A MICHIGAN DEPARTMENT OF TRANSPORTATION: IMPLICATIONS FOR COMPREHENSIVE STATE LEVEL PLANNING

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ABSTRACT

A MICHIGAN DEPARTMENT OF TRANSPORTATION:
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By

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Transportation is consistently recognized as one of the most essential functions of modern society, providing the linkages through which the needs of people are met and the channels necessary to the development of basic resources. Therefore, the provision of transportation facilities is a subject of widespread interest and general concern. Because of this importance, the development of government policies and programs for the improvement of transportation systems is the subject of national analysis and debate, with continuing demands for more effective solutions to growing problems.

Following the pattern of the federal government, several states have consolidated their transportation agencies into Departments of Transportation (DOTs) to achieve a better administration of these responsibilities. Since there is considerable pressure growing in Michigan to also create a state DOT, an analysis of the potential effect of such change was undertaken.

The general nature of transportation was described and the

historical development of public policy traced. Then the emergence of fundamental transportation issues was stated. It was found that the recent emphasis on highway programs has been a dominant feature of national policy, but that there is a trend toward finding ways to improve urban public transportation systems. This focused attention on the key issue of concern; how to best serve the public interest by achieving a balanced transportation program. It was concluded that the institutional framework for decision-making was a crucial part of overall policy and program improvement, and that a state DOT for Michigan was highly desirable. Conceptually, it was found that long range transportation plans can be the foundation for comprehensive planning for urban and rural development, land use programs and environmental protection as well as for better coordination of transportation programs. Creation of a Michigan DOT would provide the means for improved coordination among levels of government, among various government programs and between transportation modes.

Finally, the important elements of concern in the process of reorganization were addressed. Because reorganization is a political process, there are a variety of considerations that will influence the structure of a new department. The central issue is the legal fact of restricting gas and weight tax revenue to use for "highway purposes" only. The Governor has undertaken an aggressive program of requiring that a portion of such revenue be made available for improving urban public transportation. If this one change can be accomplished, then organizational change can be a truly effective improvement in state government in Michigan.

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CHAPTER I

INTRODUCTION

Because there is an inherent disadvantage in most things being separated by distance, mobility is one of the essential elements of the process of living. Throughout history, the increasing capability for moving things has seemed to be a major determining factor in the complexity of the human social order. As mankind progressed through the stages of floating things on logs, using the wheel, utilizing beast of burden, setting a sail and converting energy through machines, his cultural environment expanded as new interrelationships were made possible. Transportation is the function of overcoming the disadvantage of distance by providing the means for the interaction of people and goods.

Over the years, the development of transportation systems is one of the most important contributions society provides to succeeding generations, not because of their intrinsic value, but more significantly, because transportation systems are a major determinant of the way other things will be. Few functions are as directly related to man's every activity, so transportation warrants a very high degree of special consideration.

The complexity of modern transportation systems was stressed at the 1960 Woods Hole Conference on Transportation Research, sponsored by the National Academy of Sciences, National Research Council:

> Transportation is the totality of the vehicles, ways, terminals, supporting facilities, and the personnel required

> to achieve the movement of people and goods within and across the borders of this nation. It comprises, also, the institutional arrangements, the industrial complexes, and the public policies by means of which the physical facilities and the manpower are brought together into an operating system.[1]

The recognized importance of transportation and its complex characteristics suggests many areas of inquiry that could produce useful information. One of the more important of such areas of inquiry would seem to be that of analyzing the institutional arrangements and public policies for the provision of transportation. That is: what are the organizational relationships that are the major determinants of transportation systems, services, programs and policies; and could some different set of relationships be established that would better serve the public interest?

With the creation of the United States Department of Transportation in 1966, a major change in these institutional arrangements was initiated at the national level. Subsequently, many states are giving evidence that they too are concerned with possible reorganization of responsibilities to achieve a better way of doing things in the public interest.

In Michigan, a Special Commission on Transportation, appointed by the Governor, reported:

> Problem: There is a great diffusion of authority and responsibility at the state level in the regulation of transportation in Michigan. There is no authority over the coordination, planning, promotion and financing of transportation at the state level. There is a similar

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[1]National Academy of Sciences, National Research Council. Conference on Transportation Research (Washington, D.C.: 1960), p. 1.

lack of coordination at and between the regional and local levels.

Recommendation: Immediate attention must be given to the creation of needed governmental structures.[1]

Supporting the concept of needed change in Michigan transportation responsibilities, there has been legislation introduced that would require such change, either through the establishment of a Department of Transportation, or through the creation of new policy-making bodies.[2] Most recently, the Governor expressed his concern in this area by creating an Interagency Transportation Council, made up of the top administrators of transportation agencies and representatives of the Executive Office to foster "efficient and comprehensive planning by coordinating the efforts of the respective agencies responsible for the regulation of the various transportation functions . . . ."[3]

Justification

All these expressions of concern serve to postulate that governmental reorganization would result in a better way of administering transportation responsibilities in Michigan. Thus, it would be useful to inquire into this generally held hypothesis.

In a practical sense, the result could be useful to those primarily concerned with the Michigan situation, through having formalized

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[1]Michigan, Special Commission on Transportation, A Report to the Governor of Michigan 1965-1966 (Lansing, 1966), p. 14.

[2]Michigan, Senate Bill No. 556, Introduced April 3, 1969, and Senate Bill No. 1030, Introduced April 16, 1969.

[3]Michigan, Executive Order 1969-2, 1969.

the question, gathering, organizing, and analyzing relevant information, and providing some supported conclusions and recommendations. In a more intellectual sense, such an inquiry would be a useful exercise, if only by merely adding in some way to the body of knowledge through contributing to an understanding of interorganizational relationships. Then too, there is an acknowledged personal satisfaction to be gained from exploring an area of career interest. This last justification is an important addition since it serves to identify personal bias that could possibly be introduced if not carefully guarded against.

Scope of Inquiry

The broad purpose of this effort is to analyze state level transportation responsibilities in Michigan in order to gain familiarity with the advantages and disadvantages of potential reorganization. It is conceived as one way to approach the question "does Michigan need a Department of Transportation?"

There are a wide variety of interests in transportation and literally hundreds of relatively independent entities directly involved in transportation decision-making. Some of these are: Federal departments, bureaus and offices; the Michigan Governor, Legislature, specific agencies, lobbies, and special interest groups; County Road Commissions, Boards of Commissioners, local mayors, city councils, public service agencies, planning commissions, transit authorities; private bus companies, airlines, railroads, trucking firms, taxi companies; and many, many more, including the public at large.

With all these interests, this analysis is not intended to

address specific problems; rather it is intended to consider basic issues, opportunities and inviolable constraints that could influence reorganization. To accomplish this, it is intended that the analysis will include a historical review of transportation development and its relationship to social and economic development, both in Michigan and in the United States. Further, the analysis will briefly examine some transportation responsibilities as they have developed to date, consider some basic problem areas, and relate these to efforts to achieve a comprehensive planning process. This should provide a basis for considering some alternative organizational concepts as a foundation for drawing conclusions.

Guiding Hypothesis

It is hypothesized that a Department of Transportation would result in better resolution of transportation issues in Michigan. It is hoped that this can be demonstrated by presenting conclusively that orderly planning of our transportation systems has beneficial implications far beyond the efficient movement of people and goods, having the important by-product of providing a more effective approach to other state policy; such as -- the distribution of population and economic activity, the spread of urbanization, control of pollution of the environment, the desire for outdoor recreational opportunity, -- to name but a few of the considerations regarding the quality of future life. Stated another way, it is hypothesized that new perspectives and basic insights can be gained by objectively addressing the question: Would a state Department of Transportation help solve transportation and other state level problems in Michigan?

Sources of Information and Basic Limitations

Most of the information supporting this analysis is derived from secondary sources, including technical journals, governmental agency reports, and topical articles from a wide variety of other publications. Any limitations are mostly limitations of scope and an attempt will be made to recognize them as they come up. Special note should be made of the fact that state Departments of Transportation are relatively new in organizational concept. Consequently, there is a paucity of analysis on their operation and overall effectiveness to date.

CHAPTER II

THE NATURE OF TRANSPORTATION

Although transportation facilities are among the most important features of our environment, they have almost no intrinsic value; their importance is in the means provided to accomplish other purposes. So it serves no useful purpose to discuss transportation as such; to be meaningful, it must be related to the objectives of economic or social interaction. In the consideration of such broad objectives, there are many points of conflict and potential trade-offs, which develop into fundamental political choices or issues. The purpose of developing a general discussion of the nature of transportation is to better understand the basic elements of current transportation issues and the potential consequences of policy alternatives.

The most fundamental issue that is most often stated, and therefore warrants thorough consideration, is that of achieving balanced transportation. The prevalence of statements of the need for balance suggests that there is an imbalance. While this may very well be true, it is not enough to just cite statistics to support a conclusion to that effect. Nor is it enough to just cite economic inefficiencies or social inadequacies as evidence of the problems caused by imbalance. Full consideration of the issue requires an evaluation of the many diverse

influences that have helped determine the characteristics of present transportation systems, and that might be critical to the selection of future alternatives.

Among the important influences at work is the historical evolution of the institutional arrangements that exist for the management of the transportation function. It is intended that this be utilized as a central focus of the following material, in an attempt to better understand the nature of transportation in our society, including not only an evaluation of how we achieved what we now have, but also why.

Simply defining transportation as the mere movement of people and goods does little to indicate society's complex requirements for mobility. To gain a proper perspective, transportation must be viewed with respect to the larger systems within which it functions and the larger objectives it serves. One way to grasp such a view is to relate modern transportation system development to growth and change in our culture over time. Many of the diverse forces that were critical to that relationship extend to the present and are directly influencing contemporary levels of transportation service. By identifying these determinants, it might be possible to gain considerable insight into the institutional components of present transportation elements.

Modern transportation service is provided by motor vehicles, aircraft, watercraft, railroads, pipelines and a variety of relatively minor means, such as the new recreational vehicles. In this country, a choice of two or more of the major modes is available almost everywhere, representative of our very high level of technology and industrial development. But these modes are quite recent developments; the shift from ancient to

modern transportation modes occurring with the adaptation of the steam engine to ships and railroads. Automobiles, airplanes and pipelines are even more recent, having been developed within a current lifetime.

Historical Perspectives and The Evolution of Public Policy

In discussing the importance of transportation for developing countires, Owen devotes a brief chapter to the American experience over the past century or so.[1]

Beginning with a nearly total dependence upon natural waterways, early settlers were severely limited in the movement of freight and personal mobility. Only the most hardy people would undertake trips of any length, and only the most valuable of freight could be transported.

Although, since the very first congress in 1789, tariffs have been used to encourage shipping on U.S. vessels, this limited government involvement in transportation was mainly a commercial interest. The first direct governmental interest in improving transportation was to facilitate postal service. "The beginning of mail delivery provided monthly service from New York, 400 miles south to Virginia, with an elapsed time of four weeks when weather was good and eight when it was bad."[2] Such limited service demonstrated a need for better land transport, which was responded to by private investment in toll roads. However, the full integration of the expanding economy awaited the development of a cheap means of transportation. Describing the direct

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[1]Wilfred Owen, Strategy For Mobility (Washington: The Brookings Institution, 1964), pp. 22-31.

[2]Ibid., p. 23.

relationship of improved freight transport to early economic expansion, Owen points out the spectacular results of substantial state level investment in the transportation system:

> It was the canal, however, that brought the most spectacular reductions in transport costs. When the Erie Canal opened in 1825, freight rates from the Great Lakes to New York City fell from $100 to $15 a ton. And the combination of canals and roads, including turnpikes, reduced transport costs and permitted increased range and carrying capacity for barge and wagon. The West could now supply food to the cities of the East, while eastern manufacturers in turn could pay their food bill by selling cloth, shoes, and other goods to the West. Manufacturing came to be centered in New England and the East, sugar in the South, and wheat in the West. This territorial division of labor and the greater productivity that resulted was made possible because of soil and climate conditions, together with the distribution of population and human skills. But improvements in transport acted as the catalyst to bring together these ingredients of the prosperous regional economic integration.[1]

Even with the demonstrated impact that transportation investment could have on the general economy, the national government hesitated to get involved in such improvements. Other than the Cumberland Pike, started in 1806, as a specific route, there was no federal program for roadway improvements. In fact, the first congressional action to develop a federal program was vetoed in 1817. The "strict-constructionist" presidential interpretation of the Constitution prevented any significant federal assistance for internal improvements until the middle of the nineteenth century.

The federal government finally got involved in transportation when the steam engine was adapted to rail and water vehicles. This represented a technological breakthrough that created an era of rapid economic

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[1] Ibid., p. 24.

expansion, and massive grants of land were offered as inducements to private investment for the development of the railroad system. Thus, between 1825 and 1850, a partnership of government subsidy and private capital combined to provide a true national transportation network which opened up vast areas of the country to settlement and economic development.

Although most historians, like Owens, emphasize the effect of transportation improvements on historical economic growth, North subordinates all other factors to the basic influence of the spread of the American market economy:

> Institutional and political policies have certainly been influential. They have acted to accelerate or retard growth on many occasions in our past, primarily by affecting the behavior of the prices of goods, services or productive factors either directly or indirectly. But they have modified rather than replaced the underlying forces of the market economy.[1]

Regardless of the emphasis, there is little doubt that investment in transportation improvements was a catalytic factor in economic growth after 1850.

For the next 40-50 years, railroads and steamships handled most of the nation's commerce, and use of the toll road system was all but abandoned except for extremely local travel. But, as these roads became more and more inadequate, public pressure began to mount for improvement. However, it wasn't until 1916 that real highway improvement was initiated.

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[1]Douglass C. North, The Economic Growth of the United States 1790-1860 (Englewood Cliffs, N.J.: Prentice-Hall, Inc., 1961), p. vii.

Still in effect, the Federal-aid Highway Act of 1916 set the pattern for future intergovernmental cooperation in a meaningful highway program. Owen describes this legislation this way:

> This and subsequent legislation contained a variety of terms on which the states would be eligible for federal assistance. The federal law required the states to establish appropriate highway departments, to designate a limited system of federal-aid routes on which federal-aid funds could be spent, and to adhere to federal standards of design and maintenance.[1]

The success of this cooperative intergovernmental mechanism was quickly demonstrated, with the construction of nearly a million miles of roads and the expenditure of over $40 billion between 1920 and 1940 for construction and maintenance.[2] An important element of this huge program was the gradual imposition of a user tax, paid by vehicle owners through registration fees and a tax on gasoline. The latter source, first introduced in Oregon in 1919, quickly became a major income producer, and by 1941, user taxes provided about half the total road budget.[3]

Air transport, initiated at Kitty Hawk in 1903, took considerable time to become viable as a major mode of transportation. Other than minor government interest from a military standpoint, there was little government involvement in air transportation until mail was first transported in 1919. It wasn't until the Civil Aeronautics Act of 1938 that Congress specifically empowered the Civil Aeronautics Administrator to engage in airport development and improvement.[4]

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[1]Owen, Strategy For Mobility, p. 29.

[2]Ibid. [3]Ibid., p. 30.

[4]Dudley F. Pegrum, Transportation: Economics and Public Policy (Homewood, Ill.: Richard D. Irwin, Inc., 1968), p. 64.

This historical review has shown that transportation improvements were a major influence upon the settlement patterns of the country, serving as a critical element of community development in its broadest sense. It has also shown that the initial, and pervading interest in transportation system development has been from the private sector, yet government programs developed when one of two situations arose:

1. Transportation problems that may not have been adequately recognized at one period of time came to be acknowledged as intolerable according to shifting standards.

2. The scale of needed improvement was too great for private interests to handle alone.

Finally this review has also shown that major shifts in transportation emphasis have occurred within a relatively short space of time in response to public need, technological innovation, and the degree of government involvement.

The Role of Government

After the technological breakthrough of the steam engine, the federal government began an involvement that has led to current support for, or regulation over, almost every means of transportation. Yet operation of transportation vehicles has largely remained in private hands, either corporate or individual. As President Johnson reported:

> The United States is the only major nation in the world that relies upon privately owned and operated transportation..... But private ownership and operation has been made feasible only by the use of publicly granted authority and the investment of public resources: by the construction of locks, dams, channels on our rivers and inland waterways; by the development of a vast highway network; by the construction and operation of airports and airways; by the development of ports and harbors; by the direct financial support of

> the merchant marine; by grants of eminent domain authority; by capital equipment grants and demonstration projects for mass transit; and in years past, by grants of public lands to assist the railroads. Enlightened government has served as a full partner with private enterprise in meeting America's urgent need for mobility.[1]

In spite of the retention of private ownership and operation, government has, indeed, become a dominant force in transportation policies and programs, with participation from all levels, but largely dominated today by the federal responsibilities for the general public interest of national defense, exchange of information and the maintenance of regional balance in economic and social development. Leading up to the modern era, these areas of federal responsibility were tied to a national expansionist philosophy, which has been largely expressed by an overriding emphasis on long-distance travel and the shipment of products of farms, factories and mines to markets.

