SUGGESTED CHANGES IN FEDERAL URBAN PASSENGER TRANSPORTATION POLICIES TO PERMIT IMPLEMENTATION OF METROPOLITAN PASSENGER TRANSPORTATION GOALS AND POLICIES

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ABSTRACT

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GOALS AND POLICIES

by Charles L. Gabler

The metropolitan areas of contemporary America are beset by the problems of congested and inadequate passenger transportation systems. These problems affect both private-person (automobile) and public transportation to one degree or another in all metropolitan areas throughout the nation. The road system may be poorly designed and congested during the rush hour. Public transit may be slow, of an old vintage, and minimally maintained.

Solutions to these manifold problems are now being sought and, hopefully, effectuated by agencies responsible for metropolitan transportation planning and locally elected officials. Goals to be achieved and policies to guide the effectuation of these solutions have been drawn up by the respective planning agencies. Each set of goals and policies is a package unique to each metropolitan area.

At this point, enter the federal government. It

assumes the role of helping metropolitan areas achieve solutions to their problems through a series of aid programs.

It is the contention of this thesis that the aid programs of the federal government must fit metropolitan needs as expressed in local goals and policies in order to best achieve solutions to these local transportation problems.

The object here then is to explore some current metropolitan transportation problems; present a series of typical metropolitan goals and policies designed to solve these problems; set forth existing federal urban passenger transportation policy as it affects metropolitan areas; compare metropolitan goals and policies with federal policies; and finally suggest adjustments in federal policy to more nearly satisfy local goals and policies.

This study has resulted in the following suggested changes in federal urban passenger transportation policy. These are listed in an abbreviated form:

(1) Local urban areas should have control over the federal-aid highway program within their own boundaries.

(2) The federal highway and transit aid programs should be combined into one transportation aid program.

(3) Congress should repeal the 12½% limitation on transit aid to any one state.

(4) Congress should state that economy and efficiency are not the only objectives to be embodied in urban transportation systems.

(5) The definition of secondary roads eligible for federal aid should be liberalized.

(6) Congress should permit the use of federal funds for road related improvements.

(7) Congress should permit locally determined user-charges to be collected on federal-aid roads.

(8) Congress should require the Interstate Commerce Commission to consider local efforts to save train service when reviewing petitions to abandon or curtail service.

(9) Congress should revise income tax laws to permit tax relief for publicly aided private transportation operations.

(10) Congress should permit federal-aid highway funds to be used for special function roads.

One should be aware that there are three major assumptions implicit in the methodology of this thesis: (1) that there is an urban passenger transportation problem; (2) that the federal government does have a role in helping to solve those problems; and (3) that the implementation of goals and policies developed by the planning agencies of the local jurisdictions lead to valid solutions to those problems upon which federal policy is to be based.

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CONTENTS

CHAPTER 1

The Urban Passenger Transportation Problem

The metropolitan passenger transportation problem ranks among the most puzzling facing urban areas today. Put simply in the jargon of engineering, transportation is merely a function of time and place utility. In the context of this thesis, this means the delivery of people where they want to go when they want to go.

Such a problem sounds simple enough. However, unlike a broken leg, which may be mended by any competent practitioner of the medical arts, the planning of a transportation system for a metropolitan area as a profession has yet to be perfected. The problems of origin and destination of travelers, modes of travel, and numbers who wish to travel are constantly evolving over time, so that it is not enough to deal with these variables as they exist; the planner must anticipate the form of their existence in the future.

It is the contention of this thesis that the nature and extent of the problem of passenger transportation vary with each metropolitan area throughout the country. Therefore, despite the imperfections of technique in the metropolitan transportation planning process, the solutions suggested by the various metropolitan agencies

charged with such duty must be achieved according to the unique nature of each individual metropolitan area's problem.

Such individual solutions can only be achieved if the intimate relationship which has developed between the federal government and these metropolitan areas so permits. It is the federal government which determines the framework within which solutions to metropolitan problems are achieved by virtue of the aid it dispenses to such areas. Therefore the federal government must base its own policies which relate to metropolitan transportation problems on the needs of these areas.

It is the intent of this thesis to discuss some aspects of the metropolitan transportation problem, present a range of solutions to this problem as expressed in the goals and policies of six transportation planning agencies, compare federal transportation policy as it relates to metropolitan transportation planning goals and policies, and then suggest adjustments in federal policy to more nearly fit the needs of metropolitan areas.

A major assumption contained here, then, is that federal policy must adjust to local metropolitan needs and not the reverse.

A Review of Some Metropolitan Passenger Transportation Problems

The problems which must be faced by metropolitan

transportation planning agencies are multitudinous. However, there are certain recurring problems which seem to face most metropolitan areas; these are common problems which vary only in form and emphasis. These problems are presented below in order to serve as a point of reference for the goals and policies which follow in the next chapter.

Lyle Fitch has provided the frame work for the ensuing discussion.[1]

Physical Deficiencies

Public Transportation

The physical deficiencies of public transportation are a manifestation of the urban transportation problem which is most visible to the public. Transit equipment is frequently obsolete. It is uncomfortable and crowded during the rush-hour (when most people ride). There is too much heat on the bus in the summer and not enough in the winter. Stations are dirty, littered and poorly lit. Equipment rattles. Despite the noise, some hardened New Yorkers actually fall asleep on the subways. People must wait long periods between trains, while low average speed, especially if the vehicle does not operate on its own right-of-way, fails to make up for the time lost waiting. Essentially, technology is the same for transit today as it has been since the invention of the electric

street car and motor bus. Only the details have been refined.

George Smerk cites three causes of the decline in public transportation service:[2] (1) franchise requirements which specified what ultimately proved to be too heavy a burden on transit, including a fixed fare, street sweeping, watering, maintenance, snow removal, and the franchise tax; (2) the multiplication of many small, comparatively inefficient companies, frequently competing and often operating only a few blocks apart; and (3) overbuilding and overextension of streetcar lines during periods of land speculation and building boom.

Of course during World War II there had been a need for this kind of intense transit service due to the shortage of gasoline and automobiles. However, the war only forestalled the effects the mass ownership of automobiles and the popularity of the single family house were to have on transit during the post-war years.

The above are the historical causes of present physical deficiencies, but today, if anything, causes have proliferated. Municipal and private transit companies are frequently caught in a spiral of increasing costs and decreasing revenues which prevents upkeep and modernization of equipment and facilities. This in turn is caused by competition from the automobile, which has eroded passenger traffic to a weekday pattern of peaks

and valleys and a weekend pattern of one big, two-day valley. The uniform eight-hour work day supports the two daily peaks, while equipment and labor lie unproductive for the remaining twenty hours of the day.

The rising cost of labor consumes and ever-increasing percentage of the revenues. Even the form of the metropolis, with its low densities on the fringes being more amenable to auto travel and the decline of the core city as an attractor for shopping and socializing, has contributed to the financial woes of the transit industry.

But despite the qualitative deterioration of transit in the past 20 years, Wilfred Owen remarks: "The decline of mass transportation fails to reflect continuing importance of public carriers in the rush-hour."[3] And for urban transportation, the rush-hour is the thing.

Private Transportation

Private-person transportation in urban areas consists of the owner-driven automobile. The problem here manifests itself in the form of highway congestion, especially during periods of peak travel. Essentially congestion is the result of too many vehicles competing for scarce road space which can be increased only at enormous cost. According to Fitch, "Direct evidence of congestion is found in the increasing difficulties of meeting schedules cited by bus companies and delivery services."[4]

Statistically, auto congestion is represented by these figures: "46% of the motor vehicles miles driven in 1960 were on the 12% of the streets that comprise the urban network; 40% of this 46% were driven on the 1% of our roads that are arterial streets, the bulk of which are concentrated on these streets during the morning and afternoon peak hours, 5 days a week."[5]

There are other side effects, so to speak, of auto congestion. "Rough estimates indicate that the proportion of existing air pollution attributable to motor vehicle exhausts reaches 40% in New York City and 65-70% in Los Angeles."[6] Pollution in turn may cause such dread diseases as cancer, emphysema, and nonoccupational tuberculosis. In addition, the cost of human life and limb each year due to automobile accidents is incalcuable precisely because the price of human life and health is beyond mathematical computation. Rush-hour commuters also experience a daily dose of mental wear and tear which takes the edge off their productive abilities or leisure time activities. Congestion delays police and fire protection, slows delivery time, and discourages central city shopping.

The causes of congestion are several. As for public transportation, the weekday travel peak due to the predominance of the seven to eight hour work day is one important factor. Inadequately designed road systems,

failure to enforce traffic regulations, and the failure to use traffic control methods are other contributing causes of congestion. Owen claims that "few urban highways have been built to anything resembling adequate standards. Traffic must still move on an antiquated gridiron of streets laid out long before the needs of the automobile were known. They were designed principally for convenient real estate platting and access to property rather than for mechanized transportation."[7] Curbside storage and loading of vehicles also impedes movement.

Smerk asserts, however, that the real cause of the problem is not so much lack of facilities but rather "that the automobile is not used in its proper place in the overall transport system. The private car is not a suitable mass-mover of people who head for a common destination at approximately the same time. The improper use of automobile transportation and the lack of suitable alternative means of transport are at the core of the congestion problem."[8]

This insistence upon the improper use of the auto for mass transportation has its own causes. "The automobile cannot be considered as merely another mode of transport; it has a deep social and psychological significance that frequently carries more weight with consumers of transportation service than any of the strictly economic factors

involved. The thrill of operating a large and powerful machine may far outweigh any advantages that might accrue to the individual from utilizing some form of mass transportation. The very act of owning and driving an automobile provides certain psychic income in terms of power and prestige."[9]

Lewis Mumford caustically notes this phenomenon: "Since the motor car is treated like a private mistress and not included in the family budget no matter how extravagant her demands, it is hard to dispose of such a sentimental attachment on purely practical grounds."[10]

City Configuration

The urban development pattern is closely tied to transportation technology. In fact, the two are so tightly interwoven, the effects of land use and transportation upon each other have yet to be satisfactorily explained. This in turn makes it difficult to differentiate between the causes and effects in the transportation-land use relationship.

Metropolitan areas have within recent years, particularly since World War II, undergone a massive change in size, commonly characterized, more or less critically by planners, as sprawl. This outward growth has been permitted by the advancing technology of urban transportation. The increasing ratio of distance travelled to time consumed as technology changed from the horse to the iron horse and

horseless carriage has permitted a correspondingly wider periphery of development from the center of any given urban area. The puzzling fact is, however, that the newer urban areas of Texas and California, patterned more closely to the newer forms of transportation, especially the automobile, are no more successful in ameliorating the symptoms of congestion than those older cities, mostly along the East Coast, patterned after the pedestrian, horse and buggy, and rail transit.[11]

Owen comments on this transportation-land use problem: "The whole pattern of urban development today tends to ignore how people move, and how they will be moving in the decades ahead. Building heights, densities of population, and the amount of ground being covered by new development are dooming costly expressway programs everywhere. The traffic problem is worsening much more rapidly than the highway program can hope to furnish relief."[12] And the suburbs are no better off than the cities.

Institutional Deficiencies

Lyle Fitch cannot be accused of exaggeration when he states: "Institutional weaknesses underlie the failure of most public programs to date to produce large and lasting improvements in urban transportation systems."[13]

Fragmented Organization and Policy

The Urban Traffic and Transportation Board of Philadelphia speaks for more than that city when it says:

> The physical inadequacies of transportation in the Philadelphia region are sysmptoms of the lack of an organizational framework for dealing with transportation on a comprehensive basis. The task of providing the region with transportation facilities and services is divided among a host of public and private agencies. These organizations are each limited to a segment of the transportation job (one or more modes, functions, geographical areas, and/or political subdivisions) and operate under differing "ground rules" as to the extent of public control and financial assistance. Compartmented by subdivisions of functions, these agencies are by necessity restricted to a piecemeal approach to what is essentially a regional problem.[14]

However, the metropolitan areas themselves are not the only villains of the piece. "Policies on the part of all levels of government have affected the developing congestion problem. In many cases, government transportation projects have operated to the detriment of the total transportation picture in a given region."[15]

The decline of commuter rail service will serve as an example. Much of this decline can be attributed to the federal government's activities as agent and broker for the growth of competing modes of transportation, all of which modes vie for the federal government's attention and favor. But the federal government must not bear the blame alone. State governments, too, through their taxing and regulatory policies, have had detrimental effects on railway revenues and operations.

