MASS TRANSIT IN LOS ANGELES: An Analysis






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FOREWORD

The study which resulted in this report began with specific objectives in mind. Uppermost among these objectives was determining the policies which led to the present status of mass transit in Los Angeles, i.e., that eight years after an agency was created to bring about rapid transit, no system, or even a finalized plan for the construction of one, exists. In researching this report, it was hoped that the interrelationships and mechanics of regional planning would be revealed and investigated. In short, the main objective was to answer the question: Why is there no mass transit system in the Los Angeles metropolitan area?

At the outset of this report, our parameters were carefully delineated. One of the harshest was the time factor. In a policy study, particularly one dealing with a field that changes as rapidly as transit, "the latest information" becomes obsolete very quickly. Another factor was the limited size of the study group.

Parameters concerning the subject matter in general were also set. For the study to have any meaning, a clear focus was necessary. Initially, the study was to center on the Southern California Rapid Transit District as the agency charged by the State to provide this area with rapid transit. It soon became evident, however, that the problem encompassed a greater jurisdictional area and the report began to "spiral out" to different agencies: the County of Los Angeles, the State of California, and the Federal Government.

This study was approached with a set of critical questions. In the course of research, many additional questions were suggested. At the completion of the study, several remained unanswered. However, this report offers a perspective sorely needed in the transit field. While not specifically oriented toward either the layman or the expert, it offers a concise review of the transportation problems besetting Los Angeles from the point of view of the objective observer. This paper is in no way an end in itself; but the results of a study which will hopefully direct serious attention to the research of mass transit policy in Los Angeles.

PREFACE

This report on Public Transportation is the product of a student/faculty research team from the Program in Public Policy Studies of The Claremont Colleges. The Program in Public Policy Studies is an interdisciplinary and intercollegiate undertaking which draws upon the resources of the colleges and the community to investigate a series of important public policy problems. Past research teams have investigated: the Los Angeles Air Pollution Control District, Child Care, Solid Waste Disposal, Low-income Housing Needs, Electrical Power, Educational and Vocational Rehabilitation in California Prisons, Elementary School Programs for the Educationally Handicapped, Land Use, Minority Business Enterprises, and the Pomona Valley Emergency Medical Care System. Each of these teams has issued a report similar to this document, or will be publishing their report in the Spring and Summer.

This report and the Program which generated it are designed to fulfill the traditional role of the academic community: that of scholars critically analyzing the society in which they live, as well as offering constructive recommendations for social change.

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THE CRITICAL QUESTIONS

1. What steps have been taken, both within the Los Angeles region and at the State level, to provide the area with a rapid transit system?

2. What events or conditions explain the fact that a special district (the Southern California Rapid Transit District) was created by the State of California in 1964 for the purpose of constructing a rapid transit system but eight years later, no such system exists?

3. Does the public desire a transit system in the Los Angeles region and, if so, would such a system represent a plausible alternative to automobiles?

4. What agencies, governmental and private, affect the process of providing a rapid transit system?

5. What are the major financial considerations relevant to the creation of a system and its administration?

6. What is the current position of the Southern California Rapid Transit District concerning the construction of a transit system and, generally, how does this position relate to those of other agencies involved?

7. What is the structure, and the mechanical process, of regional transportation planning within the Los Angeles region? How is this planning coordinated and how is jurisdiction delineated?

CHAPTER I

PRELIMINARIES

A. Introduction

Los Angeles, a county of seven million people, is one of the fastest growing metropolises in the United States. While the central business district has essentially ceased its growth as a residential center, the Los Angeles basin as a whole is experiencing a housing boom unprecedented in its relatively short history. The migration of middle-class and upper-middle-class workers to relatively inexpensive housing tracts in the Los Angeles suburbs has accelerated in recent years for several reasons.[1] Changes have also taken place in the practice of industrial siting. Accounting briefly for these trends:

1. Technological factors such as the introduction of containerized freight movement, telecommunications and automation encourage decentralization of industry to the periphery of the metropolitan region. The trend toward larger, centralized physical plants also necessitates the use of large parcels of land unavailable in the central city.

2. Congestion, air pollution and other forms of urban blight have made central-city living physically unattractive. While population densities in the Central Business District (CBD) have increased less rapidly than densities in the suburbs, the extensive utilization of this area as a business center forces large numbers of commuters in and out of the central city during peak traffic hours. In this way, the convenience of central city living is offset by its deteriorated environmental quality brought on by high traffic volume and inadequate public transportation facilities.

3. Low-density suburban living including moderate cost, abundant services and freedom from inner-city blight is preferred by those who can afford it.

The central city is also characterized by increasing homogeneity. The central business district of virtually every large city now teems with banks, brokerage houses and office buildings. This increasing financial and service orientation has made space a premium. Land values and rents have, for this reason, increased considerably in the CBD over the last two decades.

Opposing the trend toward suburban residential movement and concentration of service-oriented markets in the CBD, Los Angeles has been one of the few cities to experience high inner-city growth.

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Particularly in the south, south-central and eastern parts of the city, the influx of low-income families, occupying the decaying housing facilities deserted by suburban residents, has put a severe strain on the housing market. Lacking the training and education for white-collar jobs available in the CBD and the transportation to industrial job sites in the fringes, this group is characterized by unemployment several times the national average.[2]

The trend toward physical separation of employer from employee noted in the area has been accompanied by an increased reliance on the automobile for transportation. However, the external costs of automobile ownership and use, including smog, congestion and sprawl have lately increased to a critical point in certain metropolitan regions. In the process, the low-income inner-city resident has been forced to endure the costs of automobile-highway overuse while realizing none of the benefits.

Many of the problems associated with contemporary urban life are directly or indirectly attributable to the lack of an adequate mass transportation system. "Adequacy" must be defined in terms of the operating parameters of speed, convenience and economy. However, an attempt to define "adequate" rigorously in these terms would hopelessly confuse the issue for the adjective refers to a social estimation of benefit which is difficult to quantify. Intuitively, we know that every automobile removed from the road represents a reduction in the external cost of automobile transportation. However, the point at which a transit system becomes "adequate" can be determined only by an assessment of public opinion. It is perhaps safest to say that when the transit system is no longer a public issue, it can truly be termed "adequate."

By these standards, Los Angeles lacks an adequate transportation system. The present transit system, consisting of a fleet of 1,511 buses currently operates over lines totalling 180,000 daily route miles in length. While service within the immediate central city could probably be considered adequate from the point of view of availability and cost, the existing bus system is woefully inadequate in dealing with the commuter.

In this report a study was conducted to determine the driving habits of Los Angeles commuters. Although 42% of the residents of West Covina, a highly commuter-oriented city, regularly travel in the direction of Los Angeles, only 38% of this group (17% of the total), could use the bus to get to their destination, and a mere 2.6% prefer the bus over such transportation forms as the elevated train, the ground train and the freeway. Reasons cited for this lack of bus patronage include infrequency of buses, high cost, lack of consideration of private amenities and excessive travel times. A complete analysis of the transportation preferences and habits of a random sample of West Covina residents appears in Chapter IV.

While it is true that fixed-rail rapid transit is not a panacea for the transportation problems of Los Angeles, such a system would relieve the mounting strain on the congested freeways. Several different combinations of vehicle mode and service have been suggested for alleviating the transportation problem. One involves improving the bus facilities of the Southern California Rapid Transit District (SCRTD) to provide more prompt, flexible service. However, one estimate by a local transportation expert places the need for buses in SCRTD's jurisdictional area at 10,000, many times the existing number.[3]

The alternative to a massive expansion of bus facilities is a balanced system in which buses are used in the capacity as "feeders" to transport passengers to and from transit terminals. The high-speed line-haul system, consisting of fixed-rail or tracked air cushion vehicle, would receive the major part of the commuter transit burden, resulting in a more efficient allocation of transit resources. The line-haul system, which is characterized by the speed and comfort with which it can transport passengers, would maintain a constant headway over the rush-hour automobile commuter. The burden of long-haul travel thus removed, bus service could be restructured so as to provide door-to-door transit service in a manner competitive with the automobile.

Los Angeles, however, is clearly far from reaching the goal of achieving a rapid transit system on a scale wide enough to reverse the trend of increasing automobile usage. While attempts have been made to construct an effective mass transit system in Los Angeles (detailed in Chapter II), organizers of such schemes have been repeatedly stymied by a legacy of poor transportation planning and a group of vested interests representing the so-called "highway lobby." While the federal highway trust fund, the source of matching funds for the interstate highway program, has increased its vulnerability as far as transit programs are concerned, it is expected that several years will pass before either the state or federal highway trusts will be available for use by transit interests. Meanwhile, the highway lobby remains pledged to the continuing dominance of the automobile as the principal transportation mode in Los Angeles.

Planning

City planning, in the Los Angeles metropolitan area, has shown a consistent underestimation of the potential transportation problems. In the early 20's and 30's, it was assumed that the existing rail systems (The Pacific Electric Railway and the Los Angeles Railway Company) would satisfy the transit needs of the Los Angeles area for many years to come. Ironically enough, the transit system as it existed was too effective. Extending far into the suburbs of Los Angeles, the two lines encouraged low density construction and the development of small unincorporated towns.

To quote from a recent history of the famous Red Cars, "trolley lines brought growth beyond expectations to Long Beach, Pasadena, Santa Monica and points on the tracks between the cities." The real estate section of the Long Beach Press, April 1, 1903, stated: "One of the striking features of the real estate situation just now is, not only here, but in other cities, the influence of electric roads upon the value of residence property."[4] Politically, these towns had grown wary of the annexation tactics of the City of Los Angeles, and were taking steps to preserve their autonomy. Among these measures was the development of independent municipal services, including transit systems. By relying on the car as the principal transportation mode, the small unincorporated towns could maintain their physical connection with Los Angeles without relying on the city to satisfy their transit needs. As a result, absolutely no incentive existed for an integrated transportation plan to be constructed.

The population of the metropolitan area grew rapidly as industry, stimulated by World War II government dollars, began to localize in Southern California. Faced with a shortage of adequate transportation facilities during the growth period, Southern California residents turned to the automobile. During the period 1936 to 1950, automobile registrations tripled and in the period 1956 to 1960, over a half million additional cars were placed on the roads.[5] In spite of this phenomenal growth, however, city planners consistently underestimated population figures. In 1945, the City of Los Angeles projected a maximum population of six million for Los Angeles County. County population has actually exceeded this figure and is still increasing.[6]

An indirect consequence of the underestimation of county population was a delay in the creation of a special public transportation authority to handle transit planning. The consensus among autonomous communities in Southern California was for an automobile-freeway approach to transit planning. This attitude was to be expected since industry in Los Angeles was dispersed over the 2,200 square miles of the metropolitan area.[7] The demand for adequate transportation facilities for these burgeoning industrial complexes was unquestioned by local officials. With plenty of money available from the federal government and a mandate from the people to encourage industrial development, the Southern California freeway system mushroomed into the gigantic structure we know today.

By 1960, the freeway system had overshadowed rail service in Los Angeles. Passage the year before of a 12,500 mile state freeway master plan, to operate until 1980, dimmed the prospects of public mass transit ever taking hold in the area. In 1960, the Southern California Research Council had reached the following conclusions concerning transit planning in the area:[8]

1. Some transport planning has been thorough but concerned with only one type of service.

2. Most of the planning was short-sighted.

3. Much needed planning was not done at all.

The report also contended that planning commissions of small towns were spending 85% to 95% of their time making zoning and variance regulations, not assessing their long-range transit needs. Its recommendations included the organization of a planning commission to concern itself with transportation and land use problems on a regional rather than community basis.

In the decade of the 1960's, the first substantive steps in the direction of transit planning were finally being made. LARTS, the Los Angeles Regional Transportation Study, a study arm of the State Division of Highways, began making critical analyses of regional traffic flow patterns and transit needs. In 1964, with the creation of the Southern California Rapid Transit District, studies were undertaken to assess the feasibility of a first-stage rail rapid transit system. Clearly, any such system would have to be designed around the burgeoning automobile freeway-oriented culture. The opportunity to get in on the "ground floor" of public transit development had been missed by over twenty-five years.

Conclusions

The problem of providing adequate transportation service to everyone who needs it encompasses several diverse and complicated areas of study. This report, in an effort to narrow the focus of the issue while maintaining a sufficiently wide scope to do it justice, concentrates on regional planning, transportation economics and public opinion in the context of Los Angeles transit history.

Chapter II, "History of Transit Problems and Solutions," analyzes several of the attempts made in the past to implement mass transit in the Los Angeles area on a large scale. Emphasis is placed on the legislative history of transit, establishing a point of reference from which to evaluate attempts made in recent months to solve the problems of transit by legislative action. Included is an analysis of RTD's current attempt to construct a fixed-rail system; its history, and its assets and liabilities.

Chapter III, "Accomplishing Mass Transit," catalogues the various formal and informal relationships of the Rapid Transit District with outside agencies responsible for constructing and operating adequate transportation facilities: private bus lines in Los Angeles, the City and County of Los Angeles, the State of California, the federal government, the State Division of Highways and, for the purpose of comparison, the Bay Area Rapid Transit District. Also considered is the structure of grants and subsidies vis-a-vis local transit interests and the process of regional transportation planning; its present status, accomplishments, problems and inadequacies.

Chapter IV, "Transit and the Public," presents an analysis of a unique survey of transportation attitudes and habits among residents of the suburb of West Covina.

Chapter V, "Financial Policy," contains a detailed breakdown of the fiscal problems of mass transportation. In the area of revenue collection, the implications to transit of various bonding alternatives, alternate sources of revenue and institutional reorganization are discussed. In the area of revenue utilization, the demand for urban transit, fiscal and economic considerations in the selection of routes and cost-benefit analyses of rapid transit systems receive attention. Of course, the discussion in each area focuses on current financial policy of Los Angeles transportation interests.

The report concludes with a chapter containing recommendations for future action in the area of rapid transit.

Footnotes: Section A

[1] *Dudley F. Pegrum, Transportation Economics and Public Policy, Irwin Series in Economics (Homewood, Ill.: Irwin Pub. Co., 1968), p. 568.*

[2] *Report of the National Advisory Commission on Civil Disorders (New York: The New York Times Co., 1968), p. 253.*

[3] *Interview with R. H. Richmond, September 30, 1971.*

[4] *Spencer Crump, Ride the Big Red Cars (Los Angeles: Trans-Anglo Books, 1965), p. 106.*

[5] *John Meyer, et al., The Urban Transportation Problem (Cambridge, Mass.: Harvard University Press, 1965), p. 77.*

[6] *Final Report, Southern California Rapid Transit District, 1968, p. RTD-13.*

[7] *Pegrum, Transportation Economics, p. 561.*

[8] *Joseph E. Haring, "Planning Adequate Transportation for Southern California," Traffic Quarterly (October, 1960), 474-475.*

B. Who Is Responsible for Transit in Los Angeles?

As Los Angeles urgently needs and clearly lacks an adequate mass transit system the question that must be asked is, who is legally responsible for providing such a system?

The County and City of Los Angeles are given general powers by the State to enable them to provide a mass transit system. Chapter 10 of the Government Code of the State of California, Section 26002 states:

> Unless otherwise provided by law the board* [of Supervisors of a county] may lay out, maintain, control, construct, repair and manage . . . passenger transportation facilities within the county and may cooperate with any city in so doing.
>
> The Board of Supervisors of a chartered county may operate a transit system within a city, if the city consents thereto. Any such agreement shall be terminable only on mutual consent.

The County thus possesses the legal right to provide a mass transit system and coordinate its construction, operation and maintenance with the cities through which it travels.

Under the Government Code, Title 4, Section 39732, covering municipal and public utilities, the legislative body of a chartered city may:

> (a) acquire, own, construct, maintain and operate bus lines, street railways, steam railway spur tracks. . . .
>
> (b) grant franchises for the construction of public utilities it deems proper, the laying of railroad tracks. . . .

Thus the City also has the power to provide mass transit. By State law, any city, either by itself or jointly with other cities, counties or rapid transit districts may use motor vehicle license fee monies for construction of a rapid transit system. It may also give its funds only to a transit district.

More specific details relating to mass transportation are not included in the Los Angeles County Charter. The only articles in the charter relevant to transportation pertain to the formation of road districts for the care and maintenance of roads and highways. However powers granted to the cities by State law in the transportation area are amplified in the Los Angeles City Charter:

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*Under state and local law public utilities include transportation.

Sec. 2(11):

The City of Los Angeles, in addition to any other rights and powers now held by it, or that hereafter may be granted to it under the constitution of laws of the State, shall have the right and power, subject to the restrictions in this charter contained:

(h) to grant franchises for the operation of public utilities;

(j) to acquire, construct, maintain, operate or sell public utilities. . . .

(m) to provide for the acquisition, construction, improvement or alternation, maintenance, use and control of streets, tunnels, subways.

The city may also grant franchises to private corporations or persons under a fixed franchise for the construction of mass transit systems. One of the stipulations regulating such franchises is stated:

Sec. 3(9):

No franchise, permit or privilege shall be granted across public streets or ways . . . until after the adoption by the city of a comprehensive elevated railway and subway plan for the development of rapid transit into, out of and through the city, and the city shall have selected that part of such plan, if any, that it may desire to own and control, operate or lease.

The city thus has control over private franchises and an overall plan for a transit system within its boundaries.

In 1964 a rapid transit district was created for the specific purpose of providing a mass transit system for the Los Angeles area. Division 10 of the Public Utilities Code, Chapter 62, Part 3, Chapter 1, reads:

Sec. 3001: The Legislature hereby finds and declares:
(a) There is an imperative need for a mass rapid transit system in the Southern California area, and particularly in Los Angeles County.

(b) In view of the limited powers of the Metropolitan Transit Authority it has become apparent that the authority is unable to solve the transit problems of the Southern California area and to provide the needed mass transit system.

(c) It is, therefore, necessary to provide a successor corporation to the authority, to wit: a transit district, and to establish such transit district governed by representatives of the governmental agencies in the Southern California area so that there will be sufficient power

> and authority to solve the transportation problems in the Southern California area and to provide the needed mass rapid transit system.

The specific powers and responsibilities granted the district by the State include:

> ARTICLE 5, Sec. 30630:
> The district may provide a rapid transit system for the transportation of passengers and their incidental baggage.
>
> ARTICLE 5, Sec. 30631:
> The district may acquire, construct, own, operate, control or use rights of way, rail lines, monorails, bus lines . . . and any other facilities necessary or convenient for rapid transit service . . . and may acquire or contract for any interest in or rights to the use of any or all of the foregoing.

The district is to carry out the development of such a system in conjunction with the cities and counties included within its boundaries. Under the charter it must undertake studies to determine possible routes and locations and confer with local governing bodies on its plan before a final report is made. Only after discussion with local agencies and holding public hearings on its proposed plan should the district proceed to make a final report.

The district's relationship with the cities and counties is expressed in Section 30637, which states:

> The district shall not exercise control over any transit facilities now or hereafter owned and operated wholly or partly within, or without, the district by any city or public agency, unless by consent of such city or public agency and upon such terms as are mutually agreed upon between the board and such city or public agency.

Here again the law requires cooperation between the district and the local government agencies empowered to provide mass transit. Financially the district is given powers in Part 17 of the Government Codes concerning special taxes for rapid transit construction.

Although both the city and county of Los Angeles have the power to provide a mass transit system for the area the SCRTD was specifically created to carry out that responsibility. It was created in view of the inability of the local agencies to develop an adequate system themselves and it was empowered financially to carry out such development. According to the SCRTD, present capital is inadequate to finance the planning and development of a mass transit system and they have therefore concentrated on maintaining their existing bus system. This failure of the SCRTD to fulfill its main responsibility has caused other local agencies to become involved in

the planning process. The City of Los Angeles has responded to this lack of action on the part of SCRTD by proposing its own plans for such a system.

It seems that the original intentions for cooperation of SCRTD and local agencies has not been realized and that at the present time there is no adequate structure for coordination of such planning and development. However the main responsibilities for development, operation and maintenance of a mass transit system still lies with the SCRTD.

CHAPTER II

HISTORY OF TRANSIT PROBLEMS AND SOLUTIONS

A. Chronology

Los Angeles holds a unique position in the history of mass transit. Los Angeles developed a very effective and comprehensive transit system, the Pacific Electric "red cars" linking together various cities and towns in the Los Angeles basin. However, the advent of the automobile paralleled the demise of the Pacific Electric rail system, and as the freeway system expanded, the mass transit system floundered. Serious attempts have been made during the last decade to reinstitute some effective form of mass transit.

In this section, the history of transportation planning efforts in the Los Angeles area will be examined. The treatment will be chronological, with increased emphasis upon events of the past decade.

Following this review of historical attempts to deal with transit planning, an analysis will be made of both apparent trends in the field, and the role the Southern California Rapid Transit District has played with particular attention given to the current situation.

The first organized attempt to deal with the question of transportation in the Los Angeles area came in 1887 with the introduction and development of an electric railway network.[1]

This was expanded and in 1911 two systems were operating in the area--the Pacific Electric (the "big red cars" referred to in the Introduction), and the Los Angeles Railway. The railway proved to be so successful that by 1946, 1,100 miles of track were in use.[2]

By this time the automobile had been invented, and during the 1920's and 30's the automobile began gaining widespread acceptance. Los Angeles quickly became the center of Western automobile travel and in 1932, the Pacific Electric Company recorded its first year in the red.[3]

The changeover to the car was encouraged by many civic minded groups. The automobile was regarded as the "wave-of-the-future," and little thought was given to the problems which have become so prevalent today--air pollution, congestion and sprawl. In 1939 the Los Angeles Transportation Engineering Board publicly announced support

of the private automobile and discouraged the use of buses partly to justify the beginnings of investments in the freeway system.[4]

In 1943, the City and County of Los Angeles released a statement which gave support to the freeway solution of local transportation needs.[5] However, due to the gas rationing imposed by World War II and other factors, public transportation recorded a peak-use record during the year 1947.[6]

The concept of a public transportation system was slow to die, however. In 1948, the Los Angeles Chamber of Commerce sent a Rapid Transit Action program proposal to the State Legislature. No action was taken for three years.[7]

In 1949, the same group again proposed the creation of a Transit District, supported via property tax-supported general obligation bonds. This proposal was not acted on by the State. An interim committee was formed to report in 1951.[8]

A new look at Los Angeles transportation problems was taken in 1950. The Metropolitan Transportation Engineering Board was established by the Los Angeles Traffic Association "to explore all methods of expediting construction of a freeway system in the metropolitan area." This freeway-oriented organization was staffed by various city officials, and engineers of the City of Los Angeles. The agency was responsible for coordination of freeways.[9]

As a follow-up to the late 40's request by the Los Angeles Chamber of Commerce, the Los Angeles Metropolitan Transit Authority was created in June, 1951 as a planning agency under AB 3117. Its purpose was to study the feasibility of a monorail system running from the San Fernando Valley through Los Angeles to Long Beach. It was not given tax-exempt status, nor any funding. A Coverdale and Colpitts study found this financing unrealistic under the MTA act.

The study also concluded that an "all bus system" was not feasible due to the traffic volume, and recommendations were made to investigate a steel-wheeled system in somewhat more depth.[10]

During the late 1950's it became obvious that the freeway system would not solve the transportation problems of Los Angeles. Accordingly the MTA was given the mandate in 1957 by the State Legislature in AB 1104 to develop the needed mass transit system.

The bill made the LAMTA into a public corporation, and merged 75% of the Los Angeles public transportation system into the Authority. The MTA was also given tax relief.[11]

The LAMTA began operations the next year as this new corporation with the purchase of the properties and franchises of Los Angeles Transit Lines and Metropolitan Coach Lines.[12]

In 1959 the State Master Plan was released, with the prediction of 12,500 miles of freeway in California by 1980. This plan was based upon the availability of federal interstate highway money. In 1956, the federal government had approved ninety (federal) to ten (local) matching funds for interstate highway construction. A counterpoint to this was provided by a report of the Southern California Research Council:

> Completion of the freeway system in Southern California will not solve the mass transportation problems of the Metropolis. . . . The shortcomings of the Freeway System as a solution to mass transit problems of the Los Angeles Metropolitan Area are related to the question of wise land usage and economic inefficiency in transporting the commuting population.[13]

The following year, in response to the increasing complexity of Los Angeles transportation, a new study group was organized. Los Angeles Regional Transportation Study, coordinated by the California Division of Highways, was created. LARTS was the first transportation planning effort that involved engineers, planners, mathematicians, and social scientists. Its highway emphasis was apparent as its task was to conceptualize a freeway system tailored to the projected land use.[14]

By 1961 the freeway had become the dominant transportation mode with little remaining of the previously effective public transit system. The demise of a once flourishing public transportation system was complete; the last run of a Pacific Electric Red Car was made between Los Angeles and Long Beach.[15]

In 1962, another study group was established with a slightly different emphasis. TASC, Transportation Association of Southern California, came into being in response to the Federal Aid Highway Act which listed as a goal "to encourage and promote the development of transportation systems embracing various modes of transportation."[16]

1964 saw a renewed attempt to encourage rapid transit in Los Angeles; the Southern California Rapid Transit District was created by the California Legislature. The District was empowered to operate the existing bus system and to plan, construct and finance a system of mass rapid transit, but was limited to the urban portion of Los Angeles County. Eleven directors were chosen by elected officials of local governments, and ordered to review LAMTA's past six years of planning, "and to prepare a general obligation bond issue to submit to the voters," which would require the approval of 60% of the electorate.