This past emphasis upon long distances may have a particular relevance to current issues in terms of there not being a fully developed government policy posture for urban transportation problems. But, as the previous historical review has shown, government transportation programs have been particularly responsive to the emergence of major issues, and the recent changes toward greater government involvement in urban programs follows a basic pattern.

Further, the historical review has shown that initial weak government participation (and even initial prohibition against direct involvement) weakens over time, and later programs of massive proportions

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[1]U.S., Congress, Senate, Committee on Government Operations, Establish A Department of Transportation, Hearings, on S. 3010, 89th Cong., 2nd sess., 1966.

evolved. It was also shown that user taxes in support of programs were not initially important. In fact, it has only been recently that highway user taxes even came close to matching the amount spent on highway improvements and maintenance.

Finally, the federal highway program has emerged as the strongest of all transportation programs, and set a basic cooperative framework of federal-state-local partnership which might be considered a pattern of the future. This required the states to set up appropriate departments, adherance to basic federal standards, and other terms on which federal aid would become available.

Shifting Community Values and Public Concern

The role of transportation in the development of this country has been one of major significance. If the most basic importance of past transportation programs and policies can be generalized as having been strongly oriented toward fostering geographic accessibility:

- for the development of national resources;
- to open up the country and permit universal settlement;
- to move products to consumers; and
- to integrate all areas into a functional national community,

then today's ubiquitous transportation service can be recognized as having reached a major level of achievement.

While there is no fully integrated theory of the role of transportation in regional development programs, there is increasing skepticism

in the literature regarding the potential of transportation for further accelerating economic growth.[1] This view is subject to debate, if only on the magnitude of change being sought and the value of even a marginal transportation related economic improvement as a catalyst for other economic stimuli to foster regional improvement. However, there can be little argument with the concept that the broad role of transportation in terms of its importance to national economic growth can be expected to diminish now that a true national base transport system has been created.

This means that the present transportation era is one of transition, from an overriding emphasis on economic growth to an orientation toward human development in an urbanizing society. This view is well expressed by Webber and Angel:

> We have freed the economy from the obstacles of geographical distance, and we have freed the metropolis from the boundaries that had previously constricted its spatial expansion. Distance is no longer a constraint either upon the national economy or upon the mobility of the middle-majority of the nation's population. Both have benefitted greatly from the development of the automobile-highway system which by now is highly efficient, requiring only incremental expansion to keep pace with future population and economic growth.[2]

Extending their reasoning to a concern about our automobile oriented society, Webber and Angel recognize the beneficial effects of enhancement of personal freedom provided for the vast majority of the

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[1]Gerald Kraft, John R. Meyer, and Jean-Paul Valette, The Role of Transportation In Regional Economic Development (Lexington, Mass.: D.C. Heath and Co., 1971), pp. 23-35.

[2]Melvin M. Webber and Shlomo Angel, "The Social Context For Transport Policy," (Reprint No. 48, Institute of Urban and Regional Development, University of California, Berkeley, 1969), p. 67.

public, but trace some extreme disbenefits to those that for any reason cannot utilize the automobile in the way it is used by the majority. Their conceptualization of the contemporary transportation problem is that the auto-dominated highway, with its pervasive effects on community structure and social mobility, has contributed greatly to social and economic isolation of the already disadvantaged poor, especially black people.[1]

Such expressions of concern are creditable, and gaining a great deal of public acceptance. It appears that there is a discernable shifting of public concern from considering transportation as serving mostly the demands of economic efficiency to a means of achieving social equity. This seems to be general recognition that our national problems are now more closely identified with the day-to-day mobility needs of an urban society rather than the long distance mobility of a national economy.

Emerging Transportation Issues

The prevalence of articles in the national media as well as in sophisticated technical literature that portrays the private automobile as the root cause of many of this country's social problems are expressions of wide-ranging concern that outline emerging transportation issues.

Some analysts see the increasing use of the automobile as the main reason for the trend toward urban decentralization. This is translated into inefficient land use patterns, the decay of the central city, and the growing dichotomy between affluent "suburbanites" and the central

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[1] Ibid., pp. 64-67.

city poor. Others see the "over-emphasis" upon auto transportation as working a serious disadvantage on larger minority segments of society, those too old or too young to drive, the infirm, and those too poor to own a car. This is related to the decline in public transportation which has become too expensive to serve a decreasing ridership. Still others elaborate upon the adverse effects that the automobile has had on the environment, citing increasing levels of air and noise pollution, the rapid depletion of fossil fuels, and the contribution it makes to despoilation of the landscape.

While much of the discussion being presented in the literature represents oversimplification as required for brevity, the essential expressions of concern have factual bases. It is undeniable that some fundamental cultural shifts have occured that can be translated into emerging transportation issues.

There is a recognizable migratory trend from rural areas to the large urbanized areas, and at the same time, an outward movement from the central cities to the suburbs. One author projects that almost all future increases in the U.S. population will be absorbed by metropolitan areas.[1] This represents a complex problem with vast economic, social and political implications. What kinds of transportation systems are needed to help solve such problems? Can a developmental highway program be expected to help reverse the rural to urban migration? Can new urban mass transportation programs be expected to help revitalize the central

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[1]Alexander Ganz, "Emerging Patterns of Urban Growth and Travel," Transport Report, M.I.T., Cambridge, Mass., 1968 (Mimeographed.)

cities? Can the central city and the suburbs be closely linked together through any transportation program?

Most of these questions can be framed in terms of viable alternatives for available funds which in turn presents new facets to the debate. How can priorities be rationally determined? Can the nation afford to continue a massive highway program that is not even keeping pace with its growing needs? Do public transportation systems require huge operational subsidies? Should modern rail mass transportation systems be built to help redirect growth? How much improvement cost can be added to accommodate environmental protection needs and social considerations?

In all of these issues there is a common theme; that of improving the quality of life. Resolving such issues requires an examination of priorities, which is, in essence, a requirement to redefine the public interest.

The Public Interest

It has been shown that the development of government policies and programs has been closely related to shifts in economic and social emphasis over time, and that the promotion, regulation and operation of transportation systems has evolved into a true partnership between government and the private sector. Yet, any well rounded examination of governmental policies and programs must include another view; that of the "public interest", as distinguished from mere response to social, economic or political pressure.

The author of a basic planning textbook introduces this topic,

although in a different context, this way:

> The public interest is frequently used in law to refer to what the courts will sanction as a public purpose, whether under the police power, the power of eminent domain, or the power of taxation. For example, health, welfare, morals, and safety have become generally recognized tests of the public interest in American jurisprudence. Convenience, comfort and prosperity are sometimes cited, but are less frequently allowed by the courts and usually only in combination with the other four tests. In a restricted sense, the courts thus provide a barometer of what are generally held to be the limits of the public interest. As indicated in the history of court actions, the public interest concept in a legal sense is an evolving one, tending to broaden in time as new elements become more generally sanctioned in a cultural context, but also tending to lag behind their social acceptance.[1]

Thus, another dimension of the role of government can be examined on the basis of what is good for the general public. Instead of just deriving a concept of the public interest from an evolving legal interpretation, or even from some generalized perception of the predominant will of the public at large, there should be some derivation that is less vague to guide the development of public policy.

However, there does not appear to be any well developed, and fully accepted theory in this regard. There is considerable academic debate on this topic among both social scientists and political scientists.[2] The main concern here is the true meaning of public responsibility on the part of government officials in the exercise of discretionary power in policy making.

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[1]F. Stuart Chapin, Jr., Urban Land Use Planning (Urbana: University of Illinois Press, 1965), p. 41.

[2]Herbert J. Storing, "The Crucial Link: Public Administration, Responsibility, and the Public Interest," Public Administration Review, (March 1964), pp. 39-46.

This question is particularly relevant to the development of transportation policies because of the profound influence that transportation has on the quality of life. It is especially pertinent to the current issue of the need to improve public transportation facilities in our automobile oriented society. Here, the will of the majority (as interpreted from accumulated historical marketplace decisions) is to abandon public transportation in favor of increasing use of the automobile. While this issue will be discussed in greater detail later in the chapter, it serves here as a foundation of the question of whether the public interest is a mere aggregation of individual interests, or whether something else needs to be added to adequately define the broad interests of the general public. This current issue appears to be a classic example of what Storing calls "the basic ambiguity in the notion of the public interest: the tension between public wants and the public good."[1]

How should policy makers resolve such issues? Some theorists see it as a problem of accountability; a need to legitimize policy determination to predominant support groups as the most democratic interpretation of public responsibility.[2] But this seems to leave policy determination too much to the desires of "special" interest to fit any true concept of the public interest. Others see the public interest as only a "verbal symbol, whose value is primarily psychological and does not extend beyond the significance that each responsible civil servant must

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[1]Ibid., p. 46.

[2]Ibid., p. 44.

find in the phrase for himself."[1] This, too, seems to beg the issue, providing no real test of the degree to which the real needs of the public are to be served.

As a leading critic, Schubert emphatically states that "there is no public interest theory worthy of the name," and that "it may be nothing more than a label attached indiscriminately to a miscellany of particular compromises of the moment."[2] In modeling his critical stance, Schubert organizes dominant theoreticians into three basic classes:

> Rationalists - who believe that it is the function of public officials to execute the popular will, that is expressed either through the political parties, or can be readily defined from public opinion;
>
> Idealists - who believe that the true interests of the public may not coincide with what the public itself feels is the public interest, and administrators must rely heavily upon their conscience; and
>
> Realists - who believe that the bureaucratic structure of government functions to provide full consideration of all relevant interests and perspectives, and that resultant decisions are the best possible for all interests.

Even as Schubert rejects the formulation of a worthwhile concept, his review serves a real purpose of identifying some basic truths in all the theoretical positions. As such, his review is useful herein to provide a background from which to articulate a personal statement of public interest philosophy which is based upon a belief in the inherent

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[1] Ibid.

[2] Glendon Schubert, The Public Interest (Glencoe, Ill.: The Free Press of Glencoe, 1960), p. 223.

acquisition of broadly based concern for the general welfare by government policy makers as they rise to positions of power.

It may be assumed that no policy-maker can long remain in a powerful position if he continually offends others who may have a particular view of the public interest, whether they be strong pressure groups, an opposing political party, or disorganized minority interests. Each public policy maker must have developed some kind of support base on his way to his position, and must retain some credibility of being attuned to the general welfare in order to maintain or advance his position. Perhaps a concept of the public interest that is representative of the real world is nothing more than the series of compromises that must be continually made by leaders as they strive to maintain or enlarge their position of responsibility. This would be a concept of pragmatic accommodation of varying points of view that is developed over time; a responsiveness to the public welfare that is necessary to success. This view is quite similar to the conclusion developed by Storing, that personal responsibility and a willingness to confront difficult choices on the part of all public officials is a major determinant of what the public interest is at any particular period of time.[1] It refers to the "art of governing" as the crucial link between public administration and the public interest.

Accepting that there is an "art of governing" inherent in public administration, then that "art" should be most well developed among top elected officials that are confronted by the electorate periodically.

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[1]Storing, "Crucial Link," p. 46.

This leads to a conclusion that is herein offered as a personal philosophy regarding the public interest; that the top elected official serves as the focal point of interpreting the public interest, and at the state level, this is a function of the Governor. It may not always be possible for even the Governor to serve the public interest as he sees it, but his basic sensitivity to the general welfare must be reflected in his decision making.

If there should be a basic conflict between the Governor and any functional agency in the area of discretionary decision making, then the basic responsibility of resolving the differences rests with the Governor. Such differences do occur. A syndicated columnist recently wrote:

> Whatever institutions we devise for whatever good and noble purposes - eventually develop a life and raison d'etre of their own. They soon begin (unconsciously) to operate for their own sake, for surviving, controlling, expanding, more than for the sake of the community that formed them, or the original purpose for which they were established.[1]

This sketches a potential conflict situation wherein an agency might see the public interest from a narrow point of view, and the Governor from another. After thorough discussion of all considerations, such conflicts should be responsive to the Governor's point of view.

Modern Transportation Systems and National Policies

Reporting to Congress on the complexity of transportation policy, President Kennedy identified "A chaotic patchwork of inconsistent and

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[1]Sydney Harris, "Strictly Personal," State Journal, Lansing, Mich., Sept. 3, 1971.

often obsolete legislation has evolved from a history of specific actions addressed to specific problems of specific industries at specific times."[1] The late President's words are used by Lansing to initiate his discussion of the objectives of public policy and the history of each major transportation mode. After thorough review and analysis, Lansing concludes "Viewed as a whole, there is a disorderly, one might say unkempt, character to American transportation policy."[2]

With so much acknowledged difficulty involved in trying to trace federal transportation policy, it seems that little can be gained from further attempts at detailed analysis of "specific actions addressed to specific problems" that have occurred at "specific times" in the past. Yet, federal policies are of dominant importance to this discussion of modern transportation systems and the consideration of future directions. Therefore, it is intended that national policy be evaluated in a different way, using a form of policy consideration that presents a major program area which has generated significant debate, identifying pertinent legitimate constraints, portraying trends that bear on the issue, considering alternatives that have been proposed, and the feedback to the basic policy area. This technique can be modeled along the following lines:

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[1] John B. Lansing, Transportation and Economic Policy (New York: The Free Press, 1966), p. xiii.

[2] Ibid., p. 399.

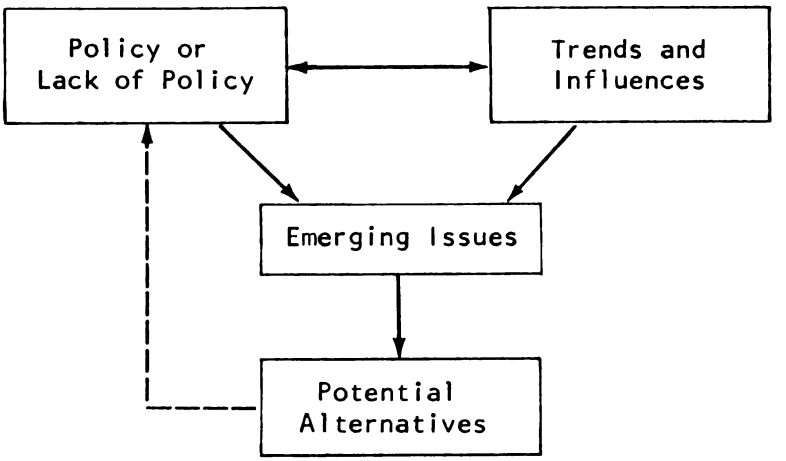

Figure 1. Transportation Policy Evaluation Model

While this simplistic approach to very complex problems may have some limitations in regard to depth, it has the compensating virtue of clarity in getting directly to the points of concern. Because of its clarity, any mis-statement or omission can be quickly identified and the result easily traced. As such, it seems adequate for a generalized discussion of modern transportation systems and resultant problems. In the following discussion, major attention will be devoted to urban transportation policy as the most critical of all policy areas.

Major Programs

Recognized as the largest single construction project ever undertaken, the Interstate Highway System program is easily identified as the main element of the nation's transportation program. With routes in every state, the 42,500 miles of freeways interconnects the largest cities at a total cost now estimated to reach $69 billion. Ten percent of this cost is to be paid by the states and the other 90 percent by the federal government.

Initiated with the passage of the Federal Aid Highway Act of 1956, a major feature of the program was the creation of the Highway Trust Fund as the repository for user taxes that are reserved for financing highway programs. Before 1956, federal funds for highways were appropriated from the general fund of the Treasury, and although federal taxes were imposed on highway users, there was no direct link between such collections and disbursements. Because the Interstate Highway Program was originally scheduled for completion by 1972, the Highway Trust Fund was to terminate that year, but was just extended by Congress to 1978.[1]

The Highway Trust Fund provided for a pay-as-you-build program that included financial insurance for a long-range approach to highway construction. Each state was reasonably sure that program schedules would be maintained. The success of this approach cannot be denied, with the completion of lengthy sections in each state, as shown by the following map. Extension of the Highway Trust Fund was a critical decision, because it also is the source of federal funds for other elements of the national highway program, and its extension thus insured continued financing for the non-Interstate highway systems as well. As such, it was a reaffirmation of national policy in support of the highway program which has these major features:

1. Completion of the Interstate Highway Program by 1976, at whatever cost required.

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[1] Federal-Aid Highway Act of 1970, U.S. Code, Title 23, Sec. 209 (1970).

