regional transportation plan

southern california association of governments

regional transportation plan

1978 edition

prepared by

southern california association of governments

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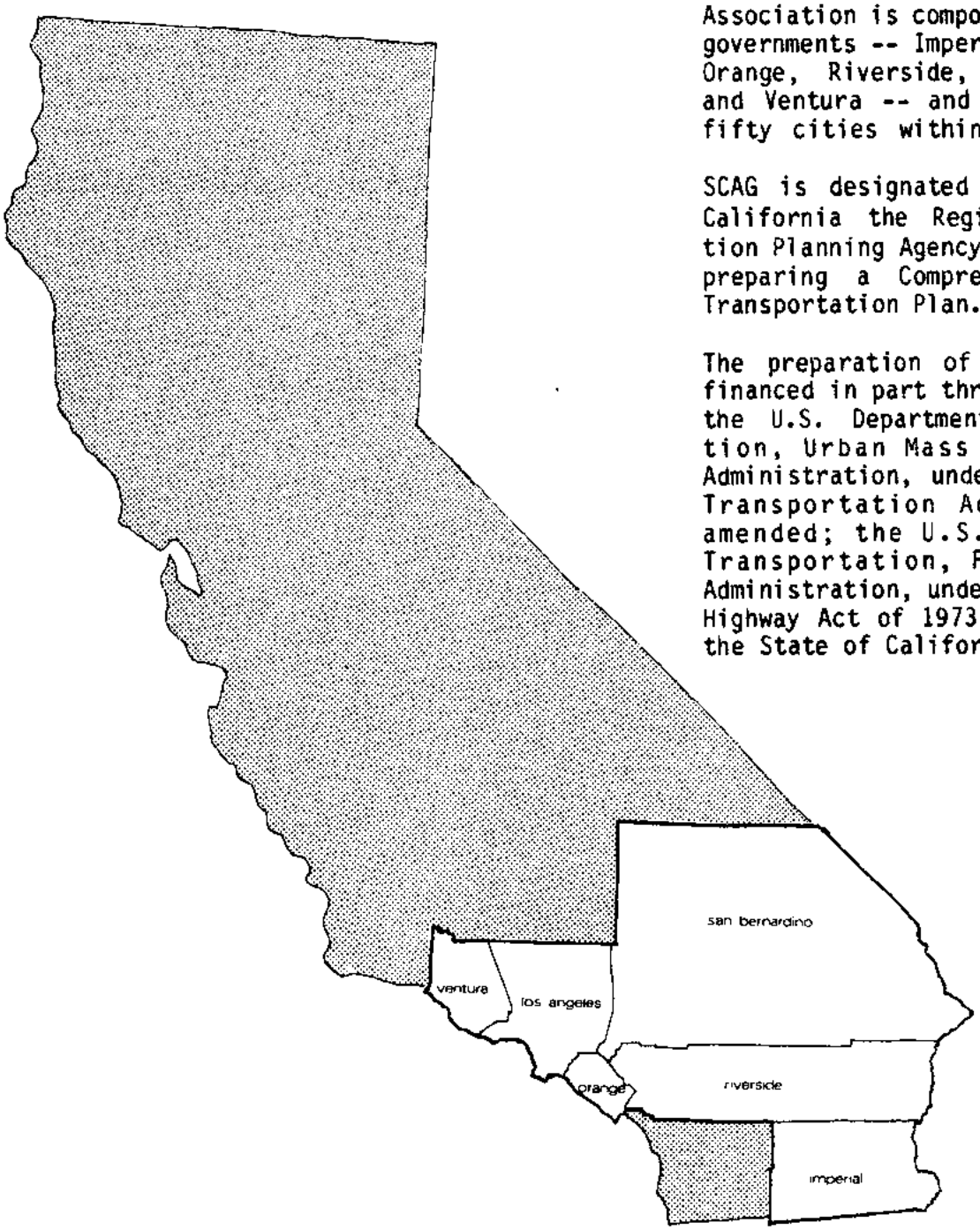
The Environmental Impact Report of the Plan is contained in a separate document

The Southern California Association of Governments (SCAG) was formed by local elected officials in 1965 to deal with issues of regional concern. SCAG is a partnership of local governments joined together in voluntary agreements under the Joint Exercise of Powers Section of the California Government Code. The Association is composed of six county governments -- Imperial, Los Angeles, Orange, Riverside, San Bernardino, and Ventura -- and over one hundred fifty cities within these counties.

SCAG is designated by the State of California the Regional Transportation Planning Agency, responsible for preparing a Comprehensive Regional Transportation Plan.

The preparation of this report was financed in part through a grant from the U.S. Department of Transportation, Urban Mass Transportation Administration, under the Urban Mass Transportation Act of 1964, as amended; the U.S. Department of Transportation, Federal Highway Administration, under the Federal Aid Highway Act of 1973, as amended; and the State of California.



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FOREWORD

While transportation recommendations must be based on the best available information, political decisions are ultimately required. And these decisions must reflect the public will. When risks must be measured against benefits, when economic and environmental values must be weighted and balanced, the public has the right and the obligation to make its views known.

SCAG welcomes public participation, because informed and involved citizens and citizen groups are essential for action to improve our regional transportation system. The views, opinions, needs and desires of the public will continue to be sought as SCAG updates the regional plan.

What can you do to make a difference in the transportation planning process?

First of all, get informed about local, regional and state transportation proposals, plans and programs. Once you have this basic information, the next step is to evaluate it within your own experience, based on where you live and travel.

Then, determine what you want in transportation, now and in the future. Take your ideas, requests and suggestions to your local elected officials, to planners, or to others who are working on the problems.

Get involved with your neighborhood or community planning group. Find out who does this work in your area. Encourage civic and local organizations to have programs on transportation issues.

And be sure to let us know at SCAG how you feel about transportation. We invite your participation in public hearings, forums, workshops, and by writing or calling us. SCAG encourages public input and involvement -- yes, and even prodding and constructive criticism of its regional planning program.

For further information, please contact the SCAG Community Relations Office.

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SOUTHERN CALIFORNIA
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RESOLUTION OF THE SOUTHERN CALIFORNIA ASSOCIATION OF GOVERNMENTS ADOPTING AMENDMENTS TO THE 1978 REGIONAL TRANSPORTATION PLAN

No. 79-158-6

WHEREAS, the Southern California Association of Governments (SCAG) serves as the areawide planning agency for Southern California and has been duly designated under federal and state law as the agency responsible for regional transportation planning within its jurisdiction; and

WHEREAS, pursuant to this authority the SCAG Executive Committee adopted a Regional Transportation Plan on October 5, 1978; and

WHEREAS, an amendment has now been prepared for incorporation into the Regional Transportation Plan which address additional transportation issues;

NOW THEREFORE BE IT RESOLVED that the Executive Committee of the Southern California Association of Governments hereby adopts the 1978 Regional Transportation Plan Amendment.

BE IT FURTHER RESOLVED that the President of the Southern California Association of Governments is authorized to transmit the 1978 Regional Transportation Plan Amendment to the State of California in accordance with state law.

Passed and adopted by the Executive Committee of SCAG at a regularly adjourned meeting held this 25th. day of January, 1979.

James H. Wilson, President

Attest: Mark Pisano, Executive Director

SOUTHERN CALIFORNIA
ASSOCIATION OF GOVERNMENTS
600 South Commonwealth Avenue • Suite 1000 • Los Angeles • California • 90005 • 213/385-1000

RESOLUTION No. 79 - 158 - 5

SCAG EXECUTIVE COMMITTEE CERTIFICATION OF THE FINAL ENVIRONMENTAL IMPACT REPORT SUPPLEMENT PREPARED FOR THE ADOPTION OF THE 1978 REGIONAL TRANSPORTATION PLAN AMENDMENT

WHEREAS, the Southern California Association of Governments has undertaken the preparation of an amendment to the Regional Transportation Plan pursuant to its responsibilities as the regional transportation planning agency; and

WHEREAS, an Environmental Impact Report (EIR) was prepared on the Regional Transportation Plan and certified as complete by the Executive Committee of SCAG on October 5, 1978, in compliance with the California Environmental Quality Act of 1970 (California Public Resources Code Section 21000 et. seq.); and

WHEREAS, CEQA requires that an EIR Supplement the prepared and considered by the Executive Committee of SCAG prior to its approval of the Regional Transportation Plan Amendment;

NOW THEREFORE BE IT RESOLVED that the Executive Committee of the Southern California Association of Governments hereby certifies the completion of the Final Environmental Impact Report Supplement for the 1978 Regional Transportation Plan Amendment pursuant to the California Environmental Quality Act of 1970 and declares that the Executive Committee has reviewed and considered the information contained therein prior to the approval of the Regional Transportation Plan Amendment.

Passed and adopted by the Executive Committee of SCAG at a regularly adjourned meeting held the 25th day of January, 1979.

James H. Wilson, President

Attest: Mark Pisano
Mark Pisano, Executive Director

SOUTHERN CALIFORNIA
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RESOLUTION ON THE FINDING OF CONSISTENCY BETWEEN THE REGIONAL TRANSPORTATION PLAN AND THE STATE IMPLEMENTATION PLAN

Resolution No. 79 - 158 - 4

WHEREAS, the Southern California Association of Governments (SCAG) is the designated Metropolitan Planning Organization for the area within its jurisdiction and, as such, is responsible for the preparation and adoption of the Regional Transportation Plan; and

WHEREAS, Section 176 of the Federal Clean Air Act, as amended, and Section 109(j) of the Federal Aid Highway Act, as amended, require SCAG to assess the consistency of the Regional Transportation Plan with the State Implementation Plan for Achieving and Maintaining National Ambient Air Quality Standards, and

WHEREAS, SCAG has acted to carry out this responsibility by insuring the consistency of the Regional Transportation Plan with the Air Quality Management Plan (AQMP), with the understanding that any final assessment must await approval of the AQMP by the Administrator of the U. S. Environmental Protection Agency;

NOW THEREFORE BE IT RESOLVED that the Executive Committee of the Southern California Association of Governments hereby accepts the report entitled: "1978 Consistency Assessment of the SCAG Regional Transportation Plan to the State Implementation Plan for Achieving and Maintaining National Ambient Air Quality Standards," attached as Exhibit "A" and made a part of this resolution by reference, as an accurate description of the status of current transportation-related air quality improvement efforts within the SCAG region.

BE IT FURTHER RESOLVED that the Executive Committee hereby finds the 1978 Regional Transportation Plan to be consistent with the California State Implementation Plan for air quality (based upon the regional Air Quality Management Plan as noted above).

Passed and adopted by the Executive Committee of SCAG at a regularly adjourned meeting held this 25th day of January, 1979,

Southern California Association of Governments

James H. Wilson, President

Attest: Mark Pisano

Mark Pisano, Executive Director

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summary

1.0

1.0
INTRODUCTION

The Southern California lifestyle is built on travel. Our homes and businesses are spread across 1,600 square miles of urbanized area; the region as a whole occupies 38,000 square miles. Our 10 million residents have over 5-1/2 million autos, and drive them daily on the region's 3,700 miles of freeways and highways, and thousands of miles of surface streets. Each day our public transit system carries over one million passengers on over 3,400 buses. In one recent year, the region's six major air-carrier airports moved some 29 million passengers and 750,000 tons of cargo. And the many general-aviation airports in the region house over 11,000 private aircraft used for business and pleasure.

For recreation, the region also has miles of bikeways, equestrian and hiking trails, and numerous marinas for pleasure boating.

Besides moving people, our transportation system moves goods and services. The highway system serves trucks as well as passenger vehicles. The three major ports of the region (Los Angeles, Long Beach and Port Hueneme) handled $13 billion in trade in 1974 -- 30% of the total trade at all West Coast ports. Three major railroads move people and freight through the region -- the Southern Pacific; the Union Pacific; and the Atchison, Topeka, and Santa Fe. Southern California has the busiest rail market in the Western United States.

All of these facilities and the people who operate them make up the region's complex transportation system. How we work, play, and live depends in large part on how well that system works.

Unfortunately, it doesn't work as well as it used to. We see increasing traffic congestion, more burning of energy, and more air pollution. The costs of just keeping up the existing system are skyrocketing -- and there are not enough tax dollars to fund all the new programs the region wants. We must decide very carefully how to spend our money.

The 1978 Regional Transportation Plan focuses on approaches to solving these and other problems. Mobility, energy consumption, air pollution, financing, project priorities -- these are some of the major transportation issues that SCAG is dealing with.

1.1
CRITICAL TRANSPORTATION ISSUES

SCAG's first major effort in transportation planning came in 1974, when eight major transportation issues were identified:

Land Use

How do our land use decisions affect the provision of transportation facilities and services, and vice versa?

Air Quality

How will changes in the transportation system contribute to attainment of clean air?

Energy

What changes in the transportation system will best conserve energy?

Access and Mobility

How can the transportation system provide better access to opportunities, and equitably improve people's mobility?

Allocation of Resources

How can our limited funds provide the greatest benefit, and how can additional funds be found?

Institutional Responsibilities

What institutions, having what responsibilities, can best provide and operate the system?

Technological and Operational Change

How can the system best incorporate new technologies?

Phased Decision-Making

How can decisions meet current transportation needs and yet keep our options open for the future?

1.2
THE REGIONAL TRANSPORTATION PLAN

The Regional Transportation Plan is updated periodically, to keep pace with changes in legal requirements, new technology, available funding, and so on. This RTP -- the fifth in a continuing series -- is built on policies and actions previously adopted (in the Critical Decisions Plan for Transportation, 1974, and the RTPs of 1975, 1976, and 1977), and includes new policies and actions adopted this year. This current Plan will, in turn, be refined and amended in future updates.

The Regional Transportation Plan must fulfill a number of state and federal legal requirements. These require that the region prepare a transportation plan which will include both short- and long-range elements, and result in a balanced and coordinated transportation system. Although a specific definition of balanced transportation is arguable, generally this RTP uses the term to mean: the provision of services and facilities in a proper proportion, by mode, necessary for the development of an equitable and efficient transportation system.

Other legal responsibilities to be met include the Clean Air Act. The Act requires each state to adopt a plan that will achieve and maintain acceptable air quality, using measures to control transportation, if necessary. This RTP contains policies and actions that specifically address air quality; these -- along with plans for controlling pollution from causes other than transportation -- will make up the regional element of the statewide air-quality plan.

The Regional Transportation Plan is not intended to be a builder's blueprint; rather, it is primarily a policy document that sets out clearly the ideas that will guide the future development of the transportation system. It identifies the directions in which the region must move. It says which kinds of projects are acceptable to the region and, by implication, which are not. It sets criteria by which each project can be judged, and defines what each should accomplish. The force of its policies derives from the fact that they are agreed upon by those representing every member government in the region, and the fact that only those projects and programs accepted into the Regional Transportation Plan become eligible for funding by the state and federal governments.

Each year, the RTP forms the basis for development of the Transportation Improvement Program, and is used in reviewing federal grant applications and projects using Local Transportation Fund (SB 325/821) moneys.

1.3
GOALS AND OBJECTIVES

Five broad goals for transportation have been adopted:

1. To develop a transportation system which will support the comprehensive goals of the region, taking into account the effect of mode selection, location, and time upon the physical, social, economic, and organizational environment.

2. To create a balanced transportation system integrated with planned land use to provide effective mobility for all people and efficient and economic movement of goods.

3. To minimize the need for long distance intraregional travel, particularly work trips, by guiding the development of the region to create self-sufficient metros having balanced service facilities, employment, and housing.

4. To develop for the region a transportation system compatible with the environment, using the available resources wisely, promoting the aesthetic beauty of the region, and avoiding undesirable environmental changes.

5. To develop a transportation system that is financially, legally, and politically feasible, has broad public support, and has a commitment to its implementation by elected officials and those providing transportation services.

In conjunction with these overall goals, the 1978 RTP establishes four quantified objectives for the regional transportation system:

1. Air Quality

   Mobile sources at a minimum will reduce emissions (expressed) in tons per day) by 1987 according to the table 4.3-1 on p 4-4.

2. Energy

   Reduce fuel consumption by the transportation system equivalent to a reduction of vehicles miles traveled of 5% in each five-year period from 1980 to 1995.

3. Transit

   Increase transit ridership, currently 3.36%, to 6% of person trips in the region by 1990.

4. Rideshare

   A) Carpool/vanpool

      By 1987 increase the average light-duty vehicle occupancy for the daily, freeway/non-freeway, home to work trip from 1.2 to 1.3

   B) Transit

      By 1990 increase transit ridership by 755,000 new transit person-trips daily.

1.4
POLICIES AND ACTIONS

The Plan suggests various means of attaining the region's transportation objectives. These take the form of policies and actions which guide decisions on the following elements of the system: automobiles, public transit, airports, non-motorized modes, highways, maritime, and railroads.

The basic theme running through the Regional Transportation Plan's policies and actions is that of "improved system management". In each section, actions are divided between transportation system management and system development.

Transportation system management proposals encourage better use of the existing system by increasing its people-carrying capacity. Measures include ridesharing (carpools, vanpools, transit), and increasing air-carrier load factors. System management methods have lower capital cost than system development strategies, and usually can be implemented more quickly.

System development proposals include construction of new facilities such as roadways, rapid transit, expanded ports, and new airports. The costs of system development (e.g., capital construction) have increased much faster than revenue from local, state, and federal sources. This makes system development harder to finance than ever before. Since our already extensive system costs more and more each year just to maintain and operate, we should plan further development only when the system we already have cannot be made to meet our needs.

1.4.1
Multi Modal Program Development

The multi-modal section describes two specific planning approaches that transcend most of the transportation modes:

- o Transportation System Management (TSM), which includes ridesharing, and
- o Air Quality Management.

Each planning approach leads toward attainment of the goals adopted by the region. For example, TSM attempts to make the most out of the system we have by improved management and operational efficiency. Ridesharing, one TSM technique, tries to maintain mobility without adding more cars to the roads. The air quality management planning activities seek to improve air quality -- in part, by reducing the pollution caused by transportation.

Understanding the integration of these strategies throughout the plan is important, since many actions support both programs. For example, providing exclusive lanes for transit, vanpools, and carpools is basically a strategy that encourages ridesharing. However, when two or more people who once drove separately share a vehicle, there is also less congestion and vehicle pollution. Thus the exclusive lane also meets the aims of the transportation management and air quality approaches.

A Ridesharing Plan and an Air Quality Maintenance Plan are scheduled for adoption and amendment into the RTP in February of 1979.

1.4.2
Automobile Policies and Actions

On the average, Southern Californians make over three trips a day -- 96.6% of them by car. In fact, we have become accustomed to driving everywhere, often using our cars when we don't really have to. All these trips add to air pollution, traffic and energy consumption. To meet our clean-air and fuel-conservation objectives, we must learn to use our 5-1/2 million automobiles more wisely.

We have to examine how much each of us contributes to the problems, and see where we can cut back. For example, the RTP recognizes that automakers have a responsibility to develop clean-burning engines that use less fuel. But it also recognizes that we cannot meet the federal air-quality standards through cleaner engines alone. We will simply have to drive less, particularly as the population increases.

The RTP supports ridesharing to maintain mobility, reduce congestion, clean the air, and reduce consumer costs. Mandatory inspection and maintenance of light-duty vehicles (cars, vans, small trucks) is endorsed to ensure that engines don't waste gasoline or dirty the air. Inspection and maintenance is also a strategy required by the Air Quality Management Plan, necessary to allow an extension from 1982 to 1987 for meeting the federal standards for carbon monoxide and photochemical oxidant.

1.4.3
Transit Policies and Actions

Over a million of the region's residents ride transit every day, especially for home/work trips at peak hours. The SCAG region has a number of different forms of transit, including fixed-route bus service, dial-a-ride, and some charter bus service. Paratransit service (taxis, vans) is provided by many private operators, and some local governments supply specialized services to the elderly and handicapped. AMTRAK offers rail transit between Los Angeles and San Diego.

About 850,000 people use the buses of the Southern California Rapid Transit District daily, while over 60,000 use the Orange County Transit District service. The remainder use transit provided by other counties or by cities, or services such as dial-a-ride, taxis or vans, and Amtrak.

Despite these impressive numbers, only 3.36% of daily trips are made on transit. The RTP proposes to increase this number to 6% -- which would help to cut down vehicle miles traveled.

To attract new riders, SCAG proposes various measures to improve and increase transit service -- for example, better coordination among transit operators. Transit service standards and policies have also been adopted to help improve service levels and lower costs.

The Plan supports preliminary work on the Regional Transit Development Program. This program initially calls for the establishment of an areawide bus-on-freeway system; construction of a people-mover system in downtown Los Angeles; and development of a grade-separated rapid transit facility running from downtown Los Angeles through North Hollywood. Portions of the RTDP will affect San Bernardino, Riverside, Orange, and Los Angeles counties.

The Plan also supports preliminary engineering for an exclusive transit guideway in Orange County, and transit improvements in the Los Angeles/San Diego corridor. Also urged is the expansion of the region's local service fleet by several hundred buses over the next five years.

Policies aimed at better service for the elderly and handicapped would increase the number of transit vehicles easily boardable and usable by the physically handicapped. Transit passengers' safety and security needs would be met through such measures as improved physical planning, procedural guides for transit employees, and improved communication equipment.

1.4.4
Highway Policies and Actions

The region's vast network of highways moves more people and goods than any other segment of the transportation system. Drivers reach most destinations quickly and easily on the 1,455 miles of freeways and 2,282 miles of conventional state highways in the region. But the system has growing problems.

More and more vehicles are using the highway system, creating congestion, adding to air pollution, and consuming growing amounts of our precious energy supply.

To cope with these problems, the Plan advocates both transportation system management (TSM) measures and further system development. TSM measures are favored over system development wherever possible, due to their lower capital costs and greater ease of implementation. Specifically, the RTP recommends that highway projects be funded in the following order of priority: first, maintenance and rehabilitation, and second, operational improvements and new construction.

The RTP urges that Caltrans implement projects necessary to maintain and rehabilitate the system, or to make it safer. To ease congestion, the RTP supports traffic-operations improvements such as synchronized signals, improved striping, and upgrading of routes that can serve as alternatives to freeway travel. In addition, SCAG supports the increased use of high-occupancy vehicles (buses, carpools, vanpools) to reduce pollution and energy consumption. The Plan recommends that such vehicles receive preferential treatment on the highway system, including special reserved freeway lanes and bypass facilities at metered on-ramps.

In terms of system development, the RTP urges completion of needed new construction. Within the region's freeway system there are several "essential gaps", which are links between two completed portions of a freeway, expressway, or major route.

There are also numerous areas in the region where new freeways or major upgrading may be needed. Potential highway-system projects, now being evaluated, will be priority-ranked for possible construction in the future.

1.4.5
Airport Policies and Actions

One out of three persons who want to fly in 1995 won't be able to, if the region's expected air-travel demand for 1995 is reached and our airports have not been expanded. The RTP recommends that all six of the region's major airline airports expand to the maximum capacity currently planned.

Many airports in the region cannot grow beyond certain limits due to regulations governing noise, environmental impacts, use of airspace, and so on. The proposed Palmdale International Airport could relieve much of the expected overcrowding.

The RTP recommends that undeveloped land around new airports be planned for uses compatible with airport operations, and that all areas which benefit from new facilities share in the costs of building them. Plans for new or expanded airport facilities must, of course, meet state and federal environmental standards.

Another worsening airport problem is ground access. One solution would be to process air passengers at remote terminals and then take them to the airports in group transport. The RTP recommends that such terminals be planned for and phased in as needed.

1.4.6
Non-Motorized Modes Policies and Actions

Southern California's climate allows a wide range of leisure pursuits. Many such activities -- walking, bicycling, horseback riding, hiking -- require trails or special lanes which are part of the transportation system. The RTP Non-Motorized Section concerns itself with these modes.

The initial policies deal primarily with bicycling, which could serve many of our trips. All of the counties and 80% of the cities in the SCAG region have developed plans for bikeways, and the RTP recommends that local governments encourage and promote greater bike use. For example, safe bicycle storage should be provided at all major destinations, and cities and counties should require bike-storage facilities in large public and private buildings, and at bus terminal facilities. The RTP also favors modifying some streets and highways to provide bicycle lanes. These actions, and programs of biker/driver education and bike-law enforcement, should promote a safe environment for cyclists and encourage the enjoyment of this useful mode.

1.4.7
Maritime and Railroads

The SCAG region has three major ports -- Los Angeles, Long Beach, and Port Hueneme -- and is served by three major railroads. Except for AMTRAK, which provides passenger service within the region, both ship and rail modes carry mostly freight. Ports are public facilities which gear their operations to the demands of the private sector. While both rail and sea transport are privately owned, each has a considerable impact on public transportation facilities, since the freight they carry is at some point trucked on public highways. Each also has an effect on the region's environment. Thus both modes must be considered in a regional transportation plan.

While approving the ports' Master Plans for development to 1990, SCAG proposes to take a more active role in reviewing individual projects. It will do this by increasing its contacts with Harbor Commissioners and Harbor Districts, and by strengthening its review of projects' Environmental Impact Statements.

Working with AMTRAK to increase the level of passenger service in the Los Angeles/ San Diego travel corridor, SCAG will also support rail passenger service in other corridors as an alternative to long-distance commuting by automobile.

The connection points that ports and railroads have with other modes (especially highways) will be carefully considered in future RTP updates. Policy guidelines for incorporating rail, port, pipeline, and truck considerations will be developed in future regional plans.

1.5
FINANCIAL SECTION

The financial element of the plan presents a summary of existing sources of funds to provide transportation services and facilities in the SCAG region. Financial need for the future is then projected on three levels:

a financially constrained plan (below current service levels),

a maintenance of current services level plan (keeping service as is),

an unconstrained plan (expanding levels of service).

For transit, the implications of a financially constrained plan vary from county to county. In counties other than Los Angeles, moderate system expansion is possible even in the constrained case. However, in Los Angeles, if no added funds are found to support SCRTD's operations, further service cutbacks and fare increases will be necessary to maintain a balanced budget. The maintenance of current services level transit plan is higher than the constrained plan by the amount necessary to fund SCRTD's operations deficit.

The financially unconstrained transit plan incorporated all the system expansion envisioned by the Regional Transit Development Program. Although additional federal funds will be available for some of the added capital expenses, and fare revenues will be higher due to increased patronage, an additional $1,600-million will be needed to fund the program --an amount which could be raised by a 1/3 cent sales tax increase.

The financially constrained highway program is based on the assumption that the SCAG Region is able to obtain the legal maximum of capital improvements. The "expansion" unconstrained alternative calls for an additional $700-million in improvements. This sum could be raised by imposition of a 1.4 cent gasoline tax if all funds generated by the region were returned to it.

A financially constrained Streets and Roads program will not be adequate to fully fund maintenance and rehabilitation as shown to be needed in the maintenance of current services level plan. To continue Streets and Roads Programs at the historical level, maintenance/rehabilitation will require an additional $800 million, equivalent to a 1.6 cent gas tax increase.

introduction

2.0

2.0
INTRODUCTION

2.1
PURPOSE OF THE PLAN

The purpose of the Regional Transportation Plan (RTP) is two-fold. It must define the course of action Southern California should take to achieve a balanced transportation system for both goods and people, and it must satisfy several state and federal requirements.

2.1.1
Guide to System Management and Development

The Plan's main purpose is to guide the region in developing a balanced transportation system. This system must: 1) serve all population groups and satisfy critical transportation needs; 2) combine existing and new modes into a single, coordinated system; 3) protect the environment; 4) use available revenues for the greatest benefit; and 5) help guide the patterns of regional growth by supporting planned land uses.

The RTP is not a detailed blueprint of the transportation system of the future. Rather, it is a policy document which provides a framework for developing a regional system. The Plan identifies regional transportation goals and objectives; sets policies from which projects can be developed, and against which proposed projects can be evaluated; outlines actions to be implemented; and presents a plan for financing programs and projects.

Projects to be implemented in the short term are listed in the Transportation Improvement Program (TIP). The RTP (planning) and TIP (programming) complement one another. Policies and actions in the RTP form the basis for development of, and inclusion of projects in, the TIP. The TIP's specific projects implement the RTP in the short term.

2.1.2
Legal Requirements

The Plan responds to many legal requirements. Changes in the requirements often affect the degree of emphasis placed on specific issues in the RTP.

