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INTRODUCTION

THE PURPOSE

Mass transit is beginning to stage a comeback. After decades of declining ridership, a modest upswing is in progress, at least in some metropolitan areas. Perhaps more importantly, there is growing popular interest in mass transit. Major issues of the 1960s -- traffic congestion, the plight of the poor and other minorities -- are combining with the issues of the 1970s -- degradation of environmental quality, energy shortages, and increasing gasoline prices -- to kindle more broadly based political support for mass transit.

Nearly all of the nation's metropolitan areas have some type of mass transit system. Six of them are served by rapid rail transit on rights-of-way that are separated from automobile traffic. The rest use streetcars, buses, and trolleybuses. Many of these systems were built by private entrepreneurs during the period when transit was a profitmaking business. Routes were laid where they would serve the most people and bring the highest returns, or they were extended to promote new real estate developments that, in turn, provided captive markets for these lines in the preauto era.

Thirty years ago transit operations in U.S. cities averaged a decent 11% profit. Then, a downward spiral in ridership and income began that led to an average loss of 23 cents per paying passenger (not including transfer passengers) by 1974. Eventually, ailing operations were sold to city governments, and by fall 1975 almost every major private transit enterprise in metropolitan areas of more than half a million population had been transferred to public ownership. In 1974, 90% of all revenue passengers were carried on publicly owned systems.

The public sector dominates transit now. New public agencies have assumed responsibility for transit operations, and they are pumping public dollars into the effort. The greatest commitment of both responsibility and money is occurring in the metropolitan areas that either operate rail transit systems or are building new regional rapid transit systems.

The Federal Government entered the transit business along with metropolitan areas. The Federal interest was spurred by the parallel concerns of making urban transit competitive with urban highways, which had been receiving Federal support since 1944, and shoring up the financially pressed transit operators. Federal participation began in 1961 with a modest program to support first-time applications of innovative transit concepts; by 1970 the Urban Mass Transportation Administration was able to begin providing substantial financial assistance to both existing and major new transit projects in metropolitan areas.

Since then, through the Federal-Aid Highway Act of 1973 and the National Mass Transportation Assistance Act of 1974, Congress has greatly expanded the capacity of the Federal Government to aid urban transit. ----- --

When San Francisco's Bay Area Rapid Transit system -- BART -- began operating in 1972, it was the first new regional transit system to come on line with the aid of Federal funds. UMTA's \$304 million contribution to BART was the largest sum the Federal Government had committed to a single transit system.^{1/} The new BART was a natural focal point for public attention, and considerable debate has ensued over whether BART has been a wise investment. Much of the BART controversy centered on technology issues. BART was designed as the most highly automated transit system in the United States, but a series of unanticipated technological setbacks and financial limitations has kept the system from performing at the expected service levels.

BART also raised questions that went beyond the merits of its technology. With employment in the suburbs growing faster than downtown employment, is a radial transit system focusing on the downtown the best approach for meeting the region's transit needs? Does a high-speed regional rapid transit system unfairly benefit the white-collar commuters who use it most often, while everyone pays a share of the costs? Some BART critics charge that the system was conceived and brought into being by self-interested property owners in downtown San Francisco who wanted to stimulate a rise in property values.

BART was the first major new transit program to request aid from the Federal Government. By the early 1970s a number of metropolitan areas were drawing up plans that included much higher price tags for the Federal share. Atlanta, for example, wanted over \$1 billion to build its regional rapid rail system. Requests from Los Angeles were expected to reach as high as \$11 billion. During the same period, a number of researchers began to report findings that rail systems were not cost-effective -- that is, for the same cost, other transit programs would provide more service.

The issue of how decisions about new transit systems should be made underlies all these concerns. The purpose of planning is to put decisionmaking on a rational basis so that public investments (and other public policy decisions) can be made wisely and in the public interest. A particular type of transit technology, route configuration, or level of service may have different impacts in different metropolitan areas and even in parts of one metropolitan area. One of the important functions

^{1/} BART was conceived and construction begun without the expectation of Federal support, and although the Federal contribution was great compared to the amount granted to other new transit programs, it represented only 19% of the total BART cost.

of planning is to provide enough information about these impacts and the impacts of alternative courses of action to provide a solid basis for making decisions. ...

The effectiveness of planning depends on several factors.

One variable is the structure of the technical planning process -- the activities that are undertaken in doing the planning work. The past decade has witnessed an evolution in planning toward opening the door to public participation, toward broadening both the range of options considered and the range of goals they are intended to meet, and toward developing more practicable schemes for putting plans into effect.

