers, including updating of plans on a continuing or at least annual basis.
- An element of credibility based upon proven evaluation techniques, quantification of facts, and sensitivity to the more intangible expressions of citizen and political values in the community.

While many metropolitan planning efforts do not measure up to these ideals, and adequate resources to meet them have not always been available, it appears that progress is being made toward them. Metropolitan planning provides a framework within which the many planning and implementation activities of local governments can take place in a coordinated fashion. At the same time, state and national plans and program policies set the framework within which metropolitan planning can be coordinated.

2 Urban transportation planning is a firmly established element of metropolitan planning, and it is currently being done for every urbanized area in the nation identified by the 1970 Census. In the past two decades the urban transportation planning process has evolved from one with a primary focus on highways and a separation between planning and implementation to one which is now truly multimodal and every bit as much concerned with implementation as with the planning process itself. In the course of this evolution, the scope of community values to be considered continually expanded, and major emphasis has been placed on incorporating citizens' views and the deliberations of local elected officials. Now, urban transportation planning is considered an essential and integral element of comprehensive metropolitan planning. To illustrate this point, it should be noted that 80 percent of the regional councils in metropolitan areas adopted transportation policies at a time when only 37 percent of these bodies were the officially designated DOT planning organizations.

In addition to its intermodal aspects, urban transportation planning requirements and standards now give consideration to environmental and human impacts on the community, including the relocation of homes and businesses displaced by transportation facilities. Much greater emphasis is now given also to the need for programming implementation activities, and identifying agencies responsible for them, as an integral part of preparing overall areawide plans for transportation systems and services, though these needs are not always met. The great emphasis in current DOT requirements placed upon incorporating the views of citizens and local elected officials is directly related to the desire to link areawide planning more directly to implementation activities.

3 Presently, however, urban transportation planning frequently is not practiced fully within the overall metropolitan planning process. Despite the growing consensus about the need to involve local citizens and officials, and to coordinate with comprehensive metropolitan planning, 42 percent of the organizations recognized by DOT to do the comprehensive urban transportation planning required by Section 134 of the *Highway Act* were still state agencies in 1973. Metropolitan planning councils composed largely of local elected officials were recognized in about 37 percent of the cases, while the remaining 17 percent of the designated organizations were mostly individual cities and counties. While any organization designated for this planning must be advised by a coordinating committee representing all

of the local governments in the area as well as state transportation agencies, the level of government actually designated to do the staff planning can be expected to have the greatest amount of influence in the process. Thus, through 1973 it can be seen that the states retained the dominant position, while the truly intergovernmental metropolitan councils had major roles in only about one-third of the areas. This pattern changed dramatically under a new provision of the *1973 Highway Act* which requires that specially appropriated comprehensive urban transportation planning funds be passed through the states to the general purpose metropolitan planning bodies. Under this new requirement, approximately 74 percent of the areas now (1974) have been designated for planning by such a metropolitan body, and DOT has required that this same body receive the Federal aid transit and airport planning funds.

Before this recent change, over half of the Federal aid mass transportation planning and nearly one-third of the airport planning was done by organizations in the metropolitan area other than the comprehensive transportation planning agency designated under Section 134 of the *Highway Act*. In addition, comprehensive metropolitan planning assisted by HUD, and the Circular A-95 Federal aid review and comment process required by OMB were carried out by organizations other than the Section 134 transportation planning agency in over half of the areas. Where different planning agencies were designated for the purposes of these different Federal programs, there was little difference in the legal status of the different organizations, but there was a noticeable geographic difference. The UMTA and FAA designations tended to be conferred on organizations with areas smaller than the Section 134 organization, while the A-95 and HUD 701 designations tended to be given to organizations with larger jurisdictions. This might have been expected since transit systems and airports may be somewhat localized, while the A-95 and 701 programs are defined to encompass metropolitan areas rather than the more restricted urbanized areas written into the Section 134 transportation planning requirements.

4 Present "comprehensive" urban transportation planning usually includes no more than two modes despite the fact that almost all metropolitan areas are served by at least four modes, and about one-third are served by a fifth. The highway mode is always included, but transit elements were included in less than half of the certified plans, while other elements were included in only 12 percent or fewer of the cases. This remains true despite recent Federal requirements for unified (intermodal) work programs in those areas where more

than one type of Federal transportation planning aid is being used, and despite the creation of state departments of transportation in about half of the states. The reasons appear to be that planning funds other than those from the highway programs have been quite scarce, and implementation funds from Federal and state sources, other than those for highway purposes, also have been quite limited. So plans which emphasize the highway mode simply reflect the present emphasis on that mode in implementation programs. It makes little sense to include unfunded transportation modes in a plan. Intermodal planning without intermodal implementation programs would be patently unrealistic and unachievable.

5 There are now greater pressures than ever for intergovernmental sharing of planning and decision making responsibilities for transportation within metropolitan areas, but considerable uneasiness exists at all levels of government concerning the specific patterns of sharing which eventually may emerge. The Federal government, in the *1973 Highway Act* and related administrative regulations, is anxious to give responsible local officials — acting through metropolitan planning councils — a larger voice in transportation planning and decision making than they have ever had before. And these regional bodies, for the most part, seem willing and anxious to undertake such responsibilities. But the state governments, which traditionally have had strong roles in Federal aid highway and airport programs (though not mass transit), are wary of losing their preferred relationship with the Federal government. At the same time, some local governments, especially the larger more capable ones, are wary of the regional bodies to which they relate. They view these bodies as new and untested, and they would prefer to continue working through the states with whom they already have well developed relationship for transportation programs. Nevertheless, most of the changing relationships initiated by Federal law involve the "urban system" of transportation, and this system is a new one just being created to include both highway and transit elements. It is not one of the older highway systems over which the state already had prime responsibility; by including transit, it involves a function for which local governments have usually had prime responsibility. Yet, the urban system is of major areawide significance and cannot be dealt with effectively by individual localities acting alone in most metropolitan areas.

6 Techniques for linking metropolitan planning to transportation implementation programs are avail-

able, but largely unused. These techniques include intermodal planning, planning to minimize specific environmental and human impacts of transportation facilities and services in the community, continuing operations plans which include annual monitoring of transportation systems and the programming of specific implementation projects on an annual basis, and comprehensive multifunctional programming of regional projects. Each of these techniques is designed to develop acceptable projects for immediate implementation consistent with overall long range community needs for comprehensive transportation systems and services. Hence, they seek to do away with the traditional disengagement between broad general systems planning and specific detailed project planning — a disengagement which too often has made the broader planning irrelevant. Probably the most significant criticism of metropolitan planning at the present time is that it is not being implemented. As implied by the multiple criteria for a “good” metropolitan planning process presented above, the success of the overall process is just as dependent on its “implementation” quality as it is upon its other features. This means that there may have to be compromises between the objective criteria and standards used in the technical part of the planning process, and the value judgments added to reflect community acceptability. The resulting implementation commitments would then be embodied in a realistic program of projects linked as closely as possible to updated long range plans for providing urban transportation systems suitable to the metropolitan area’s needs. Thus, the “best” plan may be one which has a clear potential for improving the current situation, rather than one which sets perfection in the far off future as a goal but provides no way to reach that goal. This appears to be recognized by DOT in its increasing emphasis on administrative requirements for short range transportation improvement programs consistent with long range systems plans.

7 Several alternative types of governmental institutions are available to support strong linkages between metropolitan planning and transportation implementation programs, but they are largely unused except to provide intergovernmental advice and communications. These options include the following:

- *Strengthened regional councils*, similar in authority to the Twin Cities Metropolitan Council in Minneapolis-St. Paul, but with membership predominantly composed of the major elected officials of constituent local general purpose

governments, and secondarily composed of appropriate state representatives. Such a body could be authorized by state law not only to plan the area’s transportation system, but also to approve or disapprove individual projects having areawide significance, regardless of which agency has the responsibility for actual implementation. The strengthened regional council could also be authorized to develop and operate specific transportation facilities and services as might be approved by the constituent local governments.

- *A consolidated and independent metropolitan government*, having either general purpose governmental authority of a home rule nature or partial authority designed to let it independently provide all areawide services, including transportation.

- *The state as a metropolitan decisionmaker*, particularly where the metropolitan area itself does not have the capability, or where the state interest is so great as to be overriding.

- *An interstate compact body*, having the characteristics of either a strengthened regional council or a limited metropolitan government, where the metropolitan area crosses state boundaries.

- *Intergovernmental agreements*, to establish required planning and provide needed transportation services where other more formal methods of doing so cannot be arranged.

Under the *Highway Act of 1973*, the Federal government now appears to be moving strongly in the direction of strengthening regional councils, and away from an exclusive state role in transportation decision making for metropolitan areas. Metropolitan government (through city-county consolidation, annexation, multifunctional service districts, and similar arrangements) has been established in only a dozen or so cases in the past 15 years, and even those which have been established did not cover the whole metropolitan area to start with and are rapidly including less and less of their area as urban growth continues. Despite the existence of over 100 single county SMSAs, city-county consolidation or the assumption of urban type areawide functions by the county are techniques which have seldom been used to create metropolitan governmental capabilities. Interstate compact bodies have been employed even less frequently, affecting only five metropolitan areas and dealing only with single functions of government. Intergovernmental agreements have been frequently employed, but they are voluntary, subject to frequent

change, and lacking in the authority available to a strengthened regional council.

Both intergovernmental agreements and strengthened regional councils, as well as interstate compact bodies, are mechanisms which create consortiums of local governments. The differences are that the consortium formed by intergovernmental agreement is voluntary and impermanent, while the strengthened regional council would achieve permanence and an authoritative role through state legislation, and the interstate compact would achieve the same advantages through concurrent acts of the legislatures in two or more states. The interstate compact organization might have a greater amount of state representation in its governing body, but not necessarily. Some form of local government consortium is currently the most prevalent planning mechanism at the metropolitan level.

Issues

These findings pose several issues, all of which revolve around the question of linking metropolitan planning to transportation implementation programs. There seems to be a consensus as to what would constitute good metropolitan planning and good urban transportation planning, but the question of what to do about implementation appears to remain largely unresolved. It is basically a matter of who should do what parts of the planning-implementation job and might be stated more precisely in terms of five questions.

1 What should be the proper scope of metropolitan transportation planning and decision making? This involves a determination of how much flexibility there should be in the use of transportation funds, and the number, size, and purposes of implementation programs for the various modes. Planning should not be expected to be more comprehensive than the implementation programs, if the planning is to be realistic and achievable.

2 Who should share in making decisions to provide metropolitan transportation facilities and services?

There very well might be different answers to this question depending upon the specific types of facilities and services being decided upon. The interstate, primary, and secondary highway systems, even though having links within the metropolitan areas, might have greater significance at the state level than at the local level. But the urban system might be of primary significance to the metropolitan area itself, rather than to the state. Instead of who should share, perhaps the question involves the degree to which there should be sharing. Conceivably all affected governments should share, but the most af-

ected governments in each case should have the primary decision making role.

An issue related to how decision making responsibility ought to be shared among the various levels of governments is who should make transportation decisions at a given level. For example, at the state level should it be the highway department, a department of transportation, or the governor? At the Federal level, should it be the modal administrations, the Secretary of Transportation, or some sort of interdepartmental mechanism such as the Domestic Council at the headquarters level or a Federal Regional Council at the regional office level? At the metropolitan level, should it be the general purpose regional council, a special purpose transportation planning group, or a regional transportation authority? At the local level, should it be the local elected chief executive, the city or county governing body, or the special transportation units of those governments? How should the roles or regulatory units be recognized, including land use control, environmental protection, and civil rights decisionmakers?

3 Should the metropolitan transportation planning bodies composed of local elected officials be given the responsibility and authority to initiate transportation project proposals, or only to concur in projects initiated by the state or by individual local governments? Should they also be allowed to implement certain projects with areawide significance?

4 What kind of Federal transportation grants would best support the proper sharing of metropolitan transportation decision making authority? Grants to the states which may be used for metropolitan purposes give states the prime role, while grants made directly to the metropolitan body would give it primacy. In between are grants to the states which are earmarked for metropolitan purposes and grants to the states which must be passed through to the metropolitan organizations, but over which the states retain some control. So the earmarked and pass through grants have shared responsibilities more directly built in.

5 What kind of metropolitan decision making institutions will best provide the desired linkages between metropolitan planning and urban transportation implementation activities? Would the choice of institutions vary according to the size and present governmental complexity of a given metropolitan area?

These issues can be understood more fully after examining the transportation finance, regulatory, and implementation institutions now in use. Such an examination follows in *Chapter III*.

FOOTNOTES

¹Committee of Regional Plan of New York and Its Environs, *Regional Plan of New York and Its Environs*, Regional Survey, 8 vols., and Regional Plan, 2 vols. (New York: Regional Plan of New York and Its Environs, 1929-1931).

²Mel Scott, *American City Planning Since 1809* (Berkeley: University of California Press, 1969).

³National Association of Regional Councils, *Regionalism: A New Dimension in Local Governmental and Intergovernmental Relations* (Washington, D.C.: 1971). ACIR, *Metropolitan Councils of Governments* (Washington, D.C.: U.S. Government Printing Office, 1966).

⁴Provided by Section 701 of the *Housing Act of 1954*, as amended.

⁵U.S. Department of Housing and Urban Development, "Comprehensive Planning Assistance Grants to Metropolitan Planning Organizations: FY 72-FY 73," unpublished, undated. U.S. Office of Management and Budget, *Directory of State, Metropolitan, and Regional Clearinghouses Under the Office of Management and Budget Circular No. A-95* (revised) (Washington, D.C.: OMB, September 11, 1972). Only seven metropolitan areas are without A-95 clearinghouses, and only three lack HUD planning funds.

⁶Advisory Commission on Intergovernmental Relations, *Regional Decision Making: New Strategies for Substate Districts*, Chapter VI, "Federal Programs Supporting Substate Districts" (Washington, D.C.: U.S. Government Printing Office, 1973).

⁷ACIR, *Regional Decision Making: New Strategies for Substate Districts*, Chapter VIII, "Districting in Non-Metropolitan Areas," Table VIII-15, p. 270.

⁸Since 1970, 22 new metropolitan areas (SMSAs) have been defined by OMB but not yet officially recognized for purposes of this program.

⁹ACIR, *Regional Decision Making: New Strategies for Substate Districts*, Chapter VI, "Federal Programs Supporting Substate Districts," (Washington, D.C.: U.S. Government Printing Office) Table VI-21, p. 205.

¹⁰ACIR, *Regional Decision Making: New Strategies for Substate Districts*, Chapter VIII, "Districting Metropolitan Areas."

¹¹These five USDA programs are: resource conservation and development, rural development planning, rural industrialization assistance, water and sewer planning for rural communities, and water and waste disposal systems for rural communities.

¹²ACIR, *Regional Decision Making: New Strategies for Substate Districts*, Chapter VII, "Statewide Systems of Substate Districts." The five states which have not districted are: Rhode Island, Delaware, Wyoming, Alaska, and Hawaii.

¹³The seven substate districts in Nevada are still tentative, making the total of officially recognized substate districts 517, as of September 1973.

¹⁴ACIR, *Regional Decision Making: New Strategies for Substate Districts*, Chapter VII, "Statewide Systems of Substate Districts."

¹⁵ACIR, *Regional Decision Making: New Strategies for Substate Districts*, Chapter V, "The A-95 Review Process."

¹⁶ACIR, *Regional Decision Making: New Strategies for Substate Districts*, Chapter VII, "Statewide Systems of Substate Districts."

¹⁷ACIR, *Regional Governance: Promise and Performance*, Chapter IV, "Governance in the Twin Cities Area of Minnesota" (Washington, D.C.: U.S. Government Printing Office, 1973).

¹⁸ACIR, *The Challenge of Local Governmental Reorganization*, Chapter V, "Federation, Annexation and Consolidation" (Washington, D.C.: U.S. Government Printing Office, 1974).

¹⁹*Ibid.*

²⁰While 70 percent of cities had independent planning commissions in 1960, this percentage had reduced to 59 by 1970. International City Managers' Association (ICMA), *The Municipal Year Book: 1972*, (Washington, D.C.: ICMA, 1972) p. 56. See also National Association of Counties (NACO) *From America's Counties Today, 1973* (Washington, D.C.: NACO, 1973), p. 43.

²¹Scott, *American City Planning Since 1809*.

²²ACIR, *The Challenge of Local Governmental Reorganization*, Chapter IV, "The Metropolitan County."

²³There is a general DOT regulation on civil rights compliance which deals, among other things, with the need for non-discrimination in locating any facilities assisted by the department, and calling for the maintenance of compliance data and the preparation of compliance reports by project sponsors.

²⁴This organization recently underwent a name change which added the word "transportation." While the publications of the organization referred to in following pages were produced before this change and are footnoted accordingly, the text will consistently use the new name.

²⁵For example see Melvin R. Levin and Norman A. Abend, *Bureaucrats in Collision: Case Studies in Area Transportation Planning* (Cambridge, Massachusetts: The MIT Press, 1971).

²⁶Neumann, Marheim, Pecknold, and Reno, "Integrating Systems and Project Planning for Effective Statewide Programming of Investments," September 5, 1973, a paper presented at the Highway Research Board annual conference in Washington, D.C., January 1974.

²⁷*Federal and State Policies as Framework for Local Planning in the United States* (Washington, D.C.: U.S. Department of Housing and Urban Development, September 1, 1973), unpublished draft. See also, Ernst & Ernst, *An Overview of North Carolina Transportation Policy and Recommendations for Policy Planning* (Raleigh: State Planning Division, April 1973).

²⁸The President, *Report on National Growth: 1972* (Washington, D.C.: U.S. Government Printing Office, 1972).

²⁹*The Sagamore Conference on Highways and Urban Development: Guidelines for Action*, Syracuse University, Syracuse, New York, October 5-9, 1958.

³⁰*Freeways in the Urban Setting*, The Hershey Conference (Washington, D.C.: Automotive Safety Foundation, June 1962).

³¹*Highways and Urban Development*, Report on the Second National Conference, sponsored by National Association of State Highway Officials, National Association of Counties, and National League of Cities, Williamsburg, Virginia, December 12-16, 1965.

³²This concept is developed further in Winnie and Hatry, *Measuring the Effectiveness of Local Government Services: Transportation* (Washington, D.C.: The Urban Institute, 1972).

³³*Organization for Continuing Urban Transportation Planning* (Washington, D.C.: Highway Research Board, National Academy of Sciences, 1973).

³⁴American Institute of Planners, *Metropolitan Transportation Planning Seminars: December 1971* (Washington, D.C.: U.S. Government Printing Office, 1972).

³⁵Washington, D.C.: AASHO, 1973.

³⁶*Ibid.*, p. 135.

³⁷U.S. Comptroller General, *Adequacy of Selected Environmental Impact Statements Prepared Under the National Environmental Policy Act of 1969*, report to Congress, B-170186 (Washington, D.C.: November 27, 1972). See also Mattson and Wilson, "NEPA: Legal Interpretations and Suggested Direction," *Traffic Quarterly*, January 1974, pp. 119-138.

³⁸OMB Circular A-103 (Washington, D.C.: Office of Management and Budget, May 1, 1972).

³⁹GSA, Federal Management Circular FMC-?: Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, Public Law 91-646, draft dated November 5, 1973.

⁴⁰HUD, *Handbook I: Comprehensive Planning Assistance*

Requirements and Guidelines for a Grant (Washington, D.C.: HUD, March 1972), pp. 4-6.

⁴¹U.S. Department of Transportation, Federal Highway Administration, "Instructional Memorandum 50-4-68" (Washington, D.C.: DOT, May 3, 1968).

⁴²U.S. Department of Transportation, Federal Highway Administration, "Guidelines Supplementing IM 50-4-68" (Washington, D.C.: DOT, April 1968), p. 4.

⁴³"Technical Services Agreement Between the Department of Housing and Urban Development and the Department of Transportation," September 10, 1968, p. 4 (offset).

⁴⁴Mel Scott, *American City Planning Since 1890*, pp. 251-255; Mary McLean, *Local Planning Administration*, 3rd Edition (Chicago: ICMA, 1959), pp. 377-385; and Robert E. Coughlin, "The Capital Programming Problem," *Journal of the American Institute of Planners*, Vol. XXVI, No. 1, February 1960, pp. 39-48.

⁴⁵Roland N. McKean, *Efficiency in Government Through Systems Analysis* (New York: John Wiley and Son, Inc., 1958); Arthur Maas, "Benefit-Cost Analysis: Its Relevance to Public Investment Decisions," *Planning, Programming, Budgeting: A Systems Approach to Management*, ed. by Fremont J. Lyden and Ernest G. Miller (Chicago: Markham Publishing Company, 1968).

⁴⁶See the following World Bank Staff Occasional Papers (Baltimore, Maryland: John Hopkins Press): No. 2, Jan DeWeille, *Quantification of Road User Savings*, 1966; No. 5, A.A. Walters, *The Economics of Road User Charges*, 1968 (especially Chapters III, V, and VI); No. 7, Herman VanDer Tak and Jan DeWeille, *Reappraisal of a Road Project in Iran*, 1969. See also, U.S. Department of Transportation, Office of Technical Assistance, *Preparation and Appraisal of Transport Projects* (Washington, D.C.: U.S. Government Printing Office, June 1968).

⁴⁷Ernst and Ernst, *A Transportation Resource Allocation System for North Carolina* (Raleigh, North Carolina: State Planning Division, June 1972). James F. Reed, III, "Aviation Planning: The Illinois Approach," *Traffic Quarterly*, January 1974, pp. 75-85.

⁴⁸*The Six-Year Public Services Program* (Rockville, Maryland: Montgomery County Government, February 15, 1970).

⁴⁹National Association of Regional Councils, *NARC Evaluation and Analysis of Regional Improvement Program Demonstrations: Final Report* (Washington, D.C.: NARC, February 28, 1973).

⁵⁰ACIR, *The Challenge of Local Government Reorganization*, Chapter V, "Federation, Annexation and Consolidation."

⁵¹ACIR, *The Challenge of Local Government Reorganization*, Chapter IV, "The Metropolitan County."

⁵²Melvin B. Mogulof, *Five Metropolitan Governments* (Washington, D.C.: The Urban Institute, 1972), p. 136.

⁵³Existing, perhaps modernized, municipalities would remain in charge of local functions and activities. A fuller explanation of how functions may be assigned among different levels of government can be found in ACIR, *Governmental Functions and Processes: Local and Area-wide* (Washington, D.C.: U.S. Government Printing Office, 1974).

⁵⁴This paragraph is taken largely from: Melvin B. Mogulof, "Federally Encouraged Multi-Jurisdictional Agencies in Three Metropolitan Areas," Chapter V of ACIR, *Regional Governance: Promise and Performance* (Washington, D.C.: U.S. Government Printing Office, 1973), pp. 157-160.

⁵⁵Frank C. Colcord, Jr., "Institutions for Urban Transportation," *Technology Review*, October/November, 1973, pp. 53-57.

⁵⁶Still, in both of these cases, there is a mixture of state and local involvement. In Boston, for example, the Metropolitan Area Planning Council is significantly involved, and in Baltimore the Regional Planning Council is mostly composed of local

government representatives despite its state agency status and its administrative ties with the department of state planning and the state budget.

⁵⁷ACIR, *Regional Decision Making: New Strategies for Substate Districts*, Chapter IX, "Districting in Interstate Areas."

⁵⁸ACIR *Regional Decision Making: New Strategies for Substate Districts*, Chapter VII, "Statewide Systems of Substate Districts."

⁵⁹Smith, Ben-Rubin, and Peak, *Status of Multi-County Planning and Development Districts* (Washington, D.C.: U.S. Department of Agriculture, 1973).

⁶⁰Mogulof, in ACIR, *Regional Governance: Promise and Performance*, pp. 157-158.

⁶¹Remarks by the Honorable John White, Treasurer of Ontario and Minister of Economics and Intergovernmental Affairs, Province of Ontario, Canada, to the Semi-Annual Meeting of the Provincial Council of Women of Ontario, November 5, 1973, pp. 7-8.

⁶²Highway Research Board, National Academy of Sciences, *Statewide Transportation Planning Needs and Requirements* (Washington, D.C.: National Academy of Sciences, 1972), p. 1. See also Richard G. RuBino, *A Quest for Integrated and Balanced Transportation Systems in State Government* (Tallahassee: Transportation Center, Department of Urban and Regional Planning, The Florida State University, 1971).

⁶³ACIR, *The Challenge of Local Governmental Reorganization*, Chapter III, "Intergovernmental Service Agreements and Transfers of Functions."

⁶⁴There may be some restraints on dropping out such as, for example, requirements for prior notice and assuming or paying off any bonded indebtedness incurred on behalf of the departing locality.

⁶⁵ACIR, *Regional Decision Making: New Strategies for Substate Districts*, Table 111-5, p. 79.

⁶⁶Since 1973, the act requires that an additional one-half of 1 percent of the construction funds be passed on directly to the metropolitan planning bodies.

⁶⁷While OMB has designated several new SMSAs and revised the boundaries of several others on the basis of 1970 Census figures, the Census Bureau did not officially designate the new "urbanized areas" until May 1, 1974. Since Section 134 is only for urbanized areas, DOT could not activate planning in these new areas until Census took this official action. For the new Census designations see, Social and Economic Statistics Administration, "Urbanized Areas Designated by the Bureau of the Census," *Federal Register*, Volume 39, No. 85, Wednesday, May 1, 1974, pp. 15202-15206.

⁶⁸American Association of State Highway Officials, *A Policy on Design of Urban Highways and Arterial Streets: 1973* (Washington, D.C.: AASHO, 1973), pp. 91-138.

⁶⁹The Secretary may waive the requirement for matching funds if this becomes an insurmountable problem.

⁷⁰On May 1, 1974 the Bureau of the Census published a new list of urbanized areas, indicating that there are now 274 such areas. The tables in this report do not reflect this change.

⁷¹In the New York area, however, the urbanized area extends beyond the included SMSAs, and the total urbanized area population is greater than the total SMSA population.

⁷²Memorandum to Regional Federal Administrators from G.E. Marple, "Urban Transportation Planning - Unified Urban Work Program," March 17, 1972 (offset printing).

⁷³DOT 1130.1, "Establishment of Intermodal Planning Groups", Office of the Secretary, 11-30-72, p. 2. HUD and EPA also participate in these groups.

⁷⁴DOT 1130.2, "Annual Unified Work Programs for Intermodal Planning," 3-16-73.

⁷⁵ Letter of November 13, 1973, signed by the administrators of FHWA, UMTA, and FAA.

⁷⁶ DOT, "Status of Unified Work Programs," unpublished table.

⁷⁷ U.S. Office of Management and Budget, *The Integrated*

Grant Administration (IGA) Program (Washington, D.C.: OMB, January 14, 1972).

⁷⁸ This includes designations approved by DOT through April 1974. The designations in a few states had not yet been acted upon at that time.

TRANSPORTATION IMPLEMENTATION: THE INSTITUTIONAL, FINANCIAL, AND REGULATORY DIMENSIONS

This chapter examines the complex of institutions – both public and private – currently having responsibilities for financing, building, operating, maintaining, and regulating transportation systems and services in the nation’s metropolitan areas. It examines also the fiscal relationships among them created by different transportation funding assignments and inter-governmental aid systems, and the restraints placed on transportation providers by a variety of regulatory units affecting them both directly and indirectly. The chapter is divided into several major parts. The first provides an institutional profile of the public and private transportation providers in the 218 urbanized planning areas recognized by the U.S. Department of Transportation. This is intended to provide the reader with an overview of the organizational variation of metropolitan transportation assignments. It provides also some preliminary assessments of the population, geographic, and governmental factors that account for the different ways in which the nation’s metropolitan areas organize in order to carry out their transportation responsibilities.

The next four sections detail some of the roles that state departments of transportation, cities and counties, areawide special districts, and the private sector play in the delivery of transportation services. These are designed to describe briefly the transportation responsibilities that these public and private institutions exercise and to highlight some of the developments that have led to their assumption of service roles.

The next two sections deal with the financing and regulatory aspects of the transportation process. They indicate, in some detail, the character of state and Federal transportation aid systems, and the fiscal resources and restraints that different levels of government exhibit in funding transportation programs. They indicate also the major elements of the several regulatory systems that affect the operations of both metropolitan and non-metropolitan transportation systems.

The chapter concludes with a statement of major findings about the institutional character of urban transportation systems, the decision making roles that the public and private organizations play in these systems, and the financing and regulatory policies that condition the actions of both sets of transportation providers. The section ends with a brief listing of the intergovernmental issues that figure prominently in current debates about how the country’s transportation systems might be better financed, regulated, and operated. These issues will be examined in some depth in *Chapter IV*.

ORGANIZATIONAL STRUCTURES FOR TRANSPORTATION IN METROPOLITAN AREAS

The transportation needs of the typical metropolitan area are served by a varying combination of general purpose governments, special districts, and private providers. Diffusion of responsibility and jurisdictional fragmentation are the chief characteristics of metropolitan transportation service delivery patterns. The average metropolitan area has 11 "urbanized" municipalities,¹ three counties, 38 special districts and four transportation districts serving a population of approximately 655,700. (The median population for the 218 "Section 134" metropolitan areas is 272,063.) However, there are considerable variations in many of the characteristics of these planning areas. Population differences range from a low of 57,978 in Bryan, Texas, to a high of 16,111,384 in the Tri-State planning area (New York, Connecticut, New Jersey). Jurisdictional fragmentation varies from one "urbanized" municipality in the Bakersfield, California, area to 381 in the Tri-State area, from no counties in Hartford, Connecticut, to 15 in the Tri-State area, from one special district in Jackson, Michigan, to a high of 470 districts in the Chicago area. The number of special transportation districts also ranges widely from none, as in Dubuque, Iowa, to 28 in the Tri-State planning area.

Basic Patterns

Five discernible patterns of transportation service organization emerge in the 218 "Section 134" metropolitan planning areas studied.

- The simplest pattern usually consists of a city involved in a variety of transportation functions such as highways, airports, and mass transit while the county is active only in highways.
- In a variation of this bi-level pattern, the county may be involved in other functions such as airports and mass transit as well as highways.
- The tri-level pattern adds special district participation to the city and county efforts (usually in the form of a mass transit district, parking authority, airport authority, or other such activities).
- A modification of this pattern is where the county assumes additional transportation responsibilities itself.

- The fifth, or multilevel pattern, involves the state directly in the metropolitan transportation service delivery system, usually in the form of a state owned airport, while the special district, county, and city also participate directly.

The most prevalent organizational pattern is the tri-level approach with the county performing a single

Table III-1

PROTOTYPE OF STRUCTURAL- FUNCTIONAL PATTERNS OF TRANSPORTATION SERVICE DELIVERY IN METROPOLITAN AREAS, MADISON, WISCONSIN: 1973

Pattern One: Local Bi-Level
(Multifunctional Municipality And
Unifunctional County)

Jurisdictional Fragmentation Factors:
Population: 290,272; Urbanized Municipalities:
6; Counties: 1; Special Districts: 8.

Function	Service Provider		
	Municipal	County	Private
Airports	1		1
Highways	6	1	
Water			
Transport			
Mass			
Transit			2
Parking	*		*

*Parking data derived from National League of Cities, *National Parking Facility Study* (Washington, D.C.: The League, 1972), pp. 41-83.

SOURCE: ACIR tabulation based on data from the following:

Moody's *Municipal and Government Manual*, Volumes 1 and 2. (New York: Moody's Investors Service, 1973). Federal Aviation Administration, *National Airport System Plan Summary* (Washington, D.C.: U.S. Government Printing Office, 1972). American Transit Association, *1973 Directory* (Washington, D.C.: American Transit Association, 1973). *Bus Ride, The Journal of Bus Transportation Directory—1972* (Spokane, Washington: Bus Ride, May 1972). U.S. Department of Commerce, Bureau of the Census, *Governmental Organization, Volume I of the 1972 Census of Governments* (Washington, D.C.: U.S. Government Printing Office, 1973).

service. The next most frequent is the county assuming more than one transportation responsibility. Both patterns involve special district participation.

Five areas illustrate these basic metropolitan service patterns. Madison, Wisconsin, serves as a prototype of the basic bi-level arrangement with a multifunctional municipality and a unifunctional county sharing transportation responsibility (see *Table III-1*). Madison is a comparatively small metropolitan area with a population of 290,272, six urbanized municipalities, one county, and eight special districts. The six municipalities are involved in highways and airports, while the county is concerned with highways only. Private providers are also significant, since one airport is privately owned and the Madison Service Corporation, a subsidiary of the American Transit Corporation, provides bus service for the area.

The second local bi-level pattern involves a multifunctional county as exemplified by El Paso, Texas (see *Table III-2*). This area has a population of 359,291, one urbanized municipality, one county, and eight special districts. The municipality and county both are involved in airports and highways while the private sector provides bus transit services. El Paso International Airport is owned by the city, while Fabens Airport is owned by the county. A third airport, Sun and Park, is privately owned. Three private bus companies, El Paso City Lines, Inc.; Country Club Bus Line, Inc.; and Lower Valley Bus Line operate in the area.

The Dallas-Fort Worth metropolitan area typifies the local tri-level pattern with multifunctional municipal and unifunctional county levels sharing the transportation responsibility with two independent, one municipal dependent, and one state dependent transportation district (see *Table III-3*). The area has a population of 1,555,950 which includes 43 urbanized municipalities, six counties, and 39 special districts. The municipalities are concerned with airports and highways while the county is concerned only with highways. The districts are involved in airports, highways, and transit. The area is served by six municipal airports – Terrel, Grand Prairie, Denton, Dallas Love Field, Rockwall, and Redbird. The Dallas-Fort Worth Regional Airport Authority operates the Dallas-Fort Worth Regional Airport as an independent district. The Dallas Road District functions as an independent district, while the Texas Turnpike Authority operates as a state dependent district. The Dallas Transit System is a municipal dependent district, while two private airports, Addison and Garland, and one private bus company, Fort Worth Transit Co., Inc., also provide transportation services in this metropolitan area.

Table III-2

**PROTOTYPE OF STRUCTURAL
FUNCTIONAL PATTERNS OF
TRANSPORTATION SERVICE
DELIVERY IN METROPOLITAN
AREAS, EL PASO, TEXAS:
1973**

Pattern Two: Local Bi-Level
(Multifunctional Municipality And
Multifunctional County)

Jurisdictional Fragmentation Factors:
Population: 359,291; Urbanized Municipalities:
1; Counties: 1; Special Districts: 8.

Function	Service Provider		
	Municipal	County	Private
Airports	1	1	1
Highways	1	1	
Water			
Transport			
Mass			
Transit			4
Parking	*		*

*Parking data source, see *Table III-1*.

SOURCE: ACIR tabulation (see *Table III-1*).

The multifunctional county variation of the local tri-level pattern is demonstrated by San Diego, California (see *Table III-4*). The population of this metropolitan area is 1,357,854, divided among ten urbanized municipalities, one county, and 90 special districts. The municipalities and the county are involved in highways and airports, while three independent districts are concerned with airports, water transport, and mass transit. Some parking is provided by a municipal dependent district. Montgomery, Brown, and Oceanside are municipal airports, while Gillespie, Palomar, Borrego Valley, Fallbrook Community Airpark, and Ramona are county airports and San Diego International (Lindbergh) is owned by the independent San Diego Port Authority, which also is concerned with water transport. The San Diego Transit District, another independent district, provides transit services.

Harrisburg, Pennsylvania, illustrates the fifth and most complex pattern. Here four levels share transportation responsibilities in a metropolitan area (see *Table III-5*). The state is a director-actor (in a function other than highways) along with municipalities, counties, and

Table III-3

**PROTOTYPE OF STRUCTURAL FUNCTIONAL PATTERNS OF
TRANSPORTATION SERVICE DELIVERY IN METROPOLITAN
AREAS, DALLAS-FORT WORTH, TEXAS: 1973**

Pattern Three: Local Tri-Level
(Multifunctional Municipality,
Unifunctional County, And
Special Districts)

Jurisdictional Fragmentation Factors:

Population: 1,555,950; Urbanized Municipalities: 43; Counties: 6; Special Districts: 39.

Function	Service Providers					Private
	Municipal	County	Independent Special District	Municipal Dependent District	State Dependent District	
Airports	7		1			2
Highways	43	6	1		1	
Water Transport						
Mass Transit				1		2
Parking	*					*

*For parking data, see Table III-1.

SOURCE: ACIR tabulation (see Table III-1).

Table III-4

**PROTOTYPE OF STRUCTURAL FUNCTIONAL PATTERNS OF
TRANSPORTATION SERVICE DELIVERY IN METROPOLITAN
AREAS, SAN DIEGO, CALIFORNIA: 1973**

Pattern Four: Local Tri-Level
(Multifunctional Municipality,
Multifunctional County, and
Special Districts)

Jurisdictional Fragmentation Factors:

Population: 1,357,854; Urbanized Municipalities: 10; Counties: 1; Special Districts: 90.

Function	Service Providers					Private
	Municipal	County	Independent Special District	Municipal Dependent District	County Dependent District	
Airports	3	5	1		1	1
Highways	10	1				
Water Transport			1			
Mass Transit	2		1			1
Parking	*			1		

*For parking data, see Table III-1.

SOURCE: ACIR tabulation (see Table III-1).

special districts. The Harrisburg area is of moderate size with a population of 410,626, 16 municipalities, three counties, and 71 special districts. The 16 municipalities and three counties are concerned with highways as are four state dependent districts (the Pennsylvania Parkway Commission, the State Highway and Bridge Authority, the Pennsylvania Turnpike Commission, and the Pennsylvania Tunnel Commission). The state is directly involved in airport service since Harrisburg International (Olmstead Field) is owned by the Commonwealth of Pennsylvania. Transit services are provided by the Cumberland-Dauphin-Harrisburg Transit Authority which operates as an independent district.

The Role of Special Transportation Districts

These prototype areas represent the five structural variations that occur most frequently in the provision of transportation services in the 218 metropolitan areas examined. The two most prevalent patterns (local tri-level with a unifunctional or multifunctional county) also involve independent or dependent transportation districts which are major actors on the local transportation scene.

Twenty-nine metropolitan areas have more than eight

transportation districts and 47 have more than four (see *Table III-6*). While both general and special purpose units may be involved in airports, general purpose local governments are most concerned with highways while water transport, mass transit, and parking are frequently provided by the special districts. Private providers also contribute bus and parking services. Examination of the 218 metropolitan areas reveals that of the 746 identifiable transportation districts (see *Table III-7*), 136 or 18 percent are airport districts. Forty percent or 298 are highway related units (turnpike authorities, bridge, tunnel, and parkway commissions). One-hundred-twenty-nine or 15 percent are water transport districts. One-hundred-thirty-five or 20 percent are mass transit entities and 49 or 7 percent are parking districts.

Transportation districts are classified as independent, or as municipal, county, or state dependent — according to their source of funds and the nature and degree of their structural ties to general purpose governments. Of the 746 districts identified, 30 percent are independent, 20 percent municipal dependent, 6 percent county dependent, and 44 percent state dependent.

The state is involved directly with the highway

Table III-5

PROTOTYPE OF STRUCTURAL FUNCTIONAL PATTERNS OF TRANSPORTATION SERVICE DELIVERY IN METROPOLITAN AREAS, HARRISBURG, PENNSYLVANIA: 1973

Pattern Five: State-Multilevel
(Multifunctional Municipality,
Uni- or Multifunctional County,
Special Districts, and State)

Jurisdictional Fragmentation Factors:

Population: 410,626; Urbanized Municipalities: 16; Counties: 3; Special Districts: 71.

Function	Service Providers					
	Municipal	County	State	Independent Special District	State Dependent District	Private
Airports			1			
Highways	16	3			4*	
Water Transport						
Mass Transit				1		
Parking						3

*Some of these are inactive or have been superseded by the Pennsylvania Department of Transportation.

SOURCE: ACIR tabulation (see *Table III-1*).

Table III-6

**METROPOLITAN DISTRIBUTION OF TRANSPORTATION DISTRICTS
RELATED TO STRUCTURAL PATTERN OF SERVICE DELIVERY: 1973**

Structural Pattern		Number Of Transportation Special Districts* In Section 134 Planning Areas								
		0-4	4-8	8-12	12-16	16-20	20-24	24-28	Total	
Local Bi-Level	Type I	Multifunctional Municipal Unifunctional County	19	0	0	0	0	0	0	19
	Type II	Multifunctional Municipal Multifunctional County	4	0	0	0	0	0	0	4
Local Tri-Level	Type I	Multifunctional Municipal Unifunctional County Special Districts	83	29	12	1	0	0	0	125
	Type II	Multifunctional Municipal And County Special Districts	29	12	5	7	0	0	1*	54
State-Multilevel		Multifunctional Municipal Multi- Or Unifunctional County Special Districts State	7	6	2	0	1	0	0	16
	All Patterns		142	47	19	8	1	0	1	218

*Includes independent, state, county, and municipal dependent districts.

SOURCE: ACIR tabulation (see Table III-1).

Table III-7

**TRANSPORTATION SPECIAL DISTRICTS CLASSIFIED BY FUNCTION
AND DEPENDENCY: 1973**

Function	Type Of District				Total Number Of Special Districts
	Independent	Municipal Dependent	County Dependent	State Dependent	
Airports	61	35	14	22	132
Highways	36	7	4	251	298
Water Transport	52	21	10	46	129
Mass Transit	59	56	12	8	135
Parking	24	25	3	0	52
Total*	232	144	43	327	746

*Total is for the 218 surveyed Section 134 Planning Areas.

SOURCE: ACIR tabulation (see Table III-1).

function, but it also has considerable indirect impact on the local metropolitan highway and water transport function via the subordinate special district mechanism. Independent districts are found in the airport, water transport, mass transit and parking functions. Municipal dependent districts are primarily involved in mass transit, airports, parking, and water transport. County dependent units are not major transportation actors, but do participate occasionally in airports, mass transit, and water transport.

Functional Prime Actors

The general functional pattern of prime actors on the metropolitan transportation scene suggests certain dominant organizational roles (see *Table III-8*). Municipalities and independent districts dominate the airport function. Highways are the major concern of the general purpose governments, but state dependent districts are also prime participants. The chief providers of water transport services are independent and state dependent districts. Most mass transit and parking responsibilities are shared by independent districts, municipal dependent districts, and private providers.

Responsibility for airports is divided among general purpose local governments (52 percent), special districts (38 percent), and the private sector (10 percent). The municipal level alone is responsible for approximately 40 percent of the airports, with independent districts accounting for somewhat less than 20 percent.

The highway function is shared by municipalities,

counties, the state, and special districts. Eighty-five percent of highway related districts are state dependent. The state emerges as the dominant highway actor.

The water transport function is largely administered by special districts. Of 129 identified water transport units, 40 percent are independent, 37 percent are state dependent, 16 percent municipal dependent, and 7 percent county dependent districts.

Mass transit is also dominated by special districts. Municipal governments were directly involved in mass transit in only 19 of the 218 metropolitan areas, while 135 had transit districts. Of these districts, 42 percent are independent, 40 percent are municipal dependent, 10 percent are county dependent, and 8 percent are state dependent units. The private provider also plays a substantial role in transit, with 245 private bus companies operating in 81 of the metropolitan areas surveyed.

The parking function also seems to be dominated by special districts and private providers. Of the 52 parking districts, approximately half are independent units and the other half are municipal dependent bodies.

Regional Variations in District Use and Structural Patterns

Dependence on special transportation districts as well as the overall organization pattern for service delivery vary regionally. In three regions, the Pacific, the South Atlantic, and the Middle Atlantic, approximately 50

Table III-8

PRIME TRANSPORTATION SERVICE PROVIDERS IN METROPOLITAN AREAS: 1973

Function	Type Of Transportation Provider						
	Municipal	County	State	Independent District	Municipal Dependent District	State Dependent District	Private
Airports	*			*			
Highways	*	*	*			*	
Water Transport				*		*	
Mass Transit				*	*		*
Parking				*	*		*

*Prime transportation provider(s).

SOURCE: ACIR tabulation (see *Table III-1*).

percent of the metropolitan areas have four or more transportation districts (see *Table III-9*), and 20 percent have eight or more such districts.

Regional variations in organizational patterns for transportation service also occur (see *Table III-10*). The simplest organizational pattern, the local bi-level with a unifunctional county, is most prevalent in the West South Central region (60 percent). The more complex tri-level pattern involving several transportation districts is found most frequently (60 percent) in the South Atlantic, East North Central, and West North Central regions. The same pattern, but with the addition of a multifunctional county, is prominent in the Middle and South Atlantic and East North Central regions.

Population Variations

Analysis of the largest, medium, and small population sized Section 134 planning areas indicates some size related trends in metropolitan transportation organization. The largest of these areas (those in the top 10 percent size bracket) generally exhibit municipal, county, and special district involvement in the delivery of transportation services. The average such area has 67 urbanized municipalities, seven counties, and 142 special districts and contains at least nine identifiable transpor-

tation districts. Data from *Table III-11* show that individual transportation services in these areas are generally provided by several levels of governments. Airport administration in the typical large area generally involves a combination of special districts, municipalities, and counties. Highways are the joint responsibility of a state highway department, counties, municipalities, and several independent special districts. Mass transit usually involves special districts, municipalities, and private providers. Only the water transport area seems clearcut, with special districts being the main providers.

The middle sized Section 134 areas have somewhat similar organizational patterns. Airports in these moderate sized areas tend to be the combined responsibility of special districts, counties, municipalities, and private parties. Highway duties are shared between state, municipal, and county levels. Special districts are prominent in water transport, while private provision of bus transit is most common.

Smaller Section 134 areas exhibit the least complex pattern of functional transportation organization. Municipalities generally provide the airport function. The private sector provides mass transit, while states, counties, and municipalities deliver highway services. Water transport, where it exists, is the responsibility of a special district. Here there is considerably less institu-

Table III-9

REGIONAL DISTRIBUTION OF TRANSPORTATION DISTRICTS IN METROPOLITAN AREAS, BY REGION: 1972

Region	Number Of Transportation Districts By Section 134 Planning Area						Total	
	0-4	4-8	8-12	12-16	16-20	20-24		24-28
Pacific	9	3	1	2	1	0	0	16
Mountain	12	3	0	0	0	0	0	15
West South Central	27	6	1	0	0	0	0	34
West North Central	14	5	1	0	0	0	0	20
East North Central	31	7	3	2	0	0	0	43
East South Central	8	3	4	0	0	0	0	15
South Atlantic	22	10	7	1	0	0	0	40
Middle Atlantic	7	9	1	2	0	0	1	20
New England	12	1	1	1	0	0	0	15
All Regions	142	47	19	8	1	0	1	218

SOURCE: ACIR tabulation (see *Table III-1*).

Table III-10

NUMBER OF SECTION 134 URBANIZED AREAS HAVING VARIOUS PATTERNS OF GOVERNMENTAL RESPONSIBILITY FOR TRANSPORTATION SERVICE DELIVERY, BY REGION: 1973

Structural Pattern	New England	Middle Atlantic	South Atlantic	East South Central	Region East North Central	West North Central	West South Central	Mountain	Pacific	Total Number Of Section 134 Areas
<i>Bi-Level: Type I</i> (Multifunctional Municipality, Unifunctional County)	0	0	3	1	2	1	12	0	1	20
<i>Bi-Level: Type II</i> (Multifunctional Municipality, and Multifunctional County)	0	0	0	0	3	0	1	0	0	4
<i>Tri-Level: Type I</i> (Multifunctional Municipality, Unifunctional County, Special Districts)	12	9	26	9	25	17	12	10	4	124
<i>Tri-Level: Type II</i> (Multifunctional Municipality, and County, Special Districts)	1	9	10	4	9	2	7	4	8	54
<i>Multi-Level</i> (Multifunctional Municipality, Uni- Or Multifunctional County, Special Districts, State)	2	2	3	1	2	0	2	1	3	16
All Patterns	15	20	42	15	41	20	34	15	16	218

SOURCE: ACIR tabulation (see Table III-1).

Table III-11

STRUCTURAL AND TRANSPORTATION PROFILE OF FIRST, FIFTH, AND TENTH POPULATION DECILES OF 218 SECTION 134 METROPOLITAN PLANNING AREAS: 1973

Population Class	Population Range	Predominant Pattern Of Responsibility	*Municipalities	Average Counties	Special Districts	Air-ports	General Provider Patterns High-ways	Water Transport	Mass Transit	Parking	Average Number Transit Districts
Highest 10%	16,111,384	65% Local tri-level; (Multifunctional Municipal, County, And Special Districts)	67	7	142	50% Special Districts	90% Combina- tion Of State, County, and Municipal (Special Districts)	14 Areas Special Districts	90% Combina- tion Of Special Districts, Municipal, and Private	9 Areas With Districts	9
	1,270,515										
Middle 10%	333,140	55% Local tri-level (Multifunctional Municipal, Uni-functional County, And Special Districts)	4	2	35	40% Combina- tion Of Special Districts, County, Municipal, and Private	55% Combina- tion Of State, Municipal, and County	5 Areas Special Districts	45% Private	3 Areas With Districts	3
	272,063										
Lowest 10%	104,389	50% Local Bi-level (Multifunctional Municipal And Uni-functional Or Multifunctional County)	1	1	8	85% Municipal	55% State, Municipal, and County	3 Areas Special Districts	50% Private	No Districts	1
	57,978										

*Municipalities in Section 134 Planning Area.

SOURCE: ACIR tabulation (see Table III-1).

tional complexity and cooperation in provision of various components of the transportation function.

Differences in urban transportation organization also seem to be related to urbanization factors as well. When the Section 134 planning areas are cross-classified by the GM index² and the transportation organizational pattern, it appears that there is a positive association between a low GM index number and a more complex form of metropolitan transportation organization involving three or four levels of state and local government. Simply put, the more complex the transportation task faced by a metropolitan area, the more

sophisticated and multilevel form of transportation organization the area tends to develop (see *Table III-12*).

STATE DEPARTMENTS OF TRANSPORTATION

The state role in transportation has been changing over the last decade and a half as state departments of transportation have been created. These new organizations combine numerous previously autonomous agencies at the state level, each of which had a relatively narrow responsibility for some limited mode of transportation.

Table III-12

NUMBER OF SECTION 134 URBANIZED AREAS HAVING VARIOUS PATTERNS OF GOVERNMENTAL RESPONSIBILITY FOR TRANSPORTATION SERVICE DELIVERY, BY G.M. INDEX: 1973

Structural Pattern	G.M. Index Number										Total Number Of Section 134 Areas
	0	1	2	3	4	5	6	7	8	9	
Bi-Level											
Type I (Multifunctional Municipalities And Unifunctional County)	19	0	0	0	0	0	0	0	0	1	20
Type II (Multifunctional Municipalities And County)	2	0	0	0	0	0	1	1	0	0	4
Tri-Level											
Type I (Multifunctional Municipalities, Unifunctional County, And Special Districts)	89	0	0	2	7	4	6	3	2	11	124
Type II (Multifunctional Municipalities And County Special Districts, And Uni- Or Multifunctional County)	25	1	1	4	4	3	8	4	2	2	54
Multi-Level											
(Multifunctional Municipalities, Special Districts, And State)	8	0	1	1	1	2	2	0	0	1	16
All Patterns	143	1	2	7	12	9	17	8	4	15	218

SOURCE: ACIR tabulation (see *Table III-1*) and General Motors Research Publication No. GMR-1225.

Table III-13

**STATE DOT'S, LISTED BY YEAR OF ESTABLISHMENT
(Enactment Or Executive Order)***

Year Es- tablished	State	Name Of Agency
1959	Hawaii	Department Of Transportation
1960 ¹	California	Business And Transportation Agency
1966	New Jersey	Department Of Transportation
1967	New York	Department Of Transportation
1967 ²	Florida	Department Of Transportation
1967	Wisconsin	Department Of Transportation
1969	Connecticut	Department Of Transportation
1969	Massachusetts	Executive Office of Transportation And Construction
1969	Oregon	Department Of Transportation
1970	Delaware	Department Of Highways And Transportation
1970	Maryland	Department Of Transportation
1970	Pennsylvania	Department Of Transportation
1970	Rhode Island	Department Of Transportation
1971	Illinois	Department Of Transportation
1971	Maine	Department Of Transportation
1971	North Carolina	Department Of Transportation And Highway Safety
1972	Ohio	Department Of Transportation
1972	Tennessee	Department Of Transportation
1973	Arizona	Department Of Transportation
1973	Georgia	Department Of Transportation
1973	Michigan	Department Of State Highways And Transportation
1973	South Dakota	Department Of Transportation
1974	Kentucky	Department Of Transportation (With Broader Responsibilities)
1974	Idaho	Transportation Department
1974	Iowa	Department Of Transportation
1974	Missouri	Department Of Transportation (All Modes Except Highways)
1974	Virginia	Department Of Highways And Transportation

*Puerto Rico also has a DOT.

¹Reorganized in 1973 to form a Department of Transportation with broader responsibilities within the Business and Transportation Agency.

²Reorganized in 1969 as part of overall state reorganization.

SOURCE: Taken in part from Richard G. RuBino, "A Quest for Integrated and Balanced Transportation Systems in State Government," study performed for U.S. Department of Transportation (June 30, 1971), pp. 16-28. Data on post-1971 DOT's taken from review of state statutes and budget documents and obtained from AASHTO.

These new departments are concerned with a broad range of transportation and transportation related activities. The forms taken by these new organizations, and the reasons for their creation, vary considerably among the states. Nevertheless, certain common themes run through the arguments in support of the formation of state departments of transportation, and the specific organizational approaches employed in their implementation.

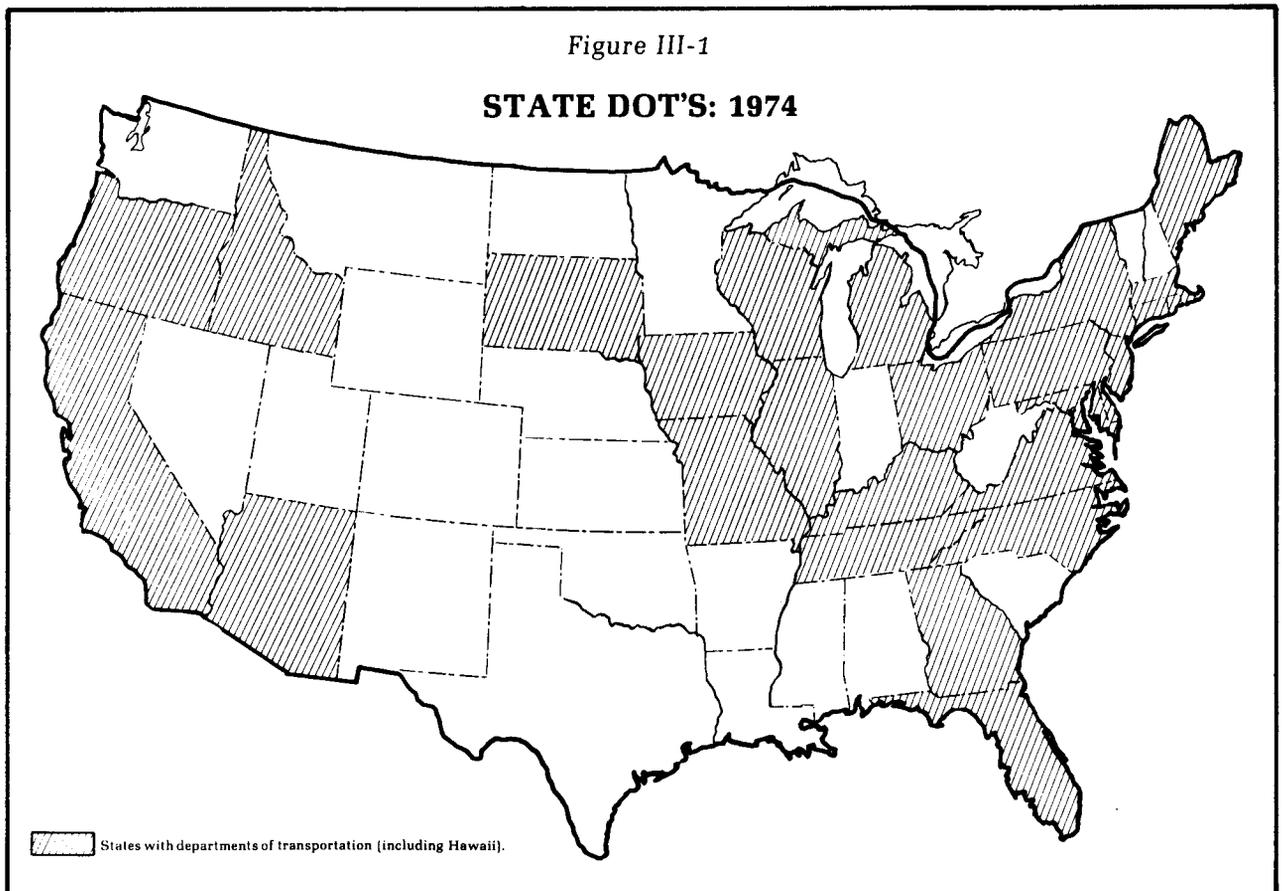
This section of the report elaborates on the conditions surrounding the creation of state departments of transportation (DOT's) and the characteristics of existing DOT's. It discusses the effect of DOT's on the planning, financing, and delivery of transportation services — their benefits and limitations; contrasts the DOT approach with other state organizational arrangements for transportation; and concludes with an overview of the state role in the provision of transportation services.

State Departments of Transportation (DOT's): The Record

State DOT's are a phenomenon of the last 15 years, with most having been established in the last eight. All of the 27 state DOT's (as of 1974) have been created since Hawaii took the first step in 1959, and all but Hawaii's and California's date from the establishment of the Federal Department of Transportation in 1966. Thus, while some states had reorganized their transportation systems before the Federal government's action (and others were in the early stages of doing so), the passage of legislation creating the Federal Department of Transportation stimulated and accelerated state reorganization in the field of transportation (see *Table III-73*). In fact, the desire to maintain satisfactory communications with the Federal Department of Transportation is one frequently cited reason for the creation of a state DOT.³ To date, state DOT's have been concentrated in the eastern half of the U.S., and along the Pacific coast. Only eight of 27 existing DOT's are in states west of the Mississippi (see *Figure III-1*), and only

five are located between the West Coast and the Mississippi (Arizona, Idaho, Iowa, Missouri, and South Dakota). The concentration of state DOT's is greatest in the Northeast and the Middle Atlantic regions, and is somewhat less in the North Central and Southern states, respectively. Insofar as the emergence of state DOT's represents the involvement of the states in a broad range of transportation services, it is not surprising that the majority of states which have not formed DOT's are those in which the state role in transportation is relatively narrow and urbanization is less prominent.

Table III-14 lists states with DOT's and the degree to which their occurrence is associated with urbanization. As this table shows, of the 27 states with DOT's, 15 are more urbanized than the median of all 50 states. This relationship is especially strong for the earliest DOT's; of the first 13 (1970 or before), 11 are in states with urbanization rates above the median, and the other two are only slightly below the median — Oregon at 67.1 percent urbanized and Wisconsin at 65.0 percent.⁴ *Figure III-2* shows the location of states with DOT's along a line representing urbanization rates.



This strong correlation between urbanization and the formation of DOT's probably reflects the fact that as an area becomes more urbanized its transportation system becomes more complex. Highways may be virtually the only mode of transportation in a typical rural area, possibly joined by railroads and ports or waterways. As population density increases, other modes become increasingly desirable and feasible, especially commercial airports and mass transit. In addition to an increase in the number of transportation modes required, greater population densities also give rise to a greater demand for increased capacity in all transportation facilities. There is accordingly greater pressure for governmental involvement in the regulation, finance, and direct provision of transportation services, as dependence on the smooth functioning of a complex transportation system increases. Lastly, recognition of this increased complexity and dependence leads to the desire to plan and develop transportation services as a system, rather than to treat each mode independently. In this context, the evolution from fragmented, separate modal organizations toward departments of transportation as integrated multimodal organizations is quite natural; the movement toward some form of coordination

mechanism for transportation seems inevitable as states become more urbanized.⁵

Reasons for Creation of State DOT's

There are two basic reasons for the emergence of state DOT's. First, they often have been created as part of comprehensive reorganizations of the executive branch of state government. The reason behind this broader reorganization movement is the traditional one of strengthening the management capability of the executive branch, normally through such devices as limiting the governor's span of control, grouping related functions together, and more precisely specifying agency accountability to the governor and to the legislature. Legislative reapportionment is credited with providing the impetus to the most recent wave of state reorganization, by stimulating greater willingness on the part of legislatures to assist in strengthening the executive branch. Thus DOT's have been established as part of an overall reorganization effort, rather than for reasons related specifically to transportation problems and issues, in 12 states: Delaware, Maine, Maryland, Massachusetts,

Table III-14

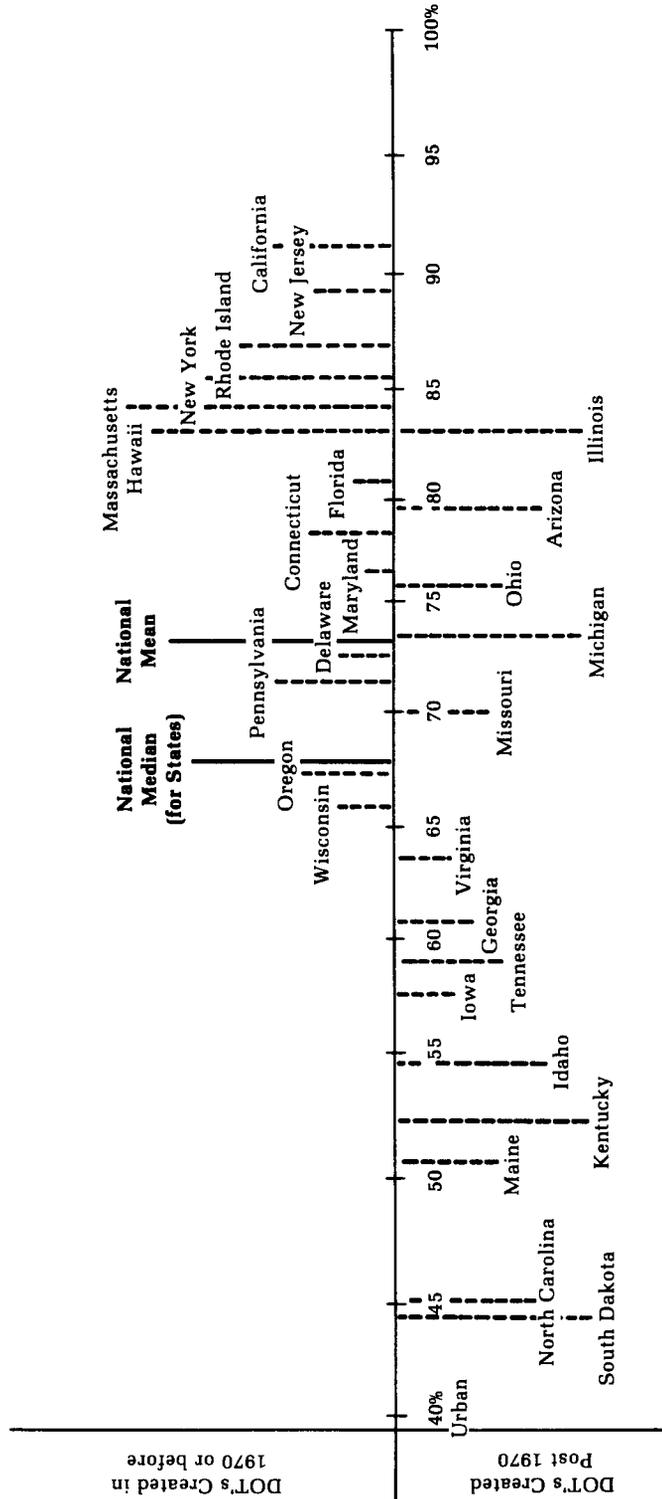
1970 URBANIZATION RATES, STATES HAVING DOT'S BY 1974

State	Percent Urban	State	Percent Urban
Arizona	79.6	Massachusetts	84.6
California	90.9	Michigan	73.8
Connecticut	77.4	Missouri	70.1
Delaware	72.2	New Jersey	88.9
Florida	80.5	New York	85.6
Georgia	60.3	North Carolina	45.0
Hawaii	83.1	Ohio	75.3
Idaho	54.1	Oregon	71.5
Illinois	83.0	Pennsylvania	71.5
Iowa	57.2	Rhode Island	44.6
Kentucky	52.3	South Dakota	58.8
Maine	50.8	Tennessee	58.8
Maryland	76.6	Virginia	63.1
		Wisconsin	65.9
U.S. Urbanization Rate	73.5		

SOURCE: *Statistical Abstract of the U.S.*, 1973.

Figure III-2

DOT STATES ON A CONTINUUM OF URBANIZATION: 1970



SOURCE: Statistical Abstract of the U.S., 1973; taken in part from Richard G. Rubino, "A Quest for Integrated and Balanced Transportation Systems in State Government," study prepared for the U.S. Department of Transportation (June, 1971), p. 9.

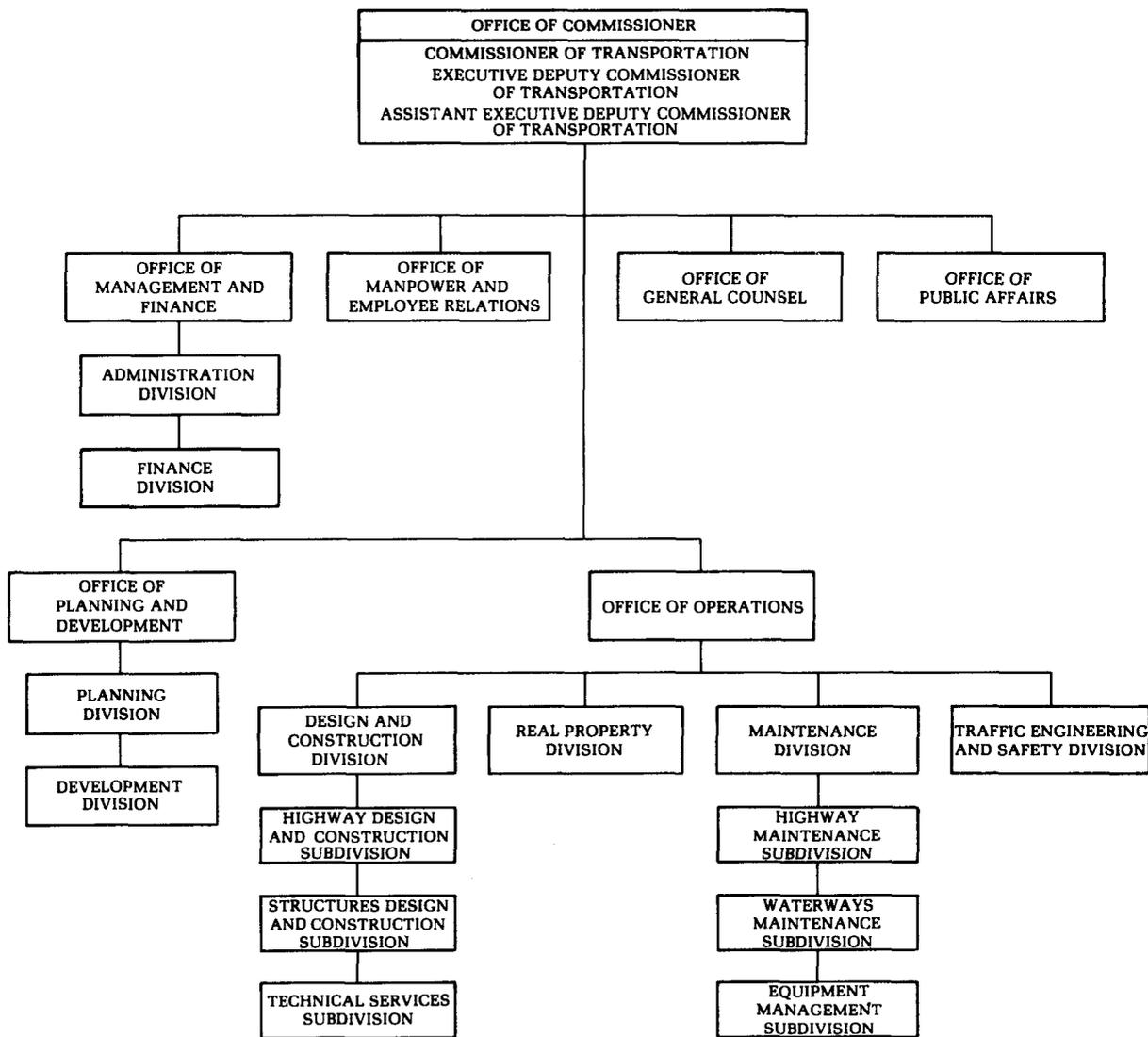
Missouri, Oregon, North Carolina, Wisconsin, South Dakota, Georgia, Arizona, and Kentucky. In addition the Florida DOT, established initially in 1967, was greatly strengthened in 1969 during a comprehensive state reorganization.⁶

In the remaining 15 DOT states, Florida included, re-arrangement of the organizational scheme for transportation took place as the result of problems or

motivations related specifically to transportation.⁷ The most common reason given in support of a DOT is the furtherance of a balanced, multimodal transportation system, followed closely by the desire to coordinate transportation with other areas of state involvement, especially land use planning, environmental protection, and economic development. Other frequently cited motivations include: the elimination of waste caused by

Figure III-3

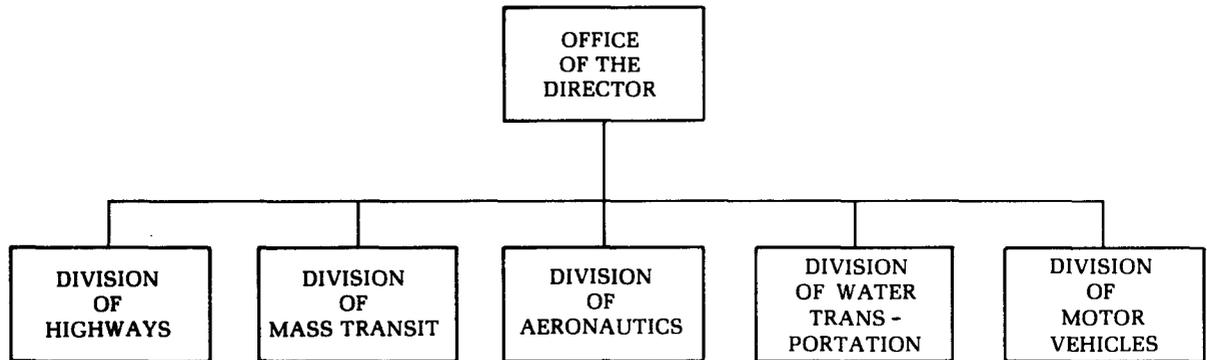
ORGANIZATION CHART OF THE NEW YORK DEPARTMENT OF TRANSPORTATION



SOURCE: Taken from Council of State Governments, "State Departments of Transportation," preliminary report of the National Governors' Conference, Committee on Transportation, Commerce and Technology. (Lexington, Kentucky: Council of State Governments, 1970), p. 21.

Figure III-4

ORGANIZATION CHART OF THE OREGON DOT



SOURCE: State of Oregon, Governor's Budget Recommendations, 1971-1973.

duplication of effort by separate modal agencies; the development of an integrated Federal-state-local system of transportation, often including state review of local grant applications to the Federal government; the advancement of a stronger state role in the planning, financing, administration, or coordination of local and regional transportation activity; the performance of transportation planning within the framework of state comprehensive planning; and the maintenance of effective communication channels with the Federal DOT. Part or all of this amalgamation of supporting arguments accounts for the establishment of DOT's in Hawaii, California, Connecticut, Illinois, New Jersey, New York, Ohio, Florida, Pennsylvania, Rhode Island, Tennessee, and Michigan.

Thus, in only about half of the states forming DOT's was a perceived inadequacy in the prior institutional arrangements for transportation clearly the catalyst for organizational change. Almost as frequently, the reasons lay in a broad reorganization movement directed at strengthening the governor's control over state programs.

In general, the movement to state DOT's has found support among the generalists in state government — governors, planning directors, and other officials who share a broad perspective on the state's problems and resources, and from major urban areas and their representatives.⁸ In addition to this support at the state and local level, state DOT's have been encouraged by the Federal DOT, both by example and as a byproduct of the National Transportation Needs Study. The orientation of this study impressed on the states the need for some mechanism to ensure that different modes are

treated as components of an integrated transportation system.⁹ On the other hand, the movement has frequently been opposed by members and constituents of established modal organizations who wish to preserve the importance and visibility of these organizations. To this extent, it appears that the DOT movement has surfaced the same generalist-specialist tensions which are evident in many other public services. Judging from these alignments, the issue seems to have been perceived as one of decreasing the emphasis placed on highways as the dominant (often only) transportation mode — one which at this point still benefits rural areas more than urban concentrations, and increasing the relative role of other modes, especially mass transit, in a balanced and efficient transportation network.

Structure and Powers of State DOT's: 1973¹⁰

The patterns of organization adopted by state DOT's naturally vary considerably. While the detailed structures are virtually unique in each state, the basic patterns can be described along a continuum from completely functional to completely modal. The New York DOT is an example of the first kind of structure, in which the constituent organizational units represent functions such as planning, design and construction, maintenance, and administration, with each unit performing its assigned function for all modes. The New York DOT organization is depicted in Figure III-3, and is fairly typical of all three DOT's with functional organization. In contrast, the Oregon DOT has a purely modal structure, with five

modal division – aeronautics, highways, mass transit, water transport, and motor vehicles – each performing all the functions required for its operations, such as planning, maintenance, and construction. The Oregon DOT is shown in *Figure III-4*, and is roughly representative of the five DOT's with this form. In between these two types are a variety of intermediate or "mixed" or-

ganizational structures, in which both modal and functional units are present. The typical examples of this form have cross-modal units for planning and for administration, accompanied by a number of modal units. Fifteen of the state DOT's fall in this category. *Table III-15* arrays all 23 state DOT's referred to above according to their primary form of organization.

A recent U.S. DOT staff paper recommends the functional form as the preferred organizational style for state DOT's, citing its improved potential for intermodal cooperation as an advantage over the modal organization which tends to encourage modal competition.¹¹ Since multimodal planning and development is the fundamental goal of the DOT movement, an organizational style which furthers this goal is much preferred to one which inhibits it. At this time, however, as *Table III-15* shows, most DOT's have not achieved a completely non-modal organization. No significant trend is evident, as both the first and the most recent DOT's have modal structures. For political and other reasons, the mixed structure apparently will continue to be the compromise adopted by most states. In summary, most states are not carrying the multimodal concept to its logical conclusion as they choose organizational forms for DOT's, but are adopting structures with less than the maximum possible emphasis on multimodalism as an organizational goal.