AB402 of 1977* requires that designated transportation planning agencies (e.g., SCAG) shall prepare a regional transportation plan

> "directed at the achievement of a coordinated and balanced regional transportation system, including, but not limited to, mass transportation, highway, railroad, maritime and aviation facilities and services. The plan shall be action-oriented and pragmatic considering both the short- and long-term future and shall present clear, concise policy guidance to local and state officials."

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* Chapter 1106, Statutes of 1977

The law requires the plan to have policy, action, and financial elements. Adoption procedures are described. The first plan is to be forwarded to the California Transportation Commission by October 1, 1978, and plans are to be adopted every two years thereafter.

SCAG has worked with Caltrans, other regional agencies, and local governments to help develop the guidelines on RTP preparation adopted by the California Transportation Commission on May 18, 1978.

Federal regulations, issued jointly by the Federal Highway Administration (FHWA) and the Urban Mass Transportation Administration (UMTA), also require the development of a transportation plan consisting of short-range and long-range elements. This plan resulted from a continuing, cooperative and comprehensive planning process by SCAG, local agencies, and the state, as required under federal law.*

SCAG is the agency responsible under federal and state law for carrying out the regional transportation planning process, and the 1978 RTP meets this responsibility in part.

The Plan addresses other legal responsibilities. For example, the Federal Clean Air Act requires that each state adopt a plan to achieve and maintain air quality -- using, when appropriate, transportation control measures. The 1978 RTP contains policies and actions directed at air quality. These, combined with pollution control programs for areas other than transportation, make up the regional element of the statewide plan to be prepared by the California Air Resources Board.

The Plan meets the UMTA requirement that transit services for the elderly and handicapped be improved.

The RTP will be the basis for development of the Transportation Improvement Program, and will be used in reviewing federal grant applications and projects using Local Transportation Fund (SB325/821) moneys.

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* These regulations detail responsibilities for metropolitan planning organizations. They also include instructions for the preparation of the Transportation Improvement Program, the Unified Work Program, and the Transportation System Management element, as well as procedures for certification. See also 23 USC 105, 134(a) and 135(b); 49 USC 1602, 1603(a), 1604.

2.2
PLANNING PROCESS AND PARTICIPANTS

In the SCAG region, every level of government and many special-purpose entities are involved in transportation planning. SCAG, the regional planning agency, is designated by the federal and state governments to coordinate transportation plans across geographic boundaries, and to coordinate transportation plans with other types of plans, such as those for land use and the environment.

2.2.1
Program Coordination

SCAG is responsible for regional planning in many areas besides transportation -- e.g., air quality, water quality, housing, and human services. These activities are coordinated. For example, each program area uses the Development Guide's growth forecast policy. And, as environmental planning has been emphasized, the many programs have begun joint planning activities. For example, a single Transportation Control Plan is being developed for both the RTP and the Air Quality Maintenance Plan (AQMP).

Transportation Planning

In the SCAG region, every level of government, many special purpose agencies, districts, and commissions are involved in transportation planning activities. These agencies cooperatively plan, develop, and implement the most appropriate system for the region.

SCAG

SCAG is the federal- and state-designated regional transprtation planning agency for six Southern California counties: Imperial, Los Angeles, Orange, San Bernardino, Riverside, and Ventura. As part of its responsibility, SCAG conducts regional transportation planning and coordinates subregional transportation planning.

SCAG encourages local governments to participate in preparing their own subregional transportation plans, to ensure that local needs are addressed. When consistent with regional policies -- themselves formulated in cooperation with subregional agencies and committees -- recommendations are included in the RTP.

The state is also actively involved in regional transportation planning through the California Department of Transportation. Close coordination, both technical and policy, are essential. A close working relationship exists at the technical level with the three CALTRANS Districts in the SCAG region. CALTRANS sits (ex officio) on the SCAG Transportation and Utilities Committee, a policy advisory committee for SCAG. The California Air Resources Board also has an ex officio member on the Transportation and Utilities Committee to strengthen coordination between transportation and air quality.

The transportation element of the AQMP will be the Transportation Control Plan for the region. It will be amended into the Regional Transportation Plan upon adoption of the AQMP, to ensure conformity between the two plans.

County Transportation Commissions

Legislation (AB 1246) passed in 1976 established County Transportation Commissions in Los Angeles, Orange, San Bernardino, and Riverside counties. These Commissions began to function in January, 1977. The governing board of each Commission is composed primarily of County Supervisors and Councilmembers. The Commissions' primary role relates to short-range planning and programming, with specific responsibilities identified in law.

The major responsibilities of the Commissions include but are not limited to: coordination of the operation of public transportation services within the County; approval of plans for public mass-transit systems or projects which conform to the Regional Transportation Plan; carrying out short-range capital and service planning which is directed towards the development and approval of a short-range three- to five-year transportation improvement program, with an annual updated element reflecting all transportation capital and service priorities. This program shall contain all projects utilizing federal and state highway and transit funds, as well as any public mass-transit guideway projects. The program shall be consistent with the Regional Transportation Plan and is submitted to SCAG for incorporation into the Regional Transportation Improvement Programs.

2.2.2
Subregional Coordination

Coordination is required between agencies and across geographic boundaries. Subregional plans (Appendix F) were reviewed in preparation of the RTP for the following purposes:

- To identify major issues, problems, and concerns of the local agencies;
- To determine if there were any major inconsistencies between the policies, goals, and actions of the local agencies and the RTP;
- To ensure that the concerns of the subregional agencies are reflected in the RTP update.

2.3

PLAN CONTENT

The 1979 RTP is in three documents: (1) The Plan, (2) A Transportation Systems Management Report, and (3) an Environmental Impact Report.

Chapter 1 contains the summary.

Chapter 2 of the Plan covers the purpose of the Plan, its process and participants, as well as an overview of Plan format.

Chapter 3 details major transportation issues and problems (the primary focus for the RTP's development).

Chapter 4 presents the comprehensive planning aims that underlie transportation goals, policies, and actions. Also given are the transportation goals and the objectives identified as targets for the Plan.

Chapter 5 contains both modal and multimodal policies, which lead to methods for realizing the Plan's goals and objectives.

Chapter 6 details programs and actions for either system management or system development. Those for Transportation System Management (TSM) are designed to make better use of the existing system. TSM actions are usually low-capital, an can be implemented in the short term. System development actions generally involve expanding or increasing the system's capacity, and are capital-intensive.

Chapter 7 describes the financial plan: the overall costs, revenues, and financial recommendations.

Chapter 7A describes institutional arrangements.

The Environmental Impact Report (EIR), published separately, summarizes the combined impact of all the recommendations in the 1978 Plan in six areas: 1) natural environment; 2) land use and urban form; 3) economy; 4) social environment; 5) air quality; and 6) energy. The overall Plan could affect regional development patterns, employment, auto mobility, and energy consumption. Individual recommendations could have local impacts on land use, social environment, air quality, and land values; these are also examined, so that the impacts of transportation improvements and management strategies can be seen. This system-level EIR does not replace detailed environmental studies of projects, or EIRs that address local impacts of specific proposals.

The Transportation Systems Management report is also published separately and is an elaboration on TSM tactics contained in the RTP.

issues and problems

3.0

3.0
ISSUES AND PROBLEMS

As part of the Regional Transportation Planning process, future travel needs are projected, and the funds likely to be available for transportation are estimated. These data indicate that future transportation needs (1990-95) far exceed the region's ability to finance them, given present resources. The Regional Transportation Plan is prepared with the above concern in mind. Specifically, the Transportation System Management Element which contains the Ridesharing actions is directed at more efficient use of the system we have, through better management and operation of our transportaiton network.

SCAG's transportation planning recognizes eight key problem areas: (1) land use, (2) air quality, (3) energy, (4) access and mobility, (5) allocation of resources, (6) institutional responsibilities, (7) phased decision-making, and (8) technological and operational change.* The first four problems must be addressed to make the system compatible with the environment and provide efficient service. The others pertain to the responsibilities of developing the system over time. These eight problems dictate the approaches used to develop the system.

3.1
LAND USE

How do our land use decisions affect the provision of transportation facilities and services, and vice versa?

Of all the various factors which influence travel, the arrangement of land uses is probably the most important and yet the most difficult for which to measure travel demand influences.

The advent of the mass-produced automobile heralded a change in the geographic arrangement of urban uses. The detached single-family home was made possible, and as a result large areas of relatively low-density residential development were created, serviceable primarily by the auto.

These land-use trends facilitated by the automobile have worked in a self-sustaining cycle for many years. Recently increasing costs for both housing and transportation have created interest for infilling vacant urban land and the creation of subregions where activities such as work and home life could be accomplished without a long commute trip. The arrangement of land uses can have a dramatic effect on an ability to increase use of alternative means of transportation to the auto (i.e., transit, ridesharing, walking, bicycling) and thus conserve energy, reduce pollution, and reduce transportation user costs.

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* Critical Decisions Plan for Regional Transportation - 1974 (SCAG)

3.2
AIR QUALITY

How will changes in the transportation system contribute to attainment of clean air?

In one year of average driving, most cars emit over 600 pounds of pollutants. Short trips increase the pollution rate because there is more starting of a cold engine. Over 50% of vehicle hydrocarbon emissions, 60% of carbon monoxide, and 68% of nitric oxide emissions come from cars.

In Southern California, air pollution cost $350 million in 1970, in damage to health, crops and materials. It is dangerous for some people with respiratory ailments to walk or exercise when pollution is high. Even moderate amounts of pollution can cause headaches, rasping coughs, and burning eyes.

Although air pollution is down from the high in 1965, the region still exceeds federal and state standards for oxidants about two-thirds of the year, and the standards for carbon monoxide one-third of the year. Because of stricter exhaust standards, future vehicles will emit less hydrocarbons, carbon monoxide, and nitrogen oxides. After 1990, however, the State Air Resources Board says that rising miles of travel will cause another pollution increase. It is important to note that probably of equal importance are the insidious effects of lower levels of air pollution. Increased aggravation of chronic respiratory diseases have been associated with long-term exposure to low levels of air pollutants.

3.3
ENERGY

What changes in the transportation system will best conserve energy?

Southern California burns 13.6 million gallons of gasoline and diesel fuel each day for surface transportation (rail, bus, auto motorcycle, and truck), more than double the rate of 20 years ago. Our 5-1/2 million cars use 53% of all our petroleum-based fuels. From 1956 to 1976, the average resident's gasoline consumption rose from .91 gallons to 1.3 gallons. Each person now consumes about 125 gallons more of petroleum each year than in 1956. Today, about 40% of these fuels are from <u>imported</u> crude oil, and the proportion is rising.

The supply of low-cost U. S. oil is running out. No one knows just how much is left, but the amount is finite. Varying estimates of the remaining domestic oil cause public confusion and detract from the vital need to stretch what we have. Because oil is still available and affordable, public reaction has been slow and uncertain; but as the U.S. depends more and more on foreign oil and the demand keeps growing, gasoline prices could jump to $1 a gallon within the next few years. At the same time, the U.S. becomes more vulnerable to foreign political actions.

3.4
ACCESS AND MOBILITY

How can the transportation system provide better access to opportunities, and equitably improve people's mobility?

Transit: For those who own an automobile, or have access to one, the present transportation system in the region offers a high level of mobility. And because of its speed and comfort, many people rely on the automobile as their sole means of transportation. However, there are still many people who are not able to drive, for reasons of age, income, health, or physical handicap. Since the public transit system does not offer service to all locations for all trip purposes, these people are often restricted in their ability to take advantage of education, shopping, employment, or recreational opportunities.

In some communities, transit service levels are inadequate, when compared with adopted service standards. In others, transfers between routes are difficult to make because of poor scheduling and routing of buses. For some, schedules are inadequate for off-peak hour services. Even when service levels are adequate, poorly designed vehicles and vehicle approach areas often act as barriers to the infirm elderly and the handicapped.

Auto: Southern California has a good road system, but nearly 10 million people use it, most of them during the morning and evening rush hours (6-10 a.m. and 3-7 p.m.).

During those hours, nearly 10% of freeways in Los Angeles and Orange counties operate stop-and-go at speeds under 20 miles per hour (mph). Another 20% of the freeways operate between 20 and 35 mph. Thus about 200 miles of freeway are severely or moderately congested. Many more miles of freeway operate between 35 and 55 mph with intermittent slowing -- which is often more annoying because of the suddenly changing conditions. Congestion usually extends 10 or 20 miles from downtown Los Angeles.

Congestion will get worse. Without highway improvement, in 1988 over 30% of the freeways will be congested at peak periods. Major freeways -- the Santa Monica, Santa Ana, San Diego, Hollywood and Ventura -- will average 20 mph for large portions of the route, raising travel times by 50-60%. The miles of congested freeway will double. Relying on new highway construction alone to solve congestion problems would require the construction of about 900 new lane-miles of freeway, assuming that ramp metering and other upgrading and control measures are also implemented.

3.5
ALLOCATION OF RESOURCES

How can our limited funds provide the greatest benefit, and how can additional funds be found?

Financial resources available to fund transportation facilities and services have not been able to keep pace with increasing travel demands.

The results have meant increased congestion on our highways, roads and streets, as well as unmet needs for transit users. Data reflecting anticipated revenues for the future continue to indicate a shortfall in funds compared to needs. Because of this, the Regional Transportation Plan must provide policies and actions that make the most efficient use of limited financial resources.

For example, the plan must (1) set carefully-considered priorities to be used in allocating resources, (2) emphasize projects that encourage more efficient use of the existing system, and (3) suggest legislative and regulatory changes that would affect either total resource availability, or the region's ability to use available resources more efficiently.

3.6
INSTITUTIONAL RESPONSIBILITIES

What institutions, having what responsibilities, can best provide and operate the system?

The fragmentation of responsibility for planning, programming, and implementation in transportation has become more of a concern in recent years. This is due primarily to increasing interest in multi-modal planning efforts, transportation systems management development, air quality planning, and the need to encourage ridesharing techniques. All of these require a high degree of interagency coordination and understanding. The arrangement of institutional responsibilities also has a major effect on the efficiency with which a particular service can be offered, or a facility constructed.

Recent legislation (AB 1246) has added County Transportation Commissions in Los Angeles, Orange, San Bernardino, and Riverside Counties, while AB 402 has created a State Transportation Commission in lieu of four previous transportation-related groups (Highway Commission, State Transportation Board, Aeronautics Board, and Toll Bridge Authority). These changes and others were brought about by the need to continually refine institutional arrangements so as to best meet transportation needs. Continual thought will be needed in this issue area.

3.7
TECHNOLOGICAL AND OPERATIONAL CHANGE

How can the system best incorporate new technologies?

Transportation planning and development take place in a dynamic environment. Changes in transportation technology occur frequently, as is evidenced by the development of fuel-efficient autos. Other improvements, such as the personalized rapid transit systems and the high-speed rail systems, are on the planning horizon. Although some future options appear to provide attractive alternatives to existing modes, there is still considerable uncertainty about them. If these emerging technologies are incorporated into the regional transportation system without adequate development, there is a risk that they may not function properly. If existing technology is used to the exclusion of new technologies, there is a rish that an obsolete system will be built.

3.8
PHASED DECISION-MAKING

How can decisions meet current transportation needs and yet keep our options open for the future?

One difficulty of planning is making the proper choices in the face of uncertainty. Transportation planning is especially sensitive to uncertainty because of its dependence on technology, the large capital and operating expenditures required by transportation systems, and the lengthy lead time between planning and implementation. In the past, master plans were considered the most reasonable way of reducing uncertainty in decision-making. However, it has been found that the longer the planning horizon, the greater the degree of uncertainty.

Another difficulty is that once a particular direction, scenario, mode or technology has been chosen, other options may inadvertently be foreclosed. The process must be structured to be responsive to existing conditions yet flexible in the face of change. Existing needs must be planned for in a way that does not foreclose future options.

goals and objectives

4.0

4.0
GOALS AND OBJECTIVES

The Regional Transportation Plan's goals and objectives set the framework within which specific policies, actions, and plans are formulated. (Goals identify public desires which are theoretically attainable, and provide principles for the development process. Objectives are more precise and quantifiable steps to achieve in advancing toward the goals.) The transportation goals and objectives outlined in this Plan support the goals and policies of the Regional Development Guide, which is the six-county comprehensive plan.

4.1
COMPREHENSIVE GOALS OF THE REGION

The Regional Development Guide is SCAG's comprehensive guide for regional growth and development. As such, it deals with a broad range of issues, including land use, employment, population, housing, and environmental quality.

To guide growth and change, SCAG has adopted both a broad set of goals and policies (set forth in Goals and Policies, adopted in 1973), and specific, quantified growth forecast numbers (The SCAG-76 Growth Forecast Policy -1976) showing the preferred distribution of growth for specific time increments. (Note: Draft SCAG-78 was distributed for review and comment in late August 1978. It is scheduled for adoption in January 1979. It will be reflected in the amendments to the 1978 RTP which are scheduled for adoption in February.)

The Development Guide goals and policies provide basic guidance for, and are supported by, SCAG's transportation planning activities. The following is a summary of the goals and policies that are particularly relevant to transportation planning.

- To assure opportunity for the experience of a variety of lifestyles within the region and within each of its major geographical sub-units.
- To create subregions which have a balance of service facilities, employment, and housing types.
- To guide the development of the region toward a form which provides the necessary balance between the region's manmade and natural systems.
- To ensure housing opportunities in proximity to jobs and daily activities.
- To encourage the maintenance of sound and viable residential neighborhoods and to increase the rehabilitation of blighted and declining neighborhoods.
- To assure a variety of economic opportunities within each of the major sub-units of the region consistent with its natural and existing resources and potential resources.

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* SCAG, Development Guide, Draft SCAG-78 Growth Forecast Policy (Aug.,'78)

- To achieve a balanced distribution of open space throughout the region which meets the needs of inhabitants...and which will prevent some of the adverse effects of urban sprawl and other forms of inappropriate development.
- To eliminate the degradation and pollution of the region's basic resources -- water, air, and land.
- Growth throughout much of the region should be of low density character, with specified urban areas experiencing higher density development in accordance with local and regional plans.
- Development within existing urban areas, rather than the urbanization of new land, should be encouraged as much as possible.

The SCAG-76 Growth Forecast Policy was adopted in December, 1975, and modified slightly for technical updates in November, 1977. The Growth Forecast depicts future land uses, levels of population, housing and employment consistent with SCAG's Development Guide and Trasportation goals and policies. The Draft SCAG-78 Forecast is currently under review. Six growth forecast alternatives were developed, assessed, and reviewed as a basis for developing SCAG-78. These six alternatives were assessed from a transportation perspective. The SCAG-78 adopted alternative will be reflected in the amendments to the 1978 RTP, which are scheduled for adoption in February 1979.

The policies from the SCAG-76 Growth Forecast Policy particularly relevant to transportation planning include the following:

- Encourage growth in and adjacent to existing urban areas.

  This policy applies particularly to those areas where the existing infrastructure -- that is, transportation systems, utilities, schools, private investment, etc. -- is not used to capacity. This would also encourage recycling of the housing stock, preserve open space and agricultural lands in outlying areas, and reduce long-distance home-to-work travel -- thereby reducing energy use and alleviating air pollution.
- Avoid densities that would overtax the existing and currently planned infrastructure.
- Preserve, wherever possible, the region's natural resources and desirable land uses, particularly prime agricultural lands.
- Balance population with jobs within each major subregion.

  This policy is intended to reduce home-to-work commute trip distances, and to cause a more equitable distribution of the employment tax base.

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* SCAG, Development Guide. Alternative Population, Housing, Employment and Land Use (PHEL) Forecasts, Draft, Vol. I, May 1978, and DMJM, Preliminary Environmental Assessment for Six Growth Forecasts for the South Coast Planning Area, May 1978.

4.2

REGIONAL TRANSPORTATION GOALS

Five transportation goals, adopted and incorporated into the Regional Development Guide in 1973, provide the framework for planning the transportation system and suggest general implementation strategies:

1. TO DEVELOP A TRANSPORTATION SYSTEM WHICH WILL SUPPORT THE COMPREHENSIVE GOALS OF THE REGION, TAKING INTO ACCOUNT THE EFFECT OF MODE SELECTION, LOCATION, AND TIME UPON THE PHYSICAL, SOCIAL, ECONOMIC, AND ORGANIZATIONAL ENVIRONMENT.

2. TO CREATE A BALANCED TRANSPORTATION SYSTEM INTEGRATED WITH PLANNED LAND USE TO PROVIDE SAFE, EFFECTIVE MOBILITY FOR ALL PEOPLE AND EFFICIENT AND ECONOMIC MOVEMENT OF GOODS.

3. TO MINIMIZE THE NEED FOR LONG DISTANCE INTRAREGIONAL TRAVEL, PARTICULARLY WORK TRIPS, BY GUIDING THE DEVELOPMENT OF THE REGION TO CREATE SELF-SUFFICIENT SUBREGIONS HAVING BALANCED SERVICE FACILITIES, EMPLOYMENT, AND HOUSING.

4. TO DEVELOP FOR THE REGION A TRANSPORTATION SYSTEM COMPATIBLE WITH THE ENVIRONMENT, USING THE AVAILABLE RESOURCES WISELY, PROMOTING THE AESTHETIC BEAUTY OF THE REGION, AND AVOIDING UNDESIRABLE ENVIRONMENTAL CHANGES.

5. TO DEVELOP A TRANSPORTATION SYSTEM THAT IS FINANCIALLY, LEGALLY, AND POLITICALLY FEASIBLE, HAS BROAD PUBLIC SUPPORT, AND HAS A COMMITMENT TO ITS IMPLEMENTATION BY ELECTED OFFICIALS AND THOSE PROVIDING TRANSPORTATION SERVICES.

4.3
TRANSPORTATION PLANNING OBJECTIVES

Four key objectives -- steps toward achieving the goals -- have been formulated to date:

1. REDUCE EMISSIONS FROM MOBILE SOURCES MEASURED IN TONS PER DAY) BY 1987 ACCORDING TO TABLE 4.3-1.

2. CONSERVE TRANSPORTATION ENERGY IN THE REGION BY THE AMOUNTS SHOWN IN TABLE 4.3.2.

3. INCREASE TRANSIT RIDERSHIP, CURRENTLY 3.36%, TO 6% OF ALL PERSON-TRIPS BY 1990.

4. INCREASE RIDESHARING (CAR/VANPOOL) AS MEASURED BY AUTO OCCUPANCY, FROM 1.2 INDIVIDUALS PER VEHICLE TO 1.3, AND INCREASE RIDESHARING (TRANSIT) THROUGH SERVICE AND FACILITY IMPROVEMENTS CAPABLE OF ADDING 1.7% ADDITIONAL DAILY TRIPS TO TRANSIT (1.7% INCLUDED AS PART OF 6% TRANSIT OBJECTIVE.

These objectives are discussed in detail on the next page.

4.3.1
AIR QUALITY OBJECTIVE

The following objective represents a reevaluation of the previous objective. As a study objective, a 40% emissions reduction from all mobile sources was evaluated. This approach was taken because it was discovered that non-light-duty vehicles, particularly certain off-road vehicles, were growing sources of emissions. Analysis of the study objective and development of the Air Quality management plan altered and established the following objective for the South Coast Air Basin. An objective for Ventura County and Southeast Desert Air Basin portions of the SCAG Region has not been developed.

It is recommended that mobile sources at a minimum reduce emissions (expressed in tons per day) by 1987 according to the following table:

Table 4.3-1

SCAB 1987 Emission Reduction Potential of Transportation Control Measures

Source	RHC	NOx	CO
On-Road Travel Related	41.8	41.3	354.4
Off-Road Operations	9.7	(+3.5)	116.3
Technological	149.1	199.4	1201.1
Total Mobile	200.6	237.2	1671.8

RHC = Reactive Hydrocarbons
NOx = Nitrogen Oxides
CO = Carbon Monoxide

The emission reductions were developed through the AQMP process which selected measures, regardless of source category (i.e., stationary or mobile) based on the cost effectiveness, emission-reduction potential, reasonable availability, and related impact criteria. This competitive process resulted in the selection of those measures which best met the reduction objectives necessary to satisfy federal clean air standards by 1987. Those emissions listed in Table 4.3-1 when added to stationary measures satisfy the standards. As the review process proceeds, a trade-off policy will be used. If one of the recommended measures is removed, it will be replaced by another comparable (in terms of emissions-reduction potential) measure or measures based on the above criteria and process, and the emission-reduction objective will change accordingly, depending on whether the replacement measure is on-road, off-road, or stationary. It should be noted that those reductions presented in Table 4.3-1 exceed the mobile source's fair share allocation of the reductions necessary. To be specific, the transportation measures emission reductions represent 67% of the RHC, 65% of the NOx, and 100% of the CO targets.

table 4.3-1

4.3.2 Energy Objective

- o Conserve transportation energy in the region by the amounts shown in Table 4.3-2.

FUEL CONSERVATION OBJECTIVES
(MILLIONS OF GALLONS OF GASOLINE PER YEAR)

YEAR	PROJECTED CONSUMPTION OF FUEL BY LIGHT-DUTY VEHICLES	FUEL SAVINGS OBJECTIVE	PERCENTAGE SAVED
1980	5,270	263	5
1985	4,650	465	10
1990	4,240	424 to 636	10 to 15
1995	4,170	417 to 834	10 to 20

Fuel savings for 1990 and 1995 are shown as a range, since they will depend on the measures used to reduce emissions. To the degree that emissions are reduced by reducing VMT, a corresponding amount of fuel will be saved. It is expected that the VMT projected for 1985 will be reduced by 10%. Beyond 1985, emissions may be further reduced either by reducing VMT even more, or by using other measures (e.g., imposing controls on sources not now controlled). The range of fuel savings shown corresponds with these possibilities.

Note that the LDV consumption projections in Table 4.3-2 are based on two assumptions: 1) that there will be a normal vehicle replacement cycle with vehicles meeting the federal fuel economy standards, and 2) that VMT will continue to increase at current trends. Thus the fuel savings objectives for 1980 through 1995 shown in Table 4.3-2 are <u>in addition to</u> projected savings to be realized by meeting the federal fuel economy standards for new vehicles.

table 4.3-2

4.3.3
Transit Ridership

- Increase transit ridership, currently 3.36%, to 6% of all person-trips by 1990.

Currently, about 3.36% of person-trips are by transit in the region. If the 6% objective is to be met, therefore, significant improvements in transit service will be required. Estimates of ridership for the Regional Transit Development Program indicate that this program would bring the regional transit ridership up to about 1.8 million by 1990. This is equivalent to a 4.4% modal split. To reach the transit objective of 6% modal split, or 2,5000,000 transit trips, many of the ridesharing strategies defined in the multi-modal section of the RTP must be successfully implemented. Such strategies as fare policy changes, parking management, employee subsidies (free bus passes), information and marketing, etc., will have to be implemented.

This objective is discussed further in Section 6.3.

4.3.4

RTP Ridesharing Objectives

The SCAG region light-duty vehicle rideshare objective is defined as:

> By 1987 increase the average light-duty vehicle occupancy for the daily, freeway/non-freeway, home to work trip from 1.2 to 1.3. Achieve this increase in average vehicle occupancy by diverting approximately 1,063,000 work commuters from single-occupant to rideshare modes (i.e., 3+ person carpools or its equivalent), thusly, forming 354,000 new carpools and 708,000 daily carpool vehicle trips. See note below.

It is intended that, by 1987, those weekday light-duty vehicle trips identified have, as 24-hour home-based work trips (utilizing both freeway and non-freeway segments of the transportation network), an average vehicle occupancy of 1.3. In order to realize this average vehicle occupancy, it will be necessary to divert approximately 735,000 work commuters from the single-occupant vehicle mode to the mutiple occupant (i.e., 3+ person carpool or its equivalent) mode of travel -- in addition to the 328,000 work commuters expected to form carpools naturally (i.e., contributing 109,000 3+ person carpools or their equivalent). It is assumed that these 735,000 ridesharers, formed into some 245,000 3+ person carpools and representing approximately 490,000 daily carpool trips, can be captured by means of an Employer Program aimed primarily at commuter matching and promotional activities (i.e., contributing 639,000 new ridesharers and 213,000 carpools) and a Freeway Facility Change Program featuring rideshare incentives such as rideshare lanes and metered ramp bypass lanes (i.e., contributing 96,000 new ridesharers and 32,000 carpools). This objective is the same as the level called for in the AQMP.

Capture rates for the Employer Program are expected to vary according to the size of the firm and may require incentives in addition to matching/promotion in order to be realized. Listed below are the capture rates for firms of various sizes which are expected to be achieved by 1987.