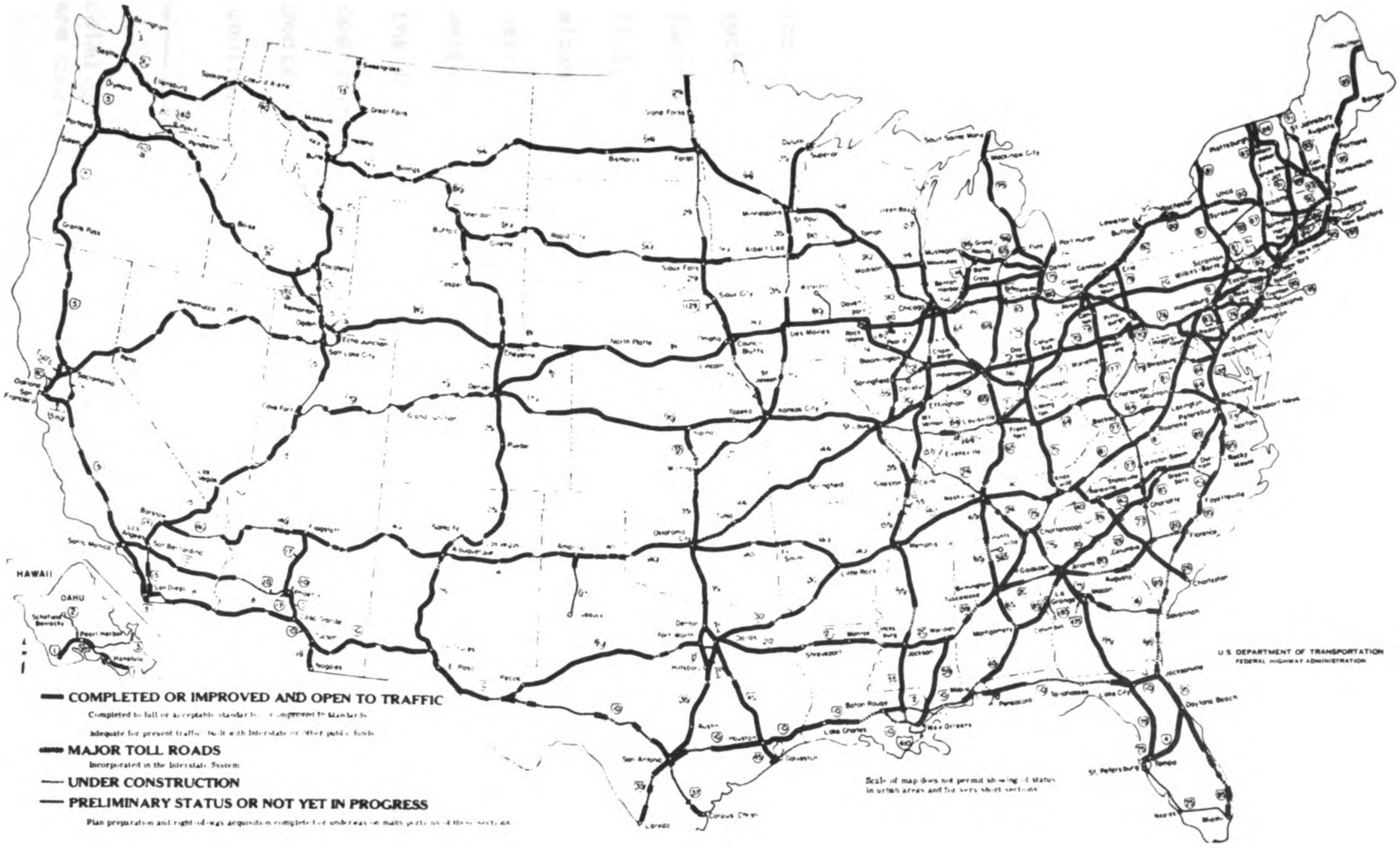

Figure 2: National System of Interstate and Defense Highways

Source: Public Roads
Magazine, October, 1971

2. Continuation of the federal-state partnership for improvement of other federal-aid highway systems:

   a) Federal-aid Primary
   b) Federal-aid Secondary
   c) Federal-aid Primary or Secondary extensions in urban areas.

3. Change in the matching ratio on the ABC Systems from 50% Federal to 70%, beginning July 1, 1973.

4. Establishment of a new Federal-aid Urban System that differs from Federal-aid Primary or Secondary extension, in urban areas (C above), and authorization of expenditure of $100 million each fiscal year ending June 30, 1972, and June 30, 1973. These new system routes are to be selected by the appropriate local officials and the State highway departments in cooperation with each other.[1]

The above are the main features of federal highway program policy, including the most recent changes. In addition, there are other features, such as the Traffic Operations Improvements Program (TOPICS) that provides funds to urban areas for minor street improvement projects; a new Demonstration Project authorization designated as "Economic Growth Center Development Highways, with authorization of $50 million each year for two years; the designated eligibility of Urban Highway Public Transportation, which permits the use of restricted funds for projects that will "encourage the development, improvement, and use of public mass transportation systems operating motor vehicles on highways, other than on rails, for the transportation of passengers"; and reaffirmation of the required cooperative, continuing, and comprehensive urban transportation planning process.[2]

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[1]National highway policy is reviewed by Congress each two years, culminating in the passage of biennial Federal-Aid Highway Acts, which are codified in the U.S. Code, Title 23.

[2]Federal-Aid Highway Act of 1970.

One further feature of highway policy is the currently underway National Transportation Study that was required by Congress, to evaluate transportation needs to 1990 on the basis of detailed analysis of projected transportation improvements for all modes. A major feature of this study is to consider the allocation of alternative funding levels to satisfy all needs, with the state governors having the responsibility to recommend alternative distributions for Capital Improvement programs for 1974-1990.[1]

The increasing emphasis on providing aid to urban areas is quite evident in the new features of the national highway program, but it is still obvious that, in spite of mounting pressure, highway user taxes are not to be diverted to other modes. This pressure is mounting throughout the nation as more and more cities are expressing concern about federal aid for mass transit.

The federal government initiated support for mass transit in 1961, with amendments to federal housing legislation.[2] Later, direct Federal-aid for mass transit was initiated with the Urban Mass Transportation Act of 1964. The purposes of the Act include:

1. Coordinated assistance, between the Federal government and public and private transport companies, to help develop mass transit.

2. Planning and establishment of regional transit systems.

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[1]U.S. Department of Transportation, National Transportation Planning Manual, Manual A, General Instructions, (1970), p. 10.

[2]An extremely good discussion of how this federal program became inaugurated is presented in Urban Mass Transportation In Perspective, Tax Foundation, Inc., 50 Rockefeller Plaza, New York (April, 1968).

3. Assistance to States and localities in their support of transit finances and needs.[1]

The federal share of capital grants was limited to a maximum of two-thirds of the cost that could not be readily financed from revenues. Most of the funds authorized under the 1964 Act have been directed mainly at the purchase of new equipment.

The Urban Mass Transportation Assistance Act of 1970 was a major change in urban transportation policy, providing $3.1 billion in federal funds for public transportation for a five year period as the first phase of a twelve year, $10 billion program. It is expected that this new program will provide the long-term guarantees of federal-aid necessary to developing state and local funds for the construction projects.[2] Funds are to be distributed in the form of loans or grants to states or local governments on a two-thirds/one-third match basis. Upon passage of the Act, the Department of Transportation immediately indicated initial priorities:

1. Some systems that are in danger of failing.
2. Improve existing systems.
3. Extend systems.
4. Develop new systems.

These two recent pieces of federal legislation seems to indicate a major urban orientation for future federal policy. There is recognition

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[1] Urban Mass Transportation Act of 1964, U.S. Code, Title 49, Sec. 1601 (1964).

[2] "The Urban Mass Transportation Assistance Act," Metropolitan Magazine, March-April, 1970, p. 23.

of the realities of highways and public transit needs for federal aid, instead of highways only; and a long range program for mass transit is now firmly established.

Even more recent, the reorganization of the railroad passenger lines into a new operating structure called Amtrak (initially called Railpax) was initiated May 1, 1971. Envisioned as a profit-making enterprise, the federally sponsored National Railroad Passenger Corporation was supported by legislation that provided $340 million for initial operating subsidy, and the authority to select the routes to retain service under the program. However, profits are obviously a secondary consideration, with the major goal being to determine whether or not the decline of rail passenger service can be arrested or reversed. One researcher suggests it can be done, since he finds rail patronage is a function of good service and feels that a radical approach (such as has been initiated) can lead to attractive service.[1] However, this remains to be demonstrated; but whether or not the major goal of rails successfully competing with the automobile and airplane is realized, the very fact that a rather radical approach to the problem was initiated is in itself a moderate measure of success.

There are many other elements of modern transportation programs, such as the initiation of the Airport Airways Trust Fund at the Federal level, the congressional concern over extending the Great Lakes shipping

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[1]Edward P. Patton, "National Railroad Passenger Corporation: Requiem or Renaissance?," High Speed Ground Transportation Journal, Vol. 5, No. 1 (Winter-Spring, 1971), pp. 83-93.

season, and the Northeast Corridor Demonstration Project to improve high speed ground transportation. These need not be discussed in detail to conclude that modern transportation programs and policies are greatly diversified and have a wide-ranging influence on the entire economic, social and political structure of the nation. As such, transportation programs and policies can be expected to remain the focus of national debate; a central concern of major issues of national development, and a major feature of alternative non-transportation policies.

Trends of Transportation Demand

Even with the continuation of major programs that emphasize long distance travel, such as the extension of the Interstate highway system, and the attempted revitalization of inter-city rail passenger service, there is ample evidence that the problems of urban mobility are becoming the dominant factors of public policy:

- the Federal Highway Act of 1962 established a requirement for comprehensive urban transportation planning,
- the 1964 Mass Transit Act, as amended, established the principle of federal aid to transit systems,
- The Federal Highway Act of 1970 explicitly defined urban street systems for financial support, and
- the 1970 Federal Mass Transportation Act established new support levels for urban mass transit.

These and others all indicate increasing Congressional interest in urban transportation policy.

Much is being written about the trend toward urbanization in the United States. In summarizing some of its major findings, the Advisory Commission on Intergovernmental Relations stated that future estimates

indicate a national population increase of about 73% by the year 2000, practically all of it urban.[1] This means an expansion in the size and population of existing metropolitan areas and the emergence of new urban centers. Analysts also draw some other conclusions that are highly important to generalizations about future transportation demands:

1. There will be an increase in the geographical size of metropolitan areas -- using Bureau of the Census definition of an area that is economically and socially linked with the politically determined central city having a population of at least 50,000.

2. There will be a decline of the relative importance of the central city. The trend toward centralization of the metropolitan area will continue.

3. The above decentralization of the metropolitan area will bring dispersal, not recentralization in the outlying areas. Relatively high - density residential and employment nodes may develop, but it is unlikely that these nodes will rival the densities of the central cities.[2]

Thus, the pattern of the future appears to be that of the dispersed city, with at least a relative decline of the importance of the central city and no real centralization of travel attractors in the suburban fringe.

Balanced Transportation

As urban areas disperse, and the importance of the central business district declines in relation to the overall community, the

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[1]U.S., Advisory Commission on Intergovernmental Relations, Urban and Rural America: Policies for Future Growth, ACIR Report A-32 (Washington, D.C.: Government Printing Office, 1968), p. 124.

[2]U.S., Department of Commerce, Prospects for Urban Transit (Prepared by Charles Rivers Associates, Inc., Cambridge, Mass.: 1970), pp. 1-2 (Mimeographed).

origins and destinations of trips can be expected to become more varied. Urban travel demands can be expected to require increasing flexibility. This seems to indicate that the current trend toward ever-increasing auto trips will continue, and that public mass transportation trips will continue to play a small part in urban mobility. However, the emphasis on public mass transportation in recent legislation and federal funding programs indicates that it is a national goal to achieve "balanced" transportation in urban areas.

This goal is implied, but there is no widespread agreement in evidence, although considerable debate has been generated. The problem seems to be that the supporting objectives are not clear, and the main arguments of the debate are often mutually inconsistent. Yet, if even a few basic objectives that are clearly not inconsistent can be presented, then it can be shown that balanced transportation is in the public interest, and can be legitimately supported by top level policy-makers.

In a special report published in a national magazine, the Federal Highway Administration presented a survey of influential people in the highway "community." Among their responses, there is a statement of objective that seems to have widespread agreement.

> It is foreseen that the desire for independent mobility provided by the automobile will continue, but that the sheer limitations of space - on the streets and in parking places - will create high levels of congestion.[1]

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[1] "The Role Of Highway Transportation In The Seventies," Nation's Cities Magazine, July, 1971, (Special Reprint).

This supports an objective of improving auto-highway mobility in urban areas by diverting some trips to public mass transportation, which is a narrow view of needed balance, suggesting that balanced transportation requirements are internally important to the transportation system only. A broader view is one that has been well expressed by Webber and Angel:

> For the poor, the young, the aged, and the infirm, the rise of the auto-driver-highway system has represented a net loss. Wherever these groups have lacked either a vehicle or driver, the system has not worked well for them. Further, where the popularity of the system has spelled the demise of high quality public transit service, or has induced a spatial reorganization of the metropolitan area, their losses have been compounded.[1]

This view of needed balance suggests that there are legitimate balanced transportation requirements that are external to the transportation system, supporting the objective of improving mobility for the disadadvantaged. This appears to be an objective that can receive widespread agreement among policy-makers.

Of course there are other objectives, such as those that relate to comfort, convenience and safety; and those that relate to minimization of a wide range of social costs, such as decreased disruption of neighborhood structure and the pre-emption of property that might be used for other purposes. However, if the above major objectives are acceptable, it should not be necessary to examine all others in order to accept the need for both highway system programs and improved urban mass transportation in striving for balance.

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[1]Webber and Angel, The Social Context For Transport Policy, p. 67.

System Integration

The solution to national urban transportation problems is such a complex subject area that it is impossible to present a comprehensive discussion of all aspects in any single analysis. Because of the complexity, it is likewise unreasonable to expect that any solution will have universal application as the best for all urban areas. Therefore, this discussion will be limited to only some fundamental aspects of urban transportation.

Finding that balanced transportation will likely require both continued emphasis on automobile transportation and some form of public mass transportation, the alternatives of how best to provide for system integration must focus upon the service characteristics of various modes. In much of the literature, future possibilities are discussed in theoretical terms, seemingly limited only by the extent of technical imagination. While the development of totally new technological systems must be pursued, the current problems are pretty much limited to the use of existing systems. These are in three basic categories; the automobile-highway system, bus systems, and fixed rail systems.

Within these three categories, there are some basic facts: the auto-highway system exists, not always functioning satisfactorily, but capable of greater use; bus systems are also in operation, but in most instances, usage continues to decline; and rail transit systems, taking years to build, must be started soon if they are to be expected to play a significant role in urban transportation in the near future.

In a discussion of these alternatives, the Charles Rivers, Inc., study included the statement:

> It was concluded that the existing technologies are unlikely to divert many travelers from the automobile and accordingly are unlikely to reduce substantially the demand for urban freeway construction. . . . The facts of the matter are that easy alternative solutions do not exist. The provision of conventional line haul transit service, whether on rails (the alternative usually suggested) or somewhat more flexible bus transit, does not provide the kind of travel service necessary to attract the bulk of person trips in our urban areas.[1]

While this finding is very pessimistic in regard to the possible effectiveness of multi-modal systems, the study also offered:

> To the extent that mass transportation investments are to be made in urban areas, there would be great gains from emphasizing the most flexible forms of transportation. Bus operations offer such flexibility in terms of route selection, while in addition performing collection and distribution functions in a superior fashion.[2]

The above suggests that short range urban transportation problems are going to be extremely difficult to solve, if they are solved at all. It is quite clear that continued urban highway programs are vital, and that the current priority emphasis on improving bus transportation is the proper policy position.

In a study of how it might be possible to attract more riders to busses, it was found that even "free transit" would have little impact upon ridership trends, since ridership is more sensitive to service quality

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[1] Prospects For Urban Transit, P. 43.

[2] Ibid., p. 41.

than to price.[1] This implies that the greatest efforts toward providing integrated transportation service should be directed at improving transportation quality of service, and not be too concerned with the concept of overall efficiency. In support of this view the authors of this research quoted from another study:

> The ultimate test of a transportation system lies not in any techno-economic indices of efficiency, but in the extent to which it finds acceptance within the total value scheme of the community it serves.[2]

Understanding the total value scheme of the community to be served is the function of the planning process, and it seems clear that the difficult task of providing for the integration of transportation systems will require the very best application of comprehensive planning that can be developed. It must include concern for a wide range of inter-relationships between urban development and transportation facilities; the possible effects of new technology, the alternative arrangement of land uses, and the need to adopt transportation systems to serve a vast array of social objectives.

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[1]Thomas A. Domencich and Gerald Kraft, Free Transit (Charles Rivers Associates, Inc., Lexington, Mass.: D.C. Heath and Company, 1970), p. 76.