In addition to organizational pattern, another important determinant of the potential which a DOT possesses for developing an integrated, multimodal transportation system is the power given to the director of the DOT to plan, make policy, and prepare budgets for the entire agency. In this area as well as that of structure, there is wide variation among the existing state DOT's. *Table III-16* lists the 23 (in 1973) state DOT's ranked according to the director's planning, policy, and budgetary powers. As this table illustrates, all but one DOT incorporate strong planning power for the director – i.e., there is a central planning unit in the DOT which provides policy guidance to the director and performs planning for all modes. This is what would be expected, given the stress placed on multimodal planning in most arguments supporting the formation of DOT's. The differences among the DOT's emerge in the other functions – policymaking and budgeting. In the director's policy power, the DOT's are split with ten having strong, five moderate, and eight weak ratings. The real divergency occurs in the budget power, where only four DOT's are classified as strong, ten as moderate, and nine as weak. Thus, with a few exceptions, the power a DOT director has in policy making is equalled or exceeded by his planning power, and the power he has in budgeting is equalled or exceeded by his policy and

Table III-15

PRIMARY FORM OF ORGANIZATION OF STATE DOT'S

State	Modal	Mixed	Functional
Arizona		X	
California		X ¹	
Connecticut		X	
Delaware		X	
Florida		X	
Georgia	X		
Hawaii	X		
Illinois			X
Kentucky		X	
Maine		X	
Maryland	X		
Massachusetts		X	
Michigan		X	
New Jersey		X	
New York			X
North Carolina	X		
Ohio			X
Oregon	X		
Pennsylvania		X	
Rhode Island		X	
South Dakota		X	
Tennessee		X	
Wisconsin		X	

¹Before the DOT was reorganized in 1973, California's DOT had a modal structure.

SOURCE: Information on 1971 and earlier DOT's taken from: The Council of State Governments, *State Department of Transportation* (Lexington, Kentucky: The Council of State Governments, 1970), pp. 6-27. Richard G. RuBino, "A Quest for Integrated and Balanced Transportation Systems in State Government," study performed for the U.S. Department of Transportation (June 1971), pp. 16-29. State of Minnesota, "Routes of the Future: The DOT Idea," report of the Interdepartmental Transportation Task Force (January 1973), p. 26. Post-1971 information based on ACIR staff review of state legislation and budget documents.

planning powers. Budgeting, then, is the least effectively centralized power of state DOT's.

In the case of budgeting, the weakness of the DOT directors primarily reflects the existence of modally dedicated revenue sources which severely limit the financial flexibility of the DOT, particularly highway trust funds into which motor fuel tax revenues are assigned,

and which frequently cannot be used for other than highway purposes. Because of this common inability to easily alter the distribution of transportation resources among different modes, it should not be expected that the DOT states as a group will experience major shifts in the balance between modes of transportation which existed prior to the DOT's formation, at least not as an

Table III-16

STATE DOT'S, RANKED ACCORDING TO THE DIRECTOR'S PLANNING, POLICY, AND BUDGET POWERS*: 1973

State	Director's Planning Power ¹	Weighted Score	Director's Policy Power ²	Weighted Score	Director's Budget Power ³	Weighted Score	Cumulative Weighted Score
Connecticut	Strong	3	Strong	3	Strong	3	9
New York	Strong	3	Strong	3	Strong	3	9
Florida	Strong	3	Strong	3	Strong	3	9
California	Strong	3	Strong	3	Moderate	2	8
Illinois	Strong	3	Strong	3	Moderate	2	8
Kentucky	Strong	3	Strong	3	Moderate	2	8
Maine	Strong	3	Strong	3	Moderate	2	8
Maryland	Strong	3	Moderate	2	Strong	3	8
Ohio	Strong	3	Strong	3	Moderate	2	8
Tennessee	Strong	3	Strong	3	Moderate	2	8
Georgia	Strong	3	Moderate	2	Moderate	2	7
Hawaii	Strong	3	Strong	3	Weak	1	7
Michigan	Strong	3	Moderate	2	Moderate	2	7
Arizona	Strong	3	Moderate	2	Weak	1	6
New Jersey	Strong	3	Weak	1	Moderate	2	6
Pennsylvania	Strong	3	Moderate	2	Weak	1	6
Delaware	Strong	3	Weak	1	Weak	1	5
Massachusetts	Strong	3	Weak	1	Weak	1	5
North Carolina	Strong	3	Weak	1	Weak	1	5
Oregon	Strong	3	Weak	1	Weak	1	5
South Dakota	Strong	3	Weak	1	Weak	1	5
Wisconsin	Strong	3	Weak	1	Weak	1	5
Rhode Island	Weak	1	Weak	1	Moderate	2	4

*A weighting scheme is employed as follows: strong = 3; moderate = 2; weak = 1.

¹Director's planning power is considered strong if there is a central planning unit which (a) provides policy guidance for the director, and (b) conducts planning for all modes; considered weak if (a) strong planning capability exists within modal divisions, or (b) central planning unit has no formal policy role.

²Policy power is considered strong if the DOT is (a) a single agency (b) under a policy making director, (c) with no policy making boards within the DOT; moderate if (a) and (c), hold, but the entire agency is under a policy making board or commission; weak if there are modal policy making boards within the agency or if the DOT is a coordinating agency with largely independent modal units.

³Budget power is considered strong if (a) there are no dedicated revenues — other than a flexible transportation trust, and (b) budget control is vested in the director; moderate if (b) holds but some dedication of revenues exists; weak if neither (a) nor (b) holds.

SOURCE: Based in part on Richard G. RuBino, "A Quest for Integrated and Balanced Transportation Systems in State Government," study performed for the U.S. Department of Transportation (June, 1971), pp. 45-61. Post-1970 DOT information based on ACIR staff review of state statutes and budget documents.

early consequence of the creation of the DOT. Overall, while some DOT's (notably Connecticut, New York, Florida, California, Illinois, Maine, Maryland, Ohio, and Tennessee) seem admirably equipped for their purpose, the formal powers given to the director in many state DOT's fall short of matching the multimodal, balanced transportation system goals which were so prominently mentioned in the debates accompanying the establishment of these units.

Responsibilities of the State DOT's: 1973¹²

The modes of transportation and the transportation

related activities, with which a state DOT might logically be concerned, include highways, aviation, mass transit, railroads, water transport, pipelines, motor vehicles, highway or transportation safety, highway patrol (enforcement), and transportation regulation. *Table III-17* indicates the responsibilities assigned to each state DOT. All the DOT's include highways among their responsibilities, reflecting the fact that DOT's are, in terms of personnel and budgets, first and foremost reorganized highway departments.¹³ A second area of unanimity among the DOT's is the absence of pipelines as a transportation mode within their purview, despite the

Table III-17

RESPONSIBILITIES OF STATE DOT'S: 1973

State	Highways	Aviation	Mass Transit	Railroads	Water Transport	Pipelines	Motor Vehicles	Highway Or Transportation Safety	Highway Patrol	Transportation Regulation
Group 1:										
Kentucky	X						X			
Ohio	X									
South Dakota	X	X								
Group 2:										
Arizona	X	X	X				X			
California	X	X	X					X		
Delaware	X	X	X				X			
Georgia	X	X	X				X			
Wisconsin	X	X	X							
Group 3:										
Hawaii	X	X			X			X		
Illinois	X		X		X		X	X		
Maine	X	X		X						
Maryland	X	X	X		X		X	X		
Massachusetts	X	X	X		X					
Michigan	X	X	X		X					
North Carolina	X	X	X	X	X		X	X	X	
Oregon	X	X	X		X					
Tennessee	X	X	X		X					
Group 4:										
Connecticut	X	X	X	X	X		X	X		
Florida	X	X	X	X	X		X			
New Jersey	X	X	X	X	X		X	X		
New York	X	X	X	X	X			X		X
Pennsylvania	X	X	X	X	X			X		
Rhode Island	X	X	X	X	X					

SOURCE: State of Minnesota, *Routes of the Future: The DOT Idea*, report of the Interdepartmental Transportation Task Force. Information on post-1971 DOT's taken from ACIR staff review of state legislation and budget documents.

fact that this is an increasingly important component of the nation's transportation system. Almost as uniformly, state DOT's have not assumed the regulation of transportation as a responsibility. New York is the only state to have done so, believing that there are considerable advantages to a strong linkage between transportation planning and regulation.¹⁴ Since the New York experience with transportation regulation spans seven years now, it appears that most other states with DOT's are not merely waiting to observe the results of this merger, but have decided to forego such a relationship. Moreover, they often share traffic safety responsibility with several other independent agencies; particularly state departments of public safety.

Beyond these similarities, the state DOT's vary widely in the scope of their responsibilities. A few — Kentucky, Ohio, and South Dakota — have a very narrow scope, covering only highways (and aviation in South Dakota) among the major transportation modes. Another group of states (Arizona, California, Delaware, Georgia, and Wisconsin) includes highways, aviation, and mass transit in the DOT, but no other modes. Nine states (Hawaii, Illinois, Maine, Maryland, Massachusetts, Michigan, North Carolina, Oregon, and Tennessee) have fairly broad areas of responsibility covering three or four of the major modes; five of these states are concerned with highways, aviation, mass transit, and water transport. A final group of six have very broad scopes, adding railroads to the four areas above and thereby having responsibility in all currently recognized major modes, except pipelines. With the exception of Florida, these states — Connecticut, New Jersey, New York, Pennsylvania, and Rhode Island — share the problem of the bankrupt northeastern railroad system, with which they are attempting to cope. The states in this group undoubtedly have a sound base, in terms of the scope of their DOT's, for achieving multimodal planning and development. However, it should not necessarily be concluded that states in the latter two clusters necessarily have developed DOT's with more appropriate scopes than those in the former groupings, because several modes — particularly water transport and rail rapid transit — are simply not so important in the transportation systems of some states as in others. Taking this fact into account, seven states (the first two clusters with the exception of Arizona) appear to have assigned responsibilities to their DOT's which are not broad enough to permit the development by the state DOT of a completely comprehensive approach to all important transportation modes in their own circumstances. The remaining 16 states do seem to have assigned an adequate scope to their DOT, at least where the

assignments are sufficient to assure the DOT of significant influence in each mode for which it has some responsibility.

In order to gain a better understanding of the character of these assignments, however, it is necessary to examine the state role in the financing of transportation. Then it will be apparent how the strength of the state role differs, if at all, in states with DOT's compared with non-DOT states. *Table III-18* lists the states in order of their financial involvement in highways, aviation, and water transportation,¹⁵ with a weighting scheme applied to reveal the degree of influence each state has in each mode. The table shows both direct expenditures and intergovernmental aid influence, as well as each state's percentage of urbanization.

As the table indicates, there is a very wide variation among the states in terms of their financial involvement in transportation. All states are strong or predominant in highways (in either direct expenditure or intergovernmental aid). In airports, eight states are strong or predominant, 33 are weak or moderate, and nine have no involvement. Not surprisingly, the mode on which the states differ most is water transport, reflecting the fact that this mode is not important in all states. The split is 16 strong or predominant, seven weak or moderate, and 27 having no involvement.

With respect to differences between states with and without DOT's, the DOT states are usually involved in more transportation modes. The average number of modes for a non-DOT state is just over two (2.07). Put another way, states without DOT's are involved in highways in all cases, in aviation about three-fourths (74.1 percent) of the time, and in water transport only about one-third (33.3 percent) of the time. The DOT states, on the other hand, are involved on the average in roughly two-and-a-half (2.56) modes, with all states participating in highways, nine-tenths (91.3 percent) in aviation, and almost two-thirds (65.2 percent) in water transport.

When the strength of state involvement is considered, the difference between DOT and non-DOT states is still significant, though not quite as great as above. The average weighted number of modes in which DOT states engage is 9.48, compared to 8.07 for the non-DOT states. This narrowing of the differential indicates that while non-DOT states participate in fewer modes, they are somewhat more likely to be dominant in those modes. One can also divide the states into strong, moderate, and weak categories, the basis of the ranking in *Table III-18*.¹⁶ According to this scheme, over 40 (43.5) percent of the DOT states would be classified as strong, compared to slightly over 25 (25.9) percent of

Table III-18

STATE INVOLVEMENT IN TRANSPORTATION: 1970¹

State	Per- cent Urban	Intergov- ernmental Aid Influence ²	Num- ber Modes	Weighted ³ Number Modes	Direct State Expenditure ²	Num- ber Modes	Weighted ³ Number Modes	Total Num- ber Modes	Total Weighted ³ Number Modes
*Maryland	76.6	H(P),A(M)	2	6	H(S),A(P),WT(P)	3	11	3	17
*Connecticut	77.4	H(M),A(P)	2	6	H(S),A(S),WT(P)	3	10	3	16
*Massachusetts	84.6	H(W),A(M)	2	3	H(S),A(P),WT(P)	3	11	3	14
Virginia	63.1	H(M),A(M),WT(P)	3	8	H(P),A(W),WT(W)	3	6	3	14
South Carolina	47.6	H(S)	1	3	H(P),A(M),WT(P)	3	10	3	13
Wyoming	60.5	H(P),A(P)	2	8	H(P),A(W)	2	5	2	13
*Illinois	83.0	H(S),A(W)	2	4	H(S),A(W),WT(P)	3	8	3	12
Indiana	64.9	H(P),A(W)	2	5	H(S),WT(P)	2	7	3	12
*Michigan	73.8	H(S),A(W)	2	4	H(M),A(M),WT(P)	3	8	3	12
Alabama	58.4	H(S)	1	3	H(S),A(W),WT(P)	3	8	3	11
*Hawaii	83.1		0		H(S),A(P),WT(P)	3	11	3	11
*North Carolina	54.0	H(M),A(W)	2	3	H(P),WT(P)	2	8	3	11
*Rhode Island	87.1	H(W)	1	1	H(S),A(P),WT(S)	3	10	3	11
Alaska	48.8		0		H(P),A(P),WT(M)	3	10	3	10
*Georgia	60.3	H(M),A(W)	2	3	H(S),WT(P)	2	7	3	10
Louisiana	66.1	H(M),WT(W)	2	3	H(S),WT(P)	2	7	2	10
*Pennsylvania	71.5	H(M),A(W),WT(W)	3	4	H(P),A(W),WT(W)	3	6	3	10
Mississippi	44.5	H(M)	1	2	H(S),WT(P)	2	7	2	9
New Hampshire	56.4	H(W)	1	1	H(S),A(W),WT(P)	3	8	3	9
*New York	85.6	H(M),A(W),WT(W)	3	4	H(S),A(W),WT(W)	3	5	3	9
Utah	80.4	H(M),A(M)	2	4	H(P),A(W)	2	5	2	9
*Kentucky	52.3	H(W),A(M)	2	3	H(P),A(W)	2	5	2	8
*Maine	50.8	H(W),A(M)	2	3	H(S),A(W),WT(W)	3	5	3	8
Minnesota	66.4	H(M),A(W),WT(W)	3	4	H(M),A(W),WT(W)	3	4	3	8
*New Jersey	88.9	H(W),A(M)	2	3	H(S),WT(M)	2	5	3	8
New Mexico	69.8	H(S),A(W)	2	4	H(P)	1	4	2	8
*Ohio	75.3	H(S),A(W)	2	4	H(S),WT(W)	2	4	3	8
Oklahoma	68.0	H(P),A(W)	2	5	H(S)	1	3	2	8
*Oregon	67.1	H(S),A(W)	2	4	H(S),A(W)	2	4	2	8
*Tennessee	58.8	H(S),A(W)	2	4	H(S),A(W)	2	4	2	8
Vermont	32.2	H(M)	1	2	H(S),A(S)	2	6	2	8
*Arizona	79.9	H(S)	1	3	H(S),A(W)	2	4	2	7
Arkansas	50.0	H(S),A(W)	2	4	H(S)	1	3	2	7
*California	90.9	H(M),A(W)	2	3	H(S),A(W)	2	4	2	7
Nebraska	61.5	H(M),A(W)	2	3	H(S),A(W)	2	4	2	7

Table III-18 (Cont.)

	Per- cent Urban	Intergov- ernmental Aid Influence ²	Num- ber Modes	Weighted ³ Number Modes	Direct State Expenditure ²	Num- ber Modes	Weighted ³ Number Modes	Total Weighted ³ Number Modes	
*South Dakota	44.6	H(W),A(M)	2	3	H(S),A(W)	2	4	2	7
Washington	72.6	H(S),A(W)	2	4	H(S)	1	3	2	7
*Florida	80.5	H(W)	1	1	H(S),WT(M)	2	5	2	6
Missouri	70.1	H(M)	1	2	H(S),A(W)	2	4	2	6
Montana	53.4	A(W)	1	1	H(P),A(W)	2	5	2	6
Nevada	80.9	H(S)	1	3	H(S)	1	3	1	6
North Dakota	44.3	H(M)	1	2	H(S),A(W)	2	4	2	6
Texas	79.9	H(W),A(W)	2	2	H(S),A(W)	2	4	2	6
*Wisconsin	65.9	H(M)	1	2	H(M),A(M)	2	4	2	6
Colorado	78.5	H(M)	1	2	H(S)	1	3	1	5
Idaho	54.1	H(M)	1	2	H(S)	1	3	1	5
Iowa	57.2	H(M)	1	2	H(S)	1	3	1	5
Kansas	66.1	H(M)	1	2	H(S)	1	3	1	5
West Virginia	39.0	A(W)	1	1	H(P)	1	4	2	5
*Delaware	72.2	H(W)	1	1	H(S)	1	3	1	4

*Indicates state with DOT.

¹It should be noted that for the DOT states, this table reflects any transportation expenditures made by state agencies other than the DOT, as well as those made by the DOT.

²Transportation modes are abbreviated as follows: H=Highways, A=Airports, WT=Water Transport. Strength of state involvement is also indicated in parentheses as follows: W=Weak (0-20% of expenditures—of state and local expenditures in the case of direct expenditure; and state

aid as a percentage of direct local expenditure in the case of intergovernmental aid); M=Moderate (21-55%); S=Strong (56-79%); P=Predominant (80-100%).

³Weighting is as follows: Weak=1 point; Moderate=2; Strong=3; Predominant=4.

SOURCE: Unpublished Census data from the 1970 Census of Governments; urbanization rates taken from the *Statistical Abstract of the U.S.*, 1973.

Table III-19

**STATE LEGISLATIVE BASE FOR FINANCIAL INVOLVEMENT IN
MASS TRANSIT (MT): 1973**

State	Legislative Base For MT Assistance?	Operating Subsidies Permitted?	Assistance For Improve- ments And/Or Debt Financing?	Allows State Or Local Con- tract With Private Sector?	Permits Direct Operation?	Permits Use Of Gas Tax Funds For MT?
Alabama	No	No	No	NA	No	No
Alaska	No	No	No	NA	No	No
*Arizona	No	No	No	NA	No	No
Arkansas	No	No	No	NA	No	No
*California	No	No	No	NA	No	No
Colorado	Yes	NA	NA	NA	NA	NA
*Connecticut	Yes	Yes	Yes	Yes	NA	Yes
*Delaware	Yes	Yes	NA	Yes	Yes	Yes ¹
*Florida	Yes	Yes	NA ²	Yes	NA	Yes
*Georgia	Yes	Yes	Yes	NA	NA	No
*Hawaii	Yes	NA	NA	NA	NA	Yes
Idaho	No	No	No	NA	No	No
*Illinois	Yes	Yes	Yes	NA	NA	Yes
Indiana	Yes	NA	NA	NA	NA	Yes
Iowa	No	No	No	NA	No	No
Kansas	No	No	No	NA	No	No
*Kentucky	No	No	No	No	No	No
Louisiana	No	No	No	NA	No	No
*Maine	No	No	No	NA	No	No
*Maryland	Yes	Yes	Yes	NA	Yes	Yes
*Massachusetts	Yes	Yes	Yes	NA	NA	No
*Michigan	Yes	Yes	Yes	NA	NA	Yes
Minnesota	No	No	No	NA	No	No
Mississippi	No	No	No	NA	No	No
Missouri	No	No	No	NA	No	No
Montana	No	No	No	NA	No	No
Nebraska	No	No	No	NA	No	No
Nevada	No	No	No	NA	No	No
New Hampshire	Yes	NA	NA	NA	NA	NA
*New Jersey	Yes	Yes	Yes	Yes	NA	Yes
New Mexico	No	No	No	NA	No	No
*New York	Yes	Yes	Yes	Yes	NA	Yes ¹
*North Carolina	No	No	No	NA	No	No
North Dakota	No	No	No	NA	No	No
*Ohio	No	No	No	NA	No	No
Oklahoma	No	No	No	NA	No	No
*Oregon	No	No	No	NA	No	No
*Pennsylvania	Yes	Yes	Yes	Yes	NA	No
*Rhode Island	Yes	Yes	NA	No	Yes	NA
South Carolina	No	No	No	NA	No	No
*South Dakota	No	No	No	NA	No	No
*Tennessee	No	No	No	NA	No	No
Texas	No	No	No	NA	No	No
Utah	Yes	NA	NA	NA	NA	NA
Vermont	Yes	NA	NA	NA	NA	NA

Table III-19 (Cont.)

State	Legislative Base For MT Assistance?	Operating Subsidies Permitted?	Assistance For Improvements And/Or Debt Financing? Sector?	Allows State Or Local Contract With Private	Permits Direct Operation?	Permits Use Of Gas Tax Funds For MT?
Virginia	Yes	NA	NA	NA	NA	Yes
Washington	No	No	No	NA	No	No
West Virginia	No	No	No	NA	No	No
*Wisconsin	No	No	No	NA	No	No
Wyoming	No	No	No	NA	No	No

NA=Not Applicable.

*State with DOT.

¹In Delaware and New York, motor fuel tax revenues go into the general fund.

²Officials of the Florida DOT indicated this entry should be "yes."

SOURCE: The Highway Users Federation, "Public Financial Support for Transit: A Compilation of State Laws," Appendix to Technical Study Memorandum No. 7 (1974).

the non-DOT states, while the weak category would contain 26 percent of the DOT states and 48 percent of the non-DOT states.

Thus the DOT's are clearly found in states with a greater than average number of transportation modes in which the state is involved. A somewhat surprising finding is that while there is a strong positive correlation between urbanization and the existence of a DOT, there is no such strong correlation between urbanization and the state ranking of financial contribution shown in *Table III-18*. In order to understand this lack of correlation, it is necessary to look at a mode not shown in *Table III-18*, mass transit.

Table III-18 shows the role of the states in transportation as it was in 1970, when not one state had significant financial involvement in mass transit.¹⁷ Within three years, however, as *Table III-19* illustrates, 19 states had legislation permitting the state to provide financial assistance to mass transit. This development has, quite naturally, occurred primarily in the urbanized states, although the lightly urbanized states of Vermont and New Hampshire also now participate in mass transit financing. Of the 19 states financially involved in mass transit, 14 are above the state median in urbanization. Significantly, 14 of these 19 states also have DOT's; over 60 (60.8) percent of the DOT states have a financial role in mass transit, whereas only about 19 (18.5) percent of the non-DOT states have such a role. These facts, together with the patterns of state involvement outlined in *Table III-19*, suggest that the "DOT or no DOT"

question at the state level is really a question of whether assistance to mass transit is to be provided. Despite the frequency with which multimodalism is used as the argument for state DOT's, the heart of that argument for urban areas is concerned with mass transit. While there are differences between the DOT and non-DOT states in aviation, and more in water transport, the fundamental issue at the state level is whether or not to become involved in financing mass transit.

In summary, a composite ranking can be developed for the state DOT's, taking into account the five measures of DOT adequacy employed above. This composite ranking is shown in *Table III-20*. The top five DOT's (Connecticut, New York, Illinois, Maryland, and Michigan) are all strong, and have been given powers and jurisdictions which are generally adequate to accomplish their purposes. The next seven states (Hawaii, Massachusetts, Pennsylvania, New Jersey, Rhode Island, Florida, and Georgia) have moderately strong DOT's, though each has a significant weakness in at least one area. It is problematic whether these DOT's will prove adequate to develop intergrated transportation systems for their states. A third group of six states (Arizona, Maine, Tennessee, Ohio, California, and North Carolina) have DOT's which are moderately weak, with serious weaknesses in at least one area and only one area of real strength (most often the director's power). They appear to be moderately strong organizations created in states which lack a corresponding strong state role in transportation. The last group of five states (Delaware, Kentucky,

Oregon, South Dakota, and Wisconsin) is one characterized by weak DOT's, with several areas of serious difficulties and no counterbalancing areas of real strength. It is highly doubtful whether the existing state DOT's in these last two groups will be able to accomplish their objectives. They are generally in states which simply do not have strong financial involvement in

transportation. Hence their ability to go beyond highways — and perhaps aviation — to develop a comprehensive, multimodal transportation system seems severely constrained.

The Impact of State DOT's

Very few evaluations of the DOT movement have

Table III-20

COMPOSITE RANKING OF STATE DOT'S: 1973

State	Structure ¹ (1,2, Or 3)	Director's Power ² (0,1,2,3,4, Or 5)	DOT Scope ³ (1,2,3, Or 4)	State Financial Involvement In Highway, Aviation, And Water Transport ⁴ (1,2,3,4,5, Or 6)	State Financial Involvement In Mass Transit ⁵ (0 Or 3)	Composite Score
Connecticut	2	5	4	6	3	20
New York	3	5	4	4	3	19
Illinois	3	4	3	5	3	18
Maryland	1	4	3	6	3	17
Michigan	2	3	3	5	3	16
Hawaii	1	3	3	5	3	15
Massachusetts	2	1	3	6	3	15
Pennsylvania	2	2	4	4	3	15
New Jersey	2	2	4	3	3	14
Rhode Island	2	0	4	5	3	14
Florida	2	5	2	1	3	13
Georgia	1	3	2	4	3	13
Arizona	2	2	3	2	3	12
Maine	2	4	3	3	0	12
Tennessee	2	4	3	3	0	12
Ohio	3	4	1	3	0	11
California	2	4	2	2	0	10
North Carolina	1	1	3	5	0	10
Delaware	2	1	2	1	3	9
Kentucky	1	4	1	3	0	9
Oregon	1	1	3	3	0	8
South Dakota	2	1	1	2	0	6
Wisconsin	2	1	2	1	0	6

¹Based on Table III-15, this measures degrees of modal integration where 1 = modal organization, 2 = mixed structure, and 3 = functional form.

²Based on Table III-16, this column takes the cumulative weighted scores of the DOT directors' combined planning, policy, and budget power weighted scores, and subtracts 4 from those scores to keep the measures in balance.

³This relates to the scope of the DOT's responsibilities, using the four groups of states in Table III-17. Group 1 — 1 point, Group 2 — 2 points, Group 3 — 3 points, Group 4 — 4 points.

⁴Based on Table III-18, this composite ranking is a measure of the strength of state involvement in transportation with the exception of mass transit. The score used is 1 point for the lowest 3, 2 for the next 3, 3 for the next 6, 4 for the next 3, 5 for the next 5, and 6 for the highest 3.

⁵Based on Table III-19, states involved in mass transit financing are assigned 3 points; those not involved get 0.

SOURCE: See Tables III-15 through III-19.

been performed to date, undoubtedly because of the short history of this movement. This is true despite the fact that this movement is perhaps the most important transportation occurrence at the state level since the creation of state highway trust funds. The scarcity of evaluative information regarding state DOT's is even more serious, because none of the existing studies has reached conclusions concerning the actual impact of the DOT's on the planning, financing, or delivery of transportation and transportation related services. Instead they have concentrated on the potential or probable impact of the DOT's, as reflected in the attitudes of Federal and state (mostly DOT) officials involved in transportation, and as measured by the DOT's structure, and scope, and the director's planning, policy making, and budgeting powers.¹⁸ Even so, the conclusions which have emerged have not been entirely sanguine. Richard G. RuBino writes:

In summarizing. . . it appears that most state DOT's are still a long way from providing an integrated and balanced transportation system for state government, although it cannot be denied that progress is being made. Yet, impediments such as severely restricted use of dedicated funds, the growing tendency to create modally oriented trust funds, and reluctance to provide authority along with responsibility might well strangle the entire movement.¹⁹

The above comment was made in 1971. Review of the post-1971 DOT's suggests that the comment is still appropriate. While state DOT's continue to proliferate (indeed the pace seems to be accelerating, with at least ten more states considering forming a DOT),²⁰ the newer DOT's possess the same assortment of organizational and jurisdictional problems that marked early DOT's. While DOT's in Connecticut, Delaware, Florida, Hawaii, Illinois, Maryland, Massachusetts, New Jersey, and New York have made important progress toward loosening the restrictions placed on dedicated revenues used to finance transportation, in most cases the legal base on which a DOT is founded fails to match the strong multimodal, balanced transportation system language which led to its creation. As a result it appears likely that most state DOT's will have difficulty shifting the balance of transportation funding and development toward a multimodal transportation network.

The policy impact of the state DOT's is still difficult to determine. Consider the following examples. On one hand, officials of the U.S. Department of Transportation have observed that the DOT states provided an input to

the National Transportation Needs Study of definitely higher quality than did states with traditional forms of organization for transportation.²¹ On the other hand, a similar effect is not apparent in the Unified Work Programs for transportation, which the states must submit to the Federal DOT for approval. Here the only difference between the Federal reaction (approval or disapproval) to the proposals from DOT and non-DOT states is that the states with DOT's appear to be getting their response faster. (DOT states had about 10 percent of their proposals still pending, compared with 25 percent for the non-DOT states.) But when final decisions are considered, the results are nearly identical for DOT and non-DOT states, with the former having 72 percent of their programs accepted and the latter 69 percent.²²

The foregoing is not to deny that DOT's can improve some aspects of state transportation activity. They certainly serve to make the development of integrated transportation systems a principle which has been institutionalized within state governments, and on the whole it appears that they are resulting in improved intermodal transportation planning. It is also clear that at least two states, Florida in 1969 and California in 1973, have acted to remedy the most serious weaknesses of their DOT's through reorganizations which broadened the scope of the California agency and strengthened the director in Florida.²³ Further, Maryland has shown that where a flexible financing system exists which can support the DOT's multimodal planning, a shifting of resources among modes (in this case to mass transit, which is run by the state for the City of Baltimore — the only case of direct state operation of mass transit) is a feasible outcome of this movement.²⁴ Lastly, it appears that the DOT states were able (and willing) to move into mass transit financing more rapidly than were non-DOT states, a significant accomplishment. Thus, whether the state DOT phenomenon will prove in the end to be a real improvement will depend on the willingness of the states to grant their DOT's the powers they need to achieve the purposes for which they were established.

Patterns in the Non-DOT States

Earlier this section discussed the financial involvement in the four major transportation modes of states which have not formed DOT's. The typical non-DOT state was found to be heavily involved in highways, and significantly involved in one other mode, most often aviation. Water transportation responsibilities and mass transit were only very rarely a responsibility of the states without DOT's. In order to provide perspective to the

previous discussion of the structures of the state DOT's, a brief description of traditional state organization for transportation in states without DOT's is in order.

Even more so than in the DOT states, the transportation activities of other states are dominated by highways. The highway department is normally an independent agency, and typically includes over 90 percent of the state's transportation funds and personnel.²⁵ In addition to independent highway departments, a non-DOT state typically has other independent departments or commissions concerned with another transportation mode, usually aviation, although these are usually very small in terms of funds and staff (often fewer than 20 persons). A motor vehicle department usually exists as an independent agency, constituting the second largest transportation related agency in the state. A traffic safety responsibility often is present also, commonly within the highway department, the department of motor vehicles, or a department of public safety. A number of other agencies or commissions may also operate as independent bodies, or as special authorities beyond the governor's control (very common in water transport).

Since all these agencies report separately to the governor or to other state officials, yet are involved in highly interdependent activities, some method of coordinating the disparate transportation related units is necessary. The devices employed for this purpose vary, with common approaches being formal transportation coordinating committees or councils, the exercise of leadership by the state planning office, or the use of *ad hoc* transportation task forces or study groups dealing with special problems. Of the three, the last seems to be the most common, with the assignment of a coordinating responsibility to the state planning office the least popular approach.²⁶ Judging by the frequency with which states entertain serious consideration of a DOT, however, these approaches appear to be less than uniformly satisfactory. Obviously, as the number of modes and activities to be coordinated increases, the strain on these less effective coordinating mechanisms increases. After a certain critical point is reached, the search for adequate solutions leads to consideration of basic institutional change, generally some version of a state DOT.

LOCAL GOVERNMENTAL TRANSPORTATION DUTIES

Introduction

Despite substantial Federal, state, and special district involvement in the urban transportation function,

general purpose local governments still exercise considerable responsibility for the service. While popular opinion favors the provision of several types of metropolitan transportation services at an areawide rather than local level, counties and municipalities still are regarded as significant providers of the remaining facets of the urban transportation function. What follows is a brief outline of (1) public attitudes about the governmental assignment of urban transportation duties; (2) a brief description of the transportation responsibilities of counties and municipalities, and the problems they both encounter in assuming a more significant role in the function; and (3) an analysis of the patterns of metropolitan interlocal cooperation in urban transportation.

The Allocation of Transportation Services Among Local Governments

Most studies on the subject indicate substantial regional or areawide dimensions to the urban transportation function. The Commission in its 1963 report, *Performance of Urban Functions: Local and Areawide*, stressed the areawide dimensions of the service.²⁷ One review of 15 major proposed or enacted metropolitan governmental reorganizations found that transportation was invariably regarded as an areawide or shared public service (see *Figure III-5*).²⁸ This Commission's more recent survey of over 2,000 municipal governments found that several transportation functions were felt to be best provided at either the county or a regional special district level.²⁹ One recent Harris survey on confidence in American government noted that many citizens regard the state as having a significant role to play in the highway, traffic control, and accident prevention functions.³⁰

As these surveys indicate, considerable professional and public opinion favors having several facets of the urban transportation function provided at an areawide or regional level. Other facets, such as local road construction and maintenance and street cleaning, however, are still regarded as local functions. Since general purpose governments are not of a regional scope, there may be considerable pressure to assign the larger elements of the transportation function to a regional special district or to the state government, perhaps acting through a subordinate substate district. Consequently, local governmental reorganization or increased interlocal cooperation may be necessary if general purpose counties and municipalities are to continue to play major roles in urban transportation.

Figure III-5

FUNCTIONS AS ALLOCATED IN MAJOR REORGANIZATIONS

	Wel- fare	Water And Sewer	Trans- porta- tion	Police	Hos- pitals	Hous- ing Rehabil- itation	Fire	Recrea- tion	Sani- tation	Health	Library	Air Pollu- tion	Plan- ning
Jacksonville	A	S	A	S		A	S	A		A	A		
Indianapolis	A	A	A	S	A	A	S	A	A	A	A	A	A
Sacramento*	A	A	A							A			
Atlanta*	A	R	A	S	A	A	A	R	S	A	A	A	A
Charlotte*		A						A	A		A		
Toronto	S	S	S	A	A	R	L	S	S	L	L	A	S
Ontario*	R	S	S	L	A		L	S	S	R	S	R	A
Miami	A	S	A	S	A	A	L	A	S	A		A	S
Cleveland*	A	S	S	S	A		S	L	S	A	A		S
Seattle		A											
Portland		A	A										
Twin Cities		S	S					S					S
St. Louis*		A	A	L	L		L		L	L			A
Denver*													R
England	L	S	A	A	S	S	A	S	S	L	L	S	A

*Proposed rather than implemented reform.

KEY: A = Metropolitan Areawide; L = Local; S = Shared; R = Regional (Ex-
tending beyond the metropolitan area).

SOURCE: Thomas P. Murphy and Patricia S. Florestano, *The Allocation of Local and Areawide Functions in Metropolitan Areas* (Washington, D.C.: National Academy for Public Administration, 1973) p. 3.

Table III-21

COUNTY PERFORMANCE OF TRANSPORTATION FUNCTIONS: 1971

Type Of County	Percent Performing Transportation Function				
	Roads	Airports	Parking	Ports-Harbors	Mass Transit
All (1,026)	76	32	9	4	1
SMSA (150)	78	24	11	9	5
Non-SMSA (876)	76	34	9	3	1
Single County (60)	78	27	10	12	2
Unicounty (59)	58	17	N.C.	N.C.	0
Central (76)	72	17	N.C.	N.C.	3
Suburban (31)	61	35	N.C.	N.C.	0
Home Rule (28)	79	36	N.C.	N.C.	14

N.C. = Not Computed.

SOURCE: ACIR, *Profile of County Government* (Washington, D.C.: U.S. Government Printing Office, 1972), Table 23; ACIR, *Governmental Functions and Processes: Local and Areawide* (Washington, D.C.: U.S. Government Printing Office, 1974), Table III-19.

Figure III-6

CITY-COUNTY LEGAL AUTHORIZATIONS FOR THE TRANSPORTATION FUNCTION, NORTH CAROLINA: 1971

Transportation Services Assigned to:

County And City	County Only	City Only
Airports	Public Landings On	Bus And Mass Transit Systems
Ports Authority	Rivers	Parking
Roads And Bridges	Petition State Highway	Street Construction**
Harbor Master	Commission For Better Road Maintenance	Street Planning**
	Road Naming*	Aircraft Overflight Regulation
	Road Closing*	On-Street Parking Regulation
	Ferries-Toll Bridges	Taxi Regulation
		Traffic Regulation***
		Wharf Regulation

*Does not apply within cities or to state highways.

**Does not apply to state roads.

***Subject to State Highway Commission approval.

SOURCE: Warren J. Wicker and C. Terrence Armstrong, *Services, Functions, and Regulatory Powers of Cities and Counties in North Carolina* (Chapel Hill, North Carolina: Institute of Government, 1971).

County Transportation Responsibilities

Until fairly recently, county transportation responsibilities were largely confined to highways, a traditionally state delegated role for counties. Other non-highway functions were often performed by special districts, municipalities, or private parties. Yet, counties have begun to play a more prominent role in the transportation function. Nearly one-third of all counties surveyed in a 1971 ACIR-ICMA-NACO study provided

airport services.³¹ A smaller number were involved in parking, water transport, and mass transit services, with home rule and suburban counties being more apt to provide such non-highway functions (see *Table III-21*).

Counties increasingly are providing their services on a countywide basis. A 1962 survey noted that less than one-quarter of all counties over 100,000 population in 1960 rendered street construction services on a countywide basis.³² By 1971, well over three-quarters of more than 1,000 surveyed counties provided this service on an

Table III-22

AREA OF SERVICE FOR COUNTY DELIVERED TRANSPORTATION SERVICES: 1971

Class Of County	Function	Percent Of Counties Performing Function	Percent Of Counties Performing Function On Countywide Basis
All Counties (1,026)	—Roads	77%	85%
	—Airports	32	83
	—Parking	9	63
	—Ports	4	91
	—Mass Transit	1	69
Unicounty SMSA's (59)	—Roads	58	67
	—Airports	17	90
	—Mass Transit	0	N A
Central Metropolitan Counties (76)	—Roads	72	71
	—Airports	17	100
	—Mass Transit	3	100
Suburban Fringe Metropolitan (31)	—Roads	61	68
	—Airports	35	81
	—Mass Transit	0	N A
Home Rule Counties (28)	—Roads	79	59
	—Airports	36	100
	—Mass Transit	14	100

NA=Not Available.

SOURCE: ACIR, *Profile of County Government* (Washington, D.C.: U.S. Government Printing Office, 1973), Table 18; ACIR, *The Challenge of Local Government Modernization* (Washington, D.C.: U.S. Government Printing Office, 1974), Table IV-8.

areawide basis. Moreover, counties that deal with airport and mass transit services invariably provided them on a countywide basis (see *Table III-22*).

While counties have increased their transportation responsibilities, they clearly are not dominant transportation providers in many metropolitan areas (see *Table III-8*, for example). But, this often is due to the lack of modernization which results in:

- counties not having sufficient legal authority to perform non-highway services, particularly those of a proprietary or regulatory nature³³ (see *Figure III-6*);
- the continued presence of independently elected county officials responsible solely for the highway function;³⁴

- legal impediments that exist in several states that make it difficult for a transportation function to be transferred from municipal to county governments;³⁵ and

- the longstanding state denial of strong non-property taxing powers for counties which makes it less likely that counties will be able to assume expensive transportation functions.

In general, then, many counties are either unable or unwilling to play a larger role in the transportation function than they presently do. However, county modernization, of the type discussed in previous Commission reports, may be the type of structural reform that could provide the inducement for a larger county role in the urban transportation function.³⁶

Table III-23

DISTRIBUTION OF PUBLIC WORKS AND RELATED TRANSPORTATION FUNCTIONS IN PUBLIC WORKS AND NON-PUBLIC WORKS MUNICIPALITIES: 1970

Functions	Frequency Of Mentioning Function In Questionnaire Replies						Function In PWD (Of PWD Cities That List The Function)	
	957 Total Cities		187 Without PWD		770 With PWD		Num-ber	Per-cent
	Num-ber	Per-cent	Num-ber	Per-cent	Num-ber	Per-cent		
Snow Removal	596	62.3	57	30.5	539	70.0	528	98.0
Street Maintenance	833	87.0	77	41.2	756	98.2	735	97.2
Street Cleaning	828	86.5	77	41.2	751	97.5	724	96.4
Street Sign Maintenance	812	84.8	74	39.6	738	95.8	607	82.2
Street Sign Installation	815	85.2	75	40.1	740	96.1	607	82.0
Street Construction	799	83.5	75	40.1	724	94.0	570	78.7
Street Sign Manufacturing	712	74.4	68	36.4	644	83.6	418	64.9
Airport Maintenance	330	34.5	31	16.6	299	38.8	110	36.8
Street Lighting Installation	695	72.6	69	36.9	626	81.3	208	33.2
Street Lighting Maintenance	683	71.4	71	38.0	612	79.5	179	29.2
Airport Operation	316	33.0	33	17.6	283	36.8	58	20.5
Traffic Sign Maintenance	784	81.9	72	38.5	712	92.5	548	77.0
Traffic Sign Installation	794	83.0	74	39.6	720	93.5	547	76.0
Street Striping (Marking)	796	83.2	72	38.5	724	94.0	529	73.1
Parking Meter Installation	524	54.8	48	25.7	476	61.8	292	61.3
Traffic Engineering	730	76.3	67	35.8	663	86.1	397	59.9
Traffic Sign Manufacturing	683	71.4	68	36.4	615	79.9	360	58.5
Traffic Signal Maintenance	718	75.0	70	37.4	648	84.2	311	48.0
Traffic Signal Installation	714	74.6	68	36.4	646	83.9	289	44.7
Parking Meter Maintenance	511	53.4	48	25.7	463	60.1	200	43.2
Parking Meter Collection	480	50.2	48	25.7	432	56.1	116	26.9

SOURCE: American Public Works Association, *Local Public Works Organization* (Chicago: The Association, 1970), p. 39.

Municipal Transportation Responsibilities

Municipalities are often the most multifaceted transportation service providers in urban areas. They generally provide highway, airport, and parking services. Quite frequently, they deliver mass transit and water transport functions as well. Central cities especially are highly important transportation agents. Having traditionally established transportation duties, municipalities are frequently looked to by their citizens for improved transportation services.³⁷ Moreover, municipalities themselves view transportation problems as one of their main concerns.³⁸ Cities frequently stand ready to provide transportation responsibilities that previously had been provided in the private sector, notably mass transit and parking. Since municipal provision of these and other transportation duties is often essential to their continued economic development, they retain a continued interest in the overall operation of the metropolitan system.

At the same time, cities face difficulties in attempting to provide a balanced package of transportation duties. These arise partly because of the limitations that prevent municipalities themselves from providing expanded transportation services and partly because of service gaps that occur when overlapping governmental units perform transportation services hitherto or concurrently provided at the municipal level. A brief discussion of these developments indicates some of the problems that municipalities face in attempting to remain major metropolitan transportation providers.

Municipalities, like counties, have not always centralized their transportation responsibilities within one multimodal department.³⁹ Quite frequently, non-highway functions and traffic control activities are carried out by other municipal departments, mainly police, public utility, traffic control, aeronautics, and parking agencies. On the other hand, municipalities with strong public works departments often have managed to centralize municipal transportation duties under one roof (see *Table III-23*). Conceivably, transportation coordination in these cities is easier to accomplish than in areas where there is considerable institutional separation among municipal departments charged with various facets of the transportation task.

Another hurdle is the fact that municipalities often have a restricted geographic base from which to conduct large scale transportation operations. Most cities do have extraterritorial powers in the airports function and some have similar powers in building roads and maintaining traffic regulations.⁴⁰ Yet, the political problems of exercising such powers are considerable, particularly

when the use of such power involves the removal of taxable property from another municipality's or a county's tax rolls. The protracted political and legal conflicts that can arise from the use of extraterritorial powers may discourage cities from assuming transportation responsibilities for a larger area — even when it may be the most suitable jurisdiction for the exercise of these powers, given their tradition of providing them within city boundaries. In the face of such difficulties, a city may have no recourse but to transfer the function to a more encompassing unit of local government. In other cases, particularly in transportation regulation, it may make little sense to vest localities with regulatory powers that are best administered on a uniform, area-wide basis. Consequently, unless there is substantial uniformity among local regulations, a strong case can be made for transferring these responsibilities to higher levels of local government or to the state.⁴¹

Cities also lack efficient financial means from which to meet increased transportation needs. They are often constitutionally or statutorily prohibited from offering fiscal subsidies to shore up privately owned transportation operations.⁴² Yet, they often do not have the necessary fiscal resources to assume such operations.⁴³ Expanded external fiscal support for transportation ventures is sometimes the only policy that can prevent a transportation function from being transferred from a municipal government.

When municipalities find it difficult to continue to provide a wide range of urban transportation services, they often find that overlapping governments assume more significance in their transportation policies.

But, these overlying jurisdictions frequently have not contributed to improved urban transportation systems. Several studies have noted that states and counties do not always assume highway construction and operating responsibilities within municipalities even though state and county roads often are main thoroughfares within urban areas.⁴⁴ Similarly, municipalities in some states often do not share in state fuel tax revenues, though overlying local units receive such aid for local highway purposes. Often, counties and townships do not pass these fiscal allocations through to constituent municipalities either directly or in the form of service transfers. This is an especially sensitive issue in city-county relations in many areas (see *Table III-24*).

Special districts also pose problems for municipalities. They sometimes create additional tax burdens on municipal residents who may derive little or no benefit from their operations. Since the bond indentures or contract obligations of these instrumentalities may have provisions restricting the provision of competing services by

Table III-24

**INTERGOVERNMENTAL TRANSPORTATION PROBLEMS CITED IN SELECTED STATE
LEAGUE OF MUNICIPALITIES POLICY PLATFORMS: 1970-1974**

Level Of Government/ Transportation Issue	Con- necti- cut	Geor- gia	Idaho	Kan- sas	Mary- land	Mich- igan	Mis- souri	New York	Ore- gon	Penn- syl- vania	South Dakota	Vir- ginia	Wash- ington
<i>Federal Government*</i>													
Increased Non-Highway Aid		X							X				
Greater Federal-Local Aid		X											
More Urban Allocations													
From Highway Trust Fund		X		X		X			X				
More Categorical Programs			X			X							
Uniform Planning													
Requirements		X											
Changed Formula Allocations													
For Highway And Other													
Transportation Aids		X	X										
<i>State Government</i>													
Increased Non-Highway Aid*	X	X		X				X	X			X	X
More Municipal Allocations													
Of Fuel Tax		X							X	X	X		
Support Of State DOT						X	X					X	
Increased State Transportation													
Planning	X		X										
Consolidated Transportation													
Law		X				X			X				
State Maintenance Of Urban													
Arterials And State													
Highways				X		X		X		X			
<i>Local Government</i>													
Fairer City-County Fiscal Or													
Service Sharing On													
Highways				X		X	X	X		X			
State Or County Assumption													
Of Non-Highway Services								X			X	X	
Reduced Local Fiscal													
Restrictions On													
Transportation Financing			X	X		X					X		
Uniform Traffic Laws		X	X						X		X		
More City-County													
Transportation													
Cooperation			X							X	X		

*Includes support for diversion of highway trust funds.

SOURCE: Municipal League policy statements for the years 1970-1974 in the respective states shown.

other governmental units, municipalities may be prohibited from offering alternative, lower cost services.⁴⁵ Witness the fact that transportation special districts are frequently monopoly service providers within their respective metropolitan areas.

Additionally, few overlying governments appear willing to compensate municipalities for the fiscal burdens that they sometimes incur from operating and maintaining the central portions of metropolitan transportation systems. When municipalities do not achieve additional or sustained economic growth as a result of their central location, they may end up bearing more than their share of urban transportation costs. Such may be the case, for example, where cities bear a large share of the through traffic in a metropolitan area or where they are the employment center for tax exempt or governmental enterprises. In these cases, central cities might be compensated for transportation costs that are properly the costs of neighboring or overlying jurisdictions.⁴⁶

In sum, municipalities sometimes are faced with onerous transportation responsibilities that are frequently beyond their existing service capabilities. They often lack the economies of scale, legal authority, or

geographic reach to provide regional transportation services. Overlapping governments sometimes fail to provide high levels of transportation service within municipal borders or they prevent municipalities from competing for such service delivery opportunities. Occasionally municipal governments are not adequately compensated by overlapping governments for their "fair share" of urban transportation costs. All these problems make it difficult for municipalities to remain dominant transportation providers within their metropolitan areas. Still, municipalities, particularly central cities, have much to gain from improving the level and quality of metropolitan transportation services in order to serve their pressing social and economic needs. Perhaps this explains the fact that, with all these difficulties, municipalities continue to remain some of the most diversified metropolitan transportation providers.

Interlocal Cooperation.

Most local governments have considerable inter-governmental cooperation powers,⁴⁷ and most metropolitan local jurisdictions commonly engage in a variety of informal and formal service agreements. The 1972

Table III-25

INTERGOVERNMENTAL SERVICE AGREEMENTS IN THE TRANSPORTATION FUNCTION, BY TYPE OF TRANSPORTATION FUNCTION AND COOPERATING PARTY: 1972

Transportation Function	Total Number Agreements	Municipal Government	Number Of Service Agreements Made With:				Other
			County Government	COG/ Special District	State/ Federal Government	Private Party	
Transportation Management Services	58	12	2	24	2	18	0
Engineer Special Transportation Services	293	16	13	5	6	253	0
Traffic Control	100	12	7	30	2	49	0
Street Construction	111	42	18	2	44	5	0
Street Lighting	180	38	26	2	36	63	15
Total	392	41	5	29	8	309	0
Percent Distribution	1,134	161	71	92	98	697	15
	100.0	14.2	6.3	8.1	8.6	61.5	1.3

SOURCE: Unpublished data from the 1972 ACIR/ICMA survey on intergovernmental service agreements. A total of over 1,300 local governments responded to the survey.

Table III-26

SELECTED CHARACTERISTICS OF INTERLOCAL TRANSPORTATION EXPENDITURES, 37 LARGE SMSAs: 1970

Region/SMSA	Total Transportation Interlocal Expenditures (\$000)	Percent Of Total Metropolitan Transportation Expenditures	Type Of Transportation Expenditure	Percent Of Interlocal Expenditure Received By Central City(ies)
<i>Northeast</i>				
Washington, D.C.	0	NA	NA	N A
Baltimore	0	NA	NA	NA
Boston	1,515	1.8	Highway	0
Newark	0	NA	NA	N A
Paterson-Clifton	42	100.0	Water Transportation	17.0
Buffalo	0	NA	NA	N A
New York City	11,837	2.5	Air, Highways, Water Transportation	0
Rochester	1	0	Highways	0
Philadelphia	925	1.3	Highways	0
Pittsburgh	115	.2	Highways	0
Providence	0	NA	NA	N A
<i>Midwest</i>				
Chicago	173	.1	Highways	0
Indianapolis	0	NA	NA	N A
Detroit	730	.9	Highways	0
Minnesota-St. Paul	1,510	2.2	Highways	28.4
Kansas City	869	2.9	Highways	7.9
St. Louis	1,450	3.1	Highways	0
Cincinnati	3,505	10.4	Highways	9.0
Cleveland	91	.2	Highways	0
Columbus	0	NA	NA	N A
Dayton	0	NA	NA	N A
Milwaukee	54	.1	Highways	100.0*
<i>South</i>				
Miami	350	2.6	Highways	0
Tampa-St. Petersburg	509	2.9	Highways	100.0*
Atlanta	24	.3	Highways	0
Louisville	240	2.1	Highways, Airports	0
New Orleans	0	NA	NA	N A
Dallas	60	.2	Highways	25.0
Houston	100	.7	Water Transportation	0
San Antonio	0	NA	NA	N A
<i>West</i>				
Los Angeles	10,251	4.9	Highways	48.6
San Bernardino	0	NA	NA	NA
San Diego	0	NA	NA	NA
San Francisco	1,561	1.9	Highways	58.4
Denver	112	.5	Highways	0
Portland	124	.6	Highways	0
Seattle	2	.1	Water Transportation	0

*City interlocal revenues totaled more than SMSA interlocal expenditures, fiscal year problem may be involved.
N.A. = Not Applicable.

SOURCE: Unpublished 1970 Census data on the governmental finances of the 72 largest metropolitan areas.

Table III-27

**SELECTED CHARACTERISTICS OF INDEPENDENT SPECIAL
DISTRICTS WITH TRANSPORTATION RESPONSIBILITIES:
1957-1972**

Selected Characteristics	Type Of Transportation District						
	All Types	Highways	Airports	Water Transport	Mass Transit	Other Related	General Improvement
Number In 1957	1,655	653	29	119	7	510	337
Number In 1972	3,981	534	223	173	41	561	2,449
Percent Increase 57-72	141%	-18%	669%	45%	486%	14%	567%
Number of States Authorizing Districts							
1957	37	18	8	13	4	12	12
1972	42	20	24	19	20	9	23
Number of States Having Districts							
1957	34	15	8	11	3	11	12
1972	41	17	22	15	12	8	19
Percent Of Districts In The Two States With The Highest Number Of Districts And Names Of States	53%	91%	50%	57%	61%	76%	77%
	Pa./ Mo.	Mo./ Ida.	Neb./ N.D.	Wash./ Tex.	Cal./ Ill.	Tex./ S.C.	Pa./ Conn.
Average Number Of Districts In Remaining States Having Districts	48	3	6	6	2	22	34

SOURCES: U.S. Bureau of the Census, *Governmental Organization*, Vol. 1, No. 3, 1957 Census of Governments (Washington, D.C.: U.S. Government Printing Office, 1958), pp. 7-84; U.S. Bureau of the Census, *Governmental Organization Vol. 1 of the 1972 Census of Governments* (Washington, D.C.: U.S. Government Printing Office, 1973), pp. 309-472.

ACIR-ICMA survey on municipal service agreements, for example, found that the average municipality was engaged in a total of about 8.6 service agreements with other municipalities or overlapping units of county, special district, or state government units.⁴⁸

Service agreements in the transportation functions also are not uncommon. Data from the 1972 ACIR-ICMA survey indicate service agreements for a number of transportation functions were relatively frequent (see *Table III-25*). The bulk of these agreements were in street lighting, street construction, and engineering and most were made with private contractors—a fairly common practice for smaller municipalities that lack large numbers of public works

personnel.⁴⁹ Relatively few agreements were made with overlying counties even though city-county cooperation in non-transportation functions is fairly extensive.⁵⁰ The private sector service agreement, then, is most common for municipalities wishing to service their transportation needs from external sources.

The lack of major intermunicipal and city-county transportation cooperation is reflected in the rather minimal amounts of interlocal transportation expenditures in many metropolitan areas. Data from *Table III-26* indicate that 1970 interlocal transportation expenditures in 37 of the nation's largest metropolitan areas were largely concentrated in the highway function and generally accounted for not much more than 2 to 3

percent of overall respective metropolitan transportation outlays. In all but four or five cases, moreover, central cities played a minor role in the interlocal cooperation process. Evidently, most interlocal transportation cooperation involved metropolitan counties, or suburban municipalities, or both. Thus, the interlocal cooperation process has done relatively little to shift transportation servicing assignments in most metropolitan areas.

**SPECIAL PURPOSE
TRANSPORTATION UNITS:
THEIR ROLE IN METROPOLITAN
TRANSPORTATION SYSTEMS**

**Transportation Special Districts:
Their Numbers and Location**

Special purpose units of government play a significant role in the provision of transportation services throughout much of the United States — as shown by *Table III-27*. Nearly 4,000 independent special districts are authorized to provide single or multimodal transportation services with little or no restraints exercised by other affected governments. Data from the 1957 and

1972 *Censuses of Governments* indicate that these independent units increased by over 141 percent in that 15 year period. Multifunctional service districts increased by 567 percent, airport districts by 669 percent, water transport districts by 45 percent, mass transit districts by 486 percent, and other transportation related districts by 10 percent. Highway districts, on the other hand, decreased by 18 percent. Transportation districts are most heavily concentrated in California, Connecticut, Missouri, Nebraska, Oregon, Pennsylvania, Texas, and Washington (see *Table III-27*). But Florida, Georgia, Minnesota, New Jersey, New York, Ohio, and Virginia have a sizeable number.

Special purpose transportation agencies subordinate to state and local governments also are important service providers in a number of states. While it is not possible to enumerate all such state or locally subordinate units in the country or its urban areas, the number of states authorizing the creation of these units has increased between 1957 and 1972, particularly for airports and mass transit (see *Table III-28*). State subordinate agencies, particularly in the highway field, also have increased functional responsibilities that affect many of the country's larger metropolitan transportation systems.

The integration or coordination of the policies of

Table III-28

**STATE AUTHORIZATIONS FOR FORMATION OF LOCALLY
SUBORDINATE TRANSPORTATION DISTRICTS: 1957-1972**

Type Of Subordinate Transportation District	Local Governmental Units Authorized To Form Subordinate Transportation Districts									
	Counties Or Municipalities		All Counties		Selected Counties		All Municipalities		Selected Municipalities	
	1957	1972	1957	1972	1957	1972	1957	1972	1957	1972
Highways	32	29	22	21	4	3	12	9	0	0
Airports	10	18	4	6	3	5	3	7	3	7
Water Transport	16	15	4	7	5	3	2	8	9	5
Mass Transit	5	15	0	6	0	1	3	12	2	1
Parking	15	22	2	4	0	2	12	17	3	3
Street Lighting	5	7	2	4	0	2	4	2	0	0
Bridges And Tunnels	14	14	7	6	2	4	6	5	4	4
General Improvement	16	25	4	11	2	3	12	18	2	1

SOURCE: U.S. Bureau of the Census, *Governmental Organization*, Vol. 1, No. 3, 1957 *Census of Governments* (Washington, D.C.: U.S. Government Printing Office, 1958), pp. 7-84; U.S. Bureau of the Census, *Governmental Organization*, Vol. 1, 1972 *Census of Governments* (Washington, D.C.: U.S. Government Printing Office, 1973), pp. 309-472.

Table III-29

**INDEPENDENT AND DEPENDENT SPECIAL PURPOSE GOVERNMENTS BY
TRANSPORTATION FUNCTION IN TEN LARGEST SMSAS: 1973**

Section 134 Area	Total	Independent Special Districts						Dependent Special Districts						Total Number Of Special Districts					
		H	A	WT	T	P	MF	H	A	WT	T	P	MF	H	A	WT	T	P	MF
New York City	44	18	1	2	1	4	1	5	1	0	4	5	2	23	2	2	5	9	3
Los Angeles-Long Beach	19	0	2	2	3	7	1	2	2	0	0	0	0	2	4	2	3	7	1
Chicago	15	7	1	1	3	0	1	0	0	1	0	1	0	7	1	2	3	1	1
Philadelphia	16	3	0	1	2	2	1	3	1	0	1	1	1	6	1	1	3	3	2
Detroit	9	0	0	0	3	3	0	0	1	1	0	0	1	0	1	1	3	3	1
San Francisco	17	2	2	2	6	1	0	1	1	1	1	0	0	3	3	3	7	1	0
Washington, D.C.	4	3	0	0	1	0	0	0	0	0	0	0	0	3	0	0	1	0	0
Boston	12	0	1	0	4	0	0	3	1	1	0	1	1	3	2	1	4	1	1
Pittsburgh	15	2	1	1	1	4	1	4	1	0	0	0	0	6	2	1	1	4	1
St. Louis	16	14	0	0	1	0	1	0	0	0	0	0	0	14	0	0	1	0	1
TOTAL	167	49	8	9	25	21	6	18	8	4	6	8	5	67	16	13	31	29	11

Legend: H=Highways; A=Airports; WT=Water Transport; T=Transit; P= Parking; MF=Multiple Function. SOURCE: ACIR tabulation (see Table III-1).

independent and dependent special purpose agencies, as well as those of general purpose state and local governments, must be considered in fashioning a unified metropolitan transportation policy. Such coordination can involve a considerable number of separate transportation agencies in metropolitan areas. Looking, for example, at the ten largest metropolitan areas of the country, one finds an average of nearly 17 special purpose agencies involved in the transportation function. Dependent districts are not uncommon in the airports and water transport function, while independent special districts are important in the mass transit function (see *Table III-29*). Independent and dependent special districts clearly are important institutional actors in the fashioning of metropolitan transportation policy. They act as dominant service providers in a variety of functions and their policies affect the character and operation of metropolitan transportation systems. How their policies are related to those of the general purpose state and local governments is of central importance to the fashioning of a coordinated transportation system.

The Impetus for Special District Creation

All levels of general purpose government in the United States have encouraged the growth of special units. The great majority of them are created either through direct state action or by state legislative authorization which permits a municipality or county to form such units to provide needed transportation services. The Federal government also has played a significant part in the proliferation of special units. As this Commission noted in 1964, "A relatively new type of Federal aid recipient has arisen in recent years — the special purpose units of government with independent or semi-independent status. These new units. . . are actually induced and sometimes even required by almost a quarter of all Federal programs."⁵¹ Presently, 17 of the 40 separate Federal aid programs for transportation purposes make special units eligible for funding, thus serving as a further spur to their creation and operation, especially in air and mass transit functions.

Despite this encouragement, though, the local governments are usually most directly responsible for the actual creation of special districts. In a recent survey undertaken by the ACIR, the National Association of Counties, and the International City Management Association, 73 percent (111) of the counties answering the question indicated that they could approve the formation of special districts for highways.⁵² Moreover at least 50 percent of all large mass transit districts are

created through local action rather than direct state imposition.

All signs indicated that special purpose units will continue to be formed and to provide considerable transportation services. The figures on their recent growth tend to bear this out, as do the informed opinion of experts on future transportation needs. Dr. William A. Ronan, chairman of the Metropolitan Transportation Authority of New York, and president of the Institute for Rapid Transit, for example, has stated that the 1970's will see the greatest construction of mass transit facilities in the history of the country, with an expenditure of at least \$17.7-billion during the decade.⁵³ The International Bridge and Tunnel Association has made an equally expansionary prediction for the automobile interests. The association foresees the expenditure of "more than \$1.6-billion for new construction [of new toll facilities] in the three year period from 1973 through 1975. . . . This means. . . that the dollar investment in new toll facilities will increase about 25 percent annually. . . ."⁵⁴ In both these functions — transit and limited access highways — special purpose units of government are dominant service providers. It is important then to examine the specific provisions of legislation under which transportation special districts are formed.

Reasons for Resort to Special Governments for Transportation

Why has the country turned to special purpose rather than general purpose governments to discharge transportation responsibilities? An oversimplified answer suggests that the line between public control and private enterprise in transportation modes has not been a clearly defined one in the United States. Transportation has been considered traditionally private business, but "clothed with public interest" and thus subject to governmental restraints and governmental subsidies. Consequently, when the need arose for the government to take over a transportation business, it was not unusual for a "quasi" corporation to be created to reflect certain attributes of both the public and private sectors. Special governments fit that role, since their financing often involves considerable private sector participation.

Special governments for transportation are favored also because:⁵⁵

1. They make possible the financing of desperately needed capital construction which otherwise would be impossible under the present restrictive ceilings on local

general government so that they must be selfliquidating through the collection of user charges for the use of the facilities.

2. They have a greater attraction to professional persons who think in terms of specialization in their daily work. They thereby are able to recruit governing board members from a group of citizen professionals who would not run for public office through political campaigns.

3. They must be “business like” by the very fact that they often do not rely on direct taxation, but must finance themselves through the selling of bonds and the maintenance of their bond ratings in the open market. Their projects must meet the needs of the people or they will not pay the user charges from which the bonded indebtedness is to be amortized.

4. They reframe politics, by taking public enterprises of a highly technical nature out of the everyday pressures of normal party politics, and subjecting them to a new complex of professional and special interests. This permits the operation of dynamic complex functions in the public interest, but with some of the motivation of private business.

5. They make possible, through their geographic flexibility, the formation of more logical lines of jurisdiction, no longer tied to inappropriate state and local governmental boundaries drawn years ago. These units, then, have fluid boundaries which permit them to match area and function, without altering the conventional boundary lines of the established general purpose governments.

Legislative Provisions Governing the Formation and Operation of Independent Transportation Districts

An independent district, as defined by the Census Bureau, is an entity possessing all three of the following characteristics:

- corporate existence,
- governmental powers, and
- substantial operating autonomy.

As already indicated, such districts can be created under general state enabling laws or by a legislative act

creating a specific district. Analyses of 105 state laws authorizing special districts for transportation indicate that the independence of these units is relative rather than absolute. Their structural, jurisdictional, functional, and fiscal characteristics often reveal some linkages to general purpose governments. For example, some fiscal limitations may serve to diminish district autonomy by forcing reliance on general purpose governments for needed additional funds. Yet, even with such limitations, most transportation bodies still have considerable operating independence.

District Creation and Accountability. The structural linkages to governmental units are most prominent in the method of district creation. How a district is created affects its responsiveness and accountability to the political process. Formation procedures and controls over selection of the governing board usually determine these ties. If the districts are formed by the state government and the members of their governing bodies are appointed by the governor, the districts are likely to be responsive and accountable to state government. But, if other levels of government or the citizens themselves (through direct elections) control these processes, responsiveness and accountability shift toward these sources of control. Of course, there are also mixed cases where a district is linked to more than one level of government.

The 105 transportation district enabling acts analyzed here show several different methods of formation and policy body selection, representing diverse patterns of public responsiveness and accountability. These patterns vary according to the type of transportation responsibilities given to the districts (see *Table III-30*). Port authorities tend to be state created, while transit and airport districts are most often formed locally, and highway districts are usually county created.

Port authorities — established to regulate and encourage the commerce and traffic of harbor areas, and to operate all transportation facilities necessary to accomplish this purpose — usually are responsible for bridges, tunnels, mass transit, ferries, belt-line railroads, access roads, and often airports in the port area. The majority of port district acts (23) provide for state creation and governing boards appointed by the governor, often with consent of the state senate.⁵⁶ In some instances, the majority of the board members are appointed by the governor with a minority appointed by the participating local governments. Interstate port districts such as the Delaware River Port Authority, the Kansas City Port District, and the Port of New York and New Jersey Authority were created by interstate compact,

Table III-30

**MEANS OF CREATION, INDEPENDENT TRANSPORTATION
DISTRICTS CLASSIFIED BY MODE**

Type Of District	Method Of Creation			Not Stated	TOTAL
	Local Resolution	Referendum	State Created		
Ports	6	6	23	1	36
Transit	9	13	9	2	33
Highways*	1	4	5	1	11
Airports	15	4	2	4	25
TOTALS	31	27	39	8	105

*Highway districts created by the county in some instances.

SOURCE: ACIR tabulation.

specifying that board members are to be appointed by the governor of each state.⁵⁷ Only 12 port authorities (one-third of the total) are created pursuant to local action involving petition, public hearing, and local governmental approval or popular referendum. Governing board members of six of these local port authorities are appointed by the participating local governing bodies. Another six have governing boards which are elected.⁵⁸

In contrast to port agencies, almost one-third of the 33 transit district authorizations call for district formation by local resolution and referendum with governing boards appointed by the constituent local governments. The four transit agencies with elected governing boards were all created by referendum.⁵⁹ Somewhat less than one-third (9) of the transit units are state created, but unlike the state formed port districts, the governing boards appointed by the governor often involve some participation of the local governing bodies. The Kansas City Area Transportation Authority and the Southeastern Michigan Transit Authority have board members selected by the governor from lists submitted by the local constituent units. In Chicago's transit authority, the governor and mayor approve each other's board selections. Although state created, the San Francisco Bay Area Rapid Transit District and the Southern California Rapid Transit District in Los Angeles have governing boards appointed by the counties and cities.

Highway and road districts tend to be county created entities. Their purposes are to establish, maintain, and improve state and local roads and bridges of an area.⁶⁰

They are most often formed by county resolution (five states) — or township ordinance as in New Jersey — or by voter referendum (four states). In one state, Idaho, voters are presented a choice of one of three alternatives in forming the district:

- a countywide district controlled by the county,
- an independent countywide district, or
- an independent district including sections of adjacent counties.

Three of the four highway districts formed by referendum also have elected governing boards.⁶¹

Airport authorities, like transit districts, are primarily local creations. They are formed to construct, maintain, and operate airport facilities. In some instances they also are responsible for airport approaches such as roadways, causeways, and bridges. The majority of these units (in 15 states) are created by local petition and/or resolution, or by joint agreements made by the participating local governments. Only four states (California, Illinois, Texas, and Washington) require referenda to establish an airport authority. Two states, Louisiana and South Carolina, directly create independent airport districts.

Airport districts created by referenda tend to have elected governing boards (California, Texas, and Washington). Those created by local governments usually have governing boards appointed by the constituent units. The two state created entities (the Louisiana Regional Airport Authority and the North Carolina

Greenville-Spartanburg Airport District) have governing boards appointed by the state governors.

To summarize, 27 of the 105 enabling acts for transportation districts examined provide for formation pursuant to local referendum. Twelve of these also provide for locally elected governing boards. Of the 78 remaining districts formed without referendum, only six have elected governing boards. Port authorities are predominantly state formed; transit and airport districts, locally initiated; and highway districts, county originated. The establishing governments generally retain control of governing board appointments. Less than one-third of all transportation districts are subject to specific termination provisions. State formed units least often have specific termination procedures, while locally created districts (especially those subject to referendum) usually have prescribed methods for dissolution.

Governing Board Membership. Restrictions sometimes are placed on special district governing board membership. Some require resident, registered voter, taxpayer, or non-government employee status or a combination of these qualifications. The residency requirement is the most common limitation when governing board restrictions are employed. Only 15 district laws require board members to be representative of each of the participating local governmental units. Airport districts must have local government representation in eight states (California, Colorado, Illinois, Louisiana, Nebraska, North Dakota, Texas, and West Virginia).⁶² Port district boards are representative of local units in only six instances. In contrast, Oregon port

districts are divided into subdistricts, each with an elected board member.

Highway and road districts have few statutory restrictions on board appointments; only five states have stipulated requirements in this area. In Idaho, board members of the highway district are elected, one from each of three subdistricts. In Kentucky, Missouri, Nebraska, and New Jersey, road board members must be land owners.

Transit districts most often require residency, and, in Florida, the transit board members must be officials of constituent local governing bodies. In Georgia, public officials are precluded from board membership on the Metropolitan Atlanta Rapid Transit Authority and the Savannah Transit Authority. Unlike instrumentalities formed by local resolution, transit districts created by referendum and by the state tend to have restrictions on governing board membership.

Terms of Office. The terms of governing board members range from one to seven years, with a four to six year term being most common. The fiscal and operating complexities and the long lead times required for new transportation projects may explain the prevalence of the longer term. Staggered terms also are common. While they tend to curb political control of board appointments, they simultaneously insure a modicum of continuity. Sixty of the 105 enabling acts specify staggered terms for board members (see *Table III-31*).

Fiscal Autonomy. Transportation districts have a considerable degree of fiscal autonomy; since they

Table III-31

GOVERNING BOARD MEMBERSHIP TERMS OF INDEPENDENT TRANSPORTATION DISTRICTS CLASSIFIED BY MODE

Type Of District	Type Of Membership Term			Total
	Staggered	Fixed	Not Stated	
Ports	25	11	0	36
Transit	23	7	3	33
Highways	5	4	2	11
Airports	7	7	11	25
TOTALS	60	29	16	105

SOURCE: ACIR tabulation.

usually derive the major share of their funds from non-tax sources and all have bonding powers. At the same time, almost three-quarters do have some limited access to tax resources. There are also some limitations on their bonding powers, usually with respect to the duration and interest rates of bond issues, as well as to traditional referendum requirements. In several instances, districts also operate under debt limits.

Generally speaking, port and transit districts have more bonding restrictions than highway and airport units. In addition, state created units and those formed by referendum require bond referenda more frequently than districts created by local resolution. One-third of the state laws authorizing transportation districts, require referendum approval for general obligation bond issues, but these usually do not include refunding of old debts or authorizing revenue bonds. Districts created by referendum tend to have the highest frequency of bond referendum requirements.

Interest rate limits and time restrictions on bond maturities are quite prevalent. Bonds generally cannot be issued for more than a 40 year period (although it varies from 20 to 50 years). Transit districts favor the 50 year limit, especially in California. Many highway and some port agencies' bonds are restricted to a 20 year limit. Interest rate limits vary from 5 percent to 10 percent, with 6 percent being the most common. Port districts have more restrictive interest limits, while airport authorities tend toward higher interest rate limits averaging about 8 percent.

Their taxing powers frequently are limited — both as to tax rates and tax bases. Yet, most port entities (29 states), transit units (25 states), all highway districts, and

slightly less than half of the airport districts have direct taxing powers or access to local tax revenues by the action of constituent general purpose local governments. While most districts created directly by the states have either form of taxing power, there are some instances where the general law specifically precludes such authority.⁶³ All but two of the laws forming districts by voter referendum also grant taxing powers.

Budget and Reporting Requirements. While transportation districts operate under several types of taxing and bonding limitations, only slightly more than half (56) of the enabling acts set any formal budget requirements. A few compel the budgetary process to be responsive to general purpose governments. Most simply require an annual report to constituent governing bodies including a financial statement (see *Table III-32*).

Port districts most frequently rely upon an annual fiscal report to satisfy the need for financial accountability. On the other hand, Michigan port districts have strict budget controls which allow the county board to decrease or eliminate line items, and three acts (California Harbor Districts, Washington Port Districts, and Idaho Port Districts) require a public hearing before adoption of the budget.

About one-third of the transit districts have budget requirements which are to be met through an annual report. Connecticut transit districts, the Southern California Rapid Transit district, and the Bakersfield Metropolitan Transit District must publish their proposed budgets. Most transit budgets only require a majority approval of their own district governing boards.