The SCRTD immediately absorbed the LAMTA bus routes, and additionally was not permitted to originate service in any locality which would either compete with an existing system, or would lose money.[17]

In another attempt to unify and coordinate transportation planning in the Los Angeles area, the Southern California Association

of Governments (SCAG) was established in 1965 for the purpose of "discussion, study, and development of recommendations on problems of mutual interest of orderly development of the Southern California region."[18]

LARTS, which was to become a study arm of SCAG, presented a report with projections of transportation needs to 1980, revealing the need for public transportation.[19]

In a more detailed report, a Daniel, Mann, Johnson and Mendenhall Study presented August 6, 1965 to the SCRTD, pointed out that restraint in commuter mobility could cause serious adverse economic effects on all suburbs.

> Failure to achieve peak-hour transportation mobility, could, in 1980, prevent as many as 225,000 employees from suburban areas from reaching jobs in the Core (area with 30% of the population and 41% of the jobs) resulting in a loss annually of $1.5 billion.[20]

The Los Angeles County Board of Supervisors at this point offered some qualified assistance. The Board agreed to levy a 1/2% "motor vehicle license fee (in lieu) tax" to provide the SCRTD with sufficient funds to complete rapid transit engineering, institute a county liaison program on rapid transit planning (required by law), and improve the bus system, conditional on the California Legislature's approval of a county-wide sales tax or 1% in lieu tax. This legislation was not forthcoming.

After this financing legislation was defeated, House Resolution 766 was adopted. It read, "There is a dire and urgent need for a solution to the problem of rapid transit in Southern California." A disappointed Governor Brown stated, after the initial legislation was defeated, "My highway people tell me we just can't build freeways fast enough to take care of the increasing flood of automobiles that will come in the future."[21]

Harry A. Faull, SCRTD president, at hearings on rapid transit for Los Angeles County September 14 and 15, 1965, by the Assembly Interim Committee on Transportation and Commerce, declared rapid transit in this area at a standstill due to lack of funds. Most of the engineering requisite to a transit system had been completed at a cost of $2 million--all from the bus system fareboxes. (The District adopted a Rapid Transit Master Plan of 160 miles, and an 8-leg system.)[22]

Faull expressed the opinion that the RTD would require financial assistance from the legislature. This income would go towards engineering and public education. The San Francisco Bay Area Rapid Transit District (BARTD), granted the proceeds from a 5¢ ad valorem tax, used a portion of its State funding in its preparation for the 1962 general election in which the voters approved the issuance of the general obligation bonds required to finance the system.

Faull suggested a combination of a 1/2% in lieu tax on motor vehicles (which would raise approximately $15 million) and a 1/4% sales tax in Los Angeles County (good for $26 million) instead of a property tax. He then stated that these preliminary funds would be utilized in informing the people about the system and update the engineering, and community work. In addition, Faull suggested a one-time only 1/10 of 1% in lieu tax which would cost the average County car owner about 80¢.[23]

In 1966, the Public Transportation Committee was established. Its duties included the coordination, planning, and development of public transit, the coordination of data collection activity, and establishment of a cooperative enterprise among public and private bus companies.[24]

The State Legislature passed legislation favorable to local mass transit. In a special session in the State Legislature, funds of $3.6 million, tideland oil revenues, were allocated to the SCRTD for engineering and planning studies.[25]

AB 39 allowed the County Supervisors to levy an assessment of $1.00/vehicle for one year or 5% parking lot tax for one year, which would go toward rapid transit planning and engineering.

With this money, the SCRTD hired a number of firms for studies of a rapid transit system. These included Kaiser Engineers/ Daniel, Mann, Johnson and Mendenhall, Coverdale and Colpitts, Stone and Youngberg, Stanford Research Institute, and Simpson and Curtin.[26]

State Senator Randolph Collier, often termed the "father of the freeways" came out with a statement favorable to mass transit in 1966:

> I want you to know that I support rapid transit as part of an integrated, balanced transportation system--a balance that seems to be lacking at the present time. . . . A natural partnership between rail and rubber waits to be put to work to help solve the enormous problem of moving people in metropolitan areas.

Mayor Sam Yorty also pledged his cooperation to the SCRTD plan for achieving a balanced transportation system. On the federal level, Congressman Chet Hollifield stated, "The end to traffic congestion in this area will come with efficient rapid transportation systems."[27]

During 1967, two conflicting views of mass transit's role in Los Angeles' future were offered. Edward T. Telford, district engineer for the California Division of Highways stated:

> A study of the SCRTD data indicates the RTD's 4-corridor system would not lessen the need for any of the planned freeway lanes by 1980, but might provide some relief for

> them during peak periods. . . . Rapid transit will help, not much, but enough to make a difference in peak hour traffic on some freeways.[28]

Contrasting with this was the October 30 presentation of the RTD Preliminary Report. It proposed 62 miles of 75mph electrically powered commuter system. Rationalizing this proposal were statistics demonstrating that 16.77% of all households in the Los Angeles area have no cars, and 51.8% of the households have but one car. Additionally, over 1½ million people over the age of 15 do not have a driver's license. A large, previously immobile group in need of public transportation has thus been delineated. By 1980, according to Coverdale and Colpitts' projections, rapid transit systems, and feeder buses, will be carrying over 327,000,000 passengers per year. Rapid Transit will divert about 25% of the potential automobile trips within the service area during peak hours. It was further projected that in 1980, 700,000 commuter trips to the urban core (where 45% of Los Angeles County jobs are located) would take place. Over 55% of all Los Angeles County population lies within three miles of the planned rapid transit routes, and greater than 65% of all job locations will be served by the proposed routes.[29]

This proposed 62 miles would cost $1.2 million, and every year's delay would increase the total cost by 7% (or $100,000,000).

Concurring in the need for public transportation was the Citizen's Advisory Council on Public Transportation. Its statement read:

> A major improvement in public transportation is needed to supplement the motor vehicle system in Los Angeles County. . . . The major inadequacy of the freeway network, however, has been its inability to handle commuter traffic during the peak hour periods. Unfortunately, it does not appear that this inadequacy will be resolved in the future, despite the completion of the 1980 Plan. Some form of supplemental transportation, therefore, appears to be required during the peak hour periods. . . . The Council concludes that the motor vehicle alone cannot adequately serve total transportation needs and must be supplemented by an improved public transportation system if the community is to grow and prosper.[30]

A number of bills were introduced in the State Legislature to help finance public transportation, but none were passed.

The District did receive a matching grant of $975,000 for transit planning from HUD.

In the first of a series of efforts to provide adequate transit financing from state-generated sources, several key measures were introduced in 1967. Assemblyman Frank Lanterman introduced a bill extending the sales tax to gasoline, with the resulting funds

returning to the county of origin to be used either for rapid transit or other related transit needs. The bill passed the Assembly with a slight margin but was killed in the Senate Transportation Committee.

Assemblyman John Foran introduced a more incremental measure in 1967, AB 1290, calling for an increase in vehicle license fees of 1/2%, with resulting income going to rapid transit. Funds thus generated would be quite limited, but still helpful. This measure, too, did not clear the Senate Transportation Committee. Other legislation introduced would have entitled the RTD to a share of tidelands oil revenues, but this too was defeated.

A significant measure which did pass in 1967 was Senator Tom Carrell's SB 596, which, among other things, set a 60% majority for electorate approval of any general obligation bonds. This represents an advantage for the SCRTD, as the usual percentage required for any type of general obligation bond issuance by a special district is a two/thirds or 67% majority.

1968 was a turning-point year for the SCRTD. First, the Final Report was released, calling for a 5-corridor system. Corridors were planned for the San Fernando Valley, the San Gabriel Valley, Wilshire, Long Beach, and Los Angeles International Airport. There were to be sixty-six stations, with feeder bus lines to the backbone rapid transit routes. Stanford Research Institute estimated a $1.87 benefit per $1.00 in cost.[31] This is discussed in more detail in Chapter V.

The need for a mass transit system was also recognized by SCAG:

> From a regional standpoint, the most important transit issue involved the development of an area-wide rapid transit system for the movement of large numbers of people between residential concentrations and centers of employment.[32]

On July 23, the Board of Supervisors of Los Angeles County allowed the issue of mass transit to go to the voters, and Proposition A was placed on the November ballot. The Citizens for Rapid Transit organized to support Proposition A, and in three weeks had raised more than $300,000 for advertising.[33]

Proposition A, a measure involving a two-billion dollar system outlined above, to be constructed and financed by general obligation bonds supported by property tax, was defeated at the polls.

On the State level, another potential source of revenue was introduced which would enable a rapid transit district, after obtaining voter approval, to impose a permanent tax on retail transactions and use for the exclusive benefit of rapid transit. However, this measure was not implemented.

In 1969, a 1/2% sales tax increase was initiated for six months, from July 1 to December 30, 1970, with the proceeds to finance the SCRTD.

The RTD, reacting from an apparent public antipathy to the property tax as demonstrated by voter rejection of Proposition A, essentially ceased its promotion of a rapid transit system as funding was assumed unattainable.

During 1970 a major attempt was made to provide viable financing for long-delayed rapid transit in Los Angeles. The State Legislature enabled the controversial Proposition 18 to be placed on the ballot. This Proposition would have created no new taxes, but reallocated existing State funds. In a revision of Article 26 of the California Constitution, which deals with the Department of Public Works, money previously slated for highways was to be utilized for construction of rapid transit facilities. The highway lobby vigorously opposed this move, and donated large amounts of money for the campaign against it.[34] The lobby insisted that the motorist would not benefit from a mass transit system. However, through his contribution to the highway user tax fund, with which mass transit would be partially subsidized, the motorist would be forced to pay for a large part of the system. The oil companies were concerned about the prospect of transit vehicles not being powered by gasoline, and donated sizable amounts of money to the campaign. It has been noted that Proposition 18 provided no mechanism for distribution of the funds generated, as it designated no regional, County, or State agency to receive or allocate the monies.[35]

Working for the Proposition was a hastily organized group of concerned citizens, Californians Against Smog, with a very limited budget. The result was defeat for the Proposition.

Interestingly enough, the SCRTD took no official position on the issue.[36] Although admittedly the proposal was not drafted by their organization, and was presented fait accompli, the District failed to support a measure which offered the first possible opportunity to finance rapid transit since the defeat of the 1968 bond proposal.

In 1971, several attempts were made by the Legislature to do something about transportation in Los Angeles. The receipt of several large federal grants may have awakened the Legislature's concern.

One of these grants was utilized to purchase three hundred new buses. Another funded the minibus system in downtown Los Angeles. The RTD contributed $345,664 to these ventures with the remaining money coming from the City of Los Angeles and the federal government. The minibus project, begun in October, 1971, is a fourteen-month experiment, at a total of $7 million. It was designed primarily as an aid to shoppers rather than commuters, since the buses run from 9:00 a.m. to 4:00 p.m.

In another effort to ease downtown congestion, the District introduced "Park N' Ride," a system designed to encourage commuters to park their cars near the Los Angeles Convention Center, and commute by bus to their places of business.

The other significant action involving federal funds was the Express Busway Project, two bus lanes running along the San Bernardino Freeway from El Monte to central Los Angeles. The project will be complete in the fall of 1973 and involves $7 million from the RTD, and $44.5 million from other sources, including money from the Federal Interstate Program and the Urban Mass Transit Administration.

However, perhaps the most significant event to concern Los Angeles mass transit occurred on the State level. On October 25, the Senate passed SB 325, a bill removing the sales tax exemption on gasoline, with revenues to go to public transportation. The legislation was signed into law on November 4, with the RTD expected to receive $43 million annually.

Footnotes: Section A

[1] *Los Angeles Regional Transportation Study (LARTS), Vol. I, Base Year Report, December, 1963, p. 19.*

[2] *Ibid.*

[3] *Ibid.*

[4] *Alec V. Andrus, "Mass Transportation in the Los Angeles Metropolis, A Case Study," (unpublished Master's Thesis, Claremont Graduate School, 1968).*

[5] *Ibid.*

[6] *LARTS, Base Year Report, p. 19.*

[7] *Andrus, "Mass Transportation."*

[8] *Kaiser Engineers and Daniel, Mann, Johnson and Mendenhall, Report Review, Collation and Summary, July, 1969.*

[9] *Southern California Association of Governments (SCAG), Status of Regional Transportation Planning and Coordination in Southern California, November, 1968.*

[10] *Kaiser Engineers, et al., Report Review.*

[11] *Ibid.*

[12] *LARTS, Base Year Report.*

[13]The Southern California Research Council, The Southern California Metropolis--1980, 1959.

[14]SCAG, Status of Regional Planning.

[15]LARTS, Base Year Report.

[16]SCAG, Status of Regional Planning.

[17]Ibid.

[18]Ibid.

[19]Southern California Rapid Transit District (SCRTD), In-Transit, News of Rapid Transit for Los Angeles County, August, 1965.

[20]Ibid., September, 1965.

[21]Ibid., August, 1965.

[22]Kaiser Engineers, et al., Report Review.

[23]SCRTD, In-Transit, November, 1966.

[24]SCAG, Status of Regional Planning.

[25]Ibid.

[26]Kaiser Engineers, et al., Report Review.

[27]SCRTD, In-Transit, November, 1966.

[28]Ibid., April, 1967.

[29]SCRTD, Final Report, 1968.

[30]Citizens' Advisory Council on Public Transportation, Improving Public Transportation in Los Angeles, A Report to the Community on Public Transportation, July 25, 1967.

[31]SCRTD, Final Report, 1968.

[32]SCAG, Status of Regional Planning.

[33]Interview with Dr. Jule Lamm, Citizen's Transportation Committee, November 8, 1971.

[34]Senate of the State of California, Public Transportation in California.

[35]Telephone Interview with King Cushman, Transportation Coordinator, SCAG, May 15, 1972.

[36] *Interview with Sam Olivito, Public Relations, SCRTD, October 28, 1971.*

[37] *Stone and Youngberg, Municipal Financing Consultants, I c.; Coverdale and Colpitts, Consulting Engineers; Lybrand, Ross Bros., and Montgomery, CPA, The Crisis in Public Transportation: 1971--The Year of Decision, 1971.*

B. Interpretation and Analysis, Current Situation

Three main difficulties confront the development of an effective mass transit system in Los Angeles. These difficulties lie in the areas of regional planning, highways, and finance.

The first of these, regional planning, has been characterized by a generally fragmented approach. The City of Los Angeles, the County of Los Angeles, the various municipalities, SCAG, and the SCRTD represent a multitude of approaches to the question of mass transit, and have generally not tended to work cohesively together with a unified approach to the question.

The extensive freeway system linking the sprawling metropolitan area, and the correspondingly heavy reliance of Los Angeles residents upon the automobile has stymied the development of effective public transit. The combination of automobile and highway interests has created a formidable pressure group traditionally opposed to mass transit--particularly when the needed financing would be derived from either the motorist or funds already earmarked to highway construction.

The most insurmountable obstacle in the way of transit construction has been financial. The cost of constructing even a skeletal system grows yearly, and a system rivaling the defunct Pacific Electric would be phenomenally expensive. The PE system was private and did not have to be supported from public funds. However, it is unrealistic to expect that the responsibility for providing a transit system will be assumed by a private concern because transit is both an unprofitable venture and requires an exceedingly large capital outlay.

The District, as the agency charged with the primary responsibility for providing public transportation, has fought with the financing issue for several years. Its 1968 proposal for a rapid transit system was based on a property tax initiative. This attempt, however, failed, carrying with it the District's hopes for financing a system. Since then, the District has been reluctant to propose another property tax-based initiative, perhaps waiting for the time when such a proposal would be more favorably received by the voters.

In the opinion of Thomas Stemnock of the Los Angeles City Planning Department, the sole concern of the RTD since the 1968 election has been how to keep its buses running.[1] The District originally

took over the bus system run by the indebted Metropolitan Transit Authority, and for several years concentrated solely on maintaining the bus system. Although there was a State mandate for providing a master plan for a rapid transit system, the RTD did not present a viable construction plan to the voters until four years after its inception. Much of this lag-time can be attributed to the lack of funds for any preliminary studies, and by the effort to amortize the $40 million debt run up by the old MTA.

By 1971, the District, faced with increasing operating costs and a slightly declining ridership, recognized that year as its "year of decision." In a general review of its operations and financial situation, the following bleak view was articulated:

> To avoid the irreparable damage which would be caused by efforts to maintain operations by extreme fare increases and major service reductions, it is essential that action be taken in 1971 to provide an appropriate level of public aid for transit on a continuing basis.[2]

Fortunately for the District, that relief was forthcoming in the form of revenues from a bill, SB 325, passed by the California Legislature. The events that took place subsequent to the passage of the bill are illustrative of the policies the District has taken toward rapid transit over the last several years. A chronology of events follows.

October 19, 1971:[3] The California State Assembly approved a bill to extend the 5% sales tax to gasoline which would raise $129 million annually to subsidize public transportation and rapid transit. SB 325, introduced by Senate President Pro Tem James R. Mills (D-San Diego), removed the sales tax exemption on gasoline and decreased the State's share of sales tax on all taxable items from 4% to 3-3/4% and allowed the counties to increase the local share of tax 1/4%. The Southern California Rapid Transit District would receive the bulk of the $43 million raised in Los Angeles County yearly. The funds generated by the bill could lead to matching federal funds on a two-to-one basis under the UMTA act. The bill will become effective July 1, 1972.

November 5, 1971:[4] Governor Reagan signed SB 325 into law. The counties must use 1/4% of the funds for a special transportation fund, and in counties of over 500,000 population, the monies must be used exclusively for public transportation.

November 8, 1971:[5] The SCRTD estimated receiving an annual $35 million windfall from the new sales tax on gasoline, but had only a vague idea of how to use the new monies. It seemed that most of the funds were earmarked to go for wages for the District's 2,700 employees and maintenance of the 1,511 bus fleet. What plan there is for the money indicates it will not be spent on building a rapid transit system. Jack Gilstrap, General Manager of the SCRTD said of the windfall:

> It will go to upgrade and improve our existing bus system. . . . We do know that the threatened cut in service [25% of bus service] and increase in fares [of 50%] have been avoided.

The SCRTD also indicated the subsidy would have allowed the continuation of on-going projects, namely the San Bernardino Busway (now in construction, and funded by $7 million from the temporary six month sales tax of 1970), and the minibus system in downtown Los Angeles (which has already been financed through other subsidies). Therefore, most of the funds would have gone toward meeting the operating deficits of SCRTD. It also seemed the District filed a five-year improvement program with UMTA. The program anticipated $63 million in federal grants over the five-year period, which the SCRTD will match to purchase 100 new buses.

It should be pointed out here that the SCRTD had been fairly active in campaigning for the passage of SB 325 in Sacramento. The District representatives leaving Sacramento after the passage of the legislation were fully aware of the provisions calling for 75% of the agency's allocation to go toward capital construction. If the agency had intended to gear the majority of its allocation toward improving the bus system, Sacramento sources appeared to have been quite unaware of it.[6]

This whole problem of what to do with the "newfound" money appears very indicative of the pattern the SCRTD has followed since 1968: keeping the bus system running, and not attempting to leave that "proven successful" method of providing public transportation.

November 12, 1971:[7] Senator Mills accused the SCRTD of a "negative attitude" and was hopeful that the SCRTD would begin thinking about building at least one major rapid transit line. Under the law 75% of the new funds must go to capital outlay such as security for bond issues to build a rapid transit network. However, the SCRTD can spend less than that amount under another section of the bill which frees funds for operations if federal grants are applied for.

November 19, 1971:[8] Los Angeles City planners released a new plan for a one-hundred mile $2.4 billion pollutant-and-noise-free rapid transit system which would be completed by 1990. Stage one of the plan which would cost $1.4 billion includes three corridors: (1) a line starting downtown heading westward through the Wilshire area; (2) a line starting downtown and moving through Hollywood out to the San Fernando Valley; and (3) a line from Hollywood south directly to Los Angeles, to provide a transfer point for airport travelers. Financing for the plan would come from a $500 million fund from local revenue bonds to be supported by gas tax revenues, increased auto license fees and other such revenue sources. The plan does not need to go to the voters for approval of financial backing.

In this plan proposed by the City of Los Angeles Planning Department, inputs were made by both the SCRTD and SCAG. In referring

to the cooperation with the SCRTD, Thomas Stemnock commented, "we thought we were in real good accord." Stemnock went on to mention that the City Planners felt the RTD to be in agreement with their Wilshire line proposal.[9]

December 7, 1971:[10] In separate announcements both Mayor Sam Yorty and City Councilman Thomas Bradley proposed pooling the sales tax revenues received by the city and the county with the SCRTD's revenues to build a rapid transit system. Under the new bill (SB 325) Los Angeles County and the cities within the SCRTD will receive $11 million total from the sales tax, of which the City of Los Angeles receives $4.5 million and the County receives $1.6 million. Councilman Bradley estimated that if the City of Los Angeles alone commits its monies to rapid transit it could generate up to $118.5 million annually from federal funds without the necessity of an electorate vote to secure bonds.

December 7, 1971:[11] The SCRTD proposed a $420 million rapid transit line plan to South Los Angeles. This "first stage" line would be a subway-elevated line from the central city south to Willowbrook, connecting with the proposed Century Freeway (as yet unconstructed) which would have a special bus lane to Los Angeles International Airport. The initial subway segment would connect with a busway to El Monte. To finance the construction of this line the SCRTD pledged $70 million, which would be set aside at a rate of one-third of its annual revenues, and asked the City and County to add all of their shares of the gas tax revenues.

The RTD apparently here felt quite a bit of pressure in the wake of chastisement from SB 325's author, Senator James Mills. However, the district chose to justify the sudden appearance of their Central Line by stating several times over that this line had been under consideration for quite some time. At hearings before the Ad Hoc Transit Committee of the Los Angeles City Council, Jack Gilstrap, General Manager of the RTD, insisted that this line had been drawn up from plans on file.

December 9, 1971:[12] City of Los Angeles officials accused the SCRTD transit planners of "headline grabbing" as they did not notify the City before release of their new plan. Los Angeles City Planning Director, Calvin S. Hamilton, said he too was surprised by the SCRTD's switch from an expanded bus system to rapid transit. He told Bradley, "We've been led to believe this plan [the SCRTD's] was put together quite rapidly."

The SCRTD appears to have neglected communication and not to have cooperated fully with other agencies involved with transit planning.

The City of Los Angeles Planning Department was very surprised at the new RTD line proposal. However, Mayor Sam Yorty appeared to have been aware of the new proposal before the public announcement.

Mayor Yorty appeared with the Board of Supervisors of Los Angeles County as the Supervisors offered their endorsement. A Los Angeles Times editorial has commented that this endorsement was offered "without benefit of hearings or staff study; one supervisor offered his endorsement before the rabbit was out of the hat."[13]

John Shaver of the District 7 Division of Highways office noted that the SCRTD had consulted with LARTS on the proposed route.[14] Although LARTS is theoretically associated with SCAG, King Cushman of SCAG has commented that SCAG had absolutely no prior knowledge of the Central Line corridor proposal. In addition, UMTA contacted SCAG to inquire just what was happening in the Los Angeles area on this new route proposal.[15]

The SCRTD was theoretically working with the City Planning Department's transit plan. The City Council was sufficiently resentful about this lack of candor that it activated a special ad hoc committee on transit. This committee held hearings on the SCRTD's proposed plan to split the financing of a Central Line, running through the Watts-Willowbrook area.

December 22, 1971:[16] Five City Councilmen disagreed with Mayor Yorty on who should help plan a rapid transit line to South Los Angeles. The City Councilmen proposed a plan by which all policy decisions would be made by the Council's Technical Advisory Committee and the full Council.

December 26, 1971:[17] The SCRTD's new plan to build a Central Line as the first leg of a $6 billion public transportation system seemed to have taken all agencies involved in city and transportation planning by surprise--especially the Southern California Association of Governments. SCAG is responsible for regional planning and approval through review and comment on federal grant monies. The SCRTD had been accused of putting together a make-shift proposal under pressure to use the new windfall monies for rapid transit. A debate ensued as to the SCRTD's choice of a Central Line over a Wilshire corridor, first proposed many years ago and considered the logical starting point for a regional rapid transit system. The SCRTD's argument for the Central Line was that it would cost less--$420 million as opposed to $550 million for the Wilshire line. Although studies have shown the Wilshire corridor to be the best revenue producer, with the probability of highest ridership, the SCRTD claimed patronage for the Central Line will increase with the extension of a busway on the Century Freeway connecting with the airport. Funds for that project have not been allocated yet and estimates for its completion are at earliest, 1977.

To finance the Central Line the County had already promised its $1.6 million share of the sales tax, but the City had withheld commitment of its $4.5 million share. In addition, the SCRTD must apply through SCAG to receive an estimated $280 million in federal funds to help build the line.

Hearings held by the Los Angeles City Council reveal the fragmented and disjointed state of regional planning efforts. The various agencies each sought to implement their own plans, and intercommunication had been poor. The Los Angeles City ad hoc committee showed a great deal of animosity toward the SCRTD. The prevailing attitude during the hearings was one of negativism, chastising the SCRTD for the somewhat incredible failure to keep in touch with the City Planning Department. (It might be pointed out that while Mayor Yorty seems to have been kept informed of the SCRTD's doings, the communication between the Mayor's office and the Council has not been without its own problems.)

Week of February 19, 1972:[18] Los Angeles City Council's technical advisory committee, conducting a study and public hearings on alternatives for rapid transit, decided not to allocate its new revenues for the development of rapid transit.