[2]A. Sheffer Lang and Richard M. Soberman, Urban Rail Transit: Its Economics and Technology (Cambridge, Mass.: M.I.T. Press, 1964), p. 90.

CHAPTER III

TRANSPORTATION PLANNING

In a treatise on interorganizational relationships, a prominent social scientist states "the environmental contexts in which organizations exist are changing, at an increasing rate and toward increasing complexity," and suggests that "the environmental contexts themselves become an important subject for analysis."[1] With the demonstrated importance of the transportation function, it seems his statement has particular relevance to transportation organizations, and the transportation planning process as the "environmental context" most warranting analysis.

Planning can be defined as a process that leads to identification of desired direction and the orderly development of programs through systematic consideration of all relevant variables. By definition, then, planning is thus responsive to a wide range of variables that are external to the organization, and should be most sensitive to changing conditions. Because planning is a major support function to administration, it should be a particularly influential force within an organization. Therefore, a

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[1]Roland L. Warren, "The Interorganizational Field As A Focus For Investigation," Administrative Science Quarterly, (Dec., 1967), pp. 396-419.

thorough analysis of the transportation planning process, its history and evolution, seems warranted.

The Transportation Planning Function

It is axiomatic that a continual search for the best possible basis for decisions is inherent in the administration of any organization. Providing the support material for management decisions is a primary function of planning, insuring that specific projects are compatible with the organization's mission and that such decisions are based upon the best possible analysis.

Transportation Planning, and highway planning in particular, may very well be the strongest application of the planning process among public agencies. It has become a highly integrated part of the decision making process, utilizing an interdisciplinary approach, with well developed sources of basic data and sophisticated analytical techniques.

That transportation planning is so well developed is due to both the lengthy history of the nation's highway program and to its size, as well as to a general understanding of the broad-scale impact that improved highways have upon every aspect of our life. In another direction, it is in no small measure due to the long history of federal participation in state highway programs. As early as 1935, with passage of the Hayden-Cartwright Act, Congress made a percentage of federal-aid funds available for gathering needed factual information as a basis for future highway planning.

> From the beginning, it was made clear that (these studies). . . were to consist of a variety of related investigations. . . so planned as to supply all of the

> facts needed for intelligent highway planning. They were not to concern themselves solely with the highway as a problem of construction, or of public administration, or of finance; but with highways as the facilities of highway transportation; and with highway transportation as a department of a larger transportation system. They were not to establish the facts of the present only, though such facts were the first and most urgent need; but were to seek further to trace out the trends that would permit a reasonable estimate to be formed of the ways and degrees in which these facts may be altered by new economic and social forces now at work on them.[1]

These funds lent emphasis to comprehensive highway planning and started the continuing process of fact gathering which supported a long-range approach to highway system development. But with rapid increases in traffic volumes and expanding construction programs, the primary emphasis has shifted over the years more toward project planning, evaluation of the highway operation and development of techniques to build better highways. Even so, the important result of this key legislation was to establish independent funding of planning activities as a continuing highway department function, with the level of funding determined by the increasing levels of federal-aid for highway programs.

At nearly the same time as the Hayden-Cartwright Act was being implemented in Michigan, a State Planning Commission was created "to administer available federal funds, to prevent waste and to provide efficient use of land and natural resouces."[2] After a 10-year experience, in which very little seemed to be accomplished, the Commission was abolished

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[1]N.S. Fairbanks, "Objects and Methods of the Statewide Highway Planning Surveys" (paper presented to the American Association of State Highway Officials), Washington, D.C., Dec. 8, 1936. (Mimeographed)

[2]Michigan, Department of State Highways, Engineering Development Committee Progress Report, Nov. 21, 1961. (Typewritten.)

in 1947, and a Department of Economic Development established to carry on some of its functions.

The creation of the State Planning Commission was part of a national trend of institution building that accompanied the array of new federal programs to combat the depression. One researcher describes the situational context of the trend this way:

> Partly as an outgrowth of an increasingly complex social system that had required government intervention for the building of canals and railroads in the nineteenth century, the provision of highways before World War I, and the attempt to control urban development through the zoning and city planning movement of the late 1920's; partly from the disillusionment and rejection of the old social order that had brought such economic ruin to the nation; and partly due to the then recent successes of the First Five Year Plan in Russia, the feeling arose that a new rationality - long range comprehensive planning - could create an orderly world in which the reality of the future could be neatly placed.[1]

The result was that all states, except Delaware, had state planning boards by 1936 so they would be eligible for public works projects.[2]

These two examples of past efforts to institutionalize planning are important to understanding current planning interests. The first typifies the strengthening planning programs of individual agencies, especially highway planning, that, with federal support, have undergone continual improvement in providing the means to support the agency's functions. The latter, the initial attempt to establish a centralized planning function at the state level, which has had little demonstrated success.

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[1]Donald N. Rothblatt, Regional Planning: The Appalachian Experience (Lexington, Mass.: D.C. Heath and Co., 1971), p. 28.

[2]Ibid., p. 30.

But supporting project decision making is too narrow a concept of agency planning. Since all government planning, by definition, must be responsive to the needs of the people it effects and serves, there is even greater emphasis upon the comprehensive aspects of such functional planning. The needs of the people are extremely complex, with the problems of poverty, discrimination, pollution, urban decay, economic decline of rural areas, needed jobs, housing and more public services beyond the capacity of any single agency or institution to resolve. Perhaps this was part of the reason for the decline of centralized planning attempts such as the State Planning Commission, and the emergence of increasing efforts toward comprehensive planning on the part of individual agencies. And efforts to insure comprehensiveness of agency programs are increasing at a rapid rate, especially those programs utilizing federal-aid. Two bench mark requirements regarding the federal-aid highway program spanning the past decade illustrate this very well: The Federal-aid Highway Act of 1962 which requires a continuing comprehensive transportation planning process for all urbanized areas over 50,000 population; and the National Environmental Policy Act of 1969 (NEPA) which is intended to insure that environmental values are given appropriate consideration in the development of federal-aid projects.

The 1962 legislation was designed to insure that urban interests had a direct participatory role in planning urban transportation systems, with the words:

> the development of long-range highway plans and programs which are properly coordinated with plans for improvements in other affected forms of transportation

> and which are formulated with due consideration to the probable effect on the future development of urban areas . . .[1]

There is substantial evidence that something less than the full potential of these urban desires for a meaningful role have been realized, yet even critics of the way the requirements has been implemented will acknowledge that there was some major change:

> First, acceptance by highway officials of the principles of local participation and coordinated land use, highway and transit planning, has led to reformulations of highway program doctrine . . . providing an opening - if only a narrow one - to outside interests urging changes in policies and procedures . . . .
>
> Second . . . while local participation has been confined to sharing in certain administrative and technical responsibilities - rather than authority for basic program decisions - a metropolitan areawide base has nonetheless been created for a potentially more meaningful local role in the future.
>
> Third, transportation planning concepts and techniques stress the relationship between land use and travel demand patterns. This has provided entry into the transportation planning process by local and metropolitan agencies specializing in land use planning, control, and development. While most of these agencies now function more or less as data collectors for state highway departments, they are also agents of urban planning and community development values.[2]

These changes indicate a shift from concern for urban highways as "special problem" extensions of the statewide network to a broader concern for the total urban environment. Its apparent direction, whether or not it was accomplished, was to shift some of the power from state highway

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[1] Federal-Aid Highway Act of 1962, U.S. Code, Title 23, Sec. 134 (1962).

[2] Thomas A. Morehouse, "The 1962 Highway Act: A Study In Artful Interpretation," A.I.P. Journal, (May, 1969), pp. 160-168.

agencies to the local communities, and force comprehensive planning, supported in large measure by highway planning funds. Of special significance is the acceptance of the philosophy that transportation problems warrant a whole new order of intergovernmental cooperation for their most beneficial solution as part of a larger system of urban area problems.

The National Environmental Policy Act probably will have its most direct effect upon the highway construction program, both because of the magnitude of the program, and its direct impact upon the natural environment. In support of environmental protection, there are two essential performance requirements:

1. Utilization of a systematic, interdisciplinary approach which will insure the integrated use of the natural and social sciences and the environmental design arts in planning and decision making.

2. Include in every recommendation or report, a detailed statement on:

   a) the reason for the project;

   b) the probable environmental impact;

   c) any probable environmental effect that cannot be avoided; and

   d) a discussion of problems and objections, and the disposition of issues involved.[1]

The specific requirements leave little doubt that it is consistent with the trend toward requiring a shift in highway planning from the primary interest in engineering excellence to a more comprehensive investigation of a wide range of values, with the burden of compliance placed

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[1] National Environmental Policy Act of 1969, U.S. Code, Title 42, Sec. 4332 (1970).

squarely upon the highway agency.

In between these two pieces of landmark legislation, there have been federal requirements for regional and state project review requirements, so that all agencies will be able to be knowledgeable of various projects and programs; expansion of required public hearings so that individuals may make significant comments at a meaningful stage of federal-aid projects; and various support requirements for local and regional planning effort and inter-agency cooperation at all levels of government. These are examples of shifting attitudes that are having an important effect upon the direction of future transportation programs. If these reveal a basic trend, it may be concluded that there will be additional shifts in attitudes that may have even more significant influence on future program direction. It may even be concluded that these shifts will occur with increasing frequency. To attempt to gain some insight as to the future direction and emphasis, it is necessary to examine in some depth both the federal and state interests in development of comprehensive planning.

The Federal Role

It is quite obvious that the federal government is exerting the basic leadership toward comprehensive planning through increasing requirements tied to use of federal-aid funds, not only in transportation, but in most other areas as well. The scale of these efforts can be related to the size and diversity of federal-aid programs:

> Federal aid to state and local governments has grown at a rapid rate in recent years. The largest portion of this aid has been in the form of grants,

> and statistics measuring the acceleration of their increases are impressive. During the ten-year period 1955-1965, federal grants-in-aid to states and their political subdivisions more than tripled, from $3 billion to $10.9 billion, and in fiscal 1967 alone, such grants will total an estimated $15.4 billion. The estimated total for fiscal 1968 is $17.4 billion, an increase of more than $2 billion over the 1967 figure.
>
> Over a period of years, federal grants have developed rapidly, until to varying degrees, they now support many governmental services. This development has occurred in somewhat of a haphazard patchwork fashion with the result that many programs have a different policy and a different administration procedure. However, federal aid will continue to be an important element of state fiscal planning in the future.[1]

By 1967, there were over 170 separate federal aid programs, most of which stipulated, as a precondition of receiving funds, that some form of local planning be accomplished.[2] This trend, with its problems of priorities and accountability is the fundamental reason why there is a growing federal interest toward comprehensive intergovernmental program implementation, implying a significant role for state government. Support for this point of view can be found in the administrative procedures that the federal agencies are themselves adopting. A very good example is the formal agreement between the Department of Housing and Urban Development, The Department of Agriculture, and The Economic Development Administration On "Planning Assistance to Substate Multi-Jurisdictional Areas,"

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[1]Michigan, Executive Office, Bureau of the Budget, Recent Trends In Federal Aid To State Government In Michigan, n.d.

[2]Gordon C. Cameron, Regional Economic Development: The Federal Role (Resources for the Future, Inc., Baltimore: Johns Hopkins Press, 1970), p. 117.

which was signed on July 10, 1970.[1] This Memorandum was prepared and implemented in accordance with the Intergovernmental Cooperation Act of 1968, which specified that federal agencies administering development assistance programs will consult with other affected agencies in an effort to assure fully coordinated programs. It made reference to multi-jurisdictional cooperation requirements ordered by the President, outlined in Bureau of the Budget Circular A-80, dated January, 1967, and its implementation device outlined in Bureau of the Budget Circular A-95 which ordered "clearinghouse procedures" for federal-aid project review.

The clearinghouse procedures were established by the Bureau of the Budget, providing that after September 30, 1969, any applicant for federal aid under some fifty specified programs must participate in a "Project Notification and Review System" which allows agencies that might be affected to review the project before it is considered by the federal agency. A major provision provides that the Governor establish a state clearinghouse to be responsible for statewide relationships and plans where coordination is necessary.[2]

Thus, there is a definite trend toward greater state level effort in comprehensive planning and program development emerging from a definable federal posture of requiring such involvement as part of the federal aid process. It suggests a key role of state government in our federal

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[1]The general purpose of this "Memorandum of Agreement" was to establish a continuing working relationship in support of comprehensive planning at the multi-county level.

[2]U.S., Executive Office of the President, Bureau of the Budget, Bureau of the Budget Circular A-95, What It Is, How It Works, Circular Memorandum Series (1969).

structure of government; a role that the states will have to respond to with new institutional programs, procedures and, most of all, a new sense of cooperation with all levels of government.

The State Role

Regardless of the increasing importance of federal aid in transportation programs, it is a fact that the states control the program and the expenditure of those funds. Even though the federal government can, and does, place strict requirements upon eligible projects, it is the state that develops a plan and initiates a project. This is the basic difference between "formula" grants-in-aid and "project" grants, the two major sources of federal revenue. The former provides the states with funds based upon formulas that are written into law, and the latter are distributed to the states (and local governments) on the basis of some consideration of need and priority evaluation conducted by the federal government.

The other important source of state transportation funds is the traditional user tax, generally restricted to a specific use (highway projects). Together, these provide a dependable support base for long-range program expenditures. Programs several years in advance of actual improvement can be planned, publicly identified, and constructed on schedule. Thus, important support can be generated from local governments and influential private interests.

The state's role in transportation varies greatly between modes. Except for highways and air, the state's responsibility has primarily been in the areas of registration, licensing and regulation. In Michigan,

the Aeronautics Commission has long been involved in assisting local governments develop airports, yet airports are locally controlled and operated, and the major impetus must come from the local units of government. Unquestionably, the major involvement of state government is in the highway mode. In addition to direct control over some 9,200 miles of roads and streets making up the State Trunk Line Highway System, this involvement includes the collection and redistribution of hundreds of millions of tax dollars to local governments to be used on the roads and streets under their jurisdiction.

From the above facts, several important conclusions can be drawn:

1. There is a strong historical posture of state highway departments being relatively autonomous agencies of state government, supported by restricted funds and general public acceptance.

2. The long-range nature of transportation programs are such that little project interest can be generated by political forces primarily interested in short-range (crisis) situations.

3. Transportation programs are an important, even critical, element of any long-range comprehensive plan, and thus can be used to generate substantial constituent support from both local governments and influential private interests.

Other forms of state planning seem to suffer from deficiencies in direct contrast to the strength of the transportation planning process. A recent introspective examination of state planning capabilities indicates these deficiencies do exist:

> I do not want to belittle the statistics which are often quoted to illustrate the growth of state planning during the past 10 years. As a program, state planning has shown impressive virility; but as an institution, particularly as a staff function

> of the Governor, is still unusual, however, and where it does exist it probably possesses far more in terms of potential than in terms of actual influence.[1]

The basic problem with non-transportation state level planning seems to be with the short range nature of programs developed in response to legislated funds and the crisis political orientation of officials that are elected for short terms. Added to this can be the understandable desire of agencies depending upon legislated funds to defer from controversial issues in which no broadly based constituent support can be generated.

The contrast between state level transportation planning and general state level planning seems to indicate that the former, if properly organized, could have beneficial implications for reinforcing other state planning; even to the point of achieving a comprehensive state planning process. It seems that transportation planning could become the central focus around which an effective state planning process could be organized. Ideally, in planning a transportation system, its functional characteristics should be specified on the basis of the tasks it is to perform. The determination of these tasks should be the central feature of a comprehensive state planning process. The future growth of urban centers should be specified in order to develop transportation plans to encourage that growth. Land use guidelines should be specified, so that the transportation systems can be developed within the concepts of protecting irreplaceable values. Growth centers should be identified so that transportation improvements can be planned to support those centers and encourage growth.

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[1]Charles T. Lanigan, "Trends In State Planning In Relation To The Governor and State Agencies," Planning 1968, Selected Papers from the American Society of Planning Officials National Planning Conference (Chicago: American Society of Planning Officials, 1968), pp. 248-253.

Such concepts have been utilized as the basis for some inter-organizational planning efforts that have taken place in Michigan in recent years. These were significant efforts to develop better institutional approaches to comprehensive planning. These might be thought of as the preliminary stage of possible ultimate reorganization, with some progress and some failures; but providing the base of experience necessary for future success.