The problem, therefore, is to devise the appropriate type of governmental organization to deal with the issues, which organization in turn must implement a set

of policies to effectively deal with the causes and effects of current urban transportation ills.

Financial Shortcomings

The economic problems of urban transportation fall into two main categories: capital costs and the price mechanism.

As to the first:

> The cost of providing the physical facilities required to meet urban traffic requirements has reached astronomical levels. High costs of land and damage incident to construction and the tremendous capacity and complicated design of the facilities required in built-up urban areas have thus far combined to make full-scale attack impossible. The contrast between these needs and the financial possibilities of meeting them is not indicative of easy solution.[16]

Competition for the expenditure of urban governmental funds is intense. Urban transportation is but one area of expenditure. Every city and suburb is being overwhelmed with demands for better schools, housing, recreational facilities, and other public services.

One way of minimizing capital needs, of course, is the wise allocation of resources. In urban transportation, the pricing mechanism is the most effective way of doing this. The particular difficulty is applying this method to highways as well as to transit. Presently the driver makes his choice among roads as if they were a free good that does not need to be economized. As Dudley Pegrum quotes Professor Vickery:

> In the absence of any direct pricing of highway usage we seem to be faced with the following dilemma. Either we construct a highway system of extravagant proportions, which, while no greater than needed to carry its volume of traffic without congestion, is nevertheless much larger than the users would be willing to pay for if they had their choice between paying their share or doing without the facility or with one less ample, and being relieved of the corresponding share of the cost. Alternatively, we construct a highway system that is severely congested during the rush-hours, sufficiently so that resort to rail transit is the better alternative, if that is available, or possibly to bus transit if the busses can be sufficiently insulated from the impact of congestion, itself an expensive arrangement to provide for. Nor is there any particularly attractive middle ground. Specific pricing of highway usage is needed and needed badly.[17]

The problem of pricing is not solely related to highways, however. In most cases, the lowest fares are offered to those riders who incur the most total cost to the transit operation. The commuter railroads are the greatest offenders of improper pricing, since reduced-fare tickets are used mostly during the peak when total costs are highest. Although per capita costs may be lowest at this time, peak-hour volumes create the need for extensive equipment, facilities, and labor which for the most part lie idle for the rest of the day. It would seem logical that peak-hour riders should pay the cost of this labor and equipment which exist solely for peak-hour traffic. In addition, frequently distance is not adequately reflected in the transit price, especially for those systems charging a flat fare regardless of distance travelled. Flat fares exist because there are certain economies to

be had in simple methods of fare collection and administration. However, in the sprawling transit systems of large metropolitan areas, the economies are over-balanced by the expense of hauling longer distance passengers at short- or medium-distance fares. In effect, the short-distance riders subsidize the long-distance riders.

Unfortunately, "The delusion still persists that the primary role of pricing should always be that of financing the service rather than that of promoting economy in its use. But in practice there are many alternative ways of financing, but no device which can function quite as effectively and smoothly as a properly designed price structure in controlling use and providing a guide to the efficient deployment of capital."[18]

Research and Development

The problem of the research and development of better urban transportation systems is in a sense a continual one. No industry in this age of ever-advancing technology can afford to lag behind in its research. Industry is very much caught up in a Darwinian situation: the fittest will survive.

In the case of urban transportation, the effects of this Darwinian situation are evident. "Compared to the hundreds of millions of dollars flowing into research and development related to private motor vehicles every year, expenditures on mass-transportation improvement have been

almost negligible, although since 1961, federal aid for demonstration pruposes has provided an important stimulus."[19]

The big need, therefore, is to assist in the development of public transportation in order to make it an effective alternative to the automobile in flexibility, comfort, and cost. Topics needing study include the uses of automation, new power systems, body design, riding comfort, pricing mechanisms, cost reduction factors, etc., for mass transit and a continued research program for private transportation. In a less technical vein, the study of psychological factors involved in a person's choice of transportation mode would be of help to transportation planners.

Conceptual Deficiencies

Urban Design and Land Use Planning

Insofar as transportation is related to land use, any deficiency in urban design and land use planning adversely affects transportation planning and development. To date, there is little consensus as to what shape the modern urban area should assume. Generally there are two opposite poles: a centralized strong core and tightly knit density of development vs. decentralized spread at low density of development with many small nuclei.[20] There is even doubt as to whether there should be a

consensus on such matters. In any case, the inability to make a clear cut choice of urban form for any community hampers the transportation planning process.

In addition, the inability of the land use planner to implement his plans produces a situation of extreme uncertainty in planning for a transportation system. This failure of implementation has deep roots. Smerk suggests that traditionally land has been viewed as an almost inexhaustable resource and therefore to ration or somehow limit its use has seemed unnecessary to private and public agencies alike.[21] But there are still other reasons for this antipathy toward planning. Based on emotional grounds, planning and democracy have always seemed mutually exclusive to both politicians and constituents. Too, demographers had been predicting a very slow population growth after 1900. Finally, two World Wars and the Great Depression have made planning, at least up until 1950, seem of comparatively minor importance.

Transportation planning, it must also be said, has been conceptually deficient.

Transportation Planning

Wingo and Perloff sum up well one conceptual deficiency in transportation planning in this statement:

> Conventionally, urban transportation planning and policy have been carried out on a project-by-project basis, and what is normally called "the transportation system" simply has evolved from the unsystematic

> accumulation of public projects and policies. This approach has the useful quality of being fundamentally self-correcting. Individuals and groups, as well as urban governments, have exhibited a capacity to make the incremental adjustments necessary to make the system as a whole "work": particularly bad "bottlenecks" are mitigated by new projects or evaded by users shifting to new routes or modes. That this is a wasteful approach however, appears clear; it neglects the critical interconnections between parts of the system and between the system and the basic processes of the city. It may cope with specific problems as they arise, but the end consequences for the total fabric of urban life are haphazard, capricious, and unpredictable.[22]

Therefore the problem is not to look at an urban transportation system as a set of facilities for the movement of people and goods, but rather as "a set of facilities and institutions organized to distribute a quality of access selectively in urban space."[23] Too often transportation planning is merely viewed as an engineering exercise, as seen in the first definition. It is important to recognize as central the critical interdependence between the use of space and the means of interaction, between accessibility and land use.

Individual metropolitan areas seek to cope with their own unique combination of problems in various ways. One indication of the directions solutions take may be found in the goals and policies formulated by local agencies responsible for transportation planning. The next chapter sets forth a cross-section of these local urban transportation goals and policies.

CHAPTER 2

Current Local Urban Passenger Transportation Goals and Policies

The transportation goals and policies set forth by the various core city and metropolitan planning agencies throughout the country offer one indication as to the kinds of remedies which have been suggested to solve each urban area's own individual and unique problems. The aggregate of these locally derived remedies should then suggest all the solutions to the urban transportation problems possible within the limits of current planning techniques and transportation technology.

For immediate purposes here, the goals and policies developed by six cities of various sizes will serve as representatives for the goals and policies of metropolitan planning agencies throughout the country. In other words, it is assumed that the goals and policies developed by the planning agencies of these cities - Chicago, Philadelphia, Washington D.C., Buffalo, Knoxville, and East Providence[24] - cover a wide enough range of solutions to urban passenger transportation problems to be representative of the kinds of solutions developed throughout the nation as a whole.

For the sake of readability, the compilation of goals

and policies has been tampered with in two ways: (1) it has been categorized into two groups, i.e. those goals and policies dealing with the highway and street system and those dealing with public transportation; and (2) it has been summarized and combined into paragraph form rather than listed as in the original respective reports.

Goals

General

A primary goal of the metropolitan transportation system is that of economy and efficiency. The system should provide for the efficient movement of people and goods to, from, and within the central city. The system should therefore be composed of that combination of modes and facilities which will provide this efficiency of service to the community for the least overall expenditure of resources of the metropolitan area. The result will be a strenghtened regional economy (and this is a goal in itself) because locations suitable for business and industry will be more convenient to customers and employees.

A second group of goals relates to system balance. The several elements which comprise the total transportation system - highways, streets, transit lines, waterways, and all terminal facilities - must be mutually complementary in location and function. In another sense of the word, there should be a balance between transit and

automobile use. There should be sufficient volume of transit patrons to sustain a system of good riding quality and coverage so that no more cars are driven to the central business district as can be accommodated without undue congestion. In a third sense, the transportation system should be kept in balance at each future stage of development. Thus each major new project should be accomplished by necessary adjustments to related feeders and distributors. All three senses of the word balance are related, since a balance of ridership will only occur if the facilities of the transportation system are complementary and extended so that collection, main-line travel, and distribution of people are in harmony.

Another group of goals emphasizes land use. Land use and the transportation system should be coordinated, that is, related to one another so that there are enough kinds of transportation services available to adequately serve the various land uses. As a corrallary, the transportation network should be utilized to facilitate the achievement of land use objectives and to encourage desirable functional (i.e. land use) changes within the central city. These goals imply that the transportation system must fit the land use pattern and not vice versa.

Accessibility is a major goal of the transportation system. All parts of the metropolitan area should have increased accessibility to all other parts, thus permitting

greater locational choice in place of residence and work. The transportation system should enable a person at any point in the region to at any time reach any point in the central part of the region within one hour's travel time by one or more means of transportation.

As for design, the system should be built to high standards which would reduce and prevent accidents.

A final goal which encompasses all the above stipulates that the transportation system should be developed on the basis of regional requirements and objectives. Parochial and subregional interests may have to be sacrificed in any of the above goals to promote the good of the regional transportation system.

Highways

The highway system of the metropolitan area should be planned and developed with the following goals in mind:

(1) It should be a complete system both in geographic coverage and function.

(2) It should provide for all types of vehicles even when this requires specialized alignment or construction.

(3) It should be of controlled access where volume and type of traffic warrant.

(4) There should be ample rights-of-way for future widening, purchased before roadsides are lined with buildings.

(5) The regional network of freeways should be designed especially to handle those trips for which there is to be no convenient rapid transit service.

(6) The highway system should reduce the length of time necessary to travel from one place to another.

(7) Off-street parking and loading facilities should be planned and developed in relation to the highway system.

Specific design considerations of the highway system are an important set of goals. The residential environment should be improved by the upgrading and redesign of major streets. The highway system should be designed with safety and esthetic considerations as fundamental principles of development. These goals indicate that other values than merely those of economy and efficiency should be incorporated into highway design.

Finally, an all encompassing goal, the highway plan should be designed and executed to implement the general plan of development for the metropolitan area.

Transit

A reasonably convenient, pleasant public transit service with adequate area and time coverage which is potentially available to all but the most marginal urban traveler is the primary goal to be satisfied by the metropolitan

transit system. This implies that there should be transit service to all the built-up sections of the city and suburbs. In addition, the transit system should be operated to attract that portion of the travel market which it is inherently able to carry more efficiently than the automobile, all costs and benefits considered. This goal implies a center city-suburban radial system to accommodate peak-hour work trips. Finally, and this is a highly particularized goal, major transit stations should provide the focus of relatively complete new communities in development corridors. This would serve to reinforce radial patterns of metropolitan growth.

Policies

Highways

The construction of additional limited access highways is a major policy of metropolitan areas. These highways are divided into three categories: (1) a system of radials linking downtown center city with suburban and fringe areas; (2) a system of highways to distribute traffic in and around downtown to the effect of relieving congestion on the street system; and (3) a system of circumferential routes to connect the radials at approximately successive five mile intervals from downtown in order to bypass traffic bound for other than downtown destinations.

But the mere construction of this total highway system

is not enough. Other policies should be implemented. The design of these highways should enhance adjacent land uses. The system should include river crossings where necessary. The regional network of highways should be designed especially to handle those trips for which there is to be no convenient rapid transit service. Specialized functions (e.g. special bus lanes) should be designed into the highway system for use during times of highest traffic volumes.

The concept of balance enters into highway system policies. First, highway connections to rapid transit and commuter railroads should be provided as essential parts of a balanced system of transportation facilities. The development program for streets and highways should be kept in balance so that the system can function effectively as a whole.

The final set of policies refers to administrative implementation. All highway activities in the metropolitan area should be coordinated. This includes cooperation between private groups and government agencies. The highway system of the metropolitan area should be classified, designed, and maintained according to uniform standards. Rights-of-way for future highways should be reserved or acquired in advance of construction.

Streets

Although the policies regarding the metropolitan

street system treat mostly of correcting faults in the existing system, the development of new high-speed, high-capacity arterials is one policy which deviates from the patch-up orientation of these policies.