Some highway districts have extensive budgetary

Table III-32

**GENERAL LAW BUDGET AND REPORTING REQUIREMENTS OF
INDEPENDENT TRANSPORTATION DISTRICT CLASSIFIED
BY MODE: 1973**

Type Of District	Budget Requirements						
	Yes	None	Public Hearing Or Publication	General Purpose Government Review	Annual Report	Referendum	District Governing Board Approval
Ports	31	5	5	8	27	0	—
Transit	11	22	1	3	3	0	4
Highways	6	5	2	3	—	1	—
Airports	8	17	—	2	6	—	—

SOURCE: ACIR tabulation.

requirements. Idaho highway districts must hold a public hearing on the budget before certifying the tax levy to the county. In New Jersey, road districts must subject their budget to local referenda. In contrast, only eight of the 25 airport agencies are subject to some type of budget review, and six need do this only through an annual report to the member local governments. On the other hand, the Metropolitan Airports Commission (MAC) in Minneapolis-St. Paul must submit its budget for the approval to the Twin Cities Metropolitan Council. Only the Virginia Peninsula Airport Commission is required by law to submit estimates of next year's revenue and expenses to the local governing bodies with the stated limitation that any surplus be set aside for the capital improvement fund, the use of which is to be approved by the local governing bodies.⁶⁴

The general pattern which emerges from analysis of bonding restrictions, tax powers, and budget controls is one of considerable fiscal independence. Forty-nine of the 105 laws authorizing transportation districts do not subject them to any budget controls or fiscal oversight by participating local government units. Of the 56 that do have budget requirements, most are only in the form of an annual report to parent governments. So, the budgetary process is responsible to general government oversight and actively responsive to the general public interest in a minority of instances. Most of the districts do have access to tax funds within certain base and rate limits. All of the districts can issue bonds, and most can issue revenue and refunding bonds without public approval. Maturity and interest rate limitations on bonds are the most common restrictions, but 24 districts do not have any fiscal limits at all. In a few instances debt limits — on general obligation bonds — restrict the fiscal freedom of the districts.

Jurisdictional Flexibility. Independent transportation districts possess a greater degree of jurisdictional flexibility than general units of government, but they exercise this flexibility within various procedural limits. About one-third (33) of the authorization acts provide fixed boundaries. Two-thirds provide a variety of boundary amendment procedures, most of which permit annexation of adjacent territory by vote, petition, or joint resolution of the authority and the affected municipal governing bodies.

Most port districts require a referendum on proposed boundary changes. Boundary change procedures for the Port of New York and New Jersey Authority require concurrent action of the state legislatures. Idaho port districts can not be more than one county at formation and may annex only whole voter precincts, with a

petition by 10 percent of voters required for initiation. Upon majority approval in the existing and additional counties, the district then must be divided into three new subdistricts for board representation. Ohio port authorities can annex on resolution of an adjoining unit and approval of the authority board. But if the authority exercises its taxing power, the joining unit must hold a referendum. Any area annexed by a member municipality automatically becomes part of the district. In Illinois, regional port districts can annex on petition of 5 percent of the voters in the additional area and majority vote in a referendum. In Louisiana, the state created Lake Charles Port Commission can change boundaries only by state law. The process of annexation for California's port districts requires a public hearing with the decision made by the county board of supervisors.

Bridge and highway districts in California can annex by petition of the local governing body if there is no bonded debt; a referendum must be held if there are bonds outstanding. In New Jersey, boundaries of road districts can be changed by town ordinance.

Transit districts usually require annexation by a majority vote in a referendum after agreement between the local governing bodies and approval of the district board.

Independent airport districts also usually have considerable ability to change boundaries since only one-third are created with fixed boundaries. Two-thirds are vested with a variety of boundary change procedures, most of which permit annexation of adjacent territory by petition, referendum or joint resolution of the authority and municipal governing boards. To cite some examples, Illinois requires petition of the approving district governing board by 10 percent of the landowners to initiate annexation. Minnesota law requires the MAC to hold public hearings before annexation. Mississippi requires approval of the majority of the landholders in the area of annexation. Airport authorities in Montana, North Dakota, Tennessee, and Ohio can change boundaries by joint resolution of the new municipalities, each current member municipality, and the board of the district. Tennessee requires a public hearing in addition, and North Dakota requires publication of the resolution. In Texas, a boundary change is initiated by petition of 5 percent of the taxable voters and is enacted by resolution concurred in by two-thirds of the district's governing board. Most airport districts clearly can readily change their boundaries to meet changing regional needs.

Boundary Commission. In addition to the rules cited above, boundary adjustments of special districts in six

Table III-33

CO-OPERATION POTENTIAL OF INDEPENDENT TRANSPORTATION DISTRICTS CLASSIFIED BY MODE: 1973

Type Of District	Level Of Government District May Cooperate With					
	Federal	State	Local	Any Government Agency	None	More Than One
Ports 36	26	15	15	12	8	22
Transit 33	19	24	17	24	7	25
Highways 11	3	2	2	2	8	2
Airports 25	13	14	10	5	9	14

SOURCE: ACIR tabulation.

states are subject to control by specially established boundary commissions. These states are Alaska, Minnesota, Michigan, California, Oregon, and Washington.⁶⁵ In the first three of these states, the commissions are statewide, while in the other three they are local (covering single or multicounty areas). In addition to reviewing petitions for municipal annexations and incorporations, these commissions consider proposals relating to the dissolution, consolidation, and adjustments in the boundaries of non-school special districts. Boundary commissions are apparently having some impact upon the growth of special districts in California and Oregon, where the legislatures have specifically directed the commissions to give special districts close scrutiny. Although their enabling acts may seem to allow transportation districts in these states to adjust their boundaries rather freely, the boundary commission acts must also be consulted to uncover additional limitations.

Extraterritorial Powers. Along with the areal flexibility of transportation districts, 27 of the 105 district authorization acts summarized here grant extraterritorial powers. Ohio grants the most extensive powers of this type, applying to airport authorities. These authorities may acquire, construct, lease, operate, maintain, or manage airports within or outside their territorial boundaries as may be deemed necessary to accomplish their purposes. They also may hold, encumber, control or acquire land by donation or condemnation and construct, own, lease (as lessee or lessor), use, and sell real and personal property within or outside of their territorial boundaries for the location or protection of airports and airport facilities. California port authorities also have broad powers as they can do any work or make any improvements within or outside of their jurisdiction

if this effort aids in the development or improvement of navigation or commerce within the district. However, California highway districts have narrower powers; they can improve or build a highway beyond their jurisdiction only with the consent of the local governing bodies concerned. Finally, many transit districts can supply service outside their own boundaries by agreement or contract with the local governments concerned.⁶⁶

Intergovernmental Cooperation. Forty-four of the authorizing statutes permit intergovernmental agreements with other units of local government, and almost the same number authorize cooperation with any public agency. Moreover, nearly 60 percent of these statutes specifically grant the transportation district the power to cooperate with Federal or state governments (see *Table III-33*).⁶⁷ Finally, 34 of the 42 states having omnibus interlocal cooperation laws include special districts as units that can exercise the interlocal cooperation powers of the state.

Operating and Planning Powers. Most authorities are granted considerable operating independence, and most have no civil service procedures or designated wage structures which tie them down to rules and regulations established by other governmental units. In addition, many airport and port districts⁶⁸ also have the exclusive power to lease or award concessions to private providers.

Thirty-nine of the state laws creating transportation districts provide planning authority. Only the state created Louisiana Regional Airport Authority, however, has a strong planning requirement linked to a general master plan. Illinois law states that an airport district may participate in the regional planning commission. Of the four functional types, port districts most often have specific planning responsibilities. They are required

to develop a comprehensive general plan for harbor improvement and port development, but only Michigan port districts must submit their plans to the member local governing bodies for their approval. Only one transit district is required to submit its plans for local government approval (Southern California Rapid Transit District).

Requirements of law, then, allow for considerable operating and planning independence, with most planning requirements not linked to regional needs or approved by general purpose governments.

Transportation Special Districts: A New Typology

As has been already indicated, there are great divergencies among the different types of special districts. Calling them all by the same name probably has impeded a better understanding of their various characteristics and of the differing roles that they play in transportation. Three contrasting types of special purpose governments with transportation responsibilities have emerged.

The first is a traditional *special district* generally formed by persons living in an unincorporated area, who desire a special public service, and organize themselves to receive it. They apply to the state for a charter as a "special district," and, when that is granted, they create a board, usually consisting of three to five persons from the area who will assess a special tax on the property in the district in order to defray the costs of providing a service. This whole procedure does little violence to the classic concept of American local government: a group of citizens who want a particular public service are chartered by the state as a special district, and they agree among themselves to tax their property to help pay for it over a period of years. This is the common meaning of the special district, although the term has been applied rather loosely to many types of special purpose units.

A second, more recent type of special purpose government is the *public authority*. These bodies depend, not on the property tax, but on revenue bonds, amortized by charges, or tolls made against those persons who use the transportation facilities. The operations of these units are heavily influenced by bonding interests, whose money makes the whole undertaking possible in the first place, and the users of the facility. Neither of these, as in the case of a parking lot, or a turnpike, may even reside in the immediate vicinity of the project. Consequently, a kind of absentee influence over the district's operations frequently is exerted.

Still a third kind of special purpose government of even more recent derivation is the *authority-district*. It usually is of a regional scope and generally is responsible for areawide, multimodal transportation programs. These units do not rely solely on user charges to amortize their debts from the issued revenue bonds, since they are responsible frequently for deficit modes of transportation, such as commuter railroads, subways, and buses, which do not produce sufficient revenues for self-sustaining operations. They have to rely on other sources of revenue, such as state and local taxes on gasoline, cigarettes, and sales.

These very distinct groupings of special purpose governments are distinguished from one another by the types of transportation functions they perform, the area over which they have jurisdiction, their relationships with state and local governments, and the means of financing their transportation responsibilities. Yet, all three kinds still exist throughout America and frequently, side by side.

Traditional Classification of Special Districts

The need to categorize special districts has been acknowledged for some years, but suggestions as to how this might be done have varied greatly. Detailed study and classification of special purpose units first occurred with John Bollen's book, *Special District Governments in the United States*. He suggested that some special unites functioned independently of the general governments, and that others were more dependent on their parent governments. As he explained:⁶⁹

Some entities that are not independent special districts resemble them in some particulars and are at times mistaken for them. Although these independent districts and authorities are not the main concern of this book, they deserve separate consideration principally for purposes of clarification and also because they are increasing in number and importance. The fundamental distinction between such operations and special district governments is the former's lack of sufficient fiscal independence or adequate administrative autonomy or both.

Bollens' dichotomy between independent and dependent special districts generally has been adopted by the relatively few scholars who have studied special governments at all. Consequently, dependence or independence

has been gauged by the measure of administrative control exercised by the general purpose government over its functions. What has been overlooked, however, is that the independence of a special purpose unit is generally gained by the degree to which it is able to finance itself.

Greater sophistication is needed to classify special districts according to their sources of revenue, since that factor makes possible the kind of managerial independence upon which these unique governments have prospered. If a special government has to keep coming back to a parent government for special taxes, it becomes a dependent unit; if, on the other hand, it is enabled to issue revenue bonds in its own name, that are sufficient to cover its operating expenses, it has gained a kind of program independence that no unit of general purpose government has been allowed.

Such bonding capabilities, in the hands of the public authorities or special districts, free them from the normal governmental controls over their transportation operations. But they force the authorities or districts to depend on the investment world which often has been very restrictive. Frequently, they have become subject to the peculiar demands of the market, which dictate their choice of projects and mode of operations.

For most recent kinds of regional and multimodal special governments, a more complex set of interrelationships has begun to emerge involving general purpose governments as well as the bond market. In short, the form of district financing can be the basis for a more complete typology than one based on the degree of managerial freedom from parent governments.⁷⁰

A New Classification Based on Fiscal Characteristics

In the transportation field, where financing has assumed such a central position, the identification of the sources of income for the various kinds of special governments concerned serves to denote differences between and among these units. The following descriptions of different kinds of financing arrangements for special governments offer one way of discerning the differences between special districts, public authorities, and authority-districts.

Public Authorities and Their Financing

Revenue-Bond-User-Charge. Many special agencies can float bonds in their own name, without the full faith and credit of a general purpose government, and then

repay such loans through the charging of tolls for the use of the facilities built with the borrowed money. This is known as the revenue-bond-user-charge approach. These instrumentalities, generically known as public authorities, usually. . .

are corporate bodies authorized by legislative action to function outside the regular structure of state government in order to finance and construct and usually to operate revenue producing public enterprises. Their organizational structures and powers are of the type usually associated with public corporations and like the latter they have relative administrative autonomy. Public authorities are authorized to issue their own revenue bonds, which ordinarily do not constitute debt within the meaning of constitutional debt limitations, since they are required to meet their obligations from their own resources. They lack the power to levy taxes, but are empowered to collect fees or other charges for use of their facilities, devoting the resulting revenue to payment of operational expenses and of interest and principal on their debts.⁷¹

The New Jersey Turnpike Authority is a prime example of this type of special purpose unit. It was created in 1948 and was authorized to finance and construct a limited access highway connecting New York City and Philadelphia. The authority accepted \$100-million in 1949 from the state highway department to get underway. However, the New Jersey State Supreme Court ruled that the state could not advance funds to the turnpike authority, which was an independent unit of government. This left the authority without funds, and Governor Alfred Driscoll then arranged for it to sell a ten year, revenue bond issue of \$2-million to the state fund.⁷² The bonds were subsequently redeemed on February 19, 1950, and the authority, after its abortive initial attempt to depend on the state support, became totally dependent on its own revenue bonds, without the full faith and credit of the state or any other general purpose government.

The legislation which created the New Jersey Turnpike Authority, provided that it had to secure its bonds from the proceeds of its tolls. Yet, it had exclusive authority to set tolls at a level that would fully finance its bonded indebtedness.⁷³ Consequently, bondholders were guaranteed the utmost security for their investment in the authority bonds:

By the authority itself:

Any pledge of tolls or other revenues or other moneys made by the authority shall be valid and binding from the time when the pledge is made; the tolls or other revenues or other moneys so pledged and thereafter received by the authority shall immediately be subject to the lien of such pledge. . . .⁷⁴

And by the state:

The State of New Jersey does pledge to and agree with the holders of the bonds issued pursuant to authority contained in this act, that the state will not limit or restrict the rights thereby vested in the authority to maintain, construct, reconstruct, and operate any project as defined in this act, or to establish and collect such charges and tolls as may be convenient or necessary to produce sufficient revenue to meet the expenses of maintenance and operation thereof and to fulfill the terms of agreements made with the holders of bonds authorized by this act or in any way impair the rights or remedies of the holders of such bonds until the bonds, together with interest thereon, are fully paid and discharged.⁷⁵

The normal controls on local governments also were not to apply to this authority:

Such tolls shall not be subject to supervision or regulation by any other commission, board, bureau or agency of the state. The use and disposition of tolls and revenues shall be subject to the provisions of the resolution authorizing the issuance of such bonds or of the trust agreement securing the same.⁷⁶

The bondholder could sue to compel the authority to honor its fiscal obligations to the bondholders.⁷⁷ Thus, the bondholder has considerable influence in the operation of the New Jersey Turnpike, though he or she well may be living in a state far removed from the vicinity of the turnpike itself.

The New Jersey Turnpike Authority soon became selfsufficient. Indeed, one problem of the authority was its embarrassment of riches. Thus, in both 1959 and 1963 gubernatorial proposals were made to divert surplus funds from the turnpike authority in order to

defray the financing of other transportation related projects. Voters rejected both proposals in 1959 and 1963 referenda.

Various other plans have been offered for the coordination or consolidation of the turnpike authority, but the outstanding bonds offer problems. Early in 1973, Governor William Cahill of New Jersey suggested, in his annual message to the legislature, the proposed consolidation of three toll highways into an overall special agency that would then direct its surplus revenues to the support of mass transit throughout the state. The new unit would be a semiautonomous public authority with bonding powers, and would be empowered to plan, construct, and operate mass transit in the forms of railroads, buses, and marine facilities. The suggestion, however, also was not enacted.

The New Jersey Turnpike Authority illustrates the autonomy of the public authority that relies solely on revenue bonds and user charges. This type of jurisdiction is an almost completely autonomous unit of government in which traditional checks and balances have no significance. No public utilities commission of the state may review its rates, for example, for to do so might impair the obligation of contracts of the bondholders. The obligation to the bondholder thus becomes preminent.

Consolidated Revenue Bond with User Charge. The very first special district in the United States to employ a consolidated revenue bond was the Port of New York Authority (more recently renamed the Port Authority of New York and New Jersey, to placate New Jersey). Created in 1921 by the two states of New York and New Jersey, the Port of New York Authority, was to be selfsupporting. It initially relied on the revenue bond method of borrowing money for its many giant projects, and has been repaying them through the charging of tolls and other fees for the use of its facilities. This has forced the authority to fund solely revenue producing projects, where tolls could easily amortize the revenue bond debt. Its facilities today include six interstate bridges and tunnels, three airports, two heliports, six marine terminal areas, two union truck terminals, a truck terminal for rail freight, and a union bus terminal.

The port authority, therefore, has strengthened its bonding potentialities into a commanding competitive role in the nation's investment world by its use of consolidated revenue bonding. In such a financing policy, the equity for any one of its projected facilities to be financed in the revenue bond market, is not just that facility itself, but the combined facilities of the entire port authority. This results, of course, in a much

more favorable rate of interest for its revenue bonds, an important advantage since public authority bonds usually carry a higher interest rate than general obligation bonds issued by general purpose governments.

When the port authority was planning long term bonding in the early 1930's for such vast projects as the first tube of the Lincoln Tunnel, and then a second tube, it established its "general reserve fund" (which revenue authorities carry as assurance of the repayment of their bonds). This provided a basis for a refunding plan that would permit the authority to accumulate in this reserve fund an amount equal to 10 percent of the amount of all its outstanding bonds, thus securing *collectively* the five original issues of bonds, as well as each project individually. "It provided for the consolidation of its existing debt into a single type of obligation, general and refunding bonds, which could also be used to finance the Lincoln Tunnel and, with protective restrictions, to finance future undertakings."⁷⁸ Legislation by the two states to this effect, provided:

The port authority shall, so far as it deems it practicable, treat as a single unified operation the construction, maintenance and operation of the said Midtown Hudson tunnel (Lincoln Tunnel), the said Holland tunnel, the two vehicular bridges over the Arthur Kill, the vehicular bridge over the Hudson river at Fort Lee, and any other vehicular bridges or tunnels which it may construct or operate, raising moneys for the construction thereof and for the making of additions and improvements thereto in whole or part upon its own obligations, and establishing and levying such tolls and other charges as it may deem necessary to secure from all of such bridges and tunnels as a group, at least sufficient revenue to meet the expenses of the construction, maintenance, and operation of such bridges and tunnels as a group, and to provide for the payment of the interest upon and amortization and retirement of and the fulfillment of the terms of all bonds and other securities and obligations which it may have issued or incurred in connection therewith.⁷⁹

This provision was passed in 1931, and the refunding plan was adopted in 1935. As a result, the port authority has been in sound financial condition from that year to today.

The pooling has not resulted, however, in the port

authority's acceptance of a responsibility for deficit operations such as mass transit, which both the States of New York and New Jersey have urged it to add to its functions. In fact, a covenant was written into statute when the port authority was forced to take on the Hudson and Manhattan lines in 1962, protecting the authority from additional incursions into mass transit, largely to maintain the strength of the general reserve fund and the consolidated bonds. The covenant states that the port authority will not apply any revenues or reserves pledged to bonds for this takeover of the Hudson tubes for any additional passenger railroad purpose without the consent of the bondholders unless the deficits from such additional service shall not exceed an amount equal to one-tenth of the money in the port authority's general reserve fund at the end of the preceding year.⁸⁰ The two states abolished this covenant in 1973, but its provisions still apply to the previously issued bonds, thus curtailing further mass transit ventures by the authority.

The single function authority is totally dependent on the bondholders and the users, but even the larger multifunctional ones, with consolidated bonding, feel the same need to protect their bond ratings in the open market. Both types of bodies have served efficiently the needs of the automobile, but also they have contributed to the imbalance in the use of transportation modes. Thus, the financing patterns of the authorities, while simultaneously offering more attractive highway facilities, may further aggravate the financial conditions of other transportation modes and create an imbalance in the transportation system.

Special District Financing Methods

General Taxation. The freedom from general purpose governments and from state imposed fiscal restrictions that public authorities have gives such agencies an autonomy not otherwise known in American federalism. These authorities, however, appear unable to extricate themselves from the restrictions of investment syndicates, who must insist that the bondholders have the first lien on authority actions, and that projects undertaken must, therefore, produce sufficient tolls to repay the debt with interest. Consequently, there has been renewed interest in the traditional special district which generally performs only one selected function, encompasses a smaller geographic area than that of many public authorities, and depends on general taxation for its revenue sources.

Evidence of renewed interest in this kind of district is

found, for example, in Topeka, Kansas. By a decisive vote of 25,225 to 6,366, approval was gained in April 1973 for an amendment to the city charter which provided for a publicly owned and operated bus system for the city, funded by a maximum of one mill levy on property. For this purpose, the city was authorized to create a metropolitan transit authority which would buy the bus lines of the Topeka Transportation Company, purchase new buses, and operate a revised schedule of runs. All the elements of the original special district are present in the Topeka decision: the citizens wanted bus service, they were willing to pay for it by a special tax levy on their property, and they organized themselves into a special district to bring this about.

A return to the special district from the public authority also is illustrated by recent events in Los Angeles. Its privately owned surface transit lines had been taken over in 1958 by the Metropolitan Transit Authority. Dependent solely on fares, that authority could do little more than pay off the original revenue bond issue which had been used for the purchase of the lines, and could not provide for the vast extensions of public transportation needed. In 1964, the transit authority was supplanted by the Southern California Rapid Transit District (SCRTD) which is locally controlled by eleven members chosen to reflect the local governments in the district.⁸¹ In order to make the district even more controllable by general governments, the terms of the board appointees are tied to those of the appointing powers, rather than being staggered to give them further independence as frequently is the arrangement for special district boards.⁸²

SCRTD, however, has not fared much better than its predecessor, the public authority. A \$2.5-billion bond issue to finance rapid transit under the district received a 55 percent majority in a referendum in 1968, but failed to meet California's 60 percent requirement for approval. Other plans have been proposed since then; the most recent one (1973) involved a multibillion dollar system of high speed trains and buses. The district has continued to lag behind in its fund raising, in part perhaps because of the commitment of that region, and of California in general, to urban freeways. Consequently, the mayor of Los Angeles has supported efforts through state legislation to subordinate SCRTD to a general purpose regional planning mechanism or a multimodal transportation commission such as the one in San Francisco.

Assumption of Authority Debt by the State. Florida has gone even further than those states that have returned to traditional special districts for transportation

purposes, and has subsumed all transportation authorities under the aegis of a state department of transportation. This department has assumed the financial obligations of the Florida Turnpike Authority, in order to give the state the control over the various modes, and has been given the authority to refinance various authority funds. These steps are designed to end authority dependence on municipal investors and permit the state to fund a multiplicity of transportation projects, even those that may involve deficit financing.⁸³

The return to traditional special districts indicates an increasing unwillingness to finance special purpose units on a revenue bonding basis. These traditional districts will be able to tap general tax revenues for transportation purposes and, therefore, finance transportation projects that are not easily selfsupporting. At the same time, there will be continued resistance to giving special districts large scale taxing powers that will put them directly in fiscal competition with general purpose local governments. This last constraint may effectively limit the spread of these types of special purpose units in the transportation field. At the very least, it will encourage the development of more locally subordinate special purpose units.

Authority-District Financial Patterns

Proportionate Assessment on Constituent Units.

Some special agencies are now coming to rely on direct financial support from constituent local units of government. The Boston Metropolitan District, created in 1929, was authorized to purchase the bonds of private transportation companies within its jurisdiction and assess fiscal deficits from such bonds on the communities within the district. This form of financing continued when the Metropolitan Transit Authority (MTA) superseded the Boston Metropolitan District, in 1949, gaining full authority over the subway system serving the 14 cities and towns in the core of the Boston SMSA. These same jurisdictions constituted an advisory board which, simultaneously with a five member board of directors, ran the operations of the MTA.

When the Metropolitan Transit Authority gave way to the Massachusetts Bay Transportation Authority (MBTA), in 1964, its geographic scope was expanded to include 65 additional cities and towns. Yet, the assessment of towns still comprised the core of MBTA financing.

“. . . (S)eventy-five percent of such net cost of service of such previous calendar year shall be assessed upon all cities and towns

comprising the authority's territory in the proportion which the number of commuters in each said city and town bears to the total number of commuters in all of said cities and towns."⁸⁴

These 79 cities and towns, which were to defray the major cost of mass transportation under the umbrella multimodal special purpose government (MBTA), were to have the principal role in the agency's decision making processes. This was assured in two ways. First, an advisory board consisting of chief administrative or elected officials of the constituent local governments retains policy control over the MBTA. The board uses a complicated system of weighted voting essentially dependent on the proportionate MBTA service to each city or town.⁸⁵ The advisory board must be consulted by the governor in his appointment of three of the five members of the operating MBTA board. Secondly, the advisory board also has an item veto over the budget of the MBTA.⁸⁶ Thus, the constituent local governments have a major voice in the operation of the MBTA.

The local control of and financial participation in the MBTA reflect, of course, the traditional significance of the city and town in Massachusetts government. Yet, there have been some very difficult relations between the MBTA operating board and the advisory board over control of the budget. These relations reached a crisis in the Spring of 1972, when Governor Francis W. Sargent stepped in and temporarily revoked the advisory board's right to veto the budget. The latter's full powers were restored, however, by January 1, 1973. In November of 1973, the Massachusetts General Court enacted legislation that called for the establishment and financing of ten regional transportation authorities throughout the state outside the MBTA area, and provided for MBTA's financing largely through state bond issues.

Assessment through a Regional Constituent Unit. The allocation of a share of metropolitan area transportation expenses to constituent local governments has become rather common under new regional transit agencies, such as the MBTA. In two instances, new metropolitan transportation authorities have gone beyond the conventional governments in regard to the division of expenses, and have made use of regional agencies. The Washington, D.C., Metropolitan Area Transit Authority has worked through two existing transit commissions to prorate the fiscal burden of building an areawide subway system: the Washington Suburban Transit Commission, which embraces the counties of Montgomery and Prince George's, in Maryland; and the Northern Virginia Trans-

portation Commission, which includes Fairfax and Arlington Counties, and the Cities of Alexandria, Fairfax, and Falls Church, in Virginia. Through them, a formula for payment was arrived at based on the following factors: (1) the amount of construction in a jurisdiction; (2) the quality of transit service; and (3) the sources of transit ridership and the projected population of each area by the year 1990.

An even more structured use of a regional agency as the base for assessment and representation is built into the Southeastern Michigan Transportation Authority Act (SEMTA). That act even anticipated the creation of regional agency, which at the time of its passage in 1967 did not then exist in the Detroit area.⁸⁷ In 1971, SEMTA's board was enlarged to nine members, six of whom were to be appointed by the Southeastern Michigan Council of Governments (SEMCOG). In addition to this membership on the authority board, SEMCOG was authorized to review the budget of the authority each year.⁸⁸ The authority was given the usual power to issue revenue bonds, but, in addition it could draw on financial help from its constituent counties and other sources.⁸⁹ In the fall of 1970, SEMTA announced a \$9.2-million budget for the year, much larger than previous ones. A total of \$637,000 or about 7 percent of this amount was to be assessed on the six participating counties, based on a population formula of 11.9¢ per capita. The contributions from the counties were to be "matched three for one with state funds, and the total of local and state funds matched two for one with Federal monies."

State Financing of Transportation through Umbrella Public Authorities. Constituent assessment has not always produced enough income for the regional, multimodal authorities, despite the kind of tax imposed, the formula used, or the constituent units involved. One reason is that the umbrella authorities, in most instances, have had to assume the outstanding obligations of the single function public authorities or special districts which they absorb, as well as acquire new debt for modernization of existing equipment and extension of services and facilities.

The recent history of the Massachusetts Bay Transportation Authority illustrates how the state is being forced increasingly into the financing of these larger mass transportation instrumentalities because constituent localities have often been unable or unwilling to assess increased local property taxes to pay for the escalating costs of transit labor and other expenses. When the state does enter the picture, it cannot politically support merely the largest region centering on

a principal city, such as Boston, but must deploy transportation funds to other parts of the state as well. Thus, Massachusetts now has the power to create ten other regional transportation authorities in addition to helping defray the costs of the MBTA. Similarly, the enabling legislation that made possible the Southeastern Michigan Transportation Authority for the Detroit area, stipulated that "regional transportation authorities in major metropolitan areas of the state may be established at such time as one or more contiguous counties elect by majority vote of the boards of supervisors to establish or participate in an authority."⁹⁰

The most systematic division of a state into regional transportation authorities has occurred in New York, where five such agencies have been created: the Metropolitan Transportation Authority in the New York State portion of the New York metropolitan area; the Niagara Frontier Transportation Authority of the Buffalo region; the Rochester-Genesee Regional Transportation Authority; the Capital District Transportation Authority, centering on Albany; and the Central New York Regional Transportation Authority of Syracuse.

The five have common features: (1) all are multi-modal, including "transportation by railroad, omnibus, marine, and air," but not limited to those specific modes; (2) all are regional, encompassing several counties; and (3) all contain within their enabling legislation the promise of financial support from the state to maintain their debt service funds. Differences arise, as might be expected, in certain provisions pertaining (to the governing boards of these units).⁹¹ The Metropolitan Transportation Authority in New York was designed as a "holding company," including within its jurisdiction the former Metropolitan Commuter Transportation Authority's jurisdiction over the Long Island Railroad; the New York City Transit Authority, with its subsidiary for the Fifth Avenue buses; the Manhattan and Bronx Surface Transit Operating Authority; and the Triborough Bridge and Tunnel Authority. Other units subsequently were added. From the start, however, one umbrella board was set up to supervise all of these individual entities. The same nine members (later expanded to ten plus the chairman) who were to constitute the board of the Metropolitan Transportation Authority were ex officio, the board for the New York City Transit Authority and the Triborough Bridge and Tunnel Authority. All members were appointed by the governor with the consent of the state senate. Three of the members are appointed by the governor "only on the written recommendation of the mayor of the City of New York..." and "...no more than two of the members may be non-residents of the district."⁹² The Niagara Frontier Transportation

Authority has very similar provisions for its board, which consists of a chairman and ten other members appointed by the governor with the consent of the state senate. The other three such authorities, however, have constituent governments' representation more directly spelled out in state legislation.

Transfer of Automobile Tolls to Mass Transit Support. A few authority-districts have attempted to broaden their revenue base by diverting revenue from highway to non-highway projects. One transfer of surplus automobile tolls for the support of urban mass transit occurred when the New York Metropolitan Transportation Authority sought to divert some of the excess funds from the Triborough Bridge and Tunnel Authority to support of the deficit ridden New York City Transit Authority, both wholly within the City of New York, and both now under the "holding company" of the MTA. The Triborough bridges and tunnels served automobile traffic crossing the East River within the City of New York, and, under the skillful guidance of Robert Moses, had amassed a surplus of over \$26-million. Its original legislation had forbidden the transfer of its surplus so long as any of its bonds still were outstanding. In 1968, when the Metropolitan Transportation Authority encompassed Triborough in its "holding company." Triborough bonds outstanding were in the amount of \$362.7-million, \$300-million of which were for the financing of the construction of the Verrazano Narrows Bridge, and they could not be called until the year 1970. The legislative limitation on the use of the surplus was clear:⁹³

The State of New York does pledge to and agree with (a) the holders of the bonds that the state will not limit or alter the rights hereby vested in the authority to maintain, reconstruct, and operate the project, . . . or in any way impair the rights and remedies of the bondholders, until the bonds, together with interest thereon. . . are fully met and discharged.

The New York Transit Authority, for its part, had been required in its original legislation to meet its expenses out of the tolls it charged on a "selfsustaining" basis.

A series of amendments to these acts attempted to overcome the simultaneous restrictions on the transfer of surplus funds from Triborough and their receipt and use by the transit authority. The Triborough authority statutes were amended to authorize "from time to time transfer...to metropolitan transportation authority or

New York City transit authority all or any part of its surplus funds."⁹⁴ The transit statutes were altered to authorize it to be "self-sustaining," not only on its own fares, but "from any funds granted or transferred to the authority pursuant to any provision of law."⁹⁵ Finally, the Metropolitan Transportation Authority was authorized to establish tolls and other charges "to maintain the combined operations of the authority...on a self-sustaining basis."⁹⁶

Despite these legal changes, which seemed to clear the way for the transfer of the funds, the trustee bank of the Triborough Bridge and Tunnel Authority, the Chase Manhattan Bank, instituted suit on behalf of the bondholders. After several months of negotiation, a compromise was agreed to out of court. The bondholders would be polled by the Metropolitan Transportation Authority and asked to consent to a supplement to the original bond resolution which would permit the transfer of funds. In return for a favorable vote, the bondholders would be granted an increase in interest on their outstanding bonds of from one-quarter to 1 percent. Also, a covenant would be added to the revenue bond resolution to the effect that the authority will not issue additional bonds under the revenue bond resolution except for the purpose of paying the cost of necessary reconstruction of any of its projects. The bondholders were assuaged and approved the transfer.

A similar arrangement to divert automobile tolls for mass transit was written into the provisions for the Bay Area Rapid Transit District of the San Francisco region so as to obviate any similar constitutional and legal controversies. The vital and expensive link in the areawide transit system, the Bay Area Underwater Rapid Transit Tube, the longest in the world, stretching some 3.6 miles from San Francisco to Yerba Buena Island and thence to Oakland, is being partially financed by tolls from automobiles using the bridges of the California Toll Bridge Authority. Toll from the authority's bridges in the San Francisco area are to be applied to the amortization of debt for the construction of the underwater tube. The California Toll Bridge Authority, in its own name, has issued revenue bonds in the amount of the estimated cost, and will repay the loans by amortizing the bonds with the tolls from its bridges. Another toll transfer has occurred in the Philadelphia SMSA where the Lindenwold subway line is partially subsidized from the toll of the Delaware River Act Authority.

These provisions for the intermodal transfer of transportation revenues are among the few successful efforts in the United States to balance the excesses of automobile income against mass transit deficits. Increasingly, the gasoline tax is viewed as a prime revenue

source for large metropolitan authority-districts. The new six county Chicago Regional Transportation Agency, for instance, will take advantage, in part, of this source of income through a 5 percent gross receipts tax on motor fuel sales within the participating counties. This does not have the same effect, however, as having the automobile facilities and operations and the mass transit enterprises under one multimodal special unit. Under the latter arrangement, not only is there financial transfer, but there is the potential for a rearrangement of rider use from the private car to the subways in a more balanced comprehensive plan of transportation modes.

Problems Caused by Transportation Special Districts

The imposition of some 1,000 special purpose units over an already fragmented maze of local governments for so basic a function as transportation cannot help but cause serious policy problems. These problems occur in the areas of structure, finance, intermodal linkages, and intergovernmental relations.

Structure. One serious policy problem concerns the selection of a board to govern the special unit. The United States Supreme Court has not required that the one-person-one-vote principle be applied to special purpose governments. In the 1973 case of *Saylor Land Co. versus Tulare Lake Basin Water Storage District* the court concluded that the "...water storage district, by reason of its special limited purpose and of the disproportionate effect of its activities on landowners as a group, is the sort of exception to the rule laid down in *Reynolds [Reynolds versus Sims]*." Justice Douglas, in a dissent joined by Justices Brennan and Marshall, countered that the special district was performing "vital governmental functions" and that the result of the majority ruling "is a corporate political kingdom undreamed of by those who wrote our Constitution."⁹⁷ But despite this dissent, special transportation agencies now have great constitutional freedom in the selection and composition of their boards.

In practice, however, the choice of board members is often influenced by the dependence of the special government on certain sources of revenue. Special district (or the unit levying property taxes) referenda very often require a vote only of the property owners within the district, and, then, sometimes by a margin of more than a simple majority. With the public authority, even more restricted constituencies have come into play. The public authority board has to please constituent bondholders, who usually live in another part of the

world and have no knowledge of the local authority itself, other than the assurance that it is financially solvent and will meet its bond payments periodically. This absentee "constituency" is represented through the bank chosen initially by the authority when it floats the bonds, as its trustee to handle its financial business. If the trustee bank discerns practices that might impair the obligation of contract of the bondholders, it must institute suit in the name of the bondholders. The bank, acting for the investors, thereby has very real influence over the operations of the public authority. In the case of a parking authority, the trustee bank can (and has) prohibit the authority from closing one parking lot and opening another in a different part of town, or of changing the meter toll rates. It was the trustee bank for the Triborough Bridge and Tunnel Authority, for example, which instituted suit against the New York Metropolitan Authority's proposal to use some of the surplus from its tolls to help offset the losses of the New York City subway system.

The public authority also must satisfy the users of its facilities, for it is they who pay the tolls that are used to amortize the revenue bonds of the authority. It must be given a monopoly for that function in its jurisdiction, and it must keep improving the facilities despite the pressure of other needs or functions that may become important over time.

These two constituencies — bondholder and user — are central to any board selected for the public authority. A third constituency, the people living in the vicinity of the huge projects of the authority, has not been clearly defined, although their property values and even their way of life may be affected directly by board decisions.

Authority-districts have even more complex governance structures, often having state, regional, and local representatives determining the conduct of their operations. The mix of these members varies from district to district and even among districts of the same type within a given state. The governing boards of these bodies often form interlocking directorates with constituent special purpose units.

Finance. The most serious fiscal problem with the special purpose unit, particularly the public authority, is its interference with the budget processes of general purpose governments. If properly used, the budget process is a most democratic institution. It requires that each agency of the government, at all governmental levels, must come before the public or its representative legislative agency to defend its program of the past year and its request for monies for the coming one. This is

how general purpose governments in the United States operate, but the special purpose governments frequently are not required to follow the same rules. They have responsibility for one function, or closely related functions, and the financial selfsufficiency to pursue that interest. Everything about them is long term, rather than annual or short term. District boards commonly serve terms of six to eight years, as in the case of the New York Thruway Authority; its bonds are floated for a 40 year period; its life as an agency of government may be prolonged by the continued increase of bond issuances which pushes further and further away the date of its ultimate dissolution; and it need not begin early repayment of its loans, as most general purpose governments must by state law. Not having to prove itself in a short term way through the annual budget, the special government has a kind of permanence which makes long range planning possible with a sense of confidence unusual to general purpose local governments. Thus, the changing priorities that can result from the publicly accountable budget system are not reflected.

Transit Functions and Intergovernmental Relations.

Special purpose governments are charged with having "picked the plums and shunned the prunes" in the transportation function. They have picked, of necessity, those aspects or modes that are fiscally selfsufficient and meet the requirements of their financing methods. Hence, they have shunned the modes that are unable to produce the revenue needed. The advantage of the special unit rests on the kind of autonomy from the restraints of general purpose governments that its solvency in the investment world provides.

The New York City Transit Authority, for example, was forced on the City of New York by the state legislature in 1953 with the purpose of relieving its daily operations from the influence of city hall. To that end, the state established a board of the transit authority to provide a degree of insulation from the more customary political activities of municipal parties. At the same time, the transit authority has had continuous deficit financing problems which only recently have been ameliorated, to some extent, by the diversion of fiscal surpluses from highway authorities operating in the city. Consequently, authority-districts have had to undertake the responsibility for providing this more expensive and troublesome transportation function.

Special units, also have become dominant local and metropolitan functional planning agencies, especially in matters of regional public works planning. The general governments, confined to fixed boundaries, have not consciously been denied the planning role as much as

they have unconsciously divested themselves of this essential function simply by not being able to meet the needs themselves. Consequently, the "...first type of metropolitan planning was conducted by single purpose special districts which had been organized to solve a particular areawide problem."⁹⁸ Among the very first of these regional problems was transportation.

Special governments frequently have superseded the planning expertise of the general purpose governments, who, by their very constitutional requirements, must oversee the many expectations of the citizens. Yet, special agencies are obviously the least qualified units of government for comprehensive planning, due to their *unique responsibilities* for concentrating their energies on unifunctional responsibilities. General governments, of course, are far better qualified to weigh needs, and to establish priorities, for they have as their purview the whole range of governmental activities.

The respective planning and service responsibilities of special and general governments, then, have been almost reversed. With special governments constructing regional public works, general governments are faced with the prospect of performing daily housekeeping functions, particularly as special governments assume the most dynamic modes of transportation and other functions, such as airports, ports, modern turnpikes, and now mass transit. In control of the funds for such large scale construction, special purpose units, of course, are expected to plan carefully for the placing of their bridges and tunnels, and for the corridors for their turnpikes, and the like. Local governments, on the other hand, not having the areal scope or the long range construction responsibilities of these larger special purpose units, are stunted in such efforts. These local governments frequently band together into areawide planning organizations for the purpose of addressing regional issues like transportation, but such bodies traditionally have been limited to advisory powers only leaving the local governments in the position of having to react to the public works planning of special purpose units rather than being able to plan and maintain a transportation system that reflects their own overall needs.

On the other hand, planning by special purpose units of government has been narrowed by the fact that their very existence depends on the perpetuation and expansion of a particular transportation mode. Functional planning is directed to maintaining the continued favorable bond ratings of special purpose agencies and, in turn, the acceptance of prospective facilities by transportation users.

The record of special government suggests an ob-

session with the capability to raise money, either from special levies on property, or through the issuance of revenue bonds to be repaid by user charges, or through a combination of those two methods. But, the real service delivery contribution that special governments can make in a highly technical field such as transportation has been overlooked. This new role might well have special purpose agencies as the operating vehicles for carrying into effect the comprehensive plans made by the general purpose governments. To readjust roles and take advantage of unique capabilities, comprehensive planning might be undertaken by general purpose regional planning commissions or regional councils, while associated transportation functional planning would be done by umbrella transportation authority-districts. The daily operations then would become the responsibility of subordinate servicing units of the authority-districts — perhaps one for subways, another for surface transit, a third for the railroads, and the like. With this arrangement, the kind of total concentration that the special unit brings to the transportation function might begin to be better harnessed. It seems now, at least, on the verge of being given this chance with the advent of stronger general purpose regional mechanisms, more comprehensive Federal planning and programming requirements, and the creation of multicounty authority-districts.

PRIVATE SECTOR TRANSPORTATION RESPONSIBILITIES

Introduction

The private sector provides many of the transportation services in this country. Over 85 percent of commuter traffic in large metropolitan areas moves in private conveyances, and all freight transport moves *via private carrier*.⁹⁹ Yet much of this commuter and freight movement is on public roads. Moreover, the public spends over \$20-billion annually in direct expenditures and grants-in-aid for transportation purposes; and 84 percent of all transit passengers are carried in publicly owned transit systems.¹⁰⁰ And numerous public service regulations control private transportation rate structures, financial reporting procedures, and competition with related and alternative transportation enterprises.¹⁰¹ So, while the private sector is a mainstay of urban and interurban transportation, the public sector markedly affects its operations and profitability.

The highly competitive nature of private transportation systems has produced significant shifts in American transportation use. Airlines and the private automobile have replaced bus transit and railroads as the

primary passenger movers, while trucks and pipelines have gained an increasing share of freight transport traffic. Taxicabs have retained an important place in intraurban passenger movement, while water transport has retained a large share of interurban freight movement (see Table III-34).

Competition among private transportation operators has been affected by different government policies that have altered the profitability of different transportation modes. Massive public investments in highways have increased automobile passenger movement and motor freight transport; government expenditures for aviation

research, development, and safety have stimulated air travel;¹⁰² Federal programs for waterway development have improved water transport capabilities. On the other hand, some governmental actions have reduced competitive advantages in certain parts of the private transportation sector. For example, there is evidence that outmoded and inflexible economic regulations have contributed to financial difficulties in the railroad industry, exacerbated the cost-revenue squeeze felt by private transit operators, and prevented the taxicab and trucking industry from operating more efficiently.¹⁰³ There is also evidence that these regulations have

Table III-34

SELECTED CHARACTERISTICS OF PASSENGER AND FREIGHT MOVEMENT, BY TRANSPORTATION MODE: 1950-1972

Selected Characteristic	Transportation Mode								Total
	Auto	Transit	Taxi	Air	Rail	Water Transport	Motor	Pipe-line	
Personal Expenditures (Billions)									
1970 Expenditure	22.8 ^a	1.7	.8	2.4	.3	NA	NA	NA	28.0
1970 Percent Distribution	81.4	6.1	2.9	8.6	1.0	NA	NA	NA	100.0
Percent Change, 1960-1970	86.2	23.3	29.5	274.6	-27.4	NA	NA	NA	82.0
Total Commuter Movement, 1970									
Workers Using Transit (Millions)									
Workers Using Transit	59.7	4.2 ^b	NC	NC	2.3 ^c	NC	NA	NA	66.2
Percent Distribution	90.2	6.3	NC	NC	3.5	NC	NA	NA	100.0
Percent Change, 1960-1970	44.3	20.2	NC	NC	8.6	NC	NA	NA	34.8
Intercity Freight Movement (Freight-Ton Miles)									
1972 Freight-Ton Miles	NA	NA	NA	3.8	785.0	325.0	445.0	457.0	2,015.8
Percent Distribution	NA	NA	NA	.2	38.9	16.1	22.1	22.7	100.0
Percent Change, 1952-1972	NA	NA	NA	1,094.9	31.5	98.9	157.4	253.7	89.6

NC=Not Computed, NA=Not Applicable.

^aIncludes only personal consumption expenditures for gasoline, oil, and tolls (i.e., the out-of-pocket costs of automobile travel).

^bTransit here refers to bus travel only; otherwise it refers to bus and rapid rail transit.

^cRail here refers to railroad commutation and subway travel; elsewhere it refers to rail travel only.

SOURCE: U.S. Department of Transportation, *Summary of National Transportation Statistics* (Washington, D.C.: U.S. Government Printing Office, 1973), p. 53; U.S. Bureau of The Census, *General Social and Economic Characteristics—United States Summary PC (1)-C1* (Washington, D.C.: U.S. Government Printing Office, 1972), Table 87 and comparable data from 1960 Census of Population; Association of American Railroads, *1973 Yearbook of Railroad Facts* (Washington, D.C.: Association of American Railroads, 1973), p. 36.

prompted the creation of some transportation monopolies and oligopolies which, in turn, have not always improved transportation productivity.¹⁰⁴ Declining service has reduced profit margins and investment potential in different transportation sectors (see *Table III-35*). Ultimately, as in the case of railroads and transit, this has led to increased governmental subsidies and public takeover of private transportation operations.

The pressing problems of economic competition have caused the private sector to show comparatively little interest in the building or operation of an integrated metropolitan transportation system, especially if it will reduce the economic growth potential of different transportation enterprises. Consequently, the overall urban transportation system suffers. Freight terminals that can serve both rail and motor transport interests are not constructed. Rail lines are not converted to mass transit use. Surface access to airports is often congested and inconvenient. Major highways and transit lines parallel one another, but offer little opportunity for intermodal transfer. Transportation systems, then, are often duplicative and at cross purposes with one another. The pitch and form of competition among private transportation providers has precluded their cooperation in building and maintaining a more flexible and interchangeable metropolitan transportation system.

Private Sector Transportation Responsibilities in Passenger Movement

The private sector, as noted in *Chapter 1*, plays a major part in the provision of urban transportation services. However, it increasingly faces severe economic difficulties that have produced more public intervention into private transportation operations. This has altered the balance between private and public activity in various passenger and freight movement services. What follows is a brief discussion of some of the more prominent economic difficulties facing private transportation providers and the changing balance in public and private transportation responsibilities.

Buses. Private mass transit was established in the 1840's and 1850's when horse drawn omnibuses first made their appearance. As transit technology improved, private enterprise flourished due to the large fiscal investment required for such things as trackage, equipment, horses, and stables. Local mass transit continued to require substantial capital investment with the advent of

the electric street railway. Increased use of these railway systems maintained the profitability of private ventures.

The 50 year period 1890-1940 witnessed considerable technical skill in managing and administering mass transit investments. However, the situation changed rapidly by the end of World War II with the advent of the motor bus. Transit systems became more labor intensive as operating costs outstripped investment requirements. Transit technology became standardized and more effort was required to handle the labor management problems of local transit operations.

The changing technology of mass transit coincided with the increase in automobile use. This combination produced higher operating costs and declining revenues—a cost-revenue squeeze—for private transit companies. By 1971, the annual gap between operating revenue and operating expenses for urban bus transit systems across the nation had grown to a level of over \$300-million. The percentage of firms that did not cover total costs rose from 22 percent in 1960 to 54 percent in 1969.¹⁰⁵ Thus, there are only marginal prospects for continued or expanded private investment in mass transit bus operations.¹⁰⁶

Commuter Railroads. 1970 data show that rail commuter service was generally a money losing operation. The aggregate deficit for 14 of the 16 commuter rail operations in the U.S. amounted to over \$35-million.¹⁰⁷ *Commuter railroad patronage from 1960 to 1970 for railroads serving the five major cities*¹⁰⁸ with important levels of service stabilized at a level of 248-million passengers. There were variations in the patterns for each of the cities, with New York dropping from 142 to 126-million passengers by 1965 and stabilizing at that level, while patronage increased by 17-million in Philadelphia and Chicago.

Most such railroad operations incur operating deficits which are then subsidized from state and local sources. Only two of the 16 commuter railroads in the nation operated at a net profit in 1970. The inability of the commuter lines to generate substantial operating profits means that their continued existence as private systems is doubtful.

Railroads have long exerted great pressure on the ICC to discontinue both intercity and commuter passenger services because of the mounting losses that they were suffering. By 1970, half of the nation's passenger trains were subject to discontinuation proceedings before the ICC. In response to this situation, the Congress enacted the *Rail Passenger Service Act of 1970*. That created the National Rail Passenger Corporation (better known as AMTRAK), an independent-for-profit body, to manage

Table III-35

RATES OF ECONOMIC RETURN AND CAPITAL INVESTMENT TRENDS, SELECTED INTERCITY TRANSPORTATION MODES

Transportation Mode:	Increase In Net Fixed Capital Stock: 1960-1969 (1969 Dollars)	Increase In Net Investment In Equipment And Facilities: 1960-1968	Average Rate Of Return To Stockholders: 1960-1969	Rate Of Return To Stockholders: 1960-1969	
				Highest	Lowest
<i>Intercity</i>					
Rail	.2%	3.9%	3.27%	4.97%	1.79%
Truck	165.1	107.4	11.33	15.72	4.93
Bus	-12.3	46.3	13.31	18.72	10.95
Airlines	637.1	211.1	7.14	20.99	-4.63
Water					
Transport	9.3	-2.6	9.74	13.40	5.73
Oil Pipelines	14.8	47.7	16.36	17.66	15.55

SOURCES: U.S. Department of Transportation, 1972 *National Transportation Report* (Washington, D.C.: U.S. Government Printing Office, 1972), pp. 22, 77; Transport Association of America, *Facts and Trends, 71-72* (Washington, D.C.: Transport Association of America, 1972), p. 26.

most of the nation's intercity rail passenger routes by contracting for service with existing railroads. It also provided for private railroad participation and subsidies for unavoidable passenger losses.

AMTRAK was exempted from Interstate Commerce Commission (ICC) regulations on fares and service, but it was required to serve any route that a state, regional, or local agency requested, provided the agency agreed to pay at least two-thirds of the losses incurred.¹⁰⁹ Several states have negotiated commuter subsidies with AMTRAK under this section of the law. Several of these subsidized operations are being carried out in the State of Illinois where trains carry passengers from satellite areas to Chicago, and the state has appropriated \$1-million to cover the cost. However, AMTRAK can not legally subsidize shorter distance intraurban commuter service, since it is authorized only to provide intercity railroad passenger service defined as all rail passenger service except commuter and other short haul service in metropolitan and suburban areas.

The Taxicab. The taxicab transports over 28 percent of all public transit passengers.¹¹⁰ More revenue is generated by taxicab operations than by the combined total of all other mass transit operations. As small private bus companies in smaller communities curtail or abandon service, the taxicab is often the only form of public transit available. Taxicabs are used mostly by white collar workers and housewives. Housewives ac-

count for a significant percentage of cab travel, representing over 30 percent of the trips in the central business areas and almost 55 percent in other areas. The cab is an important transit provider and the only competitor to the automobile in providing non-scheduled, "personalized" transportation.

The taxicab industry is dominated by small fleets (two or more taxicabs under one ownership) and owner-operators, there are about 7,200 fleet operations operating in about 3,300 communities in the United States. The current taxicab population is 162,000 vehicles, of which approximately half are in major metropolitan areas. At any one given time, the industry employs about 150,000 taxicab drivers, although over the course of one year approximately 600,000 individuals will have driven a taxicab. This high rate of turnover makes it very difficult to improve worker productivity.¹¹¹

While the taxicab can best compete with the automobile in offering personalized transport, the industry is suffering from many of the same ills that affect urban mass transit. Some studies have shown that only about 50 percent of cab mileage involves carrying fares. This falls short of the 60 percent paid mile operating ratio needed for a profitable operation. All these conditions have combined to reduce the economic growth potential of the cab industry.

One observer identified the immediate problems facing the taxicab industry as:

- 1) the inability to increase the productivity of the taxicab driver;
- 2) the inability to control the increased cost of doing business; and
- 3) the inability to increase revenues sufficiently to offset these higher costs.¹¹²

Consequently, the industry faces increasing difficulties in maintaining former profit levels, since its average fares have increased only 28.4 percent between 1965-1970 — an increase that is about 25 percent lower than that for the overall public transit industry.¹¹³

Another serious economic difficulty facing the taxicab industry is the cost imposed upon the industry by all three levels of government in the form of taxes and regulation. Federal and state governments affect cab operations by tax levies on sales, licenses, vehicles, and gasoline. At the same time, most local transit authorities are generally exempt from such taxes.

The regulation of taxicab operations is usually a responsibility of local government. Fleets or owner-operators may negotiate directly with the local government or may conduct negotiations through an association. Matters for negotiation typically include: (1) rates or fares, (2) the number of taxicabs, (3) insurance requirements, (4) licensing of drivers, and (5) mode of operation.¹¹⁴

Thus, uneven regulations in adjoining localities, and increased technological requirements are making taxicab fleets of ten cabs or less economically unfeasible, especially in smaller communities.¹¹⁵ Fleets of 100 or more vehicles are becoming more prevalent since they can be managed more efficiently.¹¹⁶

The status of the taxicab industry in urban transportation is not yet clearly defined. The cab can be used to provide personalized transit and is an attractive transit alternative to the automobile. Whether the industry can expand into such operations may depend on deregulating the industry, provision of public subsidies, or both.

Airlines. U.S. scheduled airlines carried over 202-million passengers in 1973, and they now account for more than 75 percent of the total intercity passenger miles traveled by public conveyance.¹¹⁷ More than 525 airports serve scheduled airline passengers in the United States.¹¹⁸ The growth and development of these airports is supported by a Federal grant program financed through an Airport-Airways Trust Fund created by the Congress in 1970.

The increased demand for air transportation has markedly increased the construction of airports. The number of civil airports on record with the FAA, as of November 1972 included 10,873 airports, 1,054 heliports, and 465 sea plane bases. It is estimated that an additional 1,050 airports may be constructed by 1982.

Increased airline use is reflected in burgeoning requests for Federal airport aid in large metropolitan centers. Projects involving STOL¹¹⁹ aircraft have been advocated to increase the use of smaller general aviation airports, thereby relieving the pressure on the large congested ones.¹²⁰

Continuing airport congestion problems still occur in metropolitan areas as a result of (a) the lack of adequately empowered multijurisdictional bodies to decide upon types of airports and their location, (b) environmental regulations concerning airport noise and ecological impact,¹²¹ (c) airport access problems and compatible land use, and (d) opposition of local interests to the development of new major airports.

A recent study done for the Federal Aviation Administration (FAA) emphasizes the need to coordinate aviation with other forms of transportation and with the pattern of urban settlement and activity.¹²² It suggests that commuter airports will be required for more efficient air travel in an urban region, especially when existing ground transport is being used to capacity and would be too costly in economic and social terms to expand.¹²³

The establishment of intown airports might be accomplished in a relatively short time and could ease urban congestion.¹²⁴ These facilities might be located at transportation interchanges, thereby providing more *intermodal* service in an urban area, especially with the development of metropolitan rapid transit, exclusive bus rights-of-way and other devices for improving metropolitan transportation. Other studies indicate that such airport facilities would greatly diminish the need for many of the planned new major jet ports.¹²⁵

Airport site selection and reduced airport congestion are two of the most pressing economic concerns for airlines. The development of land banking and airport zoning programs is regarded by public and private officials alike as essential to the economic health of the industry.¹²⁶ Congestion pricing techniques and revision of branch line subsidiaries are other proposed policies that might increase airline efficiency and reduce the demand for airport construction and improvement.¹²⁷

Urban Goods Movement

Metropolitan transportation problems also affect

urban goods movement. The urban freight industry is highly fragmented, involving many participants, with approximately 70 percent of all truck fleets consisting of only one vehicle and with approximately 8.75-million trucks being commercial for-hire conveyances. The industry handles mostly private, unregulated transport and there are few if any data on load factors, commodities transported, miles of operation, or frequency of service. However, there is little evidence that technology is sufficiently developed to bring about greater productivity in the industry. The fragmented character of the urban goods system, in turn, means that:¹²⁸

1. The existing urban goods movement system is inefficient, resulting in high operating costs and contributes to problems associated with traffic congestion, noise, air pollution, and ineffective land use.
2. The major benefits from improvements in this area would accrue to the private automobile user.
3. Significant improvements that can be made in the near future include increased consolidations of operations for the pick up and delivery of freight, temporary restrictions on the physical movement of vehicles during certain hours, restrictions or prohibitions upon curb side parking for loading and discharging vehicles, relocating terminals to the urban fringes as a means of reducing the number of large over-the-road-trucks in urban areas, and the multipurpose use of facilities in order to combine passenger-freight movement systems.

Urban transportation planning has neglected the problems of urban freight transport. A 1970 report of the Highway Research Board (HRB) urged that goods movement be a central component of comprehensive transportation policies or programs.¹²⁹ More specifically, it called for improvements in the intramodal and intermodal transfer of goods, reorganization of the freight transportation industry, coordinated Federal, state, and local regulations about urban goods movement, and greater financial and technical assistance for that segment of the trucking industry involved in urban goods movement. Other studies confirm the inefficiency of urban freight transportation systems and propose similar improvements.¹³⁰

Trucks and Urban Transportation. There are about 19-million trucks serving the commercial needs of this

nation. Large over-the-road trucks are the most conspicuous and constitute the bulk of the intercity commercial traffic. However, the vast majority, some 70 percent, weigh 100,000 pounds or less, and operate primarily within urban areas.

Trucks, per 1,000 population, are more prevalent in small than large cities. Light truck usage declines proportionally in large metropolitan areas where other modes of travel are available.¹³¹ However, truck trips in urban areas are heavily concentrated. The percentage of trucks in the typical urban traffic stream averages about 10-20 percent. Moreover, the truck is used more frequently during the day than the average automobile and adds significantly to urban traffic congestion.

Railroads. Another key component of the urban goods movement system is the railroad. Railroads presently account for 39 percent of all freight-ton mileage in the country.¹³² Every large metropolitan area and a number of smaller ones have freight terminals at focal points of the urban goods distribution system.

Railroads, however, have long been declining industries. Their share of intercity freight movement has been decreasing, the slack being taken up by truck and pipeline transport. Intercity passenger movement has been lost to both the airlines and the private automobile. On both fronts, railroads have not been a growing part of the urban transportation system.

The loss of market predominance in intercity freight and passenger travel has reduced investor interest in the railroads. Capital investment in rail facilities increased by only about 23 percent between 1947-1968 while it expanded by 326 percent in all other transportation sectors.¹³³ The plummeting reduction in capital investment, in turn, has led to depressed rates of economic return in the railroad industry, with average profit margins decreasing from 5.30 percent in 1929 to 2.95 percent in 1972.¹³⁴

The declining profitability of the railroads has been aggravated by regulations hindering competition against water carriers and truck transport¹³⁵ and by a lack of new capital for technological improvements, even though such money was readily available in other transportation sectors, especially aviation.¹³⁶ The economic decline of the railroads has been accompanied by management problems, labor disputes, and the inability to attract new capital funds for system modernization. All of these difficulties have led to the bankruptcy of several large northeastern railroads, most notably the Penn Central.¹³⁷

The bankruptcy of the Penn Central Railroad and other northeastern companies prompted the passage of the *Regional Rail Reorganization Act* (87 Stat. 985),

whereby these bankrupt railroads will be reorganized into the Consolidated Rail Corporation, a line with more than 26,000 miles in track and an annual freight capacity of 2.5-billion freight car miles. The rail corporation will be able to consolidate routes and thereby reduce operating costs. The act provides about \$1.5-billion in loan guarantees and also provides for Federal loans to state and local transportation authorities that wish to subsidize rail lines that would otherwise be abandoned.¹³⁸ This large scale public intervention into rail operations in the Northeast may be a harbinger of expanded Federal assistance to other railroad organizations which need new capital for modernization.¹³⁹

Private railroads face an increasingly difficult economic situation and may be subject to further public takeover. Much like public mass transit operations, they have had to compete against one another and with automotive transport as well. Their reorganizations have been hampered by antitrust laws; ICC regulations have sometimes hindered railroad efficiency; and the economic structure of the industry has led to inefficient management and lack of system modernization. Unless these impediments to increased economic efficiency are ameliorated, increased public assistance for railroads will be necessary to keep them in operation.

Waterways. Water transport accounts for more than 16 percent of the nation's freight movement. Such transportation is geared to flexible, low cost delivery of basic raw materials, fuel, and other bulk commodities, both semifinished and finished. One-hundred-thirty-one of the 150 American cities having a population of over 100,000 or more are located on commercial navigation channels, and 38 of the 50 states with almost 95 percent of the population have commercial transportation services provided by vessels operating on rivers, canals, bays, sounds, or lakes.

The growth and expansion of inland waterways transportation has resulted in the construction of many new and modern terminals for the handling of barge freight and the exchange of freight between water carriers and other modes of transportation.¹⁴⁰ The growth of barge transportation has spurred interest in publicly owned terminals as states, counties, municipalities, and port districts recognize the economic advantages of adequate terminal facilities.¹⁴¹

Waterway terminals have railroad and highway connections which permit interchange of freight among different modes. Consequently, commercial barge traffic is interconnected with rail, air, and highway transport. The pattern is not one of smooth cooperation, however,

since there is considerable competition between the barge system and the railroads, reflected in competitive rate structures¹⁴² and efforts to gain regulatory advantages in the Congress and elsewhere.

Water transport may increase in importance due to its low energy usage. According to the American Waterways Operators, water transportation requires less energy per ton mile than any other method of freight distribution. Water freight requires 500 British Thermal Units (BTU's) of energy for every ton mile of freight moved. Rail freight requires 750 BTU's per ton mile, pipelines 1,950 BTU's per ton mile, trucks 2,400 BTU's per ton mile, and air cargos 6,300 BTU's per ton mile¹⁴³ in many metropolitan areas, therefore, more efficient urban goods movement may well hinge on improved barge transport.

Private Sector Transportation Organizations

The significance of the private sector involvement in transportation is reflected by the number of associations that represent different transportation modes. The *Encyclopedia of Associations* reveals some 205 such associations in the transportation field.¹⁴⁴ These organizations range from those which cover the entire transportation field, to those which cover all aspects of one particular mode, and those which cover only one segment of one particular mode.

Transportation associations can exercise considerable influence in Federal, state, and local legislative and administrative processes. They often have considerable technical expertise and are relied on for basic data on private sector transportation activities. But, they have given little formal attention to the specific problems of urban transportation. Most of their data gathering is on a national or state basis only, not a metropolitan basis. Four of the most important national transportation associations are described briefly below.

The Transportation Association of America, representing industrial, agricultural, financial, and transportation interests, is the only national organization devoted exclusively to transportation concerns affecting all forms of transport. It coordinates the work of many other national organizations, providing close cooperation on lobbying for many legislative objectives. Its basic publication, *Facts and Trends*, provides statistical data about transportation.

The Association of American Railroads (AAR), estab-

lished as an umbrella organization consolidating a number of smaller more specialized groups, represents railroads accounting for 96 percent of the mileage and the business of all railroads in North America. Its lobbying and legislative efforts are considerable. The American Sound Transportation Review Organization (ASTRO), a study group of the AAR, prepared an indepth study, *The American Railroad Industry: A Prospectus*, which received unanimous railroad backing. This report indicates some awareness of metropolitan transportation problems although its primary focus is still on national railroad problems. Its major recommendation is that the railroads be allowed to price their product more competitively, and be freed from restrictive ICC regulation.¹⁴⁵

The American Trucking Associations, Inc., established in 1933, deals with state and Federal legislation affecting trucking competition. This organization focuses on issues of interstate traffic regulation. Data contained in its fact book, *American Trucking Trends*, are collected on a state basis and most of the data are then presented on a nationwide basis and broken down by product or commodity. Although the great majority of truck trips are intrametropolitan, relatively little information is provided by the ATA about metropolitan transportation problems that affect the trucking industry.

The Air Transport Association (ATA), headquartered in Washington, D.C., represents virtually all scheduled airlines in the United States. It serves as an information and research center designed to formulate and execute the industrywide planning necessary to achieve and maintain a profitable air transport system. ATA implements industrywide cooperation by serving as a focal point for various conferences and committees, by acting as the airlines' main spokesman in appearances before Congressional committees and regulatory agencies, and by producing data to assess trends in the industry.

Because private associations have given little attention to the special transportation problems of metropolitan areas, they may have missed opportunities to develop innovative solutions to private sector urban transportation problems. For example, mass transit and trucking interests might benefit from use of exclusively designated highways for bus and freight traffic. Private associations could probably benefit their members by focusing more clearly on support for metropolitan transportation policies that emphasize private sector participation and coordination of public-private transportation requirements.

The private sector faces an arduous task in maintaining its role as urban transportation providers. Changing patterns of passenger and freight movement, severe economic competition among transportation modes, regulatory imbalances, and uneven public subsidies have combined to make it difficult for private concerns to continue to provide efficient and economical services. At the same time, public sentiment may well favor greater private sector involvement in the urban transportation system. Attainment of that goal, however, will require changes in a number of financing, regulatory, and service policies.

- Private sector passengers and freight movements are important determinants of the character of urban transportation systems. Sustaining private enterprise in the transportation sector may improve the economic efficiency of such systems and reduce taxpayer burdens for transport subsidies.

- The private sector still provides the bulk of both passenger and freight transportation services, but there have been decided shifts in the dominance of different private service providers. Passenger movement has shifted over time from the railroad and mass transit systems to the airlines and the private automobile. Freight movement has shifted largely from the railroads to trucks, with airlines and water transport making marginal gains. Overall transport revenues have increased substantially in air and truck transport, and declined proportionately in the railroad sector. Capital investments have followed the same pattern.

- Increasingly, transportation operations are passing from private to public hands. Eighty-four percent of all mass transit passengers are carried on publicly owned systems. Airlines receive considerable public funds for airport construction and subsidies for providing service to smaller urban and non-metropolitan areas. Most intercity rail passenger travel is under the control of AMTRAK, a national service corporation. The recently enacted Northeast railroad reorganization means that a considerable portion of the country's freight transport will operate under the control of a Federally created corporation.

- The weak or limited growth potential of water freight transport and the taxicab industry means that these private sectors may not be able to gain a

greater share of the passenger or freight traffic being carried by publicly owned or subsidized transit, rail, or air carriers.

- The economic difficulties of private transportation providers in some measure, can be traced to either the economic structure of the industry or the types of public controls that are placed on an industry's operations. Railroads and private mass transit have been especially hindered by inflexible and outmoded operating regulations, and their economic vulnerability has been heightened by the tremendous public investments in interurban highway systems. The weakened economic base of rail and transit operations has, in turn, led to massive local acquisition of transit operations and large scale Federal involvement in the control of rail operations.

- Each part of the private transportation sector faces unique economic problems that may have to be solved through public intervention. Air transport needs public assistance for the development of land use policies that will provide future sites for the construction of major new airports. Private transit and taxicab systems might improve their economic base if allowed to bid for the operations of publicly owned transit systems or if protected from competition with tax financed and Federally aided systems. Railroads would most certainly benefit from being able to discontinue unprofitable lines and sell underused terminal facilities in large cities to other transport modes. Truck transport would benefit from the easing of economic regulations that now prevent more efficient intercity transport.

- At the same time, economic performance of the private transportation sector might be improved by greater efforts to deconcentrate the industry and to encourage subcontracting the operations of large carriers (e.g., the use of air taxis). However, the considerable fiscal requirements for research and development in certain transport sectors may be considerably beyond the reach of many segments of private enterprise. This may result in the need for greater public support of research and development covering the technology of passenger and freight transport.

- Any increase in the economic health of different parts of the private transportation sector depends

on improving the interrelatedness of transportation systems. Encouragement of highway development will necessarily mean less freight and passenger transport on alternative modes. Similarly, the development of more stringent environmental and land use controls may lead to a curtailment of highway related travel, and may increase the use of rapid transit, rail, and water transport. The balance of modes and degree of private sector involvement in each of these modes may depend on larger policy questions relating to environmental quality, fuel conservation, urban growth, and economic stability. Answers to those larger questions will play a significant part in deciding on the relative importance of different modes and the extent and type of private involvement in each mode.

- Private transportation organizations have given little attention to their impact on metropolitan transportation systems. Primarily concerned with retaining or expanding their share of passenger and freight movement, they have had little concern with the impact of this competition on the construction and operation of metropolitan transportation systems. Consequently, there has been minimal intermodal cooperation in building integrated transportation systems. Freight terminals are not always equally accessible to air, rail, and motor transport destinations. Highway and mass transit facilities are not always interconnected. Intercity air and rail transportation is often needlessly duplicated and over extended. Freight and passenger transport might benefit from integration (companies having transportation holdings in air, water, and motor transport, for example) which could provide more efficient transportation systems.

GOVERNMENT FINANCING OF TRANSPORTATION

Urban transportation responsibilities are markedly affected by the fiscal and regulatory policies of all three levels of government. Federal and state grants-in-aid; local tax and debt restrictions; special district financing practices; and Federal, state, and local regulatory directives all condition various dimensions of the transportation process. The presence or lack of grants-in-aid influences state and local transportation budget policy. State and local tax and debt restrictions can lead to the creation of special purpose transportation units which,

in turn, often face considerable restrictions in financing their assigned transportation responsibilities. What follows is a descriptive overview of some of the more pertinent intergovernmental fiscal policies that affect public and private responsibilities in the transportation sector.

Fiscal Allocations Among Federal, State, and Local Government

All three levels of government have important expenditure responsibilities for transportation. Basically, the Federal government has a major financial assistance role in highway programs, and substantial direct involvement in airports and water transport. State governments

provide directly a predominant portion of all highway expenditures, while local governments have virtually exclusive responsibilities for mass transit and total responsibility for parking. Of the three levels of government, the states concentrate most on a single mode. Ninety-eight percent of their overall direct transportation expenditures are for highway purposes while less than 2 percent of the Federal government's direct outlays are used for this local purpose (see *Table III-36*).

Intergovernmental aid, both Federal and state, is highly concentrated on highways. Over 95 percent of all Federal transportation aid and 98 percent of all state transportation aid was spent for this purpose in 1971. However for the states, their direct highway expenditures are composed of Federal or local intergovernmental transfers. On the other hand, only 23

Table III-36

TRANSPORTATION EXPENDITURES BY LEVEL OF GOVERNMENT: 1971

Type Of Fund Flow	Total	Expenditures (\$000,000 By Transportation Mode)				
		Highways	Mass Transit	Airports	Water Transport	Parking
Federal Direct Expenditures	4,062	301	—	2,115	1,646	—
Federal-State Intergovernmental Expenditures	4,848	4,814	—	34	—	—
Local-State Intergovernmental Expenditures	158	158	—	—	—	—
State Direct Expenditures	12,613	12,304	—	148	161	—
Federal-Local Intergovernmental Expenditures	237	47	154	36	—	—
State-Local Intergovernmental Expenditures	2,557	2,507	—	42	8	—
Local-Local Intergovernmental Expenditures	107	94	—	11	2	—
Local Direct Expenditures	9,225	5,792	2,018	913	343	159
Total Direct Expenditures	25,900	18,397	2,018	3,176	2,150	159
Percent Federal	15.6%	1.6%	0.0%	66.6%	76.6%	0.0%
Percent State	48.7%	66.7%	0.0%	4.7%	7.5%	0.0%
Percent Local	35.7%	31.7%	100.0%	28.7%	15.9%	100.0%
Total Intergovernmental Expenditures	7,907	7,620	154	123	10	—
Federal-Local Intergovernmental Expenditures As Percent Of State Direct Expenditures	29.7%	40.4%	—	22.9%	0.0%	—
Federal-State Intergovernmental Expenditures As Percent Of Local Direct Expenditures	29.3%	42.6%	7.6%	8.5%	2.3%	0.0%

SOURCES: U.S. Bureau of the Census, *Governmental Finances 1970-71* (Washington, D.C.: U.S. Government Printing Office, 1972), and unpublished census data, 1971.