Size of Firm (Number of Employees)	% Captured to Ridesharing (3+ carpools)
500 and above	20
250 - 499	15
100 - 249	10
1 - 99	2.5

These rates represent targets and actual capture rates will vary from these figures (e.g., one firm of 500 may have a capture rate of 10% while another firm of 500 may have a capture rate of 30%).

The SCAG region transit rideshare objective is defined as:

> By 1990 increase transit ridership by 755,000 new transit person trips daily. This increase will be achieved primarily by diverting 378,000 additional work commuters from single-occupant mode to transit. This increase would account for 1.7% of all daily person trips.

Transit facility and service improvements will result in an increase in transit trips from the current level of 3.36% to 4.3% of all person trips (see Transit Ridership Objective 4.3.3). In order to meet the 6% modal split objective for the region it will be necessary to successfully implement or continue several ridesharing options. It is anticipated that the implementation of these non-facility ridesharing activities (especially a marketing and information program, an expanded employer incentive program and parking management programs) will contribute to increasing transit ridership by the amount stated above.

NOTE: The vehicle occupancy objective of 1.3 is based on the assumption that a 6% transit modal split objective is achieved, that 639,000 commuters are captured through an Employer Program, that 96,000 commuters are encouraged to rideshare through freeway facility improvements, and that 328,000 commuters form carpools naturally. Should the facility and/or service improvements not be implemented or the number of individuals expected to form carpools naturally not do so, it will be necessary to make trade-offs among the components of either the transit or light-duty vehicle objectives or between the two objectives.

policies

5.0

5.0
POLICIES

The following sections list the transportation policies for the region (multi-modal, auto, transit, airports, non-motorized, maritime and rail, finance, and institutional arrangements.

5.1
MULTI-MODAL POLICIES

1. THE REGIONAL TRANSPORTATION SYSTEM SHALL SERVE ALL TRIP PURPOSES IN AN EQUITABLE MANNER ACCORDING TO NEEDS. ASSURANCES SHALL BE SOUGHT FROM TRANSPORTATION PROVIDERS THAT PROPOSALS FOR IMPROVEMENTS SHALL (1) PROMOTE THIS EQUITABILITY AND (2) CONSTITUTE INTEGRAL PARTS OF A COMPREHENSIVE SYSTEM, CONSISTENT WITH THE REGIONAL TRANSPORTATION PLAN. TRANSPORTATION MODES, SERVING DIFFERENT FUNCTIONS AND AREAS, SHALL BE COORDINATED TO PROVIDE A CONTINUOUS FUNCTIONAL SYSTEM.

2. THE REGIONAL TRANSPORTATION SYSTEM SHALL EQUITABLY SERVE BOTH PEOPLE AND GOODS MOVEMENT, PROVIDE EFFECTIVE SERVICE TO TRANSIT DEPENDENTS, AND SHALL INCLUDE ALTERNATIVE SERVICE TO AUTO TRAVEL.

3. THERE SHALL BE A BALANCED TRANSPORTATION SYSTEM, PROVIDING IMPROVED TRAVEL OPPORTUNITIES AT ALL SCALES, AND ACCOMMODATING EXISTING TRAVEL DEMANDS AS A PRIORITY, BOTH IN URBAN AND RURAL AREAS. IMPROVEMENTS SHOULD BE PROVIDED IN PROPORTION TO THE DISTRIBUTION OF TRIPS BY LENGTH AND PURPOSE, UPGRADING SERVICE IN METROPOLITAN AREAS AND, IN PARTICULAR, WITHIN COMMUNITIES.

4. IMPLEMENTATION PROGRAMS SHALL BE BASED ON A PHASED DECISION-MAKING PROCESS, WHEREIN EXPERIENCE AND EVALUATION SHOULD GUIDE THE PROGRESSION OF DECISIONS. FUNDING PROGRAMS SHALL ALSO FOLLOW A PHASED DECISION-MAKING PROCESS, WHEREIN A MULTI-MODAL CONCEPT SHOULD BE FOSTERED AND SHOULD NOT BE BIASED IN FAVOR OF ANY ONE MODE OR PARTICULAR TYPES OF FACILITIES OR SERVICES. DECISIONS ON IMPROVEMENTS SHALL TAKE INTO ACCOUNT THE EFFECTIVE USE OF ALL AVAILABLE MODES AND FACILITIES, AND SHALL GIVE SIGNIFICANT SUPPORT TO SUCH IMPROVEMENTS THAT PROVIDE BENEFITS FOR THE ENVIRONMENT, IN PARTICULAR, AIR QUALITY AND ENERGY.

5. PUBLIC TRANSPORTATION SYSTEMS OF THE REGION SHALL BE SIGNIFICANTLY IMPROVED. SUBSTANTIAL INCREASES IN PUBLIC TRANSIT FUNDING SHALL BE SOUGHT, WITH PARTICULAR EMPHASIS ON OPERATING FUNDS. THE DEVELOPMENT OF AN INITIAL PORTION OF A GUIDEWAY TRANSIT SYSTEM(S) SHALL BE SUPPORTED, AS WELL AS OTHER TYPES OF SYSTEMS THAT PROVIDE SATISFACTORY JUSTIFICATION. BUS SERVICE SHALL BE IMPROVED THROUGH MODIFICATION OF THE EXISTING SYSTEM, CONSISTENT WITH THE SHORT-RANGE TRANSPORTATION PLAN.

5.1.1
System Planning Policies

6. Use the Regional Development Guide and the currently adopted growth Forecast Policy as a guiding criterion in providing transportation service.

7. Recognize existing local land use plans in the formulation of transportation decisions.

8. Project implementation of the Regional Transportation Plan must be undertaken consistent with the requirements of the California Coastal Act of 1976.

9. Travel corridors as discussed in AB 1246 will be identified in the 1979 RTP. Assignment of priorities for corridor planning will also be included.

10. Future regional plan updates should include more specific consideration and recommendations on highway development relative to: growth policy; VMT reduction; air quality, energy, and the role of highways in terms of auto, transit, goods movement, and other uses.

11. SCAG shall identify methods to allow substantial involvement by communities in plan development and in the decision-making process. In conjunction with this policy, identification of transportation needs at the community level should be incorporated as part of the planning process undertaken by the transit districts.

12. Encourage and support development of new technologies for the efficient movement of people and goods, and incorporate advanced technologies in the development of alternatives whenever it appears that such technologies are feasible.

13. SCAG should serve as a coordinating and facilitating agency for the development of region-wide policies on transportation issues, and positions on state and federal transportation legislation, regulations and programs.

14. SCAG should actively participate in the formulation of state-wide positions on transportation issues affecting local and regional agencies.

15. Communication between the private sector and all public bodies involved in decisions on transportation issues should be actively encouraged, particularly in the early stages in the development process.

5.1.2
Transportation System Management Policies

16. The transportation system shall be managed to increase operational efficiency, conserve energy and space, reduce air pollution and noise, and provide for mobility and accessibility.

17. Avoid undesirable duplication of transit services.

5.1.3
Ridesharing Policies

18. Encourage ridesharing by providing bypass lanes at metered ramps at locations determined to be feasible and desirable. These lanes should:

    - have support from both citizens and local elected officials
    - be operationally safe
    - be capable of serving and encouraging either carpooling, vanpooling or the use of buses.

19. In planning new freeways, evaluate the impact of including exclusive bus, van and carpool lanes.

20. Where rideshare lanes meet the following criteria and are consistent with the policies in the Regional Transportation Plan, then projects should be implemented. These projects should:

    - have support from both citizens and local elected officials
    - be operationally safe
    - be open to all forms of high occupancy vehicles
    - serve as an incentive to rideshare and benefit all freeway users
    - be undertaken where freeflow condition cannot be reasonably achieved or it can be shown that a rideshare lane will carry at least as many people as a conventional lane.

21. Encourage cities and counties to include exclusive lanes for buses, carpools and vanpools on major arterials for peak-hour travel and to enforce related parking restrictions to insure unobstructed use of these lanes by high occupancy vehicles.

22. Expand the use of existing park-and-ride and park-and-pool lots to serve as connecting points for all available types of high-occupancy vehicles.

23. Support development of transfer centers which improve the interface of various transportation modes and encourage the use of high-occupancy vehicles.

24. Support development of public and private paratransit services (such as taxipools, demand-responsive and community level service) which encourage ridesharing on short trips and support any needed changes in legislation and regulation.

25. Support development of a centralized multi-modal information and marketing organization which will assist commuters in utilizing, and employers in sponsoring ridesharing services. Such an organization should be regional in scope, a non-provider of transportation services and quasi-governmental or private entity.

26. Support the expansion of Commuter Computer's ability to provide ridesharing match lists and to provide these lists in a expeditious manner so that potential ridesharers can be assisted quickly.

27. Support an extensive and coordinated marketing program to increase public awareness of transportation problems and encourage ridesharing as an immediate action to alleviate the problems.

27A. Cities and counties should consider developing parking programs which encourage the voluntary reduction in the supply of off-street parking spaces. Commercial and industrial businesses should be offered the option to reduce both code required and conditionally required parking in exchange for their commitment to implement measures that will encourage a reduction in the use of the singly occupied automobile. Any reduction in parking should be dependent upon both the nature and the effectiveness of measures that participating businesses would be willing to implement.

27B. Support the development of adequate, low-cost liability insurance for people who use group transportation.

27C. Support changes in the tax code which permit employer sponsored ridesharing program costs as a legitimate business deduction and do not consider these costs as income to the employee.

27D. Encourage both public agencies and private employers to provide bus passes for employees, sponsor carpools or vanpools, provide subscription bus service, assign preferential parking spaces for ridesharing vehicles, institute flextime and to consider using fleet vehicles as means of facilitating ridesharing for commute trip purposes.

27E. Encourage public and private employers to provide equal subsidy treatment of auto drivers, bus riders, carpoolers and vanpoolers.

27F. Encourage cities and counties to develop locally implementable projects which encourage the use of high occupancy vehicles such as bus turn-outs, off-street parking programs, signal pre-emptions and other related programs.

27G. For the purposes of AQMP, all forms of multi-occupant vehicles and paratransit systems shall be considered public transportation if such vehicles or systems are supported directly or indirectly by public funds.

5.1.4
System Development Policies

28. Provide transportation for necessary and anticipated travel between metropolitan areas but do not encourage an increase in long-distance travel.

29. Emphasize metropolitan and short-distance transportation improvements consistent with other Plan policies.

30. Encourage development of transportation services appropriate for rural areas.

31. Add new transportation facilities and services when it can be shown that: the demand for the facility and/or service is reasonable and anticipated; improved management of the transportation system cannot accommodate the demand; there exist adequate capital and operating funds to finance the improvement; their use does not take away from existing service; the proposed improvements are cost-effective; and social, environmental, and other objectives are met or negative impacts in these areas are mitigated.

32. Stage transportation planning so that policies guiding long-term transportation improvements are adopted. For hardware and route decisions, consider for adoption only those improvements which can be implemented in the foreseeable future.

5.1.5 Transportation Air Quality Policies

33. The Regional Transportation Plan and the Transportation Improvement Program shall be consistent with the Air Quality Management Plan as the applicable portion of the State Implementation Plan.

34. Transportation systems planning within the SCAG region shall work cooperatively with the regional Air Quality Maintenance Planning process to attain federal and state standards for ambient air quality at the earliest achievable date, and to maintain the standards thereafter.

35. SCAG supports and encourages technological improvements, particularly for heavy duty and off-road vehicles, as one means of moving toward attainment of federal and state air quality standards.

36. SCAG supports and encourages the state legislature to move rapidly toward implementation of a mandatory annual inspection/maintenance program for light-duty vehicles in the region.

37. Air pollution from mobile sources shall be reduced by the development and implementation of programs and actions in the following areas:

    - the diversion of a substantial number of single-passenger auto trips to carpool, vanpool, transit and other modes. (See Rideshare objectives.)

    - the encouragement of a reduction in individual daily vehicle trip-making through land use, urban design, and marketing techniques.

    - improvement to the efficiency of the automobile by

      -- instituting an annual emissions inspection and maintenance program
      -- improving bottlenecks and points of congestion in the road system
      -- encouraging technical improvements to vehicle design and operation
      -- applying emissions standards and operational improvements to off-road vehicles and currently unregulated sources.

38. Alternative modes of travel should be planned and provided for to reduce the region's reliance on the automobile.

39. SCAG shall commit to the implementation of all adopted transportation control measures, to the implementation of public transportation measures sufficient to meet basic transportation needs, and to attainment each year of the reasonable further progress (RFP) goal for the non-technological mobile category of measures. This commitment shall be executed through exercise of A-95 review authority and TIP review/approval authority to the extent authorized by state and federal statutes.

40. In conjunction with counties and cities, continue planning efforts on preferential facilities for high-occupancy vehicles on major arterials during peak hours; and develop directional flow experiments using one-way traffic flow on selected major arterials to accommodate peak hour traffic and decrease travel time.

41. Support a "balanced" approach to air quality and energy planning based on an objective assessment of the automobile's contribution to regional air pollution and energy consumption, relative to other pollution sources and energy users.

42. Encourage local governments to develop parking strategies that will encourage the use of transit and carpools; relieve traffic circulation on local streets; supplement other transportation and land use measures designed to improve air quality and conserve energy; insure coordination of transit and paratransit developments with parking management strategies.

43. Sanctions applied to transportation funds for noncompliance with appropriate portions of the State Implementation Plan (SIP) should apply only to those jurisdictions not implementing their portion of the plan.

43A. The adopted Regional TIP Annual Element shall constitute the required commitment by state, regional, and local agencies, to implement and fund adopted transportation control and public transportation measures.

43B. In the case of transportation control measures and public transportation improvements which have been previously programmed, implementation should be given priority and newly adopted measures should be phased into the TIP as expeditiously as possible.

43C. To ensure maximum local government involvement in the implementation of the AQMP/RTP and in the continuing planning process, the following steps will be taken prior to the replacement of any control measure:

a. Prior to implementation of a control measure whether indentified in the AQMP or suggested for inclusion in the future, a detailed analysis evaluating the cost, effectiveness, and social and economic impacts of the proposal shall be prepared by the implementing agency and circulated in a timely manner to all concerned parties for review and comment.

b. Local government shall have a full opportunity to review, comment on, and approve control measures which they are designated to implement at the local level. Further, State, Federal agencies shall comply within the context of Executive Order 12088 and to the greatest extent feasible, with local government requests in regard to the implementation of control measures which are the responsibility of State or Federal agencies.

c. As a part of the continuing planning process, any governmental agency may propose an amendment to the AQMP to substitute an equivalent control measure for any measure the agency is required under the plan to implement. The procedures for proposing amendments will be developed and incorporated into the plan by subsequent revision.

d. Implementation of control measures by local governments is contingent upon the availability of funds from federal, state and local sources.

43D. SCAG will encourage the study and potential use of environmentally acceptable alternative fuels for transportation energy conservation and emission-reduction potential.

43E. All forms of multi-occupant vehicles and paratransit systems shall be considered public transportation if such vehicles or systems are supported directly or indirectly by public funds.

43F. As a part of the FY 79-80 regional planning effort, SCAG, in cooperation with County Transportation Commissions and transit operators, will develop and document in the RTP a plan for long- and short-range transportation improvements designed to meet basic public transportation needs. This plan will be implemented according to the schedule adopted with that plan.

43G. As a part of the FY 79-80 regional planning effort, SCAG, in cooperation with County Transportation Commissions and transit operators, will develop and document in the RTP a plan for long- and short-range transportation improvements designed to meet basic public transportation needs. This plan will be implemented according to the schedule adopted with that plan and will be presented to the Executive Committee for adoption by June 1980.

43H. Governmental agencies will minimize "project-by-project" review through conducting air quality analysis at the regional level instead of the project level, whenever possible.

43I. Governmental agencies in the AQMP planning area will, when preparing an environmental impact report, confine the projects air quality analysis to local impacts through referencing the AQMP as a demonstration that regional impacts have been offset (as long as the AQMP is being implemented and reasonable further progress goals are being met).

43J. Any government agency receiving funds for air quality planning of transportation projects, where air quality impacts have been offset by the AQMP, shall support and assist in the implementation of the AQMP, instead of developing separate air quality mitigation measures for individual projects.

43K All agencies of the federal government shall support and implement the AQMP. All federal facilities, especially military facilities, shall be constructed and operated in a manner consistent with the AQMP, except where national defense dictates otherwise, or mitigate on a one-to-one basis any air pollution resulting from their activities.

43L Transportation improvements described in the AQMP baseline (see AQMP document 1-25-79) as well as the transportation control measures (see RTP/Air Quality Actions #6 through #58) both contribute to achieving desired results and need to be implemented as expeditiously as possible. This includes local congestion relief projects which are transportation system management (TSM) improvements contribute to reducing air emissions. The regional analysis considered these projects as part of the AQMP baseline. Further analysis and documentation of their effectiveness will be annually reviewed through the Transportation Improvement Program (TIP) and consistency assessment process.

5.1.6
Energy Policy

44. Transportation energy requirements shall be minimized by:

    a) supporting planning, programming and implementation efforts which conserve energy.

    b) encouraging technological changes that conserve energy.

    c) educating users of transportation energy about the costs of various modal alternatives.

45. Energy consumption requirements of transportation shall be minimized by: meeting the Federal fuel economy standards though at least 1980; shifting a substantial number of single-occupant auto trips to carpools, transit, and other modes; giving strong support only to investments in modes and facilities that will result in energy-efficient travel; reducing consumption of scarce and expensive energy fuel.

46. Emphasize reduction of emissions and conservation of energy in review of grant applications and subregional programs for acquiring, replacing, or operating transit and publicly owned vehicles.

47. In improvement of the existing transportation system, priority shall be given to those means of travel which are energy-efficient and least polluting.

48. Encourage the development of energy contingency plans for selected transportation agencies to assure the operation of essential transportation services during periods of critical fuel shortages.

5.2
AUTOMOBILE POLICIES*

1. Regional, subregional, and local agencies shall emphasize efficient automobile use (to lower emissions, save energy, and reduce congestion) by these means:

   a) Encourage ridesharing.

   b) Develop and implement traffic-operations improvements to speed and manage the flow of motor vehicles (i.e., signal synchronizing, channeling, reversible lanes, etc.) to increase efficiency.

   c) Encourage technical improvements to vehicles.

   d) Encourage local governments, major employers, and universities to develop parking strategies that increase ride-sharing and supplement other transportation and land-use measures to improve air and conserve energy.

5.3
TRANSIT

Service

1. SCAG encourages compliance with the local bus service standards.**

2. The following guideway projects are of equally high priority for Proposition 5 funding:

   - The Southern California Rapid Transit District's rail rapid transit line from downtown Los Angeles to North Hollywood.

   - The City of Los Angeles Downtown People-Mover.

   Note: Proposition 5 moneys are applicable only to Los Angeles County.

3. SCAG, in cooperation with other agencies, should identify areas where paratransit projects would supplement existing and proposed transit operations. Current legal restrictions to the provision of these services should be analyzed for possible removal.

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* Some of the auto-related policies can be found in the HOV, TSM, and air quality sections.

** See Appendix A for local service standards.

4. Efforts to upgrade service or add service shall be supported and priority for such service improvement shall be given to improvements in areas where transit service is substandard and in areas of greater than normal transit dependency.

5. SCAG shall use the following in defining groups requiring special transportation assistance:

   - the transportation handicapped (including wheelchair users, semi-ambulatory persons, the developmentally disabled) and the elderly

   - lack of auto availability

   - persons at or below the poverty level as defined by the U.S. Census Bureau

6. Plans for regional transit systems shall include consideration of service to the major airline airports.

7. The corridors proposed by the SCRTD and the OCTD are adopted by SCAG for planning purposes with the addition of local circulation areas (to be identified) throughout the region (Figure 6.3-3).

7A. Support development of the RTDP as part of the long-range transit plan or the region. This is contingent upon an increase in funding availability. The complete Program includes the following:

   - Element I: Local Bus/TSM Improvements (Including Service Expansion).
   - Element II: Full Freeway Transit Program. Includes construction of rideshare lanes and stations, as well as the implementation of service improvements. The rideshare lanes will be designed to permit possible conversion to rail.

   - Element III: Construction of the Los Angeles Downtown People Mover.
   - Element IV: Construction of rail rapid transit line from Downtown Los Angeles to North Hollywood.

   Also support development of a financially feasible RTDP implementation program which can be implemented within anticipated funding constraints.

   This program includes the following:

   - Element I: Local Bus/TSM Improvements (includes service expansion when financially feasible).
   - Element II: Construction of rideshare lanes on the Santa Ana, Harbor, and Century Freeways, and the extension of the San Bernardino Busway from its current western terminus to Union Station. Rideshare lanes will be designed to permit possible conversion to rail.

- Element III: Construction of Los Angeles Downtown People Mover.
- Element IV: Construction of rail rapid transit line from downtown Los Angeles to North Hollywood.

Paratransit Coordination

8. The CTC's, IVAG, and VCAG shall encourage transit and paratransit operators to coordinate their planning and programming with each other, and with other agencies concerned with transportation. SCAG will aid this process by:

   a) requiring that applications for funding of new paratransit operations show that existing resources are inadequate and discuss how the requested funds might be used to expand existing public and private sector services or, where integration is not feasible, state the reasons why.
   b) fostering the development of joint powers agreements and contractual arrangements between service providers.
   c) supporting efforts which bring providers of similar transportation services together to discuss coordination and consolidation strategies.

BROKERAGE

8A. SCAG, the CTCs, and the subregional agencies will support demonstration projects as appropriate, that develop and evaluate brokerage projects for community-level transportation services.

PRIVATE SECTOR PARTICIPATION

8B. SCAG will maintain the Paratransit Task Force and actively encourage that participation in the transportation planning process also be afforded to representatives of private transportation providers at the subregional level.

LOCAL TRANSPORTATION REGULATIONS CONSISTENCY

8C. The transportation regulations of local governments should be consistent with the Regional Transportation Plan. Local governments are encouraged to draft paratransit ordinances, or revised taxi ordinances, which permit shared-ride taxi service, independent driver contracting, less restrictive insurance provisions, and regulatory coordination.

PUC/RTP COORDINATION

8D. The State Public Utilities Commission should be encouraged to make decisions and adopt regulations which are consistent with the Regional Transportation Plan.

Elderly and Handicapped

9. The elderly and handicapped have the same right as other persons to travel and to utilize regular public transportation services. Persons with developmental disabilities, the physically disabled and the elderly shall be provided a continuum of transportation services according to need and their degree of transportation disability. Adopt and support objectives intended to facilitate the transition to accessible public transportation services.

10. Support the coordination or consolidation (where appropriate) of transit and of paratransit services to provide more effective, efficient and accessible transportation services.

11. Plans for transportation services shall include methods to provide transportation services for persons with developmental disabilities, the physically disabled and the elderly.

12. For transportation planning purposes, transportation-handicapped persons are those individuals who, by reason of illness, injury, congenital malfunction, developmental disabilities or other permanent or temporary incapacity or disability, including those who are non-ambulatory wheelchair bound and those with semi-ambulatory capabilities, are unable without special facilities or special planning and design to utilize mass transportation facilities and services as effectively as persons who are not so affected.

13. Agencies applying for public funds will notify affected public or private operators early in the development process and consider their comments when proposed new transportation programs would impact their services or afford opportunities for coordination. Planning agencies will see that lists of existing services are made widely available.

Safety

The following proposed policies have been developed from a SCAG study, Transit Safety and Security: A Design Framework:

14. Support and encourage a greater awareness that crime prevention through physical planning can play an important part in the reduction and deterrence of criminal activity in transit facility design.

15. Encourage development of uniform regional transit traffic and parking regulations as well as uniform transit signing regulations for furthering transit safety and security.

16. Suggest to transit operators the desirability of developing written procedural guides to inform transit employees on how to conduct themselves during any safety and security incidents.

17. Encourage transit operators to jointly develop and adopt a uniform standardized incident-recording procedure.

18. Support and encourage an evaluation of emergency communication equipment and radio frequencies in order to design better communication systems that will help decrease response times by public safety agencies.

19. Support and encourage public safety agencies to review transit designs for security needs prior to application for building permits.

Procedural

20. Agencies designated by the CTC's, IVAG and VCAG shall prepare a Short Range Transit Plan (SRTP) as required to meet federal guidelines.

21. SCAG and CTC's will determine the merit and suitability of TIP projects according to the following criteria:

    (1) Conformance with applicable statutes and regulations promulgated by the relevant granting agency or authority.

    (2) Conformance with policies and guidelines incorporated into the Regional Transportation Plan.

    (3) Conformance with transit system efficiency standards and guidelines which are developed and adopted by SCAG as Transit Service Policies.

    (4) Conformance with stipulations included in the SCAG/Public Transit Operator Memorandum of Understanding.

22. SCAG and CTC's shall adopt criteria consistent with SB 1687 for the evaluation of claims for community transit services. Such criteria shall include:

    - priority for group requiring special transportation assistance
    - innovative and efficient service
    - the level of impact of the service in meeting transportation need
    - the level of impact on existing taxi and transit services.

23. SCAG and CTC's shall also provide for an alternative finding, based upon the evaluation of all claims submitted, that some or all of SB 1687 funds could be used to better advantage for Article 4 purposes in the development of a balanced transportation system.

24. SCAG's endorsement of applications for state and federal transit funding shall be contingent upon implementation of the revised Memorandum of Understanding and consistency with the Regional Transportation Plan.

5.4
HIGHWAY POLICIES

1. Highways of regional significance are state highways only, including highways necessary to complete the Interstate system.

2. Maintain the 55-mph speed limit within urbanized areas of the region for all vehicles except emergency vehicles.

3. The use of the existing highway system should be maximized through traffic operational improvements.

4. Construction of sound barriers on freeways that pass through previously established residential areas will be a high priority program.

5. Priorities for funding highway programs will be:

   First, maintenance and rehabilitation;
   Second, operational improvements and construction of new facilities necessary to the efficiency of system use.

6. For the purpose of meeting AB 402 mandates and for allocating any discretionary highway funds within and among Caltrans districts, SCAG shall support the development of a regionally prioritized list of new highway construction projects during FY 78-79 which numerically ranks highway projects as recommended in sub-regionally prepared priority lists.

7. In accordance with AB 402, the RTP shall be the guiding document for State Highway programming in the SCAG region, with this understanding: that Caltrans will report to the TUC and Executive Committee as to how they actively considered the adopted RTP in the formulation of the proposed STIP; and that if Caltrans cannot follow the RTP recommendations, that this report jutify the reasons for not being able to do so.

8. SCAG will continue to work with the county transportation commissions and subregional agencies to seek additional highway funding to meet the current shortfall in the SCAG region.

9. SCAG will continue working with the California Transportation Commission and the legislature to require the programming of project development costs in the TIP.

10. SCAG will support the development of a federal program on interstate highways which would allow the use of interstate funds for major upgrading of older interstate routes.

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* Some of the Highway Policies are found in the Ridesharing Section.

5.5
AIRPORT SYSTEM POLICIES

Planning

1. The Regional Airport System Plan must be based on a continuing planning process rather than a binding long-term commitment and the Plan should be reviewed at least every two years.

2. SCAG's primarily responsibilities in aviation planning are to
   a) forecast travel demand
   b) coordinate system design
   c) coordinate institutional arrangements.

3. Implementation, as well as continuing review and revision, of the adopted Regional Airport System Plan must be integrated with development and implementation of the SCAG Regional Transportation Plan and also with state and federal transportation plans, to assure the coordination of elements and modes of regional, state, and federal transportation system.

4. SCAG should act as a convening agency to bring representatives of airlines, airport owners, communities, the Department of Defense, the Federal Aviation Administration, and other regulatory agencies together on a regular basis to increase intraregional cooperation.

5. SCAG Regional Transportation Plans and updates will include specific consideration and recommendations relating to airport access; the economic impact of meeting or not meeting projected aviation demands; the development of airport requirements within a comprehensive regional framework; and the reexamination of aviation forecasts.

6. The initiative for implementation of airport system plans in the 1978 RTP remains with local communities, state and federal agencies, and aviation industry organizations.

7. Local decision-makers must be involved in independent airport authority and commission decisions.

8. Methods should be sought for spreading the financial burden of constructing any major new general aviation facilities among all areas in the region to be served by that facility.

9. Recognizing the preemption by the federal government in this area, SCAG's policy for priority airspace is: (a) military, (b) air carrier, (c) general aviation (with as much airspace as possible).

10. If conflicts should arise in the planning, development, or operation of the general aviation portion of the regional airport system, priority normally should be given to regionally significant airports over locally significant ones.