The establishment of a workable system of streets through eliminating diagonal streets and the application of design-techniques and police-power devices are two typical patch-up oriented policies.

Washington, D.C., as a rather particular policy, advocates that special design coordination and treatment should be encouraged on streets and avenues downtown which form important parts of the city's open-space system.

Parking

The general aim of policies related to parking facilities is that of providing sufficient storage capacity when and where it is needed. This can be done by expanding the system of off-street parking to service the central business district. Such parking should be located at the periphery of the district, readily accessible from the expressway system, and designed to intercept cars destined for the high-density core area. Overnight curb parking should be controlled; it may be licensed in congested areas. Off-street loading and parking space (and this can be inconsistent with the above policy) should be provided with new buildings. Finally, parking should be adequate for other than downtown industrial and shopping areas.

Transit

Every attempt should be made to encourage rush-hour use of transit into and from downtown. Urban rapid transit of high quality is essential to meet the needs of growing outer urban areas, while suburban rapid transit must be retained and enhanced to meet the demands of growing and otherwise automobile-oriented suburban areas.

Several policies relate to rail rapid transit service. An expanded system of regional rapid transit should consist primarily of radial lines focusing on downtown. Median strips for rail transit should be reserved for future use. When these new transit lines are built, they should be located and designed so as to encroach as little as possible upon residential areas. Along with the modernization of vehicles and stations, existing elevated structures should be replaced with subways, depressed rights-of-way, elevated embankments, or modern concrete-steel structures. These improvements should have the effect of reducing noise.

Policies which concern bus service affect a larger number of metropolitan areas than do policies directed toward rail transit. Bus service should be improved to the extent that it will be available within a quarter mile of every home in the high density areas with adequate service (including feeder) in all areas. Streetcars operating on mixed-traffic streets should be replaced in most

locations with buses. At the same time, in those outlying urban and built-up suburban areas which are inaccessible to rail transit, express bus service to downtown should be established.

Bus service should be improved by reserving arterial road lanes and downtown street space for its exclusive use. In addition, express, suburban and interurban buses should be provided with off-street terminals in order to provide available street space for local service vehicles.

A few of the largest metropolitan areas also have policies which relate to commuter railroad service. Suburban rail equipment should be replaced by new, lighter, faster, more efficient and more comfortable cars. Little used or unused branch lines should be eliminated as should all railroad grade crossings. Park-and-ride stations with provisions for automobile and bus delivery and pick-up of passengers should be established at major transit and rail commuter train stops.

The downtown distribution of transit passengers is a problem in itself. A high-quality central distribution service is required to meet ideal transit service standards within the central district. Existing surface and rapid transit service downtown should be improved by increasing speed and adapting routes and fares to local as well as through traffic demands. A downtown pedestrian distribution system of weather-protected passageways or malls

in the central business district should be established so as to link bus, rail transit, and commuter railroad stations. Long-distance rail and bus terminals should be connected to this central distribution system.

All transit services should be coordinated. This would include cooperation between rail transit, commuter railroads, and suburban bus service by operating agreements, thus affording a single system of service without necessarily resorting to single ownership. Finally, all services should undertake a vigorous public information program to achieve a better understanding of transit operations by the public. Such a program would include publication of system maps and timetables, continuous phone information service, public tours, and special services.

Administrative Organization

The administrative orgainzation for metropolitan transportation may take on many forms, three of which are presented as policies here.

The first alternative is to continue all transit operations under private ownership and control with supervision directed by the local public utilities commission. The administrative organization for highways and streets would remain separate and distinct.

The second alternative is to coordinate the various transit services, regardless of ownership, to the effect of a single system through operating agreements. This

would apply to larger metropolitan areas where more than one transit system is in operation. Again roads and highways would be under a separate jurisdiction.

A third alternative would establish a regional transportation organization that is responsible for the development and general control of the total regional transportation system, including highways, suburban surface and rapid transit, rail commuter service, feeder bus lines, taxis, and parking facilities.

The range of goals and policies set forth above may be frustrated or encouraged in their implementation by federal urban transportation policies. Since individual metropolitan areas have their own unique sets of problems, the goals and policies developed to cope with these problems must perforce be unique. Federal policy, therefore, must be broad enough to permit individually developed sets of solutions to be realized. There can be no federal solution to unique problems. The federal policies which deal with urban passenger transportation are presented in the next chapter, with the end in view of recommending changes in these federal policies to better fit local needs.

CHAPTER 3

Current Federal Urban Passenger Transportation Policies

Government in the United States has had a long and checkered history in its relationship with the transportation industry. That history is not so much a concern here as are some of the reasons why the government, regardless of level, has involved itself with matters of transportation, and, in this case, urban transportation. The most important of these reasons are:[25]

(1) "Acquisition of rights-of-way usually requires the use of the government power of eminent domain.

(2) "Transportation routes have great impact on the character of the community and much of its future course of development. Beneficiaries of a transportation system....include indirect as well as direct users. Their interest can only be reconciled by government action.

(3) "To secure adequate financing of transportation facilities, it is usually necessary to invoke some powers of government specifically on their behalf. When technical difficulties prevent charging each direct and indirect beneficiary according to his use, powers of taxation are frequently applied, as for streets

and highways. When reasonable economies cannot be achieved except by limiting competition on a given route and mode, as in the case of most common carriers, exclusive franchises are granted.

(4) "Standards of health, safety, and service for most types of transportation must be enforced by government.

(5) "Responsibilities for defense, commerce, and the general welfare require the national government to have interest in transportation."

In addition, there are particular reasons for federal participation specifically in urban trasnportation planning and policy-making:

> Federal interest in metropolitan transportation derives from its responsibilities to promote and regulate interstate commerce, to provide for national defense, and to provide for the general welfare. Routes for all modes at one time or another have been supported by federal funds, or constructed by the federal government, or their use regulated by the federal government. Facilities used in interstate commerce are frequently used for intrastate travel. Commuter rail service frequently shares rights-of-way with interstate passenger or freight traffic and is regulated by the federal government. Highways constructed with federal aid within the metropolitan areas as part of an interstate system largely serve intra-metropolitan area transportation needs. The efficient functioning of manufacturing and service activities is important to interstate commerce, and most of these activities take place in metropolitan areas and use the metropolitan area transportation systems.[26]

For the above reasons, the federal government has quite definitely assumed a role in virtually every phase of transportation. This role has been expressed primarily

through federal legislation. That is to say, the Congress has initiated and set the tone for federal involvement in transportation, although the administrative agencies have been responsible for working out the details of such involvement. Collectively all the acts passed by Congress constitute federal policy in the field of transportation. Theoretically all the various federal programs relating to transportation are compatible with the Preamble to the Transportation Act of 1940, which is the most recent Congressional declaration of national transportation policy. Since the Preamble precedes Part I of the Act, however, it does not embody any specific rule of law:

> It is hereby declared to be the national transportation policy of the Congress to provide for fair and impartial regulation of all modes of transportation subject to the provisions of the Act, so administered as to recognize and preserve the inherent advantages of each; to promote safe, adequate, economical and efficient service and foster sound economic conditions in transportation and among the several carriers; to encourage the establishment and maintenance of reasonable charges for transportation service, without unjust discriminations, undue preference or advantages, or unfair or destructive competitive practices; to cooperate with the several States and the duly authorized officials thereof; and to encourage fair wages and equitable working conditions; all to the end of developing, coordinating and preserving a national transportation system by water, highway, and rail, as well as other means, adequate to meet the commerce of the United States, of the Postal Service, and of the national defense. All of the provisions of this Act shall be administered and enforced with a view of carrying out the above declaration of policy.[27]

In reality, the federal government has not implemented programs which conform to the declaration of policy

in the Act of 1940, at least as far as urban transportation is concerned. Rather, according to Smerk, federal programs in urban transportation have tended to be evolutionary in effect:

> The attitude of the federal government toward urban transportation has moved gradually through three stages. First, as would be expected in keeping with the prevailing feelings of the day, came laissez faire; any other policy would have been inharmonious with the inclinations of the public during the period preceding the Great Depression. Next, as a part of the lingering dissolution of laissez faire, was the period of one-sided federal help to urban areas through grants-in-aid for the construction and improvement of highways and streets. Finally came the present program which, though currently of limited scope, extends federal action to include aid to mass transport agencies.[28]

The federal role in urban transportation, then, is primarily concerned with rail and highway transportation, although to a minor extent water transportation is also involved in the form of ferries and hydrofoils. Thus actually two different programs are involved, each to be discussed separately here.

Federal Highway Program

The federal-aid highway program will be 52 years old this year. The original supporters of federal highway aid were, from today's point of view, a strange group of bedfellows. Farmers were the prime pressure group for such aid because of the poor condition of rural roads. They were joined, however, by bicycle enthusiasts, the rapidly growing number of auto owners, the auto manu-

facturers, and even the railroads. The railroads had joined in on the theory that improvement of highways would bring opportunity for greater access to their rural stations.[29]

Federal aid to urban roads, however, did not begin until 1944, since the Federal-Aid Road Act of 1916 specifically prohibited aid to urban areas with a population of more than 2,500, as shown by the latest federal census, except portions of streets or roads along which the houses averaged more than 200 feet apart. With only minor exception, this gap continued from 1916 until World War II.

Smerk cites several reasons for this gap:[30] (1) aid went originally to the area of greatest need; (2) rural opposition to federal aid to urban areas for fear of a cut in aid to rural areas; (3) urban streets were in comparatively good shape; (4) no one foresaw the shades of problems to come. The effects on the environment and eventual ubiquity of the auto were not understood by the planners of that time.

In 1928 the first minor exception to the ban on federal aid to urban roads appeared. Funds were specifically made available to municipalities of 2,500 or more along those sections of highway on which houses were more than 200 feet apart on the average. Four years later the Emergency Relief and Construction Act provided money for federal-aid highways as a relief measure during the

depression. This money could be used on urban stretches and no state matching funds were required. One should appreciate, however, that this was a relief measure, not an attempt at urban transportation problem solving.[31] The National Industrial Recovery Act of 1933 and the Hayden-Cartwright Act of 1934 continued these relief measures to be used for emergency construction of federal-aid highways and extensions thereof into and through municipalities. These could include surveys and plans, grade crossing eliminations, bridges and construction of routes to avoid congested areas.

Gradually urban highway problems became evident in the late 1930's as suburban areas grew, the use of mass transportation declined, and the population of automobiles increased. "The Federal-Aid Highway Act of 1944 marks the beginning of vigorous federal participation in urban highway programs."[32] Expenditures of $500 million per year for the first three postwar years were authorized. Funds were made available for use on federal-aid systems in communities of more than 5,000.

The Act of 1944 was important because it set the pattern of aid to highways up to and including the present and established the policy of aid to urban roads-only until the Housing Act of 1961. "Seventeen years in the over-all scheme of things is not a long time; yet this particular 17-year period was one in which the greatest

urban decentralization took place and which marks the growth of the daily traffic jam to monumental proportions. The eventual recognition in the Housing Act of 1961 that urban mass transport was necessary and, moreover, that it required federal aid, is a fair indication that the policies during this period of aid to highways-only were not extraordinarily successful."[33]

This emphasis on highway aid is termed by Smerk as the "conventional wisdom," for which there were several causes:[34] (1) federal highway aid had become part of the American scene - it was more or less traditional; (2) highways are not a commercial enterprise, whereas public transport firms traditionally have been - it smacks of socialism to give aid to business; (3) rural legislatures oppose aid to urban areas as a matter of political health, while for urban legislators, urban highway aid was an accomplishment; (4) most voters today have cars and use them; (5) the highways-only buracracy has been comfortably entrenched - aid to mass transit would present a rival; (6) pressure came from the auto lobby, especially the manufacturers; (7) artful advertising has built up a consumer preference for private over public transportation; and (8) transit companies present the image of a dying, money-losing concern, an unattractive alternative to the auto.

The last major addition to the federal highway program

was made by Congress in the Federal-Aid Highway Act of 1956 which established the National System of Interstate and Defense Highways, a system of roads some 41,000 miles in length which actually had been designated for many years but never pushed toward completion until 1956. This system is to meet a higher performance standard than that required for the federal-aid primary and secondary systems, with consequently a higher cost per mile.

There are, then, essentially three federal-aid highway programs in operation today: the primary system, the secondary system, and the Interstate System. For purposes of discussion below, however, the primary and secondary systems are combined into one, popularly known as the federal-aid ABC program, while the Interstate System will be dealt with separately.