Attempts To Integrate State Planning In Michigan

While there are numerous examples of federal pressure for greater intergovernmental cooperation over the past decade, none were as effective in creating a formal state planning posture in Michigan as the liberalized interpretation of Section 701, Federal Housing Act of 1954, which made funds available to state government for comprehensive planning. Through cooperative effort of "about twenty state agencies" an application for a federal grant from the Housing and Home Finance Administration was initiated in 1962.[1] The application specified how the state agencies expected to become eligible for the grant, and described how any funds contained in the agencies budgets that were designated for planning (and were not part of a federal program requirement) could be used as the state matching funds to obtain a 2/3 federal - 1/3 state program grant. Thus $375,000 of wages in the various departments were utilized to obtain a $750,000 grant of federal funds, for a $1,125,000 State Resource

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[1]Michigan, Department of Administration, A State Resource Development Planning Program For Michigan (An Abstract of the Grant Application to the U.S. Housing and Home Finance Agency, Sept. 1962).

Development Planning Program.[1]

The organizational arrangement for managing this program provided for an "Inter-Departmental Resource Development Committee" made up of participating agencies, with single agencies selected to be directly responsible for five major plan elements:

ECONOMIC BASE AND POPULATION - Department of Economic Expansion

TRANSPORTATION - Highway Department

RECREATION - Conservation Department

LAND USE - Department of Economic Expansion

PUBLIC FACILITIES - Department of Administration

Through additional grants being obtained in the same way, the State Resource Planning Program extended through 1967, but with continual modification and revision.[2] Part of these revisions resulted in a shift of direct management into the Executive Office of the Governor, where a continuing state planning program now is part of the Budget Office.

Although there was no published evaluation of the State Resource Planning Program, a review of official reports reveals that the program was highly project oriented, designed either to provide analyses of subject areas of special concern to specific agencies, or to develop working models of segments of the study elements through highly technical research. Some results of the State Resource Planning Program were documented in a series of Technical Reports produced as a requirement of the

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[1]Michigan Department of State Highways, State Resource Planning Program, File Memoranda, 1967 (Typewritten).

[2]Ibid.

federal grant. These reports for the Transportation Element reveal that the research primarily produced mathematical models for:

- predicting the amount of general aviation;
- estimating future traffic on the rural links of the highway system; and
- examination of predictions of boat populations and boating needs of 1980, and the development of statistical data to establish trends in the shipping mode and to establish a basis for predictive procedures.[1]

Further, it was specifically acknowledged that an "ultimate statewide transportation plan" was not developed, but that a major result was to reinforce the widely-held belief that a single transportation agency should be created.

It thus appears that most of the effort was used to supplement existing agency planning by expanding it into new areas. Although this kind of effort cannot be classified as "comprehensive state planning," it is certain to have influenced state agencies to expand their own planning capabilities and provided a climate of greater cooperative efforts.

The lack of success in developing a state-level comprehensive transportation planning process is certain to have had an organizational influence on the later creation of the Michigan Interagency Transportation Council (I.T.C.), created by Executive Order of the Governor. Extracts from the Executive Order reveal that the Council concept was a direct effort to establish a stronger organization and a more specific approach to comprehensive transportation planning at the state level:

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[1]Michigan, Department of Commerce, Transportation Predictive Procedures - Summary Report, Technical Report No. 9, State Resource Planning Program (Dec., 1966).

WHEREAS, solutions to our problems can be reached only through efficient and comprehensive planning, coordinating the efforts of the respective agencies responsible for the regulation of the various transportation functions affecting the state; . . .

THEREFORE, I, William G. Milliken, Governor of the State of Michigan, pursuant to Act 195 of the Public Acts of 1931, do hereby ordain and establish the Interagency Transportation Council to be situated within the Executive Office of the Governor.

The Council's standing membership shall be as follows:

Director, Department of State Highways, Chairman

Director, Department of Commerce

Director, Department of Natural Resources

Director, Michigan Aeronautics Commission

Chairman, Michigan Public Service Commission

Director, Bureau of the Budget - ex officio

Executive Assistant, Bureau of Policy and Programs - ex officio

The Council shall have and maintain its own permanent staff, whose efforts may be supplemented by personnel assigned to the Council from its constituent agencies as well as by the services of private consultants retained by the Council.

An Executive Director of the Council shall be appointed by the Governor from recommendations made to him by the Council . . . .

The Council's general but not delimited authority and function is as follows:

It is established to provide a single central body at the state level for the purpose of achieving comprehensive transportation planning . . . .[1]

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[1]Michigan, Executive Order 1969-2, 1969.

The requirement that the state's transportation agency heads serve collectively as the program managers, and the establishment of a single position of Executive Director seems to be two important means of insuring that a truely comprehensive approach to the state's transportation problems was undertaken. Further, the $250,000 annual budget established to support the Council's program was made up of a transfer of funds from constituent agencies, with some from the State's general fund representing a contribution from the member agencies who did not have a restricted fund base.[1]

Like the State Resource Planning Program, the Interagency Transportation Council engaged the services of a consultant at an early date. The first Annual Report of the Council's activities states:

> In addition to establishing the Council membership, the Executive Order specified the tasks to be undertaken. These tasks were categorized into five major activities . . . .
>
> ACTIVITY A - DEVELOP THE CAPABILITIES NECESSARY TO ACHIEVE COMPREHENSIVE COORDINATED TRANSPORTATION PLANNING IN THE STATE OF MICHIGAN.
>
> It was recognized at the outset of this activity that the major effort would consist of the development of a modeling system to use in the evaluation of alternative transportation programs; . . . urban passenger travel, intercity passenger travel, and freight and energy transmission . . . .
>
> ACTIVITY B - IDENTIFY POLICY ISSUES OF IMPORTANCE TO THE STATE OF MICHIGAN.
>
> The system of models being developed in Activity B are designed to evaluate policy questions involving (1) state development goals, (2) proposed changes in the physical system used to provide transportation services and (3) regulation of fares charged for transporting commodities . . . .

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[1]Michigan, Executive Budget Bill, HB 2045, Introduced Jan., 1969.

> Possible sources of important policy issues were explored, including pending Federal legislation, proposed activities of the private transportation sector in Michigan, and plans of the member departments.
>
> Six major policy areas were identified which will have a significant impact on the future of transportation in Michigan: . . .
>
> Utility Corridors
> New Towns
> High Speed Corridor Transportation
> Regional Airport Development
> The Highway Trust Fund
> State Department of Transportation
>
> ACTIVITY C - PREPARE SPECIAL STUDY REPORTS FOR THE GOVERNOR.
>
> Governor Milliken requested the Council to prepare a position paper on the state's role in public mass transportation . . . .
>
> ACTIVITY D - REVIEW PROPOSED STATE AND FEDERAL LEGISLATION TO DETERMINE ITS IMPACT ON TRANSPORTATION IN MICHIGAN.
>
> A procedure for the review of all legislation introduced in the State Senate and House of Representatives was established . . . .
>
> ACTIVITY E - REVIEW PROGRAMS OF MEMBER AGENCIES AND DEPARTMENTS.
>
> This activity is predicated on the operation of the model system being developed in Activity A . . . .[1]

In comparison, the Interagency Transportation Council outlined a much more ambitious program than the preceding State Resource Planning Program. The only real similarities were in the involvement of more than one state transportation agency in cooperative projects, and in the basic characteristics of the technical modeling processes. However, the models developed within "Activity A" of the I.T.C. program were designed to

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[1]Michigan, Executive Office of the Governor, Interagency Transportation Council, Annual Report, June 30, 1969.

utilize much less precise data inputs, oriented more toward "sensitivity analysis," enabling later effort to be directed at refining only those data that are found to be critical to policy development. On the other hand, the models pioneered within the State Resource Planning Program were designed to provide much greater detail as to actual projections of transportation facility use. These are thus complementary efforts, representing both "coarse-grained" and "fine-grained" projection techniques, with the characteristics of "granularity" determining the precision of the projections as well as the degree of difficulty in operating the models.

The other I.T.C. "Activity" categories have a much shorter time horizon, with a more direct relationship to current policy issues. The result has been to make the overall program extremely relevant to each of the participating agencies, thus gaining their direct involvement throughout the program.

Then, too, there is the difference between the basic organizational structure devised for the two programs. The I.T.C. structure directly involved the administrative heads of the participating agencies, provided for direct accountability on the part of the Executive Director and his staff, and gained the operational interest of the Governor by having the Executive Director assigned directly to the Executive Office.

This empirical review of two major efforts to organize a comprehensive planning process at the state level reveals the extent to which the need for improved coordination has been recognized by both the operating agencies and the Governor. In particular, it has also shown that transportation planning is highly amenable to such coordinated effort.

At the Federal level, the need for a greater degree of coordination has also received specific attention by the structure of the current "National Transportation Planning Study." Three basic purposes have been established for the conduct of this national study:

1. Encourage cooperative comprehensive and continuing planning by each state and by each metropolitan area covering the provision of publicly used transportation facilities and services.

2. Help develop a recommended program of federal transportation expenditures up to 1990 which is coordinated with state and local plans and programs.

3. Collect information to increase the effectiveness of the allocation of federal resouces.[1]

The objective of the Study is to determine the financial needs for all modes, and the procedure is designed to directly involve the state governors in the formulation of priorities for the capital improvement programs to be submitted by each state. This is a great change from past federal "needs" studies, which have been structured to reflect only highway needs, and involve only the highway departments of each state. In fact, the change can be traced directly to a shift in transportation emphasis within the Federal Department of Transportation. The authorization for the National Study is derived from a congressional mandate to study the national highway needs, and has been interpreted by DOT officials to require a comprehensive study of all modes requiring the involvement of state governors.[2]

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[1]U.S., Department of Transportation, National Transportation Planning Manual, Manual A, 1970.

[2]Senate Joint Resolution 81, approved August, 1965, simply calls for reports on the "estimates of the future highway needs of the nation."

This shift in emphasis from state highway departments to the governors is also in evidence in the more recent 1970 Federal-Aid Highway Act, which included an "Economic Growth Center Development Highway Program", which placed the responsibility for selecting growth centers to be benefited directly with the Governor, "with the advice of Highway Departments."[1] This program also specifies that proper channels of coordination among appropriate federal, state and local agencies must be established.

Thus, it can be shown that there are both overt and subtle pressures for change from both state and federal sources, leading slowly (but inexorably) toward integration of transportation planning with other state planning functions under the executive leadership of the Governor. These pressures logically lead to questions of reorganization of governmental structures, which are resulting in the creation of state Departments of Transportation in many states.

State Departments of Transportation (DOTs)

Growing concern for finding ways to solve complex and perplexing problems is the primary force underlying the pressures for changes in basic institutions. These pressures are especially strong in the area of transportation because it is generally recognized as a critical element in the problem areas of urban sprawl and central city deterioration, the untimely shifting of land uses, highway safety, and a whole range of

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[1]U.S., Department of Transportation, Federal Highway Administration, Instructional Memorandum 50-6-71, July 12, 1971.

environmental concerns. The role of transportation systems is being critically examined with a view to both the direct and indirect effects of various programs, identifying a wide range of consequences of not having some overall policy direction that can deal with such broadly based concerns. Attitudes are changing, new issues are being debated, and it is increasingly becoming apparent that a parochial approach to transportation is no longer acceptable.

In most expressions of concern, the emphasis is on better coordination of transportation modes. Among the various levels of government having varying degrees of responsibility for transportation, the special powers of state level government are especially amenable to centralizing coordination. State government historically has exercised the major functional responsibilities for highway systems, have been given legislated responsibility for other modes utilizing federal-aid, and, significantly, have broadly based taxing and bonding powers.

Some six years before the federal Department of Transportation was organized, the state of Hawaii institutionalized coordinated transportation programs by creating a state Department of Transportation (DOT). Within ten years, a total of twelve state DOTs had been created, with a number of others being considered.[1]

Each state DOT has individual characteristics in its organizational structure, stemming from varying mandates for program authority and functional responsibility. However, there are some areas of

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[1]Council of State Governments, State Departments of Transportation and Other Coordinating Mechanisms (Lexington, Ky.: 1970).

consistency. A recent study of the structure and operation of state DOTs concluded:

> 1. Transportation functions include highways, public mass transportation, harbors and ports, aeronautics, motor vehicle registration and driver licensing, and state highway patrols; but no one state DOT includes them all.
>
> 2. The greatest consistency among state DOTs is the inclusion of the state highway function as a major element of organization. All exercise responsibility for administration, development, maintenance and operation of a system of state highways.
>
> 3. A notable consistency is the assignment of responsibility to the departments for comprehensive transportation planning.
>
> 4. Each DOT is headed by a single executive, reporting directly to the state governor.
>
> 5. Only in Maryland has the creation of a state DOT involved a revolutionary departure in finance. The enabling legislation there provides for a single Transportation Trust Fund.
>
> 6. In summary, the highway function in the state DOTs continues to receive predominant emphasis and attention, as the largest member of the transportation modes. Progress is being made in integration of inter-modal transportation, basically along lines previously initiated by former highway departments. There appears to be closer control of transportation programs by governors, with legislatures continuing to establish broad policies and financing.[1]

From the amount of interest among the states over the past ten years, it is logical to conclude that other states will have DOTs in the near future. A leading authority on transportation programs suggests:

> State transportation departments, reflecting the integrated form of organization attempted by the creation of the Federal Department of Transportation, will

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[1]Highway Users Federation For Safety and Mobility, A Status Report of State Departments of Transportation (Washington, D.C.: 1970).

> find themselves in a better position to deal with the complex problems of our urbanized society . . . . While the redirection of federal tax money to promote more state participation and program direction (toward urban needs) is admirable in concept, the funds are likely to be dissipated in a maze of bureaucracy unless state reorganization replaces the present fragmentation of responsibility.[1]

Included in the material presenting the above conclusion was the following chart showing a typical layout of improved state planning functions as related to reorganized transportation responsibilities.

One of the major problems or reorganization is determining just which organizations should be included, and how to fit the personnel of the various agencies into a proper framework. In a recent conference on this topic, one state DOT chief executive stated that a major obstacle they still had to overcome was the resistance to change among employees.[2] This implies that resistance to change, especially among key agency personnel, can be a serious obstacle to the reorganization itself, being able to insist on so many compromises that some of the potential benefits of reorganization can be lost or significantly delayed. Another problem is quite obviously that of reallocating funds that might be restricted by either federal or state "earmarking" to necessary support services (such as administration).

In spite of the difficulties of reorganization, there does not seem to be any large body of detractors, and it does seem that state DOTs

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[1]Norman Ashford, "The Developing Role of State Government In Transportation," Traffic Quarterly, (October, 1968), pp. 455-467.

[2]George Conkling, Commissioner, Connecticut Department of Transportation; comment made during a general discussion at the Florida State University Conference "The States Role In Transportation," Tallahassee, Fla., September 24, 1970.

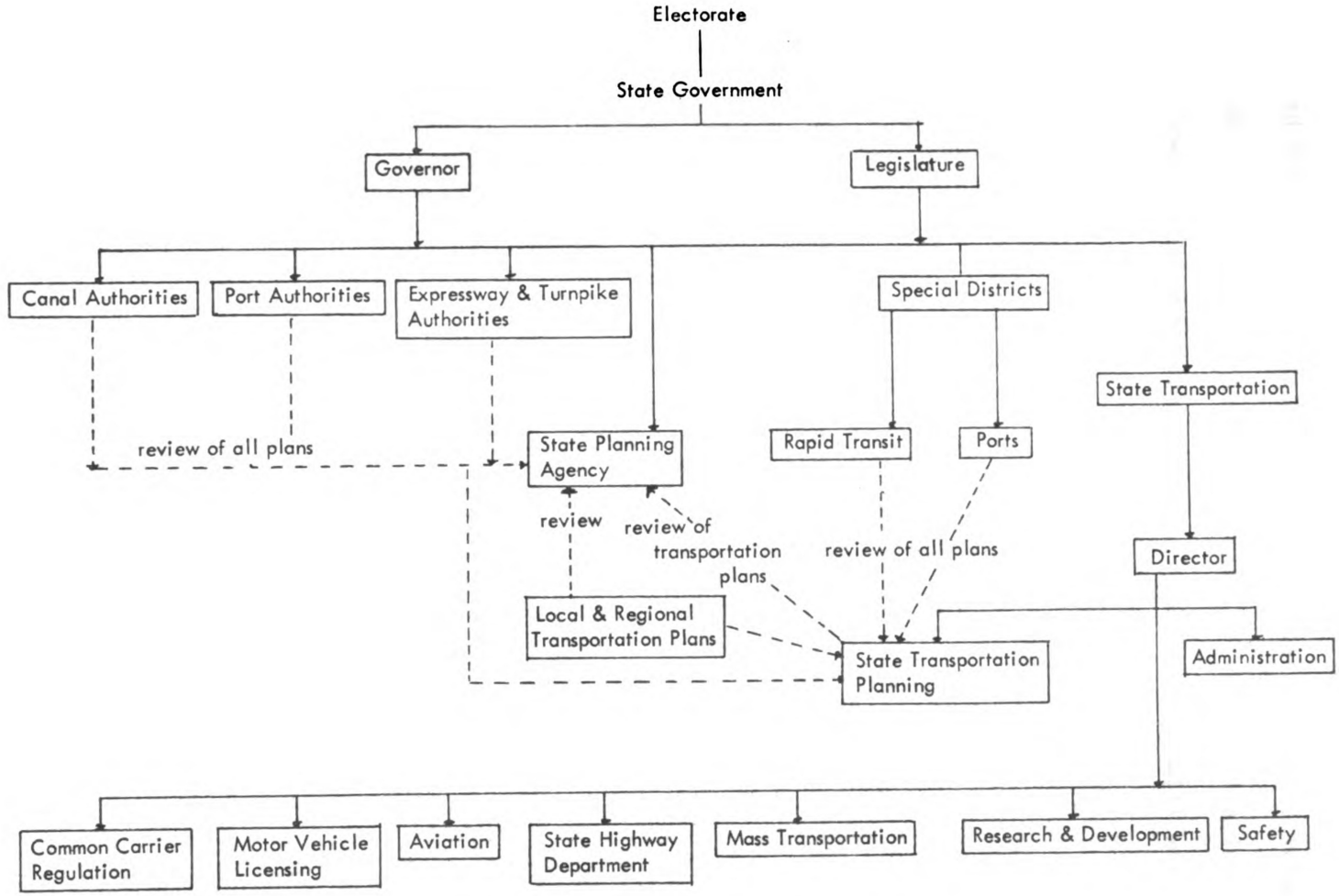

Figure 3: Typical Layout for Integration of Transportation Department Process Into State Development Plans

Source: Norman Ashford, "The Developing Role of State Government In Transportation," Traffic Quarterly, October, 1968.

are to be desired. In fact, at the Conference referred to above, the discussion consensus was that the fact of reorganization should be considered more important than the kind of operating structure that is devised. This can be interpreted: work for reorganization, then worry about how it will function, eventually everything will work out.