11. SCAG supports Airport Land Use Commissions (ALUC's) in their efforts to ensure compatible land use around airports.

12. Measures to assure permanent land use compatibility must be included in the planning and development of new airports, including a high priority for land acquisition.

13. Incompatible land uses around all airports should be prevented.

14. The State of California and SCAG definition of open space shall be used in evaluating airport impact upon open space. This definition is "land or water which is essentially unimproved and is devoted to the following open space uses:

    - Preservation of natural resources
    - Managed production of resources
    - Outdoor recreation
    - Public health and safety."

15. The areas of the region which will have the greatest deficiencies in air transportation service by the late 1980s should begin now to formulate policies concerning these deficiencies. Delayed actions or decisions not to act may cause severe inconvenience to the public. SCAG will provide all possible assistance and encouragement to local public agencies to preclude such delays.

16. No existing large civil or military airport should be converted to a non-aviation use without realizing that such action eliminates one of the options for provision of future airline service.

17. Operators of existing airports where established policies now limit the levels of air transportation service should frequently re-evaluate these policies in light of improvements and application of noise reduction technology.

18. Planning for allocation of traffic among existing airports and for the development of major new airports should consider the relative ability of airports to comply with the California Environmental Standards or superseding Federal Regulations.

19. The definition of Airports of Regional Significance for the Regional Transportation Plan shall be as follows:

    The term regional is applied to any airport that serves a major portion of region-wide air traffic activity, that has CAB or PUC certificated service, or that provides service to a portion of the region which otherwise would be isolated from the air transportation system. The criteria used for definition can be found in Appendix G.

Management

20. The six major airline airports in the regional airport system today should be expanded to the maximum extent currently planned with the greatest emphasis on expansion of Los Angeles International and Ontario International Airports to 1985.

21. At Hollywood-Burbank, Long Beach, Orange County, and Palm Springs Airports, the primary emphasis should be placed on achieving higher load-factors on commercial aircraft presently using the facilities; and, secondly, substituting quieter, higher-capacity aircraft for aircraft currently being utilized.

22. All airports of regional significance, especially those whose future existence is threatened, should be protected.

23. A broad-based airport ownership appropriate to both the market area and the impact area of an airport should be encouraged.

24. Where levels of military activity will permit it, joint use of military airports should be encouraged. (Joint use could enable orderly transition to civil ownership if a facility is declared surplus. Civil use of any surplus military airport should be pursued.)

25. Civil uses of airspace in the region should not impair critical military missions.

26. Every effort must be exerted to assure that all existing general aviation airports remain part of the future airport system.

27. The Federal Aviation Administration airport design, obstruction, airspace and other safety standards must be followed.

28. Additional land for noise buffer zones around general aviation airports should be acquired where necessary.

29. Aircraft noise and air pollution should be reduced to an acceptable level.

30. The State of California airport noise regulations, or similar federal regulations that may supersede them, shall be adhered to as airport planning criteria for the SCAG region. Environmental impact statements and reports shall demonstrate how an airport development proposal, and an airport-related zoning change, will meet these criteria.

31. In order to meet the criteria of the California airport noise regulations, every reasonable effort must be made to reduce jet engine noise, including engine retrofit or early retirement of older aircraft.

32. Much greater emphasis should be placed upon the development of technology to reduce the noise produced by general aviation aircraft, and particularly that emitted by business jets.

33. Air quality standards (federal and state) should be a major consideration in planning the regional airport system. Project environmental statements and/or reports shall make specific references to the potential impact of project implementation in relation to such standards.

34. Aircraft engine ground operating time should be reduced where safety permits.

35. Ground service vehicles at airports should be required to meet highway vehicle emission standards.

Development

36. Any development of an airport beyond the maximum airspace capability shown for it should be undertaken only with the full realization that such development may detract from the optimum utilization of the airspace system, or necessitate reductions in the potential development indicated for other airports.

37. Airports that are remotely located should not be expected to provide capacity relief in the short term to 1980. In the time period beyond that, ground travel time will be a major determinant of how many passengers any remotely located airport will serve. However, phased development of remote passenger terminals should be implemented throughout the region, coinciding with the availability of adequate mass transit.

38. Efforts should be undertaken to integrate into the development strategy all parties having a vital interest in airport ground access (e.g., airport limousine services, taxi companies, transit system operators, rental car agencies, the airlines, and the airport operators).

39. Consideration should be given to the development of high-speed ground transportation systems to supplement air transportation systems in local and short-haul markets, both for energy conservation reasons and to partially relieve airline airport capacity problems.

5.6
NON-MOTORIZED MODES POLICIES

1. The needs of handicapped persons in terms of special design features will be considered in the review process for pedestrian facilities.

2. Encourage and promote the greater use of bicycles for all transportation purposes within the region. Specifically, encourage provisions for bicycle storage at all major facilities.

3. Where appropriate, justified, and safe, modify streets and highways to include bicycle facilities.

4. Encourage cities and counties to incorporate into their ordinances and building codes provisions for safe bicycle storage facilities in public and private buildings.

5. Encourage the development and implementation of education and enforcement programs which promote a safe environment for bicycle use.

6. Support legislation facilitating city-county implementation of bicycle programs.

7. Encourage public transit operators to provide bicycle storage facilities where appropriate on public transit vehicles.

8. Urge enforcement of applicable bicycle traffic laws by local governments.

9. The bicycle mode shall be considered as an alternative mode of transportation in the regional transportation planning process.

10. Encourage the development of bicycle facilities which will be:

    - Convenient to use
    - Easily accessible
    - Relatively safe from injury or theft
    - Continuous
    - Integrated into a multi-modal transportation network
    - Of service to as many segments of the population as possible.

11. Encourage non-motorized transportation as an alternative to the automobile.

5.7
MARITIME AND RAILROAD POLICIES

1. Provide guidelines for the incorporation of rail, port, pipeline, and truck considerations in future policies of the Regional Transportation Plan.

2. Utilize adopted local Master Plans for the Ports as a basis for future port development.

3. Recognize the interface between Ports and other publicly provided transportation facilities (especially highways) as an important consideration in future transportation planning efforts.

4. Recognize the interface between rail facilities and highways as a primary consideration in future transportation planning efforts.

5. SCAG supports commuter rail service between the following:

   San Diego to Santa Ana to Los Angeles

   Oxnard to Chatsworth to Los Angeles

6. SCAG supports continued investigation of intercity rail service between San Bernardino and Los Angeles.

7. SCAG should support other attempts to utilize existing rail facilities for passenger (commuter) operations.

8. Maritime alternatives for passenger transport should be assessed as travel demand and technological advances warrant.

9. SCAG should assume a more active role in developing and maintaining working relationships with the private sector operators of the region's rail system.

10 Transportation terminals, including intermodal transfer points, shall be developed to accommodate a variety of modes. Consideration shall be given to the interaction of auto, carpool, transit, paratransit, pedestrian, aviation and other modes in plans for freight terminals. Consideration shall also be given to the desirability of developing combined passenger and freight terminals.

5.8
FINANCIAL POLICIES

Multi-Modal

1. Seek greater flexibility in the use of transportation funds which are available or may become available from federal and state sources.

2. Support amendment of the Transportation Development Act of 1971 to remove the restriction which limits the funds available for public transportation under the act to 50% of annual local costs after the first five years of operation.

3. Support state and federal policies which will assure that regional and subregional planning agencies receive an adequate and continuing level of funding for regional transportation planning.

4. Support legislation and amendments to Article 19 of the State Constitution, which would remove the "guideway" transit constraint and allow highway user revenues to be allocated for any type of transportation improvement without percentage limitations.

Transit

5. Optimum use should be made of existing funds for capital improvements prior to seeking new funds.

6. Encourage increased efficiency of transit operations by development and implementation of transit efficiency standards, allocation incentives, and improved data gathering and analysis capabilities.

7. Encourage transit decision-makers to establish a desired ratio of fares to subsidy. As costs increase over time, it is necessary for financial stability, that either a) this relative level be maintained through periodic review and increase of fares or b) the subsidy share of total costs be increased by increasing taxes.

8. That the available Section 5 funds be made available within the Los Angeles-Long Beach urbanized area <u>only</u> for operating assistance requirements.

9. The allocation of Section 5 funds for FY 75, 76, and 77 is available to each operator for that annual element year plus the two years following.

10. SCAG will take the necessary united action to ensure the availabilty of Section 3 funds to meet all reasonable capital requirements as approved in the Regional Short Range Transit Plan.

10A. SCAG will distribute UMTA Section 5 funds between counties in the Los Angeles/Long Beach urbanized area according to a formula which includes population and travel-system factors. (The details of the formula and the conditions which accompany its use are appended in Appendix H.)

11. Seek increased funding for transit operations.

12. Every effort shall be made to maximize the use of available federal transportation grants to support transit system operating costs and major capital improvements.

13. Encourage local governments to use Federal Revenue Sharing funds for transit.

14. Seek necessary legislation and constitutional changes to facilitate implementation of value capture financing mechanisms by transit districts.

Highways

15. Although it would be more appropriate for increases in gasoline taxes to be levied by state governments, it is possible that federal action may result in imposition of an additional gas tax. The region will oppose imposition of any federal tax from which revenues are not retained in the region for public transportation or highway purposes. Federal and state efforts to increase gasoline taxes should be coordinated to avoid simultaneous imposition of taxes on the SCAG region.

16. The state should seek a greater return on our federal highway user taxes than the present 75%.

17. Ensure adequate funding of maintenance, rehabilitation, safety, and operational improvements on existing highway system.

Streets-and-Roads

18. Support a 2-cent-per-gallon gasoline tax increase, with the funds to be returned directly to local governments for transportation purposes.

19. Secure sufficient funding from all levels of government to implement the actions, programs, and projects contained within the Regional Transportation Plan.

20. Encourage the most cost efficient use of funds in each modal area.

21. No funds shall be allocated or expended for capital projects unless there is a reasonable expectation that sufficient funds will be available for maintenance and operating costs.

22. New sources of funds should be levied at the lowest, most appropriate, level of government.

23. Programming of projects in the Annual Element of the Regional Transportation Improvement Program (TIP) by state or local agencies shall be deemed a commitment of necessary local funds to implement.

24. Agencies, jurisdictions, or districts receiving federal funds for capital projects which are offset by the Air Quality Management Plan and would otherwise be required to have air mitigation will support and assist in the implementation of the air quality measures and policies recommended.

25. Additional highway user revenues should be generated through indexing of the State Gasoline Tax.

26. For the purposes of the AQMP, the following categories funds shall be considered available to fund adopted transportation control measures, and to fund public transportation measures to meet basic transportation needs:

    - All funds available under Section 5 of the Urban Mass Transportation Act of 1964 as amended.
    - All funds available under Section 3 of the Urban Mass Transportation Act of 1964 as amended.
    - To the extent necessary to support required capital improvements, and the extent allowed by law, Federal Aid Primary and Federal Aid Interstate highway funds.
    - To the extent necessary and to the extent allowed by law, Federal Air Urban highway funds.
    - To the extent necessary and to the extent allowed by law, Transportation Development Act (TDA) funds. This policy does not apply to TDA funds allocable to areas outside the non-attainment area.
    - All fare box and other operating revenues.
    - To the extent necessary and allowed by law, Proposition 5 funds.
    - Funds flowing through the State Highway Account from all sources including transfers from the Department of Motor Vehicles Account.
    - Local gas tax funds excepting those funds required for maintenance and safety.
    - Social service funds for transportation purposes including but not limited to UMTA 16 (b)(2) funds.

5.9 Institutional Arrangement Policies

1. Decisions and resolution of transportation conflicts should be made at the lowest level of government empowered to address the issue.

2. Agreements should be reached between SCAG, Caltrans, CTC's, IVAG, VCAG, and transit operators which are intended to eliminate duplication of effort; fix responsibilities with agencies best qualified to do the work; improve coordination; and ensure the appropriate delegation of responsibilities to the county transportation commissions and other designated subregional agencies.

3. Streamline the transportation planning, programming and project review process to minimize review time and red tape.

programs and actions

6.0

multimodal

6.1

6.0
PROGRAMS AND ACTIONS

6.1
MULTI-MODAL

This section describes two planning approaches that transcend most of the transportation modes:

- o Transportation System Management (TSM), which includes Ridesharing, and
- o Air Quality Management.

Each planning approach leads toward attainment of the goals adopted by the region. For example, TSM attempts to make the most of the system we have by improved management and operational efficiency. The Ridesharing Program (a TSM technique) tries to maintain mobility without adding more cars to the roads. The Air Quality Management planning activities seek to improve air quality -- in part, by reducing the pollution caused by transportation.

The action recommendations are scattered throughout the plan. A separate TSM document, elaborating on TSM actions, has been prepared, and is available under separate cover. TSM actions in this document are labeled as such in each modal section. Ridesharing and transportation air quality actions are also in this section.

Understanding the integration of these strategies throughout the plan is important, since many actions support both programs. For example, providing exclusive lanes for transit, vanpools, and carpools is basically a ridesharing strategy. However, when two or more people who once drove separately share a vehicle, there is also less congestion and vehicle pollution. Thus the exclusive lane also meets the aims of the transportation management and air quality approaches.

The Ridesharing program now under way includes an extensive citizen involvement phase with specific community liaison areas spread throughout the region. Information being gathered will be developed into specific RTP amendments to be made to this plan in February of 1979.

The Air Quality Management planning program is now examining the possible options available to the region to attain clean air. After review and adoption, revised transportation air quality actions will also be amended into the Regional Transportation Plan in February of 1979.

6.1.1
Transportation Systems Management (TSM)

Transportation Systems Management actions are identified in the modal sections.* These are generally low-cost projects that improve, rather than expand, the existing system. The TSM actions, collectively, generally conserve energy, improve air quality, and increase transportation efficiency, safety, and mobility.

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* Separate modal sections address the automobile, transit, highways, airports, non-motorized modes, and maritime and railroads.

TSM activities may be divided into eight categories:

1. Traffic operations improvements

   -- Freeway operations improvements, including ramp metering
   -- Traffic signal system improvements
   -- Traffic channelization
   -- Creation of one-way streets

2. Transit service improvements

   -- Purchase of buses or vans
   -- Express bus service improvements
   -- Shelters and other passenger amenities
   -- Passenger information systems and services

3. Transit management measures

   -- Improvements in routing and scheduling
   -- Other management information and control systems
   -- Vehicle communication and monitoring techniques
   -- Improved maintenance procedures
   -- Operational agreemtns
   -- Regional service standards and guidelines

4. Special commuter services

   -- Commuter bus service
   -- Vanpools

5. Community-level paratransit services

   -- Jitneys
   -- Dial-a-ride/dial-a-lift
   -- Shared-ride taxis
   -- Service coordination
   -- Brokerage

6. Other actions to encourage ridesharing

   -- Regional Rideshare Program
   -- Express lanes for carpools, vanpools, and buses
   -- Bypass lanes for high-occupancy vehicles at metered on-ramps
   -- Park-ride/park-pool lots
   -- Carpool/vanpool matching services
   -- Employee incentive programs

7. Parking management

8. Bicycle and pedestrian facility improvements

6.1.1 Transportation Systems Management (TSM) Ridesharing Program

In early 1977, the SCAG Executive Committee decided that developing incentives for ridesharing would be an important priority in the region's transportation system. Action was needed in two areas to develop such incentives. First, the public had to become aware of the congestion, energy, cost, and air pollution problems facing the region and the rationale behind various strategies which could address these problems. Second, Southern Californians had to have a meaningful role in planning to meet these problems and in the development of solutions. The Executive Committee felt such actions were lacking in the implementation of the Santa Monica freeway "diamond lane" and did not want to see that experience repeated.

As a result, the Executive Committee authorized staff to pursue a ridesharing public awareness and participation program. The program was to cover transportation-related problems, ridesharing facilities and services, as well as other incentives, and was to solicit input from a wide variety of citizens and interested groups.

At the same time, Caltrans recognized a need for greater public awareness and participation, especially with respect to its required report to the FHWA (Federal Highway Administration) regarding the ultimate status of the north-bound "diamond lane" on the San Diego freeway. Recognizing the advantages of working together, the two agencies made a decision to become joint sponsors of the program and to invite the County Transportation Commissions and other transportation agencies to become more involved as well. These agencies now comprise the Ridesharing Steering Committee, which is the mechanism for managing the program and working together on the problems confronting the entire region. Teamwork not only produces a better product by incorporating the strengths of each agency's expertise, but also provides more effective results where a consensus of opinion is reached.

The period for developing the work plan of the ridesharing program culminated near the end of 1977. In January 1978, the regionwide awareness portion of the program was initiated. The focus of this effort was to reach as many people as possible, regionwide, with the ridesharing message. This included the development of a wide range of collateral materials such as a film, slide show, brochure, portable displays, public service announcements and billboards.

Simultaneously, the agencies began to develop the community-level awareness and participation effort. In order to maximize resources, nine Community Liaison Areas (CLAs), which represented a cross section of demographic characteristics in the region, were selected for an intensive

involvement effort. This part of the program also included special training of an interagency ridesharing team in both the technical aspects of ridesharing and communication/public involvement skills requisite to a major effort of this type. In April 1978, the regionwide awareness and community-level involvement efforts were brought before the public in a kick-off press conference. These efforts will continue through the end of 1978. In August, a private-sector employer program was begun and will also continue through the end of the year. To date, over 2,000 people have attended meetings at which Come Together ridesharing presentations were made and the program's exhibits have been displayed at fairs which have attracted over 500,000 people.

The goal of these efforts was to provide information on ridesharing options and to learn from the public which of the ridesharing options are most acceptable.

An analysis of the information gathered through the involvement program, as well as further refinement of the technical feasibility of the ridesharing options, was done during the fall of 1978. The public's preference for the different ridesharing options was evaluated in light of the technical and financial feasibility of implementing these options in the various communities. In 1979, the partner agencies in the Come Together ridesharing program are planning to implement a second phase regionwide awareness program, a set of ridesharing demonstration projects, additional community involvement activities, and research to develop further the potential for ridesharing in Southern California.

Preliminary analysis of the public's responses leads to the conclusion that while there is support for many of the ridesharing facility and service improvements, these improvements alone are not the only way to encourage ridesharing. While these improvements will generate a certain amount of ridesharing, additional actions are needed to insure that the facilities and services are used to their maximum potential. Rather than solely focusing on the "supply" of more transportation facilities and services, it is important now to focus on maximizing the "demand" side of ridesharing.

Social interaction and convenience are prime considerations in the decision to rideshare. Social interaction can be facilitated by taking a more personalized approach to promoting ridesharing. This can be accomplished through a strong employer-based program (which draws on the informal communication network which exists among employees at the place of work) and through a community-based program (which draws on neighborhood organizations). In addition, both these programs would offer the opportunity to make ridesharing more convenient (through the establishment of neighborhood park/ride lots, or preferential parking at the place of work). In order to have an impact on the demand side of ridesharing, it is recommended that both types of programs be undertaken in the next phase of the ridesharing program.

The current ridesharing program has been focusing on the commute trip because it is easiest to influence behavior on regular trips and because it is trips in the peak hours that do most to aggravate the problems of congestion, air pollution and energy consumption. While this focus should continue (to be tied in with the employer program) there is an additional need to examine how ridesharing can be encouraged for non-commute trips. This could be accomplished through both a home-based program as well as through focusing on major trip-generating activity centers.

Finally, while transportation agencies agree that certain facilities and service improvements are needed or should be implemented, there is a continuing need to involve citizens of Southern California in the process and to provide information to the community on these improvements and how they contribute to solving some of our transportation problems.

Ridesharing Actions

1. SCAG supports Caltrans' implementation of rideshare lanes on the Santa Ana, Harbor and Century Freeways as well as related ridesharing activities on these freeways including bypass lanes at metered on-ramps and park/ride and park/pool lots.

2. SCAG, Caltrans and the subregional agencies will continue to support Commuter Computer's ability to provide carpool, vanpool and taxipool matching and will support funding for expansion of existing computer capacity to handle service information and rideshare matching.

3. Caltrans will install bypass lanes at metered freeway ramps, where such lanes are technically feasible and appropriate, according to the following schedule:

RAMP METERING PROJECT IMPLEMENTATION SCHEDULE

	RAMPS METERED	BYPASS LANES	RAMPS WITH BYPASS LANES
Jan. 1978	253	46	18%
By Jan. 1979	373	93	25%
By Jan. 1980	602	211	35%
By Jan. 1983	1000	400	40%

4. After completion of the southbound portion of the San Diego Freeway project, and the rideshare program update, the Executive Committee will reconsider the preferential use of the median lanes on the basis of all available information.

5. Caltrans will construct the I-105 freeway as a joint transit way; include ramp metering and by-pass lanes for high occupancy vehicles. Planning and design will include facilities for preferential access to LAX for high occupancy vehicles.

6. SCAG, the CTCs, and Caltrans will continue to examine existing and new local ordinances, and state and federal laws and regulations relating to their implications for ridesharing, and propose changes which will encourage the use of carpools, vanpools, taxipools, buses, and trains.

7. SCAG, the CTCs, transit operators, and affected local governments will identify 3-5 locations for testing alternatives to traditional park-ride/express bus service. Such alternatives might include provision of public subscription bus service, private commuter bus service, or changes in public transit labor contracts which permit the use of part-time drivers. Implementation of service, on a trial basis, will begin in FY 80.

table 6.1-1

8. For the purpose of expanding employer-sponsored ridesharing programs, SCAG, Caltrans and other transportation agencies will develop a centralized ridesharing marketing and information agency oriented towards employers and the commute trip. Such an agency will be identified and operational not later than January 1, 1980.

9. SCAG and the CTCs will work with the Public Utilities Commission to develop a mechanism for providing private commuter bus operators interim authority to start new routes.

10. SCAG and the CTCs will work with local governments, taxi operators, and Commuter Computer to test the feasibility of the taxipool concept.

11. SCAG, the CTCs and Commuter Computer will work with the PUC, State Insurance Board and the Los Angeles Area Chamber of Commerce to develop adequate, low-cost liability insurance for owners, operators and users of group transportation.

12. SCAG, the CTCs and Caltrans will work to amend the State Constitution to permit Caltrans to develop park-ride or multi-modal lots.

13. SCAG, the CTCs and Caltrans will explore new methods of providing tax incentives to employers, commuters and service operators to encourage ridesharing and will also publicize changes in tax legislation which relate to ridesharing.

14. SCAG, the CTCs and Caltrans will continue the current Come Together program, including efforts to increase general awareness on the problems of air pollution, congestion, energy consumption and user costs as well as specific ridesharing options.

    These agencies will examine in greater detail the actual cost of driving alone versus ridesharing and increase public awareness of true costs. As part of this continued awareness effort, the agencies will develop articles for print media, speaking opportunities for program representatives on radio and television and before community groups, public service announcements for radio and television, and brochures on 3-5 specific ridesharing options (including ridesharing lanes and bypass lanes).

15. As part of the Come Together effort, SCAG, the CTCs and Caltrans will develop a public awareness and involvement program in Los Angeles County, in the Harbor, Santa Ana and Century freeway corridors to increase people's understanding of bypass lanes at metered ramps and express lanes and to demonstrate how these options could work in those corridors. Such an awareness program should be undertaken in other corridors as appropriate.

16. SCAG, in cooperation with appropriate agencies, will develop, on a demonstration basis, several home-end or community based programs which test various techniques designed to provide a more personalized or targeted approach to ridesharing.

17. SCAG and the CTCs will study ways of promoting and developing ridesharing activities for non-commute trip purposes at selected activity centers. A public awareness and involvement effort will be conducted at at least one site during FY 80 to test the effectiveness of encouraging ridesharing for non-regular trips.

18. SCAG and Caltrans, in conjunction with the subregional agencies, will develop an information-sharing and technical-assistance program to help local governments develop locally implementable projects which encourage the use of high occupancy vehicles such as reserved curbside lanes for buses and carpools, on and off street parking programs, etc.

19. SCAG, the CTCs and Caltrans will work to expand existing employer sponsored ridesharing programs to meet the objectives set forth in Section 4.3.4. To accomplish this objective, the agencies will assist public and private employers in providing bus passes for employees, sponsoring carpools or vanpools, providing subscription bus service, assigning preferential parking spaces for ridesharing vehicles, instituting flextime and using fleet vehicles for ridesharing purposes.

20. SCAG will assist cities and counties in developing parking programs which encourage the voluntary reduction of off-street parking spaces.

21. All governmental entities will develop rideshare matching programs in support of the regional rideshare program. This would be voluntary through 1982 and mandatory thereafter.

6.1.2 Transportation and Air Quality

During the last two years, SCAG, in cooperation with the South Coast Air Quality Management District, Caltrans, local governments and other agencies, has been developing an Air Quality Management Plan for the South Coast Air Basin. A similar plan has been prepared in Ventura County by the Ventura County Environment/Air Management Agency. Desert portions of the SCAG region will have Non-Attainment Plans prepared which indicate how these areas will attain the federal ambient air quality standards. Each of these plans, once approved by the state and federal governments, will represent revisions to the required State Implementation Plan.

These plans are required to consider transportation control measures and to recommend those which are to be implemented. Congress, in the 1977 Clean Air Act Amendments, included 18 control measures that have to be considered for implementation.

The Clean Air Act also includes numerous other requirements which impact local governments and transportation decisions significantly. These include:

- o Commitments to implement approved control measures.
- o Commitments to do additional analysis of measures as required.
- o Commitments to use all available resources to establish, expand, or improve public transportation to meet basic transportation needs.
- o Expeditious programming of and priority for transportation control measures and public transportation measures in Transportation Improvement Programs.
- o Implementation of an Inspection/Maintenance Program if an area cannot meet standards by 1982.
- o The Regional Transportation Plan and Improvement Program must conform with the approved State Implementation Plan.

If the air quality plans noted above are not completed within a congressionally mandated schedule and/or the requirements of the Clean Air Act are not met, the Act would preclude the awarding of certain federal transportation funds under Title 23, United States Code (as well as other federal funds). These sanctions would not apply to transportation projects under that title for safety, mass transit, or transportation projects related to air quality improvement or maintenance.

In addition to sanctions against federal funds, the Act would also prohibit the granting of any permit allowing new emission sources to be started in the region, thus blocking commercial, industrial, and other types of growth.

Because of the significance of these issues and the contribution of mobile sources to the total air quality problem, SCAG, the County Transportation Commissions, subregional transportation planning agencies, Caltrans, transit operators, and local governments have joined with air quality control agencies to prepare the plans discussed above and prepare a coordinated approach to these and other (i.e., State Lewis Air Quality Act) requirements. An extensive interagency process was developed in the South Coast Air Basin with SCAG and the South Coast Air Quality Management District sharing co-lead responsibilities for the AQMP. Subregional agencies (counties) assisted by elected officials of selected cities, the County Transportation Commissions and SCAG prepared subregional inputs to the AQMP. SCAG prepared growth forecasts, land use, transportation and energy inputs. The SCAQMD prepared stationary-source inputs. An extensive public involvement process was also developed and utilized in preparing the plan.

The conclusion of the South Coast AQMP is that standards for oxidant, nitrogen dioxide, and carbon monoxide could be met by 1987 but not by 1982. An extension of time will be necessary to attain these standards. Air Quality tactics as adopted in the Air Quality Management Plan for the South Coast Air Quality Management District (1-25-79) are reflected in Table 6.1-2.