The ABC System

Until the decision in 1956 to actively complete the Interstate System, the ABC highway program was the main highway aid program of the federal government, consisting of aid to the states for primary and secondary roads. Title 23 of the United States Code contains a definition of the primary and secondary systems:

> The Federal-aid primary system shall consist of an adequate system of connected main highways, selected or designated by each State through its State highway department, subject to the approval of the Secretary (of Commerce)....This system shall not exceed 7 per centum of the total highway mileage of such

> State, exclusive of mileage within national forests, Indian, or other Federal reservations and within urban areas, as shown by the records of the State highway department on November 9, 1921. Whenever provision has been made by any State for the completion and maintenance of 90 per centum of its Federal-aid primary system, as originally designated, said State through its State highway department by and with the approval of the Secretary is authorized to increase the mileage of its Federal-aid primary system by additional mileage equal to not more than 1 per centum of the total mileage of said State as shown by the records on November 9, 1921. Thereafter, it may make like 1 per centum increases in the mileage of its Federal-aid primary system whenever provision has been made for the completion and maintenance of 90 per centum of the entire system, including the additional mileage previously authorized. This system may be located both in rural and urban areas.[35]
>
> The Federal-aid secondary system shall be selected by the State highway departments and the appropriate local road officials in cooperation with each other, subject to approval by the Secretary....In making such selections, farm-to-market roads, rural mail routes, public school bus routes, local rural roads, county roads, township roads, and roads of the county road class may be included, so long as they are not on the Federal-aid primary system or the Interstate System. This system may be located both in rural and urban areas, but any extension of the system into urban areas shall be subject to the condition that such extension pass through the urban area or connect with other Federal-aid system within the area.[36]

Thus the ABC program is open-ended. Funds may be used not only for the construction and improvement, but also the extension of primary and secondary roads. The Secretary of Commerce must approve all projects under that program and may require modifications or revisions thereof; no funds are granted until approval is obtained.[37]

The authorized sums for the ABC program are divided into three parts: the Federal-aid primary system; the Federal-aid secondary system; and for extensions of the

primary and secondary systems within urban areas. This division is made after a deduction of 3 3/4 per cent is made from all sums authorized for administrative and research purposes.[38]

The ABC funds are divided in this manner:

45% of the total for the primary system divided among the states according to this formula:

> One-third in the ratio which the area of each State bears to the total area of all the States, except that only one-third of the area of Alaska shall be included; one-third in the ratio which the population of each State bears to the total population of all the States as shown by the latest available Federal census; one-third in the ratio which the mileage of rural delivery routes and star routes in each State bears to the total mileage of rural delivery and star routes in all the States at the close of the next preceding fiscal year....No State shall receive less than one-half of 1 per centum of each year's apportionment.[39]

30% of the total for the secondary system divided among the states according to the formula used for the primary system, except the one-third apportioned on the basis of population uses rural population rather than total population.

25% of the total for the primary and secondary extensions within urban areas divided among the states according to this formula:

> In the ratio which the population in municipalities and other urban places, of five thousand or more, in each State bears to the total population in municipalities and other urban places of five thousand or more in all the States, as shown by the latest available Federal census.[40]

Up to 20% of the amount apportioned in any fiscal year for the ABC program of each state may be transferred from one category to another with the approval of the Governor of each state and the Secretary of Commerce as long as such transfer does not increase the original apportionment of any one category of funds by more than 20%.[41] If all secondary roads in any one state are under the control and supervision of such state's highway department, the funds apportioned for the secondary system may be expended for projects on another federal-aid system if the state highway department and the Secretary of Commerce jointly agree that such funds are not needed for the secondary system.[42] This arrangement for funds transfer permits a certain flexibility in the use of federal-aid funds. This helps to recognize the uniqueness of each state's needs.

In approving projects for the ABC program, the Secretary may give priority to projects recommended as important to the national defense by the Secretary of Defense or other authorized official.[43] In addition, "in approving programs for projects on the Federal-aid primary system, the Secretary shall give preference to such projects as will expedite the completion of an adequate and connected system of highways interstate in character."[44] In this way the federal government retains control over the purposes of roads. The provision that the Secretary may withhold

funds until a project is approved gives the federal government a much more broad control, which could be used to further any policy aims the government chose to emphasize.

"For the purpose of facilitating the acquisition of rights-of-way on any of the Federal-aid highway systems... in the most expeditious and economical manner, and recognizing that the acquisition of rights-of-way requires lengthy planning and negotiations if it is to be done at a reasonable cost," the Secretary may make available funds for the acquisition of rights-of-way up to seven years before actual construction of a road. The state then reimburses the federal government for the rights-of-way cost upon actual construction.[45]

Before approving a project, the federal government requires that certain standards be met "that will adequately meet the existing and probable future traffic needs and conditions in a manner conducive to safety, durability, and economy of maintenance" for such project.[46] Secondary roads shall be constructed for all-weather service and permit maintenance at a reasonable cost. All informational signs, curb and pavement or other markings, and traffic signals placed by a public authority shall be subject to the state highway department's approval and the concurrence of the Secretary, who shall concur "only in such installations as will promote the safe and efficient

utilization of the highways."[47] Thus the federal government may exercise control not only over the priority of construction, but also over the minute details of construction and maintenance. In fact, the construction work and labor shall be performed under the direct supervision of the state highway departments and subject to the inspection and approval of the Secretary.[48]

After construction, it is the duty of the respective highway departments to maintain or cause to be maintained any project constructed with federal aid until such time as any road ceases to be a part of the federal-aid system. Whenever the Secretary shall find an improperly maintained road, he shall issue a notice stating such to the state highway department responsible. If the situation is not corrected within 90 days, approval of all projects within the state shall be withheld until the road in question receives proper maintenance.[49] The state highway departments shall enter into agreements with county and municipal officials for the maintenance of federal-aid secondary or urban roads not under legal control by such highway departments.[50]

The federal share of each project under the ABC program is 50% of the construction cost, except higher in the case of those states in which unappropriated and unreserved public lands and nontaxable Indian lands exceed 5% of the state's total land area.[51] In such case, the

federal share increases. In addition the federal government will also make relocation assistance payments to families and businesses displaced by ABC projects. These shall not exceed $200 for an individual family and $3000 for a business concern, farm, and nonprofit organization.[52] Too, the federal government pays 100% of the construction costs and 50% of the right-of-way and damage costs in the elimination of railway-highway crossings, provided that no more than 10% of a state's appropriation is used for such purposes.[53] A state may be reimbursed for the cost of relocation of utilities at the same proportion as the federal funds expended on the project.[54]

The federal government requires a certain minimum protection of the public route locations through means of public hearings. "Any State highway department which submits plans for a Federal-aid highway project involving the bypassing of, or going through, any city, town, or village, either incorporated or unincorporated, shall certify to the Secretary that is has had public hearings, or has afforded the opportunity for such hearings, and has considered the economic effects of such a location."[55]

All federal-aid roads shall be used free of charge; tolls are specifically prohibited.[56] The Secretary may permit federal participation, however, in the construction of any toll bridge, toll tunnel, or approach thereto, under the following conditions: "(1) all tolls received

from the operation of the bridge or tunnel, less the actual cost of such operation and maintenance, shall be applied to the repayment to the State or other public authority of all of the costs of construction or acquisition of such bridge or tunnel, except that part which was contributed by the United States; (2) no tolls shall be charged for the use of such bridge or tunnel after the State or other public authority shall have been so repaid; and (3) after the date of final repayment, the bridge or tunnel shall be maintained and operated as a free bridge or free tunnel."[57]

The federal government provides that a certain minimum of transportation planning be undertaken in each of the nation's metropolitan areas:

> It is declared to be in the national interest to encourage and promote the development of transportation systems, embracing various modes of transportation in a manner that will serve the States and local communities efficiently and effectively. To accommodate this objective the Secretary shall cooperate with the States, as authorized in this title, in the development of long-range highway plans and programs which are properly coordinated with plans for improvements in other affected forms of transportation to their probable effect on the future development of urban areas of more than fifty thousand population. After July 1, 1965, the Secretary shall not approve under section 105 (highway-aid programs) of this title any program for projects in any urban area of more than fifty thousand population unless he finds that such projects are based on a continuing comprehensive transportation planning process carried on cooperatively by States and local communities in conformance with the objectives stated in this section.[58]

The Department of Commerce and the Housing and Home

Finance Agency permit joint use of Section 701 planning funds under the Housing Act and highway research funds for metropolitan transportation planning. "Both agencies are pledged to stimulate and cooperate in a continuing process of planning and development coordination which will:

(1) Give consideration to all forces, public and private, shaping the physical development of the total community.
(2) Cover land uses and controls as well as plans for physical development and combine all elements of urban development and redevelopment into a clearcut, comprehensive plan of what the citizens want their community to become.
(3) Cover the entire urban area within which the forces of development are interrelated.
(4) Involve in the planning process the political jurisdictions and agencies which make decisions affecting development of the metropolitan area.
(5) Link the process of planning to action programs.

"The objective of this joint effort is not merely a planning process but the development of effective cooperation and coordination both among the local governments within a metropolitan area and between these governments and the State and Federal agencies involved in area development activities."[59]

In addition to these local efforts,

> the Secretary is authorized in his discretion to engage in research on all phases of highway construction, modernization, development, design, maintenance, safety, financing, and traffic conditions, including the effect thereon of State laws and is authorized to test, develop, or assist in the testing and development of any material, invention, patented article, or process.[60]

Thus the ABC federal-aid road program is a masterful

example of the carrot-stick principle of government finance. The federal government through generous matching funds makes state participation virtually irresistible. At the same time the Department of Commerce through the Bureau of Public Roads retains very real control over the projects for which federal moneys are expended. Despite the inevitable red tape involved, federal "bribery" through matching funds has the advantage of inducing local action and needed operating changes on the state and local levels of government as typified by the requirement set forth in 1962 that as of July 1, 1965, all metropolitan areas have an active transportation planning studies in process.

The Interstate System

For the most part, the policies of the ABC program also apply to the Interstate Highway program. The Interstate System however has as its main objectives the linking of metropolitan areas and satisfying the needs of national defense:

> The Interstate System shall be designated within the continental United States and it shall not exceed forty-one thousand miles in total extent. It shall be so located as to connect by routes, as direct as practicable, the principal metropolitan areas, cities, and industrial centers, to serve the national defense, and to connect at suitable border points with routes of continental importance in the Dominion of Canada and Republic of Mexico. The routes of this system shall be selected by joint action of the State highway departments of each State and the adjoining States, subject to the approval of the Secretary....All highways or routes included in the Interstate System as

> finally approved, if not already coincident with the primary system, shall be added to said system without regard to the mileage limitation set forth (for the primary road system). This system may be located both in rural and urban areas.[61]

Unlike the ABC program, the Interstate System is not open-ended. It has a completion date of June 30, 1971, when, hopefully, the entire system will be brought to simultaneous completion. "Insofar as possible in consonance with this objective (simultaneous completion), existing highways located on an interstate route shall be used to the extent that such use is practicable, suitable, and feasible, it being the intent that local needs, to the extent practicable, suitable, and feasible, shall be given equal consideration with the needs of interstate commerce."[62]

The federal share of the Interstate System is 90% of the cost, while the states pay 10%. The total federal appropriation is apportioned among the states in the ratio which the cost of completing the Interstate System in each state bears to the sum of the estimated cost of completing the Interstate System in all the states.[63]

Construction standards for the Interstate System are more rigorous than for the ABC program. Individual projects must be planned and executed to accommodate the types and volumes of traffic anticipated for such projects for the 20 year period commencing on the date of approval by the Secretary.[64] In addition, the states may not add

any points of access to or exit from the project in addition to those approved by the Secretary in the plans for such project without additional approval. No motor vehicle service facilities may be located on the Interstate rights-of-way. The states or their political subdivisions may, however, use the airspace above and below the road's grade line for any use which does not interfere in any way with the free flow of traffic.[65]

As with the federal-aid primary and secondary systems, no tolls may be charged on Interstate System highways. Toll roads existing or to be built in the future which follow planned interstate routes and meet the construction standards of the Interstate System may be designated as interstate highways, however no federal aid may be expended for the contruction or improvement of such toll roads.[66]

A final difference between the ABC program and the Interstate System is that of billboard and sign control. "It is declared to be national policy that the erection and maintenance of outdoor advertising signs, displays, or devices within six hundred and sixty feet of the edge of the right-of-way and visible from the main-traveled way of all portions of the Interstate System constructed upon any part of the right-of-way, the entire width of which is acquired subsequent to July 1, 1956, should be regulated, consistent with national

standards to be prepared and promulgated by the Secretary."[67] Signs permitted within 660 feet of the right-of-way would include only those giving information in the specific interest of the traveling public, official signs and notices, property sale signs, and signs advertising activities being conducted at a location within twelve miles of the sign's location. This sign control is not mandatory, but rather is an optional regulation which brings with it an added bonus of one-half of one per cent federal share of interstate highway cost if the agreement had been made between the Secretary and the state highway departments before July 1, 1963. If a state acquires by purchase or condemnation the right to advertise or regulate advertising in an area adjacent to Intersate System rights-of-way, the federal government will pay 90% of the cost.[68]

The Interstate System, then, is not so much an extreme example of the carrot-stick approach to intergovernmental relations, but rather a recognition on the part of the federal government that these highways were originally conceived to be primarily for interstate and defense purposes, and therefore quite properly the heaviest financial burden should be borne by the federal government. This is not to deny, however, that the Interstate System has had a most profound effect upon local transportation patterns and urban development.