March 3, 1972:[19] The City Council decided to join the SCRTD in applying for federal funds for studies of the best transit line for Los Angeles to impound its $4.5 million windfall monies for the development of a rapid transit system. The Council suggested to the SCRTD that it earmark one-half of its windfall revenues. The action by the Council means it will pool its funds if federal matching funds are forthcoming, and if route selection is agreeable.

Other events of interest to transit planning in Los Angeles during this time were:

February 12, 1972:[20] Broader planning powers were voted for SCAG with legislative approval still pending. The plan would make SCAG an "umbrella" agency with overall responsibility for regional planning with statutory backing.

March 3, 1972:[21] The SCRTD mechanics went on strike, closing down the RTD's bus lines.

March 5, 1972:[22] U.S. Secretary of Transportation John Volpe urged that road funds be used for public transportation. He recommended that highway trust funds be used for public transportation or highways at the option of State or local authorities. A single urban fund would be created with a budget of $1 billion the first year and increasing thereafter. Under the plan, 40% of the monies would be distributed to metropolitan areas according to their share of the nation's population. Local governments would form a "consortium of local governments" to have authority over all forms of transportation. This group would then submit its plans to the State and to the Secretary of Transportation for approval.

March 6, 1972:[23] The Senate passed the Omnibus Housing Bill 80-1, with an amendment submitted by Senator Cranston. With passage of the amendment, local governments need raise only 10% of the total cost of construction of a rapid transit system, the same amount presently paid for the construction of highways.

Previously local governments had to raise 33% of the total cost. According to Cranston, this reduction in cost will enable Los Angeles to now construct both the Watts-Willowbrook Line as well as the Wilshire Boulevard Line.

May 12, 1972:[24] James A. Moe, State Director of Public Works, recommended a plan to put much of the State freeway and highway system under the control of cities and counties. In addition, more monies would go to local agencies for construction and maintenance. Less than one-third of the 16,000 mile California highway system would remain under State jurisdiction.

Moe also recommended discontinuing the present method for classifying the California freeways and expressways as a designated network and urged the use of a new method. His proposal would classify freeways and highways by travel characteristics and land access rather than as elements of a broad network. The effects of these two recommendations could mean a step toward large deletions in the construction of portions of the planned 12,000 mile freeway and expressway system.

Footnotes: Section B

[1]*Interview with Thomas Stemnock, City of Los Angeles Planning Department, January 11, 1972.*

[2]*SCRTD, Crisis in Public Transportation: 1971-The Year of Decision, 1971, p. 18.*

[3]*Jerry Gillam, "Assembly OK's Bill to Add 6% Tax on Gasoline," Los Angeles Times, October 20, 1971.*

[4]*Tom Goff, "Reagan Signs Bill Extending Sales Tax to Gasoline," the Los Angeles Times, November 5, 1971.*

[5]*Ray Hebert, "RTD Has Only Vague Idea for Using Windfall," Los Angeles Times, November 8, 1971.*

[6]*Interview with Steve Larson, Senate Public Utilities Committee Consultant, January 25, 1972.*

[7]*Jerry Gillam, "RTD's Attitude on Windfall Hit," Los Angeles Times, November 12, 1971.*

[8]*Ray Hebert, "Planners Recommend 100 Mile Rapid Transit System by 1990," Los Angeles Times, November 19, 1971, and "Los Angeles City Planners Are Preparing a New High Speed Rapid Transit Program," The Daily Bond Buyer, November 24, 1971.*

[9]*Interview with Thomas Stemnock, January 11, 1972.*

[10]"Use of Gasoline Sales Taxes to Build Rapid Transit Urged," Los Angeles Times, December 7, 1971.

[11]Ray Hebert, "Plan for $420 Million Transit Line Unveiled," Los Angeles Times, December 7, 1971.

[12]Ray Hebert, "Officials Angered Over South Los Angeles Transit Plan," Los Angeles Times, December 8, 1971.

[13]Editorial, "Important Rapid Transit Decisions," Los Angeles Times, February 18, 1971.

[14]Interview with John W. Shaver, Assistant District Engineer, District 7, Division of Highways, March 11, 1972.

[15]Interview with King Cushman, Transportation Coordinator, SCAG, January 6, 1972.

[16]"Councilmen, Yorty Differ on Transit," Los Angeles Times, December 22, 1971.

[17]Ray Hebert, "Windfall Money Sets Off New Transit Haggle," Los Angeles Times, December 26, 1971.

[18]Editorial, "Setback for Rapid Transit," Los Angeles Times, March 2, 1972.

[19]Ray Hebert, "Council Votes to Use Gasoline Sales Taxes for Rapid Transit," Los Angeles Times, March 3, 1972.

[20]Ray Hebert, "Broader Planning Powers Voted for Southland Governments Unit," Los Angeles Times, February 12, 1972.

[21]Robert B. Young, "No Bus, No Car--and No Go," Los Angeles Times, March 3, 1972.

[22]"Volpe Urges Road Fund Use for Public Transit," Los Angeles Times, March 15, 1972.

[23]Los Angeles Times, May 12, 1972, Part I, p. 3.

[24]Legislative Newsletter of Senator Alan Cranston, April, 1972.

Conclusions

The problems that have traditionally affected the development of a rapid transit system in Los Angeles can clearly be seen to have come into play during the scenario following the passage of the landmark SB 325 bill. True to form, squabbles erupted among local agencies, each of which felt it had been slighted by the SCRTD's cavalier

treatment. And for a time, this serious neglect by that agency appeared to be fatal, with the City Council wavering on the verge of using their share of the general fund money for other things.

One reason often mentioned as fundamental to the SCRTD's basic support of a Central, Watts-Willowbrook Line is again tied in with its general fascination with buses. The Wilshire corridor is the route most financially rewarding--the Wilshire buses make money. The RTD has a reluctance to forfeit these lucrative lines and replace them with a rapid transit line. It appears to make more sense to build a line in an area not so well served by the current bus system, and not jeopardize a successful bus system.

A serious problem exists with the poor inter-agency communication. Some sort of mediation board could have been effectively utilized during the events of the past few months, to ease over problems between various groups.

CHAPTER III

ACCOMPLISHING MASS TRANSIT

Before a critical analysis can be made of the Rapid Transit District's political and economic policies, the relationships of the District to the agencies it serves must be thoroughly discussed. Frequent criticism of the Rapid Transit District often fails to consider the numerous ties, both formal and informal, that the District holds with the organizations that finance, supervise and staff it. Many of the relationships prevent the RTD from accomplishing its tasks--many are indispensable for the District's operation.

This chapter attempts to organize and explain RTD's ties with government on all levels; the planning agencies it deals with in the normal course of administrative activity and local agencies responsible for operation of transit lines. Also included is an assessment of regional transportation planning--who is responsible and what has and will be done in the future.

A. Structure of Grants and Subsidies

Authority for the receipt, disbursement and utilization of federal, State and local transit planning funds is divided among several agencies. Agencies which have received public or private grants over the last decade for transit planning and research include the Rapid Transit District, SCAG, LARTS, the City of Los Angeles Planning Department, the County of Los Angeles Planning Department, the City of Los Angeles Traffic Department, the State of California Highway Department, the Los Angeles Airport Authority, TASC (now defunct), and practically all of the region's numerous municipal transit lines. These funds, in turn, have been used in sub-contracts with both local and "absentee" engineering firms including Coverdale-Copitts, Daniel, Mann, Johnson and Mendenhall, Simpson and Curtin, Kaiser Engineers, M. A. Nishkian and Co., and others. Study financing has come primarily from public agencies. Of the $11 million allocated for Los Angeles regional transit planning and research, approximately half came from the federal government in the form of UMTA and HUD grants, one-quarter from the State treasury, including tideland oil revenues and the balance from the various municipal governments and MTA-RTD farebox revenues.

The extreme diversity of planning fund donors and recipients shows up in the nature of the local and regional plans created by the various transit agencies. Of the many reports and studies

published over the last decade, there is virtually no consensus in even the most fundamental planning criteria. There are several reasons for this. Most conspicuously, the Los Angeles area presents such an immense transit planning problem, with its non-existent regional government and large geographical area that there naturally exists a large variety of possible approaches to accomplishing mass transit. Some individuals, notably the planning personnel of the municipalities, recognizing the fragmentation of the regional political system, favor a laissez-faire planning approach which assigns the responsibility for the operation and maintenance of transit facilities to local officials. In contrast, a school of thought exists which would assign transportation planning responsibilities to an omnibus agency under which planning, construction and operation of all transit modes would be incorporated in a unified scheme. The SCAG 1990 work program includes a voluntary plan for coordinating the planning activities of all transit companies in the Los Angeles metropolitan region under a single umbrella agency. SCAG, through its Transit Advisory Committee, is actively working toward this end. As far as grants and subsidies are concerned, SCAG, the regional transportation clearing house, would administer the application and dispersal of all federal transportation planning grants, making certain that the proposed activity was consonant with the regional transportation master plan.

B. Relationships with Outside Agencies

1. Private Bus Lines

While the Rapid Transit District handles the bulk of the public transport service in Los Angeles, over 180,000 miles on a typical weekday, a significant fraction of the service is provided by municipal and private lines. Until recently, a total of eight public lines[1] and two private lines[2] were active. At present, both private lines have ceased operations as private concerns. Blue and White Bus Co., serving South-Central Los Angeles, no longer operates its buses and Eastern Cities Bus Co., serving the Chicano community of East Los Angeles, has been absorbed by RTD. The problems of Blue and White Bus Co. will be examined as a case study in this section.

The failure of private bus service in Los Angeles is attributable to several factors, of which the most important is the general decline in ridership. Blue and White Bus Co., a private venture initiated by the National Economic Growth and Reconstruction Organization (N.E.G.R.O.) in response to the Kerner Commission's recommendation for improved bus service in the ghetto, is reliant on community support to maintain its service. The company's principal function has been as a line transporting workers to the RTD bus stops where long-haul trips are made to places of employment. This is confirmed by the fact that of all private and municipal lines, Blue and White transfers the second highest number of passengers to the RTD (1,400

per day compared with 4,800 per day for Santa Monica municipal lines). The Watts-Willowbrook-Compton area, however, has been strongly affected by the regional employment decline. As a consequence, Blue and White, reliant only on farebox revenues and subsidies from N.E.G.R.O., has been unable to meet its operating expenses. In October, the Internal Revenue Service impounded twenty-three of Blue and White's buses on the grounds that withholding taxes and social security deductions had not been paid. In a previous action, the United Transportation Union struck Blue and White for failure to pay regular wages. In response, Blue and White threatened to file a $3 million suit against RTD, the United Transportation Union and the Public Utilities Commission for allegedly conspiring to drive the company out of business. In the meantime, the Rapid Transit District has assumed responsibility for Blue and White's service, although the RTD covers only the periphery of the Watts-Willowbrook area, leaving the interior without adequate transportation.

At the center of the Blue and White/RTD conflict is the issue of transfers. Implicit in the idea of a free transfer is the assurance that differences in farebox revenue will be erased by a reimbursal of the company showing the deficit. Apparently more riders had been making the Blue and White to RTD transfer than the reverse. RTD contends that Blue and White refused to absorb its loss. Blue and White, however, claims that in March, 1971 it turned in $800 worth of RTD tokens but received no reimbursal itself. L. R. Winslow, General Manager of Blue and White, claims that RTD ignored repeated invitations to sit down and discuss a mutually agreeable transfer policy.[3]

Blue and White contends that RTD was part of a conspiracy to drive the company out of business. While the merits of this case are difficult to judge, unsatisfactory relations with RTD hastened Blue and White's demise, who were, of course, heavily dependent on RTD's cooperation and support. Since such a large percentage of the total trips originating within Watts terminate at points not served by Blue and White, it is essential that passengers be given every chance to transfer quickly and cheaply to an RTD line. RTD, of course, depends far less on Blue and White to provide these services, since the latter represents such a small part of its total ridership. The Public Utilities Commission, instead of acting as a mediator between the two lines, revoked Blue and White's operating license for providing inadequate service and possessing insufficient liability insurance. To regain its certificate, Blue and White must now prove that "public convenience and necessity" warrants it.

RTD probably did not consciously conspire to drive Blue and White out of business. It has stated, however, that the problem of the black community lies in its ability to reduce unemployment rather than move its citizens from place to place.[4] This peculiar attitude seems to discount the effect of transportation on job availability. The Transportation-Employment project, conducted by the Business and Transportation Agency, showed that experimental bus lines running

from the Black and Chicano communities to employment centers would be adequately utilized. The need for adequate transportation clearly exists. As long as RTD uses unemployment to justify its peripheral service, the minority communities will continue to suffer from inadequate transportation.

Footnotes: Part 1, Section B

[1]*Cities of Commerce, Pomona, Gardena, Torrance, Santa Monica, Long Beach, Montebello and Culver City.*

[2]*Blue and White Bus Co., Eastern Cities Bus Co.*

[3]*Interview with L. R. Winslow, General Manager, Blue and White Bus Co., November 2, 1971.*

[4]*Interview with Sam Olivito, Community Representative, Southern California Rapid Transit District, October 28, 1971.*

2. City of Los Angeles

The RTD and the City of Los Angeles have traditionally maintained fairly cordial relations.[1] Formal communications are limited to the SCAG's fifteen-member Comprehensive Transportation Planning Committee, which replaced the Executive Board of the Transportation Association of Southern California. Other than this connection, the two agencies have no legal or organizational obligation to work together. However, as demonstrated by such recent ventures as the downtown minibus project, the two bodies do indeed cooperate with one another.

Recently, however, the traditional relationship was severely strained as a result of RTD's reluctance to reveal the details of its plans for use of its SB 325 revenues.

Footnotes: Part 2, Section B

[1]*Interview with Ray Hebert, Urban Affairs Writer for the Los Angeles Times, November 1, 1971.*

3. County of Los Angeles

Historically, the County of Los Angeles has been the mechanism for helping to procure funds for the SCRTD on two occasions. In 1965, the county agreed to levy a motor vehicle license fee (in lieu) tax.

The next year, in 1966, a state measure was passed permitting the County Supervisors to levy a vehicle tax also for rapid transit.

While City of Los Angeles/RTD relations have been traditionally regarded as adequate, County of Los Angeles/RTD concordance has usually been fairly weak.[1] This is borne out by the SCRTD itself. Frank Barnes, Transportation Planner, calls County planning dialogue with the RTD "not close by any means."[2]

The landmark SB 325 bill of 1971, with the added millions slated to go towards mass transit, reversed the historical relationships. The RTD's announcement of their plan to construct a line through the Watts-Willowbrook areas simultaneously dismayed the City and strengthened County ties. The announcement was made with the fore-knowledge and approval of the County Board of Supervisors.[3]

The City and County share the same lack of formal operating agreements with the RTD--neither of them have distinct organizational ties with the District outside of the SCAG board, again serving to demonstrate the lack of use of a comprehensive and consistent method of regional planning.

Footnotes: Part 3, Section B

[1] *Interview with Ray Hebert, Urban Affairs Writer for the Los Angeles Times, November 1, 1971.*

[2] *Interview with Frank Barnes, Transportation Planner, SCRTD, March 9, 1972.*

[3] *Interview with Thomas Stemnock, Los Angeles City Planning Department, January 11, 1972.*

4. State of California

The State of California has traditionally been more concerned with the highway aspect of transportation than mass transit systems. Much of this can be attributed to the pre-1963 representation in the Legislature. Rural areas were far more heavily represented than urban--Los Angeles had but one Senator. After the Supreme Court one-man one-vote decision in 1963, the ratio shifted to favor urban areas. Rural areas were in need of highways and roads linking towns together. Senator Randolph Collier, from the small town Yreka, has become known as the Father of the Freeways, due to his interest in promoting highways. Now, with a higher percentage of urban representatives, there has been more interest in urban transit problems. Accompanying this interest is a growing awareness of the economic benefits of rapid transit construction.

Although the SCRTD was created by the State of California, it was deemed a special district, and thereby was to be self-governing

with State regulation. Indeed, the State has done little with the RTD until recently. The District was created with the express purpose of constructing a rapid transit system. However, despite this mandate from the State, no construction funds were forthcoming. The District was expected to pay off old MTA debts, operate a bus system, and construct a rapid transit system, entirely from farebox revenues. The District was empowered to sell bonds under its State Charter, but this was the only provision made for capital construction finance.

Since 1964, the State has made a few steps in the direction of helping the RTD. First, in 1966, $3.6 million from tidelands oil revenues was made available for study purposes. In 1970, a very limited and qualified sales tax was enacted. For a six-month period the RTD received added revenue from a one time only 1/2% sales tax increase.

The most noticeable development in terms of State/RTD relations has been the passage of Senator James R. Mills' Gasoline Sales Tax Bill, SB 325. This bill represents one of the few successful attempts by sympathetic legislators to materially assist this Rapid Transit District. In addition, it opens the way for additional State legislation in behalf of the RTD.

In other respects this bill is something of a trade-off. While SB 325 offers a financial boost for local public transportation, it provides a disservice by removing the pressure from the campaign to amend Article 26 of the California Constitution. It is this Article which provides for the allocation of gasoline taxes for the State Highway Program, a choice target for rapid transit advocates. Proposition 18, an unsuccessful 1970 ballot measure, would have amended Article 26 to divert a portion of the gasoline tax for rapid transit financing. It now appears that Senator Mills agreed to drop his Proposition 18 sequel legislation with the highway lobby's assurance that it would not oppose SB 325.[1]

Other legislation has been introduced in the Assembly calling for voter response to reallocation of Article 26 funds. ACA 16 passed the Assembly in 1971 and was defeated in the Senate in favor of SB 325. The measure has been reintroduced in 1972.

The Assembly and Senate Transportation Committees are both quite aware of the problems besetting public transportation in Los Angeles. The Senate, in its report on Public Transportation in California has pointed out some of the obstacles in the way of rapid transit construction.[2]

At the present time the State deals very indirectly and spasmodically with the RTD. Although there exists a State Transportation Board, whose function is to advise and assist in the formulation of State transportation policy, its past concern has been primarily with the State Highway Program. Thus, the RTD must rely on sympathetic legislators to secure funds and favorable legislation, rather than work through a State Transportation agency.

This situation has been under review and may be altered. In the 1972 "State of the State" message, Governor Reagan, at the insistence of the State Transportation Board, called for the creation of a State Department of Transportation. Such a department was proposed in recognition of the fact that many decisions relating to transportation within the State are uncoordinated and do not conform to local, regional or statewide master plans. The existing State Transportation Board possesses neither the scope nor the authority to implement a coherent, responsible master plan of transportation, multi-modal in character. Highly limited in its jurisdiction, the Board functions primarily as a review authority with the power to request reports from the Office of Transportation Planning and Research, review master plans for portions of the statewide transportation system and, based upon these reviews, recommend appropriate action to the Secretary of Business and Transportation. Under no circumstances is the Secretary required to heed such recommendations. The State Transportation Board has traditionally exercised a policy of laissez faire toward regional government, providing only limited advice and assistance upon request.

In contrast, the State DOT would take a far more vigorous role in the coordination and development of transportation resources within the State, combining the present functions of the Departments of Aeronautics, Public Works and the Office of Transportation Planning and Research. The State Department of Transportation would be responsible for:

a) Development and revision of a state transportation master plan. According to the enabling legislation for the DOT, AB 69, the State Transportation Master Plan shall be submitted to the State Transportation Board no later than thirty months after the date of enactment of the bill. The plan shall consist of recommendations for the operation of public and private transit services, an evaluation of alternatives in modal mix for particular regions, a review of financing possibilities and an implementation program for the plan. Each subsequent year, a revised and updated plan will be prepared and submitted. A unique feature of the bill is the requirement for regional transportation planning. Each agency must prepare its own regional plan in a manner not unlike the State plan, but to include a more detailed assessment of existing transportation facilities, financial resources and planning alternatives for the region. Each regional plan shall be submitted to the Department of Transportation no later than twenty-four months after the date of enactment of the bill. As with the State plan, a yearly update and revision of the regional plan must be submitted, including a long-range capital improvements program.

b) Planning, operating and maintaining transportation facilities which are the responsibility of the State. This would include, of course, the present duties of the State Division of Highways. The Division of Highways will retain its structural autonomy with the State DOT. However, its broader planning authority will be under

constant review by the Director to ensure that the best interests of the region, vis-a-vis transportation planning, will be maintained.

c) Providing coordination on all levels of government between transportation agencies. It has been emphasized that the independence of regional Councils of Government in review of their applications for UMTA funds and A 95 grants will be respected. However, when necessary, the State DOT will assist the COG in its review by providing a liaison between regional and federal governments. The administrative agency within the State DOT responsible for most of this activity will be the Division of Transportation Planning.[3]

Despite the good intentions of the State DOT in the planning area, the agency still lacks substantial financial resources. Although the department will have control over the State Transportation Fund (to be renamed the "Transportation Planning and Research Account"), which presently amounts to $14 million and the funds generated by SB 325 (of which Los Angeles County is eligible for $53 million in the first year), strong reliance must be placed on the federal government to provide the remaining financial resources necessary for large-scale public transportation to become a reality. However, once State and regional master plans have fully evolved, a set of criteria will exist for determining eligibility for public funds. In order to qualify for such funds, the applicant must be in complete accord with the master plan of his region. Never before has this review authority been used to its fullest advantage. The State, upon creation of its Department of Transportation, possesses a powerful tool, the "power of the purse," in its endeavor to coordinate and support its massive transportation system.

The other State agency directly concerned with the SCRTD is the Public Utilities Commission (PUC) which has supervisory authority over SCRTD operations. The PUC is a regulatory agency, having jurisdiction over construction specifications, safety standards, routing and rates. The PUC sets guidelines for all but rate increases. Guidelines for minimum rates have been established, but not maximums. A utility must apply to the PUC for rate changes. In addition the PUC grants franchises--no line may compete with another licensed line.

As such, the PUC deals with the SCRTD in its operating capacities but not in its role of rapid transit planning.[4]

Footnotes: Part 4, Section B

[1] *Private correspondence with Russell Sunshine, Legislative Assistant to Senator Anthony Beilenson, May 18, 1972.*

[2] *State of California Senate Transportation Committee Report, "Public Transportation in California," pp. 78-81.*

[3] *Interview with Raymond Holdsworth, Assistant Director, Office of Transportation Planning and Research, January 27, 1972.*

[4]*State of California, Public Utilities Commission, Annual Report, Fiscal 1970-71.*

5. Federal Government

The federal government's massive subsidy of highway construction has engendered a suitably large highway bureaucracy in California to supervise the spending of this money. Recently, the federal emphasis on highways as the solution to the transportation needs was altered. The Urban Mass Transportation Act was passed in 1964. Money was available for planning, but was not provided for implementation of plans. The act required that transit planning be done within the Federal Department of Transportation and regional planning agencies. In 1970 the need for a $10 billion commitment toward solving the urban transportation problem was recognized. At that time, $3.1 billion was appropriated, intended for the first five years. Further appropriations toward the goal are expected.

A single state, such as California, is eligible for a maximum of 12½% of the total money available. In a discretionary clause, the Secretary of Transportation may allow a state up to 15%. The money is granted on a two to one matching basis (as compared to a nine to one highway matching formula). At the present time, much competition exists within the State for these funds. The areas of San Francisco, Los Angeles and San Diego would all be amenable to receiving UMTA money for planning and construction.

This UMTA money has become a necessity for any sort of rapid transit construction. Locally, the Southern California Association of Governments serves as the required federal liaison to UMTA. A five year capital improvements program must be submitted and updated annually in order to qualify. More importantly, the federal funds match local funds at the two to one ratio when the local funds are derived from non-revenue sources, and a regional plan has been approved by UMTA. The funds match at a one to one ratio without this regional plan. This arithmetic has become a political reality fundamental to the planning of any mass transit system--and the existence and availability of these federal funds have accordingly become crucial to construction of any new system.

The majority of the funds received from UMTA are directly channeled to local planning agencies. The 1970 UMTA money is generally conceded to be a forerunner of more federal money being allotted to mass transit.[1] State representatives both in the highway department and in the legislative division express a desire that the State be in a position to receive some of this federal money.[2] The State at this time is not in a position to receive federal money and channel it to appropriate sources. However, with the proposed

creation of a State Department of Transportation, the State would be capable of taking a part in the distribution of federal transportation money.

Communication from the SCRTD to UMTA has been limited at best, despite the presence of a full-time paid lobbyist in Washington. This is evidenced by UMTA's bewilderment and surprise upon the RTD's release of the new Central Line proposal on December 7, 1971 (discussed in Chapter II). Figuring heavily in the plans was a reliance on $280 million from UMTA to finance the system.[3]

The RTD did file a five-year capital improvements plan with UMTA. The one-page plan itself was approved by UMTA, without substantial comment. However, there was insufficient detail in the report's narrative section to explain the specific needs to which the capital improvements plan was addressed. UMTA requested a rewrite of this portion from SCAG.[4]

The federal government in the form of UMTA can thus be seen to be a very important factor in the realization of any mass transit system. At the current two to one matching formula, sizable amounts of money will be derived from federal sources. However, the systems will still need to be planned and executed at the local level, and the need for increased coordination and communication between local and federal agencies becomes clear. An effective regional clearing house arrangement would greatly expedite matters--hopefully eliminating such poor communication as evidenced by the RTD's unexpected Central Line proposal.