Adopted SCAG/AQMP Mobile Source Measures
for South Coast Air Quality Basin

2/6/79

Emission Reductions (Tons/Day)

Measure Number		Name	RHC 1982	RHC 1987	NOx 1982	NOx 1987	CO 1982	CO 1987	TSP 1982	TSP 1987	SOx 1982	SOx 1987
Through 1982 Measures												
1	H-4	Modified Work Schedules	1.7	3.4	0.8	2.4	14.2	29.2	0.5	0.5	0.1	0.3
2	H-5	Carpool Preferential Parking	0.4	0.3	0.4	0.4	3.0	2.6	0.1	0.1	-	-
3	H-13	Trip Reduction Program	7.1	11.3	7.0	13.7	53.3	92.6	0.9	1.8	0.3	1.2
4	H-18	Annual Inspection and Maintenance of Light & Medium Duty Vehicles	74.9	61.7	49.1	66.6	693.8	500.0	-	-	-	-
5	H-23	Increased Bicycle and Pedestrian Facilities	0.4	0.5	0.2	0.4	3.5	5.0	0.1	0.1	0.1	0.1
6	H-34	Employees Ridesharing Program	4.2	6.6	4.3	8.0	32.0	54.4	0.7	1.4	0.4	1.4
7	H-35	Traffic Signal Synchronization	0.4	0.9	(+0.2)	(+0.3)	3.5	8.7	-	-	-	-
8	H-112	Carpool Sign-ups for Government Employees					Included in H-34					
9	H-113	Purchase of Government Cars for Low Emission and High Fuel Economy	-	-		0.1	0.5	0.2	-	-	-	-
10	H-114	Reg. Prgm. of Insp/Maint for Govt. Veh. (Discounts impact of H-18)	0.5	0.	0.6	0.7	4.3	3.3	-	-	-	-
11	H-118	Non-Recurrent Congestion Relief	0.3	0.2	0.1	0.1	5.4	2.6	-	-	-	-
		Total 1982 Reductions	89.9		62.5		813.5		2.3		0.9	
Post 1982 - Pre 1987 Measures												
12	H-1	Increased Air Passenger Load Factor		0.9		-		2.2		1.0		0.1
13	H-2	Jet Aircraft Ground Taxi Improvements		2.7		-		14.2		6.6		0.9
14	H-3	Triple-Trailer Trucking		1.5		2.7		12.8		0.2		0.4
15	H-6	Piston Engine Aircraft Emission Controls		5.6		(+3.5)		97.6		-		-
16	H-7	Emission Standards - New Off-Road Heavy-Duty Non-Farm Equipment		5.7		28.3		72.6		-		-
17	H-11	Electrify Railroad Switching Yards		4.4		17.7		7.3		0.3		-
18	H-15	Emission Standards - New Farm Equipment		1.9		0.7		18.2		-		-
19	H-16	Emission Standards - Jet Aircraft Engines		21.4		0.8		29.5		-		-
20	H-24	Improved Emissions - Controls for Motor Vehicles		52.0		83.4		561.0		20.6		-
21	H-25	Reduced Jet Aircraft Queuing Delays		0.5		-		2.3		1.1		0.1
22	H-36	Voluntary Retirement of Older Vehicles		9.2		1.9		76.8		-		-
23	H-60	Electric Vehicles		1.6		1.1		9.0		0.2		0.8
24	H-72	Increased Trucking Efficiency		4.1		9.7		38.0		0.9		1.7
25	H-85	Freeway Facility and Transit Improvements Supporting High Occupancy Vehicle Movement		0.7		0.9		5.9		-		0.1
26	H-86	Wilshire Rail Line		0.3		0.4		2.4		-		-
27	H-87	Los Angeles Downtown People Mover System (DPM)		0.1		-		1.0		-		-
28	H-88	Congestion Relief Freeway Widening		1.9		(+0.1)		15.8		-		-
29	H-89	Transit System Improvements		0.6		0.8		4.8		0.1		0.1
30	H-117	Santa Ana Transportation Corridor		0.2		0.3		1.8		-		-
		Total 1987 Reductions from all mobile Measures (% of all measures)		200.6 (53%)		237.2 (56%)		1671.8 (95%)		34.9 (42%)		7.2 (5%)
		Total 1987 Reductions from stationary measures (% of all measures)		180.0 (47%)		187.1 (44%)		96.9 (5%)		47.7 (58%)		146.9 (95%)
		Total Reduction from all Measures		380.6		424.3		1768.7		82.6		154.1
		Emission Reduction by 1987 Needed from all sources to Meet: Fed'l stds. (target)		309		351		1618		21*		-
		State Standards		539		725		1417		63*		58
		Percent of Target Attained by Mobile Measures		65%		68%		103%		166%		-
		Projected 1987 Total Man-Made Emissions (all sources)		815		1151		4098		263		387
		Projected 1987 Mobile Source Emissions		455		618		3850		101		84
		Percent of total Emissions		(56%)		(54%)		(94%)		(38%)		(22%)
		Emission Reduction of Mobile Measures as a Percent of Projected 1987 Mobile-Source Emissions		44%		39%		44%		34%		9%

* Excludes Background

Note: Emission reductions for mobile measures take into account the impact of measures on each other. This mainly reduces the individual effectiveness of most on-road, travel-related measures due to technological controls imposed.

table 6.1-2

Air Quality Actions

Actions denoted below by asterisks are found also in the 1-25-79 adopted Air Quality Management Plan. They represent the mobile transportation control measures, and for consistency (as required by the Clean Air Act Amendment of 1977) are so contained in the Regional Transportation Plan. Note: Some Air Quality actions listed below may also be listed in other sections of the RTP (i.e. Transit, Highways, Non-Motorized, Maritime and Rail, and Finance).

1. SCAG and the subregional agencies will provide information to the general public on the economic and environmental benefits and methods of reducing the emissions of pollutants and conserving energy; and encourage private firms to take these considerations into account in the acquisition, replacement or operation of autos, trucks, and other vehicles.

2. SCAG recommends that the state and federal governments consider a tax credit or tax deduction for low-income individuals to mitigate the vehicle maintenance costs attributable to a mandatory inspection and maintenance program.

3. SCAG will seek assurance from domestic automobile manufacturers that significant improvements will be made to the automobile, in terms of fuel economy, pollution characteristics, and safety. Such improvements should have the following aims:

   - A pollution-free engine, to be achieved either by design innovations or through the use of alternative sources of energy.

   - As the average size of automobile is reduced, incorporate additional safety improvements into their design.

4. To determine whether "reasonable further progress" is being made through transportation measures, SCAG, in cooperation with the County Transportation Commissions, IVAG, and VCAG, will establish performance criteria for all transportation management measures to determine annual progress in their implementation and effectiveness.

5. As a part of the FY 79-80 regional planning effort, SCAG, in cooperation with County Transportation Commissions and transit operators, will develop and document in the RTP a plan for long- and short-range transportation improvements designed to meet basic public transportation needs. This plan will be implemented according to the schedule adopted with that plan and will be presented to the Executive Committee for adoption by June 1980.

*H-1 Increased Air Passenger Load Factor

6. SCAG will establish a task force of airline representatives of commercial airlines, airport operators, and regulatory agencies to determine specific implementation actions to achieve an average load factor of 70%. Recommendation for action to be made by July, 1979. (See Action 56 and Airport Action 22).

*H-2 Jet Aircraft Ground Taxi Operation Improvements

7. SCAG will seek assurances from FAA that it will initiate a technical feasibility study (if necessary) in FY 81 to determine impacts of modifying engine speeds during aircraft idling and reducing the number of in-operation engines during taxiing. (See Action 56 and Airport Action 22).

8. The FAA should prepare, in conjunction with the affected agencies, an operating procedure for each type of aircraft in use. This procedure should include RPMs for engine, numbers of engines to be used, and allowances for reduced taxi speeds if necessary. (See Action 56 and Airport Action 22).

*H-3 Triple Trailer Trucking

9. SCAG and Caltrans, working with truck operators and other appropriate agencies, will include (in the Overall Work Program) a study of triple trailer trucking focusing on outlying routes in the South Coast air basin.

*H-4 Modified Work Schedules

10. SCAG will work with both private and public sector employers to develop an educational program designed to encourage both staggered work hours and four-day, 40-hour work weeks.

*H-5 Parking Management: Carpool Preferential Parking (see also H-34)

11. SCAG, the CTCs and Caltrans will work to expand existing employer sponsored ridesharing programs to meet the objectives set forth in Section 4.3.4. To accomplish this objective, the agencies will assist public and private employers in providing bus passes for employees, sponsoring carpools or vanpools, providing subscription bus service, assigning preferential parking spaces for ridesharing vehicles, instituting flextime and using fleet vehicles for ridesharing purposes.

*H-6 New General Aviation Aircraft Engine Controls

12. SCAG will encourage the ARB (California Air Resources Board), EPA and FAA to establish requirements for new piston aircraft engines to meet emission standards as proposed by the EPA in 1973.

*H-7 Emission Standards for all new Non Farm Heavy Duty Offroad Vehicles

13. SCAG and SCAQMD will recommend that ARB establish exhaust emission standards for all new non-farm heavy-duty off-road vehicles comparable with standards for highway heavy-duty trucks.

14. SCAG will promote new standards for non-farm heavy-duty off-road vehicles through its legislative/administrative advocacy program.

*H-11 Electrify Railroad Switching Yards

15. SCAG will seek federal/state/private sector financial support of feasibility studies for the electrification of railroad switching yards and all operations, if appropriate, or other equivalent emission reduction measures.

16. SCAG will seek commitments from the major railroad companies owning/operating classification/switching yards at Colton, East L. A. (Hobart Yard), South Central L.A. (Watson Yard) and the Harbor Service Railway at Port Hueneme, Long Beach, and Port of L.A. to convert those yards to electric power pending the results of detailed feasibility studies.

*H-13 Trip Reduction Program

17. SCAG, in cooperation with other appropriate agencies, will develop a media/educational program aimed at maintaining the current daily automobile trip-making level.

18. SCAG and other appropriate agencies will evaluate alternative methods for local government implementation of automobile trip reductions (i.e., land use planning, circulation, home goods delivery).

19. SCAG, in cooperation with local government, will identify demonstration projects to be tested for automobile trip reduction effectiveness.

*H-15 Emission Standards for New Farm Equipment

20. SCAG and SCAQMD will recommend that ARB establish new exhaust emission standards for all new farm equipment similar to those promulgated for on-road heavy-duty equipment.

21. SCAG will promote new standards for new farm equipment through its legislative/administrative advocacy program.

*H-16 Modify Old and New Jet Aircraft Engines

22. SCAG will encourage EPA and FAA to establish emission standards for modifying existing jet aircraft engines to meet proposed 1978 Federal standards.

*H-18 Inspection and Maintenance of Light Duty Vehicles

23. SCAG endorses the California Legislature's adoption of legislation to mandate implementation of an annual vehicle inspection/maintenance program in the South Coast Air Basin. This program would require full mandatory inspection of light duty vehicles at State supervised inspection stations using loaded tests.

24. SCAG, in conjunction with the South Coast Air Quality Management District and other interested agencies, will prepare a legislative advocacy campaign to promote state mandated legislation for an annual inspection/maintenance program.

25. SCAG will prepare information to encourage governmental entities to initiate an immediate voluntary inspection/maintenance program for their fleet vehicles until a mandatory program is in operation.

*H-23 Increased Bicycle and Pedestrian Facilities

26. SCAG will coordinate bicycle planning, implementation, and safety programs among all participants in the transportation planning process.

27. SCAG and the CTCs will encourage cities and counties to use available SB 821 bicycle and pedestrian facilities funds in support of projects which discourage auto use.

28. SCAG will seek increased funding, from private, local, state and federal sources, for bicycle and pedestrian facilities, through its legislature/administrative advocacy program.

29. SCAG, the CTCs, and Caltrans will encourage and support promotional programs to increase the provision for and use of bicycle and pedestrian facilities.

30. SCAG will encourage cities and counties to consider amending zoning, subdivision and building ordinances to require the provision of bikepaths, over-crossings and pedways, bike racks and other facilities to encourage walking and bicycle riding.

*H-24 Improved Emission Controls from Motor Vehicles

31. SCAG will seek ARB administrative action to revise emission standards as defined in the AQMP for on-road vehicles beginning with the 1983 model year.

*H-25 Reduce Jet Aircraft Queuing Delays

32. SCAG will utilize a task force of representatives of commercial airlines, airport operators and regulatory agencies to develop an implementation program which will reduce aircraft delays and excessive idle/taxi operations while on the ground. Recommendations for action to be made by July 1981 with implementation by appropriate agencies or firms prior to 1983. (See AQ Action 56, and Airport Action 22).

33. The airlines and regulatory agencies should evaluate existing operating procedures and flight schedules to minimize the taxi and queueing delays. Control of landings, and increased use of gate holds should be given high consideration. In addition, airport operators should design airport expansion and construction based on shorter taxi distances, reduced airplane ground congestion and runway configurations which minimize ground delay. (See AQ Action 56, and Airport Action 22).

*H-34 Rideshare Program (see also H-5)

34. SCAG, the CTCs and Caltrans will work to expand existing employer sponsored ridesharing programs to meet the objectives set forth in Section 4.3.4. To accomplish this objective, the agencies will assist public and private employers in providing bus passes for employees, sponsoring carpools or vanpools, providing subscription bus service, assigning preferential parking spaces for ridesharing vehicles, instituting flextime and using fleet vehicles for ridesharing purpóses.

*H-35 Traffic Signal Synchronization

35. SCAG, Caltrans, CTCs and appropriate local governments will identify candidate high volume intersections for signal synchronization. These intersections should form clusters of contiguous, interconnected systems and should build upon those intersections already having such systems.

36. SCAG, in cooperation with CTCs and implementing agencies, will investigate additional funding for signal synchronization and prepare necessary recommendations to obtain such funding.

*H-36 Voluntary Retirement of Older Vehicles

37. SCAG recommends that the Legislature authorize through legislation the actions listed below and appropriate sufficient funds to carry out these actions.

    - The Air Resources Board will initiate a program wherein they will offer to purchase for $450 vehicles 12 years or older registered in the South Coast Air Basin whose owners voluntarily want to sell them.

    - The Air Resources Board will utilize the private sector car dealers to the maximum extent possible and provide incentives for their involvement in this program.

    - The Department of Motor Vehicles will substantially increase the registration fee for out-of-state vehicles 10 years or older coming into the South Coast Air Basin.

    - The Department of Motor Vehicles will reduce to $1 the registration fee for vehicles that replace those sold to the state through this program.

    - The enabling legislation should authorize the State Board of Equalization to waive the sales tax normally levied on a vehicle purchase when that vehicle is replacing one sold to the state through this program.

38. The SCAQMD and ARB should seek private sector funding of the program for voluntary retirement of older vehicles, and allow it as a stationary source offset action.

39. SCAG will seek implementation of actions related to voluntary retirement of older vehicles through its legislation/administrative advocacy program.

*H-60 Electric Vehicles

40. SCAG will include (in the Overall Work Program) a study of electric or hybrid vehicles as an alternative to the auto for short distance travel in urban areas with specific application to fleet operations.

*H-72 Improved Trucking Efficiency

41. SCAG will encourage the ICC (Interstate Commerce Commission) and the Public Utilities Commission to revise their deadheading regulations to decrease the number of empty backhauls by proprietary and non-proprietary trucking operations.

42. SCAG will evaluate alternative incentives for the trucking industry to reduce empty backhauling for selected freight movements.

43. SCAG, in cooperation with the California Trucking Association and other appropriate trucking interests, will evaluate methods to develop a centralized brokerage-dispatching system to increase the trucking fleet average load.

*H-85 Freeway Facility and Transit Improvement Supporting High Occupancy Vehicle Movement

RTDP - Element II - Freeway Transit

44. Caltrans will develop rideshare lanes (designed for possible conversion to rail) on the following freeways:

    a) Harbor Freeway (from I-10 to I-105 with stations south of I-105 to San Pedro and to Long Beach via Route 11, 405 and F).
    b) Santa Ana Freeway (from downtown Los Angeles to I-605),
    c) Century Freeway (from LAX to I-605),
    d) Extension of El Monte Busway from its current western terminus to Union Station.

45. OCTC, OCTD, Caltrans and local agencies will:

    a) Complete the alternatives analysis of the high capacity transit improvements in the Santa Ana/Los Angeles Corridor
    b) Conduct preliminary engineering and EIR/EIS work on the first usable segment of the Santa Ana Transportation Corridor.
    c) Upon successful completion of the above design and construct an appropriate facility serving the high activity Santa Ana corridor to be integrated with transit facilities being designed and constructed in Los Angeles County.

*H-86 Wilshire Rail Line

RTDP - Element IV

46. SCRTD will design and construct a rail rapid transit line from downtown Los Angeles along Wilshire Boulevard to Fairfax Avenue, north on Fairfax to Hollywood, and through the Cahuenga Pass to North Hollywood. This will be integrated with the Freeway Transit and Downtown People-Mover elements of the RTDP.

*H-87 Los Angeles Downtown People Mover

RTDP - Element III

47. The City of Los Angeles will design and construct a downtown people mover that would include intermodal transfer facilities at Union Station and the Convention Center.

*H-88 Congestion Relief Freeway Widening

48. SCAG will promote expeditious implementation of currently programmed (in the TIP) widening projects which relieve peak hour congestion by seeking additional funding for such projects.

49. SCAG, in conjunction with Caltrans, CTCs and affected agencies, will evaluate additional widening projects to determine impacts, (including noise) costs and effectiveness of reducing emissions and improving mobility. (Approximately 300-400 lane miles of freeway widenings have been identified as candidate proposals by Caltrans.)

*H-89 Transit Improvements

RTDP Element I

50. Transit operators will

a) Maintain existing levels of service;
b) develop convenient transfer facilities to encourage greater transit utilization;
c) modernize transit facilities and equipment including revenue vehicles;
d) implement, in conjunction with appropriate City and County of Los Angeles agencies, transit priority programs
e) develop community transit services when appropriate.

*H-112 Carpool Signups for Governmental Employees

51. All governmental entities will develop rideshare matching programs in support of the regional rideshare program. This would be voluntary through 1982 and mandatory thereafter.

*H-113 Governmental Purchase of Low Emission High Fuel Economy Vehicles

52. All governmental entities shall establish programs to purchase low polluting, high fuel economy vehicles for their fleets. This programs will be mandatory after 1982.

*H-114 Governmental Vehicles to a Program of Inspection and Maintenance

53. All governmental entities, including special districts, will develop programs to perform low emission tune ups on all vehicles including heavy duty trucks and maintenance equipment. This will be a voluntary program through 1982 and mandatory thereafter. This program will require a minimum of two years per year per vehicle.

*H-117 Santa Ana Corridor (see also H-85)

54. OCTC, OCTD, Caltrans and local agencies will:

a) Complete the alternatives analysis of the high capacity transit improvements in the Santa Ana/Los Angeles Corridor
b) Conduct preliminary engineering and EIR/EIS work on the first usable segment of the Santa Ana Transportation Corridor.
c) Upon successful completion of the above design and construct an appropriate facility serving the high activity Santa Ana corridor to be integrated with transit facilities being designed and constructed in Los Angeles County.

*H-118 Reduce Non Recurrent Congestion

55. Caltrans shall develop those automated traffic management procedures necessary to reduce non-recurrent congestion on the freeway system. This should include expansion of the electronic surveillance system and changeable message signing, closed circuit television, highway advisory radio messages, and improved response times in clearing accidents and other forms of non-recurrent congestion.

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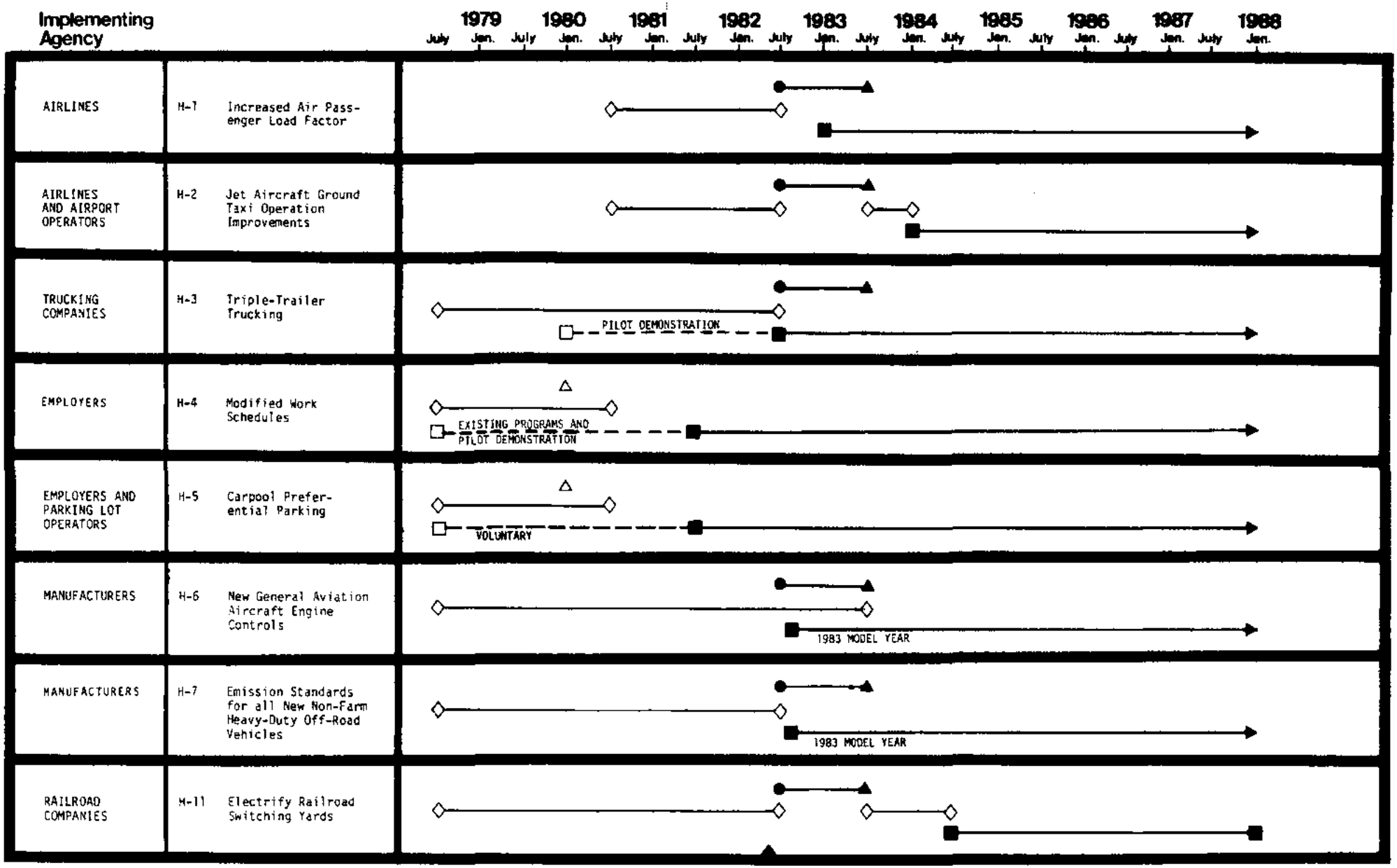
56. For the three AQMP measures relating to airports (H-1, H-2 and H-25) and their associated transportation actions, the total emissions from each airport should be determined and the public agency owning or operating these airports can implement these three measures or take whatever other actions are necessary to reduce the emissions by an amount equivalent to those that would be reduced by the individual airport and VMT control measures -- provided that the equivalent reduction takes place at the airport originating the emissions.

57. SCAG, in cooperation with Caltrans, CTCs, subregional agencies and local governments, where appropriate, will continue to analyze and recommend other measures which may be desireable to reduce mobile source emissions.

58. SCAG, through its monitoring and review responsibilities, will direct adherence to, and provide progress reports on, implementation of air quality measures on the schedule shown in Table 6.1-3 on the following page.



Submittal

△ EPA approval of ARB submittal of final SIP Revision for pre-1982 measures.

●——▲ Regional refinement of post-1982 further study measure; ARB review and submittal to EPA as final SIP revision.

Development

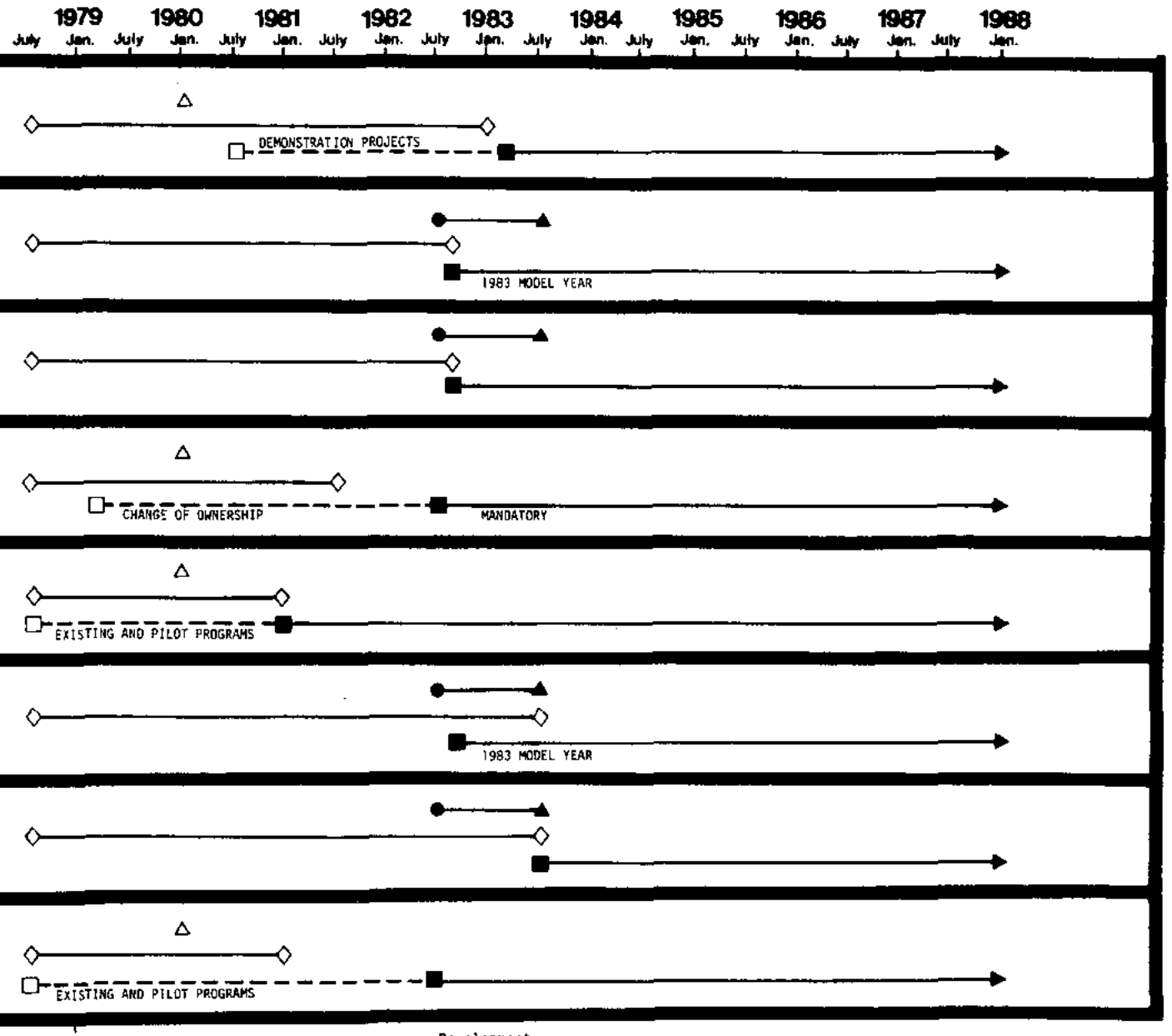
◇——◇ Technical studies alternatives analysis preliminary engineering, impact and feasibility analysis, environmental clearances, financial programming, etc.