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The Highway Trust Fund

The first post-war fiscal year appropriation for the ABC program amounted to $500 million. The authorized appropriations for the fiscal years ending 1966 and 1967 are $1 billion, or double that twenty years ago. The authorized appropriation for the Interstate System now stands at $2.2 billion annually, tapering off to slightly more than $1 billion for the final year of the interstate program. Present authorized appropriations for all federal highway aid programs total some $3.2 billion.

To pay for this aid to highways which currently amounts to three per cent of the total federal budget, Congress passed the Highway Revenue Act of 1956 which created a trust fund of monies reserved solely for highway aid. This trust fund is fed by a host of motor vehicle related taxes, which include levies on gasoline, special motor fuels, tires, truck weight, and floor stock tax.[69] The highway trust fund on the whole pays for all the federal share of highway construction. No general revenue funds are used.

Federal Aid to Mass Transportation

The principle of federal aid to public transportation in urban areas has been only recently accepted by Congress and, at least to date, on a much less munificent basis than for highway aid, primarily because transit had

previously been the profitable domain of private enterprise and, unlike the automobile enthusiasts, the transit industry had been without a powerful Congressional lobby. Although the pros and cons of the issue are not to be debated here, there are several reasons advanced for such aid:[70]

(1) The investment in Federal highways must be protected by assuring that interstate and defense traffic is not impeded by local congestion in and around urban areas.

(2) In a related connection, the (generous) availability of Federal highway funds, coupled with the (modest) amount of mass transportation funds, introduces a "pro-highway" bias into local transportation planning. The Federal highway program to date has represented a classic example of "lost opportunity."

(3) Federal assistance by way of financial aid, technical assistance, research and other programs or policies, is needed to protect the Federal investment or national interests in other fields, such as housing, outdoor recreation, and air pollution abatement, and to facilitate the journey-to-work pattern of Federal employees.

(4) The Federal Government is directly concerned with long-haul freight and passenger movements. Continued deficit operations attributable to commuter traffic seriously affect the ability of the railroads to maintain long-haul service.

(5) The Federal Government has the necessary fiscal resources to sponsor major programs of research; to conduct experiments and to undertake demonstration projects; to support regional urban transportation and land use planning in the metropolitan areas; and to assist in the construction and operation of facilities.

(6) The economic health of the Nation depends on the economic viability of its metropolitan areas. Hence there is a further national interest which would be preserved by increased

Federal action.

(7) State and local leadership is lagging and, where it exists, is highly sporadic. The result has been a general lack of concerted action; even where broad programs have been developed, as in Washington, San Francisco Bay and other areas, the built-in political limitations of local leadership have prevented early action.

(8) Increased action by the Federal Government does not mean Federal dictation over local interests; appropriate mechanisms to assure local participation and to guarantee effective means of achieving public responsiveness can be built into whatever step the United States Government sees fit to take.

(9) Finally, there is the Constitutional requirement that compacts and agreements between States must be consented to by the Congress. Thus, apart from any other consideration, the United States is necessarily invovled in the transportation problem of the interstate metropolitan areas.

Financial Assistance to Urban Mass Transportation

Although a $100 million loan program to aid the railroads existed from 1958 to 1961, the first real financial assistance to public urban passenger transportation began with the passage of the Housing Act of 1961. This initial program consisted of three separate provisions: grants, loans, and planning assistance, all administered by the newly created office of transportation within the Housing and Home Finance Agency.

The program of grants was endowed with a modest appropriation of $25 million, dispensed, like the highway aid program, on a matching basis:

> The Administrator (of the HHFA) may, with the approval of the President, contract to make grants aggregating not to exceed $25 million for mass transportation demonstration projects which he determines will assist in carrying out urban transportation plans and research, including but not limited to the development of data and information of general applicability on the reduction of urban transportation needs, the improvement of mass trasnportation service, and the contribution of such service toward meeting total urban transportation needs at minimum cost. Such grants shall not be used for major long-term capital improvement; shall not exceed 2/3 of the cost, as determined or estimated by the Administrator, of the project for which the grant is made; and shall be subject to such other terms and conditions as he may prescribe.[71]

Thus, "this program (of grants was) designed to provide federal financial assistance in testing and demonstrating new ideas and new methods for improving mass transportation systems and service. Some examples of.... projects are service improvements, testing and pricing policies, improved mass transit traffic flow, coordination of urban transportation services, and technical innovations."[72] Private transport companies could not participate in the program directly. Private companies had to contract for aid with a public agency having legal authority to undertake the project and to deal with the federal government.

The mass transportation loan program came under Title II of the Housing Act, Sections 201-207, Public Facility Loans. The purpose of the loans was set forth by Congress:

It has been the policy of the Congress to assist

> wherever possible the States and their political subdivisions to provide the services and facilities essential to the health and welfare of the people of the United States. The Congress finds that in many instances municipalities, or other political subdivisions of States, which seek to provide essential public works facilities (including mass transportation facilities and equipment), are unable to raise the necessary funds at reasonable interest rates. It is the purpose of this title to authorize the extension of credit to assist in the provision of certain essential public works or facilities by States, municipalities, or other subdivisions of States, where such credit is not otherwise available on reasonable terms and conditions.[73]

These loans could be used to finance "the acquisition, construction, reconstruction, and improvement of facilities and equipment for use, by operation, by lease or otherwise, in mass transportation service in urban areas, and for use in coordinating highway, bus, surface-rail, underground parking and other transportation facilities in such areas. The facilities referred to may include land, but not public highways, and any other real or personal property needed for an economic, efficient, and co-ordinated mass transportation system."[74]

Maturity dates for loans could extend to 40 years. The interest was 3%. A total of 50 million dollars was made available through December 31, 1962. The program has not been extended.

The final program instituted in 1961 was the specific inclusion of transportation planning in Section 701 of the National Housing Act, urban planning assistance grants; the purposes of which are:

> To assist State and local governments in solving planning problems resulting from the increasing concentration of population in metropolitan and other urban areas, including small communities; to facilitate comprehensive planning for urban development, including coordinated transportation systems, on a continuing basis by such governments; and to encourage such governments to establish and improve planning staffs.[75]

Urban planning assistance grants are available to all sizes of communities, individually or in combination. Communities of less than 50,000 receive grants through state planning agencies or an acceptable alternative. In addition, state, metropolitan, regional, and county planning agencies along with municipalities over 50,000 in population may receive federal aid directly. Planning assisted under this section shall, to the maximum feasible, cover entire urban areas having common or related urban development problems. Cooperation and coordination among municipalities, political subdivisions, public agencies, and other parties is encouraged. "Planning which may be assisted includes the preparation of comprehensive urban transportation surveys, studies, and plans to aid in solving problems of traffic congestion, facilitating the circulation of people and goods in metropolitan and other areas and reducing transportation needs."[76] These funds are in addition to any other federally aided programs.

Grants may cover two-thirds the estimated cost of the work, except three-fourths for designated redevelopment

areas. All grants are subject to terms and conditions prescribed by the HHFA. The use of a grant for planning specific public works is prohibited. The most recent authorized appropriation for such grants is $230 million. Finally, the HHFA may provide technical assistance to state and local governments and their agencies and instrumentalities undertaking such planning and, by contract or otherwise, to make studies and publish information on related problems.

Although the program of planning grants is continuing as a provision of the National Housing Act, the demonstration grants and public facility loans instituted in 1961 were only one-shot programs. The current Congressional policy concerning aid to urban public transportation is set forth in the Urban Mass Transportation Act of 1964.[77]

Three reasons for the Act are stated by Congress:

(1) That the predominant part of the Nation's population is located in its rapidly expanding metropolitan and other urban areas, which generally cross the boundary lines of local jurisdictions and often extend into two or more States;

(2) That the welfare and vitality of urban areas, the satisfactory movement of people and goods within such areas, and the effectiveness of housing, urban renewal, highway, and other federally aided programs are being jeopardized by the deterioration or inadequate provision of urban transportation facilities and services, the intensification of traffic congestion, and the lack of coordinated transportation and other development planning on a comprehensive and continuing basis; and

(3) That Federal financial assistance for the develop-

> ment of efficient and coordinated mass transportation systems is essential to the solution of these urban problems.[78]

The purposes of the Act are threefold:

(1) To assist in the development of improved mass transportation facilities, equipment, techniques, and methods, with the cooperation of mass transportation companies both public and private;

(2) To encourage the planning and establishment of areawide urban transportation systems needed for economical and desirable urban development, with the cooperation of mass transportation companies both public and private; and

(3) To provide assistance to State and local governments and their instrumentalities in financing such systems; to be operated by public or private transportation companies as determined by local needs.[79]

Financial assistance may be made in the form of grants or loans

> to assist States and local public bodies and agencies thereof in financing the acquisition, construction, reconstruction, and improvement of facilities and equipment for use, by operation or lease or otherwise, in mass transportation service in urban areas and in coordinating such service with highway and other transportation in such areas. Eligible facilities and equipment may include land (but not public highways), buses and other rolling stock, and other real or personal property needed for an efficient and coordinated mass transportation system. No such funds shall be used for payment of ordinary governmental or nonproject operating expenses.[80]

No project may receive support through both loans and grants, except grants made for relocation payments. No money may be used by a public agency for purchasing any facilities or other property of a private mass transportation company or for the construction, reconstruction, or

improvement of any facilities or other property purchased from a private company after the date of the enactment of the Act or for the provision of facilities or equipment in competition with or supplementary to service provided by an existing mass transportation company unless (1) such assistance is essential to a program for a unified or officially coordinated urban transportation system as a part of a comprehensively planned urban area; (2) that such a program provides for maximum feasible participation of private companies; (3) just and adequate compensation is paid to such companies for acquisition of their franchises or property; and (4) that the interest of affected employees is protected.[81]

Federally assisted projects must be part of a long-range program of transportation development. "No Federal financial assistance shall be provided....unless....the facilities and equipment for which the assistance is sought are needed for carrying out a program....for a unified or officially coordinated urban transportation system as a part of the comprehensively planned development of the urban area, and are necessary for the sound, economic, and desirable development of such area."[82]

Federal grants may cover up to two-thirds of the net project cost, which is equal to that cost of a project which cannot be reasonably financed from revenues. "The remainder of the net project shall be provided, in cash,

from sources other than Federal funds, and no refund or reduction of that portion so provided shall be made at any time unless there is at the same time a refund of a proportional amount of the Federal grant."[83] Authorized appropriations for such grants made by Congress shall not exceed $75 million for the fiscal year ending 1965; $150 million for 1966; and $150 million for 1967. Such appropriations remain available until expended.[84] The combined projects in no state shall receive more than 12½ per cent of the aggregate authorized funds for any one fiscal year.

Prior to July 1, 1967, federal assistance may be provided to an urban area without a program for the development of a unified or officially coordinated transportation system (1) if such a program is under active preparation, (2) the facilities and equipment for which assistance is sought can reasonably be expected to be required for such a system, and (3) there is an urgent need for their preservation or provision.[85] However only 50% of the net project cost may be met by federal aid, unless such a program is completed within a three year period after the execution of the grant agreement, in which case the applicant may receive an additional one-sixth of the net project cost.