CHAPTER IV

IMPORTANT ELEMENTS IN THE ESTABLISHMENT OF A DEPARTMENT OF TRANSPORTATION FOR MICHIGAN

In a recent message to the Legislature, the Governor of Michigan indicated he would "expand the authority of the Highway Commission to include the functions of urban public transportation, waterborne freight, and inter-city rail passenger service."[1] However, he specified that this creation of a Michigan Department of Transportation by Executive Order would be dependent upon legislative passage of a series of measures outlining several basic changes in financing transportation improvements. These include a 1.3 cent motor fuel tax increase, an accelerated freeway construction program, and a new "Discretionary Fund" to help finance urban public transportation.

This announcement indicates that a state DOT for Michigan is a distinct possibility in the near future. But the requirement for legislative action is an important qualification. Had the Governor deemed that such reorganization was of critical importance in and of itself, it seems that it could have been accomplished directly by Executive Order, specifying that the new organization wrestle with the other issues. That a

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[1]Michigan, Executive Office of the Governor, Special Message To The Legislature On Transportation, March 11, 1971. (Mimeographed)

different, and more indirect political course was chosen implies that the overall process is extremely complex. The key areas of concern seem to be in the structure of the new organization and how it would function, the future allocation of tax revenue, and in the political aspects of bringing about the change. Analysis of these concerns should provide some insight as to the extent of the change that has been advocated and how such change will effect the future of Michigan.

Organizational Concepts

The brief reference to "expanding the authority of the Highway Commission" to include the responsibility for other modes of transportation incorporated in the Governor's Special Message on Transportation provided only a rough outline of the organization that might be created. Further detail was apparently left to others. Most appropriately, it would seem that such detail would be left to those gaining the enlarged responsibility, but this would be a very naive assumption considering the multiplicity of interests involved. The Governor did mention some specifics, however, and these should be incorporated into any review of the organizational concepts which might be devised:

> This new department will have responsibilities for development and implementation of our state highways program, a state mass transit program, a state air transportation program, our state intercity rail system, and our port and waterborne commerce program.[1]

At a later point in the Message, the Governor mentioned a single director in charge, with deputy directors for Highways, Aeronautics, and Urban and Public Transit. Although no organization chart was provided,

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[1] Ibid.

the above specifics seem clear enough to indicate the organization shown by Figure 4. However, the lack of mention of how important functions of

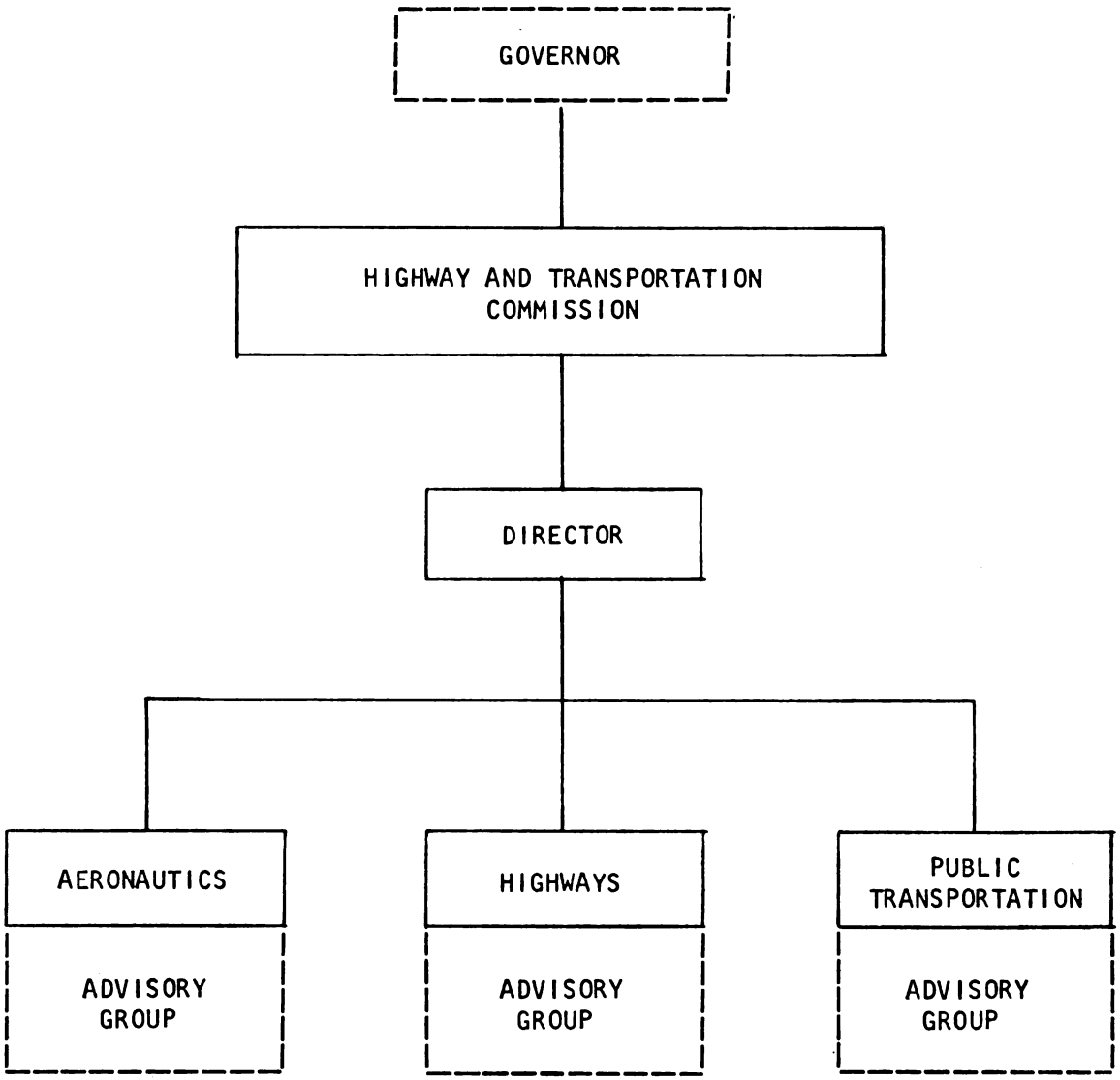

Figure 4: Basic Organization of Proposed Michigan DOT

administration and project planning are to be organized are a deficiency of this chart. Also no organizational reference is made to the organizational status of intercity rail systems and port and waterborne commerce responsibilities. These significant omissions seem to indicate that some alternative organizations need to be considered. Therefore, some analytical discussion of alternative concepts is warranted.

Integration of Modes

Aggregating the responsibility for all transportation modes implies a belief that improved administration can improve transportation decision-making. A review of existing state DOTs reveals two basic ways this is being attempted, with New York being different from all the others. The difference is in the degree of assimilation of the modes within the organizational framework.[1] The New York DOT does not have any reference to separate modes in its structural organization, as shown by Figure 5.

An organizational concept that stresses complete integration of modes can be termed low-modal. The advantage of this concept seems to be that a balanced consideration of the true effectiveness of each mode is more assured. There may also be certain economies through elimination of overlapping functions,

At the other extreme of the range of alternatives is the concept that would be termed high-modal, having specific parts of the organization

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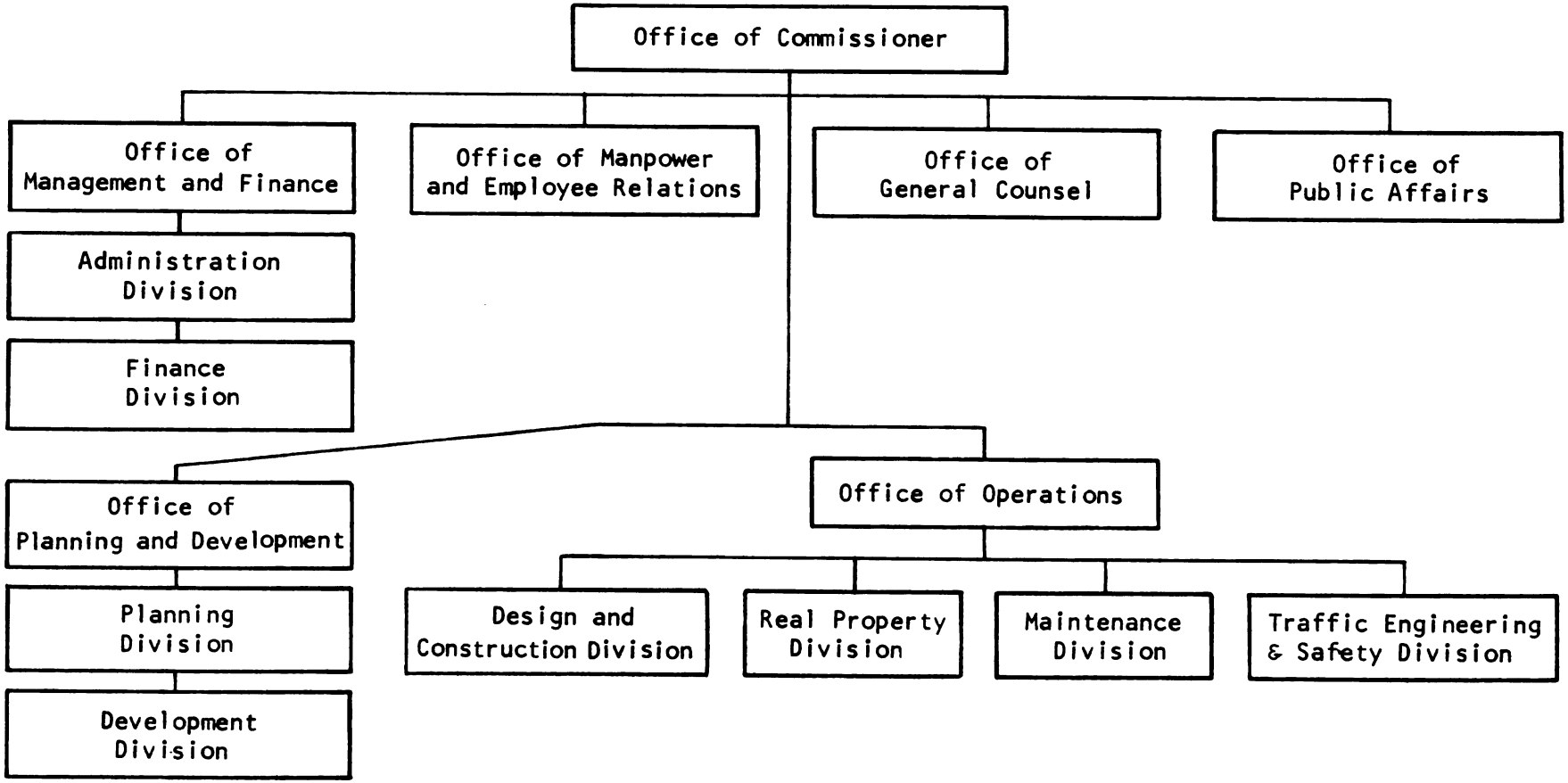
[1]Highway Users Federation For Safety and Mobility, Status Report on State Departments of Transportation.

STATE OF NEW YORK

STATE OF NEW YORK

ORGANIZATION CHART

DEPARTMENT OF TRANSPORTATION



Source: State Departments of Transportation and Other Coordinating Mechanisms, Council of State Governments, August, 1970.

Figure 5. New York Department of Transportation

fully responsible for each transportation mode. This is the type of organization implied in the Governor's Transportation Message, as shown previously by Figure 4. The advantages of this organizational concept seem to be those associated with the concentration of specialists within the organization to deal with the specifics of each mode. Another short-range benefit might be that of causing the least overall disruption during the process of reorganization.

A fundamental question is thus posed by these alternatives. Is the complete assimilation of the various modes necessary (or even desirable) to accomplish the objectives of reorganization? This leads directly to the need for an explicit set of objectives to which the need for reorganization itself can be referenced and against which the advantages and disadvantages of alternatives can be weighed.

Objectives of Reorganization

The most important benefit of change must be, of course, a better way of doing the things that need to be done. And since transportation functions are the primary concern of reorganization, a principal objective of creating a Michigan DOT is to achieve better administration of all the state's responsibilities for transportation in all modes. This involves the management of fiscal resources, the development of needed programs for system development and maintenance, improvement of inter-modal relationships, and overall policy integration.

It is reasonable to assume that each of the transportation agencies involved in the proposed reorganization already have well developed capabilities for managing their particular areas of concern. It seems that

little overall improvement can be achieved in the area of direct administration except for possible economies through elimination of duplicated functions.

The need for institutional change, however, has been generated from the pressures of perplexing problems of a generic nature rather than any particular problems of an individual mode. As discussed in previous chapters, these include:

1. The very complexity of modern transportation systems, involving a wide variety of both public and private interests for the functional operation of the various systems.

2. The tremendous importance of transportation to our society, including both the direct and indirect effects of all modes.

3. The growing national concern for the problems of increasing urbanization, and the need for urban mass transportation programs.

4. Increasing concern for protecting environmental quality, especially in terms of the detrimental effects of ever-increasing use of the private automobile.

5. A growing awareness that major governmental programs must be more closely integrated to better reflect the overall public interest, and that there should be greater responsiveness to Executive Office leadership.

6. The need to adequately assess transportation innovations in a more objective framework than is possible under present fragmentation of responsibility.

7. The need to improve the entire decision-making process of government, including a closer integration of policies among levels of government.

From these concerns it is possible to define some basic objectives for creating a Michigan DOT:

1. To establish a framework to improve overall efficiency in government.

2. Provide a means for more comprehensiveness and overall objectivity in the development of transportation programs.

3. Concentrate the decision-making process for all transportation modes and include the means to evaluate possible innovations.

4. Provide greater consistency and clarity in the state's relationships with other levels of government.

5. Provide for improved coordination with other areas of state policy through greater responsiveness to the Executive Office of the Governor.

There are probably other objectives, perhaps some that are even more important. Yet, these are sufficient to help in the evaluation of alternative organizational structures and in gaining a better understanding of other issues involved in the process of reorganization.

Evaluation of Alternative Organizational Structures

Regardless of the structure ultimately devised, the creation of a state DOT through the Executive Order process should assure that the organization is responsive to the Governor. Likewise, the very fact of reorganization under a single administration should achieve greater efficiency and overall economy of operation, and provide for improvement in the state's relationships with other levels of government. In these areas, it does not seem to make much difference whether the structure is of the low-modal or high-modal type. Therefore, a pragmatic approach to reorganization appears suitable, which seems to be the direction implied in the Governor's Transportation Message.

However, the objectives of more comprehensiveness and greater objectivity in developing transportation programs does not seem at all assured through a high-modal type of organization. Nor does this type necessarily create an organizational climate which insures that possible innovations are objectively evaluated. In these areas it seems that the way the organization is structured is most critical. Specifically, how the organization incorporates the policy and program development function seems one of the most important organizational decisions.