Footnotes: Part 5, Section B

[1] *Interviews with Robert Nida, AAA Associate Council, January 26, 1972, and Steve Larson, Senate Public Utilities Committee Consultant, January 25, 1972.*

[2] *Interviews with Steve Larson, January 25, 1972 and Larry Wieman, Department of Public Works, Sacramento, January 24, 1972.*

[3] *See page 25, Chapter II.*

[4] *Interview with King Cushman, Transportation Coordinator, SCAG, January 6, 1972.*

6. State of California; Division of Highways

Basic to the financial existence of the California Division of Highways is the Federal-Aid Financing and the Highway Trust Fund.

The Highway Trust Fund was created in 1956 by increasing some of the highway-related excise taxes and levying some new ones.

The fund was made the sole source of monies for the previously existing federal aid programs for improvement of main highways, secondary roads, and urban arterials included in the Federal-Aid primary and secondary systems (the "ABC" Program) and Interstate Programs during the years 1957 to 1972. The Federal Aid Program was put on a wholly highway-user-supported, pay-as-you-build basis.

Aid to states is apportioned according to legislative formulas. For the Interstate System, the federal aid is apportioned according to the ratio of the cost of completing the system in each state to the total system cost.

The federal government receives more monies in highway users taxes from California than any other state in the nation.[1]

The California Division of Highways has traditionally been concerned with the building of roads. Engineering know-how assumed great importance utilizing the federal funds available in the establishment of an effective highway network. As has been discussed earlier, the state experienced a population boom necessitating rapid development. With such demand, roads were being constructed to strictly utilitarian specifications, with little regard to amenities or environmental impact. The role of the Department of Public Works as mandated by the legislature was simply to build roads. No leeway was provided for landscaping or for the construction of roadside rest areas.[2] With much of the funding coming from federal sources, the legislature for quite some time failed to give proper direction to the department. This problem has remained.

Various observers have deemed the role of the Department of Public Works in planning overall state transportation to be not completely satisfactory. The Legislature has failed to provide sufficient legislative guidelines and identify the general purpose of the state highway system, according to the Department itself in 1966.[3]

The Legislative Analyst wrote in 1968:

> Without a statement of purpose, the department does not have a meaningful basis for determining (1) the importance of transportation needs compared to community values, (2) the appropriate jurisdiction for highway routes, and (3) the relative priorities of state highway deficiencies.[4]

The Analyst stated that a second aspect of the problem involves not only a legislative failure to give adequate guidance, but the agency's reliance upon traffic demand as the fundamental criterion for judging highway deficiencies. It was noted that instead, "The fundamental problem is to reconcile the conflict between transportation needs and community values."[5]

Thus, the problem rested upon both lack of legislative guidance to the Department of Public Works and the corresponding failure of the department to evaluate the state highway system uniformly.

The question becomes, who has been providing guidance for the department? The Division of Highways is empowered to plan and construct highways--which involves deciding where and where not to build. Because of the state legislature's shortcomings, how much has the Department of Public Works become influenced by those very interests, seeking to benefit from department projects--i.e., the highway lobby? This lobby is composed of the automobile clubs, various oil companies, tire companies, heavy construction firms and the trucking industry. It has attempted to step in the breach left by the legislature and has acquired a disproportionately large influence.

At the present time the lobby groups are generally revising their traditional hard line against public transit. This attitude was noticeable in the 1970 Proposition 18 dispute, which would have amended the State Constitution to reallocate the highway users tax fund. Opponents of this measure donated over a third of a million dollars in publicity against the measure. Much of this activity to thwart the proposition was based on opposition to the reallocation of highway money to transit. In a different scheme to finance transit, the repeal of the gas sales tax exemption, the opposition to transit funding lessened, as the money would be derived from a new source, leaving the highway users fund intact. The official position of the highway lobby has been that public transit would be acceptable but not when financed out of highway users tax funds, arguing that taxing motorists to pay for a system they would not need to utilize is unjust.[6]

In a statement fairly indicative of the lobby's attitude toward transit, the Chairman of the California Freeway Support Committee of the California State Chamber of Commerce gave several reasons for leaving Article 26 of the California State Constitution intact. Referring to the Freeway Master Plan,

> The system is now about 40% complete, and there is already a shortage of gasoline tax funds if we are to take highway user tax funds away from this program, the need for which is unquestioned.[7]

The general tone of most public relations publications such as the one quoted above, and Automobile Association of America brochures implies that while rail rapid transit is needed in certain metropolitan areas, it is scarcely applicable to Los Angeles as only those without a car would use the system. It has been stated that a system, such as the one suggested by SCRTD in 1968, would serve only 2% of the total Los Angeles trips.[8] Transit becomes a threat when it seeks to divert any of the "needed" highway users tax fund. In an Automobile Association pamphlet, Transportation and Tomorrow's Cities, those who sought to challenge the heavy reliance on freeways and cars, and corresponding congestion and pollution problems, were thoroughly and sarcastically chastised for being "roadblocks to solution."[9]

Thus the general lobby position seems to be that transit is acceptable, as long as it remains limited in scope, and bus oriented, i.e., utilizing existing highway structures. The advocacy of expansion of transit systems via funding from the highway users tax fund, Article 26, is clearly unacceptable.

A limited role for public transit is becoming somewhat more compatible with the highway system, what with lobby groups accepting the role of buses in future urban planning.

In a series of new directives, the Department of Public Works has begun to seek to include more varied transportation planning into its program.

In Departmental Directive 71-20, a new policy was spelled out in regard to corridor studies. Freeway route studies are to be conducted in rural areas, and transportation corridor studies in urban areas. In these transportation corridor studies, a basic question is to be whether a highway facility is actually needed, on the basis of factors such as community need, environmental effects, etc. The result of such a study could be that one of four alternatives is needed: 1) no transportation improvement, 2) a transit plan, 3) a freeway-roads and streets mix, or 4) various combinations of the foregoing modes.[10]

There are several apparent difficulties with this new planning study scheme. To begin with, the Division is to decide whether a corridor study is even to be conducted. Additionally, the Division has indicated that corridor studies will only be made for routes not yet selected. This effectively eliminated from consideration many of the freeways in Los Angeles whose routes have been selected but not constructed.

The Division also lacks the expertise to provide inputs to the discussion which could make the case for mass transit. The directive does not indicate what agency beside the Division would be providing data, nor who would pay for the participation and services of mass transit consultants. Without these inputs, an objective conclusion would be difficult to achieve.[11]

Another difficulty is in the weighting of the various unqualifiable factors, such as impacts on local planning, environment, etc. In another section of this report, the inadequacies of certain types of these cost benefit analyses are pointed out. In various interviews with Department of Highway officials, the results of cost benefit analyses were referred to, but any actual data showing weighting could not be produced.[12]

And finally, although a new corridor study may indicate that a transit solution would be best, the Department of Public Works by law cannot finance such construction. If funds were unavailable for a transit project it could well be that a freeway system would be

deemed preferable to no transportation facilities at all, thus negating the new directive.

The point has also been made that local governments may well prefer freeways for their construction is "free" (in terms of local capital outlay), whereas alternative solutions such as transit may easily have a substantial cost in local taxes.[13]

Thus, the process by which a corridor would be rendered optimal for which mode remains hazy, to say the least. Areas which should be cleared up include: who is to provide information on mass transit corridors?; what definitive guidelines, with weighting factors, will be utilized?; and how is the discrepancy between planning and construction potential going to be resolved? Answers to these questions are needed before Directive 71-20 can become truly effective.

Another comparatively recent development in the Division of Highways policy regards busways, or provision for mass transit along freeway corridors. Mass transit, if it is accomplished utilizing buses, should be designed in cooperation with the Division of Highways, as it needs the freeway system to operate. Rail transit, on the other hand, does not need a freeway system, and thus the Division does not deal with it as it is generally not regarded as a viable alternative.

According to SB 2332, passed by the 1970 Legislature, the Department of Public Works may provide mass public transportation facilities in the development of proposed freeways. Thus, busway facilities along a median strip can be constructed and costs considered as part of the costs of freeway development.

In order to determine the need for a mass transit facility, the "comprehensive transportation planning process,"[14] is employed. This consists of a series of meetings with various local and regional planning officials. A memorandum concerning this from the Director of the department reads:

> Joint use corridors should be identified early in the planning process and included in the transportation element of the area's general plan. With this accomplished, the agencies involved can work toward coordinated stages of financing, design, right of way acquisition and construction.[15]

In a progress report of December, 1971 the Department documents various projects involving freeway lanes for high occupancy vehicles (in conformance with Section 21655.5 of the Vehicle Code). The report mentions the increasing cooperation of the Department of Public Works with transit authorities, and "presents the modest accomplishments to date."[16] Much emphasis is given to techniques, including preferential treatment to car pools. Cursory treatment is given to the San Bernardino Busway project.

The report notes, "State and local officials now consider construction of preferential lanes where warranted."[17] The key word here is "warranted." In compliance with Directive 71-20, various transportation modes must be considered for new corridors. According to 1970's SB 2332, busways may be built, if deemed necessary, along new freeways. For both matters, those responsible for local and regional planning are to be consulted, to establish whether or not a transit option is "warranted." Several difficulties remain: 1) What criteria are to be employed in determining what is warranted" and 2) although a transit option may receive a favorable study review, what provisions are made as to the financing of it as the Department of Public Works can legally fund only the construction portion of a freeway based busway project? It thus remains to be seen whether this new incorporation of transit needs into a traditional freeway-oriented department will become a viable option in future transportation planning.

Another example of potential transit-highway cooperation in the Los Angeles area is demonstrated by the Federal Aid Highway Act of 1968. This Act authorized a two-year demonstration program of providing fringe parking facilities on or adjacent to federal highway rights-of-way. Any such parking facility constructed under the program must be connected to existing or proposed mass transit facilities. The federal act will pay one-half of the cost, with the goal "to provide convenient transfer between private vehicles and public transit facilities, encouraging the use of public transit facilities and thereby lessening congestion and pollution and the need for extensive highway construction and maintenance."[18]

The new emphasis being given public transportation adds weight to its inclusion in the proposed reorganization of the State's transportation agency. More federal money is being allocated to mass transit. Accompanied by a growing State acceptance of public transportation, it seems logical that transit should acquire a place of its own in the State hierarchy, rather than retaining its tenuous position within the massive Department of Public Works structure. The basic planning structure of such an agency should remain essentially cross-modal in emphasis. However, funding should remain separate to assure transit as a viable transportation mode.

The Division of Highways has been involved with two local transit projects. One, the San Bernardino Busway Project is a prime example of the fulfillment of the bill discussed earlier. The project is funded by the SCRTD ($7 million), State and Federal Highway monies ($37 million), and UMTA ($7 million). The busway itself will consist of two separate lanes for buses, and will have its terminus in El Monte. Other stops, with appropriate facilities for passengers, will be in East Los Angeles.

The other project was a unique bus demonstration project designed to increase employment opportunities among residents of South Central and East Los Angeles. Financed from a HUD grant under the

1964 UMTA Act, the project included a Century Boulevard busway, and utilized various transit companies along with the SCRTD. Blue and White Lines, discussed earlier, was involved in the project. The original funds were for a two-year period, 1966-68. The SCRTD took over the lines in 1969, and fares, no longer subsidized, increased. The project was generally conceded to be rather unsuccessful in its original attempt to increase availability of employment opportunities, and has been cited as an example of the futility of attempting mass transit. The point has also been made that the lines were not in operation long enough, or insufficiently publicized.[19]

Local and regional highway planning is carried out by District 7 of the Highway Department. With an estimated 1.2 ratio of those working for the Division of Highways, and those involved with the Los Angeles Regional Transportation Study, the District seems definitely geared to local planning problems.[20] Planning is being coordinated with both the SCRTD and SCAG, with a few employees of each organization working in the Division office. The LARTS group is working toward the completion of a total regional transportation plan, to be presented to the SCAG General Assembly in February, 1973.

Thus, the SCRTD has but a few employees working in a District office as a formal working relationship with the Division of Highways. There exist other provisions for mass transit within the Department--calling for the inclusion of transit district officials in planning such joint ventures as the San Bernardino busway. (SCRTD Senior Engineer David McCullouch noted the amount of time he spent with the busway at the highway offices.)[21] These working relationships are strictly ad hoc, as a particular project may require. However, with the increasing number of highway/bus lane studies cited in the preliminary highway report, Freeway Lanes for High Occupancy Vehicles, the working relations between the two groups should improve.

Thus, the Division of Highways can be seen to respond both to the ineffective direction, and the subsequent persuasive influence of highway lobby groups. Highway affiliates, both public and private, appear to be currently modifying the traditional hard line on transit. The new acceptance of buses may indeed inspire increased emphasis on corridor planning, with the inclusion of transit options.

However, the new series of directives advertises essentially incremental changes--rather than the systematic re-evaluation of public transit as a self-sufficient planning option. The inclusion of transit, with a corresponding financial backing, within a State transportation agency, such as the proposed DOT, would serve to both remove transit from the realm of highway department good faith, and succeed in placing it in a position as a viable alternative.

Footnotes: Part 6, Section B

[1]*U.S. Department of Transportation, Federal Highway Administration, Bureau of Public Roads, Federal Aid Financing and the Highway Trust Fund, 1968, p. 6.*

[2]*Interview with Isaiah Meyer, Information Management Coordinator, Division of Highways, January 23, 1972.*

[3]*Statement of the Legislative Analyst, Transportation Planning and Finance, Meeting of Assembly Committee on Transportation and Commerce (Unpublished), December, 1968, p. 4.*

[4]*Ibid.*

[5]*Ibid., p. 7.*

[6]*Interview with Robert Nida, Associate Counsel, Sacramento, for the American Automobile Association, January 25, 1972.*

[7]*Neil Petree, address, "The Whole Story," at the Annual Meeting of the California State Chamber of Commerce, by the Chairman of the California Freeway Support Committee, January 15, 1970, Los Angeles, California, p. 1.*

[8]*Ibid., p. 9.*

[9]*American Automobile Association, pamphlet, "Transportation and Tomorrow's Cities," p. 14.*

[10]*Department of Public Works, Departmental Directive No. 71-20, "Freeway Route Planning Studies," April 19, 1971.*

[11]*Private correspondence with Russell Sunshine, Legislative Assistant to Senator Anthony Bielenson, May 18, 1972.*

[12]*Statement of Legislative Analyst, p. 16.*

[13]*Interviews with Isaiah Meyer, January 23, 1972 and Larry Wieman, January 24, 1972.*

[14]*Department of Public Works, Division of Highways, Circular Letter, "Highway Project Development General No. 24, No. 71-9, February 4, 1971, p. 2.*

[15]*Ibid.*

[16]*Business and Transportation Agency, Department of Public Works, First Annual Progress Report, "Freeway Lanes for High Occupancy Vehicles, December, 1971, p. 3.*

[17] *Ibid., p. 13.*

[18] *Environmental Development Division, Office of Environmental Policy, with special assistance from the Office of Public Affairs, U.S. Department of Transportation, Federal Highway Administration, Highway Environment Reference Book, November, 1970, pp. 30-31.*

[19] *"South Central and East Los Angeles Transportation-Employment Project: A Mass Transportation Demonstration Grant," Progress Report No. 11, April, 1969 and Progress Report No. 12, July, 1969.*

[20] *Interview with John Shaver, March 6, 1972.*

[21] *Interview with David McCullouch, Transportation Planner, SCRTD, November 4, 1971.*

7. Bay Area Rapid Transit Comparison

In the recent debates over mass transit in Los Angeles, the question is often asked, why does Los Angeles lack an adequate transit system when the major urban centers of the United States have been operating such systems for years? Transit advocates in Los Angeles have looked to the Bay Area and BART's significant accomplishment in the area of mass transportation and wondered why Los Angeles has failed to repeat the effort. The response is not a simple one. The Bay Area differs from Los Angeles in many important respects. It would be worthwhile, therefore, to dwell upon certain of these differences and assess their importance to public transportation in Los Angeles.

The imposing geography of the Bay Area is an important factor in the region's transportation history. The City of San Francisco, as well as the outlying suburban regions in the East Bay, are topographically rugged and formidable for automobile travel. Mountains separate parts of the Bay area from its transit bay access. The bay itself is a significant barrier in the way of unrestricted travel in the area and has affected urban planning for several decades. As long ago as 1947, a joint Army-Navy Board recommended an underwater transit tube beneath San Francisco Bay.[1]

As a result of its topography, the Bay area land development has tended to be intensive and highly compact. The East Bay is divided into two principal sections: the long narrow coastal plan stretching from Hayward to Richmond and a valley on the east side of the Berkeley Hills in which the suburbs of Concord, Pleasant Hill and Lafayette are situated. In addition, several natural "corridors" exist facilitating regional transit. In the opinion of one expert in San Francisco transit history, the combination of the geographical influences of the bay and the mountainous terrain led to the construction of a rapid transit system.[2]

In contrast, the Los Angeles Basin is completely unlike the Bay area in topography. The few hills that dot the region have received only sparse residential development due to the availability of land in the broad basin region. As a result the residential density of the Los Angeles area is far less than the 36.5 persons/acre figure of San Francisco.[3] The fact that only a few regions in the basin are economically unsound to develop for geographical reasons and that zoning practices and land use patterns have encouraged sprawl and decentralization creates a situation in which freeway corridors were planned on the basis of existing need.[4] Little attention, if any, was given to the routing of freeways so as to bring about the planned development of communities.

As a second important factor, the growth patterns of Los Angeles and the Bay Area differ significantly. According to figures taken from the Bay Area Transportation Report, San Francisco County showed an extremely small development potential outside the central business district. Within its 30,110 acre area, only 3.3% of the land area had any appreciable development potential for industry or other uses. The remainder had either been completely developed or was unusable for natural or policy reasons.[5] The population of the City of San Francisco declined slightly from 1950 to 1960 from 775,000 to 740,000 according to the 1960 census, a trend repeated in several highly developed urban centers across the country.[6] The development of the city, however, does not mirror expected regional growth. The suburbs of Contra Costa, in particular, are expected to increase their population significantly over the next decade.

A striking contrast to this projected Bay Area growth trend appears in Los Angeles. While the suburbs are experiencing rapid growth, the growth potential of the fringe lying directly outside the central business district remains quite high. At present this fringe area consists of a large number of single-family dwellings. The large relative growth of this region is expected as a result of rezoning for multi-unit apartment dwellings.

Los Angeles residential land use differs from San Francisco's in the development potential of the residential fringe outside the central business district. While this area in the North has, for all practical purposes, ceased to grow (and actually declined slightly in population from 1950 to 1960) the analogous region in Los Angeles will increase in population in the near future. The implications of this general land use trend for transit are explicated in Meyer's book, The Urban Transportation Problem:

> Rapid transit services may be excellent for workers in high-density workplaces, offering such savings in time and money that workers are very likely to use them eagerly. At low density workplaces, poorly served by public transportation and where parking is expensive, the probability is very high that workers will be attracted to the private automobile.[7]

That residential density is closely correlated to automobile use can be verified in an analysis of the transit systems of urban centers with well-developed residential centers. In Chicago, 17% of all work-trips from the Loop are by car, 25% by bus, 34% by grade separated rail transit and 22% by commuter rail. However, the percentage of work-trips from a semi-circular region thirty miles from the central business district follows a radically different distribution: 80% by automobile, 3% by bus and less than 2% by both rapid transit and commuter rail.[8]

The pressure exerted on commuters to select one particular mode over another is a complex combination of social and economic factors.[9] Although a detailed analysis of these factors is beyond the scope of this discussion, the applicability of the modal choice-residential living pattern to a Los Angeles-San Francisco comparison is clear. San Francisco, with its urban residential core almost fully developed by 1960, would naturally exert significant pressure toward construction of a rapid transit system. Los Angeles, on the other hand, showed a conspicuous absence of such pressures. The comparatively high development of the freeway system, in spite of increasing air pollution and congestion, promised rapid commuting by automobile from distant suburbs. Since the compromise of transit time, cost and inconvenience is an important element of the modal choice decision, it is not surprising that, given the large land area of the Basin and the sheer magnitude of the requisite rail transit facility, the public pressure for mass transit was small.

If this analysis is correct, the future of mass transit in Los Angeles remains dim. Although the movement toward multi-family dwellings, as exemplified by the increasing popularity of Bunker Hill-type developments, is obvious in the residential ring around the central business district, it will probably take ten to fifteen years or more for the residential densities in the area to approach those of San Francisco.[10] Although this is not the only factor influencing the construction of rapid transit, the example of San Francisco shows that it is a highly significant one.

In summary, the apparent advantage of San Francisco over Los Angeles in providing effective mass transit is attributable to two distinct factors: the geographical obstructions, such as mountainous terrain and the Bay impeding movement, and the high residential density outside the urban core. In a brief analysis such as this, the numerous social, political and economic differences between the two areas could not be discussed in full. However, the two factors detailed above form a basis for which many of them might be explicated.

Footnotes: Part 7, Section B

[1] *Bay Area Rapid Transit Pamphlet, Rapid Transit: From Concept to Construction.*

[2]*Interview with James Browne, Former Community Relations Officer, BART, January 14, 1972.*

[3]*Northern California Transit Demonstration Project (NORCAL), Final Report, Coordinated Transit for the San Francisco Bay Area Now to 1975, Ocrober, 1967, p. 1.*

[4]*Robert C. Fellmeth et al., The Ralph Nader Task Force Report on Land Use in the State of California (Report Summary), (Washington, D.C.: Center for the Study of Responsive Law, 1971), p. 26.*

[5]*Bay Area Transportation Study Commission, Bay Area Transportation Report, Berkeley, California, May, 1969, p. 22.*

[6]*Norcal Report, p. 97.*

[7]*John Meyer, The Urban Transportation Problem (Cambridge, Mass.: Harvard University Press, 1965), p. 30.*

[8]*Ibid.*

[9]*The factors influencing modal choice can be expressed mathematically by the gravity model equation:*

$$T_{ij} = \frac{P_i A_j F(t_{ij})}{\sum_{x=1}^{n} A_x F(t_{ix})}$$

where, T_{ij} = trips produced in zone *i* and attracted to zone *j*

P_i = trips produced by zone *i*

A_j = trips attracted by zone *j*

$F(t_{ij})$ = empirically derived travel time factor (Norcal Report, p. 95).

An excellent analysis of this model may be found in Transportation and Urban Land, Lowdon Wingo, Jr. (Baltimore, Md.: Johns Hopkins Press, 1961).

[10]*Interview with Robert Beckman, Executive Director, Fair Housing Congress, April 8, 1972.*

C. Regional Planning

Why Regional Planning?

The singularly undistinguished record of Los Angeles regional transportation efforts over the past twenty-five years points to several critical questions. What is the justification for the time and expense involved in regional transportation planning? The arguments

are several and highly convincing. The transit system, standing alone from all other urban commuter services must operate efficiently, cheaply and with significant public appeal. The automobile, a way of life in most urban centers, has relegated the public transportation system to a position of inferiority over the past two decades. The tremendous acceleration of highway and road construction after the end of World War II proceeded largely in the absence of an adequate regional transit planning. Although directives are now being issued by federal and state highway offices, such as State Public Works Directive 71-20 discussed above, emphasizing the need for coordination in highway routing and trip demand analysis with local agencies concerned with public transportation, many do not carry the authority of adequate financing or even the desire of highway engineers to see this done. The State highway master plan, adopted in 1959 by the California Legislature is only 40% complete, but is in jeopardy due in part to depletion of the federal highway trust fund and, more generally, to a growing disenchantment with the intra-urban freeway as the optimal transportation mode.

In reality, no single transit system can be expected to fulfill the needs of all urban residents and industrial concerns. Transit planning has been largely an ad hoc process, servicing existing demand rather than attempting to condition and direct demand in the best way. Consequently, public transportation today is on an extremely shaky economic footing. Many major metropolitan transit systems are running in the red and receiving massive subsidies. Ridership figures are not keeping pace with national trends in population growth and, for the more successful systems, patronage is remaining constant. Since 1964, patronage on major urban transit systems across the United States has declined by 13%.[1] In the Bay Area, between 1940 and 1965, vehicle traffic increased approximately 350%, vehicle registration increased 275%, population increased 120% and transit passengers declined 20%. Obviously, average automobile occupancy has been declining as well.[2] The ridership decrease has reflected many social and economic influences operating in the urban environment. In particular, the increased availability of automobile transportation to those formerly without a car has made public transportation less of a necessity for a large sector of the population.

Several other factors contribute to the need for adequate regional transit planning. The effect of a high-use transit corridor on land use patterns has been consistently underestimated in past transit planning efforts. With the enactment of the National Interstate and Defense Highway Act in 1955 came a goldmine of highway capital and planning funds. The effect of the highway on the urban environment was probably far greater than most people would have guessed. As land use patterns began to change in response to the road-building crush, it became apparent that new models of social integration, emphasizing the social and economic barriers to automobile ownership, would have to be developed. The effects of public and private transit systems on population dispersion would also need attention.

On a strictly economic level, a transit system often operates under a peculiar pricing structure, making it difficult to establish exactly what changes in planning parameters will affect the net ridership of the system. Transit, unlike several other elements of the urban economy, cannot be regarded as a competitive industry. For several reasons, most significantly the relatively large cross-elasticity of transit, competition within the field is impractical. (See Chapter V, Section D, for a complete discussion.) In addition, due to the nature of price-elasticity, decreasing the cost of transit rides does not significantly increase ridership (local bus companies are careful to ensure that their routes do not overlap and if they do, to keep fares exactly equal). Thus, the need for transit planning from this perspective is exceedingly important for a system that is poorly designed from an economist's standpoint will fail regardless of its other attractions.