In addition to grants for construction and improvement projects, the Administrator may authorize grants for

"research, development, and demonstration projects in all phases of urban mass transportation (including the development, testing, and demonstration of new facilities, equipment, techniques, and methods) which he determines will assist in the reduction of urban transportation needs, the improvement of....service, or the contribution of such service toward meeting total urban transportation needs at minimum cost."[86] Projects may be undertaken independently or by contract. Ten million dollars (of the $75 million) was authorized for such purposes for the fiscal year ending 1965 and $20 million for each of the succeeding fiscal years.

The local agency must undertake a relocation assistance program for families displaced by a project. All dwellings provided must be decent, safe, and sanitary; reasonably accessible to places of employment; and generally not less desirable in regard to public utilities and public and commercial facilities at rents or prices within the financial means of the displaced families.[87] Federal financial assistance is available for relocation assistance and direct property loss (excluding good will) at $200 for an individual or family or $3000 (or if greater, the total certified actual moving expenses) for a business or non-profit organization. These payments are over and above the regular project grant, and no matching funds are required.

The Administrator is specifically prohibited from regulating in any manner the mode of operation of a mass transit system after a grant is made, including rates, fares, tolls, rentals, or other charges fixed or prescribed by the local transit agency.[88]

When considering the provision of financial assistance for any project, the Administrator shall take into account whether the facilities and equipment to be acquired, constructed, reconstructed, or improved will be designed and equipped to prevent and control air pollution inaccordance with any criteria established by the Secretary of Health, Education, and Welfare.[89]

Finally:

> In order to assure coordination of highway and railway and other mass transportation planning and development programs in urban areas, particularly with respect to the provision of mass transportation facilities in connection with federally assisted highways, the Administrator and the Secretary of Commerce shall consult on general urban transportation policies and programs and shall exchange information on proposed projects in urban areas.[90]

Thus, similarly to the ABC highway program, federal aid to urban public transportation is rooted in the principle of the carrot-and-stick. One of the main differences between highway and transit aid, however, is that while highway aid is provided to the states and largely controlled by them, aid to transit is provided to the states and (probably in most cases) to local jurisdictions. This permits the individual urban areas to tailor their

plans and programs to their own unique needs. A second difference is the source of revenues. The highway programs are supported by specific taxes on the users of roads, while the transit aid comes from taxes derived from the general public. Transit aid is directly a public subsidy.

Federal Regulation and Taxation of Urban Transportation

The federal government, in addition to offering financial aid, regulates the service and fares of interstate common carriers and collects an income tax. The Interstate Commerce Commission is the regulatory agency which has jurisdiction over the interstate activities of private carriers.

The commission controls, essentially, the quantity and quality of service provided by both the railroads and bus lines. Although the ICC controls the entry into service by a carrier, the more important aspect of ICC control currently is the rules governing the discontinuance of service by a carrier. In the case of buses, all changes and discontinuances of service and routing must be approved by the ICC.

The procedure for rail transportation was changed by Congress from that of motor carriers by the Transportation Act of 1958.[91] For interstate passenger service, the railroad may file with the ICC, the governor of each state,

and post in every station served notice at least 30 days in advance of any proposed discontinuance or change. Such discontinuance or change may be executed regardless of any contrary state laws or decisions to the contrary by any court or state authority, unless otherwise ordered by the ICC. The ICC may, within 30 days, either upon complaint or on its own initiative, enter into an investigation of the proposed action. Notice of an investigation must be served no later than 10 days prior to the day of such action. The commission may then order continuance of service up to four months while the investigation takes place, and thereafter may order an additional year of service if it is found to be required by public convenience and necessity and not an undue burden on interstate or foreign commerce. After one year, the state's rulings shall not be superseded unless the carrier again files with the ICC.

In the case of intrastate service, a carrier may petition the ICC for discontinuance or change in whole or in part if denied by the state. The ICC may grant such authority only after full hearing and upon findings that (a) the present and future public convenience and necessity permit such action in whole or in part, and (b) the continued operation would constitute an unjust and undue burden upon the interstate operations of the carrier or upon interstate commerce. The ICC must hold hearings

within the state of operation with a minimum of 30 days prior notice.

The Interstate Commerce Commission has complete control over fares charged by both the railroads and bus lines in interstate service. The commission may set a ceiling and floor on rates or set the precise rate if it so chooses. Congress, however, set down certain general guidelines for the ICC to follow in setting rates. In the case of motor carriers:

> In the exercise of its power to prescribe just and reasonable rates, fares, and charges for the transportation of passengers or property....the Commission shall give due consideration, among other factors, to the inherent advantages of transportation by such carriers; to the effect of rates upon the movement of traffic by the carrier or carriers for which the rates are prescribed; to the need, in the public interest, of adequate and efficient transportation service by such carriers at the lowest cost consistent with the furnishing of such service; and to the need of revenues sufficient to enable such carriers, under honest, economical, and efficient management, to provide such service.[92]

In the case of the railroads:

> In the exercise of its power to prescribe just and reasonable rates the Commission shall give due consideration, among other factors, to the effect of rates on the movement of traffic by the carrier or carriers for which the rates are prescribed; to the need, in the public interest, of adequate and efficient railway transportation service at the lowest cost consistent with the furnishing of such service; and to the need of revenues sufficient to enable the carriers, under honest, economical, and efficient management to provide such service.[93]

However, Congress also states:

> In a proceeding involving competition between carriers

> of different modes of transportation.... the Commission, in determining whether a rate is lower than a reasonable minimum rate, shall consider the facts and circumstances attending the movement of the traffic by the carrier or carriers to which the rate is applicable. Rates of a carrier shall not be held up to a particular level to protect the traffic of any other mode of transportation, giving due consideration to the objectives of the national transportation policy declared in this chapter.[94]

The federal urban passenger transportation policies presented above will now be tested against the range of locally developed transportation goals and policies set forth in Chapter Two. Changes in federal policies to improve implementation of local goals and policies will be recommended in the final chapter.

CHAPTER 4

Comparison of Local and Federal Urban Passenger Transportation Policies

The Congressional urban transportation policies expressed in the preceding chapter can now be tested against the range of urban transportation goals and policies set forth in Chapter Two. This methodology implies that federal urban transportation policy should be based not on the transportation problems of metropolitan areas but rather should be rooted in the proposed solutions to such problems as drawn up by that organization best able to suggest solutions, the central city or metropolitan transportation planning agency. Necessarily federal policy must be broad enough to help implement all the unique solutions proposed by planning agencies throughout the country.

The planning goals and policies listed in Chapter Two have been condensed and grouped into related categories. After each category of goals and policies will follow a discussion of the related Congressional urban transportation policies. In this way the strengths and weaknesses of Congressional policies will become evident.

Goals

General

Planning goals: This first set of goals relates to

the development of adequate facilities and equipment for all modes of transportation. These facilities must provide efficient movement to, from, and within the central city and region. There must be mutual accessibility to all parts of the city and metropolitan area. There should be a maximum travel time of one hour from the outer region to the inner region. The transportation system should be built to high standards of quality and should be designed so as to reduce and prevent accidents.

Congressional policies: The above are quite general goals and may be met under existing policies. Money is provided on a matching basis to states and local jurisdictions through the Federal-Aid Highway Act and the Urban Mass Transportation Act of 1964 for the construction and improvement of such a system. What is required is state and local financial participation to the extent necessary to implement these goals.

Planning goals: The second set of goals is that of a balanced system of transportation. Balance does not mean a tit-for-tat, solely quantitative balance between modes. Rather the concept of balance requires the development of a transportation system on the basis of regional requirements and objectives, that is a balance between central city and suburban needs. It also requires the mutually complementary location and functioning of transportation elements. It suggests a combination of modes and facilities

which give the most efficiency and service for the expenditure involved. It suggests a balance between transit and auto use so that a viable, good quality transit system results and only those cars which can be handled come to the central business district. Finally, balance suggests that each development stage of the transportation system should be complete, that is, each step in the expansion and improvement of the system should be a complete step, with the full complement of modes planned actually built.

Congressional policies: This concept of balance is difficult to achieve under current federal policies. For both the road and transit aid programs, the federal government does require that a comprehensive planning program be in operation for the urban area. This can help insure balance between central city and suburban needs. From this planning operation the other facets of a balanced system could be realized. However, historically and at present, in practice the federal government has tacitly favored the development of the nation's urban highway system over the development of public transportation. As of 1959, the cumulative federal investment in highways was 17.259 billion.[95] Since that time, Congress has been expending highway aid at the rate of $2.5 to $3 billion per year. Thus federal highway investment has almost doubled in the past six years. One must realize that not all this investment has geen spent on urban highways. However,

even if only half of such investment is in urban areas, a princely investment has been made. Meanwhile, the total federal investment authorized for transit aid through fiscal 1967 is only $400 million in grants and $50 million in loans. Certainly such disproportionate federal investment results in a (perhaps unwitting) bias with which it is difficult for the urban jurisdictions to cope.

Planning goals: The third set of general goals is the coordination of land use development with transportation systems. This includes facilitating land use objectives through the use of the transportation network as a tool of implementation and encouraging functional changes within the central city via transportation projects. Also suggested is the coordination of public policies to reinforce all the above recommendations.

Congressional policies: There seems to be no way in which the federal government can guarantee an adequately coordinated land use-transportation development program. The federal government can and does require a planning program to be undertaken in order for an urban area to be eligible to receive both highway aid and mass transportation grants. Exactly how strict the federal government will be in enforcing these provisions remains to be seen. There would seem to be no way in which Congress could force implementation of these plans, even if such coercion were deemed to be good politics, itself a question open to

much speculation and doubt.

Highways

Planning goals: The first set of highway goals relates to the road system itself. It should be a complete system in coverage and function with the purpose of reducing travel time. It should be related to the region as a whole and include both highways and arterials with ample rights-of-way for expansion. It should provide for all types of vehicles and be designed especially to handle those trips for which no rapid transit service is available. There should be controlled access where volume and type of traffic warrant.

Congressional policies: Current Congressional policies provide financial aid for the construction of all types of highways, secondary, primary, and controlled-access freeways. Over and above the definitions of these roads as stated in the Federal-Aid Highway Act, Congress has set a limited number of constraints as to the types and functions of roads to be built. It has stipulated that priority of federal aid be given to those primary roads interstate in character in order to complete an adequate and connected system of highways. Priority shall also be given to construction of those roads recommended as important to the national defense by the Secretary of Defense or other authorized official. In addition, Congress has granted a broad power to the Secretary of Commerce in that he must

approve all projects before federal aid is granted. Factors to be considered when passing judgement on a project include its adequacy in meeting the existing and probable future traffic needs and conditions in a manner conducive to safety, durability, and economy of maintenance. However none of these constraints are really inimical to the foregoing set of goals. The only question might be that of construction priority, but most interstate primary routes are already existing. The power of project approval given the Secretary of Commerce undoubtedly is subject to negotiation by the Secretary and the state and local jurisdictions.

Planning goals: This second set of goals concerns various other aspects of highway development. There should be increased safety through proper design. The street and highway system should be used as a tool to implement the general plan of the central city and region. Esthetic considerations should be one of the fundamental principles of highway development, while improvement in the residential environment should take place through the upgrading and redesign of major streets. The highway system should be planned and developed in relation to a system of off-street parking and loading.

Congressional policies: Congress does require safety of design specifically as mentioned above. The use of the road system to implement the general plan would seem to be

a local option outside the realm of Congressional policy. However, the approval powers of the Secretary of Commerce might possibly clash with this goal as might the priority preference given to interstate and defense primary highways. If negotiations fail on these points, the local area would have to implement its plan in some instances without federal aid. One problem which seems evident, and this would be true of the goal concerning esthetic considerations also, is the fact that federal aid highway money is given to the states to decide how, where, and in what manner they want to spend it. Thus the local jurisdictions are dominated by the state highway departments in matters of major highway construction. This stipulation can prove harmful to local highway plans and programs. Some provision is made for public hearings on construction projects when plans are submitted by a state highway department for a federal-aid project involving the bypassing of, or going through, any city, town, or village, either incorporated or unincorporated. But only in the case of Interstate Highways must these hearings be held locally. The only exception to ultimate state control is in the case of secondary roads, where decisions as to projects must be made in accord with local officials.

As far as esthetic considerations are concerned, the Congress permits up to 3% of construction funds to be used for landscape purposes. There is no mention that esthetic

criteria are to be included in road design, however. Federal ABC funds would seem to be available for the upgrading and redesign of major streets only if such streets are designated ABC roads.