Implementation

■——■ Actions carrying out the recommended measures resulting in emission reductions.

table 6.1-3

Implementing Agency		
CONSUMERS	H-13	Trip Reduction Program
MANUFACTURERS	H-15	Emission Standards for New Farm Equipment
MANUFACTURERS	H-16	Modify Old and New Jet Aircraft Engines to Meet Proposed 1978 Federal Standards
BUREAU OF AUTOMOTIVE REPAIRS, DEPARTMENT OF CONSUMER AFFAIRS	H-18	Inspection and Maintenance of Light-Duty Vehicles
CITIES AND COUNTIES	H-23	Increased Bicycle and Pedestrian Facilities
MANUFACTURERS	H-24	Improved Emission Controls for Motor Vehicles
AIRLINES AND AIRPORT OPERATORS	H-25	Reduce Jet Aircraft Queuing Delays
EMPLOYERS	H-34	Rideshare Program



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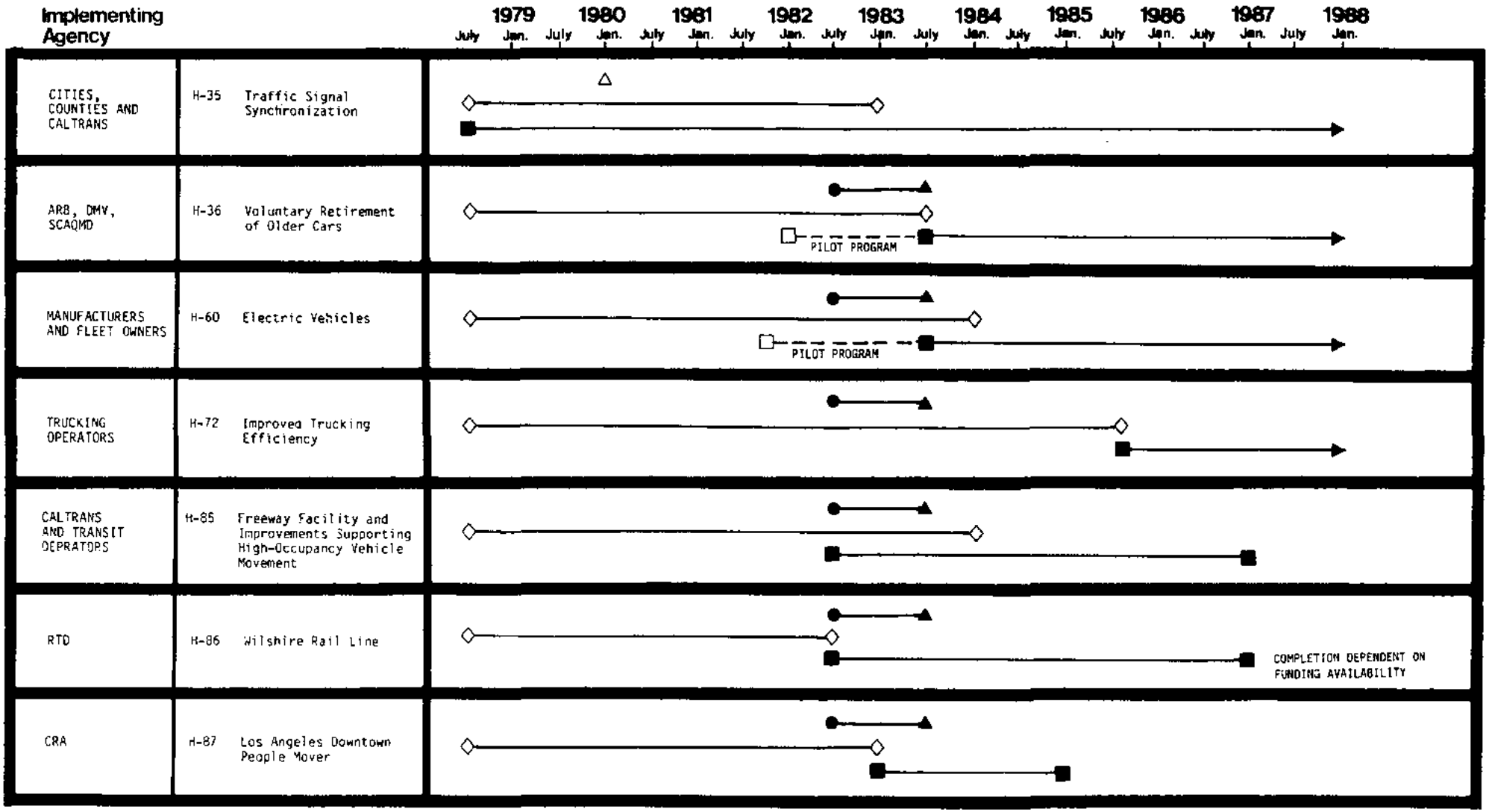
Implementation

■——■ Actions carrying out the recommended measures resulting in emission reductions.

table 6.1-3



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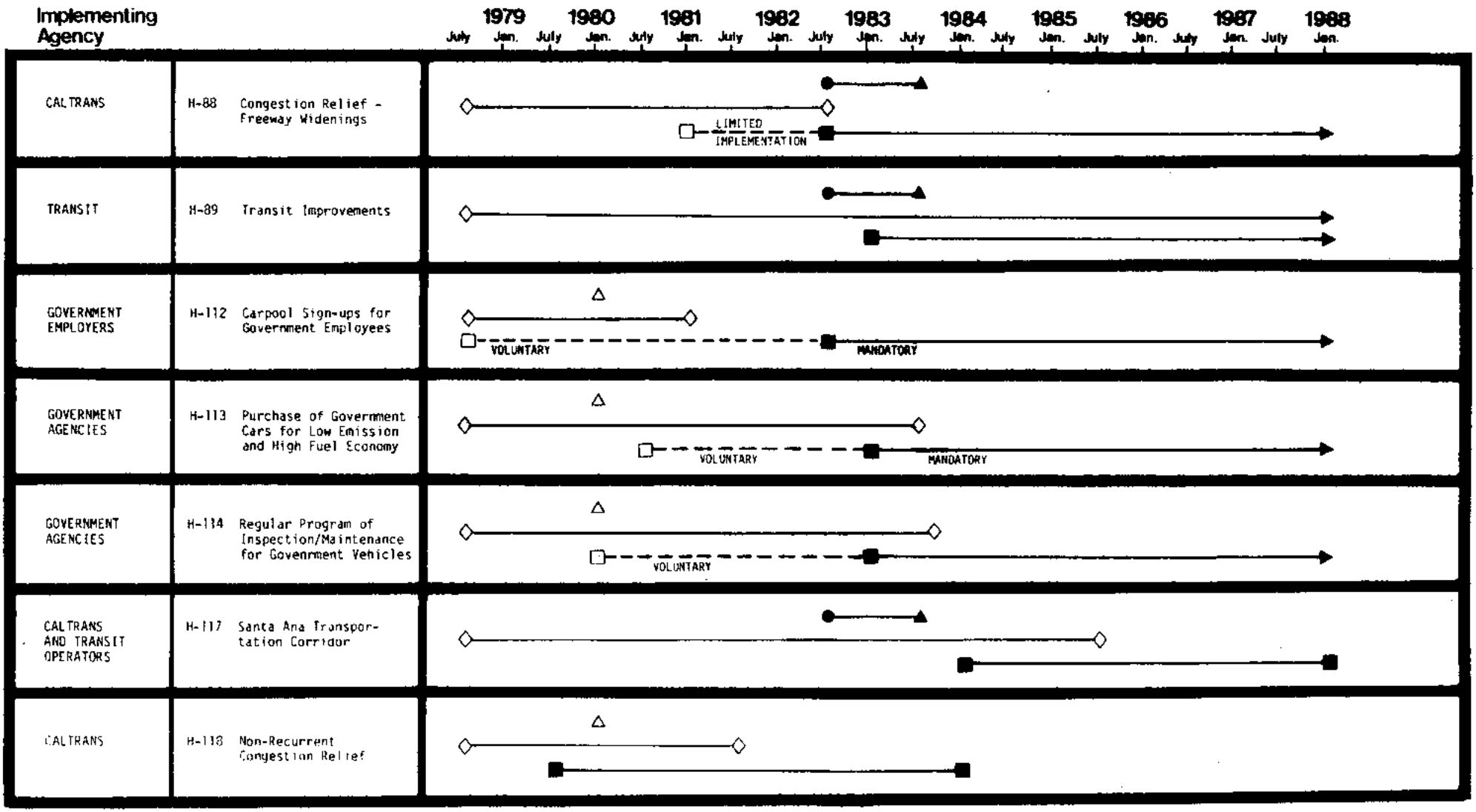
Implementation

■——■ Actions carrying out the recommended measures resulting in emission reductions.

table 6.1-3



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Development

◇——◇ Technical studies alternatives analysis preliminary engineering, impact and feasibility analysis, environmental clearances, financial programming, etc.

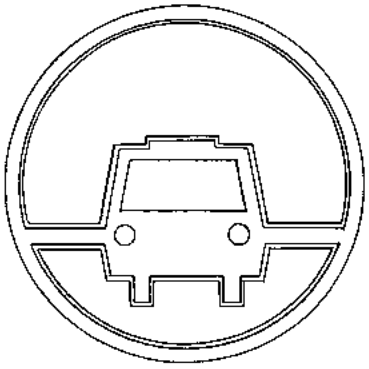
Implementation

■——■ Actions carrying out the recommended measures resulting in emission reductions.

table 6.1-3

auto

6.2



6.2
AUTOMOBILES

Automobiles are the region's chief mode of travel: about 5.5 million of them carry 97% of the 37,865,000 daily person-trips. And they are expected to carry most of the region's 43,000,000 daily person-trips in 1995.

This chapter deals with automobile management: measures to minimize its impact on air quality, lessen its consumption of energy -- and, at the same time, promote better traffic-flow and reduce congestion.

These include measures to:

- Reduce or combine automobile trips.
  This reduces emissions, fuel consumption, and congestion.

- Improve efficiency of travel corridors.
  Synchronized signals, reversible lanes, etc., can make vehicle operations more efficient.

- Improve the technical characteristics of the automobile itself.
  Better engines could lessen auto emission rates and fuel use.

Emissions, fuel consumption, and congestion are most directly improved by reducing auto use -- either the length of the average trip or the number of vehicle trips, since both have an impact on vehicle miles of travel (VMT). Thus ridesharing, which increases vehicle occupancy, also reduces emissions, energy use, and congestion.

California Emission Standards have greatly reduced auto emissions, and future improvements are expected. The 1978 model-year cars' CO emissions will fall to 2.8 grams/mile, about 3% of the CO rate of 1966 model-year cars. As newer, "cleaner" cars replace older, "dirtier" cars, the overall emission rate for the vehicle fleet will fall. By 1980, expected reductions (relative to 1975 levels) range from 16% for evaporative hydrocarbons to 65% for carbon monoxide exhausts.

Technical characteristics can be improved by modifying autos already in use (e.g., engine components could be maintained more frequently), and mandating improvements in new cars, through emission or fuel-economy standards. The efficiency of travel corridors can be improved by TSM actions (see Section 6.1.1)

The actions which follow increase the efficiency of auto use:

Automobile Actions

1. SCAG will seek Air Resources Board (ARB) administrative action to revise emission standards as defined in the AQMP for on-road vehicles beginning with the 1983 model year.

2. SCAG endorses federal fuel economy standards for 1978, 1979, and 1980 model-year automobiles.

3. SCAG endorses the California Legislature's adoption of legislation to mandate implementation of an annual vehicle inspection/maintenance program in the South Coast Air Basin. This program would require full mandatory inspection of light duty vehicles at State supervised inspection stations using loaded tests.

4. SCAG, in conjunction with the South Coast Air Quality Management District and other interested agencies, will prepare a legislative advocacy campaign to promote state legislation mandating an annual inspection/maintenance program.

5. SCAG will prepare information to encourage governmental entities to initiate an immediate voluntary inspection/maintenance program for their fleet vehicles until a mandatory program is in operation.

6. SCAG recommends that the state and federal governments consider a tax credit or tax deduction for low-income individuals to mitigate the vehicle maintenance costs attributable to a mandatory inspection and maintenance program.

7. SCAG urges enforcement of the 55-mph speed limit. Increase public awareness of the speed limit.

8. SCAG supports signal synchronization programs.

9. SCAG will seek assurance from domestic automobile manufacturers that significant improvements will be made to the automobile, in terms of fuel economy, pollution characteristics, and safety. Such improvements should have the following aims:

   - A pollution-free engine, to be achieved either by design innovations or through the use of alternative sources of energy.

   - As the average size of automobiles is reduced, incorporate additional safety improvements into their design.

transit

6.3

6.3
TRANSIT

6.3.1
Setting

Public transit service in the SCAG region includes fixed-route bus service, demand-responsive (dial-a-ride) service, route-deviation bus service and charter service. The only rail transit in the region is offered by AMTRAK. Paratransit (taxis, subscription bus service, etc.) is provided by private and public sector operators, and several local governments provide specialized services for particular groups.

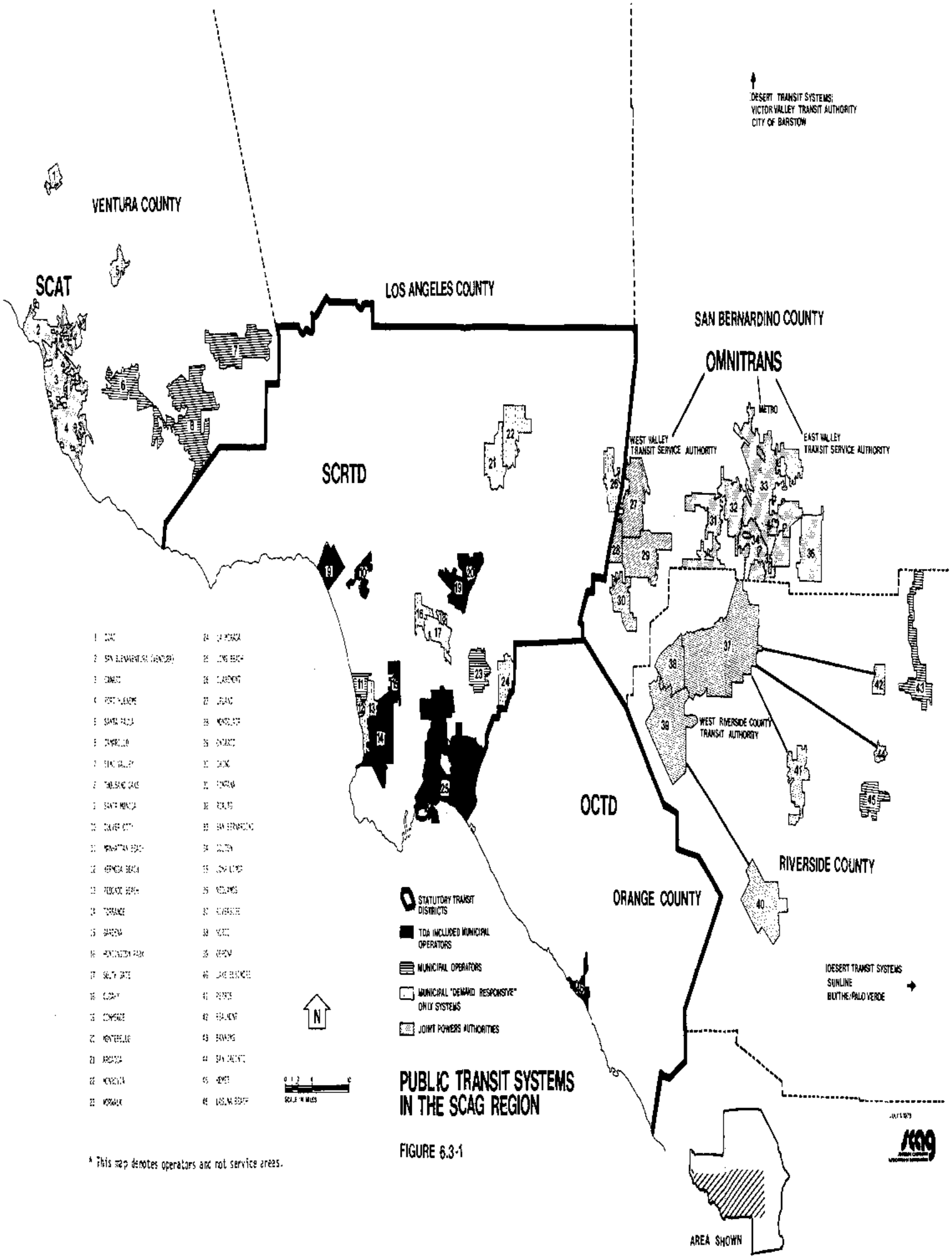
Over one million riders use the SCAG region's transit systems each day: about 850,000 use the Southern California Rapid Transit District service, slightly over 60,000 use the Orange County Transit District service, and the remainder are distributed among operators in other counties and municipal operators in the urbanized area. Although these transit trips are a small percentage of the total person trips (approximately 3.36%), during the peak-hour, transit person-trips rise to about 10% of the total trips.

Direct responsibility for providing public transportation service in the region is shared by several transit operating entities, generally organized according to geographic political jurisdictions. Major transit operators' service areas are shown in Figure 6.3-1. The two largest of these are the Southern California Rapid Transit District (SCRTD) which provides most of the Los Angeles County service and the Orange County Transit District (OCTD) which serves Orange County. As transit districts, SCRTD and OCTD were created by special state legislation.

In three other counties, local governments have formed joint powers agencies as primary service providers. These are the Riverside Transit Agency (RTA) and Sunline in Riverside County, OMNITRANS in San Bernardino County and South Coast Area Transit in Ventura County. Although specific arrangements between member cities and counties differ in each area, the general organizational relationship is one of joint decision-making, shared costs and fully coordinated service arrangements for participating local governments.

In addition to the service provided by transit districts and joint powers agencies, several cities own and operate municipal transit systems, especially in Los Angeles County. Many local governments also contract for service from other cities and/or taxicab companies.

There has been a significant expansion of paratransit service in recent years, with more than a thousand social service agencies and private-sector providers offering specialized transportation service, primarily to their client groups. Recent surveys have identified more than 5,000 vehicles committed to these types of operations in Los Angeles County alone.



PUBLIC TRANSIT SYSTEMS IN THE SCAG REGION

FIGURE 6.3-1

* This map denotes operators and not service areas.

Seventy-five taxi service providers operate 1,500 taxis in the region and carry 15 million passengers per year. Nearly 100 private commuter buses are operated in the region, transporting 3,000 commuters daily. All together, 65 private bus companies offer airport transportation, charter and tour service, school bus service, and even local transit.

6.3.2
Transit Objectives

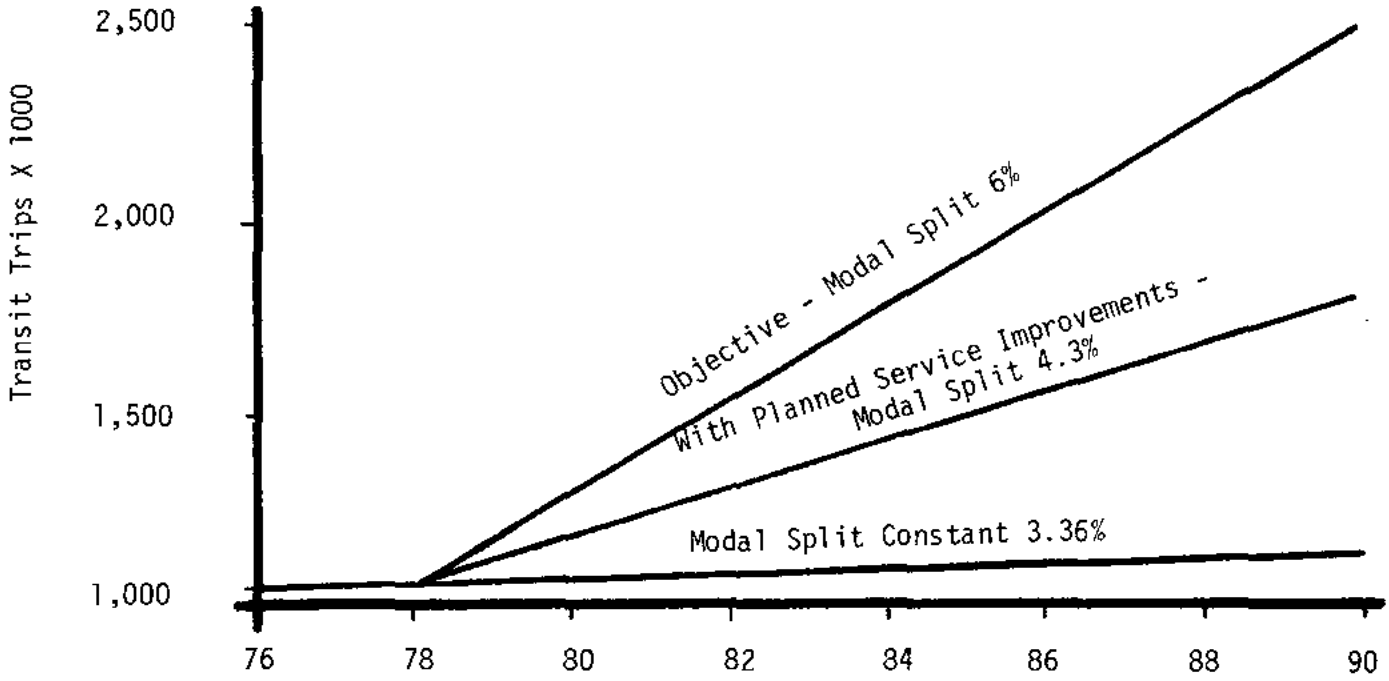
Transportation objectives on energy and air quality can be supported through reaching a modal split of 6% of regional person-trips on transit by 1990. It is assumed that each county of the SCAG region will improve transit ridership in proportion to its existing ridership, to meet this regional modal-split objective.

The LARTS modeling and patronage forecasting methodology was used for projecting transit ridership under varying service improvement alternatives. The alternative endorsed for planning purposes -- the Regional Transit Development Program -- projects a ridership level in the region of 1,800,000 by 1990 through service improvements. This is equivalent to a 4.4% modal split. To reach the transit objective of 6% modal split or 2,500,000 transit trips, other strategies which encourage transit must be successfully implemented. Such strategies include fare policy changes, parking management, employee subsidies, information and marketing. (Refer to HOV Section 6.1.1.)

Figure 6.3-2 projects the number of transit trips required to reach the modal split objective of 6% transit trips. The lower line reflects the increase in transit ridership due solely to population increase, assuming no transit system improvements over 1976 through 1990. The middle line reflects the projected increase in transit ridership resulting from improved service as defined by the Regional Transit Development Program (described under the Transit Development Section of this Plan). The top line reflects the transit ridership objective of 6%.

TRANSIT RIDERSHIP OBJECTIVES
SCAG REGION

Daily Person Trips	1976	1990
Transit Trips	37,865,200	41,961,954
% Transit Trips	1,272,300	1,811,546
Transit Trips to Reach 6%	3.36%	4.3%
		2,517,645



Source: LARTS Regional Forecast Nov. 77

figure 6.3-2

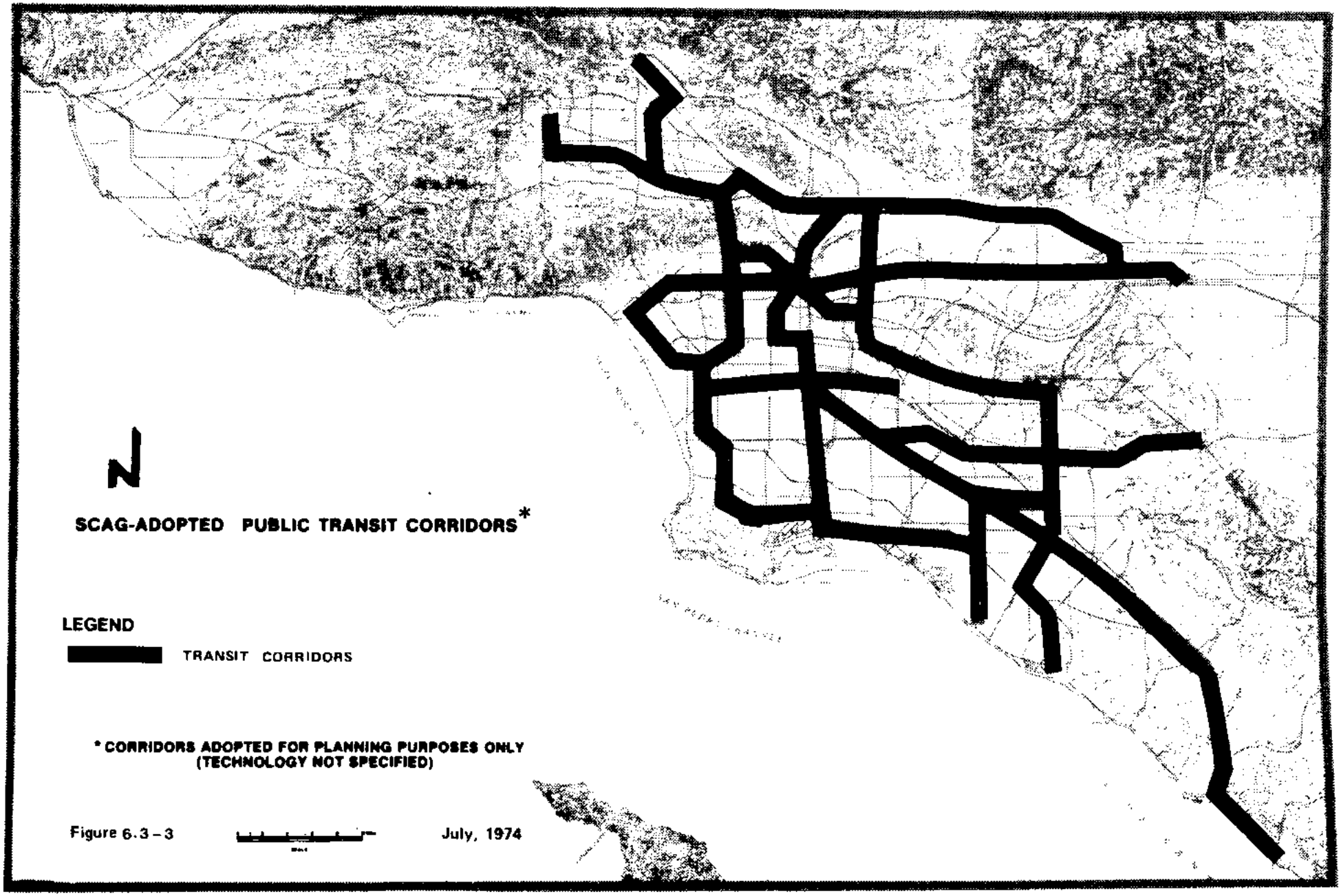

N
SCAG-ADOPTED PUBLIC TRANSIT CORRIDORS*
LEGEND
TRANSIT CORRIDORS
* CORRIDORS ADOPTED FOR PLANNING PURPOSES ONLY
(TECHNOLOGY NOT SPECIFIED)
July, 1974

Figure 6.3 – 3

6.3.3
Plans, Planning, and Issues

Planning to Meet the 6% Transit Ridership Objective.

a. Short-Range Transit Plans developed for the five-year period FY 1979 through FY 1983 generally consider two alternatives, one a status quo option, and the second, an expansion option, which forms the basis for the Regional Transit Development Program, Element I (TSM). The Short-Range Transit Planning process, which has evolved in response to state and federal regulations, represents a blending of regional, "top down" and local "bottom-up" planning. The regional role has been expressed through uniform guidelines for preparation and adoption of local plans, prepared by the region's transit system operators and subregional planning agencies.

b. The Regional Transit Development Program is a plan to improve transit through better use of freeways and fixed-guideway systems. The plan refinement and preliminary engineering phase of the Regional Transit Development Program got underway since the last issue of the Regional Transportation Plan.

   The Regional Transit Development Program will reach a decision point early in fiscal year 1979. To support expanded RTDP operations and capital improvements, a new source of funds must be identified -- and made available.

c. The coming year will also see greater emphasis on ridesharing strategies to encourage greater ridership of transit and other types of high-occupancy-vehicles. (Discussed in Section 6.1.1)

Meeting the Needs of the Transit Dependent

Planning for the elderly and handicapped has received increased emphasis since the last RTP was adopted. Surveys of all social service organizations in Los Angeles, Ventura, and Imperial Counties were completed and the results compiled. An E & H needs study is nearing completion. The coming year will emphasize the matching of needs to available services and development of a comprehensive plan to improve transportation for the elderly and handicapped.

6.3.3A

Regional Transit Development Program (RTDP)

The 1977 Regional Transportation Plan endorsed preliminary engineering and environmental analysis relating to a Regional Transit Development Program (RTDP) that would consist of the following elements:

Element I - Transportation Systems Management(TSM)
Element II - Freeway Transit
Element III - Los Angeles Downtown People Mover
Element IV - Regional Core Rapid Transit

In December of 1976, the U.S. Secretary of Transportation approved the funding of preliminary engineering and environmental analysis for the RTDP. The federal share of the downtown people mover (Element III) construction costs was also approved pending local funding support and environmental clearances.