Another persuasive argument in favor of transit planning concerns the federal requirement for matching funding on a two to one basis from the Department of Transportation. According to the Urban Mass Transportation Act of 1964 (amended 1970), PL 88-365, 78 Stat 302 et seq., 49 USC 1601 Sec. 4,

> No federal financial assistance shall be provided unless the Administrator determines that the facilities and equipment for which the assistance is sought are needed for carrying out a program . . . as a part of the comprehensively planned development of the urban area and are necessary for the sound, economic and desirable development of the area. (emphasis added)

Moreover, the federal statutes require that a transportation master plan be prepared or in the process of being prepared and that a regularly revised five to ten year capital improvements and service improvements program be on file with UMTA before a grant can be made. The law also requires that an environmental impact statement be filed with every application for federal money. It is clear that none of these requirements can be adequately satisfied without a regional transportation plan.

The special nature of the metropolitan transit with its problem of the mix of public and private ownership and the uncertainties of pricing schemes, regulation, standard-setting, investment of public capital, effects on land use and population dispersal demands both a multi-modal and multi-disciplinary approach. Transit planning is necessary not only because the construction of a system is such a massive undertaking but because the future well-being of the urban environment depends upon it.

Analysis of Past Transit Planning in Los Angeles

As indicated in the Introduction, transit planning in Los Angeles has been characterized by a consistent under-estimation of the need

for a transit system on the basis of faulty population growth statistics. A second implicit assumption of early transportation planners was the total dominance of the automobile-freeway complex. And why not? In 1960, the year of the creation of the Los Angeles Regional Transportation Study, the vehicle population of the LARTS study region stood at 3,437,000, travelling a total of 75,954,000 daily vehicle-miles.[3] As a result, LARTS' orientation at the beginning of its work was distinctly uni-modal. In the Base Year Report, an extensive commuter model, based on traffic department cordon counts and a postcard survey, was presented, simulating traffic flow in the Los Angeles metropolitan region. Although the study of possible mass transit facilities is included as an objective of the LARTS work program, the Base Year Report contains absolutely no mention of any form of mass transit as an alternative mode. In fact, the traffic model created in the Base Year Report works against the implementation of mass transit for the reason that it is oriented toward extrapolating existing traffic patterns, land use and population growth patterns without any consideration of the possible impact of mass transit. The 1970 LARTS Annual Report apologizes for this orientation in the following way:

> At the time of its inception in 1960, the emphasis of the LARTS study was on vehicular travel. This was primarily due to technical limitations. . . .The scope of a transportation study is now seen to be broadly based and to require that various modes of transportation be taken into consideration.[4]

Two objections present themselves here. First, no details were given of the so-called "technical limitations." Modal split transportation models, in fact, existed many years before the LARTS study.

The emphasis of the LARTS study on auto traffic only is an inherent defect of the model employed, a modified trip-generation model. To quote Meyer,

> Trip-end models were originally developed for, and still have their most widespread use in, highway-oriented origin and destination studies. . . .Thus the emphasis has been on forecasting future automobile travel, with transit travel regarded as a residual to be subtracted from total trip generation before the resulting trips are assigned to the highway network. These highway planning studies have been little concerned with the relative performance of alternative modes. Rather, they tend to focus on long-term increases in income and car ownership and accompanying suburbanization of the population which, . . . are powerful forces resolving the modal choice question toward the automobile.[5, 6]

The trip-interchange model has been in use for several years in the development of transit feasibility studies. Neither the hardware, i.e., computer facilities, nor data requirements are significantly more demanding for this model than for the trip-generation model.

It is thus difficult to understand LARTS' contention that "technical limitations" prevented the use of this model in its 1960 Base Year Report.

Second, the question remains whether LARTS' statement that "various modes of transportation must be taken into consideration" is genuinely receiving attention. In the summary of projects reviewed by the LARTS staff detailed in the 1970 LARTS Annual Report, thirty-three were State highway expansions or modifications and only three concerned public transportation. Of these three, a preliminary feasibility study for a TACV system servicing Los Angeles Airport, a study of Avalon hydrofoil transportation service and construction of a bus shuttle service between Dodger Stadium and the Civic Center, none possessed the scope to qualify as an adequate mass transit proposal.[7]

Although LARTS has recently been cooperating with the SCAG transit advisory committee and RTD in the Voorhees Study (described below), a long-range multi-modal transit model, its early orientation has been distinctly pro-highway. Although "LARTS will make no recommendations about land use plans, modes of transportation or route locations," its use of a uni-modal model is an implicit pronouncement in favor of highways.[8] The use of the LARTS studies by civic leaders and legislators in the formation of public policy would thus tend to reduce the likelihood of a mass transit system ever being financed in the region.

The reason for this orientation by LARTS is fairly obvious. Its working staff consisted almost entirely of Division of Highways personnel.

On-going Transit Planning

Transit planning is presently in the hands of several agencies in the Los Angeles area, the most active of which are SCRTD, the City Planning Department, the County Planning Department, LARTS and SCAG. Coordination between these agencies is accomplished through SCAG and various personal and informal relationships among the respective transit planners. While each planning department is clearly committed to the formation of a regional transportation master plan which incorporates a rapid transit system, each is politically responsible to a different segment of government and the community. Conflicting political obligation and limited financial resources have, in the past, prevented transit planners from coordinating their efforts.

The SCAG transportation policy committee is officially called the Comprehensive Transportation Planning Committee (CTPC) and replaced the Transportation Association of Southern California (TASC) on February 16, 1971. Its responsibilities include: 1) the development, in cooperation with local transportation agencies, of a region-wide transit master plan to consider alternative modes, environmental impact of major systems and land use; 2) assisting local agencies (including

RTD, municipal and private carriers, the Board of Supervisors and City Councils) in coordinating regional transit programs; 3) preparation of one and five-year work programs for future transit studies, capital, and system improvements. The committee consists of between fourteen and twenty members representing city governments, county governments, SCRTD and the Business and Transportation Agency. Technical subcommittees include the Metropolitan Transportation Engineering Board, Council of Airport Administrators, Transit Advisory Committee and the Los Angeles Regional Transportation Study (LARTS) Advisory Committee.

The LARTS Advisory Committee is responsible for technical liaison with LARTS and reviews the technical aspects of the comprehensive transportation planning work programs. The MTEB, an organization independent from SCAG, is responsible for coordinating the various agencies concerned with freeway construction including offices of county road commissioners, city engineers, public works directors and city managers. The Council of Airport Administrators is a voluntary committee concerned with the preparation of a regional ten-county airport system plan, to be released in June, 1972.

The Transit Advisory Committee is the transit "working arm" of the Comprehensive Transportation Planning Committee. The committee was formed from an ad hoc group of operating managers of publicly owned transit companies in Los Angeles who organized to expedite the disbursal of AB 2136 funds.[9] SCAG later formalized the group, which now has a membership consisting of representatives of all publicly owned carriers in the region.

Routine functions of the committee include: 1) coordinating planning efforts for proposed mass transit systems; 2) coordinating fares, schedules and transfer arrangements between carriers; 3) maintaining a link between carriers and regional planning elements with SCAG; and 4) providing a forum for transit companies to air grievances and make suggestions concerning regional transit problems.

At present SCAG is the regional clearing-house for federal transit grants. All applications to the Urban Mass Transit Administration for funds must be made through and with the approval of SCAG. In addition, SCAG has the review and allocation authority as the regional council of government to approve claims against the SB 325 transportation fund. Each claim is subject to a vote of the SCAG Executive Committee. If approval is not obtained, the applicant has three alternatives open to him: 1) modify the claim in accordance with the recommendations of SCAG; 2) appeal to the Secretary of the Business and Transportation Agency if the applicant can obtain approval of 50% of the cities in a county; and 3) form a local transportation commission empowered through SB 325 to by-pass SCAG for the allocation of claims. In Los Angeles County, in the event the latter alternative is chosen, SCAG would have sixty days to comment on the proposal and, if the application is accepted over SCAG's objection, thirty days to appeal to the Secretary of the Business and Transportation Agency.

The principal criteria to be used by SCAG in approving a claim are: 1) the degree of conformity with the regional transportation master plan and 2) the State's rules and regulations of the SB 325 law itself. Only an interim plan exists at the time of this writing. However, SB 325 allows for a two-year grace period after the date it goes into effect (July 1, 1972) in which applications may not conform to any particular plan.

In the fall of 1970, SCAG entered into a contract with the Allan M. Voorhees Company to develop a modal-split transportation model for the Los Angeles Metropolitan region. The model, the most complex of its kind, will consider three alternative patterns of transit development in the future: 1) strongly transit-oriented, 2) split between transit and freeway expansion and 3) strongly freeway oriented. The model will consider present land use and development patterns and make extrapolations to the year 1990 based upon each of the above three alternatives. When the modeling has been completed, SCAG will conduct a year of hearings in which the alternatives are discussed by county and local governments, modifications are made, and a regional master plan is finally adopted by the SCAG Executive Committee, and at least 50% of the jurisdictions representing 50% of the population.[10]

Assuming, however, that a regional master plan, cognizant of environmental impact and land use patterns could be agreed upon, a debatable point in itself, how could a transit plan be implemented? If SCAG's power over the appropriation of federal and State monies is as extensive as it claims, it will have considerable influence in directing the progress made toward implementation of the plan. But this, in itself, is a negative sanction. With RTD limited to farebox and SB 325 revenues and commitments from Los Angeles City and County for its share of SB 325 funds, the long-term financing required for transit system construction and maintenance can hardly be guaranteed. RTD's reluctance to ask for the cities' share of the SB 325 funds ($5 million per year of $15 million after matching by UMTA) attests to the lack of unanimity that presently exists among transit agencies.

Possible Models for Regional Planning Organizations
M.T.C. and C.P.O.

Establishing a regional transportation planning organization to serve the needs of a particular area involves the coordination of the many diverse planning elements existent within the region. Invariably, the more unified these planning elements become, the simpler will be the task of implementing regional transportation master plans when the time comes to attack the problems of urban transit on a large scale. The example of the Los Angeles metropolitan area, with its collection of seventy-seven unincorporated municipalities, attests to the inherent weakness of voluntary coordination. SCAG, which must contend with these provincial interests, lacks the political power to draw these diverse elements together. A more persuasive mandate is needed for SCAG, perhaps after the example set by MTC, the Metropolitan

Transportation Commission of the Bay Area or the CPO, the Comprehensive Planning Organization of San Diego.

The MTC consists of a board of eighteen members, sixteen voting and two non-voting. Members are selected to represent San Francisco City and County, Alameda, Contra Costa, San Mateo, Santa Clara, Marin, Napa, Solano and Sonoma Counties. MTC receives 30% of the region's portion of the SB 325 funds and it may support itself financially through grants from the federal government. However, according to Joe Bort, Chairman of MTC, existing MTC facilities are totally inadequate. MTC staff members complain of poor meeting facilities, no per diem for travel and other expenses and other hardships. Funds are scarcely available for postage.[11]

The principal function of MTC is to adopt and revise a regional transportation plan for the Bay Area. The plan, which must be adopted by the MTC board by June 30, 1973, must include highways, trans-bay bridges and mass transit. The place of harbors and airports in the regional transportation scheme must also be considered. From an economic standpoint, the plan must contain a ten-year capital improvements program for all public transit facilities in the Bay Area and a proposal detailing how each aspect of the program is to be financed. Finally, MTC must prepare environmental impact statements from their proposals to include projections of land use, natural resource requirements, employment, population distribution, etc. Such a plan would be both multi-modal and multi-disciplinary in character.

Until the plan is approved, no particular procedure need be followed by transit operators to construct and maintain transit systems. Thereafter, MTC acquires the power to veto any trans-bay bridge project, multi-county transit system where exclusive rights-of-way are involved and State highway projects, unless the Legislature finds in such a project "an over-riding State interest." In addition, any application to the State or federal government for transit-related funds must be reviewed by MTC for conformity with the regional master plan.

While MTC has hardly been in existence long enough for one to assess its worth as a regional transportation planning agency, it will probably overcome its immediate financial problems and continue in the difficult process of coordinating diverse transit interests. Already, MTC has entered into a Joint Exercise of Powers agreement with the Board of Directors of BARTD, A-C Transit, Muni-Railway and the Golden Gate Bridge District for the purpose of implementing an agreement on the division of public transit responsibility once BART begins its operations. According to Larry Dahms, Assistant General Manager of BART, this coalition has proved more fruitful in its short lifetime than the extensive Northern California Transit Demonstration Project which suffered from the malaise of mutual disinterest among transit concerns.[12]

The question remains, however, whether MTC, a transportation agency by nature, can successfully deal with the diverse and far-removed issues of resource conservation, land use, employment and

population. King Cushman, transportation planner for SCAG, feels that too much is being expected of MTC in this regard.[13] While MTC does appear ill-equipped to consider these problems at the present, its close association with ABAG, the Association of Bay Area Governments, may compensate for this deficiency. ABAG, which has dealt with the problems of environmental impact for many years, can complement MTC's planning function if the two agencies are able to establish a close working rapport. It remains to be seen whether such an association can be realized.

The Comprehensive Transportation Planning Organization is San Diego's analogue of MTC. Created in 1966, the principal function of CPO is to review and comment upon grant proposals made to the federal government. However, it is also responsible for the coordination of local planning agencies and the creation of a comprehensive regional planning model.

Thus far, CPO has been stymied in its attempts to evolve a comprehensive regional plan because of conflicting political obligations. At present, CPO's jurisdictions are poorly defined. Financially, it is supported by the County of San Diego. However, the orientation of county planners has been toward centralized, i.e., county planning processes, and away from individual city participation. Thus, CPO, while technically responsible to both incorporated cities and the unincorporated county region, must yield to the county in matters of priority dispute since the latter pays its bills. As a result of these conflicting political obligations, CPO has not evolved a regional transportation plan. It thus lacks an adequate set of criteria for the evaluation of federal grant proposals.[14, 15]

Both CPO and MTC were charged with essentially the same responsibilities: create and periodically revise a regional master plan, review project proposals on the basis of these criteria and work toward the effective integration of planning elements within their respective jurisdictions. In both cases, the Legislature did not provide the agency with a source of funds. But whereas MTC was able to scavenge its own financial resources, however tentative, CPO was forced into an embarrassing position of political conflict of interest. If the Legislature wishes to see comprehensive regional planning take place in its urban centers, funds must be allocated to the agencies responsible for such activities. In addition, a clear delimitation of authority must be provided within the agency and between the agency and municipal and county governments. To expect regional planning to evolve by itself without the benefit of financing and clearly defined political authority is to demand more than municipal government is presently capable of providing.

Footnotes: Section C

[1] *Southern California Rapid Transit District (SCRTD), The Crisis in Public Transportation: 1971 - The Year of Decision, 1971, p. 4.*

[2]*Bay Area Transportation Study Commission (BATSC), Bay Area Transportation Report, Berkeley, May, 1969.*

[3]*Los Angeles Regional Transportation Study (LARTS), Base Year Report, 1960, Vol. 1, p. 44.*

[4]*Ibid., 1970 LARTS Annual Report, 1970, p. 7.*

[5]*John R. Meyer, ed., Techniques of Transportation Planning (Washington, D.C.: Brookings Institute, 1971), p. 124.*

[6]*Trip-end and trip-generation models possess the same inherent limitations vis-a-vis multi-modal design; neither of the two consider the mix between alternate modes of transportation.*

[7]*1970 LARTS Annual Report, pp. 46-52.*

[8]*LARTS Base Year Report, 1960 , p. 9.*

[9]*AB 2136 provided for a one-time 1/2% sales tax increase during the period July 1 through December 31, 1970 to subsidize public transportation in Los Angeles.*

[10]*Interview with King Cushman, Transportation Coordinator, SCAG, February 18, 1972.*

[11]*John Harrington, Memorandum of Meetings, notes from an interview with Joe Bort, October 13-14, 1971.*

[12]*Telephone interview with Larry Dahms, Assistant General Manager, Bay Area Rapid Transit District, January 28, 1972.*

[13]*Interview with King Cushman, February 18, 1972.*

[14]*Anonymous, Transportation Planning in San Diego County, Staff Report on Interim Hearings of the Assembly Transportation Committee, December 9, 1971.*

[15]*Anonymous, Comprehensive Planning Organization of the San Diego Region, CPO Pamphlet.*

Conclusions

In summary, both the legal and extra-legal relationships that the Rapid Transit District holds are complicated and sometimes quite tenuous. RTD is troubled by an exceptionally demanding mandate from the people: to provide adequate public transportation for the Los Angeles metropolitan region. At the same time, it lacks the economic power to realize this goal. In struggling to operate and maintain its bus fleet in the wake of decreasing ridership, the District has been forced into a position of compromise. Its reluctance over the past four

years to push rapid transit vigorously stems from a desire merely to keep itself operating. To attempt another major transit initiative without additional subsidy might lead to financial collapse of the District if the initiative failed.

RTD's relationships with other agencies betrays this reluctance to act. The weakness of the bond between agencies responsible for transportation planning would make it quite difficult to coordinate a transit plan even if the funds were to become available for its implementation. SCAG, RTD, the City and the County occasionally duplicate their efforts. SCAG possesses insufficient political and economic power to influence the planning activities of the communities. Its partner in data collection and analysis, LARTS, has been traditionally freeway-oriented in its methodology. With these agencies to rely on, it is not surprising that the Rapid Transit District has been so reluctant to pursue a rapid transit proposal vigorously in the last several years.

CHAPTER IV

TRANSIT AND THE PUBLIC

A. Introduction

The discussion presented in Chapters II and III of this report has focused on the political and economic problems that plague transportation planners in attempting to implement a rapid transit system in Los Angeles. Chapter I summarized several of the arguments advanced by such planners in justifying the enormous expenditure of time, labor and money required for such a project. While the large land area of the metropolitan area makes it difficult to conceive of a rapid transit system serving the entire region, the consensus seems to indicate that at the very least, the need exists for a central line-haul system similar to the RTD's 1969 five-corridor system. Such a system would be oriented toward the commuter since the bulk of the traffic congestion on Los Angeles freeways is attributable to commuter travel. The question remains, however, whether the inducement could be made sufficiently high to convince the commuter that travel by mass transit (fixed rail or bus) would be more advantageous than travel by car. The transformation of Los Angeles from a region relying upon the train and other non-vehicle modes to the freeway-oriented city that it is today has been extensively documented.[1] The belief is strongly held among many experts that the pattern of automobile travel is too thoroughly engrained in the mind of the commuter for a large-scale switch to rapid transit ever to take place.

As has been emphasized, the commuter must be given a choice of several transportation schemes. The alternatives in mode range from rapid commuter rail to slow bus transit. In turn, financing can be arranged from multi-billion dollar bond proposals to relatively inexpensive sales tax reallocations. A wide variety of choices are available. However, consistent with standard economic practice, the choice of a particular combination of transportation mode and financing scheme must be consistent with the demand for the service offered. One of the most reliable methods for assessing that demand is the public attitude survey. A well-formulated survey given to a scientifically select sample can be a powerful tool for the transportation planner in designing a proposal that represents an adequate compromise between cost, effectiveness and demand.

In accord with this thinking, a telephone survey was conducted which had three specific objectives. The first was primarily informative. Through this experience, it was hoped that recommendations could

be made concerning the type of questions that should be asked, the methodology to be employed in polling a larger sample and the limitations and constraints of such a sampling procedure. The second objective was the determination of the need among a limited representative sample for a rapid transit system. The sample was selected from an area which would tend to have a large percentage of Los Angeles commuters in its population. The third objective was the assessment of public attitudes toward the style, comfort, cost and availability of various transit modes as they compare amongst themselves and with the private vehicle. In spite of the limited sample size, all these objectives were satisfactorily achieved.

Oddly enough, studies of this nature have been infrequent in the past. Although "transit attitude" polls have been taken, the majority have lacked the depth and scope necessary to evaluate financing options, reasonable fare schedules or potential ridership figures. A Rapid Transit District opinion survey, conducted before the 1969 election on Proposition A, contained but a single question: "Would you benefit from a mass transit system?" As will be shown, the response to such a question, standing alone, may give a highly misleading impression of the public desire for a mass transit system.

Methodology

The sample consisted of names drawn at random from the West Covina telephone book. West Covina, a city of 60,000, was chosen as the sample target primarily because of its proximity to the San Bernardino Freeway, a heavily used commuter traffic corridor. Subjects were asked a variety of questions relating to modal choice, attitudes toward automobile and freeway driving, driving habits and financing options. A complete list of the questions asked appears in Appendix 1.

Calls were made from 3:00 p.m. to 9:00 p.m. over the period November 30 to December 5, 1971. In all, approximately two hundred telephone calls were made, resulting in 107 usable responses which were coded on IBM cards for analysis by computer.

Analysis

The full-sample analysis reveals a number of interesting points. While only 14.3% of the sample work in or near downtown Los Angeles, 42% regularly travel in the direction of Los Angeles. The latter group evidently includes those whose place of work lies beyond the Central Business District but who must travel through the CBD to get there. This is confirmed by the fact that the average one-way travel distance for this group is 36.5 miles, considerably greater than the 17 miles that lie between West Covina and Downtown.

An overwhelming majority drive a car and their attitude toward driving is almost equally divided among the three alternatives provided: "positive," "neutral," and "negative." However, a strong negative bias against the automobile appears in several other ways. While almost 80% of the sample use the freeway system an average of five times per week, only 6.7% would elect to use the freeway system if alternative modes of travel, such as the monorail or ground train were available. Moreover, even though nearly 35% find the freeways congested when they use them, 70% see no need for more freeways in Los Angeles.

Attitudes toward freeway driving seem to be divided into two camps. One group, comprising about 25% of the sample polled, feels that the freeway is a fast, efficient mode of travel. As indicated by their positive response to question 7.0, members of this group generally are positive about driving (50.0%), experience considerable congestion on the freeways (45.4% of the time), and prefer freeways as a transportation mode far more than the full sample (17.9% to 6.7%).

The second group, characterized by its "no" response to question 7.0 was considerably less enthusiastic about driving (30.3% "positive"), meets with relatively little freeway congestion (51.6% "clear") and dislikes freeways as a transportation mode (preferred the freeway only 2.8% of the time).

The degree of congestion on the freeways that motorists encounter also appears to have a significant effect on their choice of mode. The 48.9% of the full sample which responded "clear" to question 5.2 was generally positive about driving (50.0%) but felt that it would not personally benefit from a mass transit system (56.8% "no" to 38.6% "yes"). This group felt overwhelmingly that more freeways were not needed (75.0% "no" to 22.7% "yes") in the Southern California area. By contrast the group that responded "congested" to question 5.2 was far less enthusiastic about driving (26.9% positive) and was almost unanimous in the belief that it would benefit from a mass gransit system (81.3% "yes" to 18.8% "no"). No one from this group preferred the freeway as a transportation mode and 31.3% felt that more freeways were needed to alleviate the problem of congestion.

Figure A, page 64, provides a summary of the results of the Mass Transit Study Group Telephone Survey, presented in percentages where practicable.

FIGURE A

MASS TRANSIT STUDY GROUP TELEPHONE SURVEY

Question Number	Question (Where Applicable)---	Response Yes	No	Don't Know
1.0	Do you work in or near downtown L.A.?	14.3%	85.7%	
1.1	Do you regularly travel in the direction of L.A.?	41.9%	58.1%	
1.2	How far from home does this trip take you? Average Distance: 36.5 miles			
1.3	How long does it take you to get there? 22.9 minutes average time; 43.6 mph average speed			
1.4	Do you Drive?	98.1%	1.9%	
1.41	How do you feel about driving? (Of those who answered Yes to 1.4): 25.5% Negative; 38.3% Neutral; 36.1% Positive			
1.5	Could you use the bus to get there?	45.7%	52.2%	2.2%
2.0	Would you benefit from a mass transit system?	50.4%	47.6%	1.9%
3.0	Would the people of Southern California benefit?	84.8%	7.6%	7.6%
4.0	Do you see benefits?	87.6%	10.4%	1.9%
4.1	What would those benefits be? (Of the 92 who said Yes to 4.0): Air Pollution - 51; Congestion - 45; Time - 22; Car Costs - 12; Other - 48; Don't Know - 3			
5.0	How often do you use the freeway system? Never Use - 11.5%; Use Less than Once Per Week - 8.6%; Use More than Once per Week - 79.8% (5.0 Average Times per Week)			
5.1	At what time of day do you use the freeways? (Of the 83 who use freeways): 6 a.m. - 9 a.m. - 42; 9 a.m. - Noon - 8; Noon - 3 p.m. - 9; 3 p.m.-6 p.m. - 5; 6 p.m. - 12 p.m. - 6; 12 p.m. - 6 a.m. -20			
5.2	Are the freeways clear or congested when you use them? Clear - 48.9%; Congested 35.5%; Moderate 15.5%			
6.0	If the freeways were never congested, would you use them more often?	42.6%	54.5%	3.0%

7.0	Do you see a need for more freeways in Southern California?		26.9%	70.2%	2.9%
8.0	What fare would you be willing to pay?	Average Fare 71.4¢, but 38.1% did not know.			
9.0	What is the most one should pay?	Average fare 98.4¢, but 21.0% did not know.			
10.0	Should a commuter fare be higher than a rush-hour fare?		12.4%	83.8%	3.8%
11.0	Methods of Financing (Number of Responses: 104):*				
		Property Tax	11	91	2
		Sales Tax	55	42	7
		Gasoline Tax	59	42	3
		Federal Grants	72	29	3
		Private Ownership	55	45	5
12.0	Would you vote for a bond Proposal?		16.2%	80.0%	3.8%
13.0	What type of transportation system would you prefer?				
		Monorail	57.7%		
		Ground Train	12.5%		
		Subway	12.5%		
		Bus	6.7%		
		Freeways	6.7%		
		Don't Know	3.8%		

* - The figures listed are whole numbers, not percentages.