Transit

Planning goals: All the goals concerning transit are related not so much to equipment and facilities but to service. Transit should provide a reasonably convenient, pleasant service of area and time coverage and be potentially available to all but the most marginal urban travelers. It should be geared to attract that portion of travel which it is inherently able to carry more efficiently than the auto; only local transportation in outlying suburban areas should be exclusively by auto. Major transit stations should provide the focus of relatively complete new communities in the corridors of urban development.

Congressional policies: Congressional policies related to transit have as their primary objective giving financial aid through matching grants to both state and local jurisdictions. Such aid can help achieve this set of goals. The difficulty that arises is that of the proportion between highway and transit aid, the former being so much more ample than the latter. This imbalance could seriously jeopardize the ultimate effectiveness that a transit program can have. Indeed, one expert has suggested that it is already too late; urban areas, through the

generosity of the federal government, have irrevocably committed themselves to highway-dominant transportation systems. Since World War II cities have been built to this automobile-scale, and therefore the above goals are merely a vain hope. In any case, the last goal (that of major transit stations being the foci of new communities) is uniquely local and individual and outside the ken of Congressional urban transportation policy.

Policies

Highways

Planning policies: The first set of policies concerns the continued development of the urban highway complex. Additional expressways should be built. There should be circumferential loops, one around the central business district, one at five miles from the CBD and one at 10 miles from the CBD. These loops would be for bypass and distribution purposes. There should be new river crossings. Advance acquisition of highway rights-of-way should be undertaken.

Congressional policies: Through the Interstate and ABC highway programs all the above policies may be executed. The federal government provides funds for both the planning and execution of such a system, including the acquisition of rights-of-way up to seven years in advance of construction.

Planning policies: The second set of policies relates to various other aspects of highway design and development. Expressways should be designed so they enhance adjacent land uses to the highest degree possible. Police power and designation should be used as well as new construction to form a regional highway system.. There should be a reduction of access points on non-limited access highways and a rationalization of remaining access points. The regional network of highways should be designed to handle those trips for which there would be no convenient rapid transit service. Special function highways should be designed for times of highest volumes.

Congressional policies: There is no existing Congressional policy as such which would prove to prohibit the realization of any of these local policies. Money is available for all the activities listed above except special function highways. Again the question boils down to the control of highway design and development. Since the various state highway departments make the final decision concerning the development of the urban highway system (again, except in some cases for secondary roads), in effect the local jurisdictions do not have the power to control the above facets of highway design. For exemple, federal money is available for the improvement of existing highways, including the reduction of access points on non-limited access highways. But state and not

local governments make the final decision as to improvements, if and when such improvements are made.

Planning policies: The final group of policies concerns highway coordination and balance. The implementation of the trafficways program should be made through administrative devices and cooperation between private and public agencies. These agencies should coordinate all highway activities of the region. There should be a balanced program of development for expressways and arterials. There should be uniformity in road classification and standards of design and maintenance. Finally, there should be a set of expressway-transit-railroad connections as part of a balanced transportation system.

Congressional policies: The availability of federal funds for highway planning lends support to a local planning effort toward achieving balance and coordination in highway development. The requirment of regional transportation studies for continued financial aid insures some cooperation at least at the planning stage between agencies on the local level. The void occurs at the execution stage where it would be difficult for the federal government to enforce cooperation. But of course both states and urban areas carry on planning processes. The final decisions concerning implementation, however, belong to the state government which, if made without regard to local plans concerning coordination and balance, can

relegate local efforts toward the coordination and planning a balanced system to the category of an academic exercise. This might be exemplified by efforts of local coordination in establishing expressway-transit connections. If the state prefers a new highway alignment at some distance from the transit station, all such local policies are for nought.

Streets

Planning policies: Local policies concerning streets include: a workable system of streets should be established; design techniques and police power devices should be applied to increase speed and capacity; major diagonal streets should be eliminated; there should be special design coordination and treatment for streets which form important parts of the open-space system.

Congressional policies: Financial aid is provided by the federal government for secondary roads which, if extended into urban areas are subject to the condition that such extension pass through the urban area or connect with other federal-aid system roads in the area. Thus not all streets, even major ones, come under the requirements for federal aid. For those streets that do, however, federal funds may be used for their improvement in order to increase speed and capacity. No provisions are made for federal aid to be used in the elimination of streets. Congressional policy does not explicitly state

whether the federal government would support special design coordination and treatment for streets which would perform an important part of an open-space system. Highway funds can be expended with the simultaneous use of federal open-space aid for adjacent park projects. However 3% of a project cost may be devoted to landscaping.

Parking

Planning policies: This first set of policies relates to the public provision of off-street parking facilities. There should be an expansion of the off-street parking system at the periphery of the central business district designed to intercept CBD bound traffic. There should also be adequate provision of off-street parking in industrial and shopping areas outside the CBD.

Congressional policy: There is no federal aid available for off-street parking facilities.

Planning policies: The second set of parking policies relates to on-street and private off-street facilities. There should be public control of overnight curb parking with licensing in congested areas. Off-street loading and parking facilities should be provided with all new buildings.

Congressional policy: The above policies are controlled by local regulation and are outside the domain of federal action.

Transit

Planning policies: This set of policies consists of

those related to facilities and equipment. There should be an expanded regional rapid transit system of primarily radial lines from the central business district. Reservation of expressway median strips should be made for this purpose. Park-and-ride and pick-up-and-delivery stations should be established for rail service. Off-street terminals should be provided for express, suburban, and interurban buses. There should be developed a system of weather-protected pedestrian distribution passageways or malls in the central business district linking transit and commuter stations. Existing elevated structures should be replaced with depressed, embanked, or modern elevated structures. Vehicles and stations should be modernized. Surface streetcars should be replaced with buses. Suburban rail equipment should be replaced. Grade crossings should be eliminated, as should little or unused branch lines. Downtown street space should be reserved for exclusive transit use.

Congressional policies: Federal aid is available for the acquisition, construction, reconstruction, and improvement of land, buses and other rolling stock, and other real and personal property needed for an efficient and coordinated mass transportation system. No one state may receive more than 12½% of the authorized annual sum. Thus all the capital projects listed above are eligible for federal aid except, perhaps, for the elimination of branch lines. Monies are also available through the

Federal-Aid Highway program for the elimination of grade crossings. The reservation of downtown street space for transit vehicles is a matter of local regulation.

The question which arises again, however, is that of balance in federal aid. The construction and reconstruction of transit systems will take vast amounts of money, some $1 billion for the commuter railroads in the New York area alone. Current federal spending is still highly oriented toward highway construction and improvement. Some semblance of balance does not require a dollar-for-you-and-a-dollar-for-me concept applied to the highway-transit financial aid question, but rather requires doing what is necessary to not only build new transit systems but also to rescue the extensive number of systems which have fallen into hard times and disrepair, of which the New York commuter service is only one example.

Current Congressional policy levies a corporation income tax against private mass transit companies. It is entirely possible for that aid which is given to sustain companies (be it federal aid for capital improvements or some other type of local subsidy) to be absorbed by federal income taxes, thus in effect nullifying the benefits received from public aid.

Planning policies: Recommendations concerning transit service constitute the second set of policies. There should be an improvement in bus service: service within

one-quarter mile of all residents in high density areas; adequate in all areas; as rail transit feeders. There should be a high quality central distribution service in the CBD, with improvement of existing CBD surface and transit service to local as well as through traffic demands by increasing speed and adapting routes and fares. There should be high quality rapid transit service to outer urban areas, five to ten miles from the CBD. Finally, suburban rapid transit service should be retained and enhanced, with express bus service to outlying areas inaccessible to rail rapid transit.

Congressional policies: The standards of service suggested above may be achieved, at least in part, through financial aid from the federal government. Again the big question is the amplitude of funds available for such service requirements.

Under the present Interstate Commerce Act provisions, bus and rail service may be curtailed or ended upon petition by private companies if such service is not necessary for the public good and if such service is a burden on interstate commerce, regardless of projected future need or local efforts to sustain such service through financial aid. This federal policy can have the effect of rendering local planning efforts fruitless and wasting expended financial aid.

Planning policies: The third set of policies concerns coordination of transit operations. There should be coordination of rail, transit, and bus service through operating agreements and the establishment of convenient transfer points. Long-distance, commuter, and transit service should be coordinated with a downtown pedestrian distribution system.

Congressional policies: Congress has provided the basis for such coordination through the requirement, except for emergency purposes, that a plan and program for the sound, economic, and desirable development of the urban area be in existence and that grants-in-aid be given only for projects in accord with such plan and program. Grants may be given through July 1, 1967, if such a plan is still in the stages of preparation. As in the highway aid program, it is to date beyond the realm of the federal government to coerce real and meaningful coordination in plan implementation.

Planning policies: The four remaining policies belong to a miscellaneous category. There should be little as possible encroachment upon residential areas by rail transit systems. Rail transit noise should be reduced. There should be a vigorous public information program on behalf of transit, e.g. the publication of maps and timetables, phone information service, an operator training program, and special services. Finally, every attempt

should be made to encourage rush-hour transit use to the central business district.

Congressional policies: The avoidance of residential areas in designing transit systems is not necessarily incompatible with federal aid to such systems. The reduction of rapid transit noise requires research and development which is provided under the Mass Transportation Act of 1964, both undertaken independently by the HHFA or by contract. Included is $50 million authorized for such purposes and demonstration projects. Propagandizing on behalf of public transportation would be considered an operating expense and therefore specifically prohibited by Congress. The question of making every effort to encourage use of transit during the rush-hour to the central business district involves not only federal policy toward transit but also toward highways. The federal bias in favor of financial aid to highways has the opposite effect of encouraging the use of transit in urban travel, including CBD bound traffic. In addition, the prohibition by Congress against charging tolls on federal-aid roads does not permit urban areas to use a pricing system to ration the use of highways, thus tending to encourage (or at least not discourage) travel by highway. This prohibition also covers up the real cost of various portions of federal-aid roads by averaging out costs and charges (via the gasoline tax, etc.) rather than permitting charges according to the cost

of various highway projects.

Administrative Organization

Planning policies: These policies include three different proposals: (1) the continued private ownership and control of transit operations with supervision directed by the city utilities commission; (2) the coordinating of rail transit, rail commuter, and suburban bus service into one system serving the entire area by operating agreements, not necessarily single ownership; (3) the establishment of a Regional Transportation Organization which would be responsible for development and control of an adequate regional transportation system, including all modes and parking facilities.

Congressional policies: There are no Congressional policies as such concerning ownership and control of urban transportation systems. Due to the varying local policies on this question as expressed above, Congress could not require a uniform administrative organization for transportation in urban areas. However, since the federal government grants the states control over the location and construction of most highway facilities, the last administrative organization suggested, that of a Regional Transportation Organization with responsibility for development and control of an adequate regional transportation system, would not be possible, despite the fact that urban areas are now required to undertake comprehensive trans-

portation planning without such local control over facilities. Congressional policy does permit local control over the entire public transportation portion of the total transportation system.

On the basis of the above comparisons, it is now possible to make certain recommendations as to changes necessary in federal urban passenger transportation policies in order to more nearly fit the individual needs of the various metropolitan areas. These recommendations are the next, and final, order of business.

CHAPTER 5

Recommended Changes in Federal Urban Passenger Transportation Policies

The recommendations presented below have been derived from the preceding comparison of local urban passenger transportation planning goals and policies and current Congressional urban passenger transportation policies. This comparison has yielded ten short-comings in Congressional policies which are given here in the form of corrective recommendations.

Recommendation #1: Urban areas with metropolitan or regional planning programs would be given local control over their respective development programs for federal-aid roads. Except for cases in which the states do not have complete control over the federal-aid secondary road system, local federal-aid roads are not the responsibility of municipal, county, or metropolitan jurisdictions. The local goals and policies which relate to coordination and balance of urban transportation require some real measure of local control over federal-aid roads to permit implementation of such goals and policies. The existing provision that area transportation studies be undertaken loses meaning without local power to implement these studies.

Among the policies suggested for administrative

organization is one which recommends the formation of a regional transportation organization with control over all aspects of metropolitan transportation. Such an organization could not be effective without control over federally aided roads. Such an organization might have the following powers:[96]

(1) Traffic control on federal and state highways, toll facilities, and limited-access roads, and such streets as are designated in the regional transportation plan as major intraregional arterials.

(2) Regulation of tolls on highways, bridges, and tunnels.

(3) Regulation of mass transportation fares, routes, and schedules.

(4) Location, capacity, and rates for parking facilities at major transit collection points and in areas designated as central business districts in the regional transportation plan.