The RTDP Integration Report

SCAG, working through the Interagency Technical Committee and the Interagency Coordinating Committee and in close cooperation with staffs of the County Transportation Commissions and the implementing agencies, has prepared an RTDP Integration Report. This report integrates the work done on each of the elements and makes recommendations as to what should be implemented. Two basic recommended plans emerge from the evaluation and analysis of the RTDP elements. These are:

A. Fully Funded RTP

The currently developed RTDP, as depicted Figure 6A, is recommended for implementation contingent upon an increase in funding beyond anticipated levels. Chapter 7 discusses possible methods of obtaining increased funding. The recommended complete program is as follows:

TSM

- o Implementation of transit priority programs on arterials
- o Development of facilities to improve intermodal transfers
- o Enhancement of community transit when appropriate
- o Modernization of transit capital facilities/vehicles
- o Expansion of bus fleet by approximately 900 vehicles (750 for SCRTD)

Freeway Transit

Development of rideshare lanes (designed for possible conversion to rail) on the following freeways: The Harbor (I-10 to I-105 with stations south of I-105 to San Pedro), the Santa Ana (downtown Los Angeles to Rt. 91 coordinated with Orange County's planning efforts in the Santa Ana Corridor), Ventura (Hollywood Freeway To Reseda), Century (LAX to I-605), the extension of the Long Beach (I-10 to I-210), the Hollywood (downtown Los Angeles to the Ventura Freeway) extension of the San Bernardino Busway from its current western terminus to Union Station, Santa Monica (downtown Los Angeles to La Cienega), San Diego (U.S. 101 to Marina Freeway).

Development of stations and parking facilities to complement rideshare lanes and mixed flow sections of the bus-on-freeway rapid transit system.

Development of service improvements on several regional freeways. Included among these are I-10 (Santa Monica to Pomona), San Diego (Valencia to Long Beach), U.S. 101 (Thousand Oaks to downtown Los Angeles), Harbor (San Pedro to downtown Los Angeles), and Long Beach (Pasadena to Long Beach).

Downtown People Mover (DPM)

Construction of the Los Angeles Downtown People Mover which would include intermodal transfer facilities at the Convention Center and Union Station.

Rail Rapid Transit

Construction of an 18-mile rail rapid transit line from downtown Los Angeles along Wilshire Boulevard to Fairfax Avenue, to Hollywood and through the Cahuenga Pass to North Hollywood.

B. Financially Feasible Implementation Program

As noted above, implementation of the complete RTDP is contingent upon increased funding support. At the present time, only a portion of the Program is financially feasible. This portion of the Program, the financially feasible implementation program is depicted in Figure 6B.

Below is listed the first phase of the RTDP. The elements included in this program can be implemented without additional funding beyond anticipated levels. The program consists of the following:

Transportation Systems Management (TSM)

- o Implementation of various TSM programs that would not involve expansion of service beyond current levels.

Freeway Transit

- o Development of rideshare lanes (designed for possible conversion to rail) on the Santa Ana Freeway (downtown Los Angeles to I-605), the Harbor Freeway (I-10 to I-105 with stations south of I-105 to San Pedro and to Long Beach via Routes 11, 405 and 7), the Century Freeway (LAX to I-605), and the extension of the San Bernardino Busway from its current western terminus to Union Station.

Downtown People Mover

- o Construction of the Los Angeles Downtown People Mover that would include intermodal transfer facilities at the Convention Center and Union Station.

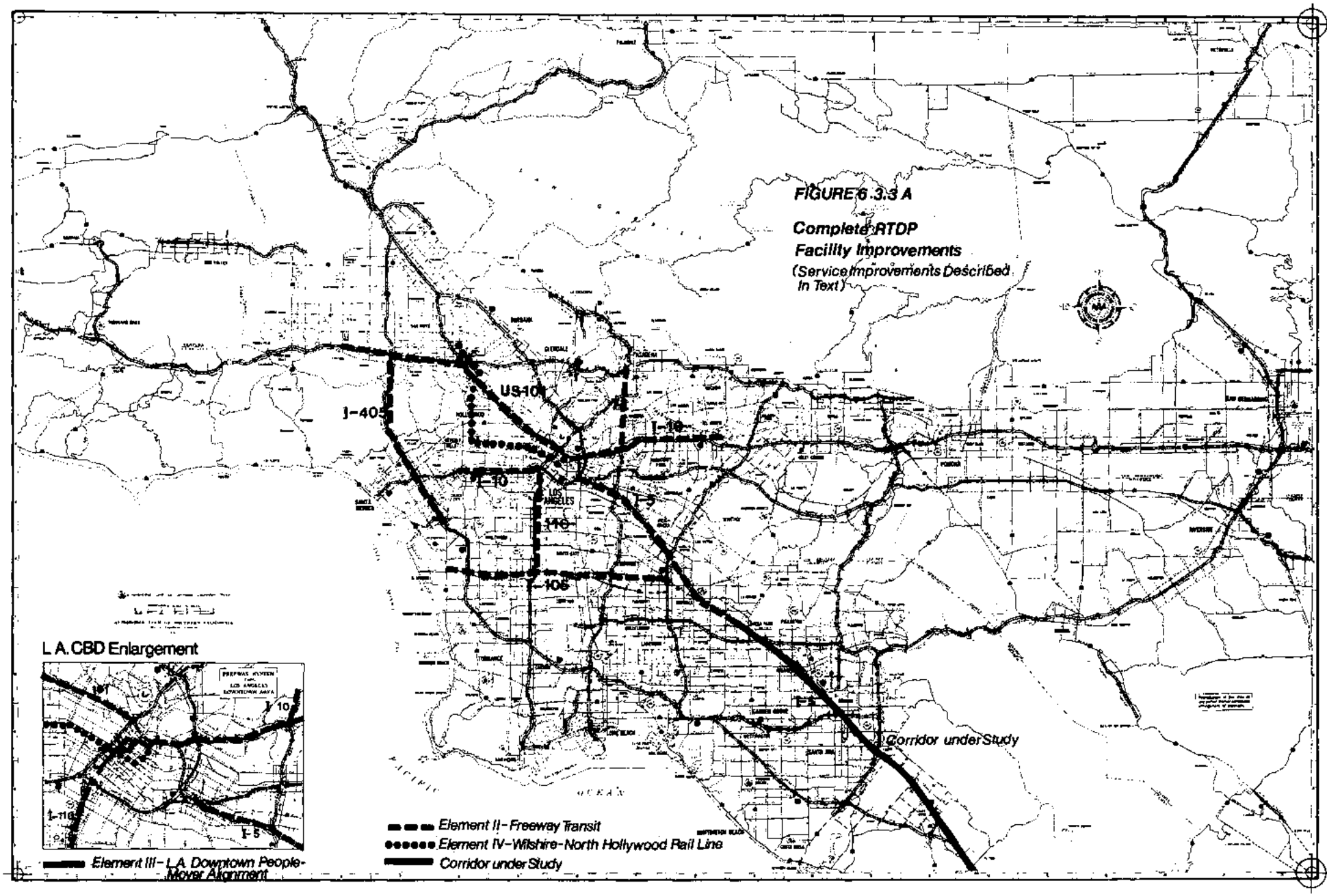
Rail Rapid Transit

- o Construction of an 18-mile rail rapid transit line from downtown Los Angeles along Wilshire Boulevard to Fairfax Avenue, north on Fairfax to Hollywood, and through the Cahuenga Pass to North Hollywood.

Future Regional Transit Development Program (RTDP) Related Planning

The RTDP, as currently developed, addresses transit improvements in Los Angeles County. It is recommended that the region's transportation planning work program include the necessary analysis and study that would evaluate the development of the RTDP in Orange, Riverside, San Bernardino, and Ventura Counties.

In Orange County, current RTP actions support completion of an alternatives analysis for high capacity transit in the Santa Ana Corridor, as well as preliminary engineering and environmental impact work on the first usable segment. Upon successful completion of the alternatives analysis, preliminary engineering and environmental work support is given for an appropriate facility to be coordinated with improvements in the Los Angeles County portions of the Corridor.



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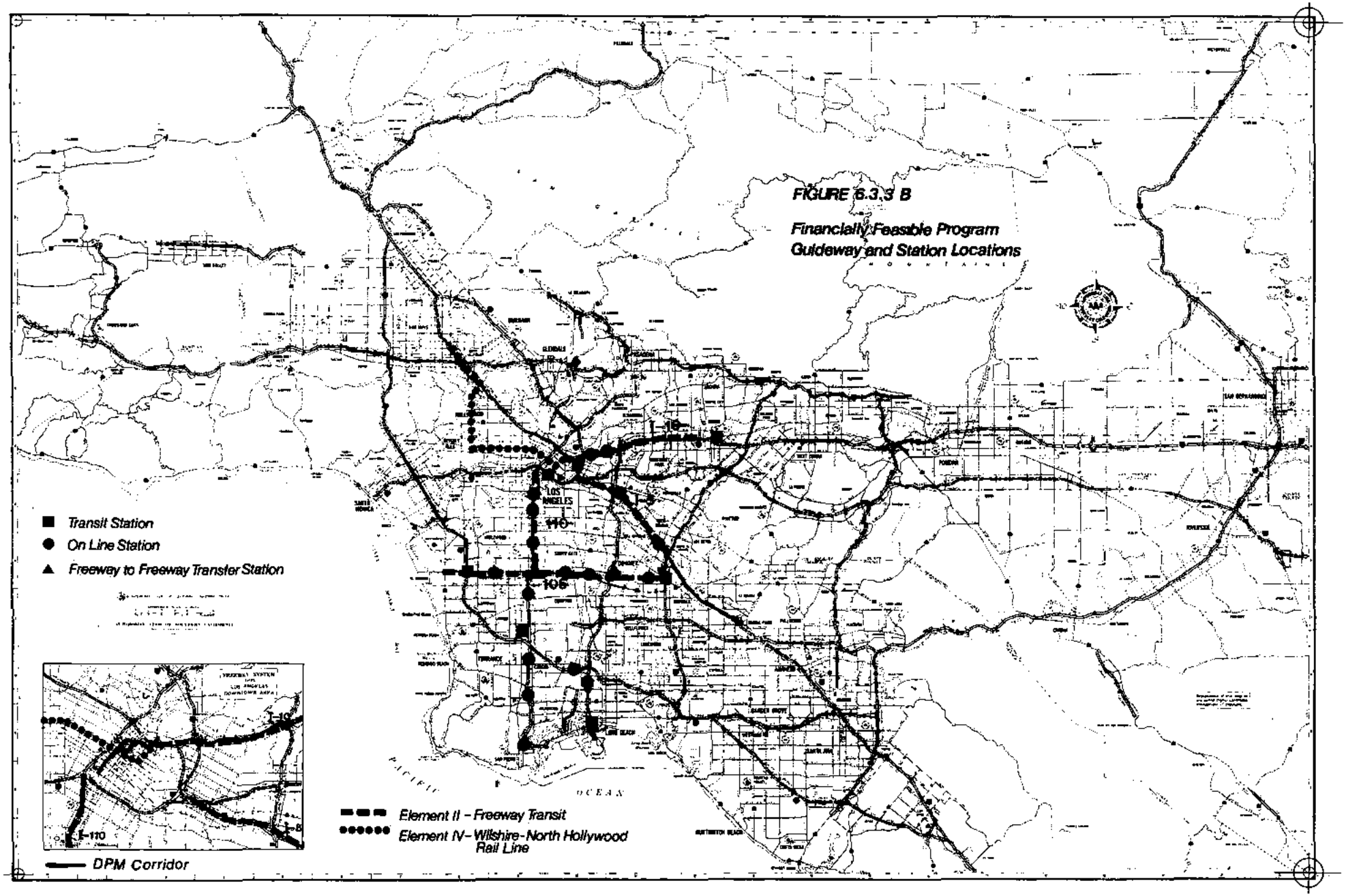

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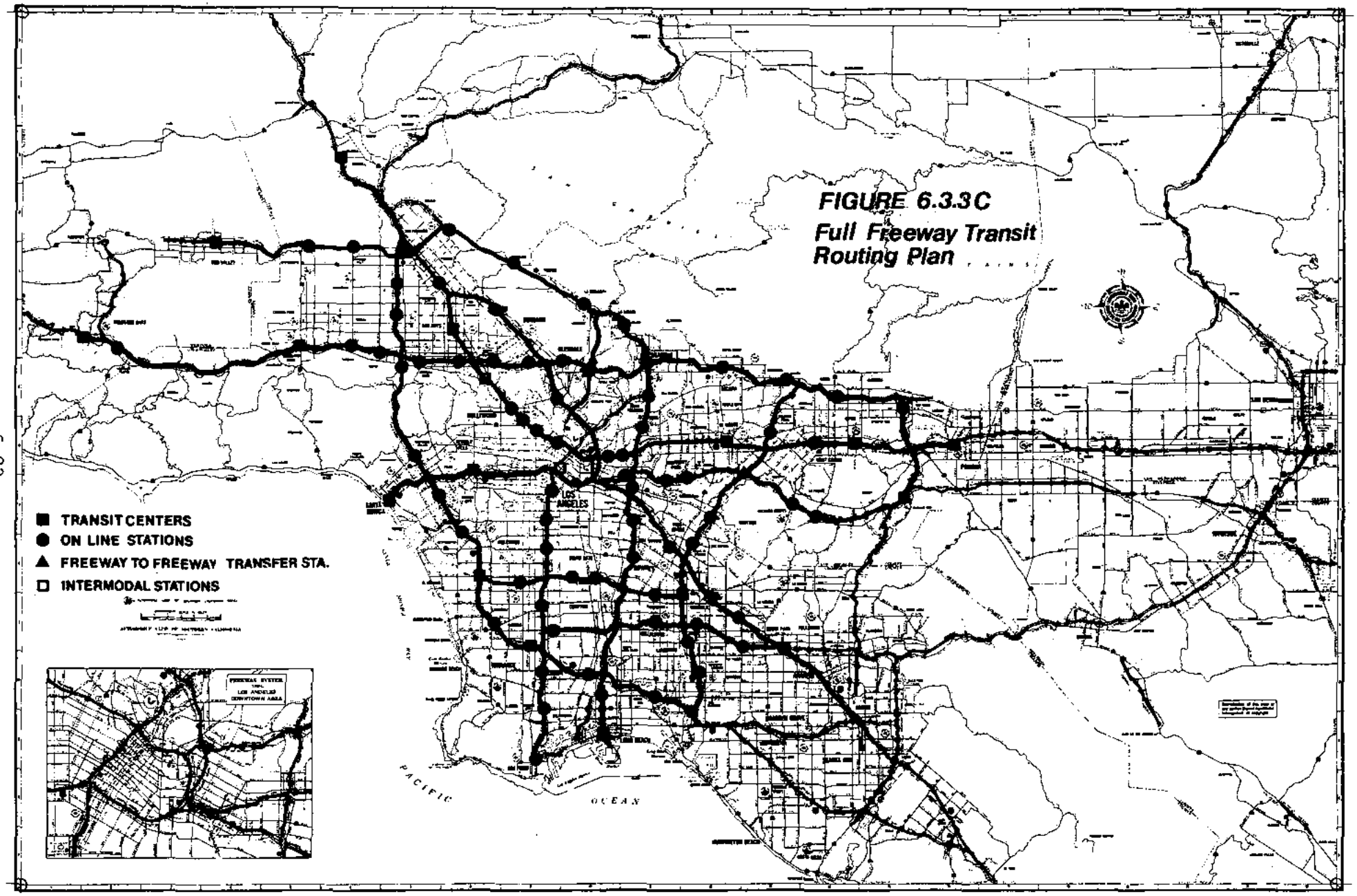

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6.3.4
Transit System Actions

TSM Actions

Short Range Transit Plans. (The following is a summary of the actions submitted for the 1978-83 Short Range Transit Plan.)

1. SCRTD will replace 1500 buses; renovate several fixed facilities; add one bus yard and a maintenance facility. Increase patronage by 24% from 310 million to 384 million annually by 1983.

2. OCTD will increase its fleet from 359 buses to 821 buses by 1983, add six transportation terminals, analyze alternatives relating to the Pacific Electric corridor; and increase patronage by 100%, from 20 million to 40 million annually.

3. RTA and Sunline will, by 1983, expand their fleet 49% from 71 vehicles to 106 vehicles, and increase patronage 100%, from 2 million to 4 million annually.

4. Omnitrans will, by 1983, expand their bus fleet by 32%, from 77 vehicles to 101, and the demand-responsive fleet by 67%, from 33 vehicles to 55 vehicles. Patronage is expected to increase by 86%, from 6.4 million to 11.9 million riders.

5. SCAT and Simi Valley will improve service and expand the fleet of 37 vehicles to 44 vehicles by 1983, and increase patronage by 42% from 2.8 million to 4.0 million annual riders.

Elderly and Handicapped

6. Agencies designated by the CTCs, IVAG and VCAG will annually update the elements of the Short Range Transit Plans for the elderly and handicapped including procedures and programs to reduce or eliminate barriers and increase the number of fully accessible vehicles in the region's transit system.

7. OCTC, SANBAG, and RCTC will develop a catalog of paratransit services.

8. SCAG, the CTC's, VCAG, and IVAG will update and maintain a catalog of paratransit services for each subregion.

9. SCAG will prepare a regional plan on elderly and handicapped policies, needs, and activities in conjunction with all interested parties in the region.

10. SCAG and the CTC's will study alternative means of coordinating social service agency transportation delivery systems.

11. SCAG, CTC's, subregional planning agencies, and transit operators will sponsor public workshops for the purpose of considering transportation needs of the elderly and the handicapped (particularly the semi-ambulatory and wheelchair users).

Procedural

12. Agencies designated by the CTC's, IVAG and VCAG will prepare an annual Short Range Transit Plan and Transit TIP consistent with the RTP.

13. SCAG will prepare an annual Regional Short-Range Transit Plan Summary.

Coordination

14. SCAG, the CTC's, and the transit operators will execute and comply with the Public Transit Operator Memorandum of Understanding.

15. Transit operators, the CTC's, and SCAG will improve and coordinate public transit passenger information systems and services.

16. SCAG, in conjunction with the State Public Utilities Commission (PUC), shall investigate changes in the PUC's "Southern California Restriction" which prohibits inter-regional carriers from providing intra-regional service in parts of Los Angeles, Orange, Riverside, and San Bernardino Counties. Specifically, they shall consider:

    a) eliminating the restriction during days and hours when public transit is not operating;
    b) selectively applying the restriction to certain routes and corridors;
    c) eliminating the restriction entirely and allowing the inter-regional carriers to compete with public transit, offering higher fares but reduced travel times.

6.3.5
System Development Actions

Regional Transit Development Program (RTDP): Plan Development

17. LACTC, Transit Operators, Caltrans, and the City and County of Los Angeles will conduct further analysis and evaluation of those portions of the full RTDP which cannot be implemented without increased funding support.

18. County Transportation Commissions, Caltrans, SCAG, and other appropriate agencies will conduct the necessary analysis and studies that will evaluate development of the RTDP in Riverside, San Bernardino, and Ventura Counties. The Orange County Transportation Commission, OCTD, Caltrans, and other appropriate agencies will continue the alternatives analysis relating to possible RTDP development in Orange County. OCTD will continue efforts to acquire the Pacific Electric right-of-way between Santa Ana and Stanton.

19. SCAG, SCRTD, and the Los Angeles County Transportation Commission will continue to evaluate the potential for rail rapid transit in additional corridors. Corridors for evaluation will be selected on the basis of projected patronage levels, potential for funding, and environmental acceptability.

RTDP Element I - Transportation System Management (TSM)*

20. Transit operators will

    a) maintain existing levels of service;
    b) develop convenient transfer facilities to encourage greater transit utilization;
    c) modernize transit facilities and equipment including revenue vehicles; d) implement, in conjunction with appropriate City and County of Los Angeles agencies, transit priority programs on arterials;
    e) develop community transit services when appropriate.

RTDP Element II - Freeway Transit*

21. Caltrans will develop rideshare lanes (designed for possible conversion to rail) on the following freeways:

    a) Harbor Freeway (from I-10 to I-105 with stations south of I-105 to San Pedro and to Long Beach via Route 11, 405 and 7);
    b) Santa Ana Freeway (from CBD to I-605)
    c) Century Freeway (from LAX to I-605);
    d) Extension of San Bernardino Busway from its current western terminus to Union Station.

22. OCTC, OCTD, Caltrans and local agencies will:

    a) Complete the alternatives analysis of the high capacity transit improvements in the Santa Ana/Los Angeles Corridor
    b) Conduct preliminary engineering and EIR/EIS work on the first usable segment of the Santa Ana Transportation Corridor.
    c) Upon successful completion of the above design and construct an appropriate facility serving the high activity Santa Ana corridor to be integrated with transit facilities being designed and constructed in Los Angeles County.

---

* Phasing

Implementation depends upon federal and local approval of preliminary engineering results, development of a local funding source, state and federal funding approvals. Tentative dates are:

a) Plan Refinement Elements I, II, and IV: September 1978.
b) Complete Element III, preliminary engineering: November 1978.
c) Preliminary Engineering Elements I, II, and IV: 1980.

RTDP Element III - Los Angeles Downtown People Mover*

23. The City of Los Angeles will design and construct a Downtown People Mover that would include intermodal transfer facilities at Union Station and the Convention Center.

RTDP Element IV - Regional Core Rapid Transit*

24. The Southern California Rapid Transit District will design and construct a rail rapid transit line from downtown Los Angeles along Wilshire Boulevard to Fairfax Avenue, north on Fairfax to Hollywood, and through the Cahuenga Pass to North Hollywood. This will be integrated with the Freeway Transit and Downtown People Mover elements of the RTDP.

Los Angeles-San Diego Corridor

25. Implementing agencies will develop transit improvements in the interregional Los Angeles to San Diego Corridor as described below:

Short range actions through 1980

Caltrans, local agencies, and appropriate transit operators will:

a) Expand existing private operator fleet by 10 vehicles, including high-capacity 64-seat buses.

b) Expand frequency of express service between primary centers -- Los Angeles, Long Beach, San Diego -- by about one-third.

c) Legislatively authorize demonstration programs for inter-regional bus improvements, using preferential treatment lanes where available.

---

* Phasing

Implementation depends upon federal and local approval of preliminary engineering results, development of a local funding source, state and federal funding approvals. Tentative dates are:

a) Plan Refinement Elements I, II, and IV: September 1978.
b) Complete Element III, preliminary engineering: November 1978.
c) Preliminary Engineering Elements I, II, and IV: 1980.

Medium range actions through 1985

Caltrans, local agencies, and appropriate transit operators will:

a) Expand private operation fleet by 18 vehicles, including four higher-capacity 64-seat buses.

b) Expand frequency of express service between the following secondary centers: Van Nuys, LAX, San Bernardino, Riverside, and Escondido.

c) Introduce an additional express route: Van Nuys-Inglewood-San Diego.

d) Increase service frequency overall by about 39% over the short-range program.

e) Improve access to bus stations at Anaheim, Santa Ana, Van Nuys, and San Clemente.

f) Construct new, near-freeway terminals at Santa Ana, Inglewood/LAX, and Van Nuys.

Regional Transit Development Program

Estimated Annual Operating Costs

Los Angeles County Portion

($Millions)

Operating Costs	1990 Annual
Element I Status Quo (78 System)	540.3
Element I TSM	183.2
Element II Freeway Transit	136.4
Element III Downtown People Mover	2.8
Element IV Regional Core Rapid Transit	51.6
	919.7
Sources of Funds	
Operating Revenues	383.1
UMTA Section 5	96.8
TDA (SB 325)	168.4
Potentially Available Funds	648.3
Additional Funds Required	271.4
Total Funds	919.7

table 6.3-4

highways

6.4

6.4.
HIGHWAYS

This chapter discusses the regional highway system. Section 6.4.1 describes the existing regional highway system; and Section 6.4.2 describes the process for programming State highway improvements under AB 402. Beginning with Section 6.4.3, highway programs affecting the SCAG region and issues relating to highway planning and programming are identified.

System management and system development (subregional/regional state highway priorities) actions are in Sections 6.4.5 and 6.4.6, respectively. Operational improvement and preferential treatment actions are found in SCAG's Rideshare Program (Section 6.1.1).

The discussion on financing state highways identifies and analyzes financial issues (Section 6.4.7).

6.4.1
The Existing Regional Highway System

As a matter of policy, only state highways are considered as regionally significant. State highways include both freeways and non-freeways (expressways, controlled access highways, and conventional highways).

Figure 6.4-1 illustrates the existing regional highway system and proposed construction and widening projects. Table 6.4.1 notes changes in state highway mileage -- by county, by Caltrans district, and for the SCAG region from 1976 to 1978.

Changes in State Highway Mileage*

Counties	Freeway Mileage		Non-Freeway** Mileage		Total	
	FY 76-77	FY 77-78	FY 76-77	FY 77-78	FY 76-77	FY 77-78
Los Angeles	478	491	420	421	898	912
Orange	132	133	111	110	243	243
Ventura	86	86	179	179	265	265
District 07	696	710	710	710	1,406	1,420
Riverside	123	136	307*	294	430	430
San Bernardino	413	413	785	785	1,198	1,198
District - 08	536	549	1,092	1,079	1,628	1,628
Riverside	112	112	153	153	265	265
Imperial	97	97	310	310	407	407
District - 11	209	209	463	463	672	672
SCAG Region	1,441	1,468	2,265	2,252	3,706	3,720

* State highways include freeways(divided arterial highways with separated grade crossings, full access control) and non-freeways (controlled access highways, expressways, conventional highways).

** Decreases in non-freeway mileage were caused by non-freeways being upgraded to freeway status.

Data source Caltrans.

table 6.4-1

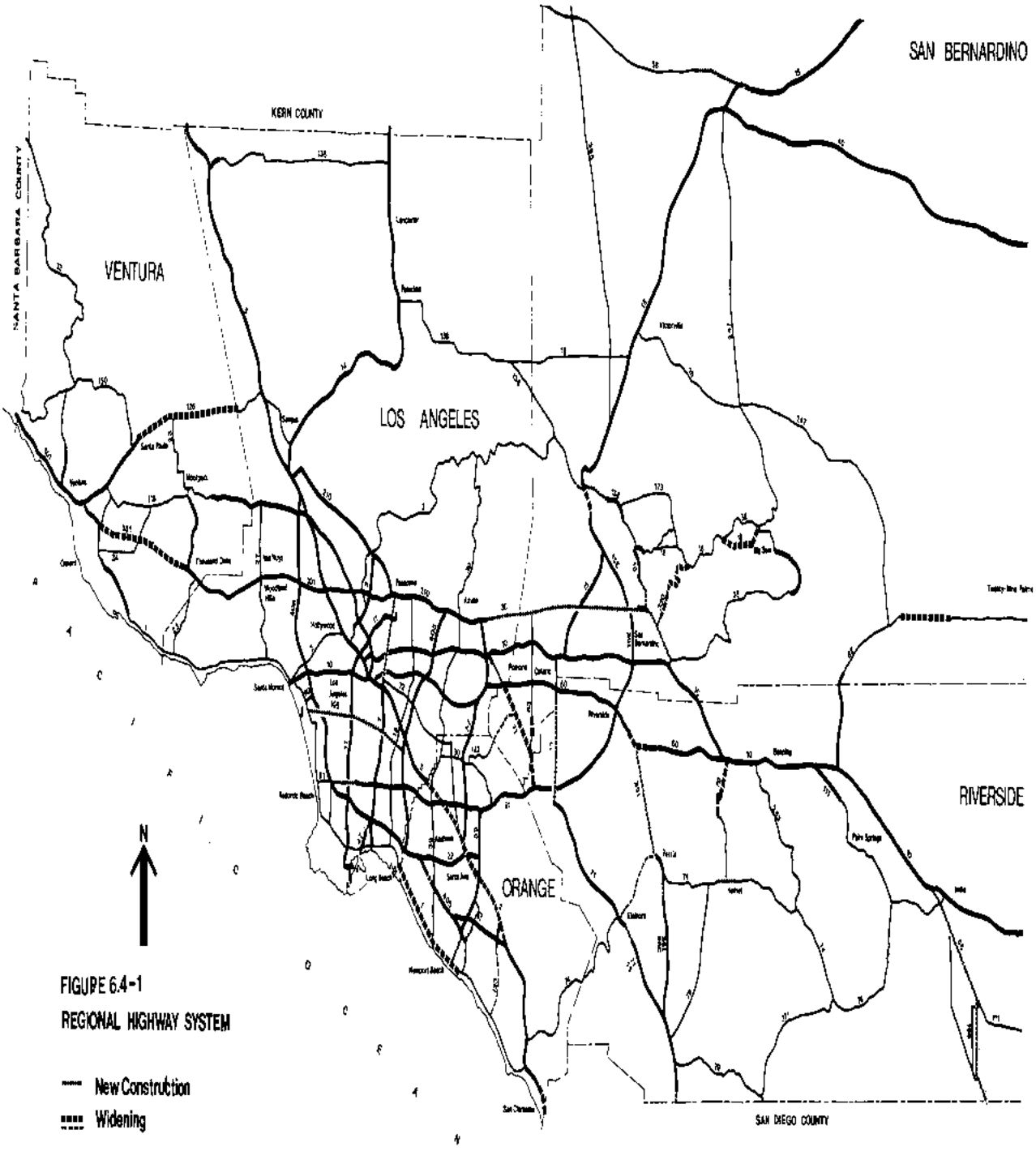
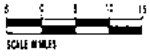


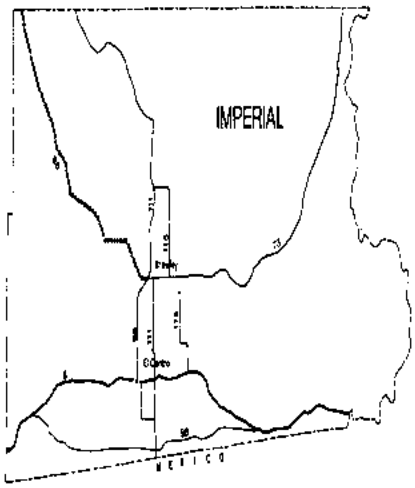
FIGURE 6.4-1

REGIONAL HIGHWAY SYSTEM

New Construction

Widening





6.4.2
Programming Highway Projects under AB 402

The state's new transportation law, the Alquist-Ingalls Act of 1977 (AB 402), significantly alters the process of programming state highway improvements. Under the act, the state legislature will appropriate funds to specified program categories with the California Department of Transportation (Caltrans) having the ability to transfer up to 10% of such funds between programs upon approval by the California Transportation Commission (CTC).