NOTES: Standard Error of Estimation - .41
Number of Responses - 105
Number Female - 67
Number Male - 38

Thus, the question arises, to what extent does the freeway condition public attitudes toward the automobile and how does this reflect upon the need for adequate mass transit service? One's personal value assessment of a car is a complex combination of beliefs relating to income, personal privacy and comfort; a questionnaire can reveal only a few of the important values underlying personal action. One such value, however, the need for physical mobility, can be determined. In spite of the strong sentiment against freeway congestion expressed in question 4.1, over half of the sample expressed the belief that freeways would not be used more often, even if they were never congested. Most people evidently place arrival at their destination over the inconvenience experienced in getting there.

The question remains, however, whether this attitude is related to the automobile or merely its expression of movement, the freeway. Of course, Los Angeles is without a basis of comparison for modal choice. Buses serve as a form of public transit, but they still utilize freeways for line-haul travel and are subject to the same problems of congestion that beset the automobile.[2] Whatever the public view toward the car, the automobile would lose considerable value both as a transportation mechanism and a means for ensuring personal privacy in transit if the freeways were not such a convenient mode. Long-haul travel over metropolitan surface streets is almost unimaginable under today's conditions. Thus, it seems that in Southern California, the automobile and the freeway must be considered a compatible, inseparable pair. The fact that so much ambivalence exists among commuters as to the desirability of expanding or even maintaining the existing freeway system casts doubt on the automobile itself as the only viable transportation mode.

As far as mode of travel is concerned, the monorail or elevated train is by far the most popular with freeways and bus systems meeting with the least approval. In Bergholz's survey, the monorail also received a significant percentage (53.8%) followed by the subway with 16.6% and surface train with 3.2%.

The transit study also confirmed two popular notions concerning mass transit: 1) "Mass transit is necessary, but for other people;" and 2) "It would be nice if we had a mass transit system, but I don't want to pay for it."

Taking the first, questions 2.0, 3.0 and 4.0 explore the gamut of possible benefit relationships. Question 2.0 asks whether the individual respondent would benefit from a mass transit system. Question 3.0 asks whether the people of Southern California, collectively, would benefit and 4.0 asks whether the respondent sees any benefits, whether to himself or to others in a mass transit system. While the response among the full sample to question 2.0 was rather evenly divided, both 3.0 and 4.0 showed overwhelming positive responses. The subset which showed the greatest positive response was the group replying "congested" to question 5.2 with approximately 80% "yes" reply. Even the subset (47.6% of the full sample) which replied "no" to question 2.0 gave 76% and 80% "yes" responses to questions 3.0 and 4.0 respectively. What

accounts for this apparent independence in subjective and objective interpretations of benefit? Is it always "the other guy" who benefits? Or is it the nature of the particular group of respondents selected, with its 98.1% accessibility to an automobile that determines the response? Before any transit line can be adequately planned, these questions must be answered in depth by a more widespread and comprehensive sample..

The second significant question concerns public attitudes toward financing. It is an historical fact that the 1968 Proposition A failed to receive the required 60% vote. Since then, voters have become increasingly reluctant to raise their own property taxes for whatever the cause. However, this bias against using the property tax as a backing for general obligation bonds dates back several years. In 1963, Richard Bergholz, a reporter for the Los Angeles Times, conducted his own survey among 790 Southland families on attitudes toward rapid transit.[3] On the financing issue, he found that 68% preferred private ownership of a mass transit line, 8.7% favored sales tax financing, 4.7% favored an additional gas tax levy and only 2.1% desired an increased property tax. Federal subsidies were not included as an option because of their limited availability at the time. In contrast, based on data collected in question 11.0 and with the option of federal subsidies, 21.8% preferred private ownership, 21.8% preferred sales tax financing, 23.5% favored an additional gasoline tax, 28.5% favored federal subsidy and 4.3% preferred property tax-bond financing. Despite the large variation in most of the options, the property tax has maintained its extremely low popularity over the years. This attitude is confirmed by the miserable showing in favor of a bond proposal among the full sample: 80% "no," 16.2% "yes," and 3.8% undecided. Even in the group most desperate for a rapid transit system, the subset which replied "yes" to question 2.0, only 18% favor the property tax and 75.5% would vote "no" to a bond proposal. This group recommended that federal subsidies be used to finance the system with a 27.1% vote.

The fact that there is a strong sentiment against subsidizing rapid transit with local funds, even among the group favoring transit, does not reflect particularly well on the public's awareness of the benefits to the community that transit provides.[4] The example of BART in San Francisco, with the appreciable rise in local property values adjoining the transit line, shows that the community experiences direct, tangible benefits from rapid transit.[5] The reduction in air pollution and congestion must also be considered. A less obvious, but nevertheless real benefit appears in a reduction in vehicle operating and maintenance costs. Most respondents indicated a willingness to pay between 75¢ and $1.00 for a one-way trip into Los Angeles. From West Covina, this equals a cost of 4½¢ to 6¢ per mile. Compared with an average cost of 15¢ per mile for private auto, the commuter relying on transit could realize a substantial saving in transportation costs alone.

In summary, this survey points out the need for an extensive public education program in the area of transit that would include: 1) an area-wide survey, similar to the one utilized above registering

preferences in mode, fare, schedules, routes, etc.; 2) a more agressive campaign outlining the benefits of a metropolitan rapid transit system including the appreciation of property values derived from such a system.

To more accurately assess the economic impact of a transit system on the community, the survey should seek to determine the extent to which various combinations of mass rapid transit facilities actually decrease automobile sales. The figures quoted above comparing costs of automobile and transit travel must be interpreted with care, since the benefits derived from transit utilization may not seem great enough in the traveler's mind to warrant not buying an automobile. Since one of the primary objectives of transit construction is to alleviate congestion, and with congestion being closely related to the number of cars on the road, the survey should attempt to determine the actual crossover from automobile to transit travel. This would require that the exact dollar values of transit construction, maintenance and use be available for comparison with corresponding values for the automobile, where available. The respondent should be allowed to specify, as in the questionnaire administered in this survey, the amount he would be willing to pay for various types of service and the price at which a transit ride is more economical than a comparable automobile ride, all factors considered.

The primary emphasis of the transit public education program should be the expression of the liabilities of automobile ownership. The Rapid Transit District has, for many years, argued for a balanced transportation system for Los Angeles. However, it has done little to promote the idea of rail rapid transit except during the 1968 bond election. Its present orientation, in fact, billing its buses as "extracars" cannot but work against the entire rapid transit concept. As long as the public associates mass transit in Los Angeles with the automobile, RTD cannot hope to enlist sufficient popular support for its fixed-rail rapid transit proposals. According to one employee of RTD's public information department, the management has given insufficient financial support to the public education aspect of rapid transit.[6] It is difficult to understand how RTD can expect the elected representatives of the people to support subsidy proposals for rapid transit construction when the public lacks the assurance that an alternative exists to the automobile. It may be that a redirection of RTD's advertising/public education efforts away from its "Extracar" theme would significantly improve the chance for passage of a bond or sales tax proposal if the District ever decides to go to the voters.

Footnotes: Section A

[1] *See especially The Exploding Metropolis by the editors of Fortune; The Urban Transportation Problem by Meyer, et al., and The Metropolitan Transportation Problem by Smerk.*

[2]*This situation may be changed when the RTD begins operations of the exclusive buslane for the San Bernardino Freeway. Here buses will run at maximum permissable speed even during peak traffic hours. SCAG has received a grant from UMTA to study the effects of the busway on traffic flow when it begins operation.*

[3]*Richard Bergholz, in Los Angeles Times, June 12, 1963.*

[4]*A cross-tabulation of responses to questions 2.0 and 12.0 yielded no significant correlation at the .5 probability level.*

[5]*Interview with Richard Shepard, District Secretary, Bay Area Rapid Transit District, January 27, 1972.*

[6]*Interview with Sam Olivito, October 28, 1971.*

Conclusions

The Program in Public Policy Studies Mass Transit Telephone Survey reveals several interesting attitudes among commuting residents of West Covina:

1. Commuters are divided in their beliefs concerning personal benefit derived from rapid transit. Their belief is overwhelming, however, that Southern California residents would benefit from a rapid transit system.

2. Freeways are unpopular as a transportation mode. Liabilities of auto travel for commuting include the proliferation of air pollution and congestion, and the high costs associated with such travel. More freeways are not desired by most commuters.

3. The property tax is favored the least as a means of financing mass transit. A bond proposal in a general election would be overwhelmingly defeated. Federal subsidies are preferred for transit financing.

4. The preferred transit vehicle is the monorail or other elevated system.

The survey demonstrates that if mass transit is to be implemented in the near future, a massive public education program must be undertaken to convince potential users of benefits and costs.

CHAPTER V

THE FINANCING OF RAPID TRANSIT

One of the most often cited, and indeed justified, reasons for not having a rapid transit system in the Los Angeles region is the lack of financial capability. The phenomenally high developmental and construction costs (estimated at $2½ billion in the 1968 Final Report) represent an insurmountable hurdle to some observers, and provide a ready excuse for those given the responsibility of solving the Los Angeles basin's transportation problem.

The purpose of this section is to show that this hurdle is in fact not insurmountable; adequate means of financing should be within the reach of an agency with the resources and capability of the SCRTD. A few of the many aspects of the finance question are dealt with here. Those types of analysis which concern largely policy matters were selected, as these are most relevant to the body of the report. A plethora of more economics-oriented types of analysis exist, investigation into which is most fruitful for those involved in the field of urban transit economics.

The section begins with a discussion of bonding, as this is the most widely-used method of financing governmental projects on the local level. This discussion is followed by a section concerned with the alternatives that are available, to take the place of or supplement bonding. A further, and possibly more innovative, alternative is discussed in the chapter dealing with institutional reorganization. The sections dealing with the elasticity of demand, cost benefit analyses and system route selection demonstrate ways in which the tools of economic analysis may be applied to transit planning, pricing and administration.

A sober analysis of the realities of the financial aspect of urban transit, by both the electorate and responsible public officials is necessary before solutions to the area's transit problems can be implemented.

A. Bonding

When examining the financial position of the SCRTD, in terms of the feasibility of obtaining funds for a rapid transit system, one of the main considerations is bonding. Bonded indebtedness is the most widely used method of financing public improvement projects. The subject is of special interest here because the district went to the voters

in 1968 with a bond proposal to finance the system. To better understand this proposal, and the SCRTD financial policy in general, it is necessary to examine in detail the legal provisions of this type of indebtedness.

Statutory Provisions

The California Public Utilities Code concerning the Southern California Rapid Transit District Law provides for six types of bonded indebtedness. Section 30706 defines terms generally applicable to indebtedness, most of which is pursuant to Chapter VII, Section 30900. This chapter, "Bonds and Other Evidences of Indebtedness," provides guidelines for bond issuance.

The six forms of indebted obligation and payment provision follow (the relevant statutes appear in Appendix 2):

1. General Obligation Bonds: This type of indebtedness was sought by the District in the 1968 election. Sections 30900-30914 assume that any such issuance, unless otherwise stated, shall be backed by the property tax. However, the primary payment sources are the District's revenues. The bonds are amortized over a long period of time, usually forty years (see Appendix 2).

2. Limited Tax Bonds Financed by Sources Other Than Property Tax: These bonds are similar to the first type, with the exception that amortization payments not met by revenues must come from a source other than property taxes. This was provided for by Sections 30920-30923 which were added in 1967.

3. Revenue Bonds: These bonds are financed by operating revenues. They are authorized under Sections 30930-30932, under the provisions of the Reserve Bond Law of 1941. The District's law differs in one respect from the 1941 law, however. While a 50% vote from the District's electors would be required under the 1941 act, no vote is necessary for SCRTD. The bond issuance is decided on by a vote of the Board of Directors. Their decision is then subject to review by a public referendum.

4. Equipment Trust Certificates: These also are financed by operating revenues. Sections 30940-30944 provide for their issuance. This statute allows the district to purchase rolling stock, using (Sec. 30940) ". . . agreements, leases and equipment trust certificates in the forms customarily used by private corporations engaged in the rapid transit business. . . ." This type also does not require an election. However, under the law, these certificates may not conflict with General Obligation or Revenue Bonds. All operating reserves must be used to amortize these bonds. Only if there was a surplus (which seems unlikely) could these certificates be issued.

5. Improvement District Bonds: To improve facilities in one section of the District, the Board may create an improvement district out of part of the SCRTD. This is provided under Section 30960-30970. This would require two elections: a district-wide election to create the improvement district and a special election within that area affected by the bond proposal.

6. Promissory Notes: These notes, provided for in Section 30950, may be used to conduct a bond election or may be used "for the expenses of formulating a rapid transit program in an amount not exceeding seven hundred fifty thousand dollars. . . ." In addition to this absolute dollar limitation, these notes are further restricted in that they must be amortized within five years of issuance.

SCRTD Bonding Policy

a. As stated in the 1968 Final Report, the District favors the second of the six financing options mentioned above.

> The District's financing consultants recommend general obligation bonds to be paid from proceeds of special taxes other than general property taxes as the most feasible and economical method of financing a rapid transit system for the people of the District. The bonds would be secured by the full faith and credit of the District, including the power to levy ad valorem property taxes should there be any deficiency in the amount of funds yielded by the special taxes. General obligation bonds represent the least costly means by which the District can borrow the substantial sums needed to finance the proposed project and, in addition, offer the greatest flexibility in meeting debt service costs through various sources of revenue other than the property tax.

The non-property tax sources of revenue needed for such an issuance did not exist at the time. The District, therefore, stated its policy objective of seeking such funds. Its recommendations, in 1968, were toward revenue sources investigated since that time by the State Legislature. The 1968 Proposition A, therefore, did not have these revenues available and the only source of bond-retirement funds was the general property tax. This is one explanation of the failure of the measure.

b. Bond Structure as Proposed in the Final Report: The 1968 Final Report called for a bonded indebtedness, of the above type, totalling $2,515,000,000. This figure was the estimate of the cost of the entire system. This seems to suggest that no State or federal assistance was expected and that no new tax sources (such as the SB 325 reallocation) were foreseen.

The figure for the system uses a 4½% interest rate on bonds amortized over a forty-year period. Costs estimated on this rate would fluctuate by 7% for every ½% change in the rate.

B. Alternate Sources of Income

As mentioned above, the SCRTD did not have alternate sources of funds in 1968 to back the proposed bond issuance. Complete reliance on the property tax for retirement and interest payments was thus necessitated in seeking the full $2½ billion. Proposition A did not pass, for a variety of reasons, some of which are discussed in the following sections.

Proposed Sources

It is very odd that the district would have attempted the election measure without alternate funds available. Their action is especially puzzling in light of the effort the SCRTD staff put into investigating alternate sources of income in 1966, 1967, and 1968. Various sources were proposed during that period.

One of the most often cited of these sources is a small increase in the general sales and use tax. This transaction tax would be in the amount of one-half or one-quarter of one percent. As might be expected, because of the high volume of taxable transactions within the District, this would be a high-yield tax. This fact is cited both by those who favor and those who oppose it. The ¼% rate, estimated by SCRTD in 1966, would yield $29,650,000 annually while the ½% rate would yield about $59,300,000. The Final Report states that this second rate would be sufficient to pay for bond retirement and interest payments without resorting to the property tax.[1] This is assuming that the tax base within Los Angeles will grow at a rate of 4%. Alan Carlin and Martin Wohl, in a paper published by the RAND Corporation,[2] critical of the 1968 five-corridor plan, point out the cost to individuals of such a tax. Computing the taxes paid over a fifty-year period at a discount rate of 6%, they found that the present values of such a tax would be:

Annual Taxable Expenditures	$5M	$7.5M	$10M	$15M	$25M
Annual SCRTD Tax	$25	$38	$50	$75	$125
Present Value of Tax	$394	$591	$788	$1182	$1970

Carlin-Wohl argue that, while these figures may be reasonable for someone who would be using the system daily, they are biased against the non-user. Others would argue that the present value of the sales tax would be an extremely fair price to pay for achieving rapid transit, even if the only benefits received were generalized non-user ones.

Another high-yield tax source considered by the SCRTD in 1967 involved taxes on motor vehicle registration. Several different

alternatives were presented. This tax would be added to the current rate of 2% on value presently being paid in Los Angeles County.

Yields of Motor Vehicle Taxes (1967 Estimates)[3]

Tax Form	Estimated Annual Yield
1/4% "in lieu" on value of Motor Vehicle	$ 8,500,000
Flat Rate of $10 per Auto and $20 per Commercial Vehicle	46,000,000
Flat Rate of $2 per Auto and $4 per Commercial Vehicle	9,200,000
$1 per Vehicle	4,200,000

Two other tax sources involving the transfer of real property were considered. Both are high-yielding. The first is a transfer tax formula that was proposed under AB 2270 in 1967 which did not pass. Under this formula, property valued under $15,000 would have no tax levied on its transfer; property of $15-25,000 valuation would be taxed at 1% of value and property over $25,000 would be taxed at 1½%. The 1967 estimate of yield of this tax was $31,900,000. This tax would be added to that levied by the City of Los Angeles, at flat rates of $15 on property up to $25,000, $20 on property up to $50,000 and $25 on property over $50,000. The other tax proposed by the District would be a flat rate of ½% of property value on trust deed recording, which is similar to a transfer tax. The estimated yield was $30,380,000 annually, and is currently not being utilized by any taxing authority within the District.

Real property tax formulae are often discussed as methods of financing rapid transit. One of the formulae that has been mentioned several times, and may prove useful, would tax not the value of the property but the rise in its value when it was sold. This would seem more equitable, assuming that a rapid transit system would raise property values. While this formula is possible in theory, it has never been used. If it proved to be feasible, it would be levied at a fairly high percentage rate, giving a high yield especially on those properties directly affected by one of the corridors. This is a finance mode favored by the City of Los Angeles Planning Department, and was proposed along with their plan for a rapid transit system. Under their formula, the City might levy as much as half of the rise in valuation of the land as taxation for the rapid transit system. The area where the tax would be levied would be three-quarters of a mile on each side of the transit line, and within a one-mile radius of each station.

Several other potential tax sources were considered in 1967 by the District, most of which are fairly low-yield. When combined, however, these could constitute ample funds to back bonds. Two of these

sources directly relate to rapid transit. One is a 5% tax on gross receipts of parking lots which would yield an estimated $1,100,000 annually. The other is a 1½% motor vehicle transportation tax on common carriers, which would produce approximately $6,564,000.

Other sources relate less directly to rapid transit financing. These sources were listed in 1967 by the District:[4]

Tax Source	Yield*
1% Telephone Billings (excluding Interstate and Foreign Calls)	$ 4,351,000
1% Water Meter Billings	851,000
1% Electricity Meter Billing	5,402,000
1% Gas Meter Billings	3,330,000
1¢ per Pack of Cigarettes	9,116,000
$1 per Gallon on Distilled Spirits	12,000,000
5¢ per Gallon on Beer	4,900,000
1¢ per Gallon on Wine (less than 14% alcohol) 2¢ per Gallon on Wine (14% alcohol and over) 30¢ per Gallon on Sparkling Wine	325,000
1% Transient Room Rental	1,600,000

*1967 Estimates

While these funds, taken alone, are fairly insignificant, a combination of several could provide a sizable amount toward debt amortization.

Each of these revenue sources has the potential of being only one-third of the eventual possible yield. This is made possible by the 1964 Urban Mass Transportation Act which provides two to one matching funds for capital improvements.

A source of revenue has recently been provided by the State with the passage of SB 325. By removing the exemption of gasoline from the State Sales Tax and allowing a ¼% "in lieu" tax, the District will be eligible for $43,000,000 the first year (1972). If a reasonable increase in the tax base could be assumed here, this source alone is almost enough to back up the necessary bonded indebtedness. Most, if not all, of the above sources of revenue would require enabling legislation at the State level.

Another source of revenue might be derived from the Highway Users Tax Fund. Freeways are too "cheap" to the frequent highway user in relation to the benefits received.[5] If some sort of pricing system were instituted on arteries leading to the Central Business District, congestion would be reduced appreciably, public transportation would

become an attractive alternative to the automobile, and large amounts of revenue would be made available for rapid transit financing.

Using one or more of the above alternate sources of revenue would allow the issuance of bonds that could be retired without recourse to the property tax. Such an issuance would, obviously, be more attractive to the voters and probably more equitable in terms of benefits-received financing. To go to the voters with property-tax-only supported bonds, without such back-up funds, as was the case in 1968, seems almost totally incomprehensible.

Realized Sources: Senate Bill 325

As articulated in this and other sections of this study, an alternate source of revenue for use in urban mass transit, beyond the traditional methods of procuring funds for this use must be found. Governor Ronald Reagan signed a bill on November 4, 1971, to make available one form of added revenues. This Act was SB 325 (the Mills-Alquist-Deddeh Act, Chapter 1400, Statutes 1971), "An Act to Improve Public Transit Statewide," which goes into effect on July 1, 1972.

There are two major provisions of SB 325. First, it removes the exemption from the sales and use tax from motor vehicle fuel. Second, it reduces the State Sales and Use Tax rate from 4% to 3-3/4%, increasing the local rate from 1% to 1/4%.

This added 1/4% tax provides revenues that must be set aside locally for a transportation fund. All monies are returned to the county of origin for distribution. In the case of Los Angeles, claims would be processed through the Southern California Association of Governments (SCAG).

Each claimant (the SCRTD being the one of interest here) may not claim more than 50% of operating capital and debt service requirements. Of the monies claimed, at least 75% must be for capital expenditure requirements.

The yield of the 1/4% tax for the Los Angeles County transportation fund is estimated at $53,914,000 for the first fiscal year. Of this total, SCRTD would be eligible for well over $43 million. This much would be needed annually to back a $2 billion bond issuance. Also, if the District did not choose to incur a bonded indebtedness, these funds would be eligible for up to two to one matching funds from the Urban Mass Transit Act of 1964 as amended in 1970. This is a significant step toward the realization of mass transit in Los Angeles.

Obviously SB 325 is much more detailed than this short account shows. The bill, as passed, was amended fourteen times and contains many specific passages concerning application, rules and eligibility. A detailed analysis of the bill is presently being undertaken by the Southern California Association of Governments.

Institutional Reorganization in the Context of Financial Capability

The SCRTD cannot easily secure funds by the traditional means of bond issuance. General obligation bonds, backed solely by the property tax must be approved by the electorate. This type of approval can be seen to be infeasible when examined from the perspective of public opinion on increased property tax (see Chapter IV). Revenue bonds, on the other hand, do not need electorate approval and command a high interest rate. Despite this enticement, however, investors would be reluctant to put money into a bond proposition such as this.

One of the possible means of easing this financial dilemma would be the institutional, or administrative, reorganization of transit financial responsibility in Los Angeles.

Two forms of reorganization are especially attractive in light of the SCRTD's apparent reluctance to switch its concentration from the operation of a bus network to the planning and construction of a rapid transit system. Under the first of these, the SCRTD would retain the responsibility for the provision of rapid transit. The District would simply do what many corporations do when they find themselves in the same position: award the construction of the system to a sub-contractor. While this might seem more expensive than a publicly-built system, this might not be the case. If the SCRTD built the system, the actual construction would be done by a group of sub-contractors, each with its own required profit margins. If the system as a whole were given to a contractor, this profit margin would vary only slightly. Costs might actually be lower under this plan, since the red tape of bureaucracy would be cut and the efficiency of a profit-making firm could be exploited. The obvious added cost to the contractor of attracting transit expertise would be hopefully eliminated through contractual agreements whereby the SCRTD could provide this expertise.

In the second of these two forms of institutional realignment, the District would forfeit responsibility for construction of the system. This responsibility would become that of a new single-purpose organization leaving the SCRTD with the operation of the Los Angeles bus network. This alternative has been suggested by many, perhaps in exasperation, who have remarked that while the District runs its buses efficiently (indeed it operated out of farebox revenues until 1969), no rapid transit system has been constructed in RTD's eight years of existence. Among these critics is John Pastier, a writer for the Los Angeles Times, who says concerning the SCRTD's portion of the SB 325 gas tax monies:

> If the RTD is unwilling to release half its tax share for rapid transit, it will be clear that it is not the proper body to hold transit development responsibility. At that point, there will be ample justification to transfer that responsibility to a separate agency, along with half its funds, and leave the Reluctant Transit District free to devote all its efforts to its first love, buses.[6]

If the District does succeed in building the system, it will have jurisdiction over both the rail system and its bus feeder network. This is clearly preferable to the situation in the Bay Area, in which the rapid transit line was planned independent of any authority over the local bus system. The result has been an inability to coordinate the two systems, to the detriment of both.[7]

However, if this coordination could be guaranteed in advance, the alternative might become plausible. This would depend on the new agency, the rapid transit provider, being granted extensive taxing powers by the State Legislature, which the SCRTD now lacks.