It is in this one organizational area that every effort should be made to achieve a low-modal approach. This stems from the types of critical analyses that must be undertaken to achieve a balanced policy development process. For example, one sensitive issue that is almost sure to develop is consideration of alternative programs for urban mass transportation. It will probably involve tremendous pressures for considering rail versus bus, the need for subsidies, and establishment of priorities for available funds. In order that such policy evaluations be as objective as possible, this part of the organization should be isolated from internal pressures by being unrelated to any particular mode, and should be assured of proper acceptance by being responsible only to the chief administrative official of the organization.

In terms of the outlined objectives, it thus seems that the structure of the organization is not the most critical issue in creating a Michigan DOT, as long as care is taken in the placement of particular functions. However, there are other issues involved which are most critical, and warrant detailed discussion.

Transportation Revenue

The proposed creation of a transportation Discretionary Fund will probably be the single most controversial part of the reorganization process. Not so much because of the purpose of the fund, nor because of the need; but mostly because of the deeply entrenched protective philosophy that has historically developed around the use of highway taxes which would be the source of the fund revenue. The proposal involves the allocation of one-half cent of gas tax to be used for urban transportation improvements, generally for urban mass transportation. This would provide about $20 million a year for this purpose.

The gas tax is the principle source of revenue for transportation programs in Michigan, as in most states. They are collected by the state and placed in a special fund that has very specific restrictions on how such funds are to be used.

The Motor Vehicle Highway Fund

Motor fuel taxes, weight taxes and miscellaneous fees (such as vehicle title transfers) generate the revenue for the Michigan Motor Vehicle Highway Fund. In 1969, this amounted to $381,251,000, which was then redistributed according to a legislated formula; 46 percent to the Department of State Highways, 34 percent to the 83 county road commissions, and 20 percent to incorporated cities and villages.[1] While the allocation formula is subject to legislation, the basic restriction on use is constitutional:

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[1]Michigan, Department of State Highways, Nineteenth Annual Progress Report, DSH Report No. 162, n.d.

> All specific taxes, except general sales and use taxes and regulatory fees, imposed directly or indirectly on fuels sold or used to propel motor vehicles upon highways and on registered motor vehicles shall, after the payment of necessary collection expenses, be used exclusively for highway purposes as defined by law.[1]

This is the user tax principle, which relates the cost of providing government services to those who most benefit through some system of charges; in this case, gas and weight taxes on motor vehicle owners and operators. As mentioned previously, this system of charges was initiated by the State of Oregon in 1919, and has become a major national institution. The history of the popularity of use taxes cannot be mentioned, however, without also mentioning the history of anti-diversion protection which has been devised, such as Michigan's constitutional provision.

As motor vehicles became more numerous, user tax revenues became an important revenue source for most states. During the depression years, this revenue was often used to provide temporary relief for general government financing. During 1936, the amount of such diversion among the states reached such a level that powerful highway interest groups became concerned about "misuse," and advocated the submission of a constitutional amendment to protect this revenue in every state.[2] The result was that some 28 states now have constitutional provisions which "earmark" certain

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[1]Michigan, Constitution, art. IX, sec. 9.

[2]American Road Builders Association. Convention Proceedings, Committee on Diversion of Motor Vehicle Transportation Revenues (Washington, D.C., 1938) pp. 58-63.

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state revenues, typically the motor fuel tax and vehicle registration fees, for specific highway purposes.[1]

Dedicated User Taxes

User taxes as such are not without controversy and there is continuing pressure toward diverting some of this huge revenue source to other purposes. One Michigan example was presented in 1969, when the Governor attempted to divert $1.6 million in highway funds to the State Police to help defray the costs of highway patrols. Newspapers accounts of the controversy show that the effort generated tremendous opposition from the Highway Commission, powerful interest groups and within the legislature; even within his own political party.[2] The attempt was unsuccessful.

The controversy continues however, because it is the opinion of many government leaders that "earmarking" hampers budgetary control, makes the revenue structure inflexible, leads to a misallocation of funds, is archaic, and infringes on state executive policy-making powers.[3] And there has been some successful diversion nationally. As stated earlier, only 28 states have constitutional restrictions, and in 26 states, highway funds have been used for a wide variety of purposes. Eleven of the latter states are among those having constitutional earmarking. The most

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[1]Highway Research Board, National Cooperative Highway Research Program Report 56, Scenic Easements; Legal, Administrative, and Valuation Problems and Proceedings (Washington, D.C., 1968) p. 39.

[2]Editorial, State Journal (Lansing, Mich.), March 11, 1969 and March 16, 1969 editions.

[3]Editorial, State Government News (Published by the Council of State Governments) May, 1970.

notable of recent broadened usage of such funds is that of Maryland, which created a State DOT and established a comprehensive Transportation Trust Fund.[1] In this case, the need for state funds for a public mass transportation program obviously was stronger than any desire to protect the integrity of user funds.

In California, a constitutional amendment was voted on in 1970 which would have permitted that restricted funds could be used for mass transit systems on a local option basis. This was soundly defeated.[2] In Wisconsin, a plan to raise automobile registration fees to pay for mass transit needs was rejected in February, 1971. In California, again, a bill to extend the 5 percent state sales tax to gasoline, with the new revenue earmarked for public transportation and general fund use has been introduced. In Rhode Island, imposition of a special state mass transit tax of one-half cent a gallon of gasoline has been proposed by the state's Public Transportation Authority.[3]

These are a few examples of the continuing effort to divert dedicated funds to other uses, and reveals the limited potential success for such efforts. The apparent reason for maintaining the integrity of the user fund for highway uses only is that the public has accepted the general equity of the concept that the need is directly related to the existence of motor vehicles, and that the owners and operators, rather

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[1] Ibid.

[2] Editorial, Passenger Transportation (Published by the American Transit Association, Washington D.C.) Jan. 29, 1971.

[3] Editorial, Passenger Transportation, June 4, 1971.

than the general taxpayer, should pay the cost.

Although it is difficult to arrive at precise definitions of benefits and cost, analysts have established two basic principles that have gained widespread public acceptance:

1. That users should pay in proportion to the benefits received; supporting the gallon tax; and

2. That users should pay according to the type of construction required for the type of vehicle used; supporting the weight tax differential.

These were specified by A. A. Walters in an extremely thorough discussion of user charges.[1] Pointing out that it is an easy tax to collect, and that the public can perceive direct benefits, Walters concludes that it has important advantages. It provides the road authority with a steady stream of funds so that both users and industry can be relatively certain about the future aggregate level of spending and can collectively plan accordingly. Further, restricting costs to only users helps prevent over-investment on the one hand, and neglect for the roads on the other. In general, Walters concludes that since for economic, political and institutional reasons the dedicated user tax appears rational, this is a good mechanism. Yet he cautions that the public confidence can only be maintained if the integrity of the entire approach is maintained. On the basis of such conclusions, it can be seen that there is justification for maintaining user tax dedication.

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[1]A. A. Walters, The Economics of Road User Charges, World Bank Occasional Papers No. 5 (Baltimore: Johns Hopkins Press, 1968), p. 36.

The Discretionary Fund

The purpose of the Governor's proposal to create a Discretionary Fund is clearly stated; to provide the revenue necessary to support a state level program for urban mass transportation improvements. In his Transportation Message, the Governor provided the following guidelines for its use:

1. The expenditure of funds will promote the maximum utilization of available federal funds for public transportation improvements.

2. Priority will be given to the most cost-effective solution, and any expenditure request must provide an analysis of alternatives rejected and the rationale for such rejection.

3. Highest priority will be given to projects which strengthen the central city and thus maintain the equity in our present systems.

4. Priority consideration will be given to means of solving transportation problems which contribute to increased efficiency in land utilization and enhancement of the environment.[1]

At the one-half cent level, the discretionary fund should approximate $20 million a year. When coupled with federal-aid and local matching revenues, the impact of the fund could be enormous.

This effort is in apparent direct conflict with the user-tax principle, unless "highway purpose" is broadened. The above guidelines suggest that redefinition could be recognition of an inter-dependence among transportation modes in terms of serving broad community needs of strengthening central cities, contributing to rational land use, and providing environmental protection. If these should be considered as

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[1]Michigan, Governor's Special Message on Transportation, 1971.

the basic purpose of transportation, then "highway purpose" might be more broadly interpreted. However, even if the legislature should more liberally interpret the "earmarking" clause, the issue is so fundamental that the constitutionality would probably be challenged in the courts.

An Appraisal of Possible Political Considerations

Although the key feature of the Governor's legislative "package" is the proposed Discretionary Fund portion of the tax increase, the other features also spell out an expanded role for the State in transportation. However, since governmental change is a political process, it is well to examine the political base for these features.

The size of the proposed tax increase is 1.3 cents, which seems an odd figure when the price of gasoline (including taxes) almost always includes 0.9 of a cent in the per gallon amount. This suggests that the proposed increase is subject to amendment up to 2.0 cents during the legislative process. One area in which the amount might be raised is to support the accelerated freeway program.

Legislation has already been introduced to support an accelerated freeway program in response to an earlier Department of State Highways proposed Bonding Program.[1] This was proposed in recognition that special financial arrangements would be required to construct the State's non-Interstate freeway system in a reasonable time period. The rationale included the view that it is desirable to complete a large part of the

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[1]Senate Bill No. 300, introduced March 31, 1971, calls for a one cent gas tax increase to support a $500 million highway construction program.

planned system before the State's previously constructed freeways became so old as to require expensive replacement construction.

The bonding proposal had widespread outstate appeal because it specified the routes that would be constructed, which included all geographic areas of the state. It seems entirely possible that the supporters of the Governor's package could successfully capitalize upon this popular appeal by amending the tax increase amount to include more for freeway construction (largely outstate - rural) in a legislative horse-trade for support of the urban mass transit program. Figure 6 shows the routes selected for accelerated construction.

Further support could be gained through altering the distribution formula for the remaining portion of the tax increase between the County Road Commissions and the state's municipalities. Under present laws, these are complicated formulas for the distribution of the Motor Vehicle Highway Fund, and are extremely important to the individual recipients. Being so important, it seems that there is considerable political leverage involved in any legislation which determines future allocations.

Finally, the placement of responsibility for managing the state's expanded role in total transportation within the Department of State Highways is another feature that could substantially reduce political opposition. The Michigan Constitution states:

> There is hereby established a state highway commission, which shall administer the state highway department and have jurisdiction and control over all state trunk line highways and appurtenant facilities, and such other public works of the state, as provided by law.[1]

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[1]Michigan, Constitution, art. V, sec. 28.

Figure 6: Proposed Accelerated Freeway Program

Source: Michigan Department
of State Highways

This clearly provides that an expanded mandate for the Department is a legitimate goal which appointed Commissioners could strive for. Not only would this add to their prestige, but as knowledgeable individuals, they are aware of the need for greater coordination in the development of transportation systems. Although it seems merely a coincidence, the fact that two different Constitutional clauses are directly related in one legislative package might have some political value in determining their individual issues.

Overall it seems that the political aspects of the Governor's Transportation Program might be conducive to passage of the critical features, thereby clearing the way for creation of a State DOT. There appears to be something for almost everyone; the most powerful of the agencies involved, urban interests, outstate interests, transit interests and the political prestige of the Governor in achieving a controversial program. However, tax increases are never very popular legislation, and it is generally conceded that any tax increase legislation has a less than even chance of passage. Yet, the fact that the entire process of change has progressed to this stage of consideration is an indication that reorganization will probably occur, if not this year then in some future year.

Policy Implications of a DOT

While the first order of concern in creating a DOT is to better accommodate the state's transportation responsibilities, the indirect effects on other areas of state policy may be even more important. Achieving a more comprehensive transportation planning process could

generate new requirements for vast improvements in total state planning.

As previously discussed, state planning has not been very effective for a variety of reasons. There has also been a discernable lack of relating other state programs to transportation. This has probably occurred because of the long range nature of the transportation program, while the political aspects of other state policies demand rather short range solutions. It can be hypothesized that because of long range programs and a high level of extremely technical expertise involved, transportation considerations have not been regarded as being particularly important to the political affairs of the Executive Office.

However, a consolidation of transportation programs within a DOT merges the long range developmental programs with those of more immediate concern; for example, the possibilities of developing operating subsidies for failing bus transit systems and recommending links for inclusion in the national Amtrak system. The need to become directly involved in such issues could increase the influence of transportation administrators, and create a closer policy development interaction with the Governor and other agencies.

This closer inter-relationship could result in a greater degree of involvement of transportation administrators in the growing state concern for such problem areas as urbanization, rural economic development, land use, environmental protection and social welfare. All of these problem areas have long range developmental consequences, yet most of the current emphasis reflects crisis situations. It seems entirely possible that transportation policy-makers could very well exert the influence necessary to achieve a longer planning horizon in such areas.

This could be achieved through the need to relate long range transportation plans to a broader policy framework in these other areas. For instance, instead of a state freeway development plan being based primarily on projected traffic volumes to be safely accommodated, a closer policy interaction within the Executive Office could easily incorporate the freeway plan into a broad scale plan for urbanization, rural development and land use, all to be achieved by the time the freeway is to be constructed. Of course, this would also include urban transportation policies, regional airport development plans and other transportation interests.

Properly inter-related, state investment in specific areas could be keyed to a specific future date to which regional and local plans could be effectively related. The focus would be on planning at the grand scale, such as that required to initiate New Town concepts. The fact that transportation can be the catalyst in grand scale planning is illustrated by specific plans to develop New Towns. Maumelle, Arkansas has been planned as a New Town to capitalize on the opening of the Arkansas River ocean access waterway and flood control project, and Flower Mound New Town, Texas is being developed just four miles from a giant regional airport scheduled to open in 1973.[1] The key to grand scale planning is to pose the conceptual question: What should Michigan be like in some future time period? Answering that in outline form is a function of a state planning process, with policy development and program formulation adding substance to the plan.

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[1]Eleanor Carruth, "The Big Move To New Towns," Fortune Magazine, Sept., 1971.

With one agency responsible for presenting detailed programs for highway construction, airport improvement, urban mass transportation strategies, port and waterway development, and railroad passenger service, it seems inevitable that the grand scale question will arise of necessity. Efforts to integrate such important programs and establish meaningful priorities will require that they be collectively related to the broadest framework of guiding urban growth, conserving natural resources through land use programs, serving the economic and social needs of all areas and protecting the environment. Then the projects that are approved should not only establish the pattern of the grand scale plan, but should also indicate the temporal sequence of plan implementation.

To properly develop this process, improved levels of communication will be required, both horizontal within state government and vertical between levels of government. Through improved communication, non-transportation programs at both the state and local levels could be analyzed for overall consistency and greatest effectiveness. Possible redirection of the plan elements could provide a synergistic effect within a particular community.

In very brief form, the following illustrates the potential of this process. The state's transportation plan could indicate alternative time periods by which it could construct significant freeway links. Consideration could be given to community development objectives such as the selection of growth centers, the potential of new town development, and guiding the urban expansion of existing cities. Local development plans could be reviewed for consideration of the impact of the various

time periods for freeway construction. Needs for complementary programs, such as state assistance in developing community sewage treatment plants, higher educational facilities, parks and housing, could be analyzed. Alternative development strategies then could be postulated for specific time periods. Selection of a particular strategy then would extend the planning horizon for local community development to a meaningful date, and the whole web of inter-governmental interests and concerns could be directed toward specific accomplishments within a designated time frame.

Of course, the process could not be expected to be as clean as the above illustration. But it does seem possible that the transportation plan could be the most influential part of developing grand scale plans. A most important feature would be that of transferring the political heat for immediate solutions to local problems from the legislature and the Executive Office of the Governor to the more technical aspects of developing transportation facilities as the basis for comprehensive community development. And a state DOT should be able to stand the heat because of historical experience with long range programs and the wide range of capital outlay programs. Highway resurfacing, modern airport improvements, bus system assistance, and port development could be offered to pacify local interests where freeways were deferred for a time. The capability to make such trade-offs must be considered one of the most important aspects of creating a state DOT for Michigan.

CHAPTER V

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

Summary

The development of transportation systems has implications which extend far beyond the basic functions of mobility and access; the influence of transportation policies is reflected in nearly every aspect of our way of life. Because it is so important, every effort should be made to maximize the effectiveness of transportation programs in terms of total human needs. Thus, it is hypothesized that better governmental organization to administer state transportation programs would not only provide for better resolution of transportation issues, but would also provide a more effective approach to other policy areas.

The creation of a Federal Department of Transportation brought about significant change in the institutional arrangements for transportation at the national level in 1966. During that same year, a Governor's Special Commission on Transportation noted the great diffusion of responsibility for transportation and recommended changes in Michigan's governmental structures. Change is now being specifically considered in Michigan, and adds a great deal of significance to the need for an objective appraisal of the potential benefits to be derived from such change.