The budget will be developed from the adopted state TIP -- a five year blueprint of transportation improvements. The state highway portion of this TIP replaces Caltrans' previously used Multi-year Planning Program. AB 402 prescribes that the California Transportation Commission adopt, as the state TIP, regionally adopted TIPs unless specified findings are made as to overriding statewide interest, insufficient funds, or regional TIP conflict.

To facilitate the TIP process estimates of the state highway funds available to each county in the SCAG region will be provided by the California Transportation Commission. The methodology for making these estimates must be determined by the Commission in cooperation with Caltrans and local and regional transportation agencies. Table 6.4-2 presents the various deadlines specified in AB 402 for the new state highway programming process.

6.4.3
Highway Programs Affecting the SCAG Region

State Highway programs that affect SCAG's highway planning effort and encompass system management and system development actions are:

Maintenance and Rehabilitation
Operational Improvements
New Facilities
Local Assistance

These are some of the capital outlay programs (appropriation categories) identified in AB 402 for State Highway Account funds. Under AB 402, County Transportation Commissions and local and regional agencies can program and make tradeoffs between the Operational Improvements Program and New Facilities Program and their respective subprogram categories. The other programs identified in AB 402 -- Administration, Program Development, and Operations -- are administrative programs of Caltrans, and therefore will not be discussed in this section.

A brief definition of each of the highway programs that impact the SCAG region follows. Program definitions are based upon the Department's (State Department of Transportation) program definition manual.

TIMETABLE FOR STATE HIGHWAY PROGRAMMING

TIME LINE	TIP PROCESS	BUDGET PROCESS
1978		
April through September	CTC develops methodology for making state highway fund estimates.	
October 1	Caltrans prepares fund estimates based on CTC methodology.	
November 1	CTC adopts and provides fund estimates to local and regional transportation planning agencies.	
December 1	Caltrans submits proposed State TIP consistent with fund estimates.	
1979		
January		State Highway Budget Proposed for FY '80. Legislative review.
February 15		CTC submits evaluation of proposed budget to Legislature.
April 1	Local and regional TIPs submitted to CTC's consistent with fund estimates.	
June		Budget adopted for FY '80 setting program levels.
July 1	CTC adopts local and regional TIPs as State TIP unless specified findings are made.	CTC allocates budgeted program levels to projects in the State TIP.
August 1	Appeals regarding the State TIP are due.	
August 15	Public hearing on appeals must be held.	
October 1	Caltrans prepares new fund estimates.	

table 6.4-2

- Maintenance and Rehabilitation

  As highway facilities age or become damaged, they become more costly to maintain. This program deals with keeping the existing system in a safe and usable state by repairing deteriorated or damaged facilities. As owner/operator, the Department has the authority to program and implement maintenance and rehabilitation projects.

- Operational Improvements

  This program deals with making the operation of the existing highway system more efficient and keeping it intact to retain the value of the public's investment. Some of the projects within this program are Ridesharing projects; community and school noise attenuation projects; safety, compatibility, and traffic operational improvements.

- New Facilities

  This program involves the construction of highways on a new alignment to supplement or replace existing facilities; the addition of new lanes to existing facilities to accommodate increasing volumes of traffic; and the construction of highways to serve new areas and assist in the appropriate development of the region.

- Local Assistance

  This program element provides the administration, coordination and control required by Federal and State legislation in furnishing financial assistance to City and County transportation programs. These programs support the Highway Transportation Program in providing a response to the public need for safe, serviceable and comprehensive city and county transportation service. Local assistance includes: Federal-Aid Secondary, City and County Urban Extensions, TOPICS, Railroad Crossings, Unassigned Local Assistance, Federal-Aid Urban System, Bicycle Facilities, Highway Safety Improvement on Local Roads, and Off-System Roads.

6.4.4
Current Issues

Over the past few years, the following trends have been evident: high priority projects have not moved forward; back-up projects have not been provided; there has been an increasing emphasis on compatibility projects (sound walls and sound attenuation; landscaping); and legally required funding has not been provided. The following issues will be discussed below: (a) the inability to get projects ready for construction; (b) selecting AB 402 fund estimation methodology; and (c) the 1977 "Now" Needs Study.

Inability to Get Projects Ready for Construction

The process of getting a highway project ready for construction has been lengthened by such problems as not being able to begin preliminary project or engineering studies, not being able to acquire right-of-way for project construction, and delays in obtaining final environmental clearance.

In preparing the Regional TIP under AB 402, SCAG and County Transportation Commissions should have the ability to program projects to undergo preliminary engineering studies, as part of the long-range planning function, and pursuant to project implementation being scheduled in the next five-year period.

1977 "Now" Needs Study

Section 188.8 of the Streets and Highways Code requires Caltrans to prepare, every four years, an estimate of existing state highway construction needs. The study is used to set the legally required minimum expenditure on right-of-way, construction and reconstruction in each transportation district of the state.

Individual jurisdictions within the region as well as SCAG's Transportation and Utilities and Executive Committees have commented critically on the amount of state highway expenditures programmed for the region when compared to state highway revenues generated and existing state highway needs. Concern has also been expressed over the methodology used to compile the 1977 "Now" Needs study. The philosophy and methodology of the study resulted in a dramatic decline, between 1974 and 1977, in the measurement of new construction need in the region. This decline was particularly significant in Los Angeles, Ventura, and San Bernardino Counties. In some cases the decline in new construction need was due to the deletion of proposed highways from the state highway system. Legal opinion prevented the deletion of the Beverly Hills Freeway in western Los Angeles from being offset by the addition to the study, of the Wilshire Corridor Starter Line despite the fact that Proposition 5 funding for the Starter Line would count toward meeting the state highway district minimum. In other instances, state highway improvements were deleted or downscoped in the 1977 Study in opposition to regional priorities and policies. For these reasons SCAG opposes the use of the 1977 Needs Study for setting the district minimum percentages in state highway funding.

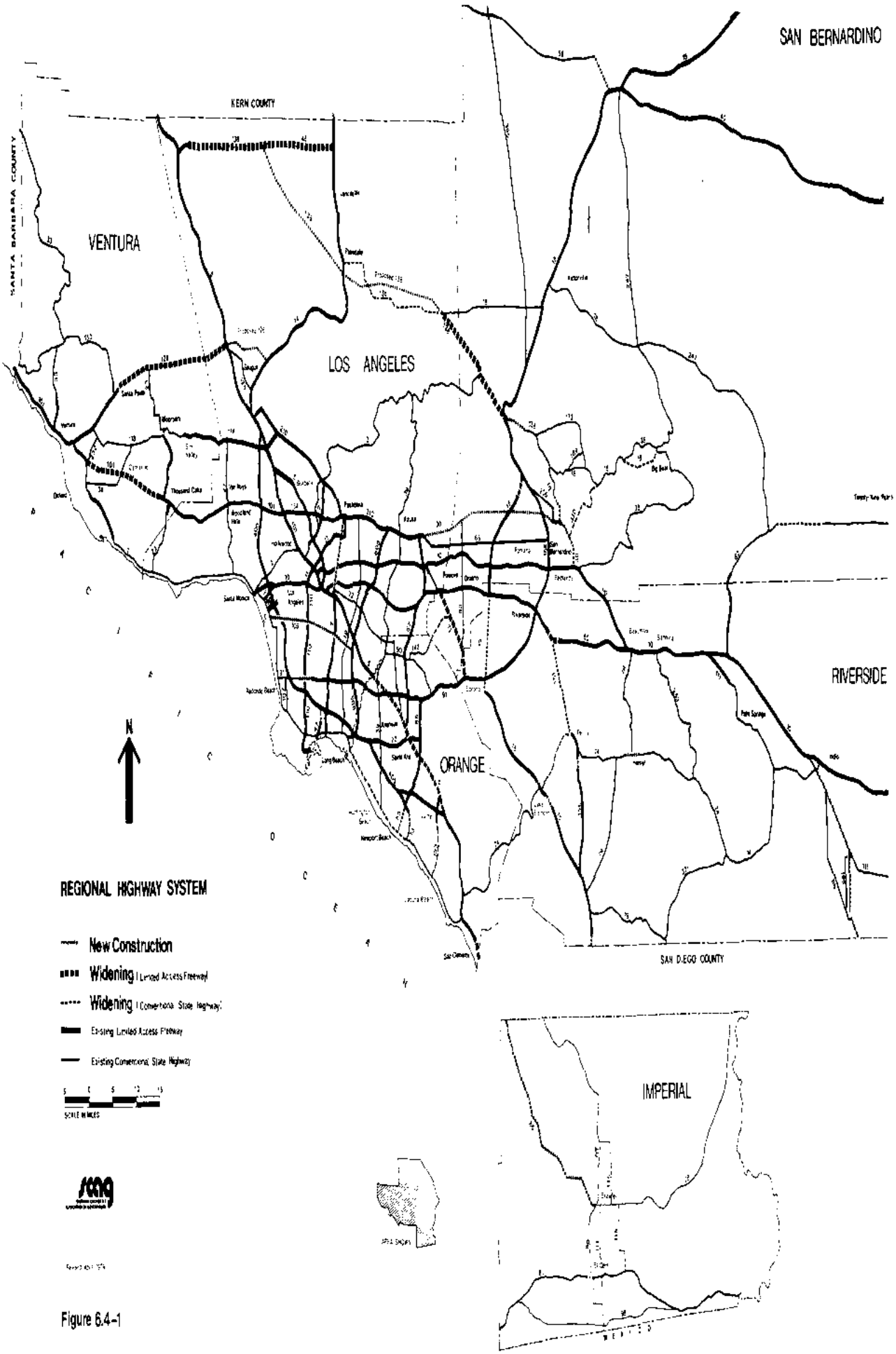

SAN BERNARDINO
KERN COUNTY
SANTA BARBARA COUNTY
VENTURA
LOS ANGELES
RIVERSIDE
ORANGE
SAN DIEGO COUNTY
IMPERIAL
N
REGIONAL HIGHWAY SYSTEM
New Construction
Widening (Limited Access Freeway)
Widening (Conventional State Highway)
Existing Limited Access Freeway
Existing Conventional State Highway
SCALE IN MILES

Figure 6.4-1

6.4.5
System Management Actions*

System management actions are directed toward making more efficient use of the existing highway system. Generally, these actions are not as capital intensive as system development actions.

1. Caltrans will implement maintenance and rehabilitation activities as appropriate to ensure complete utilization of the existing State highway system.

2. Caltrans will implement a traffic management program to obtain maximum efficiency of the existing system.

3. Caltrans will implement safety improvements as necessary to ensure a safe highway system.

4. Caltrans will implement improvements necessary to ensure compatibility with the environment.

5. Preliminary engineering and environmental evaluation for the highway related element of the Regional Transit Development Program will be conducted conducted by Caltrans, and highway portions of the RTDP based on the results should be implemented.

6. SCAG will promote expeditious implementation of currently programmed (in the TIP) widening projects which relieve peak hour congestion by seeking additional funding for such projects.

7. SCAG, in conjunction with CALTRANS, CTCs and affected agencies, will evaluate additional widening projects to determine impacts, (including noise) costs and effectiveness of reducing emissions and improving mobility. (Approximately 300-400 lane miles of freeway widenings have been identified as candidate proposals by CALTRANS.)

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* See Section 6.1.1 for highway-related ridesharing actions.

6.4.6
System Development Actions

This section lists state highway construction priorities submitted by county transportation commissions, VCAG and IVAG (see Table 6.4.3). These priorities include only new freeways/expressways and widening projects that exceed $200,000 in cost. From these lists a regional list of priorities will be developed. These priorities will be used as guidelines for establishing priorities for major state highway projects in the FY 1979-1980 TIP.

8. SCAG endorses construction of I-105 (with the provision that I-105 will be a freeway/transitway consistent with the Regional Transit Development Program, with ramp metering and bypasses where consistent with appropriate planning) and the upgrading of Routes I-15, 15E, 86 and 30.

9. SCAG endorses Route 30 as a top priority construction project for immediate implementation, acquisition of right-of-way and preliminary engineering.

10. Caltrans should develop projects on Routes 86 and I-15E and should implement them expeditiously to provide safe and efficient movement of people and goods along those travel corridors.

11. SCAG will complete the Highway Evaluation Report and establish priorities for the regional highway system.

TABLE 6.4-3
PROPOSED NEW FACILITY PROJECTS FOR THE SCAG REGION
IMPERIAL/RIVERSIDE HIGHWAY PRIORITIES

(Source: Imperial Valley Association of Governments)

Priority	Route No.	Project Description	Approximate Length	Fed. System Designation*	Cost (Million)
		NEW FACILITIES			
1	86	R10.7/R22.6 South of Indio, from the Jct. of Route 195 near Mecca to 0.2 mile N of Dillon Road 4 lane freeway	11.9	Primary	$22.9
2	86	Imp-R63.5/Riv-R2.8 Near Desert Shores, from 0.5 mile S of Brawley Ave to 0.5 mile S of Ave 81 4 lane freeway	7.5	Primary	$13.4
3	86	R2.8/R10.7 South of Indio, from 0.5 mile S of Ave 81 to Jct of Route 195 near Mecca 4 lane freeway	7.9	Primary	$13.0
4	86	57.5/63.1 Near Salton City, from 0.3 mile S of Marina Dr N to 0.5 mile S of Brawley Avenue 4 lane expressway	5.6	Primary	$9.1
5	86	41.5/57.5 2 miles S of North Jct Route 78 to 0.3 mile S of Marina Drive N 4 lane expressway	16.0	Primary	$13.6
6	86	21.8/41.5 NW of Brawley, from Brandt to 2 miles S of North Jct Route 78 4 lane expressway	19.7	Primary	$20.6
		REVISED FACILITY			
7	I-8	South of El Centro Revise Interchange at I-8 and Imperial Avenue	0.1	Interstate	

table 6.4-3

TABLE 6.4-3 (Continued)
PROPOSED NEW FACILITY PROJECTS FOR THE SCAG REGION
LOS ANGELES COUNTY HIGHWAY PRIORITIES

Priority	Route No.	Project Description	Approximate Length	Fed. System Designation	Cost (Million)
1	91/11 Artesia Freeway	Construct 8-lane freeway from Main Street to Route 11, including interchange at Route 11 and Redondo	.5 Mile	FAP	$38
2	I-105 Century Freeway	Connect Route 605 in Downey with Route 1 in El Segundo by constructing 8-lane freeway with provision for transitway.	17.0 Mile	I	$457
3	47 Industrial Freeway	From Willow Street in Long Beach to San Diego Freeway construct 6-lane expressway.	1.1 Mile*	FAU	$10-38
4	30 Foothill Freeway	From Foothill Boulevard to San Bernardino County line (then into San Bernardino to parallel Route 66) Construct 4-lane freeway.	5.3 Mile**	FAP	$25
5	7 Long Beach Freeway	Between Route I-10 and Route I-210 construct 8-lane freeway.	4.5 Mile	FAU	$128
6	90 Marina Freeway Extension	From Lincoln Boulevard to Washington Boulevard with access ramps to Venice Boulevard.	2.3 Mile	FAU	$20

* Some work contemplated to .5 miles south of Willow Street for total distance of 1.6 miles.
** Portion in Los Angeles County.

Table 6.4-3 (Continued)
PROPOSED NEW FACILITY PROJECTS FOR THE SCAG REGION
ORANGE COUNTY HIGHWAY PRIORITIES

(Source: Orange County Transportation Commission)

Priority** Route No.	Project Description	Approximate Length	Fed. System Designation	Cost (Million)
ORA-1/Bayside to Bayshore-Dover	Replace bridge and widen to 6 lanes	0.4 Miles	FAU	$ 5.87
ORA-1/MacArthur to Bayside	Widen to 6 lanes	1.75 Miles	FAU	$ 1.25
ORA-1/Dover to Newport	Widen to 6 lanes	1.3 Miles	FAU	$ .62
ORA-5/Route 405 to Route 55	Widen to 8 lanes	7.5 Miles	FAI	$32.6
ORA-5/Route 55 to Route 22	Widen to 8 lanes and modify 5/55 interchange	5 Miles	FAI	$35.3
ORA-5 Route 22 to Euclid Ave.	Widen to 8 lanes	5.5 Miles	FAI	$23.9
ORA-5/Euclid to L.A. County line	Widen to 8 lanes	5 Miles	FAI	$21.7
ORA-5/Broadway or Memory Lane	Construct new overcrossing	0.5 Miles	FAU & FAI	N/A
ORA-5/Vicinity of Main Street	Widen overcrossing and modify interchange	0.5 Miles	FAU/FAP or FAI	$ 5.0
ORA-5/Anaheim-Haster	Reconstruct overcrossing	0.5 Miles	FAU/FAP or FAI	$ 4.05
ORA-5/Knott Ave	Reconstruct with full interchange	0.75 Miles	FAU/FAP or FAI	$ 4.0
ORA-5/Harbor-Ball Road	Reconstruct and widen overcrossing; modify interchange	0.5 Miles	FAU/FAP or FAI	$10.8

* ORA-5 Widen from Route 22 = 21.7 million; 5/55 interchange modification = $14.6 million.
** Each of the projects is considered of equal importance.

Table 6.4-3 (Continued)
PROPOSED NEW FACILITY PROJECTS FOR THE SCAG REGION
ORANGE COUNTY HIGHWAY PRIORITIES

(Source: Orange County Transportation Commission)

Priority	Route No.	Project Description	Approximate Length	Fed. System Designation	Cost (Million)
	ORA-5/17th St.	Modify interchange	0.5 Miles	FAU/FAP or FAI	$ 3.6
	ORA-5/San Diego County line-North Camino De Estrella	Widen to 8 lanes	6.4 Miles	FAI	$20.0
	ORA-55 Bristol to 15th Street	Construct Freeway	3.5 Miles	FAU	$59.36
	ORA-73/Bonita Canyon to Red Hill	Construct Freeway	2 Miles	FAP	N/A
	ORA-133 Laguna Canyon Road	Widen	?	FAP	N/A
	ORA-405/at Edwards	Widen Structure	0.5 Miles	FAU	$.60

Table 6.4-3 (Continued)
PROPOSED NEW FACILITY PROJECTS FOR THE SCAG REGION
RIVERSIDE COUNTY HIGHWAY PRIORITIES

(Source: Riverside County Transportation Commission)

Priority	Route No.	Project Description	Approximate Length	Fed. System Designation	Cost (Million)
		District 8 New Facilities			
1	I-15, Magnolia to Route 91	Construct 4 lane freeway	.7 Miles	FAI	$18.0
2	I-15, Route 91 to Route 60	Construct 4 lane freeway	9.8 Miles	FAI	$65.0
3	I-15, San Diego county line to 1 mile north	Construct 4 lane freeway	1.1 Miles	FAI	$ 5.3
4	I-15, San Jacinto River to Central	Construct 4 lane freeway	3.1 Miles	FAI	$13.5
5	Route 74, Hemet Bypass	Construct bypass through Hemet	6.5 Miles	FAP	$ 6.0
		District 8 Missing Links			
1	I-15E, Perris to Route 60	Convert to 4 lane Freeway	10.9 Miles	FAP	$30.0
2	I-15E, at Ethanac Road	Construct interchange	1.0 Miles	FAP	$ 1.5
		District 8 Widenings			
1	Route 60, UCR to Main Street	Widen from 4 to 6 lanes	2.9 Miles	FAP	$ 2.6
2	Route 74, Lake Elsinore to Perris	Widen from 2 to 4 lanes	10.3 Miles	FAP	$ 5.6

Table 6.4-3 (Continued)
PROPOSED NEW FACILITY PROJECTS FOR THE SCAG REGION
RIVERSIDE COUNTY HIGHWAY PRIORITIES

(Source: Riverside County Transportation Commission)

Priority	Route No.	Project Description	Approximate Length	Fed. System Designation	Cost (Million)
3	Route 71, San Bernardino County line to Route 91	Widen from 2 to 4 lanes	3.4 Miles	FAP	$ 3.0
4	Route 79, Foothill Road to I-10	Widen from 2 to 4 lanes	6.2 Miles	FAP	$ 9.0
5	Route 60, Valley Way to Main Street	Widen from 4 to 6 lanes	4.1 Miles	FAP	$ 4.5
		District 11 New Facilities			
1	Route 86 Imperial County line to Route 195	Convert to 4 lane freeway	10.7 Miles	FAP	$20.0
2	Route 86, Route 195, to .2 mile North of Dillon Road	Convert to 4 lane freeway	11.9 Miles	FAP	$22.9

Table 6.4-3 (Continued)
PROPOSED NEW FACILITY PROJECTS FOR THE SCAG REGION
SAN BERNARDINO COUNTY HIGHWAY PRIORITIES

(As adopted by San Bernardino Associated Governments, July 5, 1978)

Priority	Route No.	Project Description	Approximate Length	Fed. System Designation	Cost (Million)
		New Facilities			
		Interstate			
1	I-15; Route 30	Routes 15/30 IC	2.0 miles	FAI	$18.0
		Non-Interstate			
1	Route 30, San Dimas to I-15	Construct 4-lane freeway	10.6 miles	FAP	$40.0*
2	Route 30, I-15 to California Street	Construct 4-lane freeway	8.3 miles	FAP	$30.0
3	Route 138 I-15 to Summit	Construct 4-lane freeway	4.5 miles	FAP	$ 4.0
4	Route 18, Rte. 30 to Waterman Cyn.	Construct 4-lane freeway	3.0 miles	FAP	$12.0
		Missing Links			
		Non-Interstate			
1	Route 58, Community Blvd. to I-15	Construct initial 2-lane freeway	2.2 miles	FAP	$ 6.0
2	Route 30, Arden Ave. to Rte. 10 to Rte. 71	Construct 2- & 4-lane freeway	5.9 miles	FAU	$21.0
3	Route 30, California Avenue to "H" Street	Construct Rte. 30/15 Interchange	3.0 miles	FAP	$16.0

* District 8 portion only

Table 6.4-3 (Continued)
PROPOSED NEW FACILITY PROJECTS FOR THE SCAG REGION
SAN BERNARDINO COUNTY HIGHWAY PRIORITIES

(As adopted by San Bernardino Associated Governments, July 5, 1978)

Priority	Route No.	Project Description	Approximate Length	Fed. System Designation	Cost (Million)
		Widen Interstate			
1	I-15, Devore Rd. to Route 15-E	Widen freeway to 8 lanes	2.1 miles	FAI	$ 2.0
		Widen Non-Int'state			
1	Route 71, LA Co., to Rte. 83	Widen to 4 lanes	8.4 miles	FAP	$ 3.0
2	Route 62, Sunfair to Canyon	Widen to 4 lanes	8.0 miles	FAP	$ 0.6
3	Route 62, El Repose to Sunfair	Widen to 4 lanes	3.9 miles	FAP	$ 0.4
4	Route 18, Big Bear Dam to Big Bear City	Widen to 4 lanes	9.6 miles	FAU	$25.0
5	Route 83, Pine Avenue to Merrill Ave.	Widen to 4 lanes	2.0 miles	FAU	$ 1.0
		Other Major Widening Deficiencies			
		Non-Interstate			
-	Route 18, Crestline to Lakeview Point	Widen to 4 lanes	21.3 miles	FAP	$40.0
-	Route 142, Orange Co. line to Rte. 71	Widen to 4 lanes (portions)	5.8 miles	FAP	$ 0.9
-	Route 330, Highland Ave. to Running Springs	Widen to 4 lanes (portions)	14.6 miles	FAP	$17.5

Table 6.4-3 (Continued)
PROPOSED NEW FACILITY PROJECTS FOR THE SCAG REGION
VENTURA COUNTY HIGHWAY PRIORITIES

(Source: 1977 Ventura County Transportation Plan)

Priority**	Route No.	Project Description	Approximate Length	Fed. System Designation	Cost (Million)
1	Route 126/Santa Paula to Castaic Junction with Highway 5	Widen to 4 lanes conventional highway	26	FAP	$25
(1)	Route 101/ Moorepark Road, Thousand Oaks to Santa Clara River, Oxnard	Widen to 6 lane freeway	19	FAP	45
2	Route 23/New Los Angeles Avenue to Route 118	Complete missing freeway link	2	FAP	15
(2)	Route 33/end of * freeway, Casitas Spring Road to Encino Drive	Widen to 4 lanes or construct a 2-lane bypass	...	...	...
3	Route 1 corridor (Oxnard Bypass)	...	...	...	...
(3)	Route 150, 118, 23, 34, and 232 (Capital Outlay Projects)	...	...	...	...

* The City of Ojai has not endorsed a by-pass of Oak View.
** Represents grouping of projects into categories rather than project ranking
(...) Indicates that project information is not available at this time.

6.4.7
Financial Analysis and Issues

The following discusses issues regarding state highway finance and programming that must be resolved in the implementation of AB 402, and provides a rough estimate of the region's need for additional resources.

Equity of State Highway Expenditures

As shown in Figure 6.4-2, expenditures on construction and maintenance of state highways in the SCAG region reached a peak of $373 million in FY 71. Mirroring the overall state decline in highway expenditures, the regional level of construction, reconstruction, and improvement fell in FY 76 to a decade low of $170 million, while maintenance expenditures also dropped from a high in FY 75 to $44 million in FY 76 -- a 9.5% decrease. The amounts shown for FY 77 equal those for FY 76 and confirm the trend, identified in last year's RTP, that SCAG counties have lost significant ground with respect to the rest of the state in receiving state highway expenditures. The combined regional share has fallen to 34% of total state highway moneys expended on construction and maintenance -- down from a decade-high share of 42% of the money expended in FY 72.

During the past year, SCAG's financial analysis for state highways has centered on the rate of State Highway User Tax donations -- estimated state highway revenues generated minus actual expenditures -- the region has provided to the other states of the nation and to other counties within California. The graphic "State Highways Expenditures and Revenues 1967-1976" (Figure 6.4-3) shows, for example, that while $8 billion was expended statewide during this ten-year period, $1.15 billion generated in Los Angeles and Orange Counties was spent in other counties of the state.

A description of the flow of these dollars may be found on the reverse side of the graphic.

The amount of state highway dollar donations flowing from the SCAG region has risen sharply over time. Figure 6.4-4 shows these donations for five-year periods beginning with 1947. Based on current Caltrans programming plans, it is estimated that for the five-year period FY 79-FY 83, over one billion dollars generated in the SCAG region will be spent for state highway improvements in other states and in other counties in California.

Figure 6.4-5 places the projected $1.15 billion tax donation into perspective with total estimated Highway User tax dollars generated and currently programmed expenditures. Figure 6.4-5 shows that under projected federal and state levels for state highway support, the region will receive, in expenditures, only 62 cents of each state highway tax dollar generated. This rate of return is down from the estimated return of 70 cents per tax dollar generated during the five-year period FY 67-71.

HISTORICAL EXPENDITURES FOR CONSTRUCTION AND MAINTENANCE
ON STATE HIGHWAYS IN THE SCAG REGION