Another, more orthodox method of institutional reorganization is the Joint Powers Agency, a common method for local financing. Under a Joint Powers Agreement, separate governmental entities are joined to achieve a common goal. Obviously, the goal must be desirous to all parties and each party must be capable of achieving it. One example of such an agreement was the joining of the City of Los Angeles with the County of Los Angeles to provide for the expansion of health care facilities in the fall of 1971. A Joint Powers Agency has complete financial responsibility; i.e., it may issue bonds, sue and be sued, etc. An important prerequisite for such an agreement is that each participating agency be legally empowered to accomplish the common goal.

To meet the State's legal requirements, a new agency would have to be created which would possess a sufficiently powerful taxing authority to attract revenue bond buyers. Such an agency might be modeled after the Bay Area Metropolitan Transportation Commission, discussed in Chapter III, Part 7, Section A.

A precedent exists for such an agreement. On June 30, 1971, a document was signed entitled, "Joint Exercise of Powers Agreement Between Metropolitan Transportation Commission, San Francisco Bay Area Rapid Transit District, County of Alameda, City of Oakland, and City of Oakland Board of Airport Commissioners." The MTC was the central agency of this agreement which called for the creation and regulation of the Oakland Airport Board.[8]

When the groups had been joined in an agreement, special mortgage lease bonds were issued. The capital generated by these bonds could then be used by the agency to purchase rapid transit capital equipment (rolling stock, rights of way, etc.). This capital equipment would then be leased to the actual provider of rapid transit. At the present this would be the SCRTD, since its enabling act gave it the primary responsibility for providing rapid transit in Los Angeles. The dollar amounts of these payments, paid by the SCRTD to the Agency, would ideally be equal to the sum necessary to amortize the bonded indebtedness and pay the interest on it. This presupposes that the operating (farebox) revenue of the system would be sufficient to pay these lease payments.

The Southern California Rapid Transit District is implicitly empowered to enter into such an agreement through its 1964 enabling legislation. The California Public Utilities Code, Division 10, Part 3, which is the SCRTD enabling act, contains a section on contracts. The relevant sections state:

> The District may contract with any department or agency of the United State of America or of the State of California or with any public or private corporation upon such terms and conditions as the directors find are for the best interests of the District.
>
> The District may contract with any person, firm, corporation, association or organization for the development of a rapid transit system.[9]

Thus, the District possesses the legal mandate to enter into agreements with other agencies. In the light of its difficulties in procuring funds, such an agreement should be seriously investigated by the RTD Board of Directors.

Footnotes: Section B

[1] *SCRTD Final Report, 1968, p. SY-5.*

[2] *Alan Carlin and Martin Wohl, An Economic Re-evaluation of the Proposed Los Angeles Transit System, RAND Corporation, p. 2.*

[3] *SCRTD, "Potential Tax Sources," March 15, 1967, pp. 1-2.*

[4] *Ibid.*

[5] *Meyer, Kain and Wohl, The Urban Transportation Problem (Cambridge, Mass.: Harvard University Press, 1965), pp. 67-69.*

[6] *John Pastier, Los Angeles Times, January 27, 1972, Sec. II, p. 7.*

[7] *Interview with Richard Shepard, District Secretary, Bay Area Rapid Transit District, January 27, 1972.*

[8] *"Joint Exercise of Powers Agreement," June 30, 1971.*

[9] *West's Annotated California Code, PUC Code, p. 215.*

C. The Elasticity of Demand of Urban Transit and Derived Demand Curves

One of the major problems encountered in the planning and execution of any transit system is the determination of a pricing structure. Basically there are two methods of price determination--a mathematical process, taking ridership as a given level, whereby operating revenues are set to meet operating costs, and a more complex economic process utilizing the elasticities of demand. Three categories of elasticity exist in the process of pricing.

The most important category is the price elasticity of demand, defined as ". . . the percentage of change in quantity that results from a 1% change in price."[1] Applied to transit pricing, "quantity" is the ridership of the system. If this amount is greater than one, the commodity is said to be price elastic; if it is less than one, it is price inelastic. Relating this to transit, if demand was price elastic, a raise in fares would result in a decline in total revenues. If demand were price inelastic, a rise in fares would result in an increase in total revenue.

Besides being very useful in determining whether fares should be raised, the price elasticity of demand is very useful for deriving demand curves for the transit system. On such a curve, the ridership may be found for each price level using the elasticity as a multiplier. The curve is price inelastic for the lower section (at lower prices) and price elastic for the upper section (see Figure VC-1). In other words, the price could be increased continually through the lower range and still increase total revenues, but when the elasticity became greater than one, such an increase would cause revenues to decline.

This elasticity multiplier is well known in the transit industry. It is often used as a rule-of-thumb figure in rate calculations. The Amalgamated Transit Union, in a paper presented to Urban Mass Transportation hearings, referred to the figure as the "resistance formula." It means "to how many fewer people will the community permit service to be available" in order to provide a return to the operator. For years the Pennsylvania Public Service Commission, for example, used the formula--every 1% increase in fares caused .33% reduction in revenue passengers. The WMATC in Washington assumes in all bus rate cases, .25% decrease in revenue passengers for each 1% increase in fares. This formula takes into consideration the fact that bus passengers are almost completely dependent on public transit and do not have the alternative of switching modes when the fare is raised. Economists call this inelastic demand.[2]

By finding the price elasticity of demand for the transit service of the SCRTD at the current 30¢ rate, we can conclude whether a raise in fares will result in an increase to total revenues. To do this we can use the method introduced by William Vickery of Columbia University, who was asked by the Mayors Committee on Management Survey of the City of New York to recommend rate structure revisions in 1952. The report

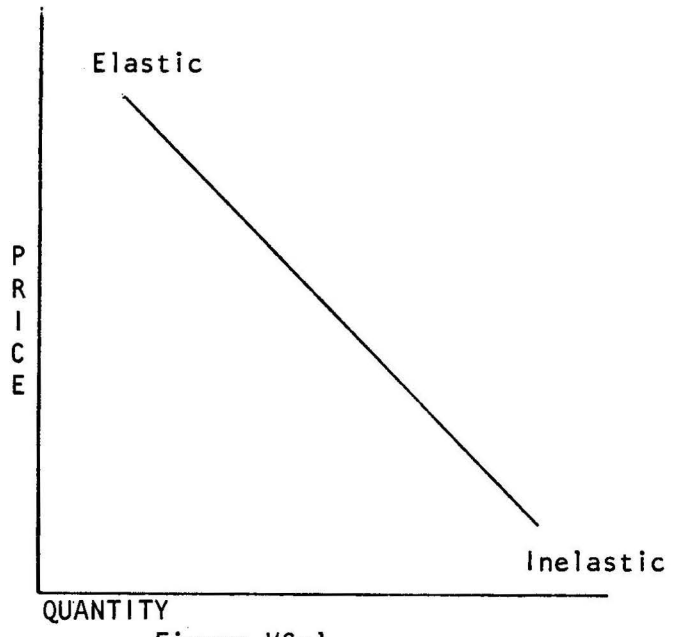


Figure VC-1

Example of a Demand Curve

that resulted from this study revolutionalized the field of transit pricing. While the concept of derived demand curves was popular elsewhere in economics, it had not been applied in this area. It is odd indeed, then, that Vickery's process has not been applied to the data available to the District, since the proven accuracy of such demand curves could be used as a rational policy-formation tool. Vickery uses four methods to compute the elasticity, which we shall use here for SCRTD figures:

> In Case A, he assumed that equal absolute changes in fare result in equal absolute changes in traffic. In Case B, he assumed that equal absolute changes in fare result in equal percentage changes in traffic. In Case C, he assumed that equal percentage changes in fare result in equal absolute changes in traffic. And in Case D, he assumed that equal percentage changes in fare result in equal percentage changes in traffic.[3]

The figures for the SCRTD, using its fare change in 1967 from 25¢ to 30¢ are shown in Table VC-1. Ridership figures are taken from the cordon count, which is a tally of the total number of passengers entering the Central Business District daily during the seventeen-hour period 6:00 a.m. to 11:00 p.m. (This is not total ridership.) The extrapolations shown for fares over 30¢, using Vickery's method, constitute four separate derived demand schedules. As inferred by each of the four schedules, the SCRTD's total revenues would be

TABLE VC-1

ALTERNATIVE ESTIMATES OF DEMAND SCHEDULE FOR SCRTD BUS TRAVEL

	CASE A		CASE B		CASE C		CASE D	
FARE	Passengers	Total Revenue	Passengers	Total Revenue	Passengers	Total Revenue	Passengers	Total Revenue
25¢	276,264	$ 69,066	276,264	$ 69,066	276,264	$ 69,066	276,264	$ 69,066
30¢	267,001	80,100	267,001	80,100	267,001	80,100	267,001	80,100
35¢	257,738	90,218	258,190	90,366	259,128	80,695	258,525	90,834
40¢	248,475	99,390	249,670	99,868	252,644	101,058	253,556	101,722
45¢	239,212	107,645	241,431	108,644	246,808	111,064	248,485	111,818
50¢	229,949	114,974	233,464	116,732	241,708	120,854	244,012	122,006

Source: Figures from SCRTD cordon count, 1969; method of computation from W. S. Vickery, "The Revision of Rapid Transit Fare Structure of the City of New York."

raised with the fare increases up to 50¢. As is evident, such increases would boost the District's revenues appreciably, and lower operating costs (since fewer buses would be run). In fact, the Technical Advisory report to the Ad Hoc City Council Committee stated in February of 1972 that the SCRTD was planning a fare increase to 40¢ by 1975.[4]

The price elasticity of demand also may be used for two pricing systems variations. The most pronounced difference occurs in the time pricing. The elasticity for peak-hour travel is much less than that for off-peak hours. The main reason for this is both higher demand for peak-hour rides and the fact that most travel of this type is to or from work and, therefore, a necessity. Therefore, a transit system could increase its revenues by raising peak-hour fares.[5]

The other variation for which price elasticity may be used is for distance pricing. Long-haul trips are much more inelastic than short-haul trips. The implications for pricing and revenues are obvious.[6]

Another important consideration in transit planning is the income elasticity of demand, defined as the percentage change in quantity demanded resulting from 1% change in income. In the case of transit, ridership is compared to changes in per capita income in the community. The income elasticity of transit is low (or negative) because transit is an inferior commodity. Inferior commodities have low elasticities because they are consumed less as income increases. Once the profile of the income elasticity of demand is known, service can be adjusted to make transit a luxury good in areas where the demand is inelastic, thus boosting ridership.

Another major economic consideration (especially in Los Angeles where there is a high degree of automobile congestion) is the cross elasticity of demand, defined as the percentage change in the amount of one commodity resulting from a 1% change in the price of another commodity. Here the two commodities compared are transit use and automobile use. The elasticity here is positive, since the two may be considered substitutes. However, "the cross-elasticity of demand between private auto and public transit commutation would appear to be so low that actual payments might have to be made to transit riders to induce any considerable shift in patronage."[7] According to Smerk, the problem might be attributable to inadequate public education. In his discussion, he contends that automobile owners vastly underestimate the price of a trip. The price is assumed to be the actual cost of movement, instead of being computed from the cost of the car, excise and licensing fees, as well as the per-mile costs. His conclusion is that the cost of an auto trip is much higher than the driver assumes.[8]

All three of these elasticities, and the calculations they lead to, are extremely important in transit planning and pricing.

Knowing the elasticities of demand for its system, a transit company can optimize its service and minimize its costs by concentrating its resources in areas where the greatest monetary return will be realized.

Footnotes: Section C

[1]*Edwin Mansfield, Microeconomics (New York: W. W. Norton & Co., Inc., 1970), p. 83.*

[2]*U.S. Congress, House, Subcommittee on Housing of the Committee on Banking and Currency, Hearings, Position Paper of Amalgamated Transit Union on Fare Increases and Public Ownership, 91st Cong., 2nd sess., March, 1970.*

[3]*Mansfield, Microeconomics, p. 108.*

[4]*For a more detailed discussion of transit pricing, and other aspects of transit economics, see W. S. Vickery, "The Revision of the Rapid Transit Fare Structure of the City of New York," Technical Monograph No. 3, Finance Project, Mayor's Committee on Management Survey of the City of New York, 1952.*

[5]*George Smerk, Urban Transportation (Bloomington: Indiana University Press, 1966), pp. 218-219.*

[6]*Mansfield, Microeconomics, p. 108.*

[7]*John R. Meyer, "Regional Economics: A Survey," American Economic Review, LIII (March, 1963), p. 42.*

[8]*Smerk, Urban Transportation, pp. 258-264.*

D. System Route Selection: Fiscal and Economic Considerations

In 1968, the plan for construction of a rapid transit system in Los Angeles was presented by the SCRTD as a package--a complete five-corridor, skeletal system. After the failure of the Proposition A vote, the prospect of such a package being approved seemed doubtful. Therefore, much of the transit planning done since then--not only by the District, but by other agencies--has been based on the idea of building one leg at a time on a pay-as-you-go basis.

The corridor receiving the most attention in this regard is the Wilshire-West Los Angeles route. This route was considered for some time by the SCRTD, and by many other proponents of rapid transit, as the logical first step, for many reasons. Primary among these was that this route was the most financially expedient. Also, it would increase access to the rapidly growing business district in Century City. In addition to work done by the District, the Los Angeles City Planning

Department studied the feasibility of the Wilshire route and presented their conclusions in 1970.[1]

The SCRTD work on the Wilshire line was based on a subway line beneath Wilshire Boulevard. The District developed plans for two contingencies, shown in Figure VD-1. The first was a ten-mile line from the Central Business District (7th and Flower) to Fairfax Avenue. The second route is an extension of the first, running a total of fifteen miles and terminating in West Los Angeles, west of the San Diego Freeway.[2] The shorter route would cost an estimated $550 million while the longer would cost an estimated $750 million. The District has estimated an average daily ridership on this line of between 100,000 and 120,000.

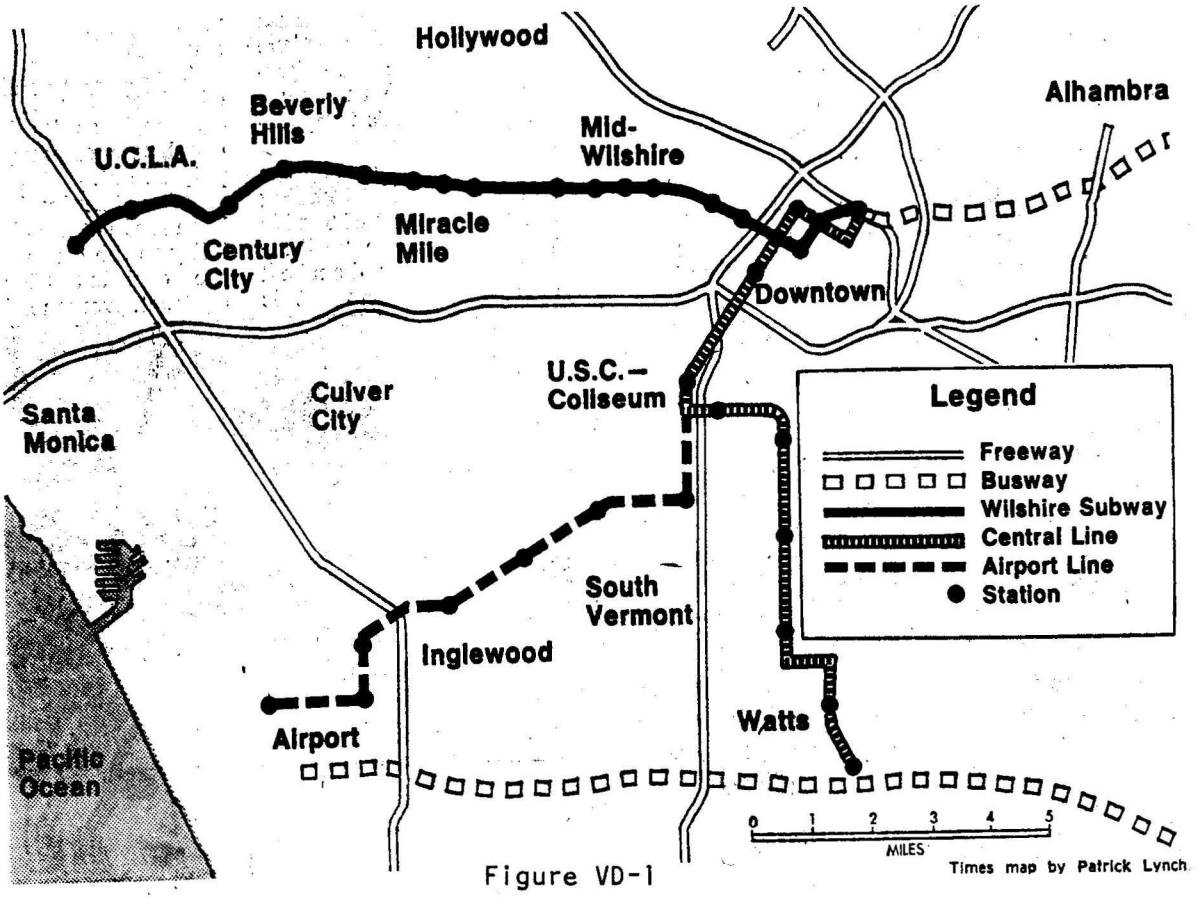


Figure VD-1

Map of Proposed Transit Lines

The route developed by the City Planning Department (CPD), upon which their feasibility and cost studies were based, was quite different. Instead of a subway directly beneath Wilshire, this plan calls for an elevated system, to be located about one-half block south of the boulevard. The reason for choosing this route is that the cost of acquiring the right of way for the aerial system would by far offset the high costs of subway construction.[3] The route would be essentially the same

as that shown in Figure VD-1, shifted slightly southward. The line would run ten and a half miles from the Central Business District to the beginning of the Miracle Mile. The planners set the total primary cost at $251,619,500; projected ridership level was 98,200 average trips per day.

As mentioned earlier, this line has for some time been considered the logical first step in the construction of a rapid transit system. Reasons for this include the fact that it would serve more riders than any other proposed line and it would serve the most congested business district in the city. In addition, the Wilshire corridor is the most financially viable route. The City Planning Department, in its study, concluded that the revenue from this line would exceed its operating costs. Using the 98,200 daily ridership figure and a fare of 45¢, the planners arrived at an annual revenue figure of $14,822,000 which is over five million dollars above the projected operating costs of $9,800,000 annually.[4] It would clearly be economically sound to operate such a line.[5]

As mentioned in another section, the SCRTD did not choose this route in its selection of a starter line. The District caused great controversy by announcing plans for a central corridor. This route would go south through the Watts-Willowbrook area, as shown in Figure VD-1. While the Wilshire line was one of the routes in the 1968 five-corridor plan, the Central line that was introduced by the District differed from that plan. Its main attractions were the increased service provided to the minority community and the fact that it would connect the San Bernardino Busway with the proposed Century Busway. The line would run underground for the northern one-third, emerging as an elevated structure for the remainder. The total length would be fourteen miles, with the line ending about a mile south of Watts. The estimated cost is $420 million. The District has estimated a ridership of 45,000 to 75,000 daily.

After the announcement of the Central proposal, Herbert Krauch, a member of the SCRTD Board of Directors, publicly dissented from the decision and offered his own proposal for a first-stage system. This is the Airport route shown in Figure VD-1. The line would connect the Central Business District with Los Angeles International Airport, a total of fifteen and a half miles. Like the Central line, the downtown portion would be subway with the remainder elevated. The justification given for this route was that it would reduce airport and freeway congestion. This line would cost an estimated $480 million and carry from 40,000 to 65,000 peope per day according to Krauch.[6]

The costs of constructing these routes were valid at the time of the estimating. Consequently, a five to seven percent increase in cost for each project could be assumed for every year the project construction is delayed. Offseting this is the rise in population of the region affected. Since the population of the Los Angeles Basin is still rising, ridership would rise proportionately. The costs of each line, and their expected riderships, may be compared on Table VD-A.

TABLE VD-A

ROUTE COMPARISON: DOLLARS SPENT AND PEOPLE MOVED

Route	Ridership	Cost
Airport	40,000 - 65,000	$ 480,000,000
Wilshire (SCRTD)	100,000 -120,000	550,000,000
Wilshire (CPD)	98,200	251,619,500
Central	45,000 - 75,000	420,000,000

The Wilshire corridor, in light of the advanced stage of its planning and its financial viability, would be the logical first step in construction. An additional factor in its favor is that businessmen in the Wilshire-Century complex are strong supporters of rapid transit.[7] It has been suggested that the reluctance of SCRTD to go ahead on this project is due to a further financial consideration--the bus routes running east-west in the Wilshire area are some of the biggest money makers of the system. However, the revenues from these lines would not be lost, as a feeder system for the rail line, with buses running north-south, would be needed when the corridor is put into operation.[8]

Footnotes: Section D

[1] *Los Angeles City Planning Department (LACPD), Wilshire Rapid Transit Corridor in Aerial Costs, Revenue and Expenses, 1970, and Wilshire Rapid Transit Corridor Feasibility Study, 1970.*

[2] *The route does not follow Wilshire Boulevard exactly, but in the general area. Refer to SCRTD Final Report, 1968, pp. JV-36-40 for exact route. The important aspect of this corridor plan is that both contingencies would be composed of subway facilities.*

[3] *Interview with Thomas Stemnock, Director of Advanced Planning, City Planning Department, Los Angeles, January 11, 1972.*

[4] *LACPD, Wilshire Rapid Transit Corridor . . . , 1970.*

[5] *In economics, it is considered sound for a firm (in this case, the SCRTD) to operate as long as its marginal revenue is larger than or equal to its marginal cost. In this case the point would be where revenues equaled $9,800,000. Any amount over this total, here around five million dollars, would be excess. Presumably it would be used to retire part of the $251,619,500 primary investment.*

[6] *John Pastier, Architecture Critic, the Los Angeles Times, January 27, 1972.*

[7] *Interview with Dr. Jule Lamm, Citizens' Committee for Rapid Transit, Los Angeles, November 8, 1971.*

[8] *Interview with Thomas Stemnock, January 11, 1972.*

E. Cost-Benefit Analyses of Rapid Transit Systems

The economic procedure of cost-benefit analysis has become an increasingly popular tool in public policy analysis. To the many who advocate its use, it is the simplest method of decision, since it utilizes a simple precept: if the total benefits of a project are greater than the total costs, the project is economically sound and a good one.

Two major studies of the costs and benefits of the SCRTD five-corridor plan have been completed. The first was the original cost-benefit study done by the Stanford Research Institute.[1] The results of this analysis were used by the District as an argument for the system presented in the Final Report.[2] The second document was a criticism of the findings of the SRI Report. Published in September, 1968, under the auspices of the RAND Corporation, the paper was written by two economists, Alan Carlin and Martin Wohl.[3]

Unfortunately, both the original study and its critique were written with biased viewpoints. The SRI Report, which was commissioned by the SCRTD, concluded that benefits from the system would run 87% higher than its costs, i.e., for every $1.00 put into the system, $1.87 would be returned. The bias of the Carlin-Wohl report is equally obvious. Preceding its analysis, it suggests that transportation problems might be solved by improving bus service, building additional freeways and revising the taxi franchise system.[4] The Carlin-Wohl paper sorts these disagreements into three main categories: ridership, economic procedures, and community benefits.

Carlin and Wohl accuse the SRI Report of using grossly optimistic ridership figures in their calculations. The SRI figure of 138 million passengers annually is countered by the assertion that total ridership of a rail system would probably fall within one and two percent of the total daily trip-making in Los Angeles. However, they continue to support this assertion by comparing the transit situation in Los Angeles with that of Chicago. Little, if any, basis for this comparison exists. The nature of the residential living patterns of Chicago and Los Angeles are highly dissimilar. While the Chicago Transit System is oriented toward line-haul travel, the proposed five-corridor system would combine line-haul travel with downtown distribution. It thus seems pointless to compare the transit systems of two such inherently different urban areas as Chicago and Los Angeles.

Under the category of economic procedures, the RAND paper has four basic criticisms of SRI methods: 1) different price levels, 2) incomplete accounting of annual capital costs, 3) inclusion of irrelevant

benefits, and 4) use of fares and fees rather than operating costs. The point of 1) was that all cost should be converted to a standard year's level of dollars (Carlin-Wohl used 1969 dollars). The conversion of figures to a standard unit facilitates comparison of values. In 2) Carlin-Wohl simply use the converted figures of 1) to produce standard-dollar capital costs. However, with this "accounting error" rectified, the total difference in annual capital costs comes to about 4%, which is less than would be the error to be expected in ten-year projected costs. Section 3) cites as an "irrelevant benefit" the inclusion by the SCRTD of $14.9 million annual operating surplus. Their argument is that this money would not result from the initial proposed investment. This point would be a matter of conjecture in economic theory, however, since without the investment the surplus would not occur and therefore the money would seem to be a direct benefit of the project. A minor disagreement is involved in 4), in which Carlin-Wohl assert that system operating costs, rather than farebox revenues, should be used to calculate the social benefits of transferring from one transportation mode to another. The difference here again is small, about one-sixteenth of one percent, between the two calculations.

The third main area of disagreement, that of community benefits, is the major defect in the usage of cost-benefit analysis in public works projects. The problem stems from the fact that most of these benefits are simply not quantifiable. Carlin-Wohl attack the inclusion by SCRTD of such factors as "improvements in life style" and "construction employment benefits" for the reason that dollar amounts were assigned to these factors.