A second factor is the extent to which constraint are put on the technical planning process by those who set it in motion. For example, the legislative mandates of the agencies responsible for planning can seriously limit the range of alternatives that will be examined. Similarly, the controls political leaders and the public exert over these agencies influence the choice of options to consider and the means of considering them. Where and how the money comes has an especially powerful influence on the planning work. The availability or unavailability of financing and the conditions under which the financing is provided limit the range of options that are feasible.

Federal policy has influenced and will continue to influence all the factors that shape transit planning. Federal regulations affect the structure of regional planning organizations and the scope of the technical planning process. The level and type of Federal financing affects what a community can afford to build.

The central question is how to shape Federal policy so it will strengthen community transit planning. What are the factors that help communities facing critical technological choices make wise decisions that are consistent with both local and national goals for transit? Answering the question entails looking at how transit decisions have been made in the past.

Thus, the objective of this assessment has been to obtain a better understanding of the impact of different financing mechanisms, institutional arrangements, and technical planning procedures. The ultimate purpose of the work has been to cast light on prospective changes in national transit policy programs and administration that might improve, in different ways and to different extents, the way communities plan mass transit systems.

SCOPE

The study focuses on the planning of transit systems rather than broader transportation programs. Yet because transit planning is closely related to other regional planning functions, particularly highway and land use planning, the study takes account of these interrelationships.

The assessment also concentrates on rail rapid transit rather than bus or other types of mass transportation.^{1/} The focus has two explanations. First, the impact of the new BART and its technological difficulties tended to frame a particular concern about the way communities make decisions about transit: namely, were they capable of correctly judging the impact and appropriateness of costly new transit technologies? Bus systems, in contrast, involve a less awesome commitment.

A more important reason for focusing on rail rapid transit is the fact that until recently, conventional "heavy rail" fixed-guideway transit, or technological improvements on it such as personal rapid transit, have dominated the imaginations of U.S. transit planners. Only within the past five years has serious attention been given to the potential for bus or "light rail" (sophisticated streetcar) transit, using parts of existing highways, to meet transit needs. There is yet no example of a planning process that has resulted in a final decision to build one of these innovative systems to serve a metropolitan area.^{2/}

This report is based on a review of transit planning and decisionmaking in nine metropolitan areas that have, or have been considering, rapid transit systems. The areas were selected to represent the full range of issues that arise at different stages in the overall process of planning and developing a transit system:

- Boston and Chicago have long established rapid transit systems for which extensions and other improvements are currently being planned.
- San Francisco's BART is the first new regional rail transit system in recent decades.

1/ The term "rapid transit" is most commonly used to denote electrified rail transit operating on exclusive rights-of-way, although it is sometimes broadened to encompass bus or other fixed-guideway transit operating on exclusive rights-of-way. The term "fixed-guideway transit" is a broad term used to refer to any public transportation system operating on exclusive rights-of-way under direct lateral control, including conventional rail technology of any kind, monorail, or any of the several types of automated new technologies.

2/ On the other hand, several cities soon will introduce new light rail rolling stock on existing routes (Boston and San Francisco), several other cities are seriously considering new light rail systems (Dayton, and Portland, Oregon), and there are a large number of cities that have begun express bus service on highway rights-of-way.

Washington, D.C., and Atlanta have regional rapid transit systems under construction. The Washington, D.C., Metro system is scheduled to begin service on a 4-1/2-mile segment in 1976. Groundbreaking for Atlanta's regional rail transit system occurred in February 1975.

Denver has planned a fixed-guideway transit system but has not yet started construction. In June 1975, Denver requested Federal financial aid to build the first segment of its system.

In Seattle and Los Angeles, voters twice defeated rail transit proposals in referendum, but serious planning activity continues.

The ninth metropolitan area, Minneapolis-St. Paul, is attempting to make a final decision after several years of studying alternative transit schemes.

ORGANIZATION

The assessment involved three basic steps, and these steps provide the structure for this report.

Step 1: Establishing the National and Historical Context.

A brief review of the historical trends in transit development and of the Federal Government's response to the changing urban transit situation provides a context within which the findings of the assessment can be more realistically interpreted. This review is contained in Part I of the report, which is titled "The National Setting."

Step 2: Assessing the Metropolitan Experience. The bulk of the study effort was an evaluation of the transit planning and decisionmaking process in the nine case metropolitan areas. The evaluation identified a number of problems that affect the performance of community planning for transit. The discussion of these problems, grouped in three categories according to their roots in financing, institutional, and technical planning considerations, is contained in Part II of this report, called "Metropolitan Decisionmaking Issues."

Step 3: Developing Options for Public Policy. The lessons learned during the metropolitan case assessments lead to several courses the Federal Government could follow in taking steps to improve transit planning. The major issues for Federal policy and potential remedies for these issues are described in "Part III: National Policy for Mass Transit."