Table III-37

**RELATIVE HIGHWAY EXPENDITURES, BY STATE AND LEVEL OF
LOCAL GOVERNMENT: 1971**

State	Percent Of Total Transportation Expenditures ¹ Made For Highway Purposes: 1971			
	State	County	Municipal	Special District
U.S. Totals	97.6	92.4	64.4	6.9
Alabama	96.3	99.7	81.7	0.0
Alaska	78.4	100.0	61.8	N A
Arizona	99.9	99.3	64.1	N A
Arkansas	99.9	99.9	72.5	100.0
California	99.8	94.2	56.7	2.3
Colorado	100.0	96.0	66.4	45.5
Connecticut	97.9	N A	90.4	100.0
Delaware	100.0	18.8	64.1	100.0
Florida	99.5	40.2	75.6	0.0
Georgia	94.7	95.3	51.7	8.4
Hawaii	48.2	100.0	94.2	N A
Idaho	100.0	98.2	77.5	97.7
Illinois	99.1	99.6	79.3	.1
Indiana	98.9	98.6	83.9	N A
Iowa	100.0	100.0	85.8	100.0
Kansas	100.0	99.7	91.2	0.0
Kentucky	99.5	73.8	76.7	100.0
Louisiana	99.4	96.8	80.7	0.0
Maine	98.8	87.6	86.7	N A
Maryland	93.8	99.8	92.0	100.0
Massachusetts	84.0	99.1	95.7	.1
Michigan	97.7	91.0	71.9	0.0
Minnesota	98.9	99.9	81.0	0.0
Mississippi	93.9	99.2	80.1	0.0
Missouri	99.9	99.5	53.2	29.3
Montana	99.7	84.5	77.6	N A
Nebraska	99.5	99.9	94.6	0.0
Nevada	100.0	54.5	85.2	100.0
New Hampshire	99.9	N A	95.3	100.0
New Jersey	97.8	96.7	95.6	19.8
New Mexico	99.8	96.9	78.3	N A
New York	96.4	95.2	31.3	18.5
North Carolina	98.1	.6	91.7	0.0
North Dakota	99.6	100.0	79.4	0.0
Ohio	99.6	98.6	75.3	0.0
Oklahoma	99.9	100.0	44.4	N A
Oregon	99.9	99.8	89.4	.9
Pennsylvania	99.0	56.0	86.8	4.3
Rhode Island	94.3	N A	98.5	100.0
South Carolina	93.2	93.8	92.2	12.3
South Dakota	98.5	99.7	78.8	N A
Tennessee	99.6	99.6	73.2	.1
Texas	99.9	98.9	68.2	.5
Utah	98.2	98.9	73.3	N A
Vermont	99.3	N A	98.0	100.0

Table III-37 (Cont.)

State	Percent Of Total Transportation Expenditures ¹ Made For Highway Purposes: 1971			
	State	County	Municipal	Special District
Virginia	98.0	95.9	82.0	94.4
Washington	99.9	97.2	76.6	0.0
West Virginia	99.8	2.9	83.6	0.0
Wisconsin	98.4	94.3	94.3	N A
Wyoming	99.3	98.2	91.5	N A

¹Total includes direct and intergovernmental expenditures. Expenditure totals include Federal aid also.
NA = Not Available.

SOURCE: U.S. Bureau of the Census, unpublished data, 1971.

percent of direct state airport expenditures are financed from Federal or state aid, as opposed to not more than 9 percent of expenditures in each of the other modes.

States then place heavy emphasis on highway expenditures. Only three states — Alaska, Hawaii, and Massachusetts — spend less than 90 percent of their transportation funds for highway programs. Similarly,

counties generally earmark 90 percent of their transportation expenditures for highways, except in seven states (Delaware, Florida, Kentucky, Maine, Montana, Nevada, and Pennsylvania). But, in marked contrast, municipalities spend about 35 percent of their transportation monies for non-highway responsibilities while special districts except in 12 states have predominantly non-highway expenditure responsibilities (see *Table III-37*).

Figure III-7

PATTERNS OF TRANSPORTATION EXPENDITURE ASSIGNMENT: 1971

Predominately State	State-County	State-Municipal	State-County-Municipal	State-Municipal-Special District	State-Municipal-County-Special District
Alaska	Idaho	Arizona	Alabama	Delaware	California
Kentucky	Mississippi	Connecticut	Arkansas	Illinois	Tennessee
North Carolina	Montana	Hawaii	Colorado	Massachusetts	Washington
South Carolina	Nevada	Maine	Florida	Pennsylvania	
West Virginia	Oregon	Missouri	Georgia	New York	(3 States)
Wyoming	South Dakota	New Hampshire	Indiana		
(6 States)	(6 States)	New Jersey	Iowa	(5 States)	
		New Mexico	Kansas		
		Ohio	Louisiana		
		Rhode Island	Maryland		
		Texas	Michigan		
		Utah	Minnesota		
		Vermont	Nebraska		
		Virginia	North Dakota		
		(14 States)	Oklahoma		
			Wisconsin		
			(16 States)		

SOURCE: ACIR tabulation (see *Table III-38*).

Table III-38

**TOTAL TRANSPORTATION EXPENDITURE RESPONSIBILITIES, BY
LEVEL OF STATE AND LOCAL GOVERNMENT: 1971**

State	Total Per Capita Transportation Expenditure*	Percent Of Total Expenditures Made At			
		State Level	County Level	Municipal Level	Special District Level
U.S. Totals ^a	\$133.54	69.0%	10.4%	16.6%	4.0%
Alabama	108.61	73.2	16.1	10.6	.1
Alaska	426.22	86.9	.8	12.3	0.0
Arizona	115.78	74.8	8.5	16.7	0.0
Arkansas	78.68	69.2	14.5	16.2	.1
California	124.32	53.0	11.4	23.8	11.8
Colorado	114.09	70.6	14.9	14.5	0.0
Connecticut	99.03	75.1	0.0	24.8	.1
Delaware	124.06	75.6	.8	10.7	12.9
Florida	96.93	66.1	22.3	11.2	.4
Georgia	85.84	64.4	17.6	17.6	.4
Hawaii	193.79	82.1	5.6	12.3	0.0
Idaho	150.05	73.5	12.4	8.3	5.8
Illinois	127.18	60.4	8.1	19.3	12.2
Indiana	94.58	70.8	15.4	13.8	0.0
Iowa	160.46	62.6	22.2	15.2	0.0
Kansas	126.58	60.1	19.6	20.0	0.3
Kentucky	114.37	91.1	4.4	4.5	0.0
Louisiana	112.21	75.0	10.5	13.3	1.2
Maine	128.95	71.4	.6	28.0	0.0
Maryland	116.95	76.2	12.3	11.5	0.0
Massachusetts	121.83	49.5	.9	22.6	27.0
Michigan	100.46	58.5	20.2	21.2	.1
Minnesota	142.13	54.3	19.6	21.5	4.6
Mississippi	132.20	71.4	19.5	9.1	0.0
Missouri	98.31	70.2	8.9	20.2	.7
Montana	190.86	81.3	11.8	6.9	0.0
Nebraska	138.95	60.7	19.2	18.0	2.1
Nevada	177.39	70.2	21.9	7.9	0.0
New Hampshire	122.68	73.2	0.0	25.8	1.0
New Jersey	97.85	67.3	8.4	16.8	7.5
New Mexico	121.61	82.4	5.2	12.4	0.0
New York	149.56	35.2	6.2	50.1	8.5
North Carolina	77.81	86.0	12.0	12.0	1.6
North Dakota	196.62	67.3	17.3	15.0	.4
Ohio	103.75	63.8	12.5	23.3	.4
Oklahoma	116.37	67.4	17.0	15.6	0.0
Oregon	152.17	69.8	16.7	7.0	6.5
Pennsylvania	119.80	69.0	3.7	14.7	12.6
Rhode Island	51.58	70.6	0.0	29.4	0.0
South Carolina	73.69	88.2	6.5	4.5	.8
South Dakota	174.44	68.2	19.2	12.6	0.0
Tennessee	124.09	59.2	11.1	11.8	17.9
Texas	94.18	62.3	12.1	21.6	4.0
Utah	112.29	83.3	6.5	10.2	0.0
Vermont	200.46	80.5	0.0	19.5	0.0

Table III-38 (Cont.)

State	Total Per Capita Transportation Expenditure*	State Level	Percent Of Total Expenditures Made At			Special District Level
			County Level	Municipal Level		
Virginia	98.62	84.1	2.2	11.8	1.9	
Washington	177.72	56.1	13.1	14.1	16.7	
West Virginia	181.09	96.1	.6	3.0	.3	
Wisconsin	126.35	44.9	27.5	27.6	0.0	
Wyoming	243.88	89.5	5.7	4.8	0.0	

*Total includes direct and intergovernmental expenditure; expenditure totals also include Federal aid.

^aUnweighted mean.

SOURCE: U.S. Bureau of the Census, unpublished data, 1971.

State-Local Service Allocations

Not unexpectedly, states differ in their overall allocation of transportation financing responsibilities between the state and local levels. *Figure III-7* indicates six relatively distinct patterns of state-local fiscal allocations for the transportation function in the 50 states (see also *Table III-38*). Six largely rural states rely on one dominant service provider — the state — to provide the bulk of transportation services.¹⁴⁶ Twenty other states rely on a combination of states and counties or states and municipalities. Another 16 make use of all three types of general purpose governmental units — states, counties, and municipalities — to carry out the transportation function. Five heavily urbanized states have state, municipal, and special district governments carrying out transportation programs, while three states, California, Tennessee, and Washington, allocate significant transportation responsibilities among all four types of state and local governmental jurisdictions.

While it is difficult to generalize what determines these patterns of service allocation, the degree of urbanization and diversity of modes seem to have bearing. Transportation responsibilities in the more urbanized states tend to be allocated to three or more jurisdictional levels. And six of the eight states granting special districts significant transportation responsibilities are heavily urbanized. At the other end of the spectrum, the 12 states that rely on either states or states and counties to do the job are sparsely populated, rural jurisdictions.

In terms of good trends, states have tended to centralize highway expenditure responsibilities for providing airports; and special districts have undertaken

major responsibilities for providing mass transit. The relative allocations of service responsibilities among state and local governments in the water transport function have remained relatively stable (see *Tables III-39 to III-42*).

Fourteen states increased their overall highway expenditure responsibilities between 1957 and 1971, generally reducing the county and municipal role in the function. Counties rarely increased their expenditures, while municipalities in several states — notably Connecticut where counties were abolished — expanded their fiscal responsibilities. Special districts played a minor role in the highway function in both 1957 and 1971 (see *Table III-39*).

In providing airports (see *Table III-40*), states, counties, and municipalities increased their relative service responsibilities in various parts of the nation from 1957 to 1971. Counties in Kentucky, Montana, Nevada, South Carolina, and West Virginia assumed major roles as did state governments in Maine, Maryland, Massachusetts, New Jersey, South Dakota, Utah, Vermont, and Wyoming. Municipalities in Illinois, New Mexico, and Oregon expanded their airport duties largely at the expense of counties or special districts. Special districts assumed or expanded their airport responsibilities in Nebraska, South Carolina, Texas, and Washington, largely at the expense of counties and municipalities. Service allocations remained stable in about 21 states. Airports were the exclusive responsibility of a single jurisdictional level in ten cases in 1957 but in only four by 1971.

Several states increased their water transport duties during these same years (see *Table III-41*), and five of them, Indiana, Maryland, Michigan, Mississippi, and Washington, assumed almost full control of the function.

Table III-39

HIGHWAY EXPENDITURES, BY LEVEL OF STATE AND LOCAL GOVERNMENT: 1957 AND 1971

State	Total Highway Finances: 1971 (000's)	Percent State	Percent County	Percent Municipal	Percent Special District	Total Highway Finances: 1957 (000's)	Percent State	Percent County	Percent Municipal	Percent Special District
U.S. Totals	\$20,548,779	72.0	12.0	15.5	.5	\$7,800,451	62.5	15.4	20.8	1.3
Alabama	360,026	74.1	16.9	9.0	—	137,867	57.6	27.8	14.6	—
Alaska	102,157	89.0	1.0	10.0	—	NA	NA	NA	NA	NA
Arizona	200,958	79.6	9.0	11.4	—	54,153	70.1	20.3	9.6	—
Arkansas	146,063	72.5	15.2	12.2	.1	60,862	70.0	20.9	9.0	.1
California	1,946,998	68.4	13.9	17.4	.3	654,441	66.5	16.5	16.7	.3
Colorado	246,175	74.7	15.1	10.2	—	89,542	58.3	22.7	19.0	—
Connecticut	293,089	76.6	—	23.3	.1	242,630	88.4	—	11.6	—
Delaware	66,104	79.1	.2	7.2	13.5	22,735	93.6	.2	6.2	—
Florida	568,181	79.1	10.7	10.2	—	204,341	75.7	11.0	13.3	—
Georgia	347,748	70.2	19.3	10.5	—	121,435	57.0	26.7	16.2	.1
Hawaii	86,762	69.7	9.8	20.5	—	NA	NA	NA	NA	NA
Idaho	107,967	74.9	12.5	6.5	6.1	38,656	62.3	16.8	11.0	9.9
Illinois	1,185,764	71.9	9.7	18.4	—	417,072	45.2	14.8	40.0	—
Indiana	482,752	72.4	15.7	11.9	—	167,959	62.4	23.0	14.6	—
Iowa	447,780	64.0	22.7	13.3	—	181,954	53.4	34.8	11.3	.5
Kansas	279,872	61.4	19.9	18.7	—	170,770	66.1	17.2	16.7	—
Kentucky	365,462	93.1	3.3	3.6	—	102,974	85.3	7.4	7.1	.2
Louisiana	394,222	78.1	10.6	11.3	—	154,302	74.1	10.7	15.2	—
Maine	123,347	74.0	.6	25.4	—	53,128	68.2	1.0	30.7	.1
Maryland	441,422	75.8	13.0	11.2	—	165,113	71.3	15.1	13.6	—
Massachusetts	435,763	64.9	1.3	33.8	—	291,299	71.9	.5	27.6	—
Michigan	820,860	62.9	20.4	16.7	—	364,668	54.0	23.2	22.8	—
Minnesota	500,701	59.2	21.6	19.2	—	176,918	54.2	21.0	24.8	—
Mississippi	275,590	71.6	20.7	7.7	—	84,156	49.5	40.0	10.5	—
Missouri	429,029	76.3	9.6	11.6	2.5	146,825	68.6	9.0	19.9	2.5
Montana	130,243	84.1	10.4	5.5	—	53,148	69.5	17.5	13.0	—
Nebraska	202,969	62.5	19.8	17.7	—	73,301	54.6	28.9	16.5	—
Nevada	79,906	79.0	13.4	7.6	—	23,327	82.8	8.7	8.5	—
New Hampshire	92,281	74.1	—	24.8	1.1	41,929	74.3	—	24.9	.8
New Jersey	653,744	71.9	8.9	17.6	1.6	217,993	56.0	9.9	21.2	12.9

Table III-39 (Cont.)

State	Total Highway Finances: 1971 (000's)	Percent State	Percent County	Percent Municipal	Percent Special District	Total Highway Finances: 1957 (000's)	Percent State	Percent County	Percent Municipal	Percent Special District
New Mexico	121,565	84.9	5.2	9.9	—	53,905	86.7	5.6	7.7	—
New York	1,570,413	59.4	10.4	27.5	2.7	652,711	46.4	11.1	36.3	6.2
North Carolina	381,478	88.5	—	11.5	—	150,876	86.5	—	13.5	—
North Dakota	118,243	69.7	18.0	12.3	—	47,085	53.3	26.8	19.9	—
Ohio	1,045,043	68.0	13.2	18.8	—	422,352	57.6	17.3	25.1	—
Oklahoma	278,059	73.5	18.9	7.6	—	121,124	67.2	25.2	7.6	—
Oregon	304,429	75.2	18.0	6.7	.1	100,911	57.6	31.3	10.8	.3
Pennsylvania	1,190,810	81.6	2.5	15.3	.6	371,848	65.1	3.5	31.1	.3
Rhode Island	47,318	69.7	—	30.3	—	31,318	73.6	—	26.4	—
South Carolina	179,266	88.7	6.6	4.6	.1	59,684	78.5	15.0	6.5	—
South Dakota	112,445	69.7	19.9	10.4	—	54,498	66.9	20.3	12.8	—
Tennessee	389,410	75.0	14.1	10.9	—	118,205	57.8	25.9	16.3	—
Texas	960,612	70.0	13.5	16.5	—	405,066	64.5	19.7	15.8	—
Utah	118,151	85.4	6.7	7.9	—	34,523	70.6	13.4	16.0	—
Vermont	90,960	80.8	—	19.2	—	27,328	60.2	—	39.7	.1
Virginia	400,560	95.6	—	4.4	—	181,674	79.3	1.7	9.1	9.9
Washington	488,655	70.3	16.1	13.6	—	155,957	60.2	22.9	16.9	—
West Virginia	312,422	97.4	—	2.6	—	59,016	91.5	.1	8.4	—
Wisconsin	542,995	45.9	27.0	27.1	—	209,530	30.2	34.8	35.0	—
Wyoming	82,010	89.9	5.6	4.5	—	29,342	82.4	8.8	8.8	—

NA=Not Applicable.

SOURCES: U.S. Bureau of the Census, *U.S. Census of Governments: 1957*, Vol. III, No. 5, *Compendium of Government Finances* (Washington, D.C.:

U.S. Government Printing Office, 1959). U.S. Bureau of the Census, unpublished data, 1971.

Table III-40

**AIRPORT EXPENDITURES, BY LEVEL OF STATE AND LOCAL GOVERNMENT:
1957 AND 1971**

State	Total Airport Finances: 1971* (000's)	Percent State	Percent County	Percent Municipal	Percent Special District	Total Airport Finances: 1957* (000's)	Percent State	Percent County	Percent Municipal	Percent Special District
U.S. Totals	\$1,063,157	13.9	17.5	43.4	25.2	\$231,754	2.7	13.2	45.9	38.2
Alabama	7,001	4.4	2.1	86.3	7.2	2,175	6.4	3.5	90.1	—
Alaska	23,676	98.7	—	1.3	—	NA	NA	NA	NA	NA
Arizona	13,062	1.2	1.0	97.8	—	3,970	—	7.0	93.0	—
Arkansas	5,582	—	.4	99.6	—	683	—	—	100.0	—
California	130,454	.5	12.7	86.3	.5	17,348	—	9.1	90.2	.7
Colorado	13,056	—	11.7	88.3	—	2,662	—	7.1	92.9	—
Connecticut	5,012	71.2	—	28.8	—	1,592	91.6	—	8.4	—
Delaware	431	—	100.0	—	—	323	—	100.0	—	—
Florida	85,091	—	91.2	7.7	1.1	12,445	—	91.8	7.5	.7
Georgia	35,818	—	9.2	90.8	—	2,496	—	11.4	88.6	—
Hawaii	51,781	100.0	—	—	—	NA	NA	NA	NA	NA
Idaho	2,148	—	11.7	88.3	—	474	—	8.3	91.7	—
Illinois	51,062	6.4	.9	84.9	7.8	7,494	.3	—	66.0	33.7
Indiana	8,371	—	12.8	87.2	—	3,047	—	6.1	93.9	—
Iowa	4,697	—	—	100.0	—	1,759	—	—	100.0	—
Kansas	3,624	—	4.8	74.9	20.3	2,800	—	.1	88.6	11.3
Kentucky	5,263	2.3	81.9	15.8	—	212	7.5	—	92.5	—
Louisiana	11,345	—	12.2	84.1	3.7	6,247	—	22.9	77.1	—
Maine	2,667	9.2	3.8	87.0	—	852	2.5	—	97.5	—
Maryland	1,630	—	7.6	92.4	—	1,408	—	—	100.0	—
Massachusetts	38,321	94.7	.1	5.2	—	3,035	46.8	—	53.2	—
Michigan	29,489	26.9	52.6	17.5	3.0	7,677	16.0	64.3	19.7	—
Minnesota	29,620	.9	.1	13.9	85.1	4,036	.2	—	22.2	77.6
Mississippi	5,129	—	9.4	90.6	—	1,060	—	—	100.0	—
Missouri	41,788	.1	.5	97.0	2.4	8,695	—	—	100.0	—
Montana	4,336	3.9	57.9	38.4	—	724	—	28.4	71.6	—
Nebraska	6,156	5.4	—	25.7	68.9	1,116	26.5	—	73.5	—
Nevada	9,819	—	91.4	8.6	—	731	—	45.6	54.4	—
New Hampshire	721	4.9	—	95.1	—	241	—	—	100.0	—
New Jersey	4,178	—	46.5	53.5	—	274	—	—	100.0	—

Table III-40 (Cont.)

State	Total Airport Finances: 1971* (000's)	Percent State	Percent County	Percent Municipal	Percent Special District	Total Airport Finances: 1957* (000's)	Percent State	Percent County	Percent Municipal	Percent Special District
New Mexico	1,803	—	11.3	88.7	—	1,176	—	79.8	20.2	—
New York	167,670	5.6	4.3	1.1	89.0	78,821	—	1.6	2.5	95.9
North Carolina	10,993	—	15.5	24.5	60.0	852	—	10.2	63.6	26.2
North Dakota	4,393	7.9	—	80.2	11.9	570	—	—	100.0	—
Ohio	23,122	—	8.2	89.9	1.9	8,017	—	7.5	92.5	—
Oklahoma	20,822	—	—	100.0	—	3,201	—	—	100.0	—
Oregon	1,274	8.4	9.4	80.2	2.0	3,652	—	1.2	12.0	86.8
Pennsylvania	37,870	4.6	57.7	33.5	4.2	7,236	1.5	38.3	60.2	—
Rhode Island	1,579	100.0	—	—	—	757	100.0	—	—	—
South Carolina	2,909	20.8	26.7	8.3	44.2	533	21.8	8.8	69.4	—
South Dakota	3,045	8.7	.9	90.4	—	382	10.7	.6	88.7	—
Tennessee	12,092	—	1.7	30.6	67.7	1,302	—	2.5	97.5	—
Texas	73,314	—	1.9	70.2	27.9	19,664	—	5.4	94.6	—
Utah	3,737	9.7	2.2	88.1	—	1,096	—	3.9	96.1	—
Vermont	638	77.0	—	23.0	—	223	—	—	100.0	—
Virginia	6,317	9.0	5.6	77.7	7.7	730	19.3	—	80.7	—
Washington	42,831	—	5.2	3.1	91.7	3,516	—	29.7	16.9	53.4
West Virginia	2,751	—	52.5	11.2	36.3	2,385	—	24.9	13.1	62.0
Wisconsin	14,308	28.9	59.0	12.1	—	1,480	32.5	45.6	21.9	—
Wyoming	361	19.4	23.0	57.6	—	585	—	12.7	87.3	—

*Direct expenditures (intergovernmental aid is included in expenditures of governments receiving aid).

NA=Not Applicable.

SOURCES: U.S. Bureau of the Census, U.S. Census of Governments: 1957, Vol. III, No. 5, *Compendium of Government Finances* (Washington, D.C.: U.S. Government Printing Office, 1959). U.S. Bureau of the Census, unpublished data, 1971.

Table III-41

**WATER TRANSPORT EXPENDITURES, BY LEVEL OF STATE AND LOCAL
GOVERNMENT: 1957 AND 1971**

State	Total Water Transport: 1971* (000's)	Per- cent Total	Per- cent State	Per- cent Municipal	Per- cent Special District	Total Water Transport: 1957 (000's)	Per- cent Total	Per- cent State	Per- cent County	Per- cent Municipal	Per- cent Special District
U.S. Totals	\$505,126	100.0%	32.0%	31.1%	36.9%	\$187,066	100.0%	28.8%	.9%	25.4%	44.8%
Alabama	9,654	100.0	100.0	—	—	7,898	100.0	99.5	.3	.2	—
Alaska	7,189	100.0	22.5	77.5	—	NA	NA	NA	NA	NA	NA
Arizona	7	100.0	—	100.0	—	—	—	—	—	—	—
Arkansas	627	100.0	—	100.0	—	—	—	—	—	—	—
California	91,248	100.0	—	71.1	28.9	32,337	100.0	15.1	3.9	64.9	16.0
Colorado	—	—	—	—	—	—	—	—	—	—	—
Connecticut	1	100.0	100.0	—	—	57	100.0	87.7	—	12.3	—
Delaware	1,994	100.0	—	100.0	—	536	100.0	—	—	100.0	—
Florida	7,244	100.0	28.1	47.7	24.2	3,508	100.0	.5	—	37.5	62.0
Georgia	13,912	100.0	95.9	.7	3.4	1,833	100.0	89.4	—	6.8	3.8
Hawaii	13,172	100.0	100.0	—	—	NA	NA	NA	NA	NA	NA
Idaho	151	100.0	—	.7	99.3	—	—	—	—	—	—
Illinois	4,283	100.0	80.5	3.6	15.9	11,346	100.0	11.4	—	.3	88.3
Indiana	2,723	100.0	100.0	—	—	—	—	—	—	—	—
Iowa	93	100.0	—	100.0	—	78	100.0	—	—	100.0	—
Kansas	—	—	—	—	—	—	—	—	—	—	—
Kentucky	23	100.0	—	100.0	—	26	100.0	—	—	100.0	—
Louisiana	22,784	100.0	80.6	—	19.4	15,587	100.0	88.5	—	—	11.5
Maine	2,182	100.0	10.9	89.1	—	203	100.0	99.5	—	.5	—
Maryland	21,487	100.0	99.1	.9	—	3,198	100.0	—	—	100.0	—
Massachusetts	16,483	100.0	99.6	.4	—	13,032	100.0	98.2	—	1.8	—
Michigan	4,131	100.0	98.5	1.5	—	412	100.0	63.6	—	—	36.4
Minnesota	14,162	100.0	.1	99.9	—	1,681	100.0	—	6.3	93.7	—
Mississippi	13,127	100.0	97.8	1.6	.7	441	100.0	—	36.7	1.8	61.5
Missouri	74	100.0	—	86.5	12.5	19	100.0	—	—	100.0	—
Montana	—	—	—	—	—	—	—	—	—	—	—
Nebraska	8	100.0	—	100.0	—	—	—	—	—	100.0	—
Nevada	—	—	—	—	—	—	—	—	—	—	—
New Hampshire	34	100.0	100.0	—	—	3	100.0	—	—	100.0	—
New Jersey	20,451	100.0	44.2	1.1	54.8	1,722	100.0	58.7	—	.6	40.7

Table III-41 (Cont.)

State	Total Water Transport: 1971* (000's)	Per-cent Total	Per-cent State	Per-cent Municipal	Per-cent Special District	Total Water Transport: 1957 (000's)	Per-cent Total	Per-cent State	Per-cent County	Per-cent Municipal	Per-cent Special District
New Mexico	2	100.0	—	100.0	—	—	—	—	—	—	—
New York	88,393	100.0	14.7	50.3	35.0	43,636	100.0	14.8	—	10.4	74.8
North Carolina	6,536	100.0	100.0	—	—	681	100.0	100.0	—	—	—
North Dakota	—	—	—	—	—	—	—	—	—	—	—
Ohio	4,440	100.0	10.8	8.2	81.5	557	100.0	51.3	—	2.4	46.3
Oklahoma	87	100.0	—	100.0	—	—	—	—	—	—	—
Oregon	—	—	—	—	—	7,612	100.0	—	—	53.4	46.6
Pennsylvania	10,462	100.0	7.4	92.6	—	2,569	100.0	2.3	—	97.7	—
Rhode Island	577	100.0	71.2	28.8	—	407	100.0	58.7	—	41.3	—
South Carolina	10,968	100.0	100.0	—	—	2,142	100.0	99.8	—	.2	—
South Dakota	—	—	—	—	—	—	—	—	—	—	—
Tennessee	225	100.0	—	100.0	—	637	100.0	—	9.8	91.2	—
Texas	26,556	100.0	—	16.1	83.9	20,161	100.0	—	—	25.1	74.9
Utah	—	—	—	—	—	—	—	—	—	—	—
Vermont	—	—	—	—	—	—	—	—	—	—	—
Virginia	3,971	100.0	19.8	80.2	—	607	100.0	62.1	—	37.9	—
Washington	63,280	100.0	—	—	100.0	11,983	100.0	—	—	.9	99.1
West Virginia	2	100.0	—	100.0	—	218	100.0	—	—	100.0	—
Wisconsin	943	100.0	—	100.0	—	1,884	100.0	—	—	100.0	—
Wyoming	—	—	—	—	—	—	—	—	—	—	—

NA=Not Applicable.

*Total direct expenditure (intergovernmental aid is included in expenditures of government receiving aid).

SOURCES: U.S. Bureau of the Census, *U.S. Census of Governments: 1957*, Vol. III, No. 5, *Compendium of Government Finances* (Washington, D.C.: U.S. Government Printing Office, 1959). U.S. Bureau of the Census, unpublished data, 1971.

Table III-42

MASS TRANSIT EXPENDITURE RESPONSIBILITIES, BY LEVEL OF LOCAL GOVERNMENT: 1957 AND 1971

State	Total Transit Expenditure: 1971* (000's)	Percent Total	Percent County	Percent Municipal	Percent Special District	Total Transit Expenditure: 1957* (000's)	Percent Total	Percent Municipal	Percent Special District
U.S. Totals	\$2,017,770	100.0%	7.1%	53.1%	46.2%	\$652,350	100.0%	74.7%	25.3%
Alabama	769	100.0	—	100.0	—	13,362	100.0	100.0	—
Alaska	—	100.0	—	—	—	NA	NA	N A	N A
Arizona	—	100.0	—	—	—	605	100.0	100.0	—
Arkansas	182	100.0	—	100.0	—	—	100.0	—	—
California	328,023	100.0	—	19.7	80.3	25,606	100.0	—	—
Colorado	603	100.0	—	100.0	—	—	100.0	—	—
Connecticut	—	100.0	—	—	—	—	100.0	—	—
Delaware	—	100.0	—	—	—	—	100.0	—	—
Florida	16,100	100.0	82.4	17.6	—	1,933	100.0	—	—
Georgia	2,174	100.0	—	48.3	51.7	—	100.0	—	—
Hawaii	—	100.0	—	—	—	N A	NA	N A	N A
Idaho	—	100.0	—	—	—	—	100.0	—	—
Illinois	119,123	100.0	—	.3	99.7	111,237	100.0	—	100.0
Indiana	269	100.0	—	100.0	—	136	100.0	100.0	—
Iowa	960	100.0	—	100.0	—	—	100.0	—	—
Kansas	769	100.0	—	100.0	—	—	100.0	—	—
Kentucky	158	100.0	—	100.0	—	—	100.0	—	—
Louisiana	995	100.0	—	100.0	—	587	100.0	100.0	—
Maine	1	100.0	—	100.0	—	—	100.0	—	—
Maryland	28	100.0	—	100.0	—	—	100.0	—	—
Massachusetts	183,974	100.0	—	.3	99.7	54,008	100.0	—	100.0
Michigan	37,656	100.0	—	100.0	—	30,888	100.0	100.0	—
Minnesota	1,336	100.0	—	100.0	—	—	100.0	—	—
Mississippi	—	100.0	—	—	—	—	100.0	—	—
Missouri	23,593	100.0	—	4.7	95.3	584	100.0	100.0	—
Montana	8	100.0	—	100.0	—	—	100.0	—	—
Nebraska	3	100.0	—	100.0	—	—	100.0	—	—
Nevada	—	100.0	—	—	—	—	100.0	—	—
New Hampshire	—	100.0	—	—	—	—	100.0	—	—
New Jersey	30,017	100.0	—	—	100.0	—	100.0	—	—

Table III-42 (Cont.)

State	Total Transit Expenditure: 1971* (000's)	Percent Total	Percent County	Percent Municipal	Percent Special District	Total Transit Expenditure: 1957* (000's)	Percent Total	Percent Municipal	Percent Special District
New Mexico	1,403	100.0	—	100.0	—	—	100.0	—	—
New York	911,650	100.0	.1	95.9	4.0	384,655	100.0	100.0	—
North Carolina	—	100.0	—	—	—	—	100.0	—	—
North Dakota	—	100.0	—	—	—	—	100.0	—	—
Ohio	36,273	100.0	—	100.0	—	32,424	100.0	100.0	—
Oklahoma	675	100.0	—	100.0	—	—	100.0	—	—
Oregon	313	100.0	—	100.0	—	—	100.0	—	—
Pennsylvania	161,582	100.0	—	—	100.0	—	100.0	—	—
Rhode Island	—	100.0	—	—	—	—	100.0	—	—
South Carolina	—	100.0	—	—	—	—	100.0	—	—
South Dakota	35	100.0	100.0	—	—	—	100.0	—	—
Tennessee	7,166	100.0	—	100.0	—	—	100.0	—	—
Texas	17,469	100.0	—	100.0	—	134	100.0	100.0	—
Utah	—	100.0	—	—	—	—	100.0	—	—
Vermont	—	100.0	—	—	—	—	100.0	—	—
Virginia	191	100.0	—	100.0	—	199	100.0	100.0	—
Washington	17,036	100.0	—	100.0	—	9,354	100.0	100.0	—
West Virginia	—	100.0	—	—	—	—	100.0	—	—
Wisconsin	1,581	100.0	—	100.0	—	—	100.0	—	—
Wyoming	—	100.0	—	—	—	—	100.0	—	—
Washington, D.C.	65,255	100.0	—	—	100.0	—	—	—	—

NA=Not Applicable.

*Total direct expenditure (intergovernmental aid is included in expenditures of the government receiving the aid).

SOURCES: U.S. Bureau of the Census, U.S. Census of Governments: 1957, Vol. III, No. 5, *Compendium of Government Finances* (Washington, D.C.: U.S. Government Printing Office, 1959), Table 46. U.S. Bureau of the Census, unpublished data, 1971.

Table III-43

**FEDERAL TRANSPORTATION EXPENDITURES BY TYPE OF OBLIGATION:
1957-1972**

Function	Direct	Type of Expenditure, 1972 (Millions)			TOTAL	Direct Expenditures As Percent Of Total Expenditures:		Percent Change In Direct Expenditures: 1957-72	Percent Change In Total Expenditures 1957-1972
		Transfer Payment	Grant- In-Aid	Subsidy		1957	1972		
Total Federal Outlays	104,446	96,366	37,677	6,084	244,576	62.1%	42.7%	111.5%	207.5%
Total Civilian Outlays*	19,205	72,036	36,779	6,341	134,394	12.5	14.3	526.9	450.5
Total Transportation Outlays	2,657	4	5,185	469	8,225	26.2	32.3	409.9	314.9
Highways	192	—	4,663	129	4,984	4.5	3.9	225.4	279.2
Water Transport	894	4	1	183	1,082	64.6	82.6	251.9	175.3
Air	1,508	—	157	67	1,732	75.6	87.1	493.7	529.8
Transit	63	—	364	—	427	NC	14.8	NC	NC
Transportation As Percent Of Total Civilian Outlays									
1972	13.8%	—	14.1%	7.4%	6.1%				
1957	17.0	—	32.5	5.6	8.1				
Percent Distribution Of Transportation Outlays By Type Of Obligation									
1972	32.3	—	63.0	4.8	100.0				
1957	26.2	—	64.8	9.0	100.0				

*Total outlays minus those for national defense, space exploration, international relations, and general government.
NC = Not Computed.

(July, 1973), (Washington, D.C.: U.S. Government Printing Office, 1973), Table 3.10. U.S. Department of Commerce, *Survey of Current Business*, 39, 7 (July, 1959), (Washington, D.C.: U.S. Government Printing Office, 1959), Table III-8.

SOURCES: U.S. Department of Commerce, *Survey of Current Business*

In contrast, municipalities in Maine and New York assumed greater fiscal responsibility at the expense of either state or special district units. Special districts increased their water transport services in California, New Jersey, and Ohio, but became relatively less prominent providers in Florida, Illinois, Mississippi, and Washington.

Finally, in the mass transit function (see *Table III-42*), special districts considerably increased their share of service duties between 1957 and 1971 in California, Georgia, Missouri, New Jersey, Pennsylvania, and the District of Columbia. However, municipalities were exclusive public transit providers in 22 states by 1971, as compared to ten states in 1957. In two states, Florida and South Dakota, county government handled the bulk of the mass transit services. In only three states, California, Florida, and Georgia, is mass transit responsibility vested in more than one single level of government below the state — either municipal, special district, or county.

The Federal Role in Transportation Finances

The Federal government plays both a direct and indirect role in transportation finances. It has significant direct expenditure responsibilities in the airport and water transport functions and administers 40 separate assistance programs for state, local, and private transportation providers. Direct Federal responsibilities are predominant in the water transport function, while a mix of direct and intergovernmental fiscal responsibilities occurs in the airport functions. A predominately intergovernmental fiscal approach is most prevalent in the highways and mass transit functions.

Federal involvement in the transportation function has become increasingly more broad gauged since the passage of the *1956 Federal Aid Highway Act*. Mass transit aid programs have been established. The National Rail Passenger Corporation has been created. Several transportation safety grant programs have been undertaken and the formula allotments for highway and airport aid were revised considerably during the 1960's and 1970's. Thus, Federal transportation finances have been in a state of considerable flux during the last 15 to 20 years.

Direct Federal Transportation Expenditures. The bulk of direct Federal transportation responsibilities occur in the water transport and airport functions. Direct water transportation responsibilities are lodged in

the civil division of the Corps of Engineers which undertakes a variety of navigation and port development activities in the coastal and major river areas. Direct airport expenditures are made for the operation of a national air traffic management program at over 370 major civil airports, a variety of aircraft safety programs and the maintenance and operation of two Federally owned airports in the Washington, D.C., metropolitan area.

Direct transportation expenditures made up over 30 percent of total Federal transportation outlays in 1972. Such expenditures grew more prominent in both the airport and water transport functions by 1972, increasing at a considerably greater rate than outlays for grants-in-aid, transfer payments, or subsidies. While transportation grants-in-aid declined from 32.5 to 14.1 percent of all Federal grants-in-aid between 1957 and 1972, proportionate direct transportation expenditures declined by only 3.2 percent, still comprising nearly 14 percent of all direct Federal civil expenditure responsibilities in 1972. The growth of the Federal transportation finances then occurred in the expansion of direct expenditure responsibilities and increased subsidies for highways and airports. Though transportation grants tripled during the period studied, they still maintained a lower relative growth than direct expenditures (see *Table III-43*).

Federal Transportation Grants — 1973. There were about 40 distinct Federal transportation assistance programs as of 1973. Twenty-five of the 40 were centered in the Department of Transportation and accounted for the bulk of the money in the transportation assistance system. However, the Corps of Engineers and the Departments of Commerce and Interior maintained 15 separate transportation programs dealing with water transport, surplus property disposal, weather forecasting, and highway construction in certain jurisdiction (i.e., the Appalachian region and Indian lands).

Transportation grants are much like those of the system at large. Different transportation functions, however, rely on different types of grant mechanisms. The bulk of transportation assistance programs are of the cash grant or services-in-kind variety. Only 5 percent involve loans, loan guarantees, and insured loans (see *Table III-44*). In terms of eligible applicants, transportation aids also differ somewhat from the grant system as a whole, since they are more frequently directed to special purpose units and private enterprise than to state or general purpose governments. This difference, of course, is attributable to the fact that transit, airport,

and water transport assistance is frequently directed to non-governmental recipients or special purpose jurisdictions which play a significant role in the provision of these non-highway transportation services. Federal transportation aid programs, then, often confirm the jurisdictional pattern of service provision at lower levels (see *Table III-44*).

The bulk of transportation dollar assistance is disbursed through formulas which provide automatic allotments to state and local recipients. Moreover, these formula grants are supported by Federal trust funds which virtually assure their permanence. The trust fund features of the highway and airport assistance programs have meant that lower levels of government could more readily count on transportation aid than on other non-transportation grant programs which often have experienced considerable authorizations-appropriations gaps.¹⁴⁷

More recent Federal assistance programs have been of a categorical grant nature. Of the 18 grant programs enacted since 1960, 11 have been project grant authorizations with Federal matching ratios ranging from 50 to 100 percent. These later grant programs vest considerably more disbursement authority with Federal program administrators than the earlier or amended grants in the highway or airport functions.

Federal Transportation Aid Revisions': 1945-1973

Federal transportation aid programs have undergone considerable change in the post war period. Beginning with a few relatively simple categorical aids for highways, the transportation aid system is now a multifaceted one, financed with at least 40 separate aid programs for a wide variety of transportation purposes.

Table III-44

TRANSPORTATION ASSISTANCE PROGRAMS, BY TYPE OF GRANT AND RECIPIENT ELIGIBILITY: 1972-73

Total Number	All Grant Programs 1,051	Transportation Grant Programs 40
<i>Type Of Assistance Program</i>		
Cash Grant (%)	580 (55.2%)	23 (57.5%)
In-Kind	94 (8.9)	3 (7.5)
Services	259 (24.6)	12 (24.6)
Loans-Loan Guarantees	104 (9.9)	1 (2.5)*
Insurance	14 (1.3)	1 (2.5)**
<i>Type of Recipient</i>		
Exclusive To State Or Local Government	444 (42.2)	14 (35.0)
To Any Type Of Governmental Unit	209 (19.9)	9 (22.5)
To Any Governmental Unit, Non-Governmental Entity, Or Individual	398 (37.9)	17 (42.5)

*Urban mass transit capital improvement loans.

**Aviation war risks insurance.

SOURCES: The Tax Foundation, *Federal Grants: The Need for Reform* (New York: The Tax Foundation, 1973), Tables 7, 8, A.3; Executive Office of The President, *1973 Catalog of Domestic Federal Assistance* (Washington, D.C.: U.S. Government Printing Office, 1973).

The main features of grant-in-aid changes which occurred between 1945 and 1973 include: (1) institution of two major trust funds, earmarking monies for highway and airport aid, (2) recurring shifts in the earmarking of these trust funds to meet changing highway and airport needs, (3) the revision of transportation formula grant allotments in highway, airport, and mass transit programs, (4) the establishment of a variety of categorical grants for research and development, planning support, training, transportation safety, and other ancillary transportation programs.

Highway Developments. In 1974, the Federal government instituted a 50 percent matching formula grant program for the financing of secondary and urban road systems to supplement the primary system set up earlier.¹⁴⁸ Interstate highways were made eligible for 50 percent funding by the *Federal Aid Highway Act of 1952*. The *1954 Highway Aid Act* revised the formula allotment to better reflect population concentrations, and the matching ratio for interstate projects was raised from 50 to 60 percent.

The *1956 Federal Aid Highway Act* marked a revolutionary change in Federal highway financing. It established the Highway Trust Fund to finance Federal contributions to the ABC and interstate system and raised the Federal matching share of interstate construction to 90 percent. It also apportioned interstate Federal trust fund money to the states according to their relative proportion of Federal aid highway construction costs. By this act, the Federal government assured the availability of considerable Federal aid to be matched by a relatively small state contribution. The fiscal impact was two fold. States could be assured of receiving highway aid allotments every year, and they would have relatively small outlays for the financing of the interstate system.

Only minor modifications were made to the highway aid program between 1956 and 1964. Fiscal authorizations for different types of Federal aid highways were increased, particularly in the ABC component of the system. An additional .5 percent of Federal support was guaranteed to state highway departments that regulated outdoor advertising on the interstate highway system. Earmarked taxes for the Highway Trust Fund were increased, and public lands highway funds could be used for ancillary facilities.

Highway beautification and safety acts were passed in 1966 and these authorized several categorical and formula grant programs. The categoricals provided for a standard 75 percent matching and part of the highway beautification program was made eligible for financing from the Federal trust fund. The highway safety formula

grant was based largely on relative state population and mandated a 40 percent pass-through to local governments.

The highway aid program underwent major changes in the 1968, 1970, and 1973 Congressional sessions. The 1968 act established two more allocations within the trust fund, one providing for earmarking of \$400-million for an urban traffic management program (the TOPICS program) and another authorizing establishment of a revolving fund for right-of-way acquisition. The 1970 act continued in the same vein with a \$200-million authorization for a Federal aid urban system program, and the authorization of financing of exclusive bus lanes and fringe parking lots from the trust fund. It also raised the Federal matching share from 50 to 70 percent for non-interstate highways, established a categorical bridge replacement program, and extended the TOPICS program to smaller urban areas.

The *Federal Aid Highway Act of 1973* made further extensive revisions in the highway aid program. It increased Federal aid authorizations for the non-interstate portions of the Federally aided highway system, expanded the road mileage eligible for Federal urban system aid, and provided for state earmarking of urban system funds to larger metropolitan areas (200,000 population or more) and their central cities. For the first time, cities are permitted also to apply directly to the Federal government for highway aid to complete interstate roads within their boundaries. The act, also for the first time, permitted Highway Trust Funds to be used for mass transit purposes such as the construction of rail transit facilities or the purchase of buses. It also raised the overall funding authorizations for mass transit to \$6.1-billion. Local officials were given say in the use of highway funds for mass transit purposes. The act permits the use of highway trust funds for the construction of bus lanes, fringe parking facilities, and traffic control devices on all Federally aided systems. It earmarked .5 percent of available Federal highway aid for distribution to metropolitan planning agencies for carrying out Section 134 transportation plans.¹⁴⁹ Finally, the act institutes several new categorical grant programs of minor fiscal importance, some financed from earmarking of the Federal trust fund.

Mass Transit Aid Developments. The *Urban Mass Transportation Act of 1964* established a two part grant program for mass transit financing. Two programs provided for the disbursement of capital grants and loans to eligible public agencies, with such grants to be funded on a one-third local matching basis. An accompanying

mass transit research and development grant program was authorized with a variable matching ratio provision. Another research and development grant program for work on the high speed ground transportation projects was enacted in 1965. The year 1966 witnessed the creation of three separate project grant programs designed to stimulate research and training activities by transit companies and universities and to increase support of mass transportation planning. These grant programs were directed, as before, at publicly controlled mass transit agencies.

UMTA amendments in 1968 and 1970 permitted private contributions to meet the non-Federal share of UMTA grants. The 1970 act also stipulated funding limitations – no more than 12.5 percent to be spent in any one state – while simultaneously earmarking 15 percent of UMTA authorizations to be spent at the discretion of the Secretary of Transportation. Discretionary categorical grant programs also were established to help meet the transportation needs of the handicapped and elderly. The same year, the AMTRAK authorization provided that regional transportation agencies could take over AMTRAK trains within a given region. This presaged similar provisions in the *Regional Rail Reorganization Act of 1973*.

The *1973 Highway Aid Act*, in addition to providing for eventual earmarking of Federal aid highway funds for transit purposes, amended the *Urban Mass Transportation Act of 1964* by raising the Federal share of capital grants to 80 percent, and by expanding the recipient eligibility for aided transportation projects geared to the handicapped and the elderly.

While funds for major mass transit capital projects will continue to be distributed to cities on a categorical basis, the *National Mass Transportation Act of 1974* (NMTA) further amends the 1964 act in several ways. For the first time, funds are provided for operating as well as capital mass transit expenditures. A formula distribution program based on population and population density allows Federal matching funds of up to 80 percent for capital purposes and up to 50 percent for operating purposes. NMTA also provides a state role in the distribution of these funds: governors will distribute funds to cities of less than 200,000 population. Larger urban areas will receive their formula funds directly. Additional sums of money will be made available exclusively for non-urbanized areas.

Airport Aid Developments. Federal airport aid commenced with the *Federal Airport Act of 1946*. That bill established a formula grant with 75 percent being apportioned to states on a population-area basis and the

remaining amount being disbursed on a discretionary basis. As with the highway act, different matching ratios (25 to 75 percent) were authorized for different aspects of airport construction. Between 1949 and 1959, numerous amendments changed the discretionary proportions of allotted aid, modified the matching ratios for different components of airport construction, and defined the eligible costs to be aided under the program. Legislation in 1961 and 1964 continued in the same vein, earmarking monies for general aviation airport construction, increasing the Federal share for navigational aids, and requiring airport zoning as a precondition for receipt of Federal airport aid.

The *1970 Airport and Airway Development Act* resulted in airport aid being financed from an Airport Trust Fund. This program, now similar to that of the Highway Trust Fund, established aids for both airport construction (including major and general aviation airports) and airport planning. It revised the formula allotment to expand secretarial discretion and take fuller account of increasing and shifting air traffic volumes; continued the different matching ratios for airport construction and the installation of navigational aids; and required more extensive local governmental inputs into the planning, design, and location of major airports.

Water Transport. Water transport assistance programs generally involve the provision of specialized services by the civil division of the U.S. Army Corps of Engineers. Navigational and port development projects are performed by the corps upon request of state and local instrumentalities. The corps provides such assistance free of charge up to a specified dollar limit, and the local governments provide necessary ancillary assistance – generally securing rights-of-way for corps work. Aside from these programs, the only other major water transport assistance program is the *Water Boating Safety Act of 1971* which is a variable matching formula grant providing designated state agencies and non-profit organizations with fiscal support for boating safety efforts.

Evaluation of Grant-in-Aid Trends. As seen above, Federal transportation aid programs have become increasingly diversified during the post World War II period. Categorical grant authorizations have proliferated; formula grants have been introduced and modified; Federal matching ratios have increased steadily to higher levels; grant recipient eligibility has broadened; pass-through provisions to local governments have been introduced; functional earmarking of trust fund allotments has proceeded apace; and Federal planning, management, and administrative requirements for re-

Table III-45

TRANSPORTATION ASSISTANCE LEGISLATIVE CHANGES, BY TYPE OF LEGISLATIVE ACTION: 1944-1973

Type Of Federal Aid Change	1944 50	1951- 55	1956- 60	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973
Institution Of Categorical Or Formula Grant Programs(s)	H,A	H		H			T	H,T	H,T				H,T	WT		H,R
Revision Of Formula For Aid Allotments	A	H	H	A									T,A			
Revision Of Matching Ratios	A	H	H						H				H,A			H,T
Change Of Jurisdictional Eligibility Under Grant Program(s)											T		H,T			H,T
Trust Fund Creation			H										A			
Earmarking Of Monies Financed From Trust Fund			H	H				H			H		H,A			H
Pass-Through Provisions Adopted In Grant Program(s)									H							H
Funding Bonus Or Penalty For Meeting Federal Program Requirement(s)			H					H								
Federal Planning Requirement(s) Adopted As Contingency For Federal Aid				T	H		A						H,A			
Expanded Functional Expenditure Options In Aid Program(s)		A	A	A							H		H			H

H=Highway, A=Airports, T=Transit, R=Railroads, WT=Water Transport.

SOURCE: Various issues of the *Congressional Quarterly*.

ceipt of transportation aid have been instituted. All these developments have resulted in a complex and increasingly interlocking transportation system (see *Table III-45*). Future developments probably will increase the flexibility of transportation aid systems, broaden Federal fiscal involvements in non-highway transportation ventures, and expand local and regional participation in transportation intergovernmental fiscal systems.¹⁵⁰

The growing complexity of Federal transportation aid programs, however, has not resolved all issues within the transportation assistance system. Disputes continue over the balance between capital and operating aid for different transportation modes; the allocation of aids among rural, suburban, and urban areas; the transfer of Federal aid among different transportation modes; the relative role of state, regional, and local mechanisms in the receipt or disbursement of Federal aid; and the nature and extent of Federal planning and administrative requirements associated with Federal aid.

The Recipients of Federal Aid

Federal transportation aid has been increasingly channeled to metropolitan areas in the last 15 years (see

Table III-46). Over 60 percent of all transportation grants-in-aid is expected to be spent in metropolitan areas in fiscal year 1975. This is a marked increase over 1961 when less than 50 percent of all transportation assistance was spent in such areas. More specifically, the bulk of airport and virtually all mass transit aid is disbursed to metropolitan areas. The redirection of airport aid to metropolitan areas has been considerable, and it is estimated that over 80 percent of all airport aid will be spent in metropolitan areas in 1975.

Though the metropolitan share of Federal transportation aid has been increasing, it is still less than the proportion of non-transportation assistance to these areas. Thus, while 57 percent of all transportation aids were expended in metropolitan areas during 1969, 70.1 percent of all non-transportation grants-in-aid were so expended, a proportion nearly 20 percent greater than that of transportation assistance programs. At the same time non-highway transportation aids were more urban directed than non-transportation grants. Moreover, the recent Federal aid highway amendments, providing for increased authorizations for urban system highway and mass transit aids, raise the prospect of continued emphasis on disbursing additional Federal transportation aid in urban areas. Future debate then will shift to the

Table III-46

METROPOLITAN CONCENTRATIONS OF FEDERAL AID OUTLAYS: 1961-1975

Federal Intergovernmental Aid Flow	Total Outlays By Year (Millions)				Percent Expended In Metro- politan Areas By Year				
	1961	1964	1969	1975 (Esti- mated)	1961	1964	1969	1975 (Esti- mated)	Percent Increase 61-75
Highways	2,909	3,973	4,030	4,740	48.1%	49.0%	55.2%	56.4%	+8.3%
Airports	N.A.	65	87	290	N.A.	55.3	95.4	80.0	+24.7
Mass Transit	—	—	146	589	—	—	100.0	99.4	-.6
Total Transportation*	2,909	4,038	4,263	5,619	49.2	49.1	57.0	62.2	+13.0
Total Non-Transportation**	4,374	6,276	16,550	46,113	56.0	57.4	70.1	70.3	+14.1
Total Federal Grant Outlays	7,283	10,314	20,813	51,732	53.4	54.1	67.4	69.4	+16.0
Percent Grants Expended For Transportation	39.9%	39.2%	20.5%	10.9%					
Ratios Of Non- Transportation Aid To Transportation Aid	150	155	388	821	114	117	123	113	108

SOURCE: Executive Office of the President, Office of Management and Budget, *Special Analysis: Budget of the United States Government* (Washington, D.C.: U.S. Government Printing Office, 1974), Tables N-7, N-9. The 1961, 1964, 1967, and 1974 editions were used in this tabulation.

Table III-47

**REVENUE SHARING FUNDS SPENT FOR TRANSPORTATION, BY TYPE
AND SIZE OF JURISDICTION: 1972-1973**

Jurisdiction	Operating Funds Expended (Millions)	Percent For Public Transpor- tation	Capital Funds Expended (Millions)	Percent For Public Transpor- tation	Total Funds Expended (Millions)	Percent For Public Transpor- tation
<i>States</i>	\$959.1	4.7%	10.1	15.9%	1,022.5	5.4%
<i>Counties</i>	286.8	21.2	367.9	27.3	654.7	25.0
250,000+	143.4	8.9	104.1	11.0	247.5	9.8
25,000-249,999	93.1	27.7	166.8	28.1	259.9	28.0
0-24,999	49.0	45.9	97.4	43.1	146.4	44.1
<i>Cities</i>	546.3	10.1	431.2	21.6	977.5	15.0
250,000+	277.9	7.1	75.2	20.6	353.1	10.0
25,000-249,999	171.7	9.5	161.6	21.0	333.3	15.1
0-24,999	97.5	20.0	194.9	22.2	292.4	21.5
<i>Townships</i>	82.9	77.9	29.2	37.5	160.8	32.0
250,000+	.1	3.3	—	0.0	.1	3.0
25,000-249,999	25.3	4.3	14.4	25.0	39.7	11.9
0-24,999	54.0	37.7	63.0	40.6	117.0	39.3
<i>Indian Tribes</i>	1.0	10.0	.7	14.2	1.7	11.8

SOURCE: Office of Revenue Sharing, *General Revenue Sharing—The First Actual Use Reports* (Washington, D.C.: Department of the Treasury, 1974), Tables 3 and 8.

Table III-48

FEDERAL SUBSIDIES, BY FISCAL TYPE AND FUNCTION: 1970

Function	Type Of Federal Subsidy				TOTAL
	Benefit-In-Kind Subsidy	Cash Payment Subsidy (Millions)	Tax Subsidy	Credit Subsidy	
Agriculture	—	3,879	880	443	5,202
Food	1,593	—	—	—	1,593
Medical Care	4,617	973	3,150	—	3,740
Manpower	—	1,991	550	—	2,541
Education	409	1,976	785	434	3,604
International Trade	34	106	420	623	1,183
Housing	—	195	5,680	2,550	8,425
Natural Resources	712	380	1,970	22	3,034
Transportation	—	300	10	362	672
Commerce And Economic Development	1,518	2,051	59	15,635	19,263
TOTAL	8,883	11,801	13,504	20,069	54,257
Percent Distribution	(16.4%)	(21.7%)	(24.9%)	(37.0%)	(100.0%)
Percent In Transportation Category	0.0%	0.8%	0.1%	1.8%	1.2%
Percent Distribution Of Transportation Subsidies	(0.0%)	(44.6%)	(1.5%)	(53.9%)	(100.0%)

SOURCE: Joint Economic Committee of the United States Senate, *The Economics of Federal Subsidy Programs* (Washington, D.C.: U.S. Government Printing Office, 1972), pp. 87, 99, 105, 113, 125, 140, 152, 167, 179, 187.

relative city and suburban allocations of Federal transportation aid, particularly those which will pass through state highway departments in the form of cash grants to or state transportation expenditures in urban areas.

The increasing urban orientation of Federal transportation aid, however, may be at least partially offset by the use of general revenue sharing funds for transportation purposes within non-metropolitan and smaller local jurisdictions. *Table III-47* indicates that smaller counties, cities, and townships, many of which are located in non-metropolitan areas, often spend 20 to 45 percent of their revenue sharing monies for transportation purposes. This is a rate that often exceeds that of larger, more metropolitan jurisdictions — sometimes by as much as ten-to-one. Unconditional revenue sharing, then, may be permitting local governments in these areas to meet transportation needs that would otherwise go unmet, as Federal aid and state highway expenditures become more concentrated in metropolitan areas.

Federal Transportation Subsidies

About 10 percent of all Federal outlays for transportation are in the form of subsidies to private or public producers of transportation services.¹⁵¹ These subsidies are designed to lower the price, or increase the output of transportation services, or both.¹⁵² Nearly half of all such subsidies are made to airlines, shipping, or railroad companies in the form of cash or tax credit assistance. The other half are grants-in-aid that reduce the market cost of mass transit and airport services (see *Table III-48*). The fiscal subsidies that occur as a result of regulation policies, however, dwarf these recorded subsidies.¹⁵³ At the same time, regulatory subsidies often raise rather than lower the price of transportation services.

Thus, Federal subsidies, on balance, probably have a mixed impact on urban transportation practices. Federal airport and mass transit subsidies probably lower the price of these services in urban areas, while the higher prices caused by regulations that restrain transportation competition may raise the price of certain urban transportation services, particularly those associated with goods movement. Only the CAB subsidy to support local airline service seems to benefit rural areas predominantly.¹⁵⁴ Some fiscal subsidies — such as those to the maritime industry and selected ones to the airlines industry — seek to promote broad national economic policies rather than to improve transportation services within urban or rural areas. As Federal airport and transit subsidies increase, and as more Federal highway money goes to support toll roads in urban areas, the

fiscal impact of these subsidies on urban transportation practices will become clear.

State Transportation Finance Policies

State Transportation Revenues and Expenditures. State governments generally finance their transportation responsibilities from a combination of transportation related taxes, intergovernmental aid, and charges for transportation services. Very little reliance, therefore, has to be placed on general state appropriations for transportation expenditures. As of 1971, only ten states had to meet transportation expenditures from revenue sources other than “earmarked” motor fuel or motor vehicle taxes, intergovernmental aid, or transportation service charges. On a nationwide basis, state governments raised nearly \$1-billion more in revenue from these transportation revenue sources than they expended for all their direct and indirect (i.e., generally intergovernmental aid) transportation expenditures. This contrasts with the 1957 situation when 22 states met transportation expenditures from general appropriations (see *Table III-49*).

Between 1957 and 1971, intergovernmental aid, mainly from the Federal government’s Highway Trust Fund, became a major source of state transportation funding, accounting for an average of 30.5 percent of state transportation revenues in 1971 and over 40 percent in 16 mainly rural and sparsely populated states. Revenues from motor fuel and motor vehicle taxes were more important in larger and more urban states, and state revenues from transportation user charges are significant only in those states which have important air or water transport responsibilities or an extensive toll highway network (i.e., Alaska, Connecticut, Delaware, Hawaii, Maine, Maryland, Massachusetts, New Jersey, and New York).

State Transportation Aid Programs. State highway aid has not been increasing as rapidly as non-transportation aid. This trend has reduced overall transportation aid from 15 percent of all state aid expenditures in 1957, to less than 8 percent in 1971. The decline even has occurred in states where non-highway transportation aid increased significantly over the 15 year period.

More specifically, only five states increased the proportion of state aid going to transportation, while two states (Alaska and Hawaii) terminated their transportation aid programs by 1971. Only ten states had transportation aid programs amounting to 15 percent or more of total state aid in 1971, compared to 22 states in 1957.

Table III-49

STATE REVENUES AND EXPENDITURES FOR TRANSPORTATION: 1957 AND 1972

	State Transportation Expenditures— State Transportation Revenues 1957 (Millions)	State Transportation Expenditures— State Transportation Revenues 1972 (Millions)	Percent State From Own Sources(a)	Percent State From Inter- government Aid(b) 1972	Percent State From User Charges(c)	Percent State From Own Sources(a)	Percent State From Inter- governmental Aid (b) 1957	Percent State From User Charges(c)
U.S. Totals	\$483.9	\$(982.1)	63.1%	30.5%	6.4%	75.7%	19.5%	4.8%
Alabama	(51.3)	(6.2)	58.3	38.1	3.6	40.4	57.4	2.2
Alaska	(1.2)	54.3	19.4	61.6	19.0	83.3	8.6	8.1
Arizona	36.7	(11.8)	58.8	41.0	.2	69.6	30.2	.2
Arkansas	(6.6)	(16.0)	68.8	30.6	.6	80.6	18.7	.7
California	(44.1)	(180.1)	68.7	27.5	3.8	78.2	17.4	4.6
Colorado	(53.6)	(7.3)	54.5	44.4	1.1	69.6	29.4	1.0
Connecticut	146.5	(62.4)	62.0	22.3	11.7	81.8	6.3	11.9
Delaware	(.46)	(6.8)	62.2	27.4	10.4	50.9	14.2	34.9
Florida	(4.48)	(329.8)	79.0	15.3	5.7	84.9	11.4	3.7
Georgia	(12.2)	(199.8)	77.2	20.4	1.9	84.1	14.0	1.9
Hawaii	18.3	32.4	23.2	45.3	31.5	34.6	65.1	.3
Idaho	(.10)	(9.1)	54.9	44.4	.7	68.8	30.5	.7
Illinois	59.6	(58.7)	64.3	28.5	7.2	80.6	19.2	.2
Indiana	21.8	(43.6)	68.4	25.6	6.0	82.2	12.9	4.9
Iowa	15.4	(57.7)	74.6	24.3	1.1	81.9	17.7	.4
Kansas	43.7	(27.3)	61.8	29.2	9.0	66.5	30.2	3.3
Kentucky	11.1	143.1	58.5	33.9	7.6	82.1	15.3	2.6
Louisiana	40.2	37.1	52.8	40.1	7.1	70.1	21.0	8.9
Maine	—	(8.1)	57.4	30.5	12.1	67.6	21.6	10.8
Maryland	(3.1)	35.1	63.8	23.5	12.7	73.9	16.1	10.0
Massachusetts	146.1	(85.6)	57.4	20.8	21.8	88.7	11.2	.1
Michigan	285.4	(104.3)	65.8	32.7	1.5	79.7	18.7	1.6
Minnesota	(4.9)	14.8	64.1	34.0	1.9	73.4	25.8	.8
Mississippi	(1.7)	23.9	65.2	31.9	2.9	73.4	24.4	2.2
Missouri	(5.9)	(25.9)	61.4	37.2	1.4	68.8	31.2	0.0
Montana	(3.6)	(5.3)	38.2	60.9	.9	52.8	47.2	0.0
Nebraska	(3.9)	(16.5)	72.3	27.3	.4	65.4	33.9	.7
Nevada	(.23)	(6.7)	49.1	50.3	.6	53.9	45.5	.6
New Hampshire	—	(4.5)	60.2	31.8	8.0	76.2	16.8	7.0
New Jersey	11.4	(180.2)	58.3	20.7	21.0	70.7	8.1	21.2

Table III-49 (Cont.)

	State	State	Percent State Transportation Revenues			Percent State Transportation Revenues		
	Transportation Expenditures—State Transportation Revenues 1957 (Millions)	Transportation Expenditures—State Transportation Revenues 1972 (Millions)	From Own Sources(a)	From Inter-governmental Aid(b) 1972	From User Charges(c)	From Own Sources(a)	From Inter-governmental Aid(b) 1957	From User Charges(c)
New Mexico	(1.5)	(15.9)	52.2	47.5	.3	60.0	39.4	.6
New York	13.0	(100.0)	63.0	24.3	12.7	75.8	14.2	10.0
North Carolina	(31.6)	(73.4)	72.1	26.8	1.1	70.1	29.5	.4
North Dakota	.41	(2.3)	51.4	47.3	1.3	64.8	34.3	.9
Ohio	47.1	(57.0)	67.6	27.2	5.4	77.7	17.0	5.3
Oklahoma	4.4	(59.3)	66.5	26.6	6.9	78.6	18.8	2.6
Oregon	(.57)	(3.3)	55.6	43.4	1.0	73.4	25.3	1.4
Pennsylvania	5.3	43.2	66.7	24.3	9.0	88.0	12.0	0.0
Rhode Island	1.6	(29.4)	66.7	27.5	5.8	69.6	24.4	6.0
South Carolina	(11.1)	3.4	67.9	27.1	5.0	81.8	14.4	3.8
South Dakota	4.7	3.6	54.4	45.5	.1	51.4	47.1	1.5
Tennessee	(11.3)	(34.1)	66.1	33.9	0.0	85.7	14.2	.1
Texas	(33.6)	(25.5)	67.6	30.7	1.7	75.1	24.8	.1
Utah	(2.8)	(14.0)	44.0	55.7	.3	68.3	30.1	1.6
Vermont	3.3	1.5	54.4	45.4	1.2	73.0	26.9	.1
Virginia	31.6	(22.9)	60.4	31.7	7.9	76.3	16.6	7.1
Washington	25.0	(8.0)	59.0	33.1	7.9	76.1	14.8	9.1
West Virginia	4.6	104.4	35.0	61.4	3.6	83.8	8.7	7.5
Wisconsin	(10.2)	(37.1)	76.1	23.6	.3	78.4	21.4	.2
Wyoming	1.2	7.1	46.4	53.1	.5	53.4	46.5	.1

Legend:

() Indicates that state transportation revenues exceed state transportation expenditures.

(a) Receipts from motor fuel taxes, motor vehicle license taxes, and motor vehicle operator license taxes.

(b) Receipts from Federal aid for highways and airports and from local funds for state highway work.

(c) Receipts from current charges for highways, airports, and water transport.

SOURCES: U.S. Bureau of the Census, *Compendium of State Government Finances in 1957* (Washington, D.C.: U.S. Government Printing Office, 1958), Tables 6, 7, 8, 10, and 13. U.S. Bureau of the Census, *State Government Finances in 1972* (Washington, D.C.: U.S. Government Printing Office, 1973), Tables 7 and 9.

Table III-50

**SELECTED CHARACTERISTICS OF STATE INTERGOVERNMENTAL AID SYSTEMS:
1957 AND 1971**

		Percent Increase 1957-71				Aid As Percent Of State Expenditures		Transportation Aid As Percent Of Total Aid	
		Total State Expenditures	Total State Aid	State Highway Aid	State Non-highway Aid	1957	1971	1957	1971
U.S. Totals		319.5%	334.9%	125.4%	423.0%	34.5	36.6	15.3	7.8
Alabama	a	263.0	206.3	101.1	—	35.3	29.8	22.3	14.6
Alaska	a	1,376.0	985.2	—	—	23.4	17.2	7.7	—
Arizona	b	392.3	529.2	350.0	—	30.6	39.1	11.4	8.1
Arkansas	a	261.0	325.6	161.3	—	25.6	30.2	19.1	11.8
California		355.8	343.0	200.7	347.4	48.4	47.1	9.3	6.3
Colorado	b	288.4	195.0	97.1	—	43.7	33.2	14.7	9.8
Connecticut		255.9	818.7	1,175.4	29,075.0	9.3	23.9	3.0	4.5
Delaware	b	331.6	504.5	1,025.6	—	18.5	25.9	1.1	2.1
Florida	b	365.0	565.8	62.9	—	26.5	37.9	9.9	2.4
Georgia	a	269.1	276.1	24.7	—	29.5	30.1	16.9	5.7
Hawaii	b	465.1	-10.7	—*	—	14.9	2.4	20.8	—
Idaho	b	283.5	309.1	88.1	—	24.1	25.7	38.6	17.7
Illinois		417.9	518.4	160.4	-59.1	28.3	33.7	36.7	15.1
Indiana		259.5	294.1	169.7	189.4	34.0	37.3	26.6	18.2
Iowa	b	221.4	285.4	128.4	—	29.6	35.5	36.4	21.6
Kansas	b	167.3	260.8	148.5	—	29.7	40.1	15.0	10.3
Kentucky		402.1	480.8	53.5	176.4	20.0	23.1	5.5	1.6
Louisiana		182.6	213.0	126.9	81.7	29.9	33.1	6.1	4.4
Maine		299.7	458.7	4.2	686.5	12.6	17.7	30.9	6.4
Maryland	a	385.2	489.1	219.6	—	34.5	41.9	22.6	12.4
Massachusetts		260.4	117.5	265.3	269.5	33.9	20.5	3.3	5.6
Michigan	a	231.7	206.3	110.5	—	40.6	37.5	23.3	16.0
Minnesota		364.6	492.6	361.3	492.8	39.8	50.8	10.2	8.0
Mississippi	b	328.1	297.7	73.7	—	36.6	34.0	25.2	11.0
Missouri	b	262.8	305.3	844.5	—	22.1	24.7	3.8	8.8
Montana	a	243.6	312.0	—	—	14.0	16.8	—	.2
Nebraska		288.4	398.7	84.7	-15.2	26.6	34.1	35.6	13.0
Nevada	b	308.5	588.9	397.8	—	22.5	37.9	15.6	11.3
New Hampshire	a	284.7	1,085.8	88.8	—	5.7	17.7	8.8	1.2
New Jersey		475.8	688.1	45.5	328.2	27.2	37.3	12.5	2.4

Table III-50 (Cont.)

		Total State Expenditures	Percent Increase 1957-71		State Non-highway Aid	Aid As Percent Of State Expenditures		Transportation Aid As Percent Of Total Aid	
			Total State Aid	State Highway Aid		1957	1971	1957	1971
New Mexico	a	235.0	292.7	283.9	—	31.2	36.6	6.4	6.4
New York		439.0	536.3	198.0	2,388.4	47.6	56.2	5.3	2.7
North Carolina	a	307.2	859.7	91.3	—	18.0	42.5	6.9	1.4
North Dakota	a	215.7	321.7	172.2	—	19.0	25.4	27.1	17.4
Ohio	a	219.7	161.1	94.6	—	39.1	31.9	38.7	21.6
Oklahoma	a	195.6	206.0	81.0	—	24.1	25.0	34.8	20.7
Oregon	a	272.1	248.9	136.1	—	26.2	24.5	34.0	23.1
Pennsylvania		331.2	236.5	26.4	466.8	35.6	27.8	14.6	5.9
Rhode Island	b	365.0	511.8	163.3	—	16.3	21.5	.9	.4
South Carolina	a	273.6	227.7	87.5	—	37.7	33.1	6.8	3.9
South Dakota		214.4	418.1	136.8	1,715.1	9.4	15.5	16.6	9.5
Tennessee		314.7	226.1	110.3	1,376.2	37.7	29.6	23.8	15.6
Texas	a	303.9	311.0	68.4	—	29.7	30.3	3.9	.7
Utah		398.9	389.3	92.0	279.7	25.7	25.2	11.1	4.9
Vermont	a	439.9	412.3	30.5	—	17.5	16.6	43.3	10.8
Virginia	a	337.7	438.8	178.3	—	26.7	32.9	6.6	4.5
Washington	a	296.8	240.2	241.2	—	35.0	30.0	14.5	14.5
West Virginia		311.9	209.0	—	33.9	28.7	21.5	1.6	.3
Wisconsin	b	384.1	297.9	84.3	—	56.3	46.3	23.1	10.7
Wyoming		215.7	126.9	236.7	-8.4	31.8	22.9	11.7	15.0

(a) No non-highway transportation aid programs in either 1957 or 1971.

(b) No non-highway transportation aid programs in both 1957 and 1971.

*Counties still receive a share of state levied motor vehicle registration funds.

SOURCES: U.S. Bureau of the Census, *State Government Finances—1971* (Washington, D.C.: U.S. Government Printing Office, 1973), Table 9. U.S. Bureau of the Census, *Compendium of State Government Finances in 1957* (Washington, D.C.: U.S. Government Printing Office, 1958), Tables 13 and 15.

Table III-51

STATE TRANSPORTATION INTERGOVERNMENTAL AID PROGRAMS: 1971

	State Aid Program, By Type: 1971				Percent Of Total State Expenditures For Intergovernmental Aid, By Function: 1971		
	Highway	Transit(b)	Air	Water Transport	Highways	Air	Water Transport
U.S. Totals	47	19	35	8	16.9	21.9	4.5
Alabama	X		X		22.9	NA	0.0
Alaska	X				0.0	NA	0.0
Arizona	X			X	16.6	NA	NA
Arkansas	X		X		21.9	100.0	NA
California	X		X		23.7	72.7	NA
Colorado	X	X	X		17.8	NA	NA
Connecticut	X	X	X		6.5	24.6	0.0
Delaware	X	X			3.9	NA	NA
Florida	X				4.9	NA	0.0
Georgia	X	X	X		12.3	100.0	0.0
Hawaii		X			0.0	NA	0.0
Idaho	X				18.2	NA	NA
Illinois	X	X	X		26.9	21.7	0.0
Indiana	X	X	X		33.6	100.0	0.0
Iowa	X				30.6	NA	NA
Kansas	X		X		19.9	NA	NA
Kentucky	X		X		1.2	92.6	0.0
Louisiana	X			X	8.1	NA	3.8
Maine	X		X		4.9	70.4	0.0
Maryland	X	X	X		28.4	100.0	0.0
Massachusetts	X	X	X		10.3	1.8	0.0
Michigan	X	X	X		46.1	.1	0.0
Minnesota	X		X	X	25.4	91.1	86.7
Mississippi	X		X		18.3	NA	NA
Missouri	X				7.3	NA	NA
Montana		X(a)	X		0.0	44.4	NA
Nebraska	X		X	X	17.8	50.7	NA
Nevada	X				15.3	NA	NA
New Hampshire	X	X			.9	NA	0.0
New Jersey	X	X	X		4.7	100.0	0.0
New Mexico	X		X		13.0	100.0	NA
New York	X	X	X	X	15.4	56.4	3.2
North Carolina	X		X		3.5	100.0	0.0
North Dakota	X				17.1	NA	NA
Ohio	X		X		29.6	100.0	0.0
Oklahoma	X		X		28.9	100.0	NA
Oregon	X		X		24.2	53.7	NA
Pennsylvania	X	X	X	X	7.8	78.3	58.7
Rhode Island	X				1.2	NA	0.0
South Carolina	X				7.6	.2	0.0

Table III-51 (Cont.)

	State Aid Program, By Type: 1971				Percent Of Total State Expenditures For Intergovernmental Aid, By Function: 1971		
	Highway	Transit(b)	Air	Water Transport	Highways	Air	Water Transport
South Dakota	X		X		4.1	78.3	NA
Tennessee	X	X	X		21.3	100.0	NA
Texas	X		X		1.1	100.0	NA
Utah	X		X		5.2	79.8	NA
Vermont	X	X			7.4	NA	NA
Virginia	X	X	X	X	1.4	68.6	87.0
Washington	X	X	X	X	25.7	100.0	100.0
West Virginia			X		0.0	100.0	NA
Wisconsin	X		X		42.3	NA	NA
Wyoming	X		X		9.1	85.6	NA

NA=Not applicable.

(a) Diversion of highway funds permitted by three-fifths vote of the legislature.

(b) This data is for 1973.

SOURCE: U.S. Bureau of the Census, unpublished data, 1971; Highway Users Federation, *Public Financial Support for Transit: Compilation of State Laws* (Washington, D.C.: Highway Users Federation, 1973).

Table III-52

STATE CONSTITUTIONAL PROVISIONS AGAINST MOTOR FUEL TAX DIVERSION: 1972

State	Constitutional Citation	Adopted	Record Of Vote		Ratio
			In Favor	Against	
Alabama	Amend. XCIII	11-4-52	215,029	105,821	2-1
Arizona	Art. IX, Sec. 14	11-4-52	128,094	48,409	2 2/3-1
California	Art. XXVI, Sec. 1-4	11-8-38	1,505,043	766,063	2-1
Colorado	Art. X, Sec. 18	11-6-34	160,482	132,944	1 1/5-1
Georgia	Art. VII, Sec. IX	11-4-52	330,327	205,668	1 3/5-1
Idaho	Art. VII, Sec. 17	11-5-40	108,358	41,145	2 2/3-1
Iowa	Art. VII, Sec. 8	11-3-42	433,917	56,472	7 2/3-1
Kansas	Art. 11, Secs. 5 & 10	11-6-28	444,806	136,719	3 1/4-1
Kentucky	Sec. 230	11-6-45	160,533	42,458	3 4/5-1
Louisiana	Art. VI, Sec. 23	4-17-56	143,024	62,614	2 3/10-1
Maine	Art. IX, Sec. 19	9-11-44	139,805	33,172	4 1/4-1
Massachusetts	Art. LXXVIII	11-2-48	1,329,232	274,351	4 4/5-1
Michigan	Art. 9, Sec. 9	6-20-63	(New constitution adopted)		
Minnesota	Art. IX, Sec. 5	11-6-28	520,769	197,455	2 1/2-1
Missouri	Art. IV, Sec. 30	11-6-28	670,299	503,861	1 1/3-1
Montana	Art. XII, Sec. 1(b)	11-6-56	160,543	47,615	3 2/5-1
Nevada	Art. IX, Sec. 5	11-5-40	16,543	4,609	3 3/5-1
New Hampshire	Part Second, Art. 6a	11-8-38	96,631	23,851	4-1
North Dakota	Art. 56, Sec. 1	6-25-40	91,149	49,331	1 4/5-1
Ohio	Art. XII, Sec. 5a	11-4-47	1,037,650	669,718	1 1/2-1
Oregon	Art. IX, Sec. 3	11-3-42	125,994	86,324	1 2/5-1
Pennsylvania	Art. VIII, Sec. 11	11-6-45	644,613	99,975	6 1/2-1
South Dakota	Art. XI, Sec. 8	11-5-40	141,792	108,256	1 1/3-1
Texas	Art. VIII, Sec. 7-a	11-5-46	231,834	58,555	4-1
Utah	Art. XIII, Sec. 13	11-6-62	201,000	60,000	3 1/2-1
Washington	Art. II, Sec. 40	11-7-44	358,581	160,898	2 1/4-1
West Virginia	Art. VI, Sec. 52	11-3-42	218,652	38,196	5 1/2-1
Wyoming	Art. XV, Sec. 16	11-2-54	70,520	26,949	2 3/5-1

SOURCE: American Petroleum Institute, *Tax Compendium* (Washington, D.C.: American Petroleum Institute, 1972).

Clearly, non-transportation concerns were making a greater claim on the state aid dollar during the later period, although actual dollar amounts for transportation were maintained or increased in most states (see *Table III-50*).

At the same time, however, many states were developing new transportation aid programs. As of 1971, a majority of states had aid programs in both highways and airports, while 23 states had aid programs for either transit or water transport or both. Moreover, when states instituted aid programs, they often accounted for a considerable proportion of the state transportation dollar. State highway aid averaged about 17 percent of total state highway expenditures nationally, and over 25 percent of state highway expenditures in ten cases. State aid accounted for over 20 percent of total state airport expenditures nationally, and for over 70 percent of state airport expenditures in 21 cases. In four of the eight water transport aid programs, state aid expenditures accounted for more than 50 percent of all state expenditures for this purpose (see *Table III-51*).

State Fuel Tax Revenues. Numerous legal provisions affect the use of gasoline tax revenues which are a major source of state transportation revenue. Twenty-eight states have constitutional provisions that prohibit the diversion of revenues from fuel taxes for non-highway purposes (see *Table III-52*). Most of these constitutional prohibitions were passed in the 1940's and 1950's by wide margins.

Fifteen states now permit diversion of motor fuel taxes for non-highway transportation purposes, and eight permit them, in whole or in part, to be diverted to the state general fund. At the same time, 33 states have earmarked some or all of the motor fuel tax for specific non-highway transportation purposes, primarily for airport, water transport, or boating functions (see *Table III-53*).

State motor fuel taxes also are an important feature in local transportation finances. Counties, or municipalities, or both are entitled to share in the fuel tax in all states, except Hawaii.¹⁵⁵ Counties are the exclusive recipient in five states and municipalities in nine. Local governments generally receive a constant proportion of the motor fuel tax, although in some states they are allotted a fixed amount of the tax (i.e., 1 cent for municipalities in North Carolina) or receive their allotments through legislative appropriation. The formulae for allotting fuel tax revenues among local governments are quite varied, though allocations usually take into account a locality's relative population, road mileage, or fuel tax collection. Counties frequently are allocated

fuel taxes on a different basis than municipalities. While municipalities generally receive their allotments on the basis of their relative population, counties usually get them on the basis of road mileage or property valuations. Local entitlement to the fuel tax is extensive in Michigan, Illinois, and Nebraska and minimal in Kentucky, North Carolina, and Utah (see *Table III-53*).

Between 1959 and 1973, state governments made considerable changes in their administration of the fuel tax (see *Table III-54*). In brief:

- 46 states raised motor fuel rates or instituted special taxes on aviation fuel or liquefied natural gas.
- 34 states either increased or reduced the earmarking of the motor fuel tax. In all but two cases additional earmarking has occurred, usually for aviation, boating, or other non-highway purposes. Thirteen states, as of 1973, permitted diversion of their motor fuel taxes for mass transit purposes. Eight states permitted their tax to be diverted for general purposes, while one state, New York, earmarked part for highway purposes when previously all had gone into the general fund.
- 23 states changed the formula allotments for sharing the motor fuel tax, generally moving to greater reliance on population and mileage based formulae and away from equal distributions of monies to local jurisdictions. Ten states permitted municipalities to share in this tax where previously counties had been the sole recipient.
- 21 states changed the share of the motor fuel tax allotted for local governments, with 13 increasing the statutory share to local units and eight enlarging the state share of the tax. Nineteen states changed the requirements for expending fuel tax allocations with 13 specifying special functions for which money could or should be spent and six states easing restrictions on functional mandating.

State Revenue Sharing. State use of revenue sharing funds for transportation purposes has been limited. As of August 1973, only ten states indicated that they specifically intended to use their revenue-sharing funds for transportation purposes. Only three states — Arkansas, Louisiana, and West Virginia — indicated that they would use more than half of their revenue sharing for transportation. Arkansas and Louisiana planned to spend their monies for highways, while West Virginia

Table III-53

LEGAL DISPOSITION OF STATE MOTOR FUEL TAXES: 1973

		Amount Of Fuel Tax (1)	Functions Tax Earmarked For (2)	Local Governments Receiving Allotment (3)	Method Of Local Allotment (4)	Bases For Local Allotment (5)	Statutory Local Share Of Fuel Tax (6)	Diversion For Non- Highway (7)	Diversion For General Purposes (8)
Alabama	*	7¢	H,A,B	C,M	P	E,P	NA	N	N
Alaska	a	8	H,A,WT	M	P	C	60%	N	N
Arizona	*	7	H,A,B	C,M	P	C,P	39	N	N
Arkansas		7.5,8.5	H,TR	C,M	P	A,C,P,E	30	N	N
California	*	7.6	H,WT,A,TR	C,M	AP,FA	E,FA,RM,A,MV	3.39¢	N	N
Colorado	*	7	H,SP	C,M	P	MV,RM	35	N	N
Connecticut		10	H,MV,SP	M,T	AP	RM,P	NA	Y	Y
Delaware		8	H,MV,SP	M	AP	RM,P	NA	Y	Y
Florida		8	H	C,M	P	A,P,C	1.4¢	Y	Y
Georgia	*	7.5	H	C	AP	M	NA	N	Y(a)
Hawaii		5	H,A,WT	—	—	—	—	Y	N
Idaho	*	8.5	H,A,B,P	C,M,SD	P	P,MV,RM	38	N	N
Illinois		7.5	H,B,T	C,M,SD	P	P,C,RM	65% of 6.5¢	Y	N
Indiana		8	H,SP,O	C,M,T	P	P,E,RM,MV	47.1% of 6¢,45% of 2¢	Y	N
Iowa		7,8	H,A,B	C,M	P	P,A	44.1% of 6.5¢	N	N
Kansas	*	8	H	C,M	P	RM,E,MV	35+%	N	N
Kentucky	*	9	H	M	NA	NA	.5¢	N	N
Louisiana	*	8	H,WT	C,SD	FA	FA	1.5¢	N	N
Maine	*	9	B,H,SP	M,T	AP	NA	NA	N	N
Maryland		9	B,F,A,T,H	C,M	P	RM,MV	35% of 7¢	Y	N
Massachusetts	*	7.5	H,B,SP	M,T	AP	M,PV	NA	N	N
Michigan	*	7	WT,H,A	C,M	P	C,M,E,P	54%	Y	N
Minnesota	*	7	A,P,H	C,M	P	E,MV,RM,AD,P	34.5	N	N
Mississippi		8,10,8	A,H	C,M	AP,FA,P	P	21% of 4¢	N	N
Missouri	*	7	H	C,M	FA	RM,PV,P	1.4¢	N	N
Montana		7.9	H,A,P	C,M	AP	RM,A,P	NA	Y	N
Nebraska		8.5,5.5	H	C,M	P	P,MV,RM,Misc.	46.7%	N	N
Nevada	*	6.6	H,B,A,O	C,M	FA	A,P,RM,P,PV	1¢,2¢	N	N
New Hampshire	*	9	SP,H,A,B	M	AP	PV,RM,P	NA	N	N
New Jersey		8	NA	NA	NA	NA	NA	Y	Y

Table III-53 (Cont.)

	Amount Of Fuel Tax (1)	Functions Tax Earmarked For (2)	Local Governments Receiving (3)	Method Of Local Allotment (4)	Bases For Local Allotment (5)	Statutory Local Share Of Fuel Tax (6)	Diversion For Non- Highway (7)	Diversion For General Purposes (8)
New Mexico	7	B,A,H	C,M	P	C	2¢	Y(b)	N
New York	7,9	P,H,T	C,T	AP	RM,C	NA	Y	Y
North Carolina	9	SP,H	M	FA	P,RM	1¢	N	N
North Dakota	* 7	H,A,SP	C,M	P	MV,P	37%	N	N
Ohio	* 7	WT,H	C,M,T	P	E,MV	25%	N	N
Oklahoma	6.5	H	C,M	P,FA	P,A,RM	27% of 4¢, 11% of 2¢	N	N
Oregon	* 7	SP,H,A	C,M	P	MV,P	32%	N	N
Pennsylvania	* 8	H,MV,TR,A,B	C,M,T	P,FA	M,P,Misc	20% of 5.5¢, 1/2¢	N	N
Rhode Island	8	H,SP	M,T	AP	RM	NA	Y	Y
South Carolina	8	H,B	C	FA	A,P,RM	2-1/3¢	N	N
South Dakota	* 7,7,6	H,A	C	P	MV,PV,M	12.5%	N	N
Tennessee	7.8	H	C,M	FA	E,A,P	3¢	Y	Y
Texas	* 5,6,5	S,H,B,A	C	AP	A,P,RM	NA	N	N
Utah	* 7	H,AD,SP,B,A	C,M	FA	A,P,O	1¢	N	N
Vermont	9	H,A,SP	M,T	AP	RM	NA	N	N
Virginia	9	H,MV,A,O	C,M(c)	AP	RM,A,C	NA	Y	N
Washington	* 9	B,O,A,WT,A,D	C,M	P,FA	P,E,MV,RM	43% of 6.9, .5¢	N	N
West Virginia	* 8.5	H	C	P	RM	28%	N	N
Wisconsin	7	H,AD	C,M	AP,P,FA	C,RM,O	1¢	N	N
Wyoming	* 7	H,SP,A	C,M	P,FA	A,P,PV,C	25% of 4¢, 1¢	N	N

(a) Applies only to aviation fuel tax.

(b) Applies locally.

(c) Only two counties share in the allotment.

*States having constitutional prohibitions against fuel tax diversion, 1972.

CODE:

Column (1) different rates sometimes apply to gasoline, diesel fuel, propane, kerosene, and other fuels.

Column (2) H=highways, A=airports, B=boating, WT=water transport, TR=tax refunds, SP=state police, MV=motor vehicles, T=transit, TR=traffic control, AD=advertising, S=schools, O=other, P=parks.

Column (3) C=counties, M=municipalities, T=townships, SD=special districts.

Column (4) P=proportion, AP=appropriation, FA=fixed amount.

Column (5) E=equal amounts, P=population, C=tax collections, RM=road mileage, MV=motor vehicle registrations, A=area, PV=property values, O=other, FA=fixed amounts.

Columns (7) and (8) Y=yes, N=no.

NA=Not applicable.

SOURCE: U.S. Department of Transportation, *Highway Statistics, 1971* (Washington, D.C.: U.S. Government Printing Office, 1973), Table MF-106, pp. 12-29.

Table III-54

**CHANGES IN DISPOSITION OF STATE MOTOR FUEL TAXES:
1959 TO 1973**

	Change In State Tax Rate	Change In Earmark- ing	Change In Formula Allotments	Change In Jurisdic- tional Sharing Fuel Tax	Change OF Share Alloted Local	Change OF Expenditure Require- ments	Change Diversion For Non- Highway Purposes	Change Diversion To General Fund
Number Of States Experiencing Change	46	34	23	10	21	19	21	4
Alabama	+	+	X	+	0	+	+,B	0
Alaska	N A	N A	N A	N A	N A	N A	N A	N A
Arizona	+	+	X	+	-	+	+,B	0
Arkansas	+	-	X	0	+	-	0	0
California	+	+	0	0	+	-	+,A,B	0
Colorado	+	+	0	+	0	0	0	0
Connecticut	+	0	0	0	0	0	0	+
Delaware (b)	+							
Florida	+	+	X	+	+	+	+(a)	0
Georgia	+	N A	N A	N A	N A	N A	N A	N A
Hawaii	N A	N A	N A	N A	N A	N A	N A	N A
Idaho	+	+	X	0	+	+	+,B,P	0
Illinois	+	+	0	0	0	+	+,T	0
Indiana	+	+	X	0	-	+	0	0
Iowa	+	+	X	0	+	+	+,A,B	0
Kansas	+	-	X	0	0	-	0	0
Kentucky	+	+	X	+	N A	-	0	0
Louisiana	+	+	0	0	-	+	0	0
Maine	+	N A	N A	0	N A	N A	0	0
Maryland	+	+	X	0	-	+	+,B,A,T	0
Massachusetts	+	+	0	0	N A	N A	+,B	0
Michigan	+	+	0	0	0	0	0	0
Minnesota	+	+	0	0	-	+	+,P	0
Mississippi	+	+	X	0	0	+	+,B	0
Missouri	+	0	X	+	N A	0	0	0
Montana	+	+	N A	+	+	0	+,P	0
Nebraska	+	+	X	0	+	0	0	0
Nevada	+	+	0	0	+(c)	0	0	0
New Hampshire	+	0	X	0	N A	0	0	0
New Jersey (b)	+							
New Mexico	+	+	N A	+	+	+	+,A,B	+(d)
New York	+	+	X	+	N A	0	0	-
North Carolina	+	0	X	0	+	0	0	0
North Dakota	+	+	X	+	+	0	+,A	0
Ohio	+	+	0	0	-	0	+,B	0
Oklahoma	0	+	0	0	0	0	0	0
Oregon	+	0	0	0	+	+	0	0
Pennsylvania	+	+	0	0	0	0	+,A,B	0
Rhode Island (b)	+							
South Carolina	+	+	X	0	-	+	+,B	0

Table III-54 (Cont.)

	Change State Tax Rate	Change In Earmark- ing	Change In Formula Allotments	Change In Jurisdic- tional Sharing Fuel Tax	Change Of Share Alloted Local	Change Of Expenditure Require- ments	Change Diversion For Non- Highway Purposes	Change Diversion To General Fund
South Dakota	+	+	X	0	0	0	+,B	0
Tennessee	+	0	0	0	0	0	0	+
Texas	0	+	0	0	0	0	+,A,B,S	0
Utah	+	+	0	0	0	0	0	0
Vermont (e)	+							
Virginia (e)	+							
Washington	+	+	X	0	0	+	+,A,B	0
West Virginia	+	0	0	0	0	0	0	0
Wisconsin	+	+	X	0	-	0	+,AD	0
Wyoming	+	+	X	0	+	0	0	0

Legend:

- (a) Cities may use their share of the gas tax for transportation purposes in county.
- (b) Fuel Taxes go into state general fund.
- (c) May levy an additional local option fuel tax.
- (d) May be used for municipal and county general purposes.
- (e) Money is initially earmarked but then spent through appropriations process.

Code:

+=increase, -=decrease, O=no change, X=change, NA=not applicable or not available, A=airports, B=boating, AD=advertising, S=schools, T=transit.

SOURCES: U.S. Department of Commerce, *Highway Statistics, 1957* (Washington, D.C.: U.S. Government Printing Office, 1959), Table G-106; U.S. Department of Transportation, *Highway Statistics, 1971* (Washington, D.C.: U.S. Government Printing Office, 1973), Table MF-106, pp. 12-29. Data from both sources effective on publication date.

Table III-55

CONSTITUTIONAL LIMITATIONS ON STATE BORROWING: 1971

	No Debt Limitations	Type Of Debt Limitation	Referendum For Debt Creation	Referendum	Exceptions To Debt Limits Debt Refunding	Other Purposes
U.S. Totals (Number of States)	5	39	13	12	15	10
Alabama		A	X		X	
Alaska			X		X	
Arizona		A				
Arkansas			X		X	
California		A	X			
Colorado		A				
Connecticut		PSR(a)				X
Delaware		LEM				
Florida		PSR	X		X	
Georgia		A				
Hawaii		LEM,PSR			X	
Idaho		A				
Illinois		PSR,LEM	X(b)			
Indiana	X					
Iowa		A		X		
Kansas		A		X		
Kentucky		A		X	X	
Louisiana		LEM				
Maine		PSR-A		X		X
Maryland	X-M					X
Massachusetts		LEM				X
Michigan		PSR	X			
Minnesota		LEM				
Mississippi		PSR				
Missouri		A		X	X	
Montana		A		X		
Nebraska		A				
Nevada		PAV				
New Hampshire	X-M					
New Jersey		PSR		X		
New Mexico		A-PAV		X	X	
New York			X		X	X
North Carolina		POD		X	X	X
North Dakota		A				X
Ohio		A			X	
Oklahoma		A	X	X		
Oregon		A				X
Pennsylvania			X(c)		X	X
Rhode Island		A		X		X
South Carolina			X(c)			
South Dakota		A,PAV,LEM			X	
Tennessee	X-M					
Texas		A			X	
Utah		PAV				
Vermont	X-M					

Table III-55 (Cont.)

	No Debt Limitations	Type Of Debt Limitation	Referendum For Debt Creation	Exceptions To Debt Limits		
				Referendum	Debt Refunding	Other Purposes
Virginia		PSR	X			
Washington		A	X(c)			
West Virginia					X	
Wisconsin		PAV				
Wyoming		PAV		X		

(a) statutory limitation, (b) alternative methods of exceeding debt limits, (c) specified conditions where referenda requirements may be waived.

CODE: X-M = approval by legislative majority, A = absolute dollar debt limit, PSR = debt limit as proportion of state revenue or appropriations, LEM = debt creation requires extraordinary legislative majority, PAV = debt limits as proportion of statewide assessed value, POD = debt limit as proportion of outstanding state debt.

SOURCE: ACIR, *Significant Features of Fiscal Federalism* (Washington, D.C.: U.S. Government Printing Office, 1974), Table 95.

planned to earmark its revenues for bridge replacement. Only one state, Missouri, planned to use any of its revenue sharing funds for mass transit purposes. Ohio initially earmarked some of its revenue sharing funds for bus fare subsidies, but the proposal was eventually dropped from the governor's budget. Early experience with revenue sharing does not indicate that transportation has been a top priority item for most state governments.¹⁵⁶

State Borrowing. As of 1971, only five state governments faced no debt restrictions. The other 45 either had a specified constitutional limitation on borrowing or had to incur debt through a statewide referendum. Several states permitted exceptions to these restrictions by authorizing additional state debt for specified purposes (i.e., generally for tax anticipation purposes); two states, Colorado and Oregon, permit state highway debt to be incurred outside of constitutional limitations. Five states — Indiana, Maryland, New Hampshire, Tennessee, and Vermont — have the most lenient restrictions on the issuance of state debt: Alabama, Arizona, California, Georgia, Idaho, Nebraska, North Dakota, Ohio, Texas, and Washington have the strictest limitations — limitations on the absolute dollar amount of debt a state can incur and accompanying requirements for statewide referenda on the bond issue (see *Table III-55*).

The State Impact on Local Transportation Finances. State governments differ markedly in their financial impacts on local transportation finances. Some assume a major direct role in the whole gamut of transportation finances (i.e., Maryland, Connecticut, Pennsylvania, and Massachusetts). Others maintain a high degree of fiscal responsibility for highways but are only minimally involved in other transportation programs (Texas and Ohio).

In general, states containing the nation's larger metropolitan areas divide themselves into fairly distinct groupings. Some maintain both aid programs and direct expenditure responsibilities in three or more transportation functions. These include some of the most heavily urbanized states — New York, Pennsylvania, Connecticut, Illinois, and Massachusetts. Others either adopt extensive aid programs (Florida and New Jersey) or directly assume various urban transportation responsibilities (Hawaii, Maryland, and Rhode Island, for example). The remaining group of less urbanized states have aid or expenditure responsibilities that are generally limited to one or two of the four transportation functions — generally highways and airports or highways and water transport (see *Figure III-8 and Table III-56*).

Aside from these regional variations there are jurisdictional patterns as well. Municipalities have the broadest range of fiscal responsibilities, often performing airport and highway functions, invariably providing parking services, and occasionally undertaking water transport and mass transit duties. Counties are usually confined to financing the highway function though several also are responsible for airport services, and a few provide mass transit. Local special districts have a minimal role in the highway function except in a few interstate metropolitan areas. However, they play a major role in the financing of non-highway services, particularly water transport and mass transit. Where they exist, these districts are often monopoly providers of non-highway services (see *Figure III-9*).

Because of the varied local assignment patterns, the burden of financing metropolitan transportation services may involve a few, or many local governments. In some areas, a municipality with sufficient extraterritorial powers might be in the best position to finance areawide transportation services. In other SMSAs, joint city-county agreements or county assumption of services might be sufficient. In still others, a combination of unifunctional authorities or one multifunctional special district might be logical candidates for major regional transportation financing and servicing.

The local financing of urban transportation services in larger metropolitan areas is a complex task and may involve a considerable reassignment of local fiscal responsibilities. In smaller SMSAs, local transportation assignments might remain unchanged but financing arrangements might be altered by intergovernmental service contracts or joint provision of services by an area's cities, counties, and special districts. Yet, it is clear that most metropolitan areas do not now have a single logical institutional candidate for financing the full set of areawide transportation services. New institutional or procedural arrangements may be necessary for the funding of regional transportation services in many metropolitan areas.

Local Revenue Profiles. Local governments depend on a variety of funding sources to meet their transportation needs. While the bulk of local financing occurs *via* the property tax, municipal and county governments in some states have considerable non-property taxing powers. Local sales and income taxes are significant revenue sources for many municipalities. The local sales tax is authorized in 24 states and the local income tax in ten. Ten states have granted the local sales taxing power to more than 100 constituent local jurisdictions. Selective sales and license taxes also are not uncommon

Figure III-8

**STATES CONTAINING THE 72 LARGEST METROPOLITAN AREAS
CATEGORIZED BY THEIR FISCAL INFLUENCE ON
THE VARIOUS TRANSPORTATION FUNCTIONS: 1971**

States With Extensive Aid And Expenditure Influence*

New York
Pennsylvania
Virginia
Connecticut
Illinois
Massachusetts
Minnesota

States With Extensive Aid* And Limited Expenditure Influence**

Washington
California
Florida
Georgia
Indiana
Louisiana
New Jersey
Tennessee
Utah

States With Extensive Expenditure* And Limited Aid Influence**

Hawaii
Maryland
Rhode Island
Alabama

States With Limited Aid And Expenditure Influence**

Arizona
Delaware
Kentucky
Missouri
Nebraska
North Carolina
Ohio
Oklahoma
Texas
Wisconsin
Kansas

*Aid or direct expenditure responsibilities in three or four of the four transportation functions.

**Aid or direct expenditure responsibilities in one or two of the four transportation functions.

SOURCE: See Table III-18.

Table III-56

ASSIGNMENT OF LOCAL FISCAL RESPONSIBILITIES FOR TRANSPORTATION, 72 LARGEST SMSAs: 1970

Local Governmental Share of Metropolitan Transportation Expenditure

Metropolitan Area	Airports			Highways			Parking			Water Transport			Mass Transit		
	Munic- ipal	County District	Special	Munic- ipal	County District	Special	Munic- ipal	County District	Special	Munic- ipal	County District	Special	Munic- ipal	County District	Special
Birmingham	99%	1%	0%	46%	54%	0%	100%	0%	0%	Not Applicable			Not Applicable		
Mobile	99	1	0	48	52	0	100	0	0	do			do		
Phoenix	100	0	0	61	39	0	100	0	0	do			do		
Anaheim	35	65	0	68	32	0	100	0	0	do			do		
Fresno	100	0	0	42	58	0	100	0	0	do			do		
Los Angeles	96	4	0	69	31	0	100	0	0	100%	0%	0%	9%	0%	91%
Sacramento	0	100	0	36	64	0	100	0	0	0	0	100	100	0	0
San Bernardino	80	20	0	48	52	0	100	0	0	Not Applicable			100	0	0
San Diego	60	40	0	40	40	0	100	0	0	0	0	100	100	0	0
San Francisco	100	0	0	70	24	6	100	0	0	100	0	0	19	0	81
San Jose	90	10	0	65	35	0	100	0	0	Not Applicable			Not Applicable		
Denver	92	8	0	70	30	0	100	0	0	Not Applicable			Not Applicable		
Hartford	Not Applicable			100	0	0	100	0	0	Not Applicable			Not Applicable		
Wilmington	0	100	0	30	11	59	100	0	0	100	0	0	Not Applicable		
Washington, D.C.	100	0	0	71	29	0	100	0	0	100	0	0	0	0	100
Jacksonville	100	0	0	100	0	0	100	0	0	100	0	0	Not Applicable		
Miami	0	100	0	51	49	0	100	0	0	Not Applicable			6	94	0
Tampa	1	99	0	68	32	0	100	0	0	Not Applicable			100	0	0
Atlanta	87	13	0	44	56	0	Not Applicable			Not Applicable			Not Applicable		
Honolulu	Not Applicable			100	0	0	100	0	0	Not Applicable			Not Applicable		
Chicago	98	2	0	70	31	0	100	0	0	0	0	100	0	0	100
Gary	80	20	0	69	31	0	100	0	0	Not Applicable			Not Applicable		
Indianapolis	100	0	0	77	23	0	100	0	0	Not Applicable			Not Applicable		
Wichita	100	0	0	74	26	0	100	0	0	Not Applicable			100	0	0
Louisville	0	100	0	70	30	0	100	0	0	100	0	0	Not Applicable		
New Orleans	100	0	0	28	72	0	100	0	0	Not Applicable			100	0	0
Baltimore	100	0	0	60	40	0	100	0	0	100	0	0	Not Applicable		
Boston	100	0	0	99	1	0	100	0	0	100	0	0	0	0	100
Springfield	100	0	0	99	1	0	100	0	0	Not Applicable			Not Applicable		
Detroit	11	89	0	30	70	0	100	0	0	Not Applicable			100	0	0
Flint	100	0	0	40	60	0	100	0	0	Not Applicable			Not Applicable		
Grand Rapids	4	96	0	60	40	0	100	0	0	Not Applicable			Not Applicable		
Minneapolis	0	0	100	70	30	0	100	0	0	100	0	0	Not Applicable		
Kansas City	99	1	0	79	21	0	100	0	0	Not Applicable			Not Applicable		

Table III-56 (Cont.)

Metropolitan Area	Airports			Highways			Parking			Water Transport			Mass Transit		
	Munic- ipal	County District	Special District	Munic- ipal	County District	Special District	Munic- ipal	County District	Special District	Munic- ipal	County District	Special District	Munic- ipal	County District	Special District
St. Louis	94	0	6	56	44	0	100	0	0	89	0	11	0	0	100
Omaha	1	0	99	72	28	0	100	0	0	100	0	0	Not Applicable		
Jersey City	Not Applicable			71	29	0	100	0	0	Not Applicable			Not Applicable		
Newark	100	0	0	77	23	0	72	0	28	Not Applicable			Not Applicable		
Paterson	Not Applicable			75	25	0	100	0	100	100	0	0	Not Applicable		
Albany	0	100	0	14	86	0	100	0	0	0	0	100	Not Applicable		
Buffalo	100	0	0	55	39	6	100	0	0	100	0	0	100	0	0
New York	0	1	99	78	10	12	100	0	0	30	0	70	97	0	3
Rochester	0	100	0	69	31	0	100	0	0	Not Applicable			100	0	0
Syracuse	100	0	0	55	45	0	100	0	0	100	0	0	Not Applicable		
Greensboro	3	97	0	100	0	0	100	0	0	Not Applicable			Not Applicable		
Akron	91	9	0	70	30	0	100	0	0	Not Applicable			Not Applicable		
Cincinnati	97	3	0	66	34	0	100	0	0	100	0	0	100	0	0
Cleveland	83	17	0	72	28	0	100	0	0	100	0	0	100	0	0
Columbus	99	1	0	70	30	0	100	0	0	Not Applicable			Not Applicable		
Dayton	100	0	0	64	36	0	100	0	0	Not Applicable			Not Applicable		
Toledo	98	2	0	62	38	0	100	0	0	0	0	100	Not Applicable		
Youngstown	99	1	0	67	33	0	100	0	0	Not Applicable			Not Applicable		
Oklahoma City	100	1	0	52	48	0	100	0	0	Not Applicable			100	0	0
Tulsa	100	0	0	43	57	0	100	0	0	100	0	0	Not Applicable		
Portland	100	0	0	58	42	0	100	0	0	31	0	69	Not Applicable		
Allentown	29	0	71	85	15	0	100	0	0	Not Applicable			Not Applicable		
Harrisburg	Not Applicable			94	6	0	100	0	0	Not Applicable			Not Applicable		
Philadelphia	100	0	0	78	11	11	83	0	17	100	0	0	16	0	84
Pittsburgh	98	2	0	78	21	1	0	0	100	100	0	0	0	0	100
Providence	Not Applicable			100	0	0	100	0	0	100	0	0	Not Applicable		
Knoxville	100	0	0	67	33	0	100	0	0	Not Applicable			Not Applicable		
Memphis	93	7	0	59	44	0	100	0	0	100	0	0	100	0	0
Nashville	100	0	0	90	10	0	100	0	0	Not Applicable			Not Applicable		
Dallas	100	0	0	66	34	0	Not Applicable			Not Applicable			100	0	0
Fort Worth	10	0	90	87	13	0	100	0	0	Not Applicable			Not Applicable		
Houston	100	0	0	67	33	0	100	0	0	0	0	100	Not Applicable		
San Antonio	100	0	0	80	20	0	100	0	0	Not Applicable			100	0	0
Salt Lake	100	0	0	58	42	0	100	0	0	Not Applicable			Not Applicable		
Norfolk	100	0	0	17	0	83	100	0	0	100	0	0	Not Applicable		
Richmond	65	35	0	72	28	0	100	0	0	100	0	0	Not Applicable		
Seattle	3	7	90	67	33	0	100	0	0	15	0	85	100	0	0
Milwaukee	1	99	0	66	34	0	100	0	0	100	0	0	Not Applicable		

SOURCE: Unpublished U.S. Bureau of the Census data for the 72 largest metropolitan areas, 1970.

Figure III-9

GROUPING OF 72 LARGEST SMSAs BY TYPE OF LOCAL ASSIGNMENT OF FISCAL RESPONSIBILITY FOR TRANSPORTATION: 1970

Multifunctional Municipal- Unifunctional County	Multifunctional Municipal- Multifunctional County	Multifunctional Municipal- Unifunctional County- Special District(s)	Multifunctional Municipal- Multifunctional County- Special District(s)	Other
Birmingham	Anaheim	Washington, D.C.	Los Angeles	Hartford
Mobile	San Bernardino	San Francisco*	Sacramento	Jacksonville
Phoenix	San Jose	Chicago*	San Diego	Honolulu
Fresno	Denver***	Boston	Albany	Jersey City
Indianapolis	Tampa-St. Petersburg	St. Louis**	Toledo	Harrisburg
Wichita	Atlanta	Minneapolis***	Pittsburgh*	Providence
New Orleans	Gary-Hammond	Omaha	Seattle**/**	
Baltimore***	Louisville	Newark		
Springfield, Mass.	Detroit***	Patterson		
Flint	Grand Rapids	Buffalo		
Kansas City	Rochester	New York City**		
Syracuse	Akron	Portland***		
Greensboro	Cincinnati	Allentown		
Dayton	Cleveland	Philadelphia*		
Oklahoma City	Columbus	Fort Worth		
Tulsa	Youngstown	Houston		
Knoxville	Memphis	Norfolk		
Dallas	Richmond			
San Antonio	Milwaukee			
Salt Lake City	Miami			

*Two or more local transportation special districts.

**At least one multifunctional transportation special district which is locally created.

***Significant change in service assignment since 1970.

Multifunctional means having two or more of the five (airports, highways,

parking, water transport, mass transit) transportation functions.

SOURCE: Unpublished 1970 U.S. Bureau of the Census data on local government finances in the 72 largest metropolitan areas (see Table III-20).

sources of funding for many localities.¹⁵⁷ At the same time, only ten states allow local units to independently levy gasoline or severance taxes and most states usually permit their local governments to tap only one or two major non-property revenue sources (see *Table III-57*).

Many local governments rely on user charges and special assessments for the financing of various transportation projects. Thus, 12 percent of 379 surveyed cities over 25,000 population in 1970 imposed airport service charges; over a third of these same cities also imposed parking charges as well. Over two-thirds of these surveyed cities had special assessment programs for the financing of streets, curbs, gutters, and sidewalks and 40 percent had similar programs for street lighting and storm drainage.¹⁵⁸ Local governments, then, generally have a variety of non-tax devices for meeting their transportation needs.

Transportation service charges exhibit considerable variation among cities and transportation functions. In the nation's 48 largest cities, for example, service or user charges cover about 50 percent of various non-highway expenditures. Parking charges alone yielded 25 percent more revenue than current parking expenditures in these jurisdictions. But, only 13 percent of all highway expenditures were financed through highway charges and these charges were confined largely to certain cities in interstate SMSAs — New York, St. Louis, and Kansas City being the prime examples. In the other non-highway functions, user charges varied considerably. Cleveland, Jacksonville, Long Beach, and San Jose charged more than enough to cover their airport expenditures in 1973. Atlanta, Cincinnati, Kansas City, and Oklahoma City, on the other hand, had to fund a substantial amount of their airport expenditures from alternative revenue sources. Wide differences also occurred in the water transport function. Less variation occurred in parking while mass transit charges often were not sufficient to cover operating expenses (see *Table III-58*).

Several local pricing patterns emerge in the 48 largest cities. Few cities price highway services, but, high parking charge ratios (i.e., charges-expenditures ratio) may partially compensate for the lack of local highway charges. While airport and water transport charges show considerable variation, cities that levy sufficient charges to cover these non-highway costs generally rely on user charges for the financing of a wide variety of local services. Jurisdictions with inexpensive charges, however, generally exhibit little reliance on charges in other functions.¹⁵⁹

Local Use of Revenue Sharing Funds. General revenue sharing has provided considerable fiscal support

for local transportation finances. A recent survey of 250 local jurisdictions found that 15 percent of all local revenue sharing funds were spent for transportation purposes.¹⁶⁰ These Federal monies were especially important in meeting highway capital costs in cities and townships and in defraying transportation operating expenditures in counties, particularly in the mass transit function. Moreover, cities and counties spent one-fourth to one-half of transportation earmarked revenue sharing funds for non-highway purposes. This may indicate a local desire for increased non-highway aid, or the relative scarcity of Federal funds for non-highway purposes in many local areas, or both.

Revenue sharing has been an especially significant aid for smaller units of government. Cities and counties below 50,000 population spent from 18 to as much as 57 percent of their operationally earmarked revenue sharing funds for transportation. Thirty percent of the local revenue sharing funds allocated for construction purposes was for transportation purposes in these smaller jurisdictions.

The heavy transportation emphasis in revenue sharing within these smaller jurisdictions resulted in considerable budgetary relief for these communities. Thus, revenue sharing accounted for 12 percent of all transportation expenditures in cities and counties under 50,000 population, but less than 5 percent in cities and counties with more than 1,000,000 populations. Other pressing functional concerns in larger local jurisdictions evidently make it less likely that revenue sharing will have a substantial impact on local transportation finances. Revenue sharing then is becoming a vital means of financing the capital transportation expenses of smaller cities and counties. In larger jurisdictions, revenue sharing is likely to be applied to operating transportation programs, but is unlikely to provide a major impact on overall local transportation finances (see *Tables III-59 and III-60*).

Fiscal Limitations on Local Finances. Local tax and debt limitations can restrict a local government's ability to finance transportation projects. Property tax restrictions placed on county and municipal governments range from very strict in Kentucky to no limitations in 11 states (in Kentucky there are constitutionally defined limits, very few exceptions to tax rate limits, and no provisions for voter override). However, most states either permit functional exceptions, whereby tax levies for certain municipal services may be made outside of tax rate limits, or voter overrides of tax rate limits, or both. Thus, even fairly stringent tax limits often are offset. States also differ in their treatment of municipal

Table III-57

NUMBERS OF LOCAL JURISDICTIONS LEVYING SELECTED NON-PROPERTY TAXES: 1972 AND 1973

	Sales Tax: 1973		Income Tax: 1973		Gasoline Tax: 1972		Severance Tax: 1972	
	Jurisdic- tions Levy- ing Tax (Number)	Range of Rates (Percent)	Jurisdic- tions Levy- ing Tax (Number)	Range of Rates (Percent)	Jurisdic- tions Levy- ing Tax (Number)	Range of Rates (1¢ gal)	Jurisdic- tions Levy- ing Tax (Number)	Range of Rates (1¢ BBL, Of Per- cent)
U.S. Totals	4,458	.5-3	4,257	1.5-3.3	295	1-5¢	55	1-5¢ BBL,
Alabama (a) (d)	211	1.5-3	5	1-2	266	1-2¢		1-7% Val.
Alaska (a)	83	1-3						
Arizona	36	1-2						
Arkansas	1	1						
California (a)	438	1					17	1-5%BBL
Colorado	101	1.5-3						
Connecticut								
Delaware			1	1.25				
Florida					5	.5-1¢		
Georgia	2	2						
Hawaii (d)					4	3-5¢		
Idaho								
Illinois (a)	1,345	1.5-1						
Indiana (b)			34	.5-1				
Iowa								
Kansas	3	.5						
Kentucky (e) (b)			42	.5-2.5			36	1%
Louisiana (a)	155	.5-2						
Maine								
Maryland (e) (b)			21	(c)			1	7%
Massachusetts								
Michigan			16	1-2				
Minnesota	1	1						
Mississippi (d)					3	2-3¢		
Missouri	83	.5-1	2	1				
Montana								
Nebraska	2	1						
Nevada (a) (d)	10	.5			16	1-2¢		
New Hampshire								
New Jersey								
New Mexico								
New York (a)	65	1-3	1	3.5	1	1¢		
North Carolina (a)	88	3						
North Dakota								
Ohio (a)	28	.5	350	1-2				
Oklahoma	300	1-2						
Oregon								
Pennsylvania (b)			3,785	1-3.3				
Rhode Island								
South Carolina								

Table III-57 (Cont.)

	Sales Tax: 1973		Income Tax: 1973		Gasoline Tax: 1972		Severance Tax: 1972	
	Jurisdic- tions Levy ing Tax (Number)	Range of Rates (Percent)	Jurisdic- tions Levy- ing Tax (Number)	Range of Rates (Percent)	Jurisdic- tions Levy- ing Tax (Number)	Range of Rates (1¢ gal)	Jurisdic- tions Levy- ing Tax (Number)	Range of Rates (1¢ BBL, Of Per- cent)
South Dakota	13	1-2						
Tennessee (a) (e)	129	.5-1					1	5¢BBL
Texas	757	1						
Utah								
Vermont								
Virginia (a)	134	1						
Washington (a)	297	.5						
West Virginia								
Wisconsin								
Wyoming								
Total States	24 States		10 States		6 States		3 States	

Legend: (a) counties can levy sales tax, (b) counties can levy income tax, (c) 50 percent of state rate, (d) counties can levy gasoline tax, (e) counties can levy severance tax.

SOURCES: ACIR, *Significant Features of Fiscal Federalism* (Washington, D.C.: U.S. Government Printing Office, 1974), Tables 136-150; American Petroleum Institute, *Tax Compendium Digests* (Washington, D.C.: American Petroleum Institute, 1972), Tables TC-9 and TC-11.

Table III-58
**SELECTED CHARACTERISTICS OF TRANSPORTATION SERVICE
 CHARGES, 48 LARGEST CITIES: 1972**

City	Percent Of Service Financed Through Charges					Fee Intensity Index ^a
	Highways	Airports	Water Transit	Parking	Mass Transit	
Atlanta	0%	47%	—	—	—	.65
Baltimore	3	—	118%	83%	—	.21
Birmingham	—	94	—	—	—	.64
Boston	10	—	—	196	—	.17
Buffalo	2	—	—	175	—	.22
Chicago	7	99	—	144	—	.31
Cincinnati	1	41	—	198	—	.92
Cleveland	13	123	1,154	76	110	1.24
Columbus	6	116	—	415	—	.83
Dallas	4	79	—	—	110	.66
Denver	3	81	—	856	—	.55
Detroit	2	99	—	180	82	.61
El Paso	3	79	—	—	—	.76
Fort Worth	6	6	—	299	—	.72
Honolulu	2	—	—	416	—	.19
Houston	—	111	—	3,326	—	.35
Indianapolis	—	75	—	154	—	.17
Jacksonville	1	150	150	198	—	3.75
Kansas City	13	29	—	73	—	.42
Long Beach	—	175	95	100	—	—
Los Angeles	11	85	104	26	—	1.13
Louisville	—	—	467	325	—	.91
Memphis	12	—	18	4,727	101	3.15
Miami	1	—	—	105	—	.40
Milwaukee	2	—	111	189	—	.39
Minneapolis	12	—	61	438	—	.42
Nashville	—	105	—	286	—	.95
Newark	2	—	—	—	—	.11
New Orleans	3	102	—	1,040	—	.52
New York	49	—	17	120	—	.34
Norfolk	7	15	90	13	74	.47
Oakland	1	42	42	121	—	.30
Oklahoma City	1	23	—	15	90	.91
Omaha	1	—	95	133	—	.19
Philadelphia	1	80	49	136	—	.21
Phoenix	—	63	—	395	—	.68
Pittsburgh	—	—	—	50	—	.21
Portland	5	—	—	690	—	.60
St. Louis	14	75	—	97	—	.28
St. Paul	11	—	894	199	—	.35
San Antonio	—	115	—	958	—	—
San Diego	1	116	—	725	117	.68
San Francisco	1	66	96	271	75	.52
San Jose	7	138	—	222	55	.21
Seattle	2	—	—	361	—	2.34
Toledo	19	91	—	609	68	.85
Tulsa	—	78	—	—	—	1.40
Washington, D.C.	—	—	—	279	—	.12
TOTAL	13	65	52	129	75	—

^aSelma Mushkin, ed.: *Public Prices for Public Products* (Washington, D.C.: The Urban Institute, 1972), pp. 12-17.

SOURCE: U.S. Bureau of the Census, *City Government Finances in 1971-72* (Washington, D.C., U.S. Government Printing Office, 1973) Tables 7 and 9.

Table III-59

**GENERAL REVENUE SHARING ALLOCATIONS FOR
TRANSPORTATION, BY FUNCTION AND JURISDICTIONAL LEVEL: 1973**

Revenue Sharing As A Percent Of Selected Transportation Expenditures	Jurisdictional Type			Total (N=250)
	Cities (N=124)	Counties (N=116)	Townships (N=10)	
Total Mass Transit	8.0%	31.1%	0.0%	8.4%
Operating	8.7	38.4	0.0	9.0
Construction	3.0	7.5	0.0	3.2
Total Highways	8.2	—	—	—
Operating	4.9	2.3	1.3	3.7
Construction	11.8	4.4	33.3	8.6
Total Airports	—	1.4	—	.4
Operating	—	5.3	—	1.3
Construction	—	—	—	N.R.
Total Water Transport	—	—	—	.5
Operating	—	—	—	1.9
Construction	—	—	—	—
Total Transportation	6.3	3.4	16.7	5.7
Operating	6.7	3.7	13.3	6.1
Construction	5.6	3.3	33.3	5.1
Percent Revenue Sharing For Transportation				
Total Expenditures	17.2	7.2	13.3	14.1
Operating Expenditures	15.2	9.8	5.0	14.2
Construction Expenditures	25.5	5.8	20.0	15.1
Percent Transportation Revenue Sharing For Non-Highways				
Total Expenditures	55.2	26.9	—	50.0
Operating Expenditures	78.9	46.7	—	74.6
Construction Expenditures	7.2	2.1	—	6.0

SOURCE: U.S. General Accounting Office, *Revenue-Sharing: Its Use By and Impact on Local Governments* (Washington, D.C.: U.S. General Accounting Office, 1974), Tables 4, 6, 7 and 8.

and county tax limitations. Restrictions are more flexible for counties in California, Colorado, Kansas, Florida, Georgia, and New York, while being more lenient for municipalities in Delaware, Illinois, and Iowa (see *Table III-61*).

State imposed debt restrictions on counties and municipalities are more restrictive than tax limitations. Only four states — Alaska, Arkansas, Nebraska, and Tennessee — do not place any debt limitations on their local governments. Another seven lack limitations on either counties or municipalities, but not for both. Most state imposed debt restrictions are constitutionally defined, permit few exceptions to the debt limit, and often have no provisions for voter override (see *Table III-62*).

The general fiscal pattern that emerges from these tax and debt limitations is noted in *Figure III-10*. At one end of the spectrum are states where both tax and debt limitations are very strict and where there is little non-property taxation by local governments. At the other end are states with either lenient or no restrictions on local tax and debt practices, and considerable non-property tax usage by local governments. The remaining states make considerable tradeoffs in their tax and debt limitations, making one or the other fairly restrictive, but not both. Overall, debt restrictions are usually more stringent than tax limitations which are

commonly offsetting in nature (i.e., either there are few limitations but no local reliance on non-property taxes, or there are significant tax restrictions but extensive local non-property taxes, or there are significant tax restrictions but extensive local non-property tax authorizations).

States that follow a strict tax and debt limitation policy are New Mexico, Texas, West Virginia, and Wyoming while states following lenient tax and debt policies include Alaska, California, Pennsylvania, Tennessee, and Virginia. In sum, most states follow a policy of balancing local debt and tax restrictions with non-property tax authorizations.

Special District Finances. Special districts are important transportation units in several larger metropolitan areas, notably Boston, New York, St. Louis, Los Angeles, San Francisco, Pittsburgh, Philadelphia, and Seattle. Moreover, state turnpike authorities, a form of state sponsored special district, frequently serve many of the nation's larger metropolitan areas. Special districts, particularly in the non-highway functions, are often monopoly providers of various urban transportation services. Consequently, their fiscal policies often have a pronounced impact on metropolitan transportation finances.

These jurisdictions depend largely on service charges

Table III-60

THE FISCAL IMPACT OF GENERAL REVENUE SHARING ON LOCAL TRANSPORTATION FINANCES: 1973

Jurisdiction Population Class	Total Transportation Revenue Sharing Funds (millions)	Revenue Sharing As A Percent Of Total Operating Capital Transportation Expenditures		
		Total	Operating	Capital
<i>Cities (N=124)</i>				
Under 50,000	2.40	12.0%	2.2%	31.0%
50-499,999	34.30	8.3	7.9	8.5
500,000-1,000,000	46.30	7.8	6.0	9.8
1,000,000+	83.60	5.3	7.1	.4
<i>Counties (N=116)</i>				
Under 50,000	2.28	11.7	5.0	42.2
50-499,000	8.80	5.0	2.9	8.2
500,000-1,000,000	9.90	5.1	3.7	7.0
1,000,000+	10.70	1.8	3.0	.4
<i>Townships (N=10)</i>	.12	7.8	1.3	33.3

SOURCE: U.S. General Accounting Office, *Revenue-Sharing: Its Use By and Impact on Local Governments* (Washington, D.C.: U.S. General Accounting Office, 1974), Tables 4, 6, 7 and 8.

Figure III-10

STATES CLASSIFIED BY LOCAL TAX AND DEBT LIMITATION PRACTICES

Strict

New Mexico (C,M)**
 Texas (C)
 West Virginia (C,M)
 Wyoming (M)

**Offsetting*
 Tax Limitations
 Stringent Debt Limitations**

Alabama (C,M)
 Arizona (C,M)
 Illinois (C)
 Indiana (M)
 Iowa (C,M)
 Louisiana (C)
 Maine (M)
 Michigan (C)
 Missouri (C)
 Montana (C)
 New Hampshire (C,M)
 New York (M)
 North Dakota (C)
 Oklahoma (C)
 Rhode Island (M)
 South Carolina (C,M)
 Texas (M)
 Washington (C,M)
 Wisconsin (C,M)
 Wyoming (C)

Lenient

Colorado (C)
 Illinois (M)
 Indiana (C)
 Louisiana (M)
 New York (C)
 Oklahoma (M)
 Utah (M)

Lenient Debt Limitations

Arkansas (C,M)
 Delaware (C)
 Florida (M)
 Georgia (M)
 Kentucky (C)
 Nebraska (C)
 Nevada (M)

Colorado (M)
 Hawaii (C,M)
 Idaho (C,M)
 Kansas (C)
 Maine (C)
 Maryland (M)
 Massachusetts (C,M)
 Michigan (M)
 Minnesota (C,M)
 Mississippi (C,M)
 Montana (M)
 Nevada (C)
 North Carolina (M)
 North Dakota (M)
 New Jersey (C,M)
 Ohio (C,M)
 South Dakota (C,M)
 Vermont (C,M)

Alaska (C,M)
 California (C,M)
 Delaware (M)
 Florida (C)
 Georgia (C)
 Kansas (M)
 Kentucky (M)
 Maryland (C)
 Missouri (M)
 Nebraska (M)
 North Carolina (C)
 Pennsylvania (C,M)
 Tennessee (C,M)
 Virginia (C,M)

*Local governments have either lenient tax limitations or considerable non-property taxing powers, but not both.

**C = County, M = Municipal.

SOURCE: Tables III-60 and III-61; columns total to more than 50 states due to different treatment of counties and municipalities.

Table III-61

LOCAL PROPERTY TAX RESTRICTIONS, BY STATE: 1973

States	Legal Base Of Property Tax Limitation		Mill Rate (Taxes Per \$1,000 Of Valuation) Limitation		Exclusion Of Specific Types Of Levies From Tax Rate Limit		Provisions For Local Override Of Tax Rate Limit	
	County	Municipal	County	Municipal	County	Municipal	County	Municipal
Alabama	C-S	C	5	5	N	N	Y	Y
Alaska (f)	S	S	30	30	N	N	N	N
Arizona	S	S	20	(a)	F	F	Y	Y
Arkansas	C-S	C-S	5	5	S	S	N	N
California	S	S	N	10	S	S	Y	Y
Colorado	S	S	5-12	5(b)	F	N	Y	Y
Connecticut					No Limitations (NL)			
Delaware	S	NL	5	NL	N	NL	Y	NL
Florida	C-S	C-S	10	10	S	N	Y	Y
Georgia	S	S(c)	5	5	S	N	Y	Y
Hawaii					No Limitations (NL)			
Idaho	S	S	13	30	M	M	N	N
Illinois	C	S	1-2	2.5(c)	M	M	Y	Y
Indiana (f)	S	S	12.5-20	12.5	F	F	Y(d)	Y(d)
Iowa	S	S	3-4.5	30	M	M	N	N
Kansas	S	S	3.5-6.5	1.3-13	M	M	Y	Y
Kentucky	C	C	5	7.5-15	F	F	N	N
Louisiana	C	C	4	7-10	S	S	Y	Y
Maine					No Limitations (NL)			
Maryland					No Limitations (NL)			
Massachusetts					No Limitations (NL)			
Michigan (f)	C-S(c)	C-S(c)	15-20	15-20	F	S	Y	Y
Minnesota	S	S	5-15	40(c)	S	F	N	N
Mississippi	S	S	6-12	15	F	F	Y	N
Missouri	C-S	C-S	3.5-5	10	S	S	Y	Y
Montana	S	S	22-24	24	M	M	Y	Y
Nebraska	C-S	S	5-12	25-30	N(c)	N	Y	Y
Nevada (f)	C-S	C-S	50	30	N	N	N	N
New Hampshire					No Limitations (NL)			
New Jersey					No Limitations (NL)			
New Mexico (f)	C-S	C-S	5	5	F	F	Y	Y
New York	C	C	15-20	20	N	N	Y	N
North Carolina	C	S	2	15	M	S	Y	N
North Dakota	S	S	20	31-33	M	M	Y	Y
Ohio (f)	C-S	C-S	10	10(c)	F	F	Y	Y
Oklahoma (f)	C	C	15	15	S	S	Y	Y
Oregon (f)	C-S	C-S	(a)	(a)	S	S	Y	Y
Pennsylvania	S	S	15-25	25	F	F	N	N
Rhode Island					No Limitations (NL)			
South Carolina	NL	S	NL	40-50(a)	NL	N	NL	N
South Dakota	S	S	5-10	15	F	N	Y	Y
Tennessee					No Limitations (NL)			
Texas	C	C-S	8	8-25(c)	F	N	Y(b)	N
Utah	S	S	16-18	35	S	S	N	N
Vermont					No Limitations (NL)			

Table III-61 (Cont.)

States	Legal Base Of Property Tax Limitation		Mill Rate (Taxes Per \$1,000 Of Valuation) Limitation		Exclusion Of Specific Types Of Levies From Tax Rate Limit		Provisions For Local Override Of Tax Rate Limit	
	County	Municipal	County	Municipal	County	Municipal	County	Municipal
Virginia					No Limitations (NL)			
Washington (f)	S	S	9	7.5	N	N	Y	Y
West Virginia (f)	S	S	1.4-5.7	1.25-5	N	N	Y	Y
Wisconsin	S	S	10	35	F	F	N	N
Wyoming	C-S	C	8-12	8	S	N	Y	N

Code: C=Constitutional, ST=Statutory, N=No or None, F=Few, S=Several, M=Many, Y=Yes, NL=No Limitations

(a) Limitations apply to annual percent increase in local taxes.

(b) State department of local affairs may approve additional increase.

(c) More lenient limits for "home rule" jurisdictions.

(d) By application to state board of tax commissioners.

(e) No tax limit for cities over 5,000 population.

(f) Overall tax limit applies to cumulative taxes levied by all local jurisdictions.

SOURCE: ACIR, *Significant Features of Fiscal Federalism* (Washington, D.C.: U.S. Government Printing Office, 1974), Table 129.

Table III-62

LOCAL DEBT RESTRICTIONS, BY STATE: 1971

States	Legal Base Of Debt Limitation		Rate Of Debt Limit (As Percent Of Assessed Or Market Value Of Property)		Exclusion Of Special Types Of Debt From Limits		Provision For Voter Or Other Override Of Limit	
	County	Municipal	County	Municipal	County	Municipal	County	Municipal
Alabama (a)	C-S	C-S	3.5-5	20	N	Y	N	N
Alaska				No Limitations				
Arizona	C	C	4	4	N	N	Y	Y
Arkansas				No Limitations				
California (a)	S	S	5	15(b)	Y	N	N	N
Colorado	S	N L	.6-1.2	N L	N	N	N	N
Connecticut	N A	S	N A	(c)	N A	Y	N A	N
Delaware (a)	S	N L	3-12	N L	N	N L	N	N L
Florida (a)	N L	S	N L	10(b)	N L	N	N L	N
Georgia (a)	C	C	7	7	N	N	Y	Y
Hawaii	C-S	N L	15	N L	N	N L	N	N L
Idaho	S	S	(c)	15	N	N	Y	Y
Illinois	C-S	C-S	5	5	N	N	N	N
Indiana (a)	C	C	2	2	N	N	N	N
Iowa	C	C	5	5	N	N	N	N
Kansas	S	S	1	8-20	Y	N	N	N
Kentucky	C	C	2	3-10	Y	N	Y	Y
Louisiana (a)	C	C	10	10	N	N	N	N
Maine (a)	N L	C	N L	7.5	N L	N	N L	N
Maryland (a)	S	N L	15(b)	N L	Y	N L	N	N L
Massachusetts	N L	S	N L (d)	5	N L (d)	Y	N L (d)	Y
Michigan	C	S	10	10(b)	N	Y	N	N
Minnesota	S	S(e)	20	20(e)	N	N(e)	N	N(e)
Mississippi (a)	S	S	10	10	Y	Y	N	N
Missouri	C-S	C-S	5	5	N	Y	Y	Y
Montana	C	C-S	5	5	N	Y	N	Y
Nebraska				No Limitations				
Nevada (a)	S	S	10	10	N	N	N	N
New Hampshire (a)	S	S	2	1.75	N	N	N	N
New Jersey	S	S	2	3.5	N	N	Y	Y

Table III-62 (Cont.)

States	Legal Base Of Debt Limitation		Rate Of Debt Limit (As Percent Of Assessed Or Market Value Of Property)		Exclusion Of Special Types Of Debt From Limits		Provision For Voter Or Other Override Of Limit	
	County	Municipal	County	Municipal	County	Municipal	County	Municipal
New Mexico (a)	C	C	4	4	N	N	N	N
New York	C	C	7-10	7-10	N	N	N	N
North Carolina(a)	C-S	C-S	5-13	8	N	N	Y	Y
North Dakota	C	C	5	5	N	Y	N	Y
Ohio (a)	S	S	3-6	10	N	N	N	N
Oklahoma (a)	C	C	5	5	N	N	N	N
Oregon	S	S	2	3	N	N	N	N
Pennsylvania(a)	S	S	15	15	N	N	Y	Y
Rhode Island(a)	NA	S	NA	3	NA	N	NA	N
South Carolina(a)	C	C	8	8	N	N	N	N
South Dakota	C	C	5	5	Y	Y	Y	Y
Tennessee								No Limitations
Texas								Covered in Property Tax Limitations
Utah	C	C	2	4	N	Y	N	N
Vermont (a)	NL	S	NL	10	NL	N	NL	N
Virginia (a)	NL	C-S	NL	18	NL	N	NL	N
Washington (a)	C	C	5	5	N	Y	N	N
West Virginia(a)	C-S	C-S	5	5	N	N	N	N
Wisconsin	C-S	C-S	5	5	N	N	N	N
Wyoming	C-S	C	2	2	N	Y	N	N

Code: C = Constitutional, S = Statutory, NL = No Limitations, N = No, Y = Yes, NA = Not applicable.

(a) Debt limit applies against assessed rather than market value of property.

(b) No or more lenient limits on home rule jurisdictions.

(c) Limit is on rate of debt increase.

(d) Requires State legislation approval.

(e) Does not apply to Minneapolis-St. Paul.

SOURCE: ACIR, *Significant Features of Fiscal Federalism* (Washington, D.C.: U.S. Government Printing Office, 1974), Table 93.

Table III-63

**SELECTED FISCAL FEATURES, TRANSPORTATION SPECIAL DISTRICTS
IN 72 LARGEST SMSAs: 1970**

	Percent Of Revenue Sources From					Revenues Expendi- tures (000)	Out- standing Long Term Debt (000)	Reven- ue Debt Ratio	Percent of Hold- ings in Sinking Funds	District Type**
	Taxes	Inter- govern- mental Aid	Fed- eral Aid	State And Local Aid	All Other Sources					
Alameda/Contra Costa Transit District	0.243	0.009	0.009	0.0	0.748	-2,500.000	11,000	0.989	0.0	4
Southern California Rapid Transit District	0.0	0.028	0.022	0.006	0.972	+865.000	31,385	0.512	0.414	4
Bolinas Harbor District	0.750	0.0	0.0	0.0	0.250	-10.000	0	0.0	0.0	3
Sacramento-Yolo Port District	0.203	0.0	0.0	0.0	0.797	-7.000	15,630	0.292	0.141	3
San Diego Port Authority	0.013	0.003	0.003	0.0	0.984	-359.000	43,405	0.739	0.090	3
Golden Gate Building Highway District	0.0	0.0	0.0	0.0	1.000	+3,328.000	8,810	3.969	0.284	2
Bay Area Rapid Transit District	0.372	0.204	0.162	0.042	0.424	-69,667.000	853,780	0.236	0.0	4
Delaware River Bay Authority	0.0	0.0	0.0	0.0	1.000	+188.000	103,000	0.163	0.536	2
Washington M.A.T.A.	0.0	0.987	0.204	0.783	0.013	+60,035.000	NA	0.0	0.0	4
Chicago Regional Port District	0.0	0.0	0.0	0.0	1.000	+413.000	20,849	0.134	0.030	3
Tri-City Regional Port District	0.0	0.0	0.0	0.665	0.335	+7.000	685	0.137	0.989	3
Massachusetts Bay Transit Authority	0.0	0.492	0.193	0.300	0.508	+527.000	231,864	0.439	0.001	4
Minneapolis-St. Paul Airport Commission	0.020	0.151	0.0	0.160	0.829	-6,468.000	81,625	0.381	0.303	1
Bi-State Development District	0.0	0.088	0.041	0.047	0.912	+1,303.000	31,291	0.060	2.014	6
Omaha Airport Authority	0.0	0.255	0.174	0.081	0.745	-2,551.000	8,042	0.198	0.022	1
Delaware River Port Authority	0.0	0.0	0.0	0.0	1.000	-18,659.000	110,937	0.552	0.146	2
Newark Parking Authority	0.0	0.0	0.0	0.0	1.000	+120.000	5,100	0.199	0.0	5
Paterson Parking Authority	0.0	0.0	0.0	0.0	1.000	+57.000	5,835	0.103	0.137	5
Elizabeth Parking Authority	0.0	0.0	0.0	0.0	1.000	+77.000	414	0.952	0.312	5
Morristown Parking Authority	0.0	0.0	0.0	0.0	1.000	+106.000	1,152	0.370	0.953	5
Albany Port District	0.0	0.173	0.0	0.173	0.827	+16.000	2,476	0.044	0.0	3
New York Port Authority	0.0	0.039	0.008	0.031	0.961	-160,279.000	1,101,145	0.407	0.250	6
Niagara Falls Building Commission	0.0	0.0	0.0	0.0	1.000	+333.000	18,133	0.210	0.583	2
Toledo-Lucas Port Authority	0.161	0.014	0.014	0.0	0.825	-2,103.000	69,395	0.118	0.741	3
Port of Portland	0.210	0.050	0.050	0.0	0.740	-4,648.000	17,750	0.575	0.0	3
McKeesport Parking Authority	0.0	0.774	0.0	0.774	0.226	-1,359.000	2,845	-0.336	0.184	5
Pittsburgh Parking Authority	0.0	0.318	0.0	0.318	0.682	-1,264.000	23,776	0.044	0.235	5
Turtleneck Borough Parking Authority	0.0	0.947	0.0	0.947	0.053	+12.000	41	2.049	0.583	5
Allegheny County Port Authority	0.0	0.206	0.033	0.173	0.794	-1,648.000	48,167	0.088	0.0	4
Aliquippa Parking Authority	0.0	0.263	0.0	0.263	0.737	+14.000	361	0.133	1.000	5
Beaver County Municipal Authority	0.0	0.0	0.0	0.0	1.000	+66.000	473	0.087	0.997	2
Beaver Falls Parking Authority	0.0	0.882	0.0	0.882	0.118	-14.000	273	0.212	0.932	5
Delaware River Junction Toll Building Authority	0.0	0.091	0.0	0.091	0.909	-1,303.000	20,600	0.736	0.167	2
Lansdowne Parking Authority	0.0	0.118	0.0	0.118	0.882	-27.000	84	-0.048	0.0	5

Table III-63 (Cont.)

	Percent Of Revenue Sources From					Revenues Expenditures (000)	Out- standing Long Term Debt (000)	Rev- enue Debt Ratio	Percent of Hold- ings in Sinking Funds	District Type**
	Taxes	Inter- govern- mental Aid	Fed- eral Aid	State And Local Aid	All Other Sources					
Leigh-Northern Airport Authority	0.0	0.572	0.038	0.534	0.428	-143.000	748	-0.183	0.0	1
Philadelphia Parking Authority	0.0	0.0	0.0	0.0	1.000	-67.000	7,178	0.050	0.577	5
Southeast Pennsylvania Transit Authority	0.0	0.108	0.007	0.101	0.892	+9,377.000	55,000	0.674	0.0	4
Denora Parking Authority	0.0	0.649	0.0	0.649	0.351	+33.000	269	0.264	1.000	5
Washington Parking Authority	0.0	0.789	0.0	0.789	0.211	-27.000	1,175	0.407	1.000	5
Greensburg Parking Authority	0.0	1.000	0.0	1.000	0.0	+31.000	1,124	0.019	0.0	5
New Kensington Parking Authority	0.0	0.0	0.0	0.0	1.000	-89.000	2,235	0.069	0.877	5
Brazos River Nav. District	0.499	0.0	0.0	0.0	0.501	-483.000	1,335	0.241	0.153	3
Harris County Nav. District	0.076	0.0	0.0	0.0	0.924	-684.000	43,505	0.215	0.778	3
Dallas/Ft. Worth Airport Authority	0.0	0.621	0.621	0.0	0.379	-24,478.000	35,000	0.069	0.285	1
Elizabeth River Tunnel Authority	0.0	0.064	0.0	0.064	0.936	-2,251.000	33,928	0.213	0.672	2
Chesapeake Bay Bridge Authority	0.0	0.0	0.0	0.0	1.000	-4,265.000	200,000	0.074	0.0	2
Vancouver Port Authority	0.113	0.0	0.0	0.0	0.887	-126.000	3,887	0.178	0.551	3
Port of Seattle	0.285	0.034	0.030	0.003	0.681	-17,376.000	58,600	0.015	0.109	6
Edmonds Port District	0.113	0.002	0.0	0.002	0.885	-1,089.000	3,645	-0.128	0.877	3
Everett Port District	0.301	0.002	0.0	0.002	0.697	-1,941.000	4,511	-0.164	0.204	3

NA = Not Available.

**1 = Airports, 2 = Highways, 3 = Water Transport, 4 = Transit, 5 = Parking,
6 = Multi-Function.

SOURCE: ACIR tabulation from unpublished Census data.

and intergovernmental revenues to finance their transportation expenditures. Only mass transit and water transport districts depend on independent taxing powers to any large extent. Federal intergovernmental aid is important for mass transit and airport districts, while parking authorities and water transport units generally receive considerable assistance from state and local sources. States grant aid to these jurisdictions, while local governments often reimburse them for performing services that they would otherwise have had to perform independently (see *Table III-63*).

User charges are the mainstay of special district finances. Most special districts levy sufficient charges to more than adequately meet their expenditure needs. Consequently, metropolitan special districts, transit agencies being a notable exception, have considerable fiscal reserves to meet their current operating and debt service requirements. Indeed, 15 of the 50 transportation special districts in the 72 largest metropolitan areas have net revenues and holdings that cover more than 40 percent of their outstanding debt as of 1970 (see *Table III-63*). State turnpike authorities exhibit a similar picture. Since 1957, these units have more than adequately covered their debt service requirements from cumulative current operating surpluses. By 1972, their

annual operating surpluses were \$750-million and were 45 percent greater than their debt service requirements for that year. If one added construction and debt reserves to this total, state administered turnpike authorities had more than 4.5 times enough revenue to meet debt service requirements.¹⁶¹ These levels of debt coverage ratios have remained fairly constant since 1964 (see *Table III-64*). The pricing practices of metropolitan special districts and state turnpike authorities, then, are another important, yet often little understood, dimension of urban transportation financing problems.¹⁶²

REGULATORY LIMITS ON TRANSPORTATION

The regulatory policies of all three levels of government affect transportation policies. Inflexible regulations can cause economic dislocation of transportation providers while the lack of regulatory guidelines in some matters can result in the creation of inefficient and conflict producing transportation policies.

Regulatory systems affecting transportation are as diverse and wide ranging as the many modes of transportation involved. Airplanes, railroads, trucks in interstate commerce, and interstate pipelines are regu-

Table III-64

SELECTED FISCAL CHARACTERISTICS OF ALL STATE TURNPIKE AUTHORITIES: 1957-1972

Year	Operating Surplus (000)	Operating Surplus- Debt Service Ratio*	Operating Surplus And Debt And Construction Reserve-Debt Service Ratio**
1972	784,172	1.449	5.624
1971	1,118,242	1.779	5.045
1969	808,629	1.263	3.886
1968	782,046	1.490	4.491
1967	362,154	.607	2.912
1966	1,005,823	2.051	5.526
1964	654,010	1.437	4.257
1958	51,662	.204	2.387
1957	-332,836	-1.110	1.503

*Operating surplus divided into debt service (principal and interest) payments.

**Operating surplus plus debt and construction reserves divided into debt service (principal and interest) payments.

SOURCE: Various issues of *Highway Statistics* (published by the Department of Transportation and formerly by the Bureau of Public Roads).

lated primarily by the Federal government – the Interstate Commerce Commission, the Civil Aeronautics Board, and the various transportation safety agencies. Taxis, buses, and rapid rail transit systems are usually regulated by a variety of state and local bodies. Parking is regulated locally. This array of regulation limits common carrier franchises, rates and routes, and urban mass transit operations.

In addition to the regulations dealing directly with transportation operations, others indirectly affect the provision of transportation facilities and services. These include those affecting environmental controls, relocation, civil rights, and land use.

The various types of regulatory activities affecting transportation are discussed below.

State and Local Regulation of Transportation Providers

Private transportation providers are highly regulated industries. They are regulated to protect the public safety and to guard against economic competition which would be wasteful or cause lower quality or higher cost services. Regulatory powers usually rest with state and/or local public service commissions whose legal responsibilities are to protect both the provider and the purchaser of transportation services, and to see that service rates are based on reasonable policies.¹⁶³ Taxis and transit companies often are regulated by separate regulatory bodies; parking is still another separate concern at the local level, while other modes are out of the hands of state and local bodies altogether.

In the late 19th and early 20th centuries, most urban transportation companies operated pursuant to a long term state or local franchise stipulating in detail the conditions under which a utility could operate, the quality of service it was to provide, and the rates that it could charge for its services. Early franchises, however, provided few constraints on monopolistic practices, since state and local agencies had little authority or inclination to enforce the conditions of the franchise.

A major wave of reform in the early 20th century led to the creation of public service commissions whose duty was to determine service routes and rates after considerable investigation and hearings, and to supervise management and operations on a continuing basis. Franchises were still granted, but they were no longer of a detailed and long term character.

Thus, the conventional structure of regulation based on state and local public service commissions generally has been unable to resolve many urban transportation problems. Urban transit provides the most forceful

example of the difficulties of conventional regulation.¹⁶⁴ It cannot be viewed realistically as a monopolistic utility, since it is faced with relentless competition from the private automobile.¹⁶⁵ A regulatory agency with jurisdiction over transit alone rarely is capable of controlling, promoting, or even salvaging transit services under present circumstances. Its mandate does not involve the power or influence to halt the steady decline in transit usage caused by the growth of the automobile. As one report put it, “. . . when innovations are presented, regulators are concerned chiefly to conserve the revenues of existing services; they lack the power to stimulate investment required for fundamental improvements.”¹⁶⁶ Indeed, some argue that regulatory agencies, either under conventional or altered circumstances, simply do not have the tools to deal with the basic economic decline of urban transit services.¹⁶⁷

Transportation regulation, particularly that affecting urban mass transit, has been further complicated by the question of public ownership. When a private transportation system faces impending insolvency, the community which it has been serving is faced with a choice of accepting curtailed services, losing the transportation system, subsidizing it, or acquiring it under public ownership. When transit systems deteriorate in the face of greater automobile usage, state or local agencies charged with regulatory responsibility frequently provide some form of indirect assistance, often tax relief. But, when a regulatory body provides this assistance, it no longer carries out its traditional regulatory role which is primarily to control the earnings of monopolies. Instead, it is promoting and encouraging services valued, to some degree, by the community. When public ownership occurs, the distinction between managerial and regulatory functions in a transportation operation begins to evaporate.¹⁶⁸

Presently the 151 publicly owned mass transportation systems account for over 80 percent of all transit revenues, transit passengers, and mass transportation employees. This increased public ownership, puts transportation regulation in the hands of the provider's own governing body rather than in conventional regulatory bodies which previously provided for an independent scrutiny of transit management. Consequently, the political responsiveness of the public transportation body must be relied upon if the public is not to be deprived of past regulatory restraints that were sometimes effective in keeping rates reasonable and providing incentives for public transportation efficiency and economy.

No matter what the regulatory structure, many regulatory mechanisms find it difficult to review their

responsibilities in a broad context. For example, local agencies rarely consider that taxis or other forms of private transportation might be utilized to perform services for which a bus operation is uneconomical. As a general rule, the two major passenger modes – the bus and the automobile – usually have been viewed as separate entities that cannot be combined. The interrelationship between parking and mass transit regulatory policies usually has not been recognized. Nevertheless, the availability of public parking and the rates that are charged for such services have a marked influence on transit patronage. But, few state or local regulatory agencies have the authority to examine the relationship between these two phenomena, or deal with other intermodal questions. Consequently, many areas create special purpose public transportation authorities to consolidate the most critical metropolitan transportation mode outside the regulatory process, and let other unconsolidated modes shift for themselves as best they can.

New mechanisms at both the state and regional level may be required to coordinate and regulate metropolitan passenger transportation. New state departments of transportation and metropolitan transportation instrumentalities such as the Metropolitan Transportation Authority in New York, the Metropolitan Transportation Commission in San Francisco, and the Metropolitan Council (and Metropolitan Transit Commission) in Minneapolis-St. Paul already spearhead most public transportation planning, and also might be asked to provide or oversee coordinated regulatory policies for entire metropolitan areas. With such coordinated regulatory control over multimodal operations and facilities, they could devise pricing schemes that might result in better balanced transportation use in urban areas.

The present need, therefore, may be to establish multimodal transportation regulation that will affect urban transportation of all types – auto, bus, rail, and taxi – since all are complementary elements in the overall system.¹⁶⁹ One report, for example, notes several emerging principles for developing improved regulatory policies in urban areas. They include:

- the need for transit regulation to be linked to broad community planning and policy goals;
- the requirement for better channels of public communication about regulatory policies;
- the development of regulatory policies that will be sensitive to the transit riders, the taxpayer, the business community, and other community interests;
- the need for improved funding which would

promote better coordination among transportation systems;

- the need for close coordination among transit related programs;
- the requirement for periodic review of regulatory decisions and processes; and
- the development of relevant data and analytical skills which will provide a rational base for metropolitan regulatory policies.¹⁷⁰

All these policies may be essential if regulatory activities are to solve difficult urban transportation problems. If regulatory policies do not become more sophisticated and comprehensive, then they may continue to be an obstacle to more effective metropolitan transportation planning, financing, and implementation.

Interstate Commerce Commission Regulations

The Interstate Commerce Commission (ICC) is a Federal agency created by Congress to regulate interstate surface transportation. Some 24,000 private companies provide domestic transportation service in the United States and are subject to ICC regulations. These companies include railroads, trucking companies, bus lines, water carriers, oil pipelines, freight forwarders, transportation brokers, and express agencies. It is the ICC's responsibility to insure an adequate and efficient transportation system under private ownership. The objective of ICC regulations is to eliminate discriminatory practices which favor some shippers or localities at the expense of others.

The ICC is the oldest of independent regulatory agencies. It regulates, by mode of transport and in varying degrees, the rates, routes, operating rights, abandonment, sale, and mergers of surface carriers; it conducts investigations and awards damages where applicable; and administers railroad bankruptcy proceedings. It also prescribes a uniform system of financial accounts and records for carriers subject to the act, and analyzes issuance of transportation securities.

The ICC was initially established to regulate interstate transportation in response to monopoly and cartel conditions in the nation's railroads. Until 1935, it sought to regulate these cartels through rate controls. ICC regulations were designed to promote national and regional economic development by hastening railroad consolidation, but since the 1940's, these regulations

gradually proved counter-productive, and have failed to bolster the health of the railroad industry.

Legislation enacted since 1935 has changed fundamentally the character of regulation from an emphasis on control of price and service practices, and encouragement of intermodal competition, to the recent concern with restricting both intramodal and intermodal competition. To accomplish this latter purpose, primary reliance has been placed on entry controls and minimum rate regulation to eliminate "destructive" competition.¹⁷¹ As the trucking industry has become less competitive and motor carriers have adopted discriminating rate structures, restrictions on entry have reduced the number of competing trucking firms in many markets. This has increased the size of trucking firms far beyond that needed for economies of scale, and encouraged excess capacity, which, in turn, has produced higher costs and rates for intercity trucking.

These recent regulatory policies have diverted vast volumes of high value freight over medium and long distance hauls and billions of dollars of revenue from low cost railroads to the high cost truckers.¹⁷² As one report puts it,

...the new regulation that was originally designed to assist the railroads to continue their common carrier services. . .has turned out to provide incentives for rapid expansion of trucking and barge transport that otherwise would not have occurred. Moreover, it has stimulated greater investment in public highway and waterway facilities. Thus, the new regulation has gone hand in hand with promotional policies of government in the last several decades encouraging overdevelopment of the modes dependent upon publicly assisted facilities, and underdevelopment of that part of the railroad network that the economy highly depends on as the most efficient mode for medium and long distance traffic.¹⁷³

In sum, there is a growing tendency to doubt the value of ICC regulations in providing a competitive and appropriate balance among transportation modes. Present regulations have encouraged economic concentration in the rail and motor freight industry. They have reduced the opportunity for competition within and between transportation industries. All this has resulted in higher prices for transportation services and possibly over-investment in highway and airport facilities. The

question now is whether this imbalance can be redressed by new regulatory policies.

Civil Aeronautics Board and Federal Aviation Administration Regulations

The Civil Aeronautics Board (CAB) bases its legal authority on the *Civil Aeronautics Act of 1938*, the *Presidential Reorganization of 1940*, and the *Federal Aviation Act of 1958*. It presently regulates domestic air carrier operations – including rates, routes, operating rights, and mergers. It also formulates and grants operating subsidies, and assists in the development of international air transport. The Federal Aviation Administration (FAA) is another regulatory agency which is responsible for the regulation of civil aviation, including safety and the efficient use of air space shared by both civil and military aircraft. It has responsibilities for certifying both pilots and aircraft and is responsible for establishing and updating a national airport system plan. This plan identifies locations of future airports and suggests what type of development is desirable at these locations.¹⁷⁴

Federal air transportation regulations have met with mixed success. On the positive side, CAB regulations have contributed to greater economic competition in the airline industry. Even though freedom of entry is restricted, the industry is more competitive than in the past. One report, for example, indicates that more than half of all U.S. domestic air passengers now have a choice of competitive services.¹⁷⁵ Airline safety has improved as a result of increasingly sophisticated FAA safety regulations. Aircraft fatalities per 100-million passenger miles have been reduced by over 90 percent between 1933 and 1965.¹⁷⁶

These regulations, however, also have had their drawbacks. Some observers believe that Federal regulations have retarded the development of aircraft technology, especially those that prevent increased industry strength through merger of aircraft producers and domestic airlines.¹⁷⁷ Federal regulations also have not explored the possibilities of using airport pricing to reduce major airport congestion and to encourage greater use of reliever airports in metropolitan areas.¹⁷⁸ Lack of airport pricing techniques has also encouraged the rapidly developing general aviation industry to use and unnecessarily congest the same busy commercial airports as the major airlines use, when they could just as well use separate satellite airports.¹⁷⁹

Operating subsidies have proved to be another problem for the CAB. Several studies have found that local

service subsidies have been used inefficiently by major airlines. With only a few exceptions, these airlines have been reluctant to use small passenger planes for service to smaller urban areas. Rather, they have used the subsidies to acquire planes that are simply too large to be economical for local service routes.¹⁸⁰

Finally, CAB regulations have discouraged the development of multimodal air transport companies. Such companies, it is argued by some, could provide more efficient passenger and freight movement to and from the nation's large metropolitan airports. In the same vein, the CAB has not prodded airlines to develop more efficient short haul, intercity airline service. Though short haul trips prove uneconomic for large aircraft, the CAB has not been able to induce airlines, local governments, and aircraft producers to use smaller aircraft for more efficient service over these hauls.¹⁸¹

Promulgating airline regulations that both insure more efficient air service and provide better coordination with other transportation modes is a difficult undertaking.¹⁸² Governments at all levels are vitally interested in the operations of the airline industry. Yet, their concerns with air transport operations differ markedly. The Federal government seeks to promote and protect the economic health of the airline system through its regulatory policies; state governments often promote transportation as a key factor in their economic development policies; while local governments are most concerned with the environmental and land use effects of airport development. Conflicting interests, then, make it difficult to implement a regulatory system that will be satisfactory to all. Even within governmental levels, different agencies have different perspectives on various air service regulations. Conceivably, the resolution of regulatory policy conflicts may have to be pursued, at least in part, through recourse to the planning process rather than by streamlining present regulatory policies.

National Transportation Safety Regulations

A number of governmental organizations have transportation safety responsibilities. Their mandate covers both urban and national safety problems. The National Transportation Safety Board promulgates transportation safety requirements in the marine, railroad, highway, pipeline, and civil aviation areas. The safety board's main mission is ". . .to determine the cause of transportation accidents and to make recommendations aimed at preventing such accidents from happening."¹⁸³ While housed in the Department of Transportation, it is an

autonomous agency headed by five members appointed by the President and confirmed by the Senate.

The safety board gives primary attention to investigating the causes of all U.S. civil aircraft accidents. It maintains a "Go Team" in Washington made up of air safety investigators with specialized skills and on continuous alert to investigate any major U.S. air disaster. Non-fatal investigative work is handled either by the FAA or the board's field offices. The board limits its surface transportation inquiries to catastrophic, technically unusual, or national interest cases where industrywide corrective measures can be developed. Most surface accident investigations are carried out by the Federal agencies directly involved: the Federal Railroad Administration, the U.S. Coast Guard, the Federal Highway Administration, and the Office of Pipeline Safety.

While the National Transportation Safety Board has no powers to order correction, its hearings, special studies, and public releases carry considerable weight by the force of public opinion. In its 1968 annual report, for example, the board emphasized the new and complex safety problems posed by the introduction of supersonic transportation and jumbo jets and the continued growth of general aviation, all of which have a pronounced urban impact.

Highway safety regulations were once under the jurisdiction of the National Highway Safety Bureau and the Bureau of Motor Carrier Safety, both of which are in the Federal Highway Administration (FHWA). However, with the enactment of the *Highway Safety Act of 1970*, the National Highway Safety Bureau became the National Highway Traffic Safety Administration (NHTSA) and the Federal Highway Administration shared its safety responsibilities with this new agency, through a new associate administrator for motor carriers and highway safety.¹⁸⁴

The NHTSA has responsibility for developing safety standards related to vehicles and drivers, while the FHWA issues standards regarding highway design, construction and maintenance, traffic engineering services, identification and surveillance of accident locations, and pedestrian safety.¹⁸⁵ Together, the two administrations are responsible for a fairly comprehensive highway and traffic safety program.

Not only does the FHWA issue Federal safety standards for motor vehicles, but it also conducts programs concerning automobile defects and recall campaigns. The FHWA issues standards and certifications, under the *Highway Safety Act*, for a wide variety of Federally assisted state and local highway safety programs. Matching Federal funds are made available to

assist state and local communities in improving and expanding certified safety programs.¹⁸⁶ Among the activities that have been jointly engaged in are over 18,000 safety spot improvement projects involving such matters as new bridges and guardrails (ultimately expected to cost over \$2-billion), out of control car problems, and projects for upgrading traffic control devices.

Under the *Highway Safety Act*, NHTSA possesses broad rule making authority. By the end of 1972, it had issued a total of 51 rules and regulations and 379 amendments to existing standards. Considerable litigation has arisen over its activities in enforcing safety standards, especially on such matters as passive restraint devices for new automobiles. Some of this litigation is initiated by NHTSA itself which has the power to seek civil penalties through court action.

Civil Rights Regulations Affecting Urban Transportation

Title VI of the *Civil Rights Act of 1964* provides that "... No person in the United States shall, on ground of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving Federal financial assistance." Each Federal agency has the primary responsibility for enforcement of this non-discrimination mandate in its direct or aided programs. This responsibility must be exercised positively, not merely in response to complaints of discrimination. Regular inspections and reviews are necessary to insure that aid recipients are meeting the requirements of Title VI, since it is assumed that otherwise, there might be perfunctory observance of the law. Thus, the ultimate success of Title VI depends largely on how effectively compliance is monitored in the field. The U.S. Civil Rights Commission has prepared materials to assist the Federal agencies in developing their regulations and agencywide Title VI compliance plans. The Attorney General's office also has issued guidelines for enforcement of Title VI.

In January of 1973, the U.S. Civil Rights Commission issued a report entitled, *The Federal Civil Rights Enforcement Effort — A Reassessment*. This report was the third in a series which reviewed actions taken by Federal agencies to enforce civil rights laws. The commission's basic conclusion was that the Federal effort was inadequate and had not improved substantially since 1971.¹⁸⁷ While the commission stressed the continued weakness of overall Federal efforts to enforce Title VI, it did emphasize that progress has been made in a number

of areas.¹⁸⁸ Both the FHWA and UMTA, however, were criticized for not having identified the long range civil rights implications of their programs, although UMTA was recognized as having established a better system than FHWA for analyzing the civil rights impact of its proposed projects.

According to the Civil Rights Commission report, "...Major Title VI implications of the Federal Aid Highway Program relate to the immediate and direct consequences of highway location and construction — including such matters as community disruption, and family displacement and relocation — and to the future impact of the program in terms of housing and employment opportunities generated by the highway. The latter category involves such issues as suburban access, urban polarization and central city viability."¹⁸⁹ How the FHWA proposes to meet these issues, the Civil Rights Commission claims, is unclear.

The selection and retention of contractors and subcontractors also are Title VI matters, but the Civil Rights Commission asserted that FHWA has paid little attention to this area, especially to such issues as qualifications of contractors, bonding requirements, and the size of contracts — all of which may have significant civil rights implications. Other criticisms made of both FHWA and UMTA in the Civil Rights Commission report included: the inadequate collection of racial and ethnic data on communities affected by proposed highways or other transportation facilities, the perfunctory manner of pre-approval and post award grant reviews, and the lack, until recently, of DOT audit coverage of contracts and grants for compliance with civil rights requirements.¹⁹⁰ Complaint investigations, monitoring of field activities, and enforcement actions involving civil rights requirements also were found to be inadequate.

OMB Circular A-95 gives public agencies charged with enforcing state and local civil rights laws the opportunity to comment on proposed Federal and Federal aid projects, but adverse comments do not insure that a project will be rejected or even modified by the responsible Federal agency considering any adverse comments received through A-95 clearinghouses. While any Federal agency approving a project in the face of these adverse comments is required to submit a written explanation, the A-95 process is only advisory, and cannot be considered a reliable civil rights enforcement tool. Thus, it does not relieve Federal agencies of the responsibility for developing a structured Title VI preapproval mechanism.¹⁹¹

Another civil rights mandate relevant to urban transportation is the *Equal Employment Opportunity Act*, Title VII of the *Civil Rights Act of 1964*. Title VII

declares in part that it is “. . .unlawful to fail or refuse to hire. . .or otherwise to discriminate against any individual with respect to his. . .conditions, or privileges of employment because of such individual’s race, color, religion, sex, or national origin.” The Department of Justice and the Equal Employment Opportunity Commission (EEOC) share responsibility for Title VII and jurisdiction over the private sector, state and local employees, educational institutions, and other quasi-public activities.

Title VII is only one of several statutory or regulatory bases for oversight of employment in the private sector. The Office of Federal Contract Compliance, created to administer *Executive Order 11246*, prohibits discriminatory employment practices and requires affirmative actions on the part of government contractors with regard to equal employment opportunity. The Department of Justice has the main enforcement authority within the Federal establishment to bring suits against offenders.

Under the authority of Title VII, the EEOC has attempted to improve the status of minority employees in the trucking industry, for example. In a November 1971 report, the EEOC emphasized it had utilized field visits, compliance reviews, and adjudication of individual charges of discrimination, to resolve complaints of discrimination in the industry.¹⁹² On October 25, 1973, Assistant Attorney General for Civil Rights, J. Stanley Pottinger, wrote letters to 514 major trucking companies accusing them of practicing job discrimination against blacks and Spanish surnamed workers. The companies, the Trucking Employers, Inc. (which represents the firms in collective bargaining), and the International Brotherhood of Teamsters, were given 30 days to answer the charges, though the Department of Justice indicated court action would be taken regardless of the responses. The department had apparently concluded, after investigation, that the common carriers in the trucking industry were conducting a pattern of unlawful employment practices. This suit¹⁹³ will be a major civil rights case affecting more than 400,000 employees in this industry.¹⁹⁴ Thus far 114 trucking companies have signed consent decrees. The EEOC has been submitting briefs to a range of Federal regulatory agencies concerning various transportation services.¹⁹⁵ As Federal and state regulatory agencies take a greater interest in equal opportunity in the transportation industry, such civil rights requirements can be expected to have a greater impact on transportation practices in metropolitan areas.

Relocation Regulations

Under the *Uniform Relocation Assistance and Real*

Property Acquisition Policies Act of 1970 (PL 91-646) which implemented several recommendations adopted by this Commission in 1965,¹⁹⁶ all Federal and Federally aided programs under which families or businesses are displaced must provide uniform and equitable relocation services for such displaced persons. Uniform and equitable land acquisition policies are also required. Prior to 1971, no standardized policy existed among Federal agencies as to relocation benefits for displaced persons or businesses.¹⁹⁷

The payment schedule provided for in the law covers moving and related costs, replacement housing for home owners, mortgage insurance for replacement housing, and replacement housing for tenants and others. A range of relocation assistance advisory services also must be provided, and relocation activities must be coordinated with project work. The Federal agency head responsible for administering the Federal financial assistance that causes displacement may take such action as is necessary to provide appropriate housing (funded by project money) if he determines that such housing cannot otherwise be made available. It is expected that the services of state or local housing agencies also will be utilized.

The relocation law requires that arrangements for assistance payments must be satisfactorily made before a Federal grant, contract, or agreement is entered into with a state or local agency. The cost of providing payments and assistance under the act is considered an eligible expense for which Federal financial assistance is available.

The Federal Highway Administration has issued “Policy and Procedure Memoranda” (PPM’s) to implement the relocation law. The PPM-1 series of directives sets up procedures to insure the prompt and equitable relocation and reestablishment of persons, businesses, farms, and non-profit organizations displaced as a result of Federal and Federal aid highway construction. A hearing and appeals procedure is provided to encourage amicable resolutions of relocation controversies.¹⁹⁸

The *Uniform Relocation Act*, however, still suffers from several deficiencies, including the lack of income or asset limits to determine eligibility for the benefits under the act, a sure method of making rental assistance payments to beneficiaries, the sharing of relocation costs on the same basis as other project costs, and the greater benefits available to a former owner rather than to a former tenant. On the other hand, the *Uniform Relocation Act* provides that any Federally aided project certify the existence of suitable relocation opportunities for displaced persons. If such housing is not available, Federal aid funds may be used for the rental or purchase

of housing on a "last resort" basis. Moreover, plans for use of Federal funds in this manner must be reviewed through the regular A-95 process. Consequently, metropolitan transportation efforts now provide substantial relocation resources to those who would be displaced by Federal or Federally aided urban transportation projects designed to implement an areawide transportation program.¹⁹⁹

Environmental Protection Regulations

Two major Federal laws – the *Clean Air Act* and the *National Environmental Policy Act* – have injected environmental considerations forcefully into the transportation scene in the past few years. These two acts are explained briefly below.

Air Pollution Control. Congress first enacted air pollution control legislation in 1955.²⁰⁰ Initial legislation provided grants-in-aid for state and local air pollution control agencies; its underlying assumption was that states had primary responsibilities for air pollution control. When the *Clean Air Act of 1963* was enacted, the Secretary of HEW was authorized to publish non-mandatory air quality criteria and to encourage voluntary efforts to prevent motor vehicle exhaust pollution. He also was authorized to intervene when air pollution control measures were insufficient in any state.

The *Clean Air Act of 1965* amendments authorized the Federal government to promulgate and enforce Federal emission standards for new motor vehicles without state or local participation. The law was based on the commerce clause of the Constitution, and included the right to bring suit against polluters. The *1967 Air Quality Act* mandated issuance of Federal air quality criteria. Once Federal guidelines had been issued, states were to set specific standards and see that they were implemented. The Department of Health, Education, and Welfare was authorized to bring legal action if the states failed to enforce either their own or Federally imposed standards. The 1967 legislation also gave the Secretary of HEW exclusive authority to establish and improve emission standards for new motor vehicles, except where a state had higher standards.

The Environmental Protection Agency assumed HEW's clean air function in 1970. The *1970 Clean Air Amendments* required the achievement of national ambient air quality standards to protect the public health, by 1975.²⁰¹ All 50 states are required to submit air pollution control plans that specify strategies for

reaching and maintaining national standards of air quality.

With regard to new car emissions, the act specifies major reductions of hydrocarbons and carbon monoxide by 1975 and nitrogen oxides by 1976, subject to a one year extension by EPA if the necessary technology is not available. This extension has been made. During 1973, there was considerable controversy concerning the feasibility of achieving clean air requirements as established by the act. In many instances, EPA has had little room for flexibility, since it was under compulsion of court orders to implement the 1970 amendments.

One of the major developments in air quality legislation and regulation has been the deemphasis of local controls. The shift first to state and then to national oversight reflects a growing recognition that the problem is national in scope, and that the primary role of the states and the localities is to devise methods for the application of emission standards and their enforcement.

One of the most dramatic impacts of the *1970 Clean Air Amendments* may be on commuter driving habits.²⁰² At least 37 metropolitan areas are especially hard hit by automotive pollution, where Federal emission limits on new motor vehicles will not be sufficient for air quality standards to meet the statutory deadline. Supplementary state imposed transportation controls will be necessary for achieving national air quality standards in these areas.²⁰³

The current energy shortage, along with air quality objectives, may be a major stimulus for reducing automobile use in favor of mass transit. The other basic approaches to controlling emissions involve inspection and maintenance of air pollution control equipment, retro-fit of emission devices for older vehicles, and changes in traffic patterns.

Significant debate between EPA and environmental groups centers on enforcement of the *1967 Air Quality Act*. Environmental groups argue that the act requires EPA to disapprove any state implementation plan allowing for significant deterioration in air quality, even if such air does not violate Federal air quality standards. Federal district courts and the Supreme Court have decided in favor of the environmental groups. EPA, however, still has little guidance for carrying out a non-degradation policy which will not solidify existing patterns of economic growth. Present judicial mandates apparently would curtail growth in areas presently having clean air, and require instead that growth take place in developed areas that already have air quality problems.²⁰⁴

Another major issue is the act's requirement for major emission reductions for new automobiles in 1975 and 1976. The EPA administrator agreed to a one year exten-

sion in imposing control standards only after considerable litigation. This decision was based on a determination that the economic risks of denying the extension outweighed the slight air quality gain. Nevertheless, the EPA decision has been that existing technology does permit auto companies to meet 1975-1976 requirements; a major debate still rages as to what kind of technology is most reliable and desirable for meeting these standards.

The National Environmental Policy Act. The second major piece of environmental protection legislation with a substantial impact on urban transportation is the *National Environmental Policy Act of 1969* (NEPA). This establishes a national policy requiring all Federal agencies to give full consideration to environmental affects in their program planning. The key provision of the act is Section 102 (2) (c) which requires every Federal agency to prepare a detailed statement of environmental impact for every major Federal action that might significantly affect environmental quality. Thousands of such statements have been filed with the Council on Environmental Quality which also was established by NEPA. The types of impacts to be considered include not only air quality, but also water quality, erosion, noise, flooding, visual aesthetics, and economic and social disruption.

Legal questions concerning the interpretation of Section 102 (2) (c) include:

1. Which agencies must comply with the Act?
2. What level of Federal involvement and action requires preparation of a statement?
3. What magnitude must a "major" Federal action achieve before an impact statement must be prepared?
4. Does the act apply to the environmentally protective regulatory programs of Federal agencies?
5. Must it always be a Federal official who prepares the final impact statement?
6. How much and what kinds of information must it contain?
7. How is NEPA to be applied when several agencies are involved in a single action?

Court reception of NEPA has been favorable. One report notes that "...The courts' leading role in requiring compliance with NEPA may be traced in large measure to

their current willingness to review all agency action more closely than they did only a few years ago."²⁰⁵ Courts have eased "standing" requirements to enable the filing of "public interest" lawsuits brought by citizens and organizations which claim injury to their environmental interests when NEPA is improperly implemented, or when an agency fails to provide information to the public or to guarantee opportunities for comment and participation.²⁰⁶

The vigorous court review of agency compliance with NEPA provisions suggests that Federal agencies may neglect such requirements at their peril. In reviewing prepared statements, the courts are strongly influenced by the NEPA's policy of full disclosure; the courts are fully aware that if the level of thoroughness of statement preparation is left to the agencies themselves to determine, cursory or self-serving statements may be submitted which do not enable the responsible Federal decisionmakers to truly consider environmental values.

The Federal Highway Administration is covered not only by NEPA provisions dealing with environmental protection, but also by Section 136 (b) of the *Federal Aid Highway Act of 1970* which deals with economic, social, and environmental effects of Federal aid highway projects. Section 136 (b) directs the Secretary of Transportation to develop guidelines or standards to be applied to future Federal aid highway projects. It calls for guidelines for consideration of economic, social and environmental factors; standards for highway noise levels; and air quality guidelines.

The key provisions of Section 136 (b) direct the Secretary to develop environmental guidelines to assure (a) that possible economic, social, and environmental effects relating to proposed highway projects are fully considered in developing highway projects²⁰⁷ and (b) that final decisions on highway projects are made in the overall public interest, taking into consideration the need for fast, safe and efficient transportation, public services, and the cost of eliminating or minimizing adverse environmental effects. Section 136 (b) guidelines are to be developed in consultation with appropriate Federal and state officials, and are to be applicable to any proposed highway project which requires approval by the Secretary of Transportation.

On May 18, 1972, the Comptroller General of the United States filed an evaluation of Federal efforts to implement the *National Environmental Protection Act of 1969*. This GAO study indicated that most Federal agencies (1) did not complete their statements in time to accompany proposals to all levels of review, or in time for them to be used in the early stages of decision making, and (2) did not effectively review the results of plans to ensure that the environment is protected as

anticipated. State highway departments generally prepare the draft environmental impact statements for proposed highway projects and obtain comments on the statements from Federal, state, and local agencies — before proposing locations for the projects to FHWA division offices. The final statements also are prepared by the state highway departments and are filed with the Council on Environmental Quality by the administrator of FHWA. But state highway departments' studies of highway needs are often conducted before draft environmental impact statements are prepared. During a later stage when the state makes a location study, a final statement is prepared and the state then sets the specific location for the project. Thus, the environmental impact statement is not as useful as it might be, if it were available earlier in the decision making process or applied to an entire highway system plan for a particular area.

The GAO report emphasizes that agency procedures should specify the various kinds of actions requiring impact statements, and the circumstances which will necessitate statements for actions broader than projects. The distinction between primary and secondary impacts was found to be blurred and the extent of secondary impacts was not sufficiently described.²⁰⁸ Along with the other Federal agencies reviewed, the Federal Highway Administration was called upon to assure that public views are properly solicited, considered, and evaluated. The FHWA regulations do not require state highway agencies to explain environmental impact statements to persons at public hearings but they do allow written comments from the public within ten days following the hearing. Greater sensitivity to public opinion might well head off later legal actions that tend to block effective transportation planning and implementation. In the same vein, since the Federal Highway Administration does have a list of all agencies having expertise in special areas of environmental protection, the GAO urges a greater exchange of views and other types of cooperation between Federal, state, and local agencies that have an interest in the environmental impacts involved, especially in follow-up procedures in order to determine whether an environmental impact statement has been adhered to.

The General Accounting Office (GAO) emphasized the need for the Council on Environmental Quality, the Environmental Protection Agency, and the Office of Management and Budget to assist different Federal agencies in preparing environmental impact statements. Several states also have required their own environmental impact statements as well. State agency performance in this field has often complemented and sometimes sur-

passed national efforts. A recent national symposium on state environmental legislation, however, suggested that methods be explored for enabling compliance with both Federal and state environmental impact requirements without excessive duplication.²⁰⁹

Land Use Regulation

As was pointed out in earlier chapters, traditional land use measures focused largely on prohibiting inappropriate uses of land, rather than on promoting a balance among different types of land use, and between major land uses, transportation and other community facilities. They have permitted unplanned developments to flourish, resulting in unattractive and costly land use patterns. The essentially negative character of many established land use regulations has allowed little positive planning to meet projected public facility needs. As a result, the nation has experienced severe community development conflicts. The enormous competing pressures on existing land resources, a lack of adequate data for sound comprehensive planning, and the absence of effective means of implementing land use plans in concert with transportation and other related development plans, are all factors which have exacerbated the metropolitan transportation problem. As a recent U.S. Senate report points out:²¹⁰

...the highway planning of the recent past provides an excellent example of the failure of single purpose planning. Planners have routed highways through parks where land is invaluable for recreation but cheap for road building, carved up low income districts with commuter access roads — thus effectively destroying any sense of community; poured additional highway lanes into cities unable to cope with more automobile traffic and air pollution; and sited major interchanges without regard to the unplanned and often unanticipated growth centers which they generate.

The Local Nature of Most Land Use Controls. Perhaps the greatest problem of land use control, limiting efforts to balance urban development with areawide systems of transportation, has been its exclusively local nature. Urban land use controls have been exercised almost exclusively by individual municipalities, although some counties also have assumed local zoning and subdivision control authority for their unincorporated areas in recent years. These regulations remain jealously guard-

ed by each locality; they are imposed with a high degree of individuality and a low degree of predictability; and they often leave the long range public works planners at a loss in tying their policy proposals to land use plans with any great feeling of confidence. Not only in transportation, but also in fields like water and sewer utilities, open spaces, Federal facilities, and over 100 Federally assisted community programs, areawide planning and review are called for by Federal regulations. Land use controls, then, are virtually the only types of local development decisions having an areawide impact which still remain outside the review of higher levels of government in most states. But this situation is beginning to change, as noted below.

Some States are Beginning to Step In. Some state governments have developed an awareness that conventional, locally administered land use controls are ineffective by themselves in coping with today's needs. Consequently, they have begun to reassert their own powers.

Early state land use planning efforts focused primarily on rural areas, since urban communities often already had well established land use control systems. The first major state land use legislation occurred in Hawaii in 1961 with the advent of its comprehensive statewide zoning law.²¹¹ Under this act, the state was divided into the following classifications: (a) agricultural, (b) conservation, (c) rural, (d) urban. Development policy was established at the state level, but implementation was carried out cooperatively with local governments. Following Hawaii's lead, seven other states — Colorado, Vermont, Maine, Arizona, Nevada, Oregon, and Florida — have also instituted statewide comprehensive land use measures. Many other states have developed controls for areas such as coastal zones, shore lines, and the wetlands.²¹² Numerous other states have enacted laws regulating power plant siting, strip mining, and waste disposal.²¹³ Furthermore, at least half of the states have taken some action to assert their authority for determining valid exercise of the land use power. In most such instances, states provide broad oversight and guidelines rather than assuming the land use planning function itself.

Recent Florida legislation, the *1972 Land and Water Management Act*, exemplifies the character of recent statewide land use programs. The basic program established by the act contains two major elements: control of critical areas, and regulation of developments having regional impact.²¹⁴ The first element focuses on geographic areas (e.g., wetlands, historic sites), and the second on specific types of regional development wherever they might occur. In the latter case, the law

empowers the state to adopt guidelines and standards to be used in deciding whether certain land use developments constitute "developments of regional impact (DRI's)."

Guidelines and standards that have been adopted under the act relate to such developments as airports, recreational facilities, power plants, hospitals, and court facilities. To be classified as a development of regional impact, a project has to be large enough to have an impact over more than one county. Land use controls affecting such a project must identify the extent to which the development would create or alleviate environmental problems such as air, water, or noise pollution, and the amount of pedestrian or vehicular traffic generated by it. When land use permits are requested for a regional project, the local government having jurisdiction will be required to consider (1) the conformity of the proposed project to the state land development plan, and (2) the project's regional impact as analyzed in the report undertaken by the relevant regional planning agency.

These recent new approaches by states to prevent the consequences of unplanned growth, to preserve environmentally sensitive areas, and to prevent problems of land pollution will have major judicial repercussions.²¹⁵ One legal issue being raised with increasing frequency concerns the "taking" of land through these new land use measures. Land use controls inevitably restrict, to some extent, the way private land owners may use their property. While traditional zoning and subdivision regulations have long been accepted as legitimate constraints on private property rights, more recent land use measures will again have to be scrutinized to insure that they do not result in taking land without the just compensation provided for in the U.S. Constitution and most state constitutions. Many law suits are now being filed against new land use control measures, so the legality of these laws will be resolved in the courts. The basic issue concerns the balance between private property rights, on the one hand, and public needs and requirements, on the other.

National Interest Has Been Aroused. National land use legislation is another development in the maturation of land use controls. S. 268, 93rd Congress, 1st Session, known as the *Land Use Policy and Planning Assistance Act*, passed the Senate twice, but was rejected by the House. Nevertheless, comparable efforts are likely to be made in the 94th Congress. The program envisioned by this legislation is designed to assist Federal, state, and local governments to adopt a program of long range land use planning and management.

Under this proposal, the states would be required to develop a planning process within a three year period that would include an appropriate planning agency at the state level, a sound information system, and adequate staff and funding. Within five years of the bill's enactment, land use programs would have to be developed which concentrate on five categories of critical areas and uses of more than local concern. These five categories are:

- 1) areas of critical environmental concern (e.g., beaches, flood plains, significant wildlife habitats, historical areas);
- 2) key facilities (e.g., major airports, highway interchanges and frontage access highways; recreational facilities; and the facilities for the development, generation, and transmission of energy);
- 3) large scale developments (e.g., industrial parks or major subdivisions);
- 4) public facilities or utilities of regional benefit (e.g., solid waste disposal or sewerage systems); and
- 5) land sales or development projects (e.g., major recreational areas).

The measure assumes that local governments will continue to make land use decisions on matters of local concern. In areas of state concern, two alternative methods are possible — local implementation in accordance with state guidelines, or direct state planning. The former method is the one generally employed by most states in their present land use planning activities, and this method would be encouraged by S. 268.

State land use programs would be reviewed in an interagency process involving affected Federal agencies. In situations where a state is held to be ineligible to continue receiving funding, this judgment will have to be concurred in by a three member (Federal official, governor, and impartial citizen) *ad hoc* hearing board established in the Executive Office of the President. No sanction other than termination of grants is contained in S. 268, although previous proposals did contain sanctions involving funds from other relevant programs.

S. 268 would not only provide Federal technical assistance and a grant-in-aid program to the individual states to assist them in land use planning and management, but also grants-in-aid for interstate coordination of land use planning, Indian lands planning, research and training in land use related subjects, and new authority for better

coordination between planning for Federal lands and non-Federal lands.

This proposal would give the Council on Environmental Quality (CEQ) primary responsibility for a three year study of the suitability of national land use policies, and assure coordination with related Federal legislation such as the HUD 701 planning assistance program, the coastal zone management program, the *Federal Water Pollution Control Act*, and the *Clean Air Act*.

CONCLUSION

This chapter has provided a wide ranging description of the service roles of different types of public and private transportation providers. It has indicated some of the developments which have led to the present apportionment of transportation roles among Federal, state, and local governments and the private sector. It also has probed the various financing and regulatory policies which have confirmed or changed the service responsibilities of these actors. These analyses provide the basis for certain generalizations and questions regarding the institutional, fiscal, and regulatory policies that affect urban transportation systems.

Summary of Findings

The ten major findings of this chapter may be summarized as follows:

1 While there is no one universal metropolitan pattern of sharing responsibilities for the delivery of transportation services, several discernible arrangements occur frequently. These organizational patterns of transportation service provide alternative institutional frameworks on which to base future Federal, state, and local urban transportation policies.

Several possible service providers — the municipality, the county, the state, independent and dependent special districts, and the private sector — are involved in metropolitan transportation. The ways these units combine to provide services depend upon:

- population size,
- the number of modes of transportation,
- location in different parts of the nation, and
- the state and local governmental traditions applicable to the individual urban areas.

These factors lead to differences in the number of levels of government directly involved in transportation service provision, different degrees of activity of the county as

an active partner in sharing local transportation responsibility, greater or less reliance on special districts as a service delivery mechanism, and different degrees of involvement of the state in non-highway functions.

The most frequent pattern of transportation assignment involves a multifunctional municipality, a county with a single transportation function (roads), and one or more transportation special districts. The special district emerges as an important metropolitan transportation provider especially in larger metropolitan areas and those located on either the East or West coast. While large metropolitan areas show heavy reliance on the special district, moderate sized areas show a more equal mix of general purpose local governments, special districts, and private sector transportation providers. Small metropolitan areas tend to rely mostly on municipal and private sector transportation units.

The average metropolitan transportation planning area has 11 urbanized municipalities, three counties, 38 special districts and four transportation special districts serving a population of 655,700. The range of variation is considerable with a low population of 57,978 to a high of 16,111,384; with from one municipality to 381; with no counties in a few areas to 15 in others; from one special district to a high of 470; and with no transportation districts in some areas to well over 25 districts in one area.

Functionally, municipal governments and special districts are the prime providers of airport services. Municipalities, counties, and the state share responsibility in the highway function. Special districts grow increasingly prominent as mass transit providers while the private sector declines. Municipalities, special districts, and the private sector share responsibilities for parking.

2 The state role in transportation has been marked by basic institutional change, specifically the consolidation of traditionally separate transportation activities within departments of transportation which, despite some serious weaknesses, are resulting in more integrated transportation planning and increased state responsiveness to the transportation problems of urban areas.

State departments of transportation (DOT's) have been created in 27 states, most of them highly urbanized, and several more states are seriously considering the formation of a DOT. Just under half of these state DOT's were created as part of comprehensive executive branch reorganizations, while the remainder were established in response to perceived inadequacies in existing institutions for transportation. With respect to these inadequacies, proponents have argued that state DOT's

would result in more balanced multimodal transportation systems and would facilitate the linking of transportation to other areas of state concern, especially land use planning, environmental protection, and economic development.

In general, the DOT states are marked by broader financial participation in transportation than non-DOT states, and are involved in more modes of transportation – both through direct expenditures and through intergovernmental aid. They also seem to have developed stronger intermodal planning capabilities, and have definitely moved more quickly into the financing of mass transit than have non-DOT states. However, it is difficult to determine whether this participation in a broader range of transportation modes and greater attention to intermodal planning are consequences of the formation of the DOT's, or preconditions which led states to adopt a DOT in the first place.

These generalizations conceal many important differences among the state DOT's. Despite the progress made by the state DOT movement, serious problems remain. Many of the existing state DOT's do not have a structure; scope of responsibilities; and centralization of planning, policy, and budgetary power in the DOT director commensurate with the magnitude of their task. While a handful of DOT's are quite strong, most will probably have difficulty effecting a shift in current transportation policies and outcomes. The state DOT's seem to possess strong planning powers and appear to be producing high quality plans, but the prevalence of modally dedicated revenues which limit their implementation flexibility may prevent the realization of the potential of these plans.

Despite the progress in ameliorating some of these weaknesses, especially by developing more flexible financing systems for transportation, many DOT's will have difficulty effecting a shift in the current balance between transportation modes in their states. The eventual success or failure of the DOT movement will be determined by the extent to which the states provide their DOT's with the combination of powers and responsibilities necessary for the achievement of their goals.

3 General purpose local governments have a major stake in the substantive improvement and institutional reorganization of metropolitan transportation systems. Cities and counties have long been significant metropolitan transportation providers.

Cities continue to provide a wide variety of metropolitan transportation services despite the legal, structural, and fiscal difficulties that they face in the effort. Counties are gradually emerging in some metropolitan areas as areawide providers of mass transit and airport services. In other areas, they offer considerable interlocal contracting opportunities to constituent local governments. Yet, both cities and counties face a variety of restraints in providing higher quality transportation services. The lack of county home rule in many states confines them mainly to the provision of highway services, and cities face prohibitions in the development of subsidy schemes that might be used to bolster sagging urban transportation ventures. Both units often face considerable tax and debt restrictions which sometimes can be the reason for not undertaking fundamental but expensive improvements in the urban transportation system. And all too often, both cities and counties still have not yet developed cooperative measures that would insure that one or the other might be a more important metropolitan transportation agent.

Both types of governmental units, however, view the creation of areawide and subordinate state transportation units with considerable apprehension. These single purpose mechanisms can become monopoly service providers within a metropolitan area and their transportation policies have significant impact on the development and operation of the SMSAs overall transportation system. The institution of these new regional unifunctional mechanisms often heightens undue conflict among transportation modes. In a few areas such as Minneapolis-St. Paul, San Francisco, and New York, generalist, multifunctional, state sponsored regional districts are exerting supervisory controls over unifunctional districts. In most other areas, however, independent and state dependent districts often act apart from the continuing control of general purpose local governments even though they themselves sometimes offer areawide services or other transportation services which are affected significantly by the actions on these regional units. Closer interaction, supervision, and control of regional mechanisms, then, remains a continuing problem for general purpose local units as they attempt to contribute to better management of the metropolitan transportation system.

4 Special districts – independent and dependent – are playing a growing role in the provision of urban transportation services. State and local governments, however, are becoming more concerned about the

institutional autonomy that some of these bodies possess and increasingly are seeking stronger controls over the planning, financing, and service policies of these districts. Special districts are often monopoly providers of non-highway transportation services in a metropolitan area. Frequently, they are created to bypass the structural, geographic, political, and fiscal limitations that would prevent state or local governments from assuming areawide transportation responsibilities.

The jurisdictional and fiscal flexibility of special districts has proved to be the main factor in their growing popularity in many metropolitan areas. Most transportation districts are not created with fixed boundaries and many are granted a variety of boundary change procedures – such as annexation of adjacent territory by petition, joint resolution, or referendum. Most operate with a considerable degree of fiscal autonomy, since the major share of their funds come from non-tax sources such as revenue bonds and user charges. While almost three-quarters do have some taxing powers which would tend to link them to general purpose governments, these powers are usually limited as to tax rates and bases and do not yield the major portion of their income.

Most transportation authorities are also given a significant degree of operating independence. Many are granted eminent domain powers, and in some cases, extraterritorial powers. Almost all can independently hire, fire, and fix compensation for their employees, usually unrestricted by civil service requirements and wage structures. This operating autonomy, however, has caused concern among the cities and counties that are directly affected by their various transportation policies.

Transportation special districts have undergone considerable institutional development since they were first used to meet urban transportation needs. Original transportation special districts were granted independent taxing authority, provided only a single service within a limited geographic area, and frequently had minimal impact on other urban transportation policies. Later development of public authorities witnessed the growth of considerable fiscal and operating autonomy among special purpose transportation units, particularly, state turnpike authorities and bridge and tunnel authorities in some of the largest metropolitan areas. Even more recently, authority-districts have come into being. These generally are regional mechanisms that oversee the conduct of constituent unifunctional special districts operating within a metropolitan area. They usually receive considerable state aid and provide

multifunctional, urban transportation services. The most prominent example of this mechanism is the Metropolitan Transportation Authority in the New York metropolitan area. The Twin Cities Metropolitan Council in Minneapolis - St. Paul and the Metropolitan Transportation Commission in San Francisco are other bodies that, like the authority-district, can control the operations of unifunctional transportation units within their jurisdiction. The increased use of these units may indicate both the limited utility of unifunctional transportation districts and the increased desire of state and local governments to better control and coordinate the operations of unifunctional areawide transportation units. The authority-district, then, may be a focal point for much of the organizational restructuring of urban transportation systems.

5 Private sector involvement in the urban transportation function is becoming more tenuous in most metropolitan areas. Private transportation providers have found it more and more difficult to provide a high level of urban services. Railroads and mass transit operations especially have been unable to receive an adequate rate of return to justify continued investment and upgrading of their operations. Consequently, the bulk of mass transit passengers in the country now are carried on public conveyances and the Federal government has had to reorganize and restructure into new public corporations nearly all of the country's passenger railroad operations and a considerable portion of its intercity freight system. Economic returns in other sectors of the private transportation industry, chiefly taxis and water transport, also have not been sufficient to sustain private investment in many cases. Only the automobile and airline industries have remained economically strong, and a significant portion of their infrastructure has been provided in the public domain. Private involvement in the transportation sector then is languishing.

Public policy has played a part in the decline of some private transportation providers. Outmoded economic regulations and unfair competition with alternative, publicly subsidized transportation modes have resulted in serious economic losses for the railroad and mass transit industries. Conversely, large cash or in-kind highway and airline subsidies have made these transportation industries more profitable for private investment and control. Conceivably deregulation of restricted modes or a better balance in the transportation subsidy system might be sufficient to restore private transportation providers in some instances.

6 Fiscal responsibilities for transportation among all three levels of government have undergone considerable change during the last 15 years. First, the Federal government has become a full scale transportation financing partner. It has continually expanded its highway and airport aid programs. It has instituted new mass transit assistance policies, and it has become a major force in the rebuilding of the American railroad industry. And the rivers and harbors program of the Corps of Engineers continues as a major force. State governments, in turn, have instituted major new non-highway intergovernmental aid programs or directly assumed major transportation expenditure responsibilities in several instances. In like manner, local governments have experienced new or renewed demands for increased transportation responsibilities. Areawide special districts have undertaken regional mass transit, airport, and water transport duties. Counties have sometimes assumed major highway and airport duties, while municipalities in many states continue to provide a wide variety of urban transportation services.

The expanded fiscal responsibilities of all three levels have promoted both intergovernmental fiscal cooperation and conflict. New Federal and state aid programs simultaneously promise local fiscal relief and budget distortion. State or special district assumption of direct expenditure responsibilities frees traditional local governments from increasing transportation tax burdens, but in turn often leads to one government being the monopoly provider of selected urban transportation services. Changing intergovernmental fiscal assignments, then, present new opportunities and pitfalls for developing more innovative, efficient, effective, and equitable metropolitan transportation financing policies.

7 Intergovernmental aid systems gradually have become more complex, broad gauged and directed to urban transportation problems, even though the transportation aid dollar is becoming a less prominent portion of Federal and state finances. The Federal aid system now is composed of at least 40 separate aid programs covering all four main transportation modes and directed at a variety of state, local, and private transportation providers. Categorical grants have proliferated while formula grants have been revised and fiscal earmarking of highway and airport trust funds for specific transportation programs has proceeded apace. In turn, state governments have continued to "buy in" to Federal airport and mass transit assistance programs, and in some cases to broaden the transportation purposes of shared fuel tax revenues.

The broadening of Federal and state transportation

aid systems has precipitated a local level scramble for such assistance. Municipalities seek larger shares of state fuel taxes, often in direct competition with their surrounding counties. Special districts and cities often vie for Federal mass transit aid, and all three types of units may often compete for Federal and state airport aid. Simultaneously, state and Federal governments have to balance their budgeting requirements for direct expenditure and intergovernmental aid programs. The continuing struggle among grant recipients for the transportation aid dollar will be matched by the fiscal conflicts in grantor governments by those that wish to emphasize either aid or direct expenditure programs of that particular level of government.

Whatever the outcome of the intergovernmental rivalries for transportation funds, overall expenditures are becoming more oriented to urban area needs. Urban road systems are receiving increased allotments of Federal highway aid. Federal mass transit and airport grants are spent predominantly in urban areas, and states frequently have revised their shared revenue allotments to allocate more funds to metropolitan areas. The gradual opening of Federal and state highway trust funds for transit programs also will assure more flexible urban transportation funding. In turn, the reduced emphasis on non-metropolitan transportation funding seems partially compensated by the general revenue sharing program which has been used extensively for transportation in many rural areas. The increased metropolitan direction of Federal and state intergovernmental finances, however, will not end intergovernmental conflict over transportation funding, since cities and suburbs may have to resolve their various transportation financing priorities in order to arrive at compatible metropolitan funding policies.

8 Transportation funds are still spent largely for highway purposes, though non-highway services gradually are becoming more prominent concerns of all three levels of government. Seventy percent of all direct transportation expenditures and 95 percent of all intergovernmental aid was spent for highways during 1971. While local and Federal governments had significant non-highway responsibilities, 98 percent of all state direct and intergovernmental expenditures were made for highway purposes. The highway dominance in transportation finance is still unmistakable. Federal and state trust funds and the consequent earmarking of appropriations for highway purposes insure continued support for highway programs while other transportation needs generally have to be met through the regular appropriations process. Consequently, non-highway financing

does not have the budgeting certainty of highway funding.

Yet, there are increasing indications that non-highway finances are becoming a more prominent part of the intergovernmental fiscal scene. Federal transportation finance policies now are in a state of flux. Use of the Highway Trust Fund for non-highway transportation has begun, and numerous proposals have been made for either phasing out or further modifying this fund. Mass transit funding has been increased — with still more being called for — and the nation's railroad and airline companies now are receiving a variety of Federal transportation subsidies. This is complemented at the state level with the increased participation in airport and mass transit grant programs and the opening of the highway trust fund in several states. Locally, the creation of areawide special districts, particularly in mass transit, has produced greater local fiscal participation in non-highway programs. Moreover, counties in several cases have been willing to assume additional airport and mass transit responsibilities, while cities continue to provide a wide range of transportation services in order to maintain their economic viability. The importance of balanced transportation funding appears to become an increasing concern of all three levels of government. Increased Federal funding for non-highway programs seems certain. What remains to be worked out is: which areas will receive the funds, which non-highway functions will receive the greatest amount of financing, and which parties — states, regions, counties, municipalities, special districts, or the private sector — will be the prime recipients of these new funds? Answers to these questions will determine the nature of Federal transportation finance policy in the years to come.

9 While substantial advances have been made in developing more flexible and urban oriented financing policies, fiscal restrictions at all three levels of government still impede modernized transportation financing practices. Federal, state, and local governments still do not have maximum flexibility in financing their respective transportation requirements. The Federal aid system has two major trust funds that provide for automatic allotments of highway and airport monies and reduce the Federal government's ability to target Federal aid on serious and complicated transportation problems of specific metropolitan areas. Additionally, the Federal transportation aid system has experienced its own proliferation of narrow categorical grants that sometimes make it difficult to provide coordinated transportation funding. The majority of states still have strict prohibitions against the diversion of fuel tax revenues for

non-highway purposes. Moreover, some have augmented the fiscal difficulties by creating trust funds for airports and water transport. State and local tax and debt restrictions have given rise to state turnpike authorities and regional transportation districts which themselves face considerable financing restrictions as a consequence of their peculiar bonding requirements. In short, while intergovernmental transportation fiscal policy is certainly more sophisticated than ever, roadblocks to more flexible transportation funding still persist at all three levels of government. These impediments are the source of much of the intergovernmental fiscal conflict that still occurs on the urban transportation scene.

10 Direct regulation of transportation providers alone no longer can cope with metropolitan transportation problems, because the economic issues with which it deals have been increasingly intertwined with a variety of related land use, civil rights, environmental, and energy policies beyond the scope of transportation regulation. Federal, state, and local governments all exert some regulatory powers that affect the urban transportation process. Federal and state regulations influence the basic economic structure of many facets of the transportation industry. Local regulations condition the daily operations of many transportation providers. Moreover, all three levels of government exert increasing influence over transportation decisions through their controls over energy, environmental, civil rights, and land use matters.

Conventional transportation regulation, based primarily on economic considerations, is becoming less able to cope with metropolitan transportation problems. The unbalanced regulation of transportation has helped lead to an imbalance of transportation modes at the national, regional, and metropolitan levels. This failure of conventional transportation regulation has contributed to increasing public ownership, reflecting new non-market forces.

Regulations in fields like land use, environmental protection, and civil rights inject more than just economic dimensions into transportation programs. They stress social equity and coordinated development strategies. Conflict between these non-transportation regulatory systems and direct regulation of transportation providers is bound to arise; this suggests the need to weigh carefully the competing demands of the two different regulatory systems.

Another problem with transportation regulation concerns the meshing of regulatory mandates from all levels of government. Federal regulations are paramount in common carrier, environmental, and economic reg-

ulation matters. Combined state-local controls occur in the land use field, while mass transit regulation takes place largely at the metropolitan level. All these regulatory systems might work more smoothly if affected levels of government had increased access to the regulatory process, and if there were methods to allow waiver of uniform regulatory policies when they create undue hardships.

Abolition of conventional economic regulations has been advocated by analysts who believe that such policies have outlived their economic usefulness. Deregulation might improve the competitive balance among transportation modes. However, the rising importance of environmental, land use, and civil rights regulations also is bound to affect the balance among transit and other modes. No single set of regulations can have a neutral character. They all affect transportation usage and might be more useful if directed to the attainment of explicit Federal, state, metropolitan, or local transportation goals.

Generally, most observers agree that the regulatory roles of all three levels of government should be made more compatible with one another, that the undue complexity of some regulatory systems should be reduced, and that different regulatory systems affecting urban transportation should be better coordinated so as not to unduly disrupt the orderly improvement of metropolitan transportation systems.

Issues

The changing service roles of Federal, state, local, and private transportation providers, explained in this chapter, raise major questions about the future organization, financing, and regulation of urban transportation systems. The following are among some of the basic policy issues that all three levels of government will have to confront as they seek to restructure and redirect the operation of these systems.

- 1. To what extent should presently uncoordinated and poorly organized urban transportation systems be coordinated and improved to offer higher quality and more balanced services?*
- 2. What form of state transportation organization is most appropriate for supporting the development of integrated urban transportation systems?*
- 3. Should and can general purpose governments continue to retain roles as major transportation providers in metropolitan areas, particularly those of a multicounty nature?*

4. What roles should the private sector play in the future delivery of metropolitan transportation services?

5. What form should future transportation funding policies take?

6. What should be the relative fiscal goals of the three different levels of government in their fiscal

support of urban transportation programs?

7. What should be the functional and jurisdictional allocations of revised transportation funding systems?

8. Should transportation and related regulatory systems undergo reform, repeal, or redirection in the years ahead?

FOOTNOTES

¹Throughout this section, reference is made to "urbanized" municipalities — municipalities within a Section 134 planning area that are also located in the urbanized area portion of that area. All other units are counted on an SMSA basis.

²See *Chapter I* for a description of the GM index.

³See, for example, State of Minnesota, "Routes of the Future: The D.O.T. Idea," Report of the Interdepartmental Transportation Task Force (St. Paul: State of Minnesota, January 1973), p. 18. Also James W. Bennett, Jr. and William J. DeWitt III, "The Development of State Departments of Transportation — A Recent Organizational Phenomenon," *Transportation Journal*, Vol. 12 (Fall 1972), p. 8.

⁴The median is between Oregon at 67.1 percent urbanized and Wisconsin at 68.0 percent.

⁵This explanation is taken in part from D. Joseph Smith, "The Trend Toward State Departments of Transportation: An Appropriate Federal Role," working paper for the U.S. Department of Transportation, January 1972, pp. 1-2.

⁶Information regarding DOT's formed in 1971 or before, and the background for this paragraph is taken from George A. Bell, "State Administrative Organization Activities, 1970-1971," *Book of the States*, Vol. 19 (Lexington: Council of State Governments, 1972), pp. 141-145.

⁷The reasons for formation of state DOT's were taken from reviews of state budgets and legislation establishing the DOT's, and of assorted state studies and reports prior to and succeeding creation of the DOT. See, for example, David J. Goldberg, "The Move Toward 'Balanced — Coordinated Transportation: The New Jersey Experience," *Traffic Quarterly* 24 (July 1970), pp. 337-340; State of California, "Creation of a State Department of Transportation," Statement of Legislative Analyst, Assembly Transportation Committee (November 16, 1971), pp. 2-15; State of North Carolina, Department of Transportation and Highway Safety, "First Year Accomplishments" (1974), pp. 31-32; and State of Minnesota, "Routes of the Future," pp. 2-3.

⁸Frank C. Colcord, Jr., "Institutions for Urban Transportation," *Technology Review* (October/November 1973), pp. 54-55.

⁹James W. Bennett, Jr., and William J. DeWitt III, "The Development of State Departments of Transportation," p. 8; and David R. Miller, "New Challenges, New Institutions," *Public Administration Review* (May/June 1973), pp. 241-42.

¹⁰The analysis in this section is based on information available by the end of 1973.

¹¹U.S. Department of Transportation, "Information and Observations Concerning State Departments of Transportation," staff paper (1973), pp. 5-6.

¹²The analysis in this section is based on information available by the end of 1973.

¹³Based on examination of unpublished Census data from the 1970 *Census of Governments*.

¹⁴Council of State Governments and U.S. Department of Transportation, "Transportation Issues of the Seventies,"

summary of conference held September 28 and 29, 1972, p. 2.

¹⁵Mass transit is omitted because in 1973, the year to which the data apply, no states had significant financial involvement in it.

¹⁶The top 17 states — those with ten or more total points, equivalent to being predominant in two modes and moderate in a third (considering both aid and direct expenditure combined) — are considered strong; the middle 24 — with eight or nine points, roughly equivalent to predominant in two modes — are categorized as moderate; and the remaining 19 states — with seven or fewer points, equivalent to less than predominant in two modes — are placed in the weak category.

¹⁷Based on examination of unpublished Census data from the 1970 *Census of Governments*.

¹⁸See, for example, U.S. Department of Transportation, "Information and Observations Concerning State Departments of Transportation," and Richard G. RuBino, "A Quest for Integrated and Balanced Transportation Systems in State Government," a study performed for the U.S. Department of Transportation (June 1971).

¹⁹RuBino, "A Quest," p. 71.

²⁰H. Michael Dye, "Transportation," *The Book of the States (1972-73)* (Lexington: The Council of State Governments, 1972), p. 336.

²¹Smith, "The Trend Toward State Departments of Transportation," p. 9.

²²Taken from *Table II-24* of this report.

²³Taken from review of state legislation establishing the California and Florida DOT's.

²⁴Council of State Governments and U.S. Department of Transportation, "State Transportation Issues of the Seventies," undated, p. 16.

²⁵Material in this paragraph is based on review of budget documents in selected states without DOT's, and on Dye, "Transportation."

²⁶Based on the description of coordinative arrangements in selected states in Council of State Governments, *State Departments of Transportation* (Lexington: Council of State Governments, 1970), pp.28-32

²⁷Advisory Commission on Intergovernmental Relations (ACIR), *Performance of Urban Functions: Local and Areawide* (Washington, D.C.: U.S. Government Printing Office, 1963), pp. 252-265.

²⁸See Thomas P. Murphy and Patricia S. Florestano, *The Allocation of Local and Areawide Functions in Metropolitan Areas* (Washington, D.C.: National Academy of Public Administration, 1973), pp. 1-19, 26-28.

²⁹See ACIR, *The Challenge of Local Government Modernization*, Vol. III of ACIR's substate regionalism report (Washington, D.C.: U.S. Government Printing Office, 1974), Appendix Table III-6.

³⁰See U.S. Senate Committee on Governmental Operation, *Confidence and Concern: Citizens View American Government*

(Washington, D.C.: U.S. Government Printing Office, 1973), p. 124.

³¹Advisory Commission on Intergovernmental Relations (ACIR), *Profile of County Government* (Washington, D.C.: U.S. Government Printing Office, 1973), p. 23.

³²International City Management Association (ICMA), *1962 Municipal Year Book* (Chicago: ICMA, 1962), p. 64.

³³See, for example, Warren J. Wicker and C. Terrence Armstrong, *Services, Functions, and Regulatory Powers of Cities and Counties in North Carolina* (Chapel Hill: Institute of Government, 1971).

³⁴ACIR, *Profile of County Government*, p. 18.

³⁵Temporary State Commission on the Powers of Local Government, *Legal and Regional Studies Background Papers (1971-1972)* (New York: The Commission, 1973), pp. 241ff.

³⁶ACIR, *The Challenge of Local Government Modernization* (Washington, D.C.: U.S. Government Printing Office, 1974).

³⁷See the August and November 1971 issues of *Nation's Cities* (Washington, D.C.: National League of Cities) for a recounting of citizen demands for better municipal services, particularly transportation.

³⁸See "Municipal Government Today: Problems and Complaints," *Nation's Cities* (April 1974), pp. 15-16ff; also Office of Research and Development, U.S. Environmental Protection Agency, *Environmental Management and Local Government* (Washington, D.C.: U.S. Government Printing Office, 1974), p. 98.

³⁹See State of New Jersey County and Municipal Government Study Commission, *County Government: Challenge and Change* (Trenton: The Commission, 1969), Table IV-6.

⁴⁰See Frank S. Sengstock, *Extraterritorial Powers in the Metropolitan Area* (Ann Arbor: Michigan Legal Publications, 1962). This is evidently still one of the most complete compilations on the subject though it is dated.

⁴¹Temporary State Commission on the Powers of Local Government, *Strengthening Local Government in New York: Services, Structures and Finance* (New York: The Commission, 1973), p. 45.

⁴²Temporary State Commission on the Powers of Local Government, *Legal and Regional Studies Background Papers, Volume I* (New York: The Commission, 1973), pp. 373-379.

⁴³New York Office of Local Government, *Urban Area Bus Transit* (Albany: 1973), p. 11.

⁴⁴Rochester Bureau of Municipal Research, *Highways and Bridges: A Framework for Responsibilities* (Rochester: 1969), see especially pp. 52-55.

⁴⁵See Lennox L. Moak, *Administration of Local Government Debt* (Chicago: Municipal Finance Officers Association, 1970), pp. 319-333.

⁴⁶The debate on this proposition is considerable. See, for example, William B. Nennan, *Political Economy of Urban Areas* (Chicago: Markham Publishing Company, 1972), especially pp. 69-71; also Phillip E. Vincent, "The Fiscal Impact of Commuters," *Fiscal Pressures on the Central City*, ed. by Werner Z. Hirsch (New York: Praeger Publishers, 1971), pp. 41-143.

⁴⁷ACIR, *The Challenge of Local Government Modernization*, pp. 32-33.

⁴⁸ACIR, *Governmental Functions and Processes: Local and Areawide*, Vol. IV of ACIR's substate regionalism report (Washington, D.C.: U.S. Government Printing Office, 1974), p. 32.

⁴⁹American Public Works Association, *Local Public Works Organization* (Chicago: The Association, 1970), p. 96.

⁵⁰ACIR, *The Challenge of Local Government Modernization*, p. 36.

⁵¹Advisory Commission on Intergovernmental Relations,

Impact of Federal Urban Development Programs on Local Government Organization and Planning, (Washington, D.C.: U.S. Government Printing Office, 1964), p. 15.

⁵²International City Management Association, "County Government Organization and Services," *Urban Data Service Reports* (Washington, D.C., May 1971, p. 8), in ACIR, *Profile of County Government*.

⁵³*National Civic Review*, Volume 59, March 1970, p. 158.

⁵⁴International Bridge, Tunnel and Turnpike Association, *Tollways*, November 1972.

⁵⁵Robert G. Smith, *Public Authorities, Special Districts and Local Government* (Washington, D.C.: NACORF, 1964), pp. 13-14.

⁵⁶In Louisiana, the state created the St. Bernard Port Commission with a five member board appointed by the governor from nomination lists as follows:

- A) two members from four candidates submitted by the parish council
- B) one member from two candidates submitted by the Chamber of Commerce
- C) one member selected from the two largest *ad valorem* taxpayers
- D) one member from two candidates submitted by the Louisiana Southern Railroad.

⁵⁷The Delaware River Port Authority Board must submit its minutes to both governors who have a ten day veto power and can nullify an action of their state's port commissioners.

⁵⁸California River Port Districts, Idaho Port Districts, Michigan Port Districts, Washington Port Districts, Texas Navigation Districts, and California Harbor Districts.

⁵⁹Alameda-Contra Costa Transit Districts, San Diego County Transit, Fresno Metro Transit District (California), and Metropolitan Transit Authorities (Nebraska).

⁶⁰In California, bridge and highway districts have more extensive transportation responsibilities. They can maintain, improve, and operate bridges, roads, tunnels, railroads, street car lines, interurban lines, and subways.

⁶¹Idaho Good Road Districts, Idaho Highway Districts, and Nebraska Road Improvement Districts.

⁶²In West Virginia, governing board membership and votes are allocated according to the proportionate share of money or property contributed by each participating municipality.

⁶³These instances are the Chicago Regional Port District, Mississippi and Tennessee airport districts, the Delaware River Port Authority in New Jersey, the Metro Atlanta Rapid Transit Authority in Georgia, the Chicago Transit Authority, and Michigan Metro Transit Authorities.

⁶⁴Virginia Peninsula Airport Commission is also legally obliged to return any surplus funds exceeding \$100,000 annually to the local participating governmental units in proportion to their initial investment.

⁶⁵For further information on boundary commissions see ACIR, *The Challenge of Local Governmental Reorganization*, Vol. 3, Chapter 5, *Substate Regionalism and the Federal System*.

⁶⁶These are: San Diego, Santa Barbara, Greater Bakersfield and Fresno, California; transportation districts: Ohio, Massachusetts, Connecticut, Maine, and Massachusetts Bay Transit Authority.

⁶⁷Airport districts in North Dakota, Mississippi, and Tennessee have joint operation provisions which allow all powers granted to the airport district to be exercised jointly with any public agency within their own or an adjoining state or with any agency of the Federal government (within the legal limitations of the cooperating public agency). They may enter into agreements for joint action, but they are then required to create a joint board consisting of members appointed by the governing body of each cooperating public agency.

⁶⁸From analysis of 34 enabling acts.

⁶⁹John C. Bollens, *Special District Governments in the United States* (Berkeley and Los Angeles: University of California Press, 1961) p. 288.

⁷⁰Robert G. Smith, *Public Authorities in Urban Areas* (Washington, D.C.: Research Foundation, National Association of Counties, 1969) Chaps. 1, 6, and 7.

⁷¹Council of State Governments, *Public Authorities in the States*, A Report to the Governors' Conference, (Chicago, 1953), p. 3.

⁷²Robert G. Smith, *Public Authorities, Special Districts and Local Government*, pp. 31-32; New Jersey Turnpike Authority, *Annual Report* (1950), p.17.

⁷³See *New Jersey Statutes Annotated (N.J.S.A.)*, Title 27:23-7 (St. Paul: West Publishing Company); *N.J.S.A.*, 27:23-9.

⁷⁴*N.J.S.A.*, 27:23-8.

⁷⁵*N.J.S.A.*, 27:23-7.

⁷⁶*N.J.S.A.*, 27:23-9.

⁷⁷*N.J.S.A.*, 27:23-11.

⁷⁸Frederick L. Bird, *A Study of The Port of New York Authority*, (New York: Dun and Bradstreet, Inc., 1949), pp. 18-19.

⁷⁹*N.J.S.A.*, 32:1-121.

⁸⁰*N.J.S.A.*, 32:1-35.55.

⁸¹*California Public Utilities Code*, sec. 30001.

⁸²*California Public Utilities Code*, secs. 30201, 30204.

⁸³*Constitution of the State of Florida, Revised Constitution*, 1968, Art. XII, "Schedule," secs. 8, 9 (b).

⁸⁴The Commonwealth of Massachusetts, Acts, 1964, chapter 563, sec. 8, par. 1.

⁸⁵*Ibid.*, sec. 7, par. 1.

⁸⁶*Ibid.*, sec. 5 (i).

⁸⁷State of Michigan, 74th Legislature, 1967, "An act to create metropolitan transportation authorities and to define their powers and duties," Enrolled Senate Bill No. 559, sec. 10 (5).

⁸⁸*Ibid.*, sec. 15 (2).

⁸⁹*Ibid.*, sec. 14 (b).

⁹⁰State of Michigan, sec. 4.

⁹¹*McKinney's Consolidated Laws of New York Annotated* (St. Paul: West Publishing Company), *Public Authorities Law*, Book 42, "Metropolitan Transportation Authority of New York," Title 11:1270-3; "Niagara Frontier Transportation Authority," 11:1299-3; "Rochester-Genesee Regional Transportation Authority," 11:1299-11-3; "Capital District Transportation Authority," 11:1311-3; "Central New York Regional Transportation Authority," 11:1336-3.

⁹²*Ibid.*, 11:1263-1.

⁹³*Ibid.*, 11:3:563-1.

⁹⁴*Ibid.*, 3:569-c-1.

⁹⁵*Ibid.*, 9:1205.

⁹⁶*Ibid.*, 11:1266-3.

⁹⁷410 U.S. (1973).

⁹⁸Graduate School of Public Affairs, State University of New York at Albany, *1968 Survey of Metropolitan Planning* (Albany: SUNY, 1968), p. 1.

⁹⁹Data derived from the U.S. Bureau of the Census, *Journey to Work, 1970 Census of Population*, PC(2)-6D indicates that less than 12 percent of all commutation in metropolitan areas of over 250,000 population involved public carriers. This will change with the creation of the Consolidated Rail Corporation in 1976 which will take over seven large, bankrupt railroad corporations in the Northeast.

¹⁰⁰The American Transit Association, *'71-72 Transit Fact Book* (Washington, D.C.: American Transit Association, 1972), p. 3.

¹⁰¹U.S. Department of Transportation, *The 1972 National Transportation Report* (Washington, D.C.: U.S. Government Printing Office, 1972), pp. 34-36.

¹⁰²Almarin Phillips, "Air Transportation in the United

States," *Technological Change in Regulated Industries*, ed. by William M. Capron (Washington, D.C.: The Brookings Institution, 1971), pp. 123-165.

¹⁰³George W. Hilton, "The Costs to the Economy of the Interstate Commerce Commission" in Joint Economic Committee, *The Economics of Federal Subsidy Programs - Transportation Subsidies* (Washington, D.C.: U.S. Government Printing Office, 1973), pp. 707-733.

¹⁰⁴See Joseph R. Daughen and Peter Binzen, *The Wreck of the Penn Central* (Boston: Little, Brown, and Company, 1971).

¹⁰⁵Institute for Defense Analysis (IDA), *Economic Characteristics of The Urban Public Transportation Industry* (Washington, D.C.: U.S. Government Printing Office, 1972), p. 3-3.

¹⁰⁶According to the 1971-72 *Transit Fact Book* of the American Transit Association, there are 1,063 transit systems, and 151 of those systems are publicly owned, or 14 percent of the industry. This 14 percent of the industry, however, receives 83 percent of the operating revenue and travels 70 percent of the vehicle miles operated. It carries 84 percent of the revenue passengers and employs 85 percent of the total employees. This means that there will be relatively little private involvement in mass transit operations as a whole since bus operations account for well over 70 percent of all passengers carried on all mass transportation modes except the taxicab.

¹⁰⁷IDA, *Economic Characteristics*, pp. 2-25.

¹⁰⁸The cities are New York, Chicago, Philadelphia, Boston, and San Francisco.

¹⁰⁹Harbridge House, Inc., *The Role of Intercity Rail Passenger Service*, (Boston, February 1973), p. III-12.

¹¹⁰IDA, p. 2-2.

¹¹¹The only time when there was significant increase in worker productivity was in 1948 when the industry began utilizing the two-way radio.

¹¹²Remarks of Richard B. Gallagher, *Engineering Foundation Conference*, Henniker, New Hampshire, July 9-14, 1972, page 1.

¹¹³Institute for Defense Analysis, p. 8-8.

¹¹⁴Institute for Defense Analysis, pp. 8-20. The number of taxicabs allowed to operate in any community is generally limited, depending on "public convenience and necessity." Some cities have a specific limit on the number of licenses and others have no such limit. Another considerable expense arises from local and state regulations on the personal injury and property damage insurance that taxicab companies are required to have. Still another concern of local government is the mode of taxicab operation. Dense urban municipalities such as New York City or Chicago may permit taxicabs to cruise the streets seeking passengers at random. This may not be profitable or desirable in suburban areas where customers are widely distributed and where many residents would not prefer having such operations take place.

¹¹⁵One example of inefficient regulation is the excessive requirement for 24 hour service, regardless of the demand for service.

¹¹⁶There are a number of specific methods being explored by the taxicab industry to improve its efficiency so that it can survive as a viable economic entity. The major one mentioned is computerized dispatching, as a means of increasing productivity. The industry is also counting on improvements in traffic conditions in urban areas, with restrictions of private vehicle traffic in certain areas, and increased use of special lanes by buses and taxicabs.

¹¹⁷By 1982, the projection is for 442-million passengers, an increase of 142 percent. U.S. air carriers now fly a total of 2,642 aircraft and the projected increase leads to a total of 3,300 air carrier aircraft by 1982.

¹¹⁸Air Transport Association (ATA), *Air Transport 1973* (Washington, D.C.: ATA, 1973), p. 6.