While it seems to be an unorthodox procedure to include such factors in benefit compilation, transit advocates in Los Angeles still use such figures in their analyses. The same benefits (and the assertion that they could be quantified) were included in the February 1972 Report to: Los Angeles City Council Ad Hoc Committee on Rapid Transit.[5]

George Smerk, in Urban Transportation, argues against quantifying all social benefits:

> . . . there may be great danger of misallocation in placing precise values on some external values if it tends to distort results. The precise monetary value of a human life is questionable indeed, although the fact that life does have value is hardly debatable. The attempt to price-tag costs and gains precisely may be largely a waste of time and effort. Moreover, computing the value of lives saves from a new highway project on a dollars-and-cents basis, and justifying the highway on that basis, through a cost-benefit analysis, obscures the real purpose of a highway, which is not the saving of lives but the provision of transportation.[6] (Parenthetically, the SRI Report includes among benefits "a decrease of 32 fatalities and 1900 injuries per year.")[7]

The cost-benefit considerations of public enterprises are much more nebulous than the factors governing a private firm whose goal is

profit maximization. Such a firm would operate under a standard profit schedule. The amount of output produced, and the price at which it was sold would depend on the point at which marginal costs were equal to marginal revenue. Obviously, any point at which costs would exceed returns would be disadvantageous. On the other hand, in a public undertaking such as the provision of rapid transit, the marginal costs are not so clearly delineated, since they must be composed of both marginal dollar costs and marginal social costs. As shown earlier, it is this social factor which is difficult to compute. Only those factors which have definite dollar values, excluding non-quantifiables from both the cost and benefit equations, should be used when seeking a comparison. This method was successfully used by the Los Angeles City Planning Department's studies of the Wilshire corridor mentioned earlier.[8]

Again, Smerk articulates this concept in his book:

> Benefit-cost analysis, usually applied to projects of a public nature, is an adaptation of the typical cost-gains calculus utilized by private firms. Private enterprise can determine optimum resource use and consumer satisfaction by identifying costs and prices in competitive markets. Public projects cannot be analyzed in the same way because, in the normal sense, no market exists for public projects which have broad and indivisible collective benefits.[9]

Smerk contends that any cost benefit analysis must be undertaken with the following nine assumptions:

1. Preservation of the city
2. Existence of an urban transport system
3. No spillover effects
4. Unified decision-making
5. Congestion centered in peak hours and journey to work
6. Equality of benefits
7. Output in terms of journey to work
8. Fixed duration of the peak
9. Homogeneity of passenger journeys.

Probably the most important assumption is the fourth. To make the whole system feasible, a regional authority such as the Bay Area's Metropolitan Transportation Commission must exist to unify the decision-making process. Another significant assumption is number 3. In practice it is observed that the spillover effects, or externalities, of an improved urban transit system are almost limitless and therefore incalculable.[10]

The economic method of cost-benefit analysis should be avoided in the transit decision-making process. The results of such comparisons are, by nature, both inaccurate and misleading. If any comparison is made, it should concern itself with only those factors which are relevant and quantifiable in dollar amounts.

This type of analysis, by its very nature, ignores the vast area of social costs and benefits. This is not to imply, of course, that these factors are to be ignored in policy consideration. No reliable method has been found to quantify these factors, and thus they have no place in a strictly numerical analysis. This is an important consideration not only in the area of cost-benefit discussions but in all "financial" arguments.

Footnotes: Section E

[1] *Stanford Research Institute (SRI), Benefit/Cost Analysis of the Five Corridor Rapid Transit System for Los Angeles, SRI Project MD-6920, May, 1968.*

[2] *Southern California Rapid Transit District (SCRTD), Final Report, 1969, pp. SR11-24.*

[3] *Alan Carlin and Martin Wohl, An Economic Re-evaluation of the Proposed Los Angeles Rapid Transit System," RAND Corporation, 1968.*

[4] *Ibid., p. 4.*

[5] *Technical Advisory Committee on Rapid Transit, Report to Los Angeles City Council Ad Hoc Committee on Rapid Transit, February, 1972, pp. 64-65.*

[6] *George Smerk, Urban Transportation: The Federal Role (Bloomington: Indiana University Press, 1966), p. 242.*

[7] *SRI, Benefit/Cost Analysis, p. 9.*

[8] *Los Angeles City Planning Department, Wilshire Rapid Transit Corridor in Aerial Costs, Revenue and Expenses, and Wilshire Rapid Transit Corridor Feasibility Study, 1970.*

[9] *Smerk, Urban Transportation, P. 235.*

[10] *For an explanation and discussion of the nature of externalities, see Robert Bish, The Public Economy of Metropolitan Areas (Chicago: Markham Publishing Co., 1971).*

Conclusions

This section has dealt with some of the more salient aspects of the financial situation facing the SCRTD, and the Los Angeles transit market in general. As indicated in the introduction, only those economic analyses that relate to public policy were included.

From the section on bonding, we find that the structure of bonding capability is much more flexible than generally assumed by policy

makers. However, alternatives to bonding as a method of financing urban public transportation were also considered. The large number of currently unused potential sources of revenue indicate that a certain amount of creativity and tenacity on the part of the District could very well yield appreciable returns. A much more innovative approach, that of institutional reorganization, is discussed in the next section, showing the various alternatives to a single-purpose multi-modal transportation agency.

We may conclude from the section dealing with the application of economic tools to urban transit that:

> The price elasticity of demand is easily calculated and may be used to derive demand schedules, which in turn would show the effect of fare changes on total revenue.
>
> Cross elasticity and income elasticity indicate the extent to which transit is favored over other modes, "luxury" modes such as the automobile, adjusting system routing and service to optimize these figures will increase ridership.
>
> From a discussion of system route selection, it may be concluded, using strictly economic considerations, the Wilshire corridor is the most logical and certainly the most feasible first step for a large rapid transit system.
>
> Cost-benefit analyses, while having their place in certain areas of economics, have been overworked in the area of policy determination. The use of non-quantifiable factors in such analyses has detracted from their credibility.

The main thrust of this chapter is that financial conditions are not as bad as they might seem. Certainly the situation is, indeed, hopeless if current attitudes, structures and methods are allowed to persist. It is obvious, however, that a certain amount of creative tenacity on the part of those responsible for transit policy would result in a much improved situation. For example, the derived demand curves considered herein were computed by a method introduced in 1952; but in the past twenty years, their major impact has been in the field of economics, rather than mass transit. Cool headed application of economic analysis indicates that the situation is not hopeless.

CHAPTER VI

POLICY RECOMMENDATIONS

A. Introduction and Overall Recommendation

The recent events concerning rapid transit in the Los Angeles area subsequent to the passage of SB 325 point out the traditionally fragmented approach to transit planning that has characterized the area. There is a need for an agency with supervisory jurisdiction, to oversee transit planning in the region.

The Los Angeles area also stands in need of improved relations and closer ties to both State and federal governments. This becomes especially important in view of the increasing amounts of money that is becoming available from these bodies: SB 325 from California, and the UMTA fund. The impending Department of Transportation on a State level continues a pattern which is beginning to make transit a viable alternative. The potential cross-modal structure of a State DOT also points out the need to coordinate highway/busway projects in a non-highway-dominated situation.

There is a necessity for transit to be considered as a part of general land use patterns, pollution problems, and local and regional planning. This can best be done in a situation where these elements are taken into account as a matter of course in regional master plans.

Overall Recommendation

Effective regional multi-modal multi-disciplinary transportation planning must be given greater emphasis in the Los Angeles area.

Only recently has SCAG begun to develop a comprehensive regional transportation plan which anticipates a variety of modal choices. However, this plan will not be completed, much less implemented, for several years. Upon its completion, SCAG will face the difficult task of convincing the cities and communities of the Los Angeles region of its feasibility. Many months will be spent arbitrating differences and convincing private interests of the need to coordinate planning efforts. Hopefully, the SCRTD, the City and County Planning Departments, SCAG, the Division of Highways and other transportation interests will finally consolidate their planning efforts. Without such a functional consolidation, it is possible and even likely that long-awaited funding for non-highway public transportation projects will be misspent.

With the passage of SB 325 and federal legislation pending which would radically increase UMTA subsidies to regional transportation agencies such as the SCRTD, Los Angeles for the first time since the era of the Pacific Electric Railway will have the necessary funding for an adequate public transportation system. The SCRTD, or whichever agency will construct and operate the system, must have a transportation plan ready upon receipt of funds. In spite of SCRTD's persistent efforts in Sacramento to pass the SB 325 legislation, it was totally unprepared to appropriate its revenues properly when the legislation passed. According to Louis Guilford, Assistant to Supervisor Schabarum, SCRTD Board Member Leonard Gleckman admitted that the Central Line proposal materialized as a response to strong pressure from Senator James Mills and others. Such ad hoc planning measures reflect poorly upon the SCRTD's foresight and planning and do not improve its chances of receiving increased State and federal aid.

B. Specific Recommendations

1. State Level

a. The State Department of Transportation, recommended by the State Transportation Board and Governor Reagan, should be approved and created through enabling legislation.

This department would include both highway and public transportation departments, as well as combining functions of the Departments of Aeronautics and Public Works and the Office of Transportation Planning and Research. This multi-modal structure would facilitate the accomplishment of one of the Department's main functions: the formation of a statewide master plan for transportation. This plan would be constructed in coordination with regional master plans. In contrast to the current laissez-faire attitude of the State Transportation Board toward regional government, the new department should take an active role in the coordination of regional transportation plans. The department should also assist the regional councils of government in applying for UMTA funds and A 95 grants by providing an effective liaison to the federal level without interfering with the autonomy of the councils.

The Division of Highways would retain its structure within the new agency, with the exception that all planning would be required to be coordinated with the multi-modal State master plan.

b. A State Transit Fund should be created. The fund should be administered by the new State Department of Transportation for the benefit of all public transportation projects. With the creation of a State transportation master plan, many transportation projects without specific appropriations from the Legislature will need funding. In addition, supplementary funds to UMTA transit subsidies will be required. These monies should be provided by the State Transit Fund. Administration of these funds would be in accordance with the State master plan. Funds for specific regional projects would be distributed by the regional agency under whose jurisdiction the project is administered.

This fund has been given a beginning with the passage of SB 325, but additional sources of revenue should be derived from vehicle registration fees, "in lieu" taxes and a reallocation of the existing highway user's tax fund.

c. A State Transportation Mediation Board should be created within the structure of the proposed State Department of Transportation.

This Board would have the responsibility of bringing local and regional goals into accord with the State master plan in order to minimize deviation from the plan. The Board must be non-partisan in that it is not to be biased toward any single modal choice. This agency would mediate differences in plans, effecting compromises that would lead to greater uniformity in planning, construction and financing of public transportation projects.

2. Regional Level

a. A cross-modal regional transportation agency should be established for the six-county SCAG region. The agency should have 1) ultimate veto power for any proposed transportation plan, both by powers granted by the State Legislature and through its designation as the regional liaison to the Urban Mass Transportation Administration, and 2) the ability to function as a cooperative review board to oversee the continued implementation of a long-range regional transportation plan. If non-compliance occurs, the commission should utilize its power as disbursement agency for State and federal funds to secure effective results. The agency's powers should be comparable to, but more extensive than, the San Francisco Bay Area's Metropolitan Transportation Commission.

This enforcement agency should not fall prey to the traditional unilateral means of attempting to resolve local transportation problems but should be cross-modal and multi-disciplinary in its emphasis. Thus it should maintain close ties to the present SCAG structure. In this manner, transit planning would be coordinated with other regional urban planning and a comprehensive master plan created.

The agency could not function properly until Article 26 of the California Constitution is revised. However, this should not be allowed to inhibit the formation of the regional agency. The complete coordination of planning, routing and operation of all public transportation in the six-county region should be actively pursued.

b. A regional survey of public sentiment concerning public transportation should be made. The objective of such a survey would be to increase the involvement of the public in its transportation system and to obtain feedback on the issue of route scheduling and fares.

This survey should be similar to the model utilized in the sample taken of West Covina residents detailed in the body of this report. The

survey should be conducted in the Los Angeles region by a reputable and established agency, either public or private.

c. An intense public education program should be undertaken by the SCRTD to inform the public of the benefits of an adequate transportation system.

The sample survey taken of West Covina transit attitudes attested to the lack of public awareness of the true cost of an automobile ride. Without such an awareness, it will be difficult to attract automobile commuters to a public transportation system.

Therefore, an adequate public education program should be undertaken by the SCRTD. An emphasis of such a public transit education program must be the demonstration of the actual price of an automobile ride in order to show the high cost of private transportation in relation to public transit.

The public awareness campaign should begin with the SCRTD's own advertising--with an increased emphasis on user benefits. Additional inputs to the campaign could be obtained through citizens' and ecology groups.

d. The survey discussed above should serve as an effective indicator of public opinions and attitudes. The Board of Directors of the SCRTD should be required to act in accordance with the survey results. No conflict of interest should be permitted by members of the Board.

As the members of the SCRTD Board of Directors are currently appointed rather than elected there is no direct public control over their actions. Election of board members would facilitate the response of the Board to the needs and desires of the public and assure transit a position as a viable alternative transportation mode in a freeway-dominated region.

e. Construction of the Wilshire Line or a combination of the Wilshire-Central Lines should begin without further delay within the parameters of currently developed plans.

A "starter" transit line should be built immediately. Nothing is gained by delaying and construction costs increase at the inflation rate of several percent annually. From an economic viewpoint, the Wilshire Line is most practical of the two lines proposed. Such a financially successful line would serve as an excellent demonstration line for the construction of a more extensive mass transit system in the future. The Central Line would serve a community badly in need of adequate public transportation and would be less expensive to construct.

Both lines have been shown to be of sufficient merit for construction. Given adequate financial resources, both lines should be constructed.

f. In an effort to utilize freeways in the long-haul capacity in which they were designed, investigations should be undertaken to determine which freeways could effectively incorporate a busway design.

At the present time freeways are not being used at maximum efficiency. Freeways were originally designed to accommodate vehicles travelling long distances. However, large numbers of private vehicles, which make short trips, now use the freeways. With buses and "freeway fliers" which tend to make longer trips, given priority in freeway lands, the freeways would more effectively serve the long-haul traffic for which they were designed.

Not all freeways, however, can accommodate the busway design. The agency most qualified to determine which freeways could incorporate priority lanes for high-occupancy vehicles is the Division of Highways. Once such studies are completed, the Division of Highways and the SCRTD should collaborate in the planning and construction of such bus corridors as in the San Bernardino Exclusive Busway Project.

APPENDIX 1

WEST COVINA QUESTIONNAIRE

APPENDIX 1

WEST COVINA QUESTIONNAIRE

1.0 Do you work in or near downtown Los Angeles?
If YES, to 1.2 If NO, to 1.1.

1.1 Do you regularly travel, for any purpose including going to or returning from work, in the direction of Los Angeles?
If YES, to 1.2 If NO, to 2.0

1.2 Approximately how far from home does this trip take you?

1.3 Approximately how long does it take you to get there?

1.4 Do you drive?
If YES, to 1.41 If NO, to 1.42

1.41 How do you feel about driving?
to 1.5

1.42 How do you get there?
(If Bus, to 2.0)

1.5 Could you use the bus to get there?
If YES, to 1.6 If NO, to 2.0

1.6 Why do you prefer your present means of travel?

2.0 Would you, individually, benefit if a mass transit system were available tomorrow?

3.0 Would the people of your community or Southern California benefit?

4.0 Do you see benefits in a rapid transit system?
If YES, to 4.1 If NO, to 5.0

4.1 What would those benefits be?

5.0 How often do you use the freeway system?
If YES (do use) to 5.1 If NO (do not use) to 6.0

5.1 At what time of day do you use the freeways?

5.2 Are the freeways clear or congested when you use them?

6.0 If the freeways were never congested, would you use them more often?

7.0 Do you see a need for more freeways in Southern California?

8.0 Were a convenient rapid transit system to exist, what fare would you be willing to pay for a ride into Los Angeles?

9.0 What is the most one should have to pay for such a ride?

10.0 Do you think a commuter fare should be higher than a non-rush hour fare?

11.0 Were a rapid transit system to be built in Los Angeles, these methods could be used to finance it. Could you give a yes/no opinion of the following? Property Tax; Sales Tax; Gasoline Tax; Federal Government Grants; Private Ownership.

12.0 If it were the only means of subsidizing rapid transit in Los Angeles, would you vote for a bond proposal which authorized a property tax increase?

13.0 If it were your choice, what type of transportation system would you prefer to see built in Los Angeles? Please give a yes/no opinion: Monorail; Ground Level Train; Subway; Expanded Bus Service; More Freeways.

14.0 Which of these systems do you personally prefer?

CROSS TABULATIONS

		X^2[1]	D.F.[2]	
1.	Question 2.0 vs time of day of sample	3.32	4	PL 52%
2.	Question 2.0 vs Question 12.0	3.75	4	PL 45%
3.	Question 3.0 vs Question 12.0	2.72	4	PL 62%

[1] CHI-Square (X^2) Distribution: $X^2 = \frac{(k-1)S_A^2}{S^2}$

where: S^2 = variance of individual observations
$k-1$ = degrees of freedom
S_A^2 = variances among sample groups

[2] Degrees of Freedom.

Source: Wallis and Robarts, Statistics: A New Approach (Glencoe, Illinois: The Free Press, 1956), p. 435.

APPENDIX 2

STATUTES RELEVANT TO SCRTD BONDING CAPABILITY

APPENDIX 2

STATUTES RELEVANT TO SCRTD BONDING CAPABILITY

The following are sections of the Southern California Rapid Transit District Law, in the California Public Utilities Code, which are of particular interest when considering the District's bonding capability, discussed in Chapter V, Section A.

General Obligation Bonds

In addition to the general authorization to utilize these bonds, Section 30703.1, added in 1967, provides:

> A vote in favor of the issuance of the bonds shall authorize the use of such transit funds* appropriations, contributions, grants of loans, for such purposes, and no other or further elections need be held to authorize the board to collect or provide for the collection of and to make such funds or moneys.

Section 30902 provides:

> . . . the principle of, interest on, and sinking fund payments for general obligation bonds of the district, including the establishment and maintenance of any reserve fund therefore, shall be paid from revenues of the district.

In addition, Section 30902 establishes the property tax as a support for bonds:

> If from any cause the revenues of the district are or are expected to be inadequate to pay the principal of and interest on the bonds and sinking fund payments, as the same become due, and establish or maintain any reserve fund

---

*This section defines "transit funds" as: "any funds or money payable to or received by the district from any California transit funds or any funds which the federal government, the State, a county or city, or other public agency has or is authorized by any law or by official action thereunder to appropriate, contribute, grant, or loan to the district to be used for the payment of any indebtedness, including but not limited to any bonded indebtedness of the district in accordance with the provisions of part or any other law."

required therefore, and if the proceeds of the special tax or taxes, levied at the maximum rates authorized, together with such revenues, are still estimated to be insufficient for said purposes, the board shall levy and collect upon all property in the district taxable for county purposes a tax at least sufficient, with the revenues already collected and available therefore, together with the anticipated proceeds of the special tax or taxes, to pay the interest on the bonds as the same will become due and such part of the principal thereof, including any sinking fund payments, as will become due before the proceeds of a tax levied at the time of the next general tax levy will be available for such purposes, and sufficient to provide or to restore such reserve fund to the amount required by any of the district's agreements with its bondholders. Such special tax or taxes shall be continued at the same rates as therefore established during each successive calendar or fiscal year until the same are changed by action of the board.

Limited Tax Bonds Financed by Sources Other than Property Tax

These are provided for in Sections 30920-30923, added in 1967, commencing with the legal base for securing such funds:

30920:-In addition to the power of taxation granted by Article 1 (commencing with section 30800) of this chapter and subject to the priorities set forth in Section 30638, the board may impose one or more of the special taxes authorized by Part 17 (commencing with section 37001) of Division 2 of the revenue and taxation code in the manner and for the purposes prescribed subject to all limitations of this part.

Section 30821 deals with limitations on what tax revenues may be used for (they cannot be used for operating expenses) while Section 30822 describes the process of securing tax bonds. Section 30823 explains what must be done with surplus tax monies: they must be used to create a sinking fund that may only be used within the legal limitations of Section 30821. These four sections were added in 1967.

Revenue Bonds

Section 30930:-Whenever the board deems it necessary for the district to incur a revenue bonded indebtedness for the acquisition, construction, completion or repair of any or all improvements, works, property or facilities authorized by this part or necessary or convenient for the carrying out of the powers of the district, or for any other purpose authorized by this part, including, without limitation, the refunding referred to in Chapter 8 (commencing with Section 31000) of this part, the board shall provide for the issuance of

such revenue bonds as provided by the Revenue Bond Law of 1941, as the same now exists or may hereafter be amended; except that: (a) if the board provides for the issuance of such revenue bonds by ordinance adopted by a vote of two-thirds of all the members of the board, which ordinance shall be subject to referendum, and (b) no election is required by Section 30932, no election need be called or held for the purpose of authorizing the issuance of revenue bonds.

Improvement District Bonds

Collection and use of these funds are stated in Section 30967:

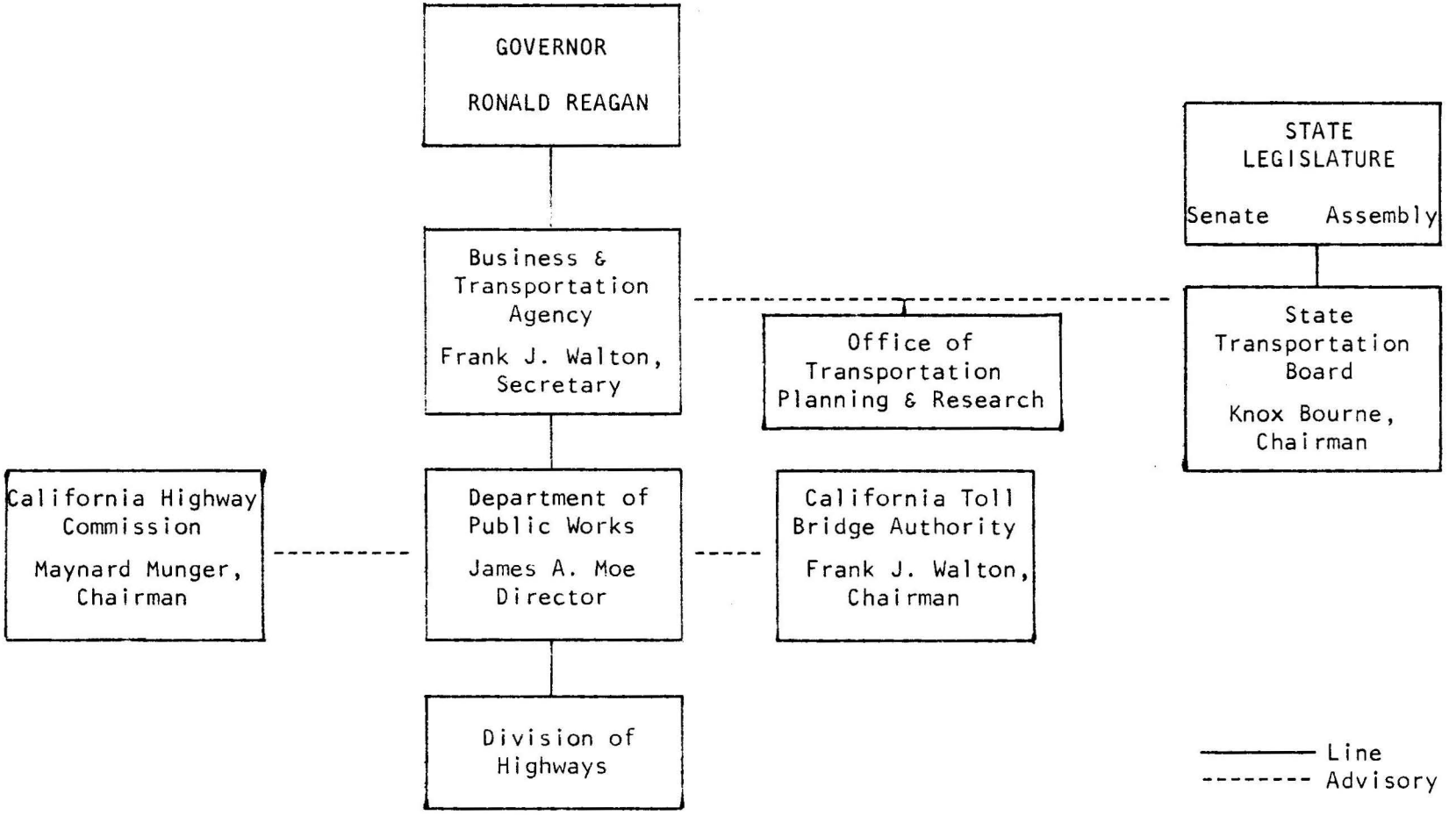
30967:-After the formation of such improvement district within the district pursuant to this article, all proceedings for the authorization and issuance of bonds of the district for such improvement district shall be limited and shall apply only to the improvement district; and taxes for the payment of said bonds and the interest thereon shall be levied exclusively upon the taxable property in the improvement district; and the revenues of the district shall be used only to the extent set forth in the resolution declaring the necessity.

APPENDIX 3

STATE OF CALIFORNIA
TRANSPORTATION AGENCY RELATIONSHIPS

APPENDIX 3

STATE OF CALIFORNIA: TRANSPORTATION AGENCY RELATIONSHIPS



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