In any case, if no such organization were formed to control the development of highways, the regional transportation planning agencies could be given equal negotiative and veto power with state highway departments concerning federal-aid road projects.

Recommendation #2: A more flexible and balanced program of federal aid to roads and transit should be instituted. The current highway bias in Congressional urban transportation policy must be corrected if urban areas are expected to achieve their goals and policies concerning a balanced regional transportation system. Because so

many local jurisdictions are heavily burdened financially, the generosity of highway aid in comparison with transit aid puts tremendous pressure on local jurisdictions to orient their transportation programs toward highways, even in the face of dilapidated but badly needed transit systems.

Therefore, ideally, federal aid should be given for urban transportation systems, not for highways and transit separately. This lump sum of aid could then be used at the discretion of the urban areas for projects which conform to a regional transportation-land use development plan. The use of aid for highways and transit could then vary from area to area and from year to year according to the individual urban areas' unique needs. In order to qualify for such a flexible aid scheme, Congress might require the formation of a regional transportation organization similar to that suggested in Recommendation #1. An incentive for the formation of such an organization would be a flat 70% federal matching grant for all projects except those on the Interstate System which would continue to receive 90% federal aid.

As an alternative to the above scheme, Congress could vastly increase the annual aid funds to mass transit, putting such aid on a par, for instance, with the ABC road program (or dispense all aid according to some other formula, perhaps, as Fitch suggests, on a per passenger-trip basis.)[97]

Recommendation #3: Congress should repeal the 12½% limitation on the availability of transit aid to any one state. Concomitantly with the implementation of Recommendation #2, the limitation of transit aid to any one state should be repealed. Since separate highway and transit grants would be abolished and one grant of transportation assistance given in its place (which aid, incidentally, should be given directly to those urban areas with regional transportation organizations), such a limitation would be unnecessary as a grant-in-aid for urban transportation purposes would be based on some other formula than first come, first served.

Recommendation #4: Congressional policy toward both highways and transit should state that the most "economical and efficient" transportation system is not the sole objective of federal urban transportation policy. Such local goals and policies as considering esthetics in transportation system design, using transportation as a tool to implement the general plan of an urban area, the avoidance of splitting residential neighborhoods in transportation contruction, and using certain roads as part of the open space system suggest that operating and construction economy and engineering efficiency are not to be the sole criteria in developing a transportation system. Therefore Congress should state quite plainly in its approval of legislation that judgement by the

government when approving federal-aid projects is not to be limited only to economic and engineering criteria but must be made according to a balanced set of qualitative criteria.

Recommendation #5: The definition of a secondary road in urban areas eligible for federal aid should be liberalized. According to the current definition, only those secondary roads which pass through an urban area or which connect with another federal-aid road are eligible for assistance. The various local goals and policies which propose a complete regional system of highways and arterials, the construction of new high-speed, high-capacity streets, and the establishment of an overall workable system of streets suggest that there should be some other criteria for deciding which roads are eligible for federal aid than those used now. Since all urban areas must now be undertaking a continuing transportation planning program, Congress could make aid available, for example, to all highways and arterials shown on the regional transportation plan. Thus the definition of secondary roads eligible for federal aid would be liberalized only as comprehensive transportation plans are completed for the various urban areas.

Recommendation #6: Congress should permit the use of federal funds for various road-related capital improvements. Currently federal road aid may be used for projects involving

the actual building or improvement of roads and highways. However, as suggested in the various local goals and policies, there are many road-related improvements that should be made from time to time but which are not part of major construction or improvement projects. For example, the elimination of streets, the construction of off-street parking, and the installation of traffic-control systems should all be eligible for federal assistance. Just as mass transit funds may be used for transit-related purposes, such as the construction of station approach roads, so the provisions of the Federal-Aid Highway Act should be liberalized to permit the use of funds for road-related purposes.

Recommendation #7: Congress should permit locally determined user-charges to be collected on federal-aid roads. Each urban area should determine its own mixture of highway and transit use, since each area has its own unique opportunities and constraints. This fact is implied in the policy which suggests that every effort be made to encourage the use of mass transportation to the central city during the rush-hour. The most effective way of encouraging such use (and permitting each urban area to determine its own mixture of usage) is through the transportation pricing mechanism. Urban areas may control the price of public transportation service under current Congressional policy (the Urban Mass Transportation Act

of 1964 specifically prohibits federal regulation of rates, fares, tolls, rentals, or other charges prescribed by a local agency), and of course, local areas have control over the pricing of non-federally aided roads. It is necessary therefore for Congress to permit user charges to be collected on federal-aid roads through a system of tolls to allow any given urban area to ration the use of its transportation system through the price mechanism. The proceeds from such user charges would then be allocated for purposes of transportation improvement.

Recommendation #8: Congress should require the Interstate Commerce Commission to take into account local efforts made toward saving train service when considering petitions to abandon or curtail interstate and intrastate commuter lines. Under the Transportation Act of 1958 the ICC was given the power to permit abandonment of train service regardless of state actions as long as such service is not required for public convenience and necessity and if such service is a burden on the interstate operations of the petitioning railroad or upon interstate commerce. Several goals and policies above recommend the preservation and maintenance of railroad commuter service and the modernization and replacement of obsolete commuter equipment. Federal aid for such activities is available under current Congressional policy. Therefore the Interstate Commerce Act should be amended to require that the ICC not

only consider immediate public convenience and necessity and factors of interstate commerce, but also whether local efforts (with or without federal aid) are being expended toward the preservation and improvement of the service in question.

Recommendation #9: Congress should revise the income tax laws to permit federal tax relief for publicly aided private transportation operations. Under present policy, the federal corporation income tax is levied against privately owned transportation companies regardless of their economic health. The federal income tax statutes should be so adjusted that federal, state, and local financial support for necessary public passenger service, made available by tax relief, direct payments to the carriers, or the provision of loans and grants for capital improvements will not be absorbed by the taxation of corporate profits. In the case of commuter railroads also involved in non-commuter operations, only partial tax relief would be granted commensurate with service rendered. If a carrier at any time no longer receives public financial support, then full corporation income taxes would be resumed.

Recommendation #10: Congress should permit federal-aid highway funds to be used for special function roads. A metropolitan transportation planning agency may recommend

as part of its plan and program special function roads which could be key links in the regional highway system. For example, one policy listed above suggests that some highways should be designed to perform special functions during times of highest volumes. Under current policy, federal funds may not be used for special function roads (such as parkways or roads which might exclude one type of vehicle), while such roads may be important to an overall transportation plan for an urban area. Congressional policy should be changed to permit federal aid for such roads if they are included in a plan and program developed by a regional transportation planning agency.

FOOTNOTES

1. Lyle C. Fitch and Associates, Urban Transportation and Public Policy (San Francisco, 1964), Chapter 1.
2. George M. Smerk, Urban Transportation: The Federal Role (Bloomington, Indiana, 1965), p. 44-46.
3. Wilfred Owen, The Metropolitan Transportation Problem (Washington, D.C., 1956), p. 80.
4. Fitch, p. 11.
5. Smerk, p. 59.
6. Fitch, p. 15.
7. Owen, p. 3.
8. Smerk, p. 35.
9. Ibid., p. 42.
10. Ibid.
11. Owen, p. 65.
12. Ibid., p. 65-66.
13. Fitch, p. 15.
14. City of Philadelphia, Urban Traffic and Transportation Board, Plan and Program, 1955 (Philadelphia, 1955), p. 91.
15. Smerk, p. 54.
16. Owen, p. 4.
17. Dudley F. Pegrum, Transportation: Economics and Public Policy (Homewood, Illinois, 1963), p. 531.
18. Smerk, p. 219.
19. Fitch, p. 19-20.
20. Ibid., p. 21.

21. Smerk, p. 31-32.

22. Lowdon Wingo, Jr. and Harvey S. Perloff, "The Washington Transportation Plan: Technics or Politics" (Washington, D.C., 1962), p. 1-2.

23. Ibid., p. 8.

24. The following reports were used as source material for the goals and policies listed in this chapter:

    A. The Maryland - National Capital Park and Planning Commission, "Wedges and Corridors" - A General Plan for the Maryland - Washington Regional District in Montgomery and Prince George's Counties.

    B. City of Philadelphia, Urban Traffic and Transportation Board, A Plan and Program, 1955.

    C. City of Chicago, Department of City Planning, Basic Policies for the Comprehensive Plan of Chicago.

    D. City Planning Associates - East, Inc., Buffalo Master Plan - 1964.

    E. National Capital Planning Commission and The National Capital Regional Planning Council, A Policies Plan for the Year 2000 - The Nation's Capital, 1961.

    F. The Metropolitan Planning Commission, Mass Transportation in the Knoxville Metropolitan Area.

    G. East Providence Planning Commission, Transportation Plan for East Providence, Rhode Island.

25. Research and Policy Committee of the Committee for Economic Development, Developing Metropolitan Transportation Policies: A Guide for Local Leadership (New York, 1965), p. 35.

26. Ibid., p. 60.

27. Pegrum, p. 321-322.

28. Smerk, p. 199.

29. Ibid., p. 120.

30. Ibid., p. 122-123.

31. Ibid., p. 123.

32. Ibid., p. 125.

33. Ibid., p. 126-127.

34. Ibid., p. 127-128.

35. United States Code, Title 23, Chapter 1, Section 103(b), as of 1965.

36. Ibid., Section 103(c).

37. Ibid., Section 103(e).

38. Ibid., Section 104(a).

39. Ibid., Section 104(b)(1).

40. Ibid., Section 104(b)(3).

41. Ibid., Section 104(c).

42. Ibid., Section 104(d).

43. Ibid., Section 105(d).

44. Ibid., Section 105(c).

45. Ibid., Section 108(a).

46. Ibid., Section 109(a).

47. Ibid., Section 109(e).

48. Ibid., Section 114(a).

49. Ibid., Section 116(c).

50. Ibid., Section 116(b).

51. Ibid., Section 120(a).

52. Ibid., Section 120(d).

53. 87th Congress, 2nd Session, P.L. 866, Federal-Aid Highway Act of 1962.

54. U.S. Code, Title 23, Chapter 1, Section 123(a).

55. Ibid., Section 128(a).

56. Ibid., Chapter 3, Section 301.

57. Ibid., Section 129(a)(1)(2)(3).

58. Ibid., Section 134.

59. Hearings Before Subcommittee No. 3 of the Committee on Banking and Currency, House of Representatives, Eighty-Seventh Congress, Second Session, on H.R. 11158, Urban Mass Transportation Act of 1962, p. 43-44.

60. U.S. Code, Title 23, Chapter 3, Section 307(a).

61. Ibid., Chapter 1, Section 103(d).

62. Ibid., Section 101(b).

63. Ibid., Section 104(b)(5).

64. Ibid., Section 109(b).

65. Ibid., Section 111.

66. Ibid., Section 111(b).

67. Ibid., Section 131(a).

68. Ibid., Section 131(c)(e).

69. Highway Revenue Act of 1956.

70. Advisory Commission on Intergovernmental Relations, Intergovernmental Responsibilities for Mass Transportation Facilities and Services in Metropolitan Areas (Washington,D.C., 1961), p. 44-46.

71. National Housing Act, Title I, Section 103(b).

72. Housing and Home Finance Agency, Office of Transportation, Urban Mass Transportation Fact Sheet (Washington, D.C., December, 1962), p. 3.

73. National Housing Act, Title II, Section 201.

74. Ibid., Section 202(a).

75. Ibid., Title VII, Section 701.

76. Ibid.

77. 88th Congress, 2nd Session, P.L. 365, Urban Mass Transportation Act of 1964.

78. Ibid., Section 2(a).

79. Ibid., Section 2(b).

80. Ibid., Section 3(a).

81. Ibid., Section 3(c).

82. Ibid., Section 4(a).

83. Ibid.

84. Ibid., Section 4(b).

85. Ibid., Section 5.

86. Ibid., Section 6(a).

87. Ibid., Section 7(a).

88. Ibid., Section 9(f).

89. Ibid., Section 11.

90. Ibid., Section 8.

91. 85th Congress, 2nd Session, P.L. 625, Transportation Act of 1958.

92. U.S. Code, Title 49, Chapter 8, The Interstate Commerce Act, Part II, Section 316(i).

93. Ibid., Chapter 1, Section 15(a)(2).

94. Ibid., Section 15(a)(3).

95. Special Study Group on Transportation Policies in the U.S., National Transportation Policy (Washington, D.C., 1961), p. 68.

96. Fitch, p. 233.

97. Ibid., p. 156ff.

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