- 119 STOL (Short Takeoff and Landing).
- 120 "Airports - What's Ahead?", *Airport World*, (May, 1972), p. 18.
- 121 See Ross D. Eckert, *Airports and Congestion* (Washington, D.C.: American Enterprise Institute for Public Policy Research, 1972), pp. 9-10.
- 122 William L. Pereira Associates, *National Aviation Planning Concepts* (Washington, D.C.: Federal Aviation Administration, July 24, 1972), p. 74.
- 123 "Satellite System that Works," *Airport World* (May 1973), p. 34.
- 124 Pereira Associates, *National Aviation Planning Concepts*, p. 135.
- 125 The Aviation Advisory Commission, *The Long Range Needs of Aviation* (Washington, D.C.: U.S. Government Printing Office, January 1973), p. 4.
- 126 *Ibid.*, p. 12.
- 127 See Eckert, *Airports and Congestion*; and George Eads, "The Impact of Regulation on Local Airline Subsidy" in Joint Economic Committee, *The Economics of Federal Subsidy Programs* (Washington, D.C.: U.S. Government Printing Office, 1973), pp. 760-761.
- 128 Speech by Robert E. Redding, Director, Office of Facilitation, Office of the Assistant Secretary for Environment, Safety and Consumer Affairs, Department of Transportation, *Engineering Foundation Conference*, South Berwick, Maine, August 6, 1973, page 2.
- 129 Highway Research Board Special Report 120, *Urban Commodity Flows* (Washington, D.C.: Highway Research Board, 1971), p. 1.
- 130 MIT Urban systems laboratory, *An Overview of Urban Goods Movement Projects and Data Sources* (Washington, D.C.: MIT Urban Systems Laboratory, March 1973). For example, rail freight terminals are generally still located near the centers of cities, even though the industry that they are most closely related to have moved out of the city generally into more open areas. Since rail freight terminals have generally not been relocated, there have been some considerable access problems created. So also the cost of moving commodities within urban areas is increasing at a rapid rate.
- 131 Wilbur Smith and Associates, *Motor Trucks in the Metropolis* (Hartford, Connecticut: Wilbur Smith and Associates, 1969).
- 132 Association of American Railroads, *1973 Yearbook of Railroad Facts* (Washington, D.C.: Association of American Railroads, 1973), p. 36.
- 133 Transportation Association of America, *Facts and Trends* (Washington, D.C.: Transportation Association of America, 1973), p. 26.
- 134 Association of American Railroads, *1973 Yearbook*, p. 20.
- 135 See Aaron J. Gellman, "Surface Freight Transportation" in William M. Capron, editor, pp. 729ff.
- 136 America's Sound Transportation Review Organization (ASTRO), *The American Railroad Industry: A Prospectus* (Washington, D.C., ASTRO, 1970), p. 40.
- 137 Joseph R. Daugen and Peter Bimzen, *The Wreck*, Chap. 9.
- 138 See Michael J. Malbin, "Transportation Report/Questions Persist in Northeast Rail Reorganization," *National Journal*, Vol. VI, No. 4, (January 26, 1974), pp. 124-130; See Title IV of H.R. 9142, "The Regional Rail Reorganization Act of 1973".
- 139 Specifically this refers to S. 1149, the *Surface Transportation Act*, introduced by Senator Warren Magnuson (D-Washington).
- 140 American Waterways Operators, Inc., *Big Load Afloat* (Washington, D.C.: American Waterways Operators, Inc., 1973), p. 53.
- 141 *Ibid.*, p. 54.
- 142 *Ibid.*, p. 95.
- 143 *Ibid.*, p. 1. It is argued that barge service costs shippers an average of three mills per ton miles as compared to the rail service cost of five times as much, about 16 mills per ton mile.
- 144 Margaret Fisk, ed., *Encyclopedia of Associations*, Vol. 1: National Organizations of the United States (7th ed., Detroit, Michigan: Dale Research Company, 1972). The breakdown by modes is as follows: associations related to automobiles - 28; boats - 10; buses - 3; freight forwarders - 2; railroads - 3; shipping - 39; transportation - 18; trucking - 28; and aerospace - 40.
- 145 See, for example, George W. Hilton, *The Economics of Federal Subsidy*, pp. 713-714.
- 146 One or more service providers that expend 85 percent or more of the monies for transportation services within a state.
- 147 See Advisory Commission on Intergovernmental Relations, *The Gap Between Federal Aid Authorizations and Appropriations, 1966-1970* (Washington, D.C.: U.S. Government Printing Office, 1970), Table 5. This indicates DOT appropriations in five selected assistance programs generally averaged 85 percent of authorizations between 1966-1970 whereas appropriations covered 73 percent of authorizations in the Federal assistance programs with fixed authorizations. Of the five programs studied, the airports and highways programs consistently had the lowest appropriations-authorizations gaps.
- 148 These three systems are commonly referred to as the ABC Federal aid road systems.
- 149 See U.S. House of Representatives, *Conference Report on Federal Aid Highway Act of 1973* (Washington, D.C.: U.S. Government Printing Office, 1973), Report 93-410.
- 150 See, for example, the recent Presidential message on transportation delivered to the 93rd Congress (House Document No. 93-214).
- 151 See Joint Economic Committee, *The Economics of Federal Subsidy Programs*, pp. 179-185.
- 152 *Ibid.*, Chapter IV.
- 153 See George W. Hilton, *The Economics of Federal Subsidy Programs*, pp. 707-733.
- 154 See George Eads, *The Economics of Federal Subsidy*, pp. 734-762.
- 155 As of 1972, however, motor fuel taxes were not distributed to counties or cities in Alaska, Hawaii, Kentucky, and West Virginia.
- 156 See U.S. General Accounting Office, *Revenue Sharing: Its Use by and Impact on State Governments* (Washington, D.C.: Comptroller General of the United States, 1973).
- 157 International City Management Association (ICMA), "The Fiscal Dilemma of the Cities," *Urban Data Service Reports* (Washington, D.C.: ICMA, 1971), p. 3.
- 158 *Ibid.*
- 159 See Selma Mushkin, ed., *Public Prices for Public Products* (Washington, D.C.: The Urban Institute, 1972), pp. 3-26.
- 160 U.S. General Accounting Office, *Revenue-Sharing: Its Use By and Impact on Local Governments* (Washington, D.C.: Comptroller General of the United States, 1974).
- 161 For one analysis of the extreme solvency of state turnpike authorities see Smith, Barney and Co., *Toll Road Bonds and the Gasoline Shortage - An Appraisal* (New York: Smith, Barney and Co., 1973).
- 162 See Twentieth Century Fund, *The Rating Game* (New York: Twentieth Century Fund, 1974), especially pp. 81ff.
- 163 Charles R. Adrian, *State and Local Governments* (New York: McGraw-Hill, 1972), p. 555.
- 164 These regulatory failures often are compounded due to the concentrated structure of the automobile industry in this country. See Bradford C. Snell, *American Ground Transport:*

A Proposal for Restructuring the Automobile, Bus, Truck, and Rail Industries (Washington, D.C.: U.S. Government Printing Office, 1974).

¹⁶⁵R. L. Banks and Associates, *Study and Evaluation of Urban Mass Transportation Regulation and Regulatory Bodies* (Washington, D.C.: R. L. Banks and Associates, 1972), Vol 1, p. 2.

¹⁶⁶*Ibid.*, p. 2.

¹⁶⁷George A. Avery, "Breaking the Cycle: Regulation in Transportation Policy", *Urban Affairs Quarterly*, Volume 8, No. 4 (June, 1973), p. 423.

¹⁶⁸R. L. Banks, *Study and Evaluation*, p.7.

¹⁶⁹*Ibid.*, pp. 1-65.

¹⁷⁰*Ibid.*, pp. 27-28.

¹⁷¹Such regulations, however, may be of more benefit to carriers rather than consumers. One economist indicates that the regulatory controls of the ICC may cost the economy about \$5-billion per year; Hilton, p. 731.

¹⁷²The Rand Corporation, *Proceedings of A Conference of Regional Transportation*. (Santa Monica, California: The Rand Corporation, 1971), page 303.

¹⁷³*Ibid.*

¹⁷⁴State aeronautics commissions and local airport authorities also exercise various types of regulatory powers which supplement or affirm FAA and CAB regulations.

¹⁷⁵Arthur D. Little, Inc., *Aviation Development: A Policy and Operations Analysis*. (New York: Praeger Publishing Co., 1972), p. 76.

¹⁷⁶Almarin Phillips, *Technological Change in Regulated Industries*, p. 130.

¹⁷⁷*Ibid.*, pp. 148-153.

¹⁷⁸Elbert, *Airports and Congestion*.

¹⁷⁹Jeremy J. Warford, "Subsidies to General Aviation" in Joint Economic Committee, *The Economics of Federal Subsidy*, pp. 827-854.

¹⁸⁰George Eads, *The Economics of Federal Subsidy*, pp 734-762.

¹⁸¹Arthur D. Little, Inc., *Aviation Development*, p.79ff.

¹⁸²*Ibid.*, p. 70.

¹⁸³The National Transportation Safety Board, *What It Is and What It Does* (Washington, D.C.: U.S. Government Printing Office, 1972).

¹⁸⁴U.S. Department of Transportation, *Safety '72*, Vols. 1 and 2 (Washington, D.C.: U.S. Government Printing Office, 1972).

¹⁸⁵A related motor vehicle safety agency, the Bureau of Motor Carrier Safety in the Federal Highway Administration has jurisdiction over safety requirements for all motor carriers engaged in interstate or foreign commerce including those whose operations are exempt from ICC regulations.

¹⁸⁶At least 40 percent of the Federal funds dispersed under the *Highway Safety Act* must be spent by local political subdivisions.

¹⁸⁷The U.S. Commission on Civil Rights, *The Federal Civil Rights Enforcement Effort - A Reassessment, January 1973* (Washington, D.C.: U.S. Government Printing Office, 1973), p. 2.

¹⁸⁸*Ibid.*, pp. 382-405.

¹⁸⁹*Ibid.*, p. 384.

¹⁹⁰*Ibid.*, pp. 398-400. FHWA has so far made only a relatively small number of reviews but is attempting to develop appropriate machinery. UMTA, on the other hand, has done a more satisfactory job of performing post-award reviews: 120 in fiscal 1972 compared to FHWA's nine.

¹⁹¹The Civil Rights Commission Report reviewed also the general activities of the Office of Management and Budget in the field of civil rights. Civil rights considerations are contained in OMB regulations involving budget examination,

the Director's civil rights review, the special analysis of Federal civil rights activity (which under circular A-11 provides a procedure for obtaining relevant civil rights data), and the legislative review process. The Commission report concluded that OMB has yet to realize on its full potential for bringing Federal agencies to meaningful compliance with Title VI and other civil rights requirements.

¹⁹²EEOC, *Equal Employment Opportunity in Trucking: An Industry at the Crossroads* (prepared by Jack E. Nelson), November 1971, p. 55.

¹⁹³*U.S. versus Trucking Employers, Inc., et al.*

¹⁹⁴While much of the trucking involved in this suit relates to long distance trucking and transfer services, the common carriers included also represent truckers in local trucking activities.

¹⁹⁵In *Ex Parte* No. 278, Equal Opportunity and Surface Transportation, a submittal by the EEOC to the Interstate Commerce Commission on December 1, 1971, the EEOC also urged the ICC to enact rules and regulations to insure equal employment in the trucking industry.

¹⁹⁶See ACIR, *Relocation: Unequal Treatment of People and Businesses Displaced By Governments* (Washington, D.C.: U.S. Government Printing Office, 1965).

¹⁹⁷Emanuel Gordan, "Relocation Inequities," *Journal of Housing* (March 1972), p. 137.

¹⁹⁸PPM-81-1 Covers Relocation Assistance - General (January 16, 1973), PPM-81-1.2 Relocation Assistance - Moving Payments (September 17, 1973), PPM-81-1.3 Relocation Assistance - Replacement Housing Payments (August 7, 1973), PPM-81-1.4 Relocation Assistance - Mobile Homes (March 14, 1973), and PPM-81-1.5 Relocation Assistance - Replacement Housing as Last Resort (July 19, 1973).

¹⁹⁹Michael E. Abramowitz, "Uniform Relocation Act Defended," *Journal of Housing*, (June 1972), p. 279.

²⁰⁰Frank P. Grad, George W. Rathjens, and Albert J. Rosenthal, *Environmental Control: Priorities, Policies and the Law* (New York: Columbia University Press, 1971), p. 51.

²⁰¹Council on Environmental Quality, *Environmental Quality*, Fourth Annual Report (September 1973), p. 155. They are referred to as primary standards. EPA is empowered to grant administrative extensions of up to three years if the necessary technology or other alternatives are not available.

²⁰²*Ibid.*, p. 157.

²⁰³These 37 metropolitan areas are located within 23 states. These states submitted, for approval or disapproval, 43 plans that were to be reviewed by the EPA pursuant to a Federal court order. On June 15, 1973, EPA announced the results of this review which ranged from full approval of five plans to promulgation by EPA, itself, of considerable portions of plans for nine regions. Plans for 15 regions in seven states were disapproved because they did not submit transportation plans.

The area that has received most public attention is the smog ridden Los Angeles area where, responding to a court order, EPA initially proposed in January 1973, a plan that would have curtailed gasoline sales by up to 82 percent from May to October. After extensive public hearings, EPA proposed a program that would emphasize alternatives, such as mass transit and car pooling.

²⁰⁴Council on Environmental Quality, *Environmental Quality*, p. 161.

²⁰⁵*Ibid.*, p. 15.

²⁰⁶Foster A. Mattson and Eugene M. Wilson, "NEPA: Legal Interpretations and Suggested Direction," *Traffic Quarterly*, XXVIII, No. 1 (January 1974), pp. 119-138.

²⁰⁷FHWA Policy and Procedure Memorandum 20-8 defines social, and economic and environmental effects as meaning "direct and indirect benefits... lost to the community and highway users." A list of 23 such effects is included. While

there is considerable overlap between PPM 20-8 and Section 136 (b), the overlap is not complete. Policy Procedure Memorandum 90-1 applies to the provisions of Section 102 (2) (c) of NEPA to Federal aid highway proposals. It provides that environmental impact statements be prepared for all projects significantly affecting the human environment. A draft environmental impact statement is circulated prior to the announcement of the location of a public hearing. The final environmental statement includes responses and comments on the draft statement.

²⁰⁸Comptroller General, *Improvements Needed in Federal Efforts to Implement the National Environmental Policy Act of 1969* (B-170186), May 18, 1972 (Washington, D.C.: U.S. Government Printing Office, 1972), p. 32.

²⁰⁹National Symposium on State Environmental Legislation, summary report, March 15-18, 1972, sponsored by the Council of State Governments, pp. 36-42. The *1973 Highway*

Act does provide that where the governor of a state certifies that the state's own requirements meet or surpass Federal standards, state project approval procedures may be substituted for Federal ones.

²¹⁰U.S. Senate Committee on Interior and Insular Affairs, *Land Use Policy and Planning Assistance Act*, (Washington, D.C.: U.S. Government Printing Office, 1973) Senate Report No. 93-197, page 76.

²¹¹*Ibid.*, page 81.

²¹²*Ibid.*, p. 82. See also the Council of State Governments, *The Land Use Puzzle* (Lexington, Kentucky: The Council of State Governments, 1974).

²¹³*Ibid.*

²¹⁴Richard G. RuBino, "An Evaluation of Florida's Land Use Law," *State Government* (Summer 1973), p. 174ff.

²¹⁵Council on Environmental Quality, *Fourth Annual Report*, p. 122.

ISSUES AND RECOMMENDATIONS

This report has surveyed the nature of metropolitan and regional transportation needs as well as the programs and institutions currently used to meet these needs. While the focus has been on the institutional means of meeting these needs, their nature underpins the study.

THE NATURE OF METROPOLITAN AND REGIONAL TRANSPORTATION NEEDS

As *Chapter I* shows:

- Many of the nation's major metropolitan areas experience severe traffic congestion, over reliance on the use of private automobiles, a decline in the use of transit, difficult access by certain sectors of the population to jobs and essential services, community disruption and relocation resulting from the construction of transportation facilities, traffic hazards, lost productivity, excessive automobile emissions, noise, junk yards, and the inefficient use of energy for transportation.
- Transportation systems and the physical development of metropolitan areas now are seen as closely interrelated, but whether transportation systems direct the development of the community or community development patterns determine transportation needs is a source of endless debate.
- Rural areas have several serious transportation problems of a regional nature, including rail abandonments, threatened and real; inadequate highways, bridges, and trucking to compensate for discontinued railway services; needs for improved transportation of all types to promote economic development; lack of public transportation to meet the needs of persons without private automobile transportation; continuing highway, rail, and migrant labor bus safety hazards; and seasonal traffic congestion in rural recreational areas.
- At this point, it is widely realized that metropolitan and regional transportation systems of all modes and their related land use patterns must be planned and considered together on an areawide basis.
- Goals for other public programs — like environmental protection, housing, full employment, equal opportunity, and health services — now are

viewed as heavily dependent on the achievement of coordinated transportation objectives.

- Despite common elements shared by all transportation systems, the severity and mix of regional transportation problems differ greatly from one area to another, requiring solutions tailored individually to each area.
- Projections of the funds needed to meet the special metropolitan mass transportation capital needs alone (exclusive of needs for transit operation subsidies, local streets, school buses and private motor vehicles, for rural areas, or for national systems of highways, railroads, airports, pipelines, and water transportation) are in the \$3 to \$4-billion range on an annual basis for at least the next ten years.

A FOCUS ON THE INSTITUTIONAL MEANS OF MEETING REGIONAL TRANSPORTATION NEEDS

With this background, the report has focused upon the institutional means of meeting current regional transportation needs in *Chapters II and III* which have probed the planning, financing, implementation, and intergovernmental relations aspects of existing transportation programs in metropolitan areas. As these chapters show:

- Current transportation programs in metropolitan areas are thoroughly intergovernmental and involve Federal, state, and local units of government as well as a variety of special districts, private providers, and metropolitan planning bodies.
- In recognition of the complex intergovernmental nature of providing transportation services in metropolitan areas, Federal aid transportation programs have prescribed, for more than a decade, metropolitan planning as a means of coordinating the use of funds.
- Numerous charges, however, have arisen that this planning has been ineffective because, until very recently, it has not been directly linked to implementation activities.

This report does not attempt to develop the technology based solutions to the nation's regional transporta-

tion problems. Not only would that be too ambitious an undertaking in light of the time and resources available for this project, but it also would go beyond the competency of this Commission. What the Commission is concerned with here is the development of a more flexible intergovernmental process in which the interrelated needs of the various transportation modes and other metropolitan and regional concerns can be effectively and simultaneously addressed. This procedural and institutional focus directs attention to some of the currently existing arbitrary divisions of responsibility and authority in transportation programs and organizations which hinder the development and application of more effective substantive solutions to the nation's urban and regional transportation difficulties.

From an intergovernmental relations point of view, the major controversies arise in connection with questions regarding:

- the influence of regional planning on transportation,
- the delivery of areawide and interjurisdictional transportation services,
- the financing of regional transportation,
- the states' response to metropolitan and regional transportation needs, and
- intermodal regulation on transportation.

This chapter considers these five basic questions in the light of the principal findings and conclusions which have emerged from the preceding chapters, and sets forth the Commission's recommendations.

THE INFLUENCE OF REGIONAL PLANNING ON TRANSPORTATION

Comprehensive areawide transportation planning, encompassing multiple transportation modes and related land use planning, has been required in every metropolitan area in the nation since 1965, under provisions of the *1962 Highway Act*. Yet, the effectiveness of the planning is doubtful and questions have been raised as to whether such planning is not a waste of money and, where it has been ineffective, whether it should be scrapped or beefed up and more directly linked to action programs.

In response to these questions, this report has identified a clear need for areawide planning in metropolitan and other regions, and has probed new ways to link this planning with action programs. In addition, alternative types of regional units have been examined, and the means of forming effective linkages between

planning and action have been explored. In the following section, specific regional policy making issues are evaluated including regional transportation program responsibilities, the form, powers, and duties of regional transportation policy bodies and non-metropolitan regional transportation policy bodies. Commission recommendations dealing with the structure and powers of regional transportation planning bodies follow the *issue discussion*.

Specific Regional Transportation Policy Making Issues

The findings on planning and policy making, outlined in *Chapter II*, suggest a definite need for regional planning and decision making bodies. They show that such bodies can be developed consistent with the nation's federal system of government, and can be empowered to link together all transportation modes within a comprehensive and easily implemented planning framework. Yet, several controversial policy issues remain, including the responsibilities of regional transportation units, the form of these organizations, their essential powers and duties, and whether a similar approach should be followed in rural regions and regions with only small non-metropolitan urban areas.

Regional Transportation Program Responsibilities. Many different transportation systems with statewide or national objectives impinge upon the nation's metropolitan areas including the interstate highway system, the Federal aid primary and secondary highway systems, the national system of airports, the national network of railroads, major long distance pipelines, and a national system of waterways and ports. These systems have been developed over the years in accordance with state and Federal policies and plans, and have as their basic objectives to connect the nation's urban areas with each other and with their rural areas.

By contrast, local systems of highways (the Federal aid urban system and non-Federally funded roads), mass transportation, taxis, pedestrian ways, and bikeways are provided within – and supplementary to – the framework of major statewide and national systems of intercity transportation. Some of these local systems are areawide or interjurisdictional, while others are strictly local, affecting only a single jurisdiction, or perhaps only a single neighborhood within the jurisdiction.

Together, these local, areawide, state, and national systems constitute the whole system of transportation within metropolitan areas. But, for the most part, each

system is funded separately, and responsibilities for each are divided among the various levels of government.

Regional Transportation Funding Responsibilities. Until recently, Federal and state funds have concentrated largely on the major intercity highway and airport transportation systems. Supplemental transportation systems to satisfy total needs for movement within metropolitan areas have been left largely to individual localities or, in a few cases, multijurisdictional transit, port, or bridge authorities. This piecemeal approach to transportation within the nation's urban areas and the scarcity of state and Federal funds for fully developed internal circulation systems, have left growing unmet needs within these areas.

In response, new Federal aid programs for an "urban system" of highways and for urban mass transportation systems have expanded substantially since 1970, and a few of the states have begun to provide urban transit assistance to their local governments, and even to operate urban transit systems themselves. The emphasis in these new programs has been on the major areawide and interjurisdictional transportation systems needed for efficient movement of people and goods within the metropolitan areas, still leaving strictly local movements a local government responsibility.

Currently, the Federal aid highway programs (including limited bikeway and pedestrian assistance) are all channeled through the states, while most of the Federal mass transportation program (excluding only part of the new formula grant program enacted in 1974) is routed directly to appropriate applicants in the urban areas. But, new Federal provisions which allow trading highway funds for mass transportation funds to create better balanced areawide systems raise the question of whether a single procedure should not apply to the distribution and use of all such funds. This could mean channeling both urban systems and mass transportation funds through the states or, alternatively, distributing them both directly to the urban area (perhaps with an administrative pass-through by the states).

The Federal aid airport program provides its action grants directly to public airport owners – whether state or local – without any channeling through intermediate bodies, while some states provide local assistance of their own which creates a triangular funding arrangement. At the same time, Federal involvement in improving ports and waterways is directly through Corps of Engineers projects which state and/or local governments may request. Federal railroad improvement programs up to now, have also been direct, although a joint Federal-state assistance program is being developed to help the states

forestall discontinuance of rail lines which are not incorporated into the national system.

Direct Versus Pass-Through Grants. Channeling all the Federal funds for urban transportation projects to the states would have the advantage of coordinating this aid with the larger scale intercity highway, airport, railroad, and port programs in which the states may be involved. In addition, the states, under this option, could be expected to play a significant role in helping to distribute these Federal aid urban funds among the metropolitan areas in accordance with the needs, as the states see them. Such channeling could be used to either "pass-through" the funds to metropolitan policy bodies which would then disburse them to implementation agencies, or simply to "earmark" the funds for use in the state's various metropolitan areas by an appropriate state agency. Funded projects could be required to be consistent with the metropolitan policy body's plan in both cases. Yet this body would tend to have more discretion and incentive to develop its "own" plan if funds were passed through to it, than if "the state funds" were simply earmarked for use in the metropolitan areas.

On the other hand, if Federal aid urban funds (for all local or areawide projects, of any mode, not included in a statewide or national transportation system) were provided directly to a locally based metropolitan policy body, this would allow an even greater voice for local officials working together to determine their own transportation needs for the movement of people and goods wholly within their own area. By enhancing initiative within the metropolitan area itself, direct grants would encourage closer coordination of these transportation systems with community based land use and physical development plans, and with related implementation policies of the local governments and other responsible units. This regional home rule, "self-determination" element is one which would be most difficult for a state agency to supply unless the state itself is dominated by a single metropolitan area and unless state and local transportation and development policies are closely intertwined.

The direct funding of these "urban" projects through a locally based metropolitan policy body would give that body considerably greater influence and authority than such bodies typically enjoy now. At the same time, those state and Federal agencies which remain responsible for statewide and national systems of transportation obviously would have a continuing interest in seeing that the urban systems funds were not used in such a way as to compromise the effectiveness of these larger

systems. This interest, of course, could be accommodated by providing appropriate state and Federal authorities with veto authority over any projects in the regionally initiated and adopted plans which would conflict with the broader systems. Local governments, of course, would continue to control strictly local projects, and projects using their own funds — subject only to review by the bodies responsible for any broader transportation systems to which these projects might connect.

While pass-through, earmarking and bypassing mechanisms would give varying degrees of state versus metropolitan control over the use of Federal aid urban funds, state financial involvement provides yet another means of control as well as assistance. A state, of course, may use its own funds to assist in meeting metropolitan transportation needs or to supplement Federal grants, or it may provide special tax sources to local governments or properly accountable metropolitan bodies for their own use in meeting internal metropolitan transportation problems. Some states, indeed, are providing financial assistance for local transportation programs, generally directly to the local implementation bodies. Such state programs usually are not channeled through a metropolitan policy body. However, in cases where these state funds may be used to provide the non-Federal share of Federal aid urban transportation project funds which are channeled to such a metropolitan body, or if they are to be used deliberately by the states to help strengthen such bodies, metropolitan channeling would offer the means to simplifying grant relationships and is meeting state regionalization goals.

Need for Areawide Policy Body. It can be argued that the internal transportation needs of many metropolitan areas have an areawide dimension too broad to be dealt with by individual local governments, yet too particularized to be met by statewide planning. The exact transportation modes and routes needed to meet these areawide needs, and the way in which such facilities and services affect the various localities in the area, cannot be specified ahead of time by statewide plans and categorical program funding formulas. Thus, according to this argument, a metropolitan policy body is needed to design the internal transportation systems of more than strictly local concern within the framework provided by statewide and national systems of the various modes of transportation, to decide on the appropriate urban modes, to see that the various localities are each involved in the planning and treated fairly, and to provide areawide citizen participation in the making of areawide transportation decisions. To make such a locally deter-

mined system work, some observers would argue, this organization needs a flexible multimodal urban transportation program at its own disposal so that, whatever modes and whatever balance between capital and operating programs it decides are needed, the locally identified demands can be met without imposition from the outside of arbitrary limitations on the use of available resources.

State Versus Areawide Roles. On the other hand, it is argued that the states are becoming more responsive to and involved in urban affairs and can, themselves, deal with their local governments and coordinate these governments' transportation activities well enough to make unnecessary, or even undesirable, a metropolitan body having anything more than an advisory planning role. Of course, the statewide and national systems of Federally aided highways, airports, railroads, waterways, and ports would continue to be administered through the states in any case. So, it is argued, coordination of these systems with the newly emerging Federal aid urban systems demands a strong state role in the new programs.

Regardless of this debate, in those cases where the states administer existing or new Federal aid transportation programs which affect the metropolitan areas, the metropolitan bodies could be put in a position of having to concur with state initiated policies and projects. While this would give less influence to the metropolitan area, it would provide an essential element of involvement. Likewise, if it is determined that a new areawide urban transportation system for internal movement should be the primary responsibility of the metropolitan bodies, local, state, and Federal concurrence could be required to protect the strictly local, statewide, and national systems.

Forms of Regional Transportation Policy Bodies. The problem of creating locally based areawide metropolitan policy bodies can be approached basically in one of two ways: (1) by reorganizing or consolidating local governments until they have areawide coverage, or (2) by joining existing units together in some sort of regional councils. The pros and cons of these two approaches are described at length in Volumes I and III of this Commission's *Substate Regionalism* report issued, respectively, in 1973 and 1974. While the local government reorganization approach, as illustrated in Miami and Indianapolis, usually goes further toward combining planning and policy making with actual governmental authority and implementation powers, it has been almost wholly limited to single county areas, and to very few such areas even at that. Meanwhile, the regional

council movement, combined with statewide substate districting activities by the states, has been much more pervasive.

The Regional Council Form. The Commission has recommended that the reformed regional council approach — involving a strengthening of present day councils of governments — be pursued as one of the most feasible means of developing areawide policy bodies. At the same time, the Commission has strongly urged that where reorganized areawide local governments have been created, they should assume all of the powers and roles of such bodies. In light of these recent recommendations, and to give full recognition to the many differences which are encountered from one urban area to another, any across-the-board prescription as to the form of metropolitan transportation policy bodies would be presumptuous. As long as the policy body has jurisdiction over a geographic area which encompasses the whole metropolitan transportation problem and is capable of exercising effective, locally responsive transportation decision making within a comprehensive planning framework, it may be argued that the specific organizational form of the policy body should be left to state and local discretion.

The Commission's previous reports on regionalism suggest that these conditions could be met more easily in most areas by building upon statewide systems of substate districts and by using a single comprehensive regional body in each such district for as many Federally, state, and locally encouraged areawide programs as possible. By and large, new organizations would not be required at this point in time — unless that is the local preference. Instead, existing regional organizations in most cases could be molded into the more effective decision makers needed for current transportation purposes.

The Strengthened County Form. In addition, there are two other likely structures that should be mentioned: county government and state agency.

Despite the general availability of interjurisdictional regional planning bodies throughout the nation, some 100 metropolitan areas are wholly or predominantly within a single county, and the existing county government reasonably might be looked upon as the preferred metropolitan government which could take on areawide transportation planning, policymaking, and even operating responsibilities. This, in fact, has been done in such places as Miami-Dade and Indianapolis-Marion. In the first case, the municipalities continue to exist, but areawide functions including transportation have been transferred to the county level; while in the second case

most of the municipalities and their transportation functions have been consolidated with the county. Where such action can be taken with local political approval, and where the resulting county governments are strong and capable, these units could provide the most desirable metropolitan coordination of Federally and state assigned urban transportation programs.

The State Agency Form. It is also necessary to consider the state agency alternative in some areas. Traditionally, the states have been very active in the field of transportation, and there are instances — such as in the Boston area — where the major metropolitan transportation functions have been carried out by powerful state agencies created specifically for the affected areas. Moreover, it must be realized that in one sense the Metropolitan Council in Minneapolis-St. Paul is a state agency. Although the state's attorney general has ruled this council to be neither an agency of local government nor a state agency, its governing body is composed of gubernatorial appointees and the council's relationship with the legislature remains close. The council, of course, was established by a special legislative enactment and its expanding role in various metropolitan affairs has come through direct state legislative action. Thus, a strong state role in a metropolitan policy body may be a fact of life in certain areas. The danger in such a situation, aside from removing the body one step further from local political processes, is that the state agency may be only a special purpose transportation body or even a unimodal one. Such difficulties can be overcome by enacting urban oriented multimodal transportation programs at the state level and by involving the governor, comprehensive state planning processes, local officials, and affected citizens in collaborative and creative ways. If these factors can be accommodated, the state agency alternative might be used to provide superior coordination among relevant state as well as metropolitan and local programs.

The Powers and Duties of Regional Transportation Policy Bodies. Whether the metropolitan policy body is a reformed regional council, an areawide government, or a subordinate state agency, the roles it assumes are of critical importance. A middle range and not too controversial cluster would include (1) developing a unified intermodal planning and decision making work program in conjunction with other appropriate planning and implementation agencies, (2) developing an overall comprehensive transportation plan and implementation program in accordance with the unified work program, (3) assuring that such transportation plans are consistent

with other areawide and local plans for community development, other public facilities and related public services, (4) initiating or monitoring all transportation projects of whatever mode having multijurisdictional or areawide impact in the area, and (5) monitoring and participating in regulatory proceedings affecting the provision of transportation services in its area plus related development, mobility, and accessibility issues. This whole series of interrelated tasks is essential, many would argue, if there is to be a carry through from planning to implementation.

But others would contend that an additional role would be vital for such a body. For this group, a capacity actually to provide transportation facilities and services is crucial. Without such authority, they maintain, the regional unit is left in the delicate and difficult position of relying on other separate, not always subordinate, units to assume capital improvement and operating responsibilities. While possessing basic metropolitan transportation policy making competence, the regional body frequently would be left with largely negative powers — in situations where positive, directive action is required.

Opponents of adding this operational role underscore the fact that responsibilities of this nature usually have not been assigned to reformed regional councils, and in fact have been opposed by many councils as well as by the National Association of Regional Councils itself. Direct operations often have been assigned to special districts, local governments, or a state agency; hence, assigning them to a metropolitan policy body could cause friction and a confusion of roles. Defenders of the reformed regional council strategy point out that the essence of this approach is to achieve a focus on overall decision making for areawide systems, not day-to-day operations. The Twin Cities' Metropolitan Council success in separating the two is usually cited to underscore this argument.

Non-Metropolitan Regional Transportation Policy Bodies. The *1973 Highway Act* enacted a program of demonstration projects for transit services in rural areas, and the *National Mass Transportation Act of 1974* enacted a regular transit program for both rural and small non-metropolitan urban areas which provides project grants at Federal discretion, as well as some funds for a formula grant. The formula funds for urbanized areas under 200,000 population go to the states for reallocation. Some of the seriously considered alternatives to this act would have handled the rural funds through the state in this same fashion.

In its previous study of substate regionalism, the

Commission found that several hundred non-metropolitan regional bodies already exist and that many of them are included in statewide systems of substate districts and are now being used for a variety of Federal aid program purposes. While the rationale in these areas for such organizations centers more upon the need to plan and establish new programs, build competent governmental staffs, and take advantage of economies arising from joint activities by small local governments, rather than upon the strongly felt need in metropolitan areas to plan and coordinate a surfeit of diverse and overlapping programs, the rationale is strong nevertheless. The fragmentation of local government is a significant problem in these areas just as it is in metropolitan areas, and many non-metropolitan local governments are too small to operate programs effectively and efficiently. Many existing regional organizations in non-metropolitan areas already have transportation, land use, and economic development policies, and they could be expected to help meet various interrelated transportation needs under the provisions of any new Federal aid programs directed to them. Thus, according to this argument, regional bodies in non-metropolitan areas, where the populations are sparse, and the local governments weak, could make better use of scarce transportation funds than could most existing local governments.

Those who argue for a regional approach to transportation problems in these areas point out the unique locally oriented nature of these problems. Some of the current problems being faced are (1) providing very low density types of public transportation for citizens without automobile transportation, (2) coping with the discontinuance of rail services which have been vital to the local economy, and (3) grappling with inadequate highways, bridges, and trucking services as an alternative to such rail services. Many of the non-metropolitan regional bodies in existence are already dealing with antipoverty, manpower, equal opportunity, and economic development programs in which these transportation problems would be major factors.

On the other hand, some would argue that state transportation agencies are much stronger than the regional bodies in these non-metropolitan areas, and that the states are in an even better position than these bodies — considering their larger geographic scope and higher levels of professional expertise — to make effective and efficient use of limited transportation funds in such areas. However, where this is true, there still remains the question of how to effectively involve local officials and citizens in developing transportation programs that respond to locally felt needs. Therefore, a

middle position might rely mostly on the expertise of the state but look to a regional body for meaningful local policy and citizen involvement.

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In view of these basic findings and issues, the Commission makes the following recommendation:

Recommendation 1. Strengthening Areawide Transportation Planning and Decision Making

The Commission finds that areawide transportation planning and decision making should be strengthened in both metropolitan and non-metropolitan areas. This strengthening should be achieved by means consistent with the Commission's recent series of reports and recommendations on *Substate Regionalism and the Federal System*. Thus, in many areas the most feasible approach would be to start with existing regional councils and regional planning commissions, recognize them officially for all areawide Federal aid and state transportation planning purposes, and strengthen their decision making powers. A second approach arises in cases where areawide local government reorganizations have taken place; here the strategy would be to use these areawide jurisdictions for regional transportation programs. A third possible approach, using state agencies with local ties, arises where the states are already major providers of transportation in metropolitan areas. Hence.

A. The Commission recommends that all Federal aid transportation programs requiring, based upon, or supporting areawide planning rely primarily on designated areawide local governments, where such have been established, or where none exists, on the single designated general purpose regional body in each area established for purposes of OMB Circular A-95 by (1) the statewide systems of substate districts in intrastate areas where the states have set up such systems, or (2) joint action of the local governments in intrastate areas where the states have not acted, or (3) joint Federal-multistate compacts, or interlocal agreements in interstate areas. In order to facilitate this action, the Federal*

*These interstate mechanisms are recommended for those metropolitan areas (currently numbering 38) which cross state lines. This recommendation is consistent with Recommendation No. 5 of the Commission's report entitled *Regional Decision Making: New Strategies for Substate Districts* (1973).

Aid Highway Act should be amended to modify the "urbanized area" definition of the geographic basis for areawide transportation planning and urban systems funding to permit consistency with Part IV of OMB Circular A-95. Transportation programs for rural and small urban systems and non-metropolitan areas should be subject to the same type of areawide regional planning and decision making single organization designations and geographic criteria.

In recommending the designation of locally based areawide transportation planning and decision making bodies, the Commission says such bodies could be either reorganized areawide local governments or strengthened regional councils such as those recommended in the Commission's report entitled *Regional Decision Making: New Strategies for Substate Districts*, adopted in 1973. Based upon past experience, the Commission anticipates that most such bodies would be of the strengthened regional council variety* rather than reorganized areawide local governments. However, where such reorganized governments have been created, their superior strength should be recognized and used to further areawide transportation programs. In those cases where an existing regional body is part of a strong statewide system of substate districts, this form of organization usually should be preferred because of the linkages it can provide to state government. In interstate metropolitan areas, an interstate body is to be preferred because it is the only one which can provide the needed areawide dimension.

The Commission's recommendation amending the present "urbanized area" definition in Federal aid highway programs will allow substate district organizations established by the states for regional planning purposes to avoid obstacles in designation for Federal aid urban transportation program purposes. The objective here is to facilitate the use of a single organization in each metropolitan and non-metropolitan area, not only for Federally aided transportation purposes, but also for other Federal aid purposes and state program designations, along with local programs for areawide planning and cooperation. This coincidence of programs, geography, and organizations is essential if meaningful

*These councils would have policy bodies composed at least 60 percent of the chief elected officials of units of general local government in the area. Such units would be mandated members of the council and responsible for supporting the council's adopted budget. The council would have certain planning, project approval, and operating powers, and its major decisions would be subject to voting procedures weighted on the basis of population.

coordination among such interrelated functions as transportation, land use, utilities, environmental protection, economic development, and human resources development is expected. Yet, geographically, many metropolitan areas are smaller than the multicounty substate districts to which they belong, and this has prevented the use of substate district organizations for Federal aid urban transportation programs in the past. In cases where the substate district is much too large, appropriate subdistricting and subcommittee structures can be used to link these important transportation activities to the statewide system of regions.

The Commission also recommends the same regional approach to transportation programs in metropolitan, rural, and small (non-metropolitan) urban areas. The Commission believes that although the transportation problems in the smaller areas are of a different nature from those in major metropolitan areas, they are significant; regional bodies already in many of those areas could be most helpful in tailoring transportation programs to local government and citizen needs.

B. The Commission also recommends that in those intrastate cases where the governor of a state determines by specific findings that the state has an overriding interest in and commitment to the regional transportation system of one or more designated substate areas, by reason of state agency activities and substantial state financial involvement, and where the state has a strong intermodal department of transportation and intermodal flexibility in using its transportation funds in accordance with overall state policies approved by the governor, a comprehensive multimodal state transportation agency may be established in such areas to assume required Federal aid transportation planning and decision making functions with the assistance of a coordinating committee of local elected officials, provided, of course, that any resulting plan or plans shall be subject to review and concurrence by the appropriate areawide A-95 clearinghouse.*

This recommendation recognizes that there may be regions within a single state where a state agency would be preferable to a locally based regional body because of a high degree of established state involvement in the affairs of such regions. While a state agency may be designated to perform the transportation planning and decision making role for these areas, the Commission believes that such an agency should have the intermodal

**In accordance with *Recommendation No. 5* of this report.

flexibility in its transportation programs needed to meet complex urban transportation problems in imaginative and creative ways, and that this agency's transportation policies should be formulated within the context of other state programs and policies (such as land use, environmental protection, and social services) under the coordinative management and political responsiveness of the governor. Local interests should be involved in the planning and policy making processes of this agency directly as well as through the locally based regional body responsible for other Federal aid and state aid programs, including the A-95 clearinghouse function.

C. The Commission further recommends that the areawide or state unit designated for multimodal Federal aid transportation planning and decision making in accordance with components A and B of this recommendation, should be empowered, but not necessarily limited, by Federal and state laws and administrative regulations to:

- (1) develop a unified intermodal planning and decision making work program in conjunction with other appropriate planning and implementation agencies;*
- (2) plan all transportation facilities, routes, services, and operations — of whatever mode — within its geographic jurisdiction which have multijurisdictional or areawide impact, including annual revision and adoption or readoption of such plans;*
- (3) resolve — or, in the case of a state unit designated pursuant to component B of this recommendation, help to resolve — any inconsistencies between such transportation plans and other areawide plans for community development, other public facilities, and related servicing programs;*
- (4) develop a multi-year program of specific transportation projects and services which would implement the transportation plan;*
- (5) initiate, review, approve or disapprove, and/or modify all transportation projects, of whatever mode having multijurisdictional or areawide impact which are not part of a statewide or national system of transportation before such projects may be funded or implemented;*
- (6) review and concur in any transportation project proposed for the area which would be part of a statewide or national system of transportation, provided however that the governor(s) of the state(s)* involved*

*More than one state, and therefore more than one governor, would be involved in interstate areas for which a single areawide planning and decision making body is designated pursuant to Component A of this recommendation.

may override an adverse decision of the areawide body by a written finding that such decision is in conflict with officially adopted state plans, policies, or action having a statewide impact or in conflict with officially adopted plans, policies, or actions of another such areawide unit;

(7) monitor and participate in regulatory proceedings affecting the provision of transportation services in its area and related development, mobility, and accessibility issues;

(8) in the case of a unit designated under component A of this recommendation, provide or contract for the provision of areawide or interjurisdictional transportation facilities and programs; provided that where such a unit is not an areawide local government such action must be agreed upon by more than fifty (50) percent of the designated general purpose regional body's constituent local governments representing at least sixty (60) percent of the population; and

(9) study and consider the present and potential roles of private sector transportation providers — including transit, taxi, trucking, parking, railroad, airline, shipping, and pipeline companies — as well as public implementation and finance units, and provide for their needs as may be appropriate to encourage and facilitate needed and desirable participation by them in the coordinated provision of transportation services in the area.

Whatever form of planning and policy making organization is designated for an area, it should have the powers and duties spelled out in this recommendation which are designed to provide a direct link between planning and meaningful decision making for the region.

Among the powers and duties specified in this recommendation, the first provides for development of a single unified intermodal transportation planning work program which involves (1) not only broad systems planning but also specific project planning, and (2) not only general purpose "comprehensive" planning bodies at regional and local levels, but also functional transportation planning bodies and units with project planning and implementation responsibilities. Then, under this work program, the body designated in accordance with components A and B of this recommendation would have a responsibility to see that both an overall comprehensive intermodal transportation plan and an annually updated implementation program of scheduled projects are developed in conjunction with and consistent with other areawide and local plans for community development, environmental protection, and the provision of needed public facilities and services. This planning would incorporate all transportation facilities in the area whether initiated by local, state, or

regional bodies, but would give special attention to developing a rational system of areawide transportation including all appropriate modes for the movement of people and goods internally within the planning region.

It would be the designated areawide planning body's responsibility to program needed implementation projects of more than strictly local but less than statewide or national significance. With respect to these other transportation systems — of strictly local, statewide, or national importance — this body would have the responsibility to react to plans for which the state(s) or local governments have primary responsibility. All of these systems — those for internal movement within the area and those designed for movement to locations beyond the area — must be consistent with each other. The differentiation of responsibilities for these systems in this component is not meant to impair this consistency, but only to assign the initiative for developing such systems to the governmental units having the closest association with the objectives of such systems. In either case, concurrence by the unit responsible for one system would be required before implementation projects could proceed in the other. This way, one system could not impair the integrity of the other, but each would aggressively seek to satisfy its own goals as fully as possible.

Further, this recommendation provides that the body responsible for transportation planning and decision making in the metropolitan area would have the duty to consider the services of private as well as public providers of transportation in its planning, and the authority needed to monitor and participate in any public regulatory proceedings affecting the provision of transportation services in its area. Most private transportation providers are regulated by independent bodies which have had little contact with the planning processes in metropolitan areas or non-metropolitan regions, and little basis other than the economics of the regulated industry for deciding transportation regulatory issues. This recommendation would help to provide a sound planning basis for community conscious regulatory actions. Not only would such a broadening of regulatory processes apply to the actual provision of transportation services, but it would also apply to the regulation of land use, protection of the environment, and the provision of public services affecting or affected by transportation. Metropolitan and other regional planning bodies have had little direct contact with such regulatory proceedings in the past, and this has been one of their most notable deficiencies. This recommendation seeks to assure that areawide transportation policies and related areawide development policies would be made known to

those bodies which regulate the development of land and the environment, the current plans and policies for providing public utilities and services — before their regulatory decisions are made. This would necessitate that any proposals pending before these bodies be referred to the areawide planning and decision making body designated under components A and B of this recommendation, and that these bodies provide a timely review and comments based upon their adopted plans and policies. Precedents for such involvement by regional bodies have begun to appear in the fields of land use and environmental protection, and it is time that they be applied to help attain comprehensive areawide transportation objectives.

Finally, the recommendation provides authority for the designated areawide planning and decision making body to take on or contract for operating functions in the transportation field. This authority, which is consistent with that recommended in the Commission's 1973 report entitled *Regional Decision Making*, would be exercised only with local government concurrence. It is not meant to suggest that this body would necessarily seek to take over existing transportation operations in its area, but rather to suggest that where there is no other reasonable means to provide needed services, this policy body could be designated to do the job. If a different regional transportation provider organization is established in the area in accordance with *Recommendation No. 2* of this report, then the policy body called for in this recommendation would not need to perform this function.

One general caution needs to be registered with respect to this recommendation. The regional planning called for here is more ambitious than any that is currently being performed. Both in terms of the range of transportation modes and the detailed implementation oriented programming — not to mention the call for integrating related community development, environmental, economic, and social goals, and the need for much more meaningful political and citizen participation in regional affairs — this planning will require technical and managerial staff capabilities that are currently in short supply. Greater emphasis on new education and training programs and years of on-the-job experience will be needed before this challenge can be met with ease. The present supply of qualified planners and managers is particularly short in the mass transit field. Yet, it is only this type of planning which can meet today's standards of enlightened, equitable, and effective public decision making in the complex field of metropolitan and regional transportation. Therefore, the Commission urges that appropriate steps be taken now to build

adequate regional planning capabilities and participatory processes.

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The Commission believes it is essential that a single body be designated for each metropolitan and non-metropolitan region to take responsibility for planning all modes of transportation in that area consistent with firm areawide development policies, and that such an organization should also be empowered to make firm governmental decisions with respect to major transportation systems designed for internal movement within the area. It is also essential that such a body provide for significant local participation in making these decisions.

DELIVERY OF AREAWIDE AND INTERJURISDICTIONAL TRANSPORTATION SERVICES

One of the most significant factors affecting the quality of areawide transportation systems is the nature of the institutional arrangements for delivering transportation services. Currently, these institutions are seriously fragmented, so that transfers from one mode to another are often more difficult, time consuming, and costly than necessary, and certain needed services are not even provided. This situation raises the question of whether metropolitan areas and other regions need an areawide mechanism to coordinate and fill gaps in the delivery of transportation services and, if so, what institutional arrangements would be suitable and what powers such units should have.

This report has found that areawide intermodal transportation provider organizations do exist in some areas, demonstrating their potential to help fill service gaps and coordinate existing services. This part of the report examines the arguments for and against using such organizations more extensively, and presents a recommendation dealing with their structure and functions.

Specific Regional Transportation Delivery Issues

The research findings detailed in *Chapter III* on transportation delivery mechanisms suggest a definite need for fuller provision and greater coordination of services in accordance with areawide plans and policies. They also show that areawide intermodal provider organizations can be developed to fill these needs. Yet, several issues remain, including the form that such

organizations should take, their precise powers, and their relationships with other existing provider organizations.

Institutions For Unifying Areawide Transportation Services

In most metropolitan areas, the present fragmented patterns of transportation service delivery and the assorted geographic, fiscal, and legal handicaps that operators contend with, contribute to service gaps and accentuate the need for a regional provider institution. A few metropolitan areas — such as Chicago, San Francisco, Denver, New York, Minneapolis, and Detroit — have realized the need for integrative operating mechanisms and are using them to develop areawide coordinated transportation systems.

Research indicates that a wide range of regional institutional arrangements are being tried to help unify these systems, and no single type can be prescribed for all metropolitan areas because of their widely differing delivery patterns, modal mixes, and present structural strengths. In some areas, a new institution may be feasible and necessary, while in others the strengthening of existing units may be a more practical strategy.

The organizational analysis of transportation providers in *Chapter III* of this report shows how metropolitan areas vary in their structural arrangements for the delivery of areawide transportation services. Larger areas are increasingly relying on umbrella organizations to coordinate the transportation activities of state governments, regional special districts, and constituent cities and counties. A few large metropolitan areas, Miami and Indianapolis, are depending on reorganized counties for unified delivery of such services, while some smaller areas are developing joint city-county approaches or are still relying on central cities and private operators to provide the bulk of highway and non-highway services. Apparently each metropolitan area is taking an incremental institutional approach that permits dominant transportation providers to singly or jointly provide coordinated regional transportation services. Therefore, many would argue, a range of institutional options should be considered, including the following:

- A regional transportation authority organized as a multimodal provider organization similar to the one in Chicago.*

*While Chicago's RTA is limited to transit modes (including taxis and any other publicly available conveyances), it could just as well deal with other modes if such a need is recognized.

- A federated transportation provider organization with a planning and coordinating unit as the upper tier and separate operating agencies as the lower tier, such as the Metropolitan Transportation Authority in the New York area.
- A confederation or association of transportation providers which interacts with the areawide transportation planning body, such as the San Francisco providers association and the Metropolitan Transportation Commission.
- A multimodal regional service corporation, such as the Port Authority of New York and New Jersey or the Bi-State Development District in St. Louis.
- A state sponsored transportation authority such as the Massachusetts Port Authority.
- A transportation subunit of a general purpose areawide metropolitan governmental unit, such as the Metropolitan Transit Commission in Minneapolis-St. Paul.
- A county department of transportation in a single county SMSA such as in the Miami, Florida, metropolitan area.
- A joint city-county department of transportation.
- An extension of urban service through use of extraterritorial powers.

The issue of whether to create a new regional provider entity or to strengthen a present organization calls for a decision which, many would argue, each metropolitan area and non-metropolitan region should make for itself. Advocates of using existing organizations oppose the creation of new bureaucracies, whether governmental or quasi-governmental. They maintain that existing organizations in every metropolitan area can be given authority to provide areawide services or to see that other agencies fulfill the coordination and implementation functions. In smaller areas, municipalities and private companies may already be providing sufficiently high quality transportation services in an adequately coordinated fashion.

There is an undeniable problem of proliferation, however. In larger metropolitan areas, it is not unusual to have 100 or more different transportation pro-

viders — some providing a few transportation services while others provide a wide range — and no existing institution, it is argued, may be capable of coordinating such complex service patterns. Perhaps in single county SMSAs, a county unit, a dominant city, or a joint city-county unit could serve as the areawide coordinating mechanism, but in complex multicounty areas — where there is no metropolitan general purpose government with effective coordination powers and no strong substate regional body — a new regional transportation service provider organization may be needed.

Critics point out the disruptive effect such new organizations could have on existing institutional relationships, especially if these new bodies were to have independent access to local tax resources. Such entities, they argue, erode local control over essential transportation services.

Advocates for creating new institutions where necessary argue that such bodies can be created while still preserving local government service options. Thus, a regional provider would assure that basic areawide transportation needs are met, while local governments would still provide internal transportation service functions (such as local streets and minibuses). These advocates cite the Southeastern Michigan Transportation Authority's recent senior citizens' transit plan as an example of the exercise of local service options within a unified service delivery system. This free fare plan makes it possible for any town, village, or county to purchase a bloc of tickets and make them available to senior citizens free of charge for non-rush hour transit. This does not mandate reduced fares, increased subsidies, or uniform local participation for the whole area. Instead the decision to provide this additional service to senior citizens is left to the individual local governments.

Critics of the creation of a new areawide mechanism for systematizing transportation service delivery also oppose establishing what will be, in their view, just one more unresponsive, autonomous, quasi-governmental bureaucracy. They are concerned that a regional provider unit, because of its technical management expertise, the size of its geographic base, and its insulation from the political process will become unresponsive and unaccountable to general purpose governments and to the public which it serves. Advocates of such new mechanisms, on the other hand, argue that a new regional service provider would increase the visibility of transportation needs by clearly designating a single agency responsible for the success or failure of areawide transportation service delivery, and that such an organization could be brought under control effectively by a politically responsive locally based planning

and policy making body such as the one suggested in *Recommendation No. 1*.

Who Should Choose?

Related to the issue of whether to establish a new entity or strengthen an existing unit, is the question of *who* should make this choice. Should constituent units of local government determine the appropriate mechanism or should a public referendum be held? Advocates of direct local designation argue that this would assure greater responsiveness to general purpose units of local government and to local public needs. Opponents of this view, on the other hand, maintain that the range of options and the technical factors involved are too complex for a public referendum. They also argue that constituent local governments under such circumstances may be unable to designate a single areawide transportation provider, that local perspectives may be too limited, and that a regional focus is of paramount importance.

Even those who think the decision should be made on a non-local basis cannot agree on a service. Some argue that the governor, the state legislature, or the regional planning body (where it is effective) have the broad scope needed to make the choice with an areawide view. While some of those who advocate state designation of the provider unit feel that the governor or the state legislature alone should make this choice, others feel that the regional planning unit should act concurrently with the state to provide for a modicum of local participation in the decision making process. Others advocate that the regional body alone should designate or create the provider mechanism because these two units supplement each other — one decides policy and the other carries it out. Therefore the policy body is the most appropriate one to designate its regional implementation partner. Opponents of this view argue that often the regional planning unit is itself a weak body, and the formal visible recognized authority of the governor or state legislature in specifically creating the regional provider may be an asset to its success.

The Transportation Powers of Regional Provider Units. The problem of how to fill the metropolitan and regional service gaps and coordinate existing operations is multifaceted. Not only does it involve the choice of building new institutional mechanisms or strengthening old ones, and the question of who makes this choice, but it also must deal with the issue of determining the powers necessary to do the required job. Although institutional options vary, many observers agree that these regional organizations should perform certain

functions in order to meet areawide transportation goals. These functions include:

- 1) purchasing equipment, pooling equipment and personnel, and joint use of facilities;
- 2) implementing the levels and kinds of public transportation service which would meet areawide needs;
- 3) assuring that such service is actually provided, by purchasing it from existing operators or by direct provision;
- 4) reviewing operations of service providers in the area;
- 5) raising or acquiring funds to meet operating expenses;
- 6) implementing service programs with plans for coordination of routes, schedules, transfers, and services of all provider agencies; and
- 7) reviewing the impact of local transportation regulations on service provision in cooperation with the regional planning unit.

Regional transportation units in several large metropolitan areas are currently functioning with many of these powers. However, critics are wary of concentrating such fiscal and managerial power and authority in one organization, while advocates point out that operations of these existing organizations indicate that such responsibilities are the logical components of managing regional transportation services. The local and areawide conflicts over the exercise of these powers which are bound to occur, as they already have in Chicago and New York, do not diminish the fact that effective areawide service delivery requires a commensurate areawide management capability. Recognizing this inevitable tension, many advocates who maintain that these powers are needed if regional transportation service delivery and planning implementation is to be effective also maintain that such powers should be subordinate to the locally controlled regional planning mechanism. They also propose that the power to tax can be effectively controlled by placing limitations on the tax rate and tax base available to such organizations. Furthermore, they argue, effective control can be maintained by requiring a popular referendum or consent of constituent local governments before the regional unit levies a tax.

The advocates of intermodal regional transportation provider organizations point out important fiscal advantages to such units. They may use revenue bonding for appropriate purposes despite local government debt limitations, and consolidation of revenue bond issues for increased financial leverage in the money market. Critics

argue that while these may be advantages, they also may result in responsiveness to bond holder interests rather than to public needs. However, advocates maintain that since many of these units are often subordinate to existing general purpose governments and to locally controlled regional planning mechanisms, there is sufficient assurance that transportation programs will serve citizen needs. Nevertheless, critics argue that giving special districts large scale taxing powers will put them in competition with general purpose governments. According to this argument, giving these regional units such extensive powers may seriously erode local control over transportation services. They also point to the fact that some states are now directly providing regional services through state subordinate service mechanisms which exist in the Boston, Baltimore, Hartford, Harrisburg, and New York metropolitan areas. Furthermore, these long established or recent areawide special districts are very difficult to bring under local control. Yet, these mechanisms most often have been favored for the delivery of regional transportation services. Thus, it is argued, using the special district approach — instead of significant reorganization and strengthening of general purpose local governments, or the development of a more effective interlocal cooperation among cities and counties — will cause general purpose local governments to lose control over transportation services.

Contrary to this position is the view that the powers given the regional provider unit, whatever option is chosen, will establish a complementary relationship to the local government controlled planning-policy body called for in *Recommendation No. 1*. Control of board appointments, budget, and operating plans by this body will serve to limit the independence of an areawide provider district.

The Role of Existing Transportation Providers in Regional Transportation Systems. When an institutional choice is made giving a designated areawide unit the power to unify metropolitan or regional transportation services, this unit's relationship to existing providers becomes important. One view maintains that the primary function of a regional transportation provider is to "package" areawide transportation services. If effective, existing providers — whether private companies, local governments, special districts, or state agencies — would be expected to continue their transportation functions while striving for better coordination, as part of this metropolitan "package" under the guidance of the regional unit.

Opponents of this "shared responsibility" position maintain that areawide transportation is a public utility

and that, as such, it should be owned and provided by a single, integrated organization. This position argues that effective systems management will not be feasible where the area's service delivery patterns are fragmented.

In refuting this argument, however, advocates of shared responsibility point out that such an approach is being taken in Chicago, with its new Regional Transportation Authority (RTA), and that Hamburg, Germany's well established and fully coordinated transportation system, which experts consider one of the best in the world, has a federated arrangement. As is expected under Chicago's RTA, Hamburg transportation providers operate under an "umbrella" unit which leaves existing providers intact; there, all public transportation carriers in the metropolitan area, including the national railroads, coordinate their operation plans, scheduling, fare collections, and other activities so that they appear to the public to function as a single system. The two largest carriers are the municipal subway and bus company, but there are also ten other providers. The board of the service unification organization includes representatives of areawide general purpose governments as well as the national railroad and other local providers.

Based on examples such as these, advocates of the "shared responsibilities" view, point to this arrangement, and argue that unification of service delivery systems does not preclude the continued functioning of present providers. The roles retained by the various metropolitan transportation service actors should depend on their effectiveness, their ability to contribute toward meeting regional transportation objectives, and the nature of the regional institution designated to oversee areawide services. Where existing transportation providers are unable or unwilling to supply needed services, the regional organization could help them do so through financial assistance, or it could take on the service responsibility.

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Recommendation 2. Improving Areawide Transportation Delivery

The Commission finds that responsibilities for implementing transportation plans and providing transportation services in many metropolitan rural areas are currently divided among a very large number of independent private and governmental organizations, making it very difficult to unify intermodal transportation services to serve effectively and efficiently the needs of the public. Hence...

The Commission recommends that states, local governments, and policy units designated pursuant to Recommendation No. 1 develop broader and more systematic institutional approaches to the delivery of areawide transportation services. Specifically, the Commission recommends that states enact legislation which:

A. establishes or provides for designation by the instrumentality called for in Recommendation No. 1 of an areawide multimodal transportation authority to provide directly, coordinate, or assist in financing existing and needed areawide transportation services, and to consolidate or otherwise integrate the transportation activities of existing areawide transportation operating units.

This recommendation calls for a visible and accountable areawide agent to be held responsible for providing a satisfactory level of areawide transportation service. The designation of this areawide transportation authority would require state legislation authorizing the state and local entities to act through the regional organization to designate an existing multimodal organization or create a new one where needed to provide regional service directly or indirectly and to integrate existing operating units. The Commission adopts this position because of its belief that it is not desirable to concentrate all regional transportation decision making, regulating, and operating authority in one agency. The designation of this areawide transportation authority by the regional planning unit establishes a service unit with linkages to the regional planning body and general purpose local governments. This unit will be the focal point for regional transportation service delivery and can be held directly responsible for transportation service failures or successes. Moreover, this designated authority will not necessarily be a monopoly transportation provider. It could well be a service coordinator as now occurs, to a limited extent, in the Chicago, New York, Minneapolis, and San Francisco metropolitan areas.

B. The Commission also recommends that this legislation authorize a range of possible forms for areawide transportation authorities including:

- (1) a reorganized county containing seventy (70) percent or more of a metropolitan or non-metropolitan area's population;
- (2) a city acting extraterritorially when it already performs the bulk of the area's non-highway transportation services;

(3) a joint city-county transportation department whose jurisdiction contains seventy (70) percent or more of the metropolitan or non-metropolitan area's population;

(4) a multipurpose or multimodal regional service authority;

(5) a state department of transportation or a state subordinate multimodal regional transportation agency; or

(6) the instrumentality designated pursuant to Recommendation No. 1.

A choice of possible institutional arrangements is presented in this recommendation since some may be more feasible than others in specific metropolitan situations. For each area one of these possible units would be designated to be the prime agency responsible for delivering or seeing to the delivery of regional transportation services in accordance with the plans and policies of the policy unit called for in Recommendation No. 1.

In single county areas, which comprise 40 percent of all SMSAs, a reorganized county which contains the major portion of the area's population may be the logical choice to function as the prime provider agent. The county would probably operate through a multimodal DOT of its own. This would presume a strong county, with powers granted to provide non-highway as well as highway transportation, and to levy sufficient taxes to finance its share of multimodal transportation operations. This choice would be most appropriate in those single county areas where the central city is not itself heavily involved in the provision of transportation services.

The second alternative — a city acting extraterritorially — would be feasible especially in smaller SMSAs where the central city is presently a prime provider of transportation service and could readily extend such services to outlying areas. In those areas where there is considerable city-county sharing of transportation responsibilities, it may be preferable to establish and designate a joint city-county transportation department as the prime provider agent (the third alternative). This might be especially appropriate in non-metropolitan areas.

The fourth alternative — of a multipurpose or multimodal regional services authority or district — might be suitable in urbanized multicounty areas which have a number of single purpose transportation districts which could be consolidated into a designated regional service authority.

The state DOT alternative (number five) might be desirable where there is a strong multimodal DOT with a demonstrated concern for the operation of the total

urban transportation system, while a state subordinate regional transportation agency would be a reasonable solution in multicounty areas that have few or no area-wide special districts or strong regional councils. These strategies would be most viable in either urban or rural areas where state transportation initiative is strong and local regionalism is weak.

The sixth alternative provides the option of designating the instrumentality called for in *Recommendation No. 1* as both the areawide planning-decision making body and the responsible areawide transportation provider. In some instances this option may be the most practical choice to allow the planning unit to oversee operations and serve the coordinating function directly. This may be the case, especially where metropolitan government has been achieved, where major service providers do not already exist, and where needed services are so great as to displace or overwhelm the policy setting functions. Non-metropolitan areas might be strong candidates for this approach.

C. The Commission recommends further that this legislation authorize financing of the areawide transportation authority's operations through a combination of area-wide taxes, assessments of constituent local governments, fees, and service charges.

This portion of the recommendation is designed to give the designated regional transportation authority the fiscal capacity to implement its operating plans and coordinating efforts. This unit should have the financial resources to execute purchase of service agreements where additional services are indicated, and to support or aid unprofitable but necessary regional facilities and system linkages. A combination of areawide property and non-property taxes such as now are levied in Chicago, San Francisco, and Boston would provide the regional unit with the necessary fiscal foundation for support of areawide operations. Assessments from local constituent governments plus fees and user charges could also be additional sources of funds. But, in the case of transit operations where user charges cannot support adequate service levels, the designated authority cannot rely on the fare box alone to assure continued or expanded service. Some of the other funding sources available include those like Seattle's 50 cent monthly per household tax, and the use of an earmarked public utility tax to subsidize transit operations as in San Francisco and New Orleans. In addition Chicago's Regional Transportation Authority uses a sales tax on gasoline, auto license fees, a parking tax, and local

government contributions. The regional transportation provider should also be permitted to transfer surplus funds from profitable operations to unprofitable ones, as is the case with New York's MTA and San Francisco's Golden Gate District.

D. Also, the Commission recommends that this legislation authorize the areawide transportation authority to:

- (1) designate, concurrently with the instrumentality called for in Recommendation No. 1, major urban and rural regional transportation routes and set the conditions for transport operations along these routes;*
- (2) reserve, develop, and maintain (a) exclusive or priority travel routes for mass transit, and (b) sites for areawide transport facilities;*

The specific transportation powers proposed in this section include, first, those powers which the designated regional authority would need to develop an inter-connecting network of regional public transportation routes, many of which might carry several transportation modes, plus the power to ensure consistent operating conditions along designated routes throughout the system. These powers might include eminent domain and right-of-way reservation authority, but would be exercised only with the concurrence of the designated policy unit called for in *Recommendation No. 1* and constituent area local general purpose governments. Such limitations would protect against arbitrary use of these powers, and would assure operating linkages to areawide and local plans. The second subcomponent gives the regional provider the authority to designate priority bus lanes and locations of terminal facilities. The Commission proposes that these site location powers be exercised in accordance with adopted plans and policies of the unit called for in *Recommendation No. 1*, and with the cooperation and participation of local governments.

E. Additionally, the Commission recommends that this legislation authorize general policy control over the designated areawide transportation authority by the planning and decision making units called for in Recommendation No. 1;

This recommendation is included to establish a strong link between systems planning and operations, since the two are highly interrelated. It would ensure that operating plans would be consistent with the overall intermodal regional transportation plans and policies

prepared and adopted by the policy unit called for in *Recommendation No. 1*.

F. Finally, the Commission recommends that this legislation authorize delivery of supplementary local transportation services by all units of general purpose local government in metropolitan and rural areas either directly, jointly, or by contract, provided that such services have not been assumed by the designated areawide transportation authority, and provided further that the plans and programs for such services be reviewed by the instrumentality called for in Recommendation No. 1 in order to resolve any inconsistencies between such plans and programs and the officially adopted areawide transportation policies and plans.

The final component of this recommendation would allow for the general purpose local governments in each area to provide additional supplementary local transportation service where desired, if not already offered by some other unit, and if consistent with other such services in the area. This assures a degree of local choice and control which guards against the designated regional transportation authority developing a transportation monopoly. It also encourages the local development of specialized or feeder transportation services which will complement regional operations.

The goal of this recommendation is to promote the development of a unified, systematic approach to the delivery of areawide transportation services. The six components are designed to improve service delivery by providing several possible institutional alternatives rather than one universal program for regional service provision. The Commission adopts this position in order to encourage each metropolitan or non-metropolitan area to build on its own existing organizational patterns and strengths.

FINANCING REGIONAL TRANSPORTATION

All three levels of government have substantially revised their transportation financing policies during the last 25 years. The purposes of these revisions have been to provide (1) greater fiscal support for urban mass transit and other urban non-highway services, (2) greater flexibility in the use of highway grants for alternative transportation projects, and (3) more overall financial

support for transportation in urban areas. This has occurred because...

- All three levels of government have a long established role in metropolitan transportation finance; but for the higher levels, this has long been limited mostly to funding highway rather than non-highway systems.
- The structural and legal constraints of traditional transportation finance practices have caused all levels of government to realize now that past patterns of funding have favored highways at the expense of other transportation modes, and resulted in an over emphasis on the use of higher level funds for capital rather than operating purposes.
- Aid programs until recently have been directed toward certain transportation providers — chiefly, states and special districts — that are often considerably removed from the general purpose local governments which either perform major regional transportation services themselves or plan for the development and maintenance of urban transportation systems.
- All levels of government are coming to the realization that the most complex and costly transportation problems are occurring in metropolitan areas where balanced urban transportation systems are desperately needed to reduce urban congestion and environmental pollution, and to conserve precious energy resources. New urban transportation systems and policies have to be developed, and the attendant financial requirements will have to be met by increasing the amount of higher level fiscal resources available for such purposes.

While most emphasis in recent transportation finance changes has been on urban needs, the needs of non-metropolitan areas also have received attention through such Federal aid programs as Appalachian development (Appalachia Regional Commission), rural development (Department of Agriculture), economic development (Department of Commerce), secondary highways (Department of Transportation), and mass transportation (Department of Transportation). State highway programs and road aid to localities have also provided for many basic rural transportation needs. In rural areas, basic road responsibilities usually are held by the coun-

ties and met substantially with locally generated revenues as well as general revenue sharing funds from the Federal government.

This part of *Chapter IV* summarizes the principal findings and conclusions concerning these transportation finance trends, and explores the issues now being confronted in developing new urban oriented and regional transportation assistance programs. Then two financial recommendations are presented, one directed to the Federal government, and one to the state and local governments.

Principal Findings and Conclusions

The principal findings and conclusions of this report about transportation finance may be summarized under the following four categories: intergovernmental responsibilities for transportation financing, limitations of transportation finance policies, lack of local focus in transportation finance policies, and the need for increased funding.

Intergovernmental Transportation Financing Responsibilities. All three levels of government have a substantial role in the financing of urban and rural transportation systems. While one or another level of government may be more prominent in the financing of the different components of the system, each level has a stake in the development of fiscal policies that can be tailored to meet the different fiscal problems of a variety of different local areas. All three levels of government, then, will have to be involved in any new national transportation finance policy designed to meet urban, rural, or regional needs. This may be more fully understood by considering the following facts.

- Of the five main types of transportation expenditures — highways, mass transit, airports, water transport, and parking — the Federal government has direct expenditure responsibilities in three; most state governments have direct expenditures in three and a few in four; and the local level exhibits expenditure responsibilities in all five areas. The Federal government has aid programs that support state and local highway, mass transit, airports, and parking projects, while some state governments have developed aid programs for highways, mass transit, airports, and water transport purposes. Thus, all levels of government have some experience in directly financing or assisting virtually every component of the transportation system.

- The extent of fiscal involvement of all three levels in transportation finances is considerable. The Federal government provided over 35 percent of transportation expenditures either in aid programs or direct expenditures in fiscal year 1971. In that year, it accounted for 28 percent of all highway finances, about 8 percent of mass transit finances, 69 percent of all airport finances, and 77 percent of all water transport outlays. State governments, in turn, accounted for 53 percent of all highway finances, 5 percent of all airport finances, and 8 percent of all water transport finances. Local governments retained a broad range of fiscal participation in all transportation functions. They accounted for 19 percent of highway outlays, 92 percent of mass transit funds, 26 percent of airport monies, 15 percent of water transport funds, and virtually all parking outlays.

- While Federal and local governments over the years have exhibited the broadest range of transportation fiscal responsibilities, many state governments have substantially expanded their non-highway responsibilities in recent years. Thus, as of 1971, 35 states had aid programs for airports, and eight had such programs for water transport. As of 1973, 19 states had some form of aid programs for transit and nine of these states had adopted capital or operating grant programs for transit, some of which ran to the \$150-million range. Moreover, 21 states spent over 70 percent of all their water transport or airport expenditures for intergovernmental aid purposes in 1971. State governments, like their Federal and local partners, are gradually beginning to develop a fiscal commitment for all components of the transportation system.

Limitations of Transportation Finance Policies. While all three levels of government have an important role in the transportation finance system, all levels have faced constraints in developing more balanced funding policies. Both state and Federal governments have developed extensive highway aid systems, but only recently have begun to develop a commitment to meet pressing non-highway needs. Trust funds and earmarked revenues abound at the Federal and state levels, and local special districts often have revenue policies that prevent the implementation of a balanced local transportation financing system. In short, all three levels of government are

hampered by a variety of legal, programmatic, and institutional constraints on their funding practices. Consequently, current Federal, state, and local action is increasingly being directed to the removal of the many barriers that now prevent the development of more flexible funding policies for transportation. These barriers, however, are multi-level and not always malleable.

- The bulk of Federal transportation finances are funded through the Airport and Highway Trust Funds. These funds are maintained through the earmarking of a variety of Federal revenue sources which automatically provide about \$6.5-billion annually for expenditures on different types of airport and highway projects. Earmarking within these trust funds has also grown over the years. Presently, some 12 highway aid programs are funded by earmarking of the trust fund, an increase of ten programs since 1956. Moreover, the Federal government now has at least 40 separate grant-in-aid programs by which to disburse annual funds that may reach \$8-billion by 1975. Trust funds that are increasingly earmarked for categorical purposes, increasing proliferation of categorical programs, and the almost universal use of Federal funds for construction rather than for operating programs, make it difficult for the Federal government to target its funding assistance on urgent urban and regional transportation needs.

- States likewise have experienced difficulties in directing funds to meet non-highway transportation needs. Most states still raise little money from general revenue sources to support transportation programs. Instead, they generally depend on earmarked fuel and license tax revenues, plus Federal aid, to meet their fiscal requirements for transportation. Twenty-eight states had constitutional prohibitions against diversion of highway funds as of 1972. Thirty-three states, as of 1973, had earmarked some or all of their gasoline taxes for highway and non-highway programs. Rigid categorization and earmarking of state highway and non-highway funds is often the rule at the state level.

- Local governments also face considerable restraints in flexibly funding transportation programs. Most general purpose local governments, especially counties, are prohibited from tapping non-property revenues for transportation programs. Constitutional restrictions generally prevent

local governments from subsidizing private mass transit concerns. These fiscal restrictions, in turn, often result in the establishment of areawide special districts which sometimes further fragment local fiscal responsibility for transportation finance. Single and multipurpose transportation districts exist in many metropolitan areas, and they often are confined to financing their transportation responsibilities solely from current charges, making it extremely difficult for them to provide services that operate at a deficit. Most systems of local government, then, lack the fiscal capacity to support expensive, regional transportation operations. Unshackling local units from present fiscal restrictions may enhance their ability to better finance urban and regional transportation programs.

Lack of Local Focus in Transportation Finance Policies. Transportation finance systems often have a state and special district government focus. Local general purpose governments, notably counties, frequently have limited transportation responsibilities, especially for areawide, non-highway services. This occurs at a time when regional councils, regional planning commissions, and state designated substate districts, governed by local officials, are actively involved in the comprehensive and transportation planning of many metropolitan areas. Thus, general purpose local units are increasingly responsible for the planning, but not for the operation or financing of their metropolitan transportation systems. Shifts in transportation fiscal assignments, then, have made it difficult for general purpose local governments to control the character of their own transportation systems.

- Ninety-five percent of all Federal transportation aid in 1971 was channeled to state governments, and direct Federal-local aid for airports and mass transit often went to independent special districts rather than to general purpose local governments.

- State aid often has been directed to only certain classes of local governments. Counties received 58 percent of all state highway aid in 1972 and virtually all such aid in five states. Like Federal aid patterns, airport and mass transit aid was often directed exclusively to special districts. Moreover, state transportation aid has not increased at the rate of other state aid programs. Thus, in 1971, state transportation aid was only 8 percent of the overall state aid dollar, while it had been 15 per-

cent of the state aid dollar in 1957. Some states, however, have directly assumed either greater highway responsibilities or non-highway programs in such metropolitan areas as Boston, Hartford, Baltimore, Harrisburg, and Honolulu.

- Local governments, themselves, have been unwilling or unable to assume the financial burdens of providing a full set of transportation services. Counties not having home-rule often provide only highway services, and many fiscally hard pressed municipalities cannot provide expensive non-highway services. In this context, special districts have assumed almost exclusive responsibility for providing mass transit or airport services in 14 of the 72 largest metropolitan areas. They are also important highway and parking providers in a number of metropolitan areas. Their fiscal practices are often not subject to systematic review by general purpose local governments, though their revenue practices often add to the aggregate financial burden of providing regional transportation services. Indeed, where deficit financing is involved, these special districts most definitely encroach on the tax resources of general purpose local governments.

- While greater direct Federal expenditures for airports, water transport, and railroad subsidies, and expanded direct state highway and non-highway programs have been common, local governments have been increasingly participating in the area-wide transportation and comprehensive planning process. Thirty-eight percent of all Section 134 transportation planning agencies were regional councils in 1973, and as the Commission has noted in its *Substate Regionalism* report, the bulk of these regional instrumentalities are directly controlled by local government officials. In addition, over 80 percent of some 1,300 surveyed local officials indicated that locally controlled regional councils in their area should be designated as the official regional planning body for Federal and state areawide programs. The conflict is obvious; general purpose governments are planning area-wide transportation programs, but they are less able to implement these plans locally. Restrictions on Federal and state aid eligibility, plus local tax and debt limits, all combine to prevent general purpose cities and counties from assuming a larger financing role in the construction and operation of transportation systems.

Need for Increased Funding And Shifts in Emphasis.

Urban areas increasingly have been demanding greater fiscal support for their transportation needs. Moreover, these requests for higher funding seem to have met with some positive response at the Federal and state levels. The Federal government has earmarked about \$1.1-billion annually for highways in urban areas through 1976. Urban mass transit capital grants are running at almost \$2-billion annually, and proposals have been made to increase such yearly appropriation authority to the \$3.5-billion level, with the bulk of that earmarked for larger metropolitan areas. Airport aid formulae have channeled greater allotments to urban states, and the port development activities of the Corps of Engineers often benefit some of the nation's larger urban centers.

States, likewise, have made commitments to channel more funds into urban areas. They have moved away from rural oriented allotment formulae in their sharing of gasoline tax revenue. At least 19 have now developed some mass transit assistance programs, and many of these are in urban states with reorganized departments of transportation. Six urban states have authorized local governments to tap specific local revenue sources in order to finance deficit transportation services.

Local governments, through user charges and other pricing techniques, also are conserving their tax resources for financing subsidized urban transportation programs. Local governments also have proposed the use of the surplus revenues of special districts and state turnpike authorities for eventual use in financing those necessary urban transportation services that now operate at a deficit.

While these governmental responses show great concern with the urban transportation problem, there is every indication that the need for urban transportation funds will increase. Thus...

- The Federal government is being called on to substantially raise its funding of crucial non-highway services. Proposals to increase mass transit outlays substantially have been made by several proponents in the Congress. Federal railroad subsidies, including loan guarantees, may run as high as \$6-billion, and these have considerable import to the local economies of many metropolitan areas. Over 180 major airports, all in urban areas, are scheduled for completion in the next 12 years at an overall expense of \$7-billion. Urban transit deficits are running at \$700-million annually and are expected to increase in the future. Indeed, some estimates indicate that up to \$8-billion an-

nually might be required from all sources if high-quality mass transportation systems are to be available in all urban areas.

- State governments increasingly are feeling the pressure to aid urban transportation. Non-highway state aid increased by 423 percent between 1957 and 1971, considerably outstripping that of highway and total state aid. At the same time, metropolitan areas account for about 30 percent of all highway mileage in the United States. Such mileage is among the most heavily travelled and the most costly to construct and maintain; until recently, it was that portion of the highway system which received the least amount of Federal and state aid. The pressures to upgrade these street systems will continue, causing urban areas to request still more assistance.

- Local governments will most certainly seek redistribution of all sorts of transportation aid in the next few years. The interstate system is nearly completed, thereby freeing up \$4 to \$5-billion of the Highway Trust Fund that might be used for highway construction and maintenance in urban areas and other regions where needs for areawide travel are great. Mass transit requests will increase, as will requests for the funding of airports and port facilities that are to handle the economic growth in urban passenger and freight transport.

- The Department of Transportation in its 1972 National Transportation Report estimated that transportation needs in the country's urban areas might require an annual expenditure of \$11.6-billion in constant 1969 dollars. This would mean, at the current high level of inflation, that total urban area transportation funding requirements might reach \$17.2-billion in 1975, about \$24-billion in 1980, and \$47-billion in 1990. Clearly, no single level of government can fully finance these requirements from its own resources. Fiscal action at all three levels will be required in order to meet these growing needs.

Issues in Regional Transportation Finance

The fiscal pressures on urban and regional transportation are mounting. Federal, state, and local governments have to raise increased revenue to finance these program demands, and they will have to revise those fiscal policies that now prevent targeting scarce re-

sources on urgent transportation demands. Moreover, there are mounting pressures for all these fiscal changes to be undertaken in a context that permits greater local governmental control over the disbursement of transportation funds. How these issues will be resolved will determine the shape of intergovernmental fiscal relations in the urban and regional transportation function for years to come.

Several issues surround these changes. First, is the question of the relative level, share, and form of Federal, state, and local financing required for upgrading and maintaining areawide transportation systems and services. Second, is the issue of geographic allocation of urban and regional transportation funds. Which metropolitan and non-metropolitan areas will require the greatest and least amounts of funding, and how will different types of transportation aids be allocated among them?

A third question involves the use of transportation monies at the local level. Will funds be earmarked for special types of projects? Will monies go for capital rather than operating purposes? Will recipient units be able to decide how their funding allocations for transportation will be used?

State-local transportation finance issues will be equally prominent in the years ahead. How will urban and regional transportation finance responsibilities be apportioned among the states and different kinds of local governments? Will uni- or multifunctional special districts be relied on as transportation providers? Will their financing practices be subjected to higher level review, and what form will this supervision take? What fiscal policies should local governments undertake to maximize their contribution to the building and operation of areawide transportation systems that aim to reduce congestion and conserve energy resources?

Resolving all these issues will, in large measure, determine the extent and form of Federal, state, and local fiscal participation in the financing of urban and regional transportation systems in the years ahead. Moreover, new and proposed finance policies at all three levels of government indicate that Federal, state, and local governmental units already are carving out new transportation financing roles. The following review of these issues provides the setting for two Commission recommendations on this matter — one directed to the Federal government, and one to the state and local governments. The issues include funding sources for metropolitan and regional transportation, dollar amounts and their intergovernmental dimension for regional transportation, apportionment of regional funds, flexibility in grant-in-aid fundings, and state and local barriers to improved regional transportation.

Funding Sources for Metropolitan and Regional Transportation. A key problem at all levels of government is finding the money needed for urban and regional transportation systems. Until recently, both the Federal and state governments established trust funds which provided the bulk of Federal and state transportation appropriations. Similar conditions have arisen locally when independent or dependent transportation districts have financed their activities exclusively or predominantly from revenue charges.

Supporters of trust funds argue that they are essential to guarantee a steady stream of funding for long term transportation projects, especially those that involve extensive capital financing. Others contend that trust funds set a ceiling rather than a floor on transportation appropriations and that they reduce legislative and executive ability to target funding on the highest priority transportation needs or competing needs of other types as they emerge from time to time.

Evidence substantiates both the pros and cons of the trust fund question. Trust funds have long provided the bulk of all Federal transportation financing. But the expenditure limits which have been placed upon uses of the trust fund have made it necessary to finance a number of transportation programs — most notably mass transit — from general revenues. Moreover, trust fund revenue sources have had to be expanded over the years, at both the state and Federal levels, and the struggle for greater certainty has prompted increasing earmarking of trust fund proceeds at both levels. Creation of a trust fund, then, certainly does not completely ameliorate or satisfy some very significant transportation finance problems.

Some critics of trust funds argue strongly that all transportation funding should come from general revenues and that any highway user taxes should be merged with general revenues. In this fashion, some periodic reassessment of differing modal needs would be encouraged; better legislative oversight would be assured, and more flexible budgeting, to meet overall governmental needs, would be encouraged.

At the same time, many segments of the transportation industry argue that the steadiness of trust fund appropriations, especially when combined with functional and geographic formula allocations of such revenues, makes it easier for grant recipients to systematically budget for major transportation expenditures. This financial stability arises from the fact that the funds are on hand, they have been contributed by users, and their expenditures will directly benefit these contributors. Many doubt, for example, whether the nation's interstate highway system would have been

built had it not been almost exclusively financed from trust funds. The popularity of the trust fund has been evident in several new proposals to either extend it or expand it to include funding for mass transit despite the strong feelings of many that transportation should compete annually with all other general fund appropriations.

Dollar Amounts for Regional Transportation: The Intergovernmental Dimension. Currently the nation spends some \$26-billion annually in public funds for transportation, making it one of the largest domestic programs. A considerable proportion of this public funding is spent in metropolitan areas. Fifty-seven percent of all Federal transportation outlays (\$4.2-billion) were ultimately expended in urban areas in 1969. Sixty-nine percent of all local governmental transportation outlays in 1967 — \$4.7-billion — were spent in metropolitan areas, and state highway departments spent \$5.3-billion in highway expenditures in metropolitan areas in 1972. Thus, about 60 percent of all publicly funded transportation outlays or \$15 to \$16-billion now are spent each year within metropolitan areas.

Is this public investment sufficient to the task? Most would agree that without substantial increases in the levels of urban transportation funding, emerging urban transportation problems will probably go unresolved. Combined mass transit deficits are running at \$700-million a year and will go over the \$1-billion mark in the near future. Overall urban transportation requirements could reach \$25-30-billion a year in the 1980's, most of which would have to be provided from public funds. Moreover, unless economic conditions improve, increased demands for airline and railroad subsidies will further add to this transportation financing burden. At the very least, then, current funding levels will have to be maintained to meet pressing transportation problems.

Federal-State Responsibilities in Transportation Funding. What are the relative responsibilities of the three levels of government for meeting these transportation requirements? Recent Federal proposals call for substantial increases in annual commitments to mass transit, with a considerable proportion of that being used for operating subsidy programs for the larger mass transit systems. Airport expenditures are estimated at \$2-3-billion annually for the next several years. Efforts are being made to continue the Highway Trust Fund, but eventually to earmark up to \$1.5-billion annually for multimodal urban needs. The general message at the Federal level is clear — increased mass transit funding, the bulk of which will be spent in metropolitan areas; redistributed highway trust funds going to urban areas as

the financing of the interstate system is completed; and continued funding of airport and water transport programs, with the bulk of these outlays going into urban areas.

Similar trends are occurring at the state level, where 23 states have revised their gasoline tax formulas to channel more money into heavily populated areas; municipalities in ten additional states now share in this revenue source. At least 13 states have developed transit aid formulae which largely benefit urban areas. Yet, most states still fund their entire transportation appropriations solely from earmarked revenues and Federal aid. Only about ten states have used their general revenue sharing funds for transportation purposes. Increased general revenue funding of transportation, then, has not yet occurred in many states. At the same time, non-highway earmarking of the gasoline tax now is a frequent occurrence. In the long run, states may have to increase their general revenue appropriations, or share more fully in the Federal gasoline tax, if they are to increase their financial commitments to urban or regional transportation

Problems in Transportation Funding. Transportation funding problems remain severe at the local level. Many counties and cities face strict debt limitations that may prevent them from undertaking costly transportation capital financing projects. Counties, in states not providing them with home rule, often lack suitable legal authorizations for financing non-highway services. Cities vary markedly in their transportation pricing practices. Local governments providing mass transportation services are faced with increasing deficits; yet they cannot raise fares to cover these services without further loss of passenger traffic and revenue. Local access to non-property tax sources is limited in many states, and municipalities apparently are unwilling to add to property tax pressures by incurring higher transportation expenditures. Many special districts provide only profitable highway, airport, and port services. But it is difficult, if not impossible, to divert surplus revenues from these operations to the support of other transportation services — however essential they may be to a large portion of the urban populace, particularly the poor and the elderly. The picture at the local level, then, is generally one of local governments being unable or unwilling to raise their share of the transportation financing burden.

Resolution of this funding issue will be difficult. Some argue that, with the completion of the interstate highway system, the Federal government should fund only those transportation systems that are of national

significance, such as the passenger operations of nationwide rail and airport systems. Others indicate that most metropolitan area traffic problems, result in large measure, from other Federal highway and urban development policies, especially since 25 percent of all metropolitan street mileage is in the Federal aid system. The vast amounts of Federal monies poured into building the interstate and other Federally aided systems have encouraged metropolitan growth and hastened the shift of freight and passenger traffic to the motor vehicle. Urban transportation problems, so this group argues, are a natural byproduct of these past funding patterns; hence, the Federal government should maintain or increase its levels of highway and non-highway funding and redistribute more monies to urban areas.

Similar arguments occur about the state role in urban local transportation finance. Some indicate that the states should deal with statewide transportation problems and not bother with the particular fiscal problems of individual metropolitan or non-metropolitan areas. They point to the extensive amount of highway mileage outside of urban areas — often the only form of efficient transportation access in non-metropolitan areas — and indicate that states should concentrate their efforts on maintaining and improving these largely rural statewide transportation systems. Urban transportation problems are difficult, they concede, but sufficient fiscal resources exist in most metropolitan areas for regional financing of areawide transportation systems. At least eight states, they point out, have passed fiscal measures that would allow individual areawide transportation providers, most often mass transit agencies, to levy regional taxes to finance their programs. Other locally based regional institutions like the Metropolitan Transportation Commission in San Francisco could complement these fiscal measures by redirecting state and Federal aid throughout the region to meet pressing urban transportation needs.

Others counter that state transportation policy has too long favored rural areas at the expense of urban ones, and that the time has come for increased state funding of urban transportation needs. These observers note that metropolitan areas are the pivotal points of a state's economy, and that balanced economic and social development requires more state funding of urban transportation systems. They note that at least four states have adopted a full range of transportation aid programs, and that a few have taken over costly non-highway transportation programs in major metropolitan areas. Some states, they conclude, have begun to recognize the fiscal dimensions of the urban transportation problem, and more should join the ranks to insure better balanced urban transportation funding.

Finally, some contend that local governments could bear a considerably greater share of the transportation financing burden themselves. The most pressing urban transportation problems concern the daily movement of passengers and freight within urban areas. These are problems affecting all metropolitan areas, but their solutions will be developed on an individual area basis. In smaller metropolitan areas and non-metropolitan regions, the need will still be for more efficient highway systems and services. In medium size metropolitan areas, public assumption of bus systems may be paramount; while in the larger areas, coordination of different commuter operations, transit subsidies, and the building of new freight distribution systems may be required. Each area will have to identify its own particular transportation problem, and work out regional financing programs to implement these policies. This has already occurred, to some extent, where regional special districts finance their operations on an areawide basis.

Others argue that the amount of fiscal redistribution required in developing regionally financed transportation programs makes it impossible to depend on local governments for the bulk of the financing of their transportation requirements. Only with appropriate "sticks" and "carrots" from the Federal and state levels will local governments having divergent transportation needs sit down and begin to negotiate their financial differences — with cities receiving increased funding for transit, suburbs getting better developed highway systems and buses, and both agreeing to the location and operation of major airlines, ports, and other regional facilities. Local resources alone, this group believes, will not be sufficient without Federal and state aid.

No clear answers appear when questions are asked concerning how much funding is needed for urban and regional transportation and who should bear the burdens of raising the corresponding revenues. Until recently, all three levels of government have borne significant shares of the transportation financing burden. Federal and local governments have experienced the most multifaceted budget requirements for transportation, but states have gradually been broadening their fiscal commitments to non-highway services. However, fiscal demands for transportation are changing; witness the calls for increased non-highway financing and the redistribution of highway trust funds to urban areas. Higher levels of government may still have to bear a significant share of future financing responsibilities, and lower level units may have to be granted more flexibility in tapping their own revenue sources for transportation needs. All levels, then, would be able to support a complete range of transportation programs.

Apportionment of Regional Transportation Funds. How are transportation assistance funds to be disbursed among different metropolitan and non-metropolitan areas? Shall all of these areas be eligible for funding? Will the funds be targeted on just the large metropolitan areas where transportation problems require rather massive funding? Should the Secretary of Transportation or his state counterpart be given discretion to disburse aid where it will meet the most pressing needs, regardless of the size of the metropolitan area or non-metropolitan regions? Answers to these questions are crucial in the formulation of Federal and state transportation aid programs.

Presently, the bulk of Federal and state transportation aid (including the highway function, and some non-highway aid) is distributed on a formula basis to lower level units. This formula distribution method applies to all highway systems other than the interstate system, and is based on several factors including geographic area, population (either urban or rural), and different sorts of road mileage. Airport aid is disbursed on the basis of relative population, area, and passenger travel. The distribution of state gasoline tax revenue is conditioned by various factors including population, road mileage, vehicle registrations, and area.

Transportation aid is channeled to different classes of transportation providers. Federal aid goes to states for highway programs, while mass transit and some airport aid is given directly to individual local transit providers. Most state transportation aid money is distributed by formula to counties and municipalities.

Some argue that formula distribution of transportation aid fails for two main reasons. First, it creates the risk of spreading the Federal and state transportation dollar too thin among numerous metropolitan and non-metropolitan areas. Second, it ignores the fact that transportation needs differ sharply among these areas, and formulas cannot be adjusted easily to target Federal monies accurately on these needs. Both fears resulted in several differing transportation bills introduced in the 93rd Congress — the House Public Works Committee bill, the Administration's *Unified Transportation Assistance Program Act*, and others — having a combination of formula and discretionary payments to meet these problems. Moreover, one-third of all airport development funds now are disbursed by Secretarial discretion, and recent amendments to the *Highway Act* require that some Federal highway aid be distributed among larger metropolitan areas on a population formula basis. All these administrative and areal adjustments reflect the uneasiness that many have in developing a single formula

which would channel all transportation assistance directly or indirectly to urban and rural areas.

Developing formulas that will please all transportation aid recipients is a formidable task. In response to the complexities, major portions of some recently proposed transportation bills have sought to allocate urban transportation funds to the states, based on relative metropolitan population, believing that this produces the most equitable result in the long run. Other bills would earmark — up to 70 percent in some cases — for the disbursement of urban mass transit funds to the larger metropolitan areas in view of the heavier costs of transit needs in such areas. Still other formulas would spread most transportation monies more evenly among different size metropolitan areas, but reserve the remainder for discretionary uses in meeting the differing needs of each area. The formula approach, of course, insures a steady flow of transportation funds.

Still others argue that more administrative discretion is needed for the effective disbursement of Federal and state funds. They point to the increased Secretarial discretion in dividing up airport funds, recent proposals for the Secretary to disburse up to 15 percent of future mass transit funds, and the incentives in some recent transportation acts for increased gubernatorial discretion in dividing Federal highway aid funds among metropolitan areas. Such developments, these observers argue, are indications that no single or multifaceted formula can adequately satisfy the funding requirements of the 267 different metropolitan areas. Such discretion also is needed in light of limited transportation funds and the need for targeting what resources are available. Hence, expanded Secretarial or gubernatorial discretion may be required for distributing transportation funds, particularly among larger urban areas where it would be easily diluted under a formula approach.

Debate over the formula allotment of transportation aids at both the Federal and state levels may well remain controversial for years to come. Its resolution may turn on whether transportation funding can be increased to a level where any reasonable transportation allotment formulas can satisfy the essential funding needs of most metropolitan and non-metropolitan areas, or whether funding scarcity and the urgency of transportation financing requirements in different types of areas will bring about demands for a targeting of Federal and state aids on the most needy urban areas.

Flexibility in Grant-In-Aid Funding. Currently, almost all Federal transportation aids and several state ones are used solely for capital purposes. National debate continues over the degree to which operating and

maintenance costs for highways and transit will be eligible for aid in future Federal funding. Moreover, some states and over 100 local communities have established transit fare subsidy programs, thereby adding pressure for a commensurately balanced national transportation policy.

Critics of present Federal aid programs have charged that their emphasis on capital construction has resulted in the development of overly costly urban transportation systems. The high matching ratios for Federal highway programs have resulted in the diversion of state and local money away from developing better balanced urban and regional transportation systems. The use of money solely for construction also may have resulted in a deferment of highway maintenance outlays, since state money was used for matching construction aid, rather than for repairs. This, in turn, may be a contributing factor to state policies that leave maintenance of state highways to constituent local governments. In urban mass transit, some aid has prompted certain areas (perhaps unwisely) to develop rapid rail systems instead of less costly, yet equally efficient bus systems. This form of aid has continued when fiscal assistance was urgently needed to defray transit deficits. In a similar fashion, Federal airport aid has tended to retard the development of operating programs that could reduce urban airport congestion, and to promote sometimes needless airport expansion in large urban areas. In short, some believe strongly that the capital investment bias of Federal aids can produce severe imbalances in the design and operation of many urban and regional transportation systems.

These critics sometimes point to state experience with developing grant and subsidy programs in order to support failing public transportation providers and keep public transportation costs down for dependent populations. They also point to the reduction of restrictions that some states place on the use of shared gasoline taxes. Such policies, they suggest, indicate a belief that local aid recipients are in the best position to determine the most effective applications of higher level funds; hence, Federal grants also should permit (as finally authorized to a limited extent by the *National Mass Transportation Assistance Act of 1974*) these units to use such funds for operating or capital purposes as they see fit. This would further broaden and enhance the funding flexibility provided by the *Federal Aid Highway Act of 1973*, which permits grant recipients in urban areas to trade highway capital funds for priority assistance in mass transit. This latter option, it should be noted, already has been exercised in both the Boston and Philadelphia metropolitan areas, involving more than \$800-million in Federal highway funds.

Critics of this sort of flexibility defend the current capital facility emphasis of Federal grants. They argue that Federal aid for operating subsidies will reduce local incentives for maintaining efficient, low cost urban transportation services. Such subsidies also will inevitably involve Federal decisionmakers in the day-to-day operations of local transportation units. They also note that operating subsidies could reach astronomical proportions in several older metropolitan areas, and result in the subsidy of inefficient transportation systems. Others note that several metropolitan areas — San Francisco, Atlanta, Washington, D.C., and Los Angeles — have just completed or are in the process of developing proposals for the construction of rapid rail transit systems, and such areas need major capital funding assistance for their systems rather than operating subsidies. Finally, some argue that the long established aim of Federal transportation policy has been to help build transportation facilities, and that states and localities should sustain the operating and maintenance costs of these systems.

Answers to these funding flexibility questions may hinge on the amount of assistance available from higher levels of government and the relative transportation financing needs of different types of urban areas and non-metropolitan regions. Clearly, the fiscal requirements for operating regional transportation systems are especially important in many larger metropolitan areas. Moreover, there is every indication that more extensive public transportation systems may be required to meet coming energy conservation needs. Federally aided highway systems may have to be maintained out of Federal funds in the future, since the costs of maintaining a 900,000 mile highway system which now carries some 70 percent of all automobile traffic will be very substantial. In the final analysis, the more initiative recipient governments take in making their own decisions about how to use Federal and state aid, the more likely such aid will be used for operating programs.

State and Local Barriers to Improved Regional Transportation. While a good deal of the focus on urban and regional transportation finance policy occurs at the national level, this Commission in past reports,* has urged repeal of state and local fiscal practices which hinder more flexible subnational policies in transportation. Considerable debate occurs as to whether these fiscal limitations — prohibitions against diversions of gasoline taxes for non-highway purposes, unduly harsh restrictions on state and local debt, prohibitions against local

fiscal incentives for private mass transportation systems, and ironclad guarantees of the fiscal autonomy of transportation special districts — are still warranted in light of the need for all three levels of government to attack simultaneously the urban and regional transportation financing problem.

Critics suggest that these policies prevent more efficient and equitable state and local transportation finance policies. They point to the fact that many state and local governments have discarded these policies, and have sought to bring all available state and local fiscal resources to bear on their most pressing transportation problems. Thus, 15 states have developed aid programs for both mass transit and airports. Maryland has developed a multimodal transportation trust fund. The surplus revenues of regional transportation districts in New York City and San Francisco have been used to finance deficit urban transportation services, while parking taxes have been imposed in San Francisco and Pittsburgh and proposed in Washington, D.C. Group fare policies for taxis have been revised in Washington, D.C., and more efficient airport pricing has occurred in the New York metropolitan area. As these new experiments with modernized state and local policies flourish, they may gradually be adopted throughout the land.

Other less optimistic critics note the continued presence of outmoded restrictions in many states and seek a hastening of progress. They note the prohibitions against gasoline tax diversions in 23 states, the lack of extensive transit aid programs in 30 or more states, the heavy debt reserve requirements imposed by bondholders on special districts and regional transportation units, the \$750-million annual operating surplus of state turnpike authorities, and the extreme variability of local transportation pricing policies. These developments, they stress, point to the continuing fiscal restrictions which preclude state and local jurisdictions from achieving the most flexible use of their transportation revenues. A less restrictive state and local fiscal landscape would permit these levels of government to become fullfledged partners in developing cooperative intergovernmental policies for financing urban and regional transportation.

Opponents caution against tampering with these long established policies. They note that constitutional prohibitions against gasoline tax diversions were adopted by substantial margins in many statewide voter referenda. Similar prohibitions against the diversion of special district revenues serve to enhance the attractiveness of these instrumentalities' bonds. Moreover, local pricing policies to improve transportation often result in unfair and destructive impacts on private transportation provi-

*The Commission reports *State Aid to Local Government* (1969) and *Unshackling Local Government* (1968) should be noted in this regard.

ders, while state "buying in" on new airport and transit programs may be unnecessary due to the Federal payment being such a high proportion of total costs.

These restrictions, others maintain, reflect a deep seated popular desire to restrict the transportation financing activities of general purpose governments. The general public, they believe, wants many transportation services financed on a pay-as-you-go basis; hence the popularity of state turnpike authorities and regional special districts which provide many important areawide transportation services. They contend that vesting more financial responsibilities in general purpose state or local units might be inefficient, and argue that the present approach of having limited purpose state and local agencies provide one or a few transportation services insures that these services will be provided on a low cost, efficient basis.

These critics also point out that many states have not repealed their antidiversionary laws or broadened their non-highway services — apparently because their highway responsibilities require full use of the gasoline tax and other revenue sources, especially if Federal funding for the interstate system terminates in 1977. Counties, in many cases, have not pressed for new non-property tax authorizations to help finance their transportation needs. Interlocal cooperation in developing regional revenue sources for areawide transportation ventures also has not been widespread, and many local governments still favor the creation of unfunctional special districts to provide non-highway transportation services. Local governments themselves often defend the fiscal autonomy of regional special districts as a necessary prerequisite for continued private investment in transportation bonds.

Recommendation 3. Providing More Balanced Federal Financing for Regional Transportation Systems.

The Commission finds that the present financing of transportation in urban and rural areas lacks adequate flexibility to meet the multimodal fiscal requirements of these areas. Mass transportation modes, in particular, have suffered from this lack of flexibility. The Commission also finds that the current Federal transportation grants-in-aid to urban and rural areas are often complex to administer, not always properly allocated, and fail to provide adequate discretion to urban and rural officials. Hence. . .

*The Commission recommends that Federal transportation finance policies be substantially revised to provide more flexible intermodal funding of regional transportation systems. Specifically, the Commission recommends that the Federal government revise its transportation funding policies by:**

*A. enacting a unified multimodal regional transportation program** which is:*

(1) funded by earmarking of the Highway Trust Fund supplemented with funds appropriated from general revenues.

This part of the recommendation calls for the Federal government to develop a unified multimodal transportation block grant program built from the urban system and secondary system portions of the Highway Trust Fund and UMTA grant programs. This block grant approach, we believe, best suits the needs of the times and would balance broad national transportation objectives with greater state and local discretion. It could involve a combined appropriation of about \$1.8-billion in 1975 or an appropriation that might range between \$2.5 and \$4.3-billion depending upon the passage of various Congressional proposals.

The Commission believes that this urban system block grant should be financed from a combination of certain earmarked highway trust funds and general revenues in a fashion similar to the Administration's recent Unified Transportation Assistance Program (UTAP) proposal. What is needed now is a combined program that draws on the urban and secondary system portions of the present Highway Trust Fund and supplements this with general revenues. This would help insure the support of those interested in more balanced Federal transportation funding, the retention of the trust fund, greater Congressional oversight, and adjustments in the program in light of changing fiscal circumstances.

(2) In addition the Commission recommends that the mixed regional multimodal transportation

*Congressman Fountain dissents from the parts of this recommendation favoring the diversion of Federal Highway Trust Funds to a regional transportation block grant and the removal of all restrictions against the use of Federal urban and rural transportation systems funds for operation and maintenance programs.

**This program would consolidate the urban and secondary system portions of the Highway Trust Fund and the UMTA grant programs but would not alter the other existing Federal aid highway systems, Federal railroad assistance, the airports trust fund program, or the water transport programs of the Corps of Engineers.

program provide funds for intrastate regions channeled to those states which have:*

- (a) strong multimodal departments of transportation**; and*
- (b) substantial intermodal funding from their own sources for regional transportation, ***or otherwise directly to the policy units called for in Recommendation No. 1; and in the case of funds for interstate regions channeled directly to the policy units called for in Recommendation No. 1.*

This channeling procedure would provide an incentive for states to reorganize their transportation structures — which about one-half have already done — and develop broad gauged fiscal assistance policies for a variety of urban and rural transportation programs. Many urban states — Connecticut, New York, Illinois, Maryland, Michigan, Hawaii, Massachusetts, Pennsylvania, California, and Florida — already have undertaken both ventures. These states are in an excellent position to develop comprehensive policies for financing regional transportation needs. Many others still have modally organized transportation agencies and concentrate mainly on highway financing. In such states, a convincing case can be made for channeling regional transportation monies directly to regionally based mechanisms, as has already been proposed as amendments to the *Federal Aid Highway Act*. This policy would insure that either a state or regional instrumentality with sufficient involvement in areawide transportation problems would be a key intermediary in the disbursement of urban transportation funds to various individual transportation providers.

This Commission for more than eight years has adhered to a general position on state channeling which requires some evidence of state involvement in the form of “buying in” a program and of administrative capacity to handle it. The proposal advanced here is an adaptation of this previous ACIR recommendation designed to meet the special case of transportation.

*Governor Evans supports the creation and use of effective state departments of transportation. However, he believes that the Federal aid funds provided for in this recommendation should be channeled to the states in all cases, even though such a department may not yet have been created. Therefore, he dissents from those portions of this recommendation which make channeling conditional.

**In accordance with *Recommendation No. 5* of this report.

***This builds upon previous Commission recommendations in its *State Aid to Local Government* (1969) and *Federal Approaches to Aid State and Local Capital Financing* (1970) reports.

(3) The Commission recommends further that the regional program funds be allocated among the states, with the exception of 15 percent which shall remain as a discretionary fund for use by the Secretary of Transportation in regions with special transportation needs, primarily according to the relative population of the states.

Equity, the differing needs of different urban areas, and political reality, all combine to support this recommendation. The regional fund would, after all, be used to support both highway and mass transportation programs as well as other modes, and not just transit alone. By most accounts, larger metropolitan areas need relatively more transit aid, but smaller metropolitan areas require proportionately more highway assistance. No single allocation formula, with earmarking by metropolitan area size — as the bitter disputes over formulas for allocating urban mass transit funds already suggest — will ever fully satisfy the transportation needs of both large and small metropolitan areas and non-metropolitan regions.

Financing improved urban and regional transportation systems, then, is a national problem and not one confined to particular sized urban and rural areas. The Commission believes, therefore, that a formula based largely on population would provide the most sensible and balanced means of distributing the bulk of transportation assistance. In addition, the Secretary, with authority to allot 15 percent of all regional funds, would eventually be able to spread up to \$600-million annually among those metropolitan and non-metropolitan areas that might require special consideration in light of their special transportation needs. This discretionary authority and easily understood formula should be sufficient to develop sound state area allocations of regional transportation funds.

(4) Also, the Commission recommends that the regional program funds be allocated among the regions:

- (a) in states that qualify for channeling, by a formula developed by the states in collaboration with the policy unit(s) called for in Recommendation No. 1 and approved by the Secretary of Transportation, such formulas to take into account factors similar to those in the Federal formula — provided that 15 percent of all such state area funds be reserved for use at the governor's discretion in regions with special transportation needs — and*

(b) in interstate regions and in states not qualified for channeling, by a Federal formula taking into account the same factors as the formula used for state area allocations—provided that 15 percent of the funds available in these areas in accordance with the formula for allocation of funds among the states may remain as a discretionary fund for use by the Secretary of Transportation in those regions in this group having special transportation needs.

Thus, the regional transportation funds which reach the states, would go by formula to individual regions. This approach builds on recent Administration proposals and provisions now within Section 104 of the *Federal Aid Highway Act* which guarantees individual local areas their share of urban system funds.

Two approaches are sanctioned here. One would channel the funds initially to those states which administratively and fiscally are committed to a multimodal program, and these states, in turn, would—within certain limits—be free to develop their own intrastate regional allocation formulas. The second approach would bypass those states that lack this commitment, and funnel funds directly to the planning units sanctioned in *Recommendation No. 1*. Funds for interstate regions would also bypass the states, but in no case would any bypassing diminish requirements for coordination with the states.

Under the first approach, the same factors that figured in the state area allocation formula would be considered, and the Secretary of DOT would be required to give a final sign off. But at the same time, those states would be in a position to join with the affected areawide and local units to develop a substate allocation formula that would reflect their unique regional transportation needs. This balancing of Federal, state, and local concerns in this crucial functional area is probably the best approach in the long run to meeting this challenge. But it hinges on state assumption of a major role in the process. If state channeling should occur without such a commitment, state-local conflict would be heightened, and controversy among the modal interests would deepen.

Like the Administration's proposed UTAP bill, this option would give the governor authority to use 15 percent of state allotments for discretionary pass-through to metropolitan and non-metropolitan areas with special transportation needs. This would permit the governor to disburse additional Federal aid to those

areas whose transportation financing needs were not fully covered by the basic formula allocations.

Under the second option, state channeling to individual regions would not occur in interstate metropolitan areas or where states have not established departments of transportation or developed broad gauged transportation assistance policies for non-highway services. In these situations, the Federal formula would be used to determine specific allotments for the affected regions. This alternative approach, then, would insure the pass-through of regional transportation funds directly to those areas in much the same way as allotments under Section 104 of the *Federal Aid Highway Act* are distributed now.

In sanctioning this second approach to channeling, the Commission is mindful of the unique character of interstate metropolitan areas and the pressing need for the Federal government to assume a more positive role in such areas if the states do not. The Commission's probes of the special problems of interstate areas in two of its *Substate Regionalism* volumes, as well as in this volume, have led to this conclusion. The direct funding of intrastate regions in states which still are largely highway oriented, is dictated by common sense and equity.

*(5) And finally the Commission recommends that the regional program funds be allocated within regions among eligible provider organizations, both public and private, by the policy unit called for in Recommendation No. 1 for projects and programs that conform to this unit's officially adopted policies, plans, and programs.**

This recommendation would ensure close integration of regional transportation planning and financing policies, and encourage the financing of transportation projects that have already won the approval of the majority of the local decisionmakers operating within a particular metropolitan area. It would also protect genuine state concerns by permitting a state override of regional plans that are in conflict with statewide transportation policies. Moreover, this recommendation parallels those of the Commission's earlier report on modernized substate districting policies.*

*Subject, of course, to the state override noted in *Recommendation No. 1* of this report.

*See Recommendation 2 of the Commission report *Regional Decision-Making: New Strategies for Substate Districts* (1973).

B. The Commission further recommends that the Federal government revise its transportation funding policies by removing all restrictions against the use of any Federal urban and rural transportation system funds for operation and maintenance programs.

Present restrictions against use of both highway and mass transit grants for either capital or operating programs have resulted in excessive funding of large scale capital projects as well as neglect of operating and maintenance programs that would help make existing transportation systems operate more efficiently. There is concern in many quarters with the very large capital costs that have been, and will be, incurred in building expanded or new urban and regional highway and mass transit systems, and also the concern that building larger systems further increases already burdensome operating costs which the Federal government does not share. The emphasis in many areas now should be on less capital intensive transportation projects — improved traffic control and enforcement systems, a greater utilization of existing bus systems, and the like — in order to provide more efficient transportation services. And the Federal government should share in meeting these types of costs.

This shift in emphasis would reduce or limit additions to the considerable debt that is being incurred in the building of large scale, fixed rapid transit systems which in many cases may simply divert passengers who already ride other public transportation systems. It would also enable urban and rural areas to develop operating programs which use existing highways and mass transportation systems more efficiently than now. These considerations warrant permitting Federal grant recipients to use their funds for either capital or operating purposes.

* * * * *

With this recommendation, including its several components, the Commission urges the Federal government to revise many of its transportation financing policies in order to focus scarce resources on developing more balanced regional transportation systems. It also proposes that local governments be granted a greater say in the disbursement of Federal funds, and that more stable, yet more flexible fiscal commitments by higher levels of government be made to the funding of urban and rural transportation services.

Recommendation 4. Improving State and Local Transportation Financing Policies

State and local governments together finance about

two-thirds of all transportation outlays. However, the Commission finds that state and local units frequently face fiscal, structural, and legal constraints that prevent them from targeting their fiscal resources on their most urgent transportation needs. The Commission believes that the time has come to remove these financial shackles from state and local governments so that they can develop more flexible transportation finance policies. In this recommendation, the Commission urges state governments to take several actions that would make their transportation financing programs more adaptable to urban needs. Hence. . .

Consistent with its past reports on this subject, the Commission urges the states to modernize their transportation finance programs through appropriate constitutional and statutory enactments which would:

A. Permit flexible use of state highway user revenues in order to achieve better funding balance among different transportation modes. In light of developments since publication of this Commission's report entitled State Aid to Local Government, the Commission also urges states to consider the creation of an expanded multimodal transportation trust fund permitting recipient units to spend such assistance for any transportation project that is in conformance with the areawide transportation plan adopted by the policy unit called for in Recommendation No. 1.*

In repeating its earlier recommendation that states permit flexible use of state highway user revenues, the commission notes that many states now permit earmarking of gasoline taxes for airports and boating programs. A few states — Michigan and Maryland being the most notable examples — have raised their gasoline taxes and provided that some of the increase be used for mass transit purposes. Yet, 25 states still do not permit diversion of their gasoline taxes; in these jurisdictions gasoline taxes must be used exclusively for highway purposes.

The Commission stresses that state funding of balanced regional transportation systems benefits both the highway and mass transit user. It notes that many segments of our society, particularly the poor and the elderly, are usually dependent on mass transit. These systems have been experiencing increasing fiscal difficulties, and annual transit deficits now approach the \$700-million mark. Clearly, mounting deficits must be financed from new revenue sources; otherwise urban

*This builds upon recommendations already made in the Commission's report *State Aid to Local Government* (1969).

transportation services may be sharply curtailed to the disadvantage of these transit dependent populations. The use of gasoline tax revenues for non-highway purposes makes as much sense now as it did when this Commission first recommended it in 1969. Consequently, we reaffirm our position that state highway user revenues be made available for the financing of any transportation project conforming to the areawide transportation plan developed by the policy units called for in *Recommendation No. 1*.

B. The Commission also recommends state action to expand the state financial role in directly aiding a full range of non-highway transportation services including, as appropriate, but not necessarily limited to, airports, mass transit, water, and rail transport.

In recommending that states expand their direct and financial assistance roles to include a full range of regional non-highway transportation services, the Commission notes that many states are already moving in this direction and urges the others to follow. Thirty-five states had airport grant-in-aid programs in 1971; eight had water transport assistance programs; and 19 states had developed some form of mass transit assistance programs by 1973. Other states have directly assumed major urban transportation services; witness state assumption of the mass transit and airport functions in the Baltimore metropolitan area by the Maryland Department of Transportation, and state assumption of the airport function in Alaska, Massachusetts, Connecticut, Hawaii, Rhode Island, and Vermont, as well as state assumption of the water transport function in over ten states as of 1971. These developments indicate that many states are moving to assume a more positive role in urban and regional transportation financing. We urge that this trend continue so that there will be a fair sharing of state-local fiscal burdens in delivering these essential services.

C. The Commission recommends, further state action to authorize an appropriate state agency to review and approve the transportation revenue bond issues of all state, areawide, and local units of government in order to avoid and type of bond obligation which would cause (a) excessive service charges for the use of transportation facilities, or (b) impediments to the development of a balanced system of transportation facilities, and also to*

*This agency might be the one already called for in the Commission's report *City Financial Emergencies: The Intergovernmental Dimensions* (1973) to supervise local financial management responsibilities.

D. Authorize state, areawide, and local governments to divert, to the extent that existing indentures allow or can be amended to allow diversion, the surplus revenues of dependent and independent transportation special districts within their jurisdiction for the support of transportation programs that are operating at a deficit; provided that the state government guarantees the bonds of any transportation districts which have had their surplus revenues so diverted.

In urging that state governments take a stronger hand in supervising the fiscal practices of independent and dependent special districts, the Commission notes that the bond obligations of these instrumentalities are often unduly restrictive. They often require heavy debt and construction reserve funds, and also contain provisions that restrict competition from other transportation facilities. This, in turn, sometimes results in considerable revenue surpluses for these units. Thus, 15 of the 50 major transportation districts in the 72 largest metropolitan areas had net revenues and reserve holdings that covered more than 40 percent of their outstanding debt in 1970. All state turnpike authorities together had an annual operating revenue surplus of over \$750-million in 1972, while their accumulated construction and debt service reserves added an additional fiscal cushion. Indeed, one analyst noted that even with a 25 percent decline in automobile traffic on some state turnpikes, these instrumentalities would remain fiscally solvent in the long run.

The Commission urges a two pronged approach to this problem. First, an appropriate state agency — as now exists in Louisiana, North Carolina, and Tennessee — should review (and approve) the transportation bond issues of all state, areawide, and local transportation providers. This would enable the state to ensure that the terms of a transportation bond offering do not impede the development of a low cost, balanced, regional transportation system. Second, states should authorize state, regional, or local units to divert the surplus revenues of independent or dependent transportation districts operating within their jurisdiction, to the extent that their indentures allow or can be amended to allow for diversion. This has already occurred, by state action, in the New York, Philadelphia, and San Francisco metropolitan areas. Other areas might tap this source of revenues for support of deficit transportation services, provided that there is no unilateral abrogation of existing bond indentures. At the same time, the Commission urges that states guarantee the bonds of transportation districts that have their revenues so diverted. This would ease private investor fears about the

solvency and marketability of these special district bonds. By these actions, needless fiscal surpluses will not be built up by transportation special units, and a source of badly needed fiscal support for other essential urban and regional transportation services could be provided. Both actions must, of course, be taken with full recognition of the need for continued investor security in transportation bond matters.

E. In addition, the Commission recommends actions required to authorize local and state governments to provide financial subsidies to private transportation providers and consumers.

In recommending that state and local governments subsidize the operations of failing, but essential, private transportation providers, the Commission notes that 81 local communities provided over \$190-million in transit subsidies in 1971. At least six states provided direct transit fare subsidies that came to about \$49-million in that same year. Moreover, several state DOT's are authorized to contract with private transportation providers to supply urban transportation services in certain situations. The Commission believes that this trend should continue so that these subsidies can be used to shore up needy private transportation providers.

Yet, we note that lone standing constitutional and statutory restrictions in many states prevent many state and local units from providing such transportation subsidies. This leaves these units in an all or nothing position. Either they must completely assume the operations of a private transportation provider or they must watch it go bankrupt — as some 261 private transit firms have done since 1959. This is a short sighted approach to the problem.

Consequently, we urge states to remove outmoded constitutional and statutory prohibitions against subsidies to private urban transportation firms. The Commission is encouraged by recent state efforts in Minnesota and West Virginia which provide transportation subsidies directly to selected types of transportation consumers. This approach to the subsidy question has merit, and may be easier to employ than business subsidies in some cases. In short, state and local governments should explore all existing means of bolstering private transportation firms, and of seeing to it that transportation consumers have access to adequate public or private transportation services.

Furthermore, the Commission recommends that, with state authorization where appropriate, local governments revise their transportation financing policies by adopting

*transportation pricing programs — parking taxes, group fares for taxis, airport landing fees, congestion tolls for urban highways, and the like — that would contribute to more effective use of these transport modes in reducing congestion, protecting the environment, and promoting the most efficient use of the nation's energy resources.**

In this last part of *Recommendation No. 4*, the Commission urges that local governments, with appropriate state authorization, develop more sophisticated transportation pricing programs to reduce congestion, protect the environment, and promote the most efficient use of the nation's energy resources.

Many local governments have already been developing such policies. Transit fare reductions have occurred in Atlanta, Seattle, San Diego, and Cincinnati. Revised airport pricing techniques have occurred in the New York metropolitan area. Parking taxes have been proposed in numerous metropolitan areas, and adopted in San Francisco, Chicago, Philadelphia, and Pittsburgh. All these actions indicate that local governments can play a constructive fiscal role in urban and regional transportation finance.

The Commission realizes that substantial obstacles often stand in the way of more efficient development of local pricing policies. Major highways are often in the Federal aid system and cannot be made into toll roads by state or local authorities. Home rule barriers sometimes prevent imposition of parking taxes. Local governments often do not have sufficient technical expertise to develop more sophisticated pricing policies.

At the same time, most local governments realize that many transportation services can be funded largely from user charges and fees. Parking, airport, and water transport enterprises are largely proprietary in nature. Prices can and should be levied for these services. More efficient pricing techniques could also be developed for highway and mass transit, to help promote the long term goals of reducing automobile usage and encouraging mass transit usage. Hence, the Commission urges local communities to employ transportation pricing policies that will aid in the development of more efficient transportation services.

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*The Commission previously has urged that local governments support the finances of general purpose regional planning and decision making bodies that would have a major role in planning more efficient transportation systems. See *Recommendation No. 3* in Volume I of the Commission's 1973 report on *Substate Regionalism and the Federal System*.

THE STATES' RESPONSE TO METROPOLITAN AND REGIONAL TRANSPORTATION NEEDS

The tradition of a strong state role in the financing of highway programs, through direct state expenditure, intergovernmental aid, or both, is long standing and common to all states. Until recently, however, the state role in urban and regional transportation was largely limited to the highway mode, with relatively few states assuming major responsibilities for such other transportation modes as aeronautics, water transport, and railroads. And, as recently as 1970, states had not assumed significant financial responsibilities in the area of mass transit.

This picture of limited state involvement in urban and regional transportation now is changing. Some states have begun to assume more non-highway responsibilities in response to pressures created by increasing urbanization. These expansions of the traditional state role in transportation have coincided with basic institutional changes in state transportation organization: chiefly the establishment of state departments of transportation.

Through their new departments of transportation, states are attempting to undertake new, complex, intermodal transportation responsibilities. While the prospects for actually achieving this goal through the state DOT's are both varied and uncertain, states will undoubtedly continue to be asked by Federal and local governments to play a more positive role in developing balanced solutions to urban and regional transportation problems. The basic issue, then, is how this shall be done.

This section of *Chapter IV* briefly summarizes the report's findings and conclusions about the states' roles in meeting regional transportation needs, and then examines the issues involved in orienting state transportation activities more toward regional needs. Finally, this section presents a recommendation designed to modernize state transportation planning and decision making.

Principal Findings and Conclusions

The principal findings and conclusions concerning the states' response to metropolitan and regional transportation needs may be grouped under the following three headings — the emergence of state departments of transportation, the varying powers and prospects of existing state DOT's, and the achievements of state DOT's.

The Emergence of State Departments of

Transportation. The state role in transportation has been characterized over the last decade and a half by the formation of state departments of transportation (DOT's). Over half of the states have established these new organizations, which combine numerous, previously autonomous state agencies related to a single or limited number of transportation modes, into "super agencies" concerned with a broad range of transportation and transportation related activities. The DOT movement began in 1959, and has accelerated dramatically since the creation of the Federal DOT in 1966. The number of states with DOT's seems certain to increase in the near future, with a number currently considering adoption.

The DOT phenomenon is rooted in general state government modernization efforts and in the need to respond to complex urban and regional transportation problems. A chief advantage of the state DOT structure is the encouragement of a multimodal approach to transportation, whose basic goal is a balanced transportation system, with each mode being used for those functions for which it is best suited. This is contrasted with a purely modal approach in which plans, programs, and budgets are developed for each separate mode, and too little explicit consideration is given to the effects of changes in one mode upon the operations of others. Analysis of the differences between states with and without DOT's suggests, however, that the key issue behind the DOT movement is whether or not to become involved in the financing of mass transit. Specific organizational issues are faced once this fundamental determination has been made. Some of the facts underscoring these features of the state DOT movement include:

- Twenty-three states had formed DOT's by February, 1974,* and at least ten others are actively considering such a move. The first DOT's were in Hawaii (1959) and California (1960), but the remainder were formed since the U.S. DOT was created in 1966; three DOT's were formed in 1967, three in 1969, four in 1970, and the remaining ten since 1971.
- Most DOT's have been formed in the more urbanized states, reflecting the increased demands for all transportation modes, and for greater intermodal coordination associated with urban-

*As of this writing, four more states (Idaho, Iowa, Missouri, and Virginia) and Puerto Rico have formed DOT's since February 1974. All the findings and conclusions concerning state DOT's, however, refer to the 23 DOT's existing as of February 1974.

ization. Fifteen of the 23 state DOT's studied are in states with urbanization rates above the median for all 50 states: this relationship is especially pronounced in the first 13 DOT's, 11 of which are in states more urbanized than the median.

- Geographically, the concentration of DOT's is greatest in the Northeast, Middle Atlantic, and West Coast regions, and somewhat less in the North Central and Southern states.
- DOT's were formed in 11 states as part of comprehensive reorganizations of the executive branch; the other 12 were created in response to perceived inadequacies in state institutions for transportation. Reasons cited for DOT formation include: the furtherance of a balanced, multimodal transportation system; the coordination of transportation with other areas of concern, especially land use, environmental protection, and economic development; and the maintenance of effective communication with the Federal DOT.
- States with DOT's are financially involved in significantly more modes of transportation than are non-DOT states, either through direct expenditure or intergovernmental aid. Three-fourths (74.1 percent) of the non-DOT states are involved in aviation, one-third (33.3 percent) in water transport and only one-fifth (18.5 percent) in mass transit. For the DOT states, on the other hand, the figures are nine-tenths (91.3 percent) in aviation, two-thirds (65.2 percent) in water transport, and three-fifths (60.8 percent) in mass transit. While there are significant differences in the aviation and water transport modes, it is mass transit which emphatically separates DOT from non-DOT states, with DOT states almost four times as often involved in this mode. All states have strong roles in the highway mode.

Varying Powers and Prospects of Existing State DOT's. While all state DOT's share the goal of developing a balanced, multimodal transportation system, there is considerable variation among existing DOT's in their organizational form, administrative powers, and scope of assigned responsibilities. A few seem well suited to their task, but most have one or more areas of serious weakness which make their prospects uncertain. The ultimate success of the DOT movement may depend on

the extent to which these areas of weakness are eliminated.

DOT structures range from purely modal, with units for highways, aviation, and so forth, to purely functional forms in which the constituent units exercise functions such as planning, maintenance, and construction. Most DOT's fall between these extremes, despite the fact that the functional form seems to be the logical extension of the principle of multimodalism. Similarly, the scope of responsibilities of the DOT's varies widely, with a few DOT's encompassing nearly all major transportation modes, while a few at the other end of the scale are responsible for only one or two modes. Most state DOT's have relatively strong centralized planning, however, few centralize policy control in the DOT director, and a few have a centralized budget function. This budgeting weakness is due primarily to the prevalence of modally dedicated revenues in the transportation field which often prohibits necessary intermodal funding flexibility. This is the greatest weakness of most state DOT's, since it can prevent the realization of the DOT's potential for intermodal planning and policy making. Despite the heavy intermodal emphasis in arguments supporting their establishment (though perhaps not surprising in view of the newness of this movement), most state DOT's in terms of personnel and budgets are first and foremost reorganized highway departments. A look at the responsibilities and functions of the state DOT's (detailed in *Chapter III*) indicates:

- A composite ranking of the 23 state DOT's existing as of February 1974 – in terms of their organizational form, scope of responsibilities, and administrative powers – reveals that five are quite strong and have been given powers and jurisdiction generally adequate for the accomplishment of their purposes. Seven states have moderately strong DOT's, although they have serious deficiencies in at least one area. A third group of six states has moderately weak DOT's, with one or more serious weaknesses and only one area of real strength. The remaining five DOT's are generally weak, with several serious deficiencies and no offsetting areas of real strength. The prospects for achieving an early shift in current state transportation policy, toward more adequately addressing urban transportation problems, are good in the first group, uncertain in the second, and doubtful in the last two.

- Five state DOT's have adopted a modal structure and three possess the logically appealing functional

form. The remaining 15 DOT's have a variety of intermediate or "mixed" organizational structures. The typical DOT in this group retains several modal units, but has centralized planning and administrative units for all modes in the DOT director's office. There is no emerging trend here, and both the earliest and most recent DOT's have representatives in each structural grouping.

- Three state DOT's have an extremely narrow scope of responsibilities, covering only highways in two cases, and highways plus aviation in the other. Another cluster of six encompasses highways, aviation, and mass transit. Nine state DOT's add either water transport or railroads to these three areas, and the final five have responsibility for highways, aviation, water transport, railroads, and mass transit. While all DOT's include the highway mode, not one has responsibility for pipelines.

- A relatively strong centralized planning function is shared by 22 of the 23 state DOT's, reflecting the priority given intermodal planning capacity in the DOT movement. More variance is observed in the policy making function, in which ten DOT's are strong, five moderate, and eight weak. The greatest divergence occurs in budgeting, in which only four DOT's are strong, ten moderate, and nine weak. A pronounced pattern is apparent where, with few exceptions, a DOT strong in budgeting is also strong in other functions, and one strong in policy making is also strong in planning.

Achievements of State DOT's. As described above, the state DOT's existing as of February 1974 vary considerably in many important respects, and a majority face serious problems in attempting to achieve their goal of developing balanced, multimodal transportation systems. At the same time, many of these difficulties may result from the inevitable growing pains of an innovative approach to the complex transportation problems of urban areas, rather than from insurmountable problems inherent in the DOT concept. Evidence suggests that state DOT's on the whole are beginning to realize their potential as more appropriate institutions for dealing with urban and regional transportation problems. Some of the key facts underlying this assessment include:

- States with DOT's are proving to be, in the view of the U.S. Department of Transportation, generally superior in their ability to develop com-

prehensive, intermodal transportation plans. One example of this is their impressive performance (again in the view of the U.S. DOT) in the National Transportation Needs Study. In addition, the state DOT's have clearly institutionalized the intermodal perspective within state government, taking this theme out of the realm of *ad hoc* coordinating arrangements and making it more visible and more permanent.

- There is a definite trend within the DOT's toward elimination or amelioration of the most serious constraints to achievement of their goals, notwithstanding the fact that some of the newest DOT's are beset by the same sorts of problems found in the pioneering units. The few DOT reorganizations which have occurred (as well as those pending in other states) have been clearly in the direction of increasing the administrative powers and scope of responsibilities of the DOT. Nine DOT's have moved to lessen the restrictions on financial flexibility imposed by dedicated revenue sources, the most debilitating weakness of most DOT's. The Maryland DOT has shown that where the financial flexibility needed to support a DOT exists, a shifting of resources to peculiarly urban transportation problems is feasible.

- State DOT's have made a generally strong showing in assuming mass transit responsibilities. In 1970, not one state had significant financial involvement in mass transit. In the next three years, however, 19 states moved into mass transit financing. Significantly, 14 of the 19 states able and willing to enter the mass transit area were states with DOT's. In other words, in a space of three years, over 60 percent of the DOT states assumed mass transit financing responsibilities; in sharp contrast less than 20 percent of the states without DOT's did likewise.

State Organizational Issues

These facts indicate clearly that state DOT's with significant intermodal flexibility and urban or regional orientation can be developed. But three major issues remain:

1. Should all states have DOT's?
2. What form should state DOT's take to be most effective in dealing with complex intermodal metropolitan transportation needs?

3. How should state transportation policies be kept consistent with other state policies?

These issues are explored below.

Should All States Have DOT's? Now that about one-half of the states have formed DOT's, the remainder must decide whether to follow suit or retain their traditional, more fragmented form of transportation organization, perhaps augmented by some method for intermodal coordination short of a DOT. At the same time, those states which have established DOT's must continually evaluate their performance to determine whether their coordinative purposes are being met.

The traditional form of organization for transportation at the state level is a highly decentralized one, in which numerous autonomous agencies operate independently, with each agency responsible for a single, or small number of transportation modes and transportation related activities. These organizations developed before widespread recognition of the high degree of interaction among the modes, deriving from the fact that the different modes may substitute for one another. Now, critics contend, this older arrangement is only adequate where the number of significant transportation modes is small and their degree of interdependence is limited. Today, they argue, very few states, if any, have such independent modes, especially not those which contain highly urbanized areas. Thus, the traditional proliferation of modal agencies exacts a cost in the form of less than optimal transportation policies.

These costs are increasingly perceived by the states. Recognizing the need for some mechanism for coordinating transportation policy and programs, states often must choose between informal or *ad hoc* devices of some sort (e.g., transportation coordinating committees, task forces or study commissions, or coordination through the state planning office), or basic institutional change, such as establishment of a DOT. As numerous observers have pointed out, each of the common coordinating mechanisms has serious weaknesses. Coordinating committees raise the familiar difficulties of peer group coordination; their capacity for resolving conflict is limited. The state planning office, being outside the transportation agencies, is in a good position for developing plans and policies, but often in a weak position to ensure that the plans are translated into budgets and operating programs. Moreover, the use of transportation task forces or study groups is severely limited in the scope of problems and span of time for which they are effective. Thus each such mechanism is inherently limited in the scope of problems it can handle or in its ability to resolve conflict. They can be useful

for limited purposes, but are not, in the view of their critics, adequate to the task of providing sustained intermodal coordination in the states.

On the other hand, a state DOT, while more difficult to establish initially, does not present serious inherent weaknesses which would prevent the accomplishment of effective intermodal coordination. As our findings indicated, most existing state DOT's have one or more areas of significant weakness, but these appear to be remediable; in fact, the DOT's are moving to eliminate these weaknesses themselves. Strong DOT's seem capable of achieving needed intermodal coordination, and recent experience in mass transit financing and various transportation planning activities bears this out. At the same time, some states without DOT's have also made significant progress in intermodal coordination and the assumption of urban transportation responsibilities, especially regarding mass transit. There are states which are primarily rural or which have a transportation system dominated by one or two modes, where coordinative arrangements other than a DOT may work adequately. Even in these situations, however, a DOT may well be the best approach. The now widespread DOT movement and the recurrent dissatisfaction with various coordinating mechanisms employed by many states which have not yet formed DOT's seem to indicate a definite need felt in the states for the department.

What Form of State DOT Would be Most Effective in Dealing with Metropolitan and Regional Transportation Problems? Once a state has decided to undergo institutional change in its transportation agencies by the formation of a DOT, it must then determine which form would be most effective in dealing with its expanding, and increasingly urban, transportation responsibilities. The choices range from a loose "secretarial" arrangement, in which the operating autonomy and independence of the modal agencies is largely maintained but some form of coordination is exercised by a transportation secretary, to a tightly integrated DOT where planning, policy, and budgetary control is vested in the DOT "director" rather than in the modal units. In fact, in the ultimate form of a highly integrated DOT — the functional type of organization — there would be no modal units; instead numerous functional units would perform their functions for all modes.

Among the advantages claimed for the loose "secretarial" form are that it can be established quickly and simply, causing little disruption in the operations of the modal agencies, and permitting the secretary to remain "above the fray," thereby enhancing his ability to provide objective advice to the governor on transpor-

tation matters. The system is weak in providing effective intermodal coordination which extends to budgets and operating programs, and in institutionalizing the intermodal principle within the operating transportation agencies, but it could be an appropriate interim measure for states which see the need for formalized coordination but have not yet decided what the ultimate form of that coordination should be. This approach is followed by the state which now has the weakest DOT arrangement; although it is considering proposals for transforming its interim structure into a more integrated one.

The reasoning which favors the choice of a DOT also favors making the DOT as strong as possible. Critics contend that to be effective in developing a balanced, multimodal transportation system for urban areas and other regions, a DOT must cover all major transportation modes important in its state. This is because the potential benefits of coordination diminish rapidly as important modes are left out of the coordination scheme. Similarly, they assert, the DOT director should have strong control over the planning, policy making, and budgeting functions of all modes within the DOT if the achievements possible under a DOT are to be realized. They argue that to create a weak DOT virtually guarantees that it will prove disappointing in managing an intermodal transportation system. Similarly, they claim that a modal DOT is likely to be much less successful in developing balanced transportation networks than either a functional DOT or one with a "mixed" structure in which at least planning, policy making, and budgeting are centralized in staff units within the director's office. On the other side of the coin, some state officials contend that a less than completely integrated DOT can achieve many of the benefits of intermodal coordination, while retaining the positive aspects of strong modal identification and professionalism, and avoiding the danger of over centralization.

How Should State Transportation Policies Be Kept Consistent with Other State Policies? Although there is little disagreement that a state should have some mechanism for relating transportation policies to other important areas of state concern — especially land use, environmental protection, energy, and economic development — there is less agreement about how this should be done. One way, of course, is to specify that the DOT director (or secretary) should be appointed by and held responsible to the governor, rather than to an intermediate or independent board or commission, and likewise to assure that the units within the DOT should all be

responsible to the DOT director rather than to modal boards or commissions.

But, essential as these steps are, many observers believe that more is needed. They suggest that the governor must have a strong general purpose state planning office and state project review clearinghouse organization to advise him on the relationships among a wide variety of state concerns — including transportation — and that state policies on land use, environmental protection, energy and other subjects must be as fully developed by appropriate agencies under the governor's control as are state transportation policies, if any real coordination is to be realized. Thus, according to this view, reorganizing the state's transportation functions, without at the same time similarly strengthening and coordinating related state functions, will leave transportation policies isolated and unresponsive to the broader needs felt by the citizens of the state.

Since the financing of transportation projects is the key step in any action program, these observers recommend that the governor should be given approval authority over the use of state appropriated and Federal aid transportation funds which may be legally accepted under state law. This could be accomplished in a coordinated fashion by a state law requiring gubernatorial approval of a multifunctional state capital improvement and comprehensive services program consistent with state appropriations, and gubernatorial approval of all proposals for the use of Federal aid transportation funds allocated to the state and legally acceptable under state law.

Opponents of these arguments for strengthening the role of the governor in coordinating a wide range of transportation and related state concerns point out that many states have not yet reached a level of coordinative management capability which would make such a role feasible at this time, and some also doubt the wisdom of such a centralization of power in a single elected official, even with the limits imposed by the appropriations process. Yet there are definite trends toward strengthening the governor's offices in the states, and the many possibilities for legislative oversight, plus the use of cabinet level committees and advisory bodies of local and regional officials, as well as citizens, to help the governors make well informed judgments about project expenditures.

In summary, it is the view of many observers that the state DOT concept has much to offer as an improved vehicle for administering the state's transportation responsibilities in a way that furthers the development of balanced, intermodal transportation systems as a response to complex urban and regional transportation

problems. However, a DOT should be strong, integrated, and politically responsive, or its promise will likely not be realized.

For these reasons, the Commission makes the following recommendation.

Recommendation 5. Modernizing State Transportation Planning and Decision Making

The Commission finds that the transportation programs of most states are still predominantly oriented to highways, and that even in many of those states having multimodal departments of transportation strong and effective coordination among the modes has not been achieved. In addition, many states influence their urban and rural transportation systems without the benefit of an adequate intermodal perspective. Though these deficiencies at the state level arise partly from the lack of financial flexibility referred to in *Recommendations No. 3 and 4*, a substantial share of it comes from certain structural inadequacies within state governments. Hence...

The Commission recommends that each state enact legislation establishing a broad intermodal "Department of Transportation," if it has not already done so, and that all such departments now existing or hereafter created should be headed by a chief administrator:

- (1) appointed by and responsible to the governor of the state, with appointment subject to legislative confirmation where that is the state practice,*
- (2) directly vested with strong and effective intermodal planning, policy making, and budgeting capabilities, and*
- (3) supported by adequate staff to enable him to carry out these responsibilities;*

provided that policy decisions concerning regional transportation plans and projects made by the state DOT shall be subject to approval by the governor acting with the advice of the state's comprehensive planning agency and A-95 clearinghouse and such other state agencies and appropriate local and regional advisory groups as he may designate, and that no applications shall be submitted by the state for Federal regional transportation funds without his approval.

The Commission believes that this recommendation would provide the states with a strong organizational structure capable of handling effectively the increasing state responsibilities in urban and regional transportation. By remedying current structural inadequacies

within state government, this recommendation, in concert with the state directed components of *Recommendations No. 1, 3, and 4*, would increase the ability of the states to carry out a fuller, more cooperative role in the solution of complex transportation problems. Indeed, this recommendation is critical to the successful implementation of *Recommendations No. 1, 3, and 4*, since those recommendations call on the states to take actions which would severely strain the capacity of traditional forms of state transportation organization, or that of weak state DOT's.

In addition, by specifying the DOT director's appointment by and responsibility to the governor, and by requiring the governor's approval of urban and regional transportation policies and projects of the DOT after considering a wide range of relevant advice, this recommendation lays the foundation for ensuring that state transportation planning is conducted within the framework of state, local, and regional comprehensive planning. Consequently, transportation policies and programs will complement, rather than conflict with, politically responsive state policies and programs in related areas such as land use, environmental protection, energy, and economic development.

INTERMODAL REGULATION OF TRANSPORTATION

Private transportation providers in metropolitan and other areas are subject to limitations imposed by many diverse and separate regulatory bodies. Some of these are local or regional bodies operating within the area, but many are state and Federal. At the same time, the regulation of related land use, environmental, relocation, and civil rights activities is primarily a local government responsibility, often subject to state and Federal guidelines and, in some cases, overridden by these higher levels of government.

It has often been charged that the direct regulation of transportation providers — based largely upon the economics of the industry being regulated — hampers service improvements and makes it difficult for new services to be started. For example, both taxi and transit regulatory bodies sometimes oppose the newer dual mode or "demand responsive" (dial-a-ride and jitney) forms of transportation, making it difficult to initiate innovative service improvements.

Also, the lack of linkages between land use control and transportation decisions makes long range transportation strategies unreliable as a guide to transportation decision making. Furthermore, it has been charged, the

increased attention now being focused on environmental, energy, civil rights, and relocation impacts of transportation proposals is increasingly delaying, and even scuttling, needed transportation projects.

This section explores the issues raised by findings in *Chapter III*, and presents a recommendation dealing with the need to orient the independent transportation regulatory processes to the regional planning, policy making, and implementation programs addressed in previous recommendations.

Specific Regulatory Issues

Recommendation No. 1 has already provided a means of making available to the independent transportation regulatory bodies the studies, plans, policies, and recommendations of the designated metropolitan planning and decision making body, and *Recommendation No. 2* has provided a regional unit which could work in tandem with the regional policy body to raise funds and provide needed urban transportation services or subsidies. But whether these independent regulatory bodies can respond meaningfully to these inputs remains a major issue. The major elements of this issue concern the extent to which independent transportation regulatory bodies should be consolidated with each other to combine modes, and the extent to which the exercise of such independent regulatory authority should be based upon broader and better defined urban oriented or regional public policies than those which now control the independent regulatory processes.

Consolidation of Independent Federal Transportation Regulatory Bodies. For well over a decade, there have been proposals from Congressional, Presidential, and private sources for reforming Federal regulatory bodies. Many of these proposals have been based upon evidence that these bodies have acted arbitrarily in the decisions they have made under their broad mandates to act in the public interest, and that they often have neither promoted competition nor restrained monopolistic practices. Furthermore, it has been charged that these bodies are frequently "captured" by the industries they are regulating, and that they are subject to a variety of pervasive industry influences creating conflicts of interest. Specifically in the transportation field, the Interstate Commerce Commission and the Civil Aeronautics Board have both been subject to these criticisms.

Critics of these commissions also blame Congress for not spelling out the criteria which should govern the regulatory processes, and for not overseeing the com-

missions diligently to assure that the public interest is being served.

Proposals for revising Federal transportation regulatory policies range from President Kennedy's proposal that the economic regulatory functions be abolished and replaced by firm enforcement of the antitrust laws, to a proposal by President Ford in 1974 that new studies be undertaken to assure that the most efficient use of the nation's energy resources will be made in the transportation field by reducing duplication of services and repealing rules which result in empty or underutilized rail and truck movements. Transportation safety regulations are now under the jurisdiction of the Department of Transportation and would not be affected by abolition of the regulatory commissions which are now left with only an economic role.

There is little indication that these commissions have sought to address the transportation plight of the nation's metropolitan areas and other regions when making crucial decisions about such diverse, complex, and conflicting matters as directing more freight into trucks rather than onto underutilized rail facilities, or denying small independent air carriers permission to serve local markets which the major air carriers do not adequately serve.

With air and high speed rail services now being considered as alternatives to one another in the nation's major urban corridors, the question might also be raised as to whether the CAB and ICC should be merged. This concern is likely to be heightened by the new emphasis on efficient energy usage.

Of course, these issues all concern national systems of transportation. Of equal concern are statewide, regional, and local systems.

Consolidation at the State Level. At the state level, it has already been pointed out that most transportation regulatory responsibilities — along with oversight of utilities and other activities — are already consolidated in a public service commission of some sort. However, new possibilities and precedents are arising for transferring the transportation functions of these very broad purpose state bodies to a state department of transportation. While opponents of such transfers argue that this violates the desired independence of the regulatory function, proponents point out that much of this independence has been illusory and that transportation services are receiving increasing amounts of public funding and are often publicly owned. This reduces the importance of economic market factors in the transportation industry, making the market oriented public service commission less likely to be in tune with the public's need for

improved services. Where public funds are involved in supporting transportation services, the conditions governing such support — which may be imposed by the state transportation body through whom the funds are channeled — may be more significant in governing service characteristics than the traditional regulatory decisions of the public service commission. Nevertheless, a partial transfer of regulatory responsibilities from a public service commission to a state DOT, leaving others behind, could divide responsibilities by mode and make coordinated intermodal regulatory decisions even more difficult to obtain.

Consolidation at the Local Level. Below the state level, regulatory decisions are sometimes made by both regional and local bodies. This reflects, in part, the realization that some transportation systems at this level serve areawide needs, while others serve strictly local needs within a single city or county. In part, however, it represents the traditional local government prerogatives and the relative lack of regional bodies.

Regional regulatory bodies are almost always single mode transit regulators. Local regulatory bodies frequently have multimodal responsibilities, even though they may not exercise them in a coordinated intermodal fashion.

Consolidation at All Levels. These complex regulatory arrangements at the several levels of government demonstrate the complexity of this subject. There appears to be no easy answer to consolidating these diverse responsibilities, and certainly no likelihood that any level will abandon its interest in such responsibilities, although deregulation is frequently mentioned as a means of encouraging more transportation providers and greater price and service competition.

Despite these uncertainties, it may be argued that what is needed is a new set of intergovernmental relationships among the various regulatory bodies. According to this argument, consolidation of independent transportation regulatory bodies with each other to combine modes should be sought at each level of government. Such consolidation would allow intermodal decisions to be made to meet the special needs of individual metropolitan areas and other regions regardless of the mixture of modes which may be needed. Thus, regulatory responsibilities might be delineated on the basis of nationwide transportation needs, statewide needs, areawide needs in metropolitan and non-metropolitan areas, and local needs in individual cities and counties. This would parallel the development of trans-

portation planning and management responsibilities at the various levels of government.

Broadened Regulatory Objectives. This multimodal consolidation of transportation regulatory responsibilities, with geographic decentralization which parallels planning and implementation responsibilities, would provide enhanced opportunities for coordinating the plans and policies of general purpose governments with the decisions of the regulatory bodies at these different levels. These general purpose governments might choose among modes — on the basis of desired service levels, the provision of alternative means of transportation, the impact on environmental, community development, and energy goals, as well as economic factors. These choices, then, might be more faithfully reflected in regulatory decisions based on interrelated public policies designed to complement each other rather than working at cross purposes. Through their legislative and executive powers, these general purpose governments may provide subsidies or other benefits to compensate for the adverse economic impacts of regulations which might be made in the public interest as defined by the broader spectrum of governmental transportation and related policies. This might also allow benefits of one action to offset costs from another. For example, if transit subsidies reduced the need for new highways, the cost of these subsidies would be offset by savings in the construction budget.

In most cases, little in the legislatively established purposes of independent transportation regulatory bodies directs that such a broad view of transportation regulations be taken. Thus, many would argue that even consolidation of such bodies to make intermodal decisions possible is not enough. In addition, it would at least be necessary to enact more specific legislative standards requiring independent regulatory bodies to consider the plans and policies of duly authorized comprehensive regional transportation planning and decision making bodies which address these same broad considerations—as called for in *Recommendation No. 1*.

Recommendation 6. Reforming Independent Regulatory Bodies to Better Meet Areawide Intermodal Transportation Needs

The Commission finds that the regulation of routes, fares, and other operational aspects of transportation services has too frequently been based on narrow economic objectives, and that the widespread use of

separate regulatory agencies for the different transportation modes has hindered solutions to the broader problems of modal productivity and efficiency, intermodal competition and coordination, energy conservation, community development, environmental protection, mobility, and access. The Commission also finds that regulations governing land use, the environment, and human rights vitally affect the success of transportation programs, but too frequently have been exercised on a different basis than has been used for the regulation of transportation systems. Hence. . .

The Commission recommends that the Congress and state legislatures consider amending their respective laws and interstate compacts establishing the independent transportation regulatory bodies with a view toward (1) consolidating them to combine separate transportation modes, where appropriate, in independent intermodal regulatory bodies; and (2) broadening the public policy objectives which shall be considered and promoted to the extent possible by these independent regulatory bodies to include — in addition to the traditional ones of safety and economics — modal productivity and efficiency, energy conservation, desired community development, environmental protection, enhanced mobility, and unhindered access.

This recommendation states the Commission's general policies that intermodal consolidation of independent transportation regulatory bodies is necessary, and that such bodies should make their decisions only after full

consideration of a broad range of transportation and related public policies developed by other branches of government. The Commission recognizes that regulatory matters are highly complex, and that its own study of this complex field has not been adequate to definitely identify the manner in which these objectives may be met most satisfactorily at the various levels of government. Thus, the Commission's recommendation on this subject suggests that the Congress and the state legislatures make their own studies of how best to accomplish these objectives through amendments to the various laws which have established the existing transportation regulatory bodies.

At the areawide level, which we have studied most thoroughly, the Commission believes that the provision in *Recommendation No. 1* of this report would significantly assist independent transportation regulatory bodies at all levels in making decisions which would be in the best interests of metropolitan America. The regional transportation authorities called for in *Recommendation No. 2* could work with these regulatory bodies in providing any subsidies and other operating arrangements needed to compensate for any adverse economic impacts occasioned by such broad based regulatory decisions. Thus, the Commission recognizes that regulation alone cannot do the whole job in many cases, but believes that cooperation between independent regulatory bodies and their planning and implementation counterparts can bring better solutions to the nation's vexing metropolitan and regional transportation problems.

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