Transportation facilities have almost no intrinsic value; their importance is in the means to accomplish other purposes. A historical review of government involvement in developing transportation systems reveals a true partnership arrangement whereby the federal government has increasingly gained influence, but the operation of vehicles has remained in private hands.

While there are a multitude of interests in transportation, including every level of government, special interests have secured special funding arrangements that have served to compartmentalize transportation responsibilities in government. The most important of these in terms of the size of programs and popular interest is the state highway department. Although federal aid has become a very important source of state highway program revenue, the historical development of programs left the basic initiative for policy and program development at the state level. Thus a true intergovernmental cooperative program has emerged, with state government as the strongest partner, but greatly influenced by federal policy. However, it is widely believed that highway administrators have adopted an internal sense of function, based upon a high level of technical expertise in satisfying the needs of a single transportation mode. As the country becomes more and more urbanized, there is increasing evidence that the popularity of automobile travel is adversely effecting the non-driving segment of society, especially the poor. Paralleling this concern is the view that inadequate national attention to public transportation is a major contributing factor in the development of an undesirable and inefficient pattern of urban land use. These kinds of problems are expressions of national concern that the public interest be more

broadly interpreted to reflect the entire general welfare, rather than being merely representative of a collection of powerful special interests. Thus there appears to be a legitimate national goal for balanced transportation systems in urban areas, including both highway and mass transit programs. However, the continuation of the Federal Highway Trust Fund and the separate type of federal aid for urban mass transportation programs seem to be basic contradictions to a search for balanced urban transportation. Obviously there is a need to develop a better understanding of how transportation policies can best be used to serve a wide range of community values, and a need for determining how best to deliver the necessary programs.

Although the public interest is extremely difficult to interpret, it is necessary to have some philosophical outline by which to guide the development of public policy. One way in which this may be conceptualized is to recognize that elected officials must have a broadly based concern for the general welfare as they acquire and hold the political support for their power. With this understanding, it is logical to expect that all major decision making at the state level must reflect the Governor's sensitivity to the general welfare. Thus there is a need to develop the means whereby greater comprehensiveness can be built into all state level planning, including transportation.

Since planning implies, by definition, a systematic consideration of all relevant variables, the planning function of an organization should be the most sensitive to the need for comprehensiveness. Because highway planning has a historical special funding provision, it is quite possibly the largest and most effective agency planning activity in

existence. In contrast, state planning as a centralized function has had little demonstrated success. However, it is the posture of the federal government to require greater comprehensiveness in agency programs that utilize federal aid. Therefore, it can be anticipated that there will continue to be substantial efforts toward increased integration of state level planning. In fact, the federal requirement for greater comprehensiveness suggests that the states will increasingly have a key role in our federal structure of government. This in turn, suggests that state level transportation planning can be the central focus around which an effective state planning process can be organized. This is because transportation systems ideally should be planned on the basis of the tasks it is to perform in the total community development process.

Two experiments with formal inter-agency planning activities have been attempted in Michigan. The first was highly project oriented, and failed to generate a comprehensive state planning process. The second was more specifically directed at inter-agency transportation planning and supported by specially acquired staff. The result was that the need for greater comprehensiveness in developing state transportation plans was specifically identified, and the specific recommendation that a state DOT be created was supported by all the state's transportation agencies and the Governor.

Paralleling these activities in Michigan, the federal DOT has continued to broaden its concern for all transportation modes and their potential effect on national development. A major change in national policy appears to be that of placing greater responsibility for state policy development upon the state governors rather than relying almost

exclusively upon transportation agencies as in the past. However, there also appears to be a parallel effort to involve city officials more directly in the policy structure as well. Together, these shifts are creating subtle pressures for institutional change in state government to enable the state to better deal with emerging problems.

State DOTs have been created in twelve states, with a number of others being considered presently. Although all are structured somewhat differently, all consistently include the state highway agency as the major element of the organization. However, the type of organization to be created is only one of the many problems involved in creating a DOT, but the potential benefits to be realized seem to greatly outweigh the problems, and reorganization seems to be desirable.

Consistent with the interest in state DOTs in other states, the Governor recently indicated that he would, by Executive Order, create a Michigan DOT if the legislature would increase motor fuel taxes and allocate a significant portion of the increase to a Discretionary Fund to be used to help finance improvements in urban public transportation. This conditional support for organizational change suggests that reorganization itself is secondary to a more basic institutional change; that of removing the inflexibilities of funding needed state programs.

Evaluating alternative concepts for state DOTs reveals that all are organized around the former state highway departments, and that all except New York have specific parts of the organization fully responsible for each transportation mode. Postulating some basic objectives for creating a DOT, including achieving efficiency in government, gaining greater objectivity and comprehensiveness in transportation programs,

concentrating the transportation decision-making process in a single executive, and providing greater policy coordination at the state level by being more responsive to the Governor, it seems that there are no great advantages to one basic type of organization over another.

The most critical single issue involved in Michigan seems to be the allocation of transportation tax revenue. The major state transportation revenue source is the gas and weight tax which is constitutionally dedicated for "highway purposes." The Governor's proposal to use a portion of the user tax to support urban mass transportation programs seems to be a direct violation of such restriction. Resolution of this central issue seems almost totally dependent upon how the legislature (and powerful special interest groups) interpret "highway purpose." If highway purpose can be interpreted as serving broad community needs rather than the narrow needs of volumes of motorists, then it would seem that the Discretionary Fund could be created. This seems a distinct possibility since the entire tax increase being proposed has a wide appeal basis, with accelerated freeway construction for outstate areas and public transportation support for urban areas. And since the Governor has indicated that the state DOT would be administered by the State Highway Commission, creation of a Michigan DOT seems a distinct possibility.

Creation of a DOT would almost certainly improve the overall accommodation of the state's transportation responsibilities. Yet, it might enhance the more important overall benefit of extending the planning horizon for other state planning by requiring that long-range transportation plans be related to long-range plans for urbanization, rural development, land use and environmental protection. Thus, it may be the critical

element of necessitating grand scale planning at the state level. Achieving this kind of comprehensiveness could very well be the greatest overall benefit of creating a Department of Transportation for Michigan.

Conclusions and Recommendations

The preceding discussion and analysis represents an attempt to identify the more important aspects of the transportation function in our society, evaluate the effectiveness of institutional arrangements for providing transportation facilities and provide some insight into the possibilities for better serving the public interest. From this effort it is possible to derive basic conclusions that are useful to understanding the general topic of transportation, but more importantly, can be highly useful in the development of specific recommendations that relate to current policy issues in Michigan. An attempt will be made to organize the remaining presentation sequentially from the general in nature to the very specific, so that a progression of logic supports an entire series of conclusions and recommendations.

Although transportation service has implications far beyond the primary functions of mobility and access, the historical demand for transportation service in an expansionist economy has been so great that programs and projects have been developed in a rather narrow framework. In general, the need to satisfy some particular aspect of that demand provided more than enough warrants for single purpose transportation systems. The result has been the creation of huge governmental organizations with single purpose funding arrangements, supported by powerful constituent

groups primarily interested in the development of a single transportation mode. This fragmented approach has produced overlapping (and even conflicting) authority at all governmental levels, making it extremely difficult to properly relate various programs to the contemporary needs of a mature economy. It is concluded that substantial changes are needed to provide a more orderly approach to this vital area of concern. The critical need seems to be for improved coordination in three major forms:

1. Among levels of government.
2. Among major governmental programs.
3. Between transportation modes.

It is recommended that Michigan create a Department of Transportation as a major step in bringing about needed change. The following discussion will attempt to point out how such change can be beneficial in terms of the three major forms of coordination listed above.

Intergovernmental Coordination

Because of the great expansion of federal programs in recent years there is little question of the importance of federal leadership in the present intergovernmental system. The potential availability of federal funds has become a prime factor in the development of a great many state and local improvement programs. And, as thoroughly discussed in Chapter III, increased federal funds have been accompanied by increasing requirements for greater comprehensiveness in the application of program funds. This can be interpreted as evidence of the real dependence upon state and local governments to properly attack the problems for which federal funds are generated. This dependence means that state

and local governments should have a major role in formulating the programs which they so badly need.

Because of the importance of federal-aid, it is extremely possible that state and local programs can become mis-directed; becoming structured into a pattern that provides the greatest capability of obtaining federal funds rather than reflecting true needs or priorities. It is concluded that the influence of the states and local government in the intergovernmental system must be increased in order to provide needed balance in the formulation and application of cooperative programs. It is recommended that the State of Michigan utilize every means possible to increase the role of state and local government in the national decision-making process.

Although there is evidence of genuine efforts at the state level to comply with the requirements of the various federal programs, little real progress toward intergovernmental coordination has yet been achieved. It is concluded that rather radical change is needed to re-orient agencies at various levels toward needed program coordination. It is recommended that basic governmental reorganization in Michigan be utilized as one of the means of achieving this kind of cooperation between levels of government.

Because of the size and importance of the intergovernmental highway program, the "functional grant" characteristics of highway federal-aid and the historical development of a true intergovernmental partnership for program development and delivery, it is concluded that the influence of state and local government relative to the federal government can be quite easily increased in the entire transportation program area through

reorganization. It is therefore recommended that creation of a Michigan DOT be structured to improve state-local coordination in order to capitalize upon a major strength in existing intergovernmental relationships. More specifically, it is recommended:

1. That the DOT is completely responsive to the Governor to insure political sensitivity.

2. That the DOT represent all state interests in transportation for comprehensiveness.

3. That the DOT be structured to insure responsiveness to local transportation needs by:

   a. Improving local transportation planning through strict requirements for coordinated participation by local governments in both urban and rural areas.

   b. Establishing a means of funding local participation in a cooperative transportation planning process.

   c. Having respresentatives of county and municipal government associations serve on transportation advisory boards in an ex officio capacity.

4. That the legislature reorganize standing committees to reflect total transportation interests.

5. That Michigan foster a multi-state regional (or even national) association of DOTs to lobby for improved relations with the federal bureaucracy in the pattern of the existing American Association of State Highway Officials.

These recommendations provide the kind of institutional change necessary to improve the role of state and local governments in the national transportation decision-making process. Such change provides the operational structure that is required to develop truely comprehensive transportation programs and insures that local interests are given proper attention. Finally, it results in a new concept of communication

with the federal government in a pattern that has been quite effective within the highway program.

Program Coordination

Transportation is only one of the many program areas in which state and local governments are faced with critical problems. Urban decay and suburban sprawl, sewage treatment, solid waste disposal, and ineffective land use controls are some of the other major concerns needing attention. Yet, as discussed in Chapter III, state planning has not been given the kind of support necessary to developing a comprehensive approach to solving community problems. There is obviously a need to plan more effectively; to inter-relate program needs both within and among levels of government. In Chapter IV, this need was described as the capability to plan on the "grand scale."

Implementation of "grand scale" planning at the state level would require a formally structured and fully integrated transportation plan. It is concluded that the annual publication of a state transportation plan could be one of the most revealing elements of governmental programs. Not only would it express continuity of transportation programs, but should express any basic difficulties that arise in its development. Therefore, it should focus attention upon any related program deficiencies, and increasingly provide a reference point for other agencies to relate to. Therefore, it is recommended that a requirement for the annual presentation of a state transportation plan be built into any legislation creating a state DOT.

The plan should be fully coordinated with appropriate state, local and regional agencies, and public comment should be sought. Upon approval by the governor, it thus could serve as a generalized state development plan. More specifically, it is recommended that the state transportation plan include:

1. Expressions of financial capabilities for transportation improvements.
2. Descriptions of projects to be undertaken.
3. Discussion of procedures and assignments of organizational responsibilities reflecting the institutional context of state and local government.

In another direction, transportation funds could be made available for the development of other plans in other program areas. Based upon the rationale that transportation influences (and is influenced by) almost every other element of our society, it seems logical that transportation planning funds could be usefully applied to a general planning program. For example, highway taxes in Michigan generates revenue that is distributed by formula to each county and municipality, as well as to the state highway agency. Presently, such revenue is restricted to "highway use," which includes the planning process. It is concluded that more liberal interpretation of planning need could provide the source of funds for each unit of government to contribute to a cooperative general planning process. Theoretically, this would provide a broader basis for the development of transportation plans, including assurance of a wide range of local concerns. It would also transfer a measure of responsibility for relating transportation plans to other planning activities (which now rests solely with transportation agencies)

to the general government.

The above principle is thoroughly integrated into the federal transportation funding program and has been generally accepted. It is therefore recommended that legislation creating a state DOT include language that would permit a small portion of transportation funds allocated to local governments to be used for a cooperative, comprehensive planning process at either the county or multi-county planning district level.

Inter-modal Coordination

Much of the transportation literature in recent years has directed attention toward the goal of system integration as a means of achieving balanced transportation. Most often, such terminology is presented as meaning there is some optimum mix of transportation modes. Yet, as briefly discussed in Chapter II, it can be shown that the operational characteristics of individual transportation modes are so unique that it is seldom that one mode is used as a substitute for another.

The consistent lack of system integration and transportation balance **everywhere** seems to suggest that their literal interpretation as operational goals is inappropriate. However, when such goals are related to the mechanics of policy formulation and planning processes, their articulation takes on new meaning. It is concluded that the capability to consider the potential utility of all modes in terms of serving community needs within the broadest possible framework of social, economic and environmental values is the proper level on which to seek inter-modal coordination. It is recommended that the mechanism creating a state DOT

stress an organizational structure that can best accommodate full consideration and control of the impact of all transportation decisions.

Two basic organizational alternatives were considered in Chapter IV, termed high-modal and low-modal, indicating the degree of organizational emphasis on the various modes. While the low-modal type can be considered as ultimately desirable for full system integration and program balance, it must be recognized that the strength of present agencies would make the transition extremely difficult, if in fact it is at all possible since reorganization is a political process. It is thus concluded that efforts to achieve system integration and program balance should be concentrated upon the organizational structuring of the planning function. It is therefore recommended that transportation planning be made the central feature of the DOT, with supplemental divisions structured to represent modal specialities and organizational services.

The changes necessary to this type of organization require the conceptual division of functions into three basic elements; all those concerned with planning, those concerned with construction and operations, and those concerned with administration. There are an infinite variety of ways such changes could be organized, and it would serve little purpose to speculate upon alternatives. Yet, there seems to be one critical function that does warrant detailed consideration - highway design. Presently a part of the Department of State Highways' Bureau of Engineering, under the basic conceptual division of functions it should be organized into Transportation Planning. This single change would provide organizational balance by reducing the size and influence of functions assigned to the Highway portion of the DOT, and add considerable size, prestige

and influence to the Transportation Planning portion of the organization.

It is concluded that this one critical change would sufficiently break up the historical power of the highway organization to create a real possibility of broadly based, multi-modal policy development within the new organization. Simply gathering together the existing transportation functions cannot be expected to result in the kind of change necessary to achieving a better way of resolving transportation issues in Michigan. However, the creation of a Department of Transportation with a concentration of organizational power in the transportation planning function could substantially help solve transportation and other state level problems.

Overview

There are a number of ideas and questions that arose during the preparation of the material that have not been pursued. Some of them are directly related to the guiding hypothesis, but were considered beyond the scope of this effort; others were interesting, but unrelated. Still others were similar in scope to this undertaking and might benefit from similar research. In this latter category are the issues of creating other new agencies in Michigan.

Considerable attention is currently being given to needed institutional change through creation of an Environmental Protection Agency and a State Land Use Agency in Michigan. Both of these reflect the trend toward better coordination of state-level activities under the Governor and the obvious interest in developing better ways to serve the public interest. It is recommended that detailed analysis of these functions and the possible implications of organizational change be undertaken.

Consistent with the above recommendation, it is further recommended that the whole fabric of state planning in Michigan be critically examined. The lack of a viable state planning function as the central focus of state government seems to be a critical deficiency in establishing priorities and developing "grand scale" plans to meet future needs. Directly related to the question of central state planning are the questions of how best to integrate multi-county, county and community planning activities with those of state government. The increasing federal requirements for program coordination are placing new responsibilities on all levels of government and ways must be found to increase the total effectiveness of inter-related planning activities.

Specifically related to transportation, research should be directed at the structure and operation of the comprehensive, coordinated and continuing transportation planning programs for metropolitan areas over 50,000 population which have been required since passage of the 1962 Federal Highway Act. Considerable effort has been directed at urban transportation problems through these agencies, yet as discussed in Chapter II, there is no widespread agreement on how transportation goals and urban development goals are inter-related. Such research is recommended.

Finally, mention must be made of the apparent lack of capability at the state level to fully consider the potential of new transportation systems. Since transportation is known to exert a tremendous influence upon the way other things will be, the potential of new technology should not be neglected. It is recommended that a Michigan DOT have some specific organizational unit maintain liaison with the federal government regarding new technology and conduct needed research in this subject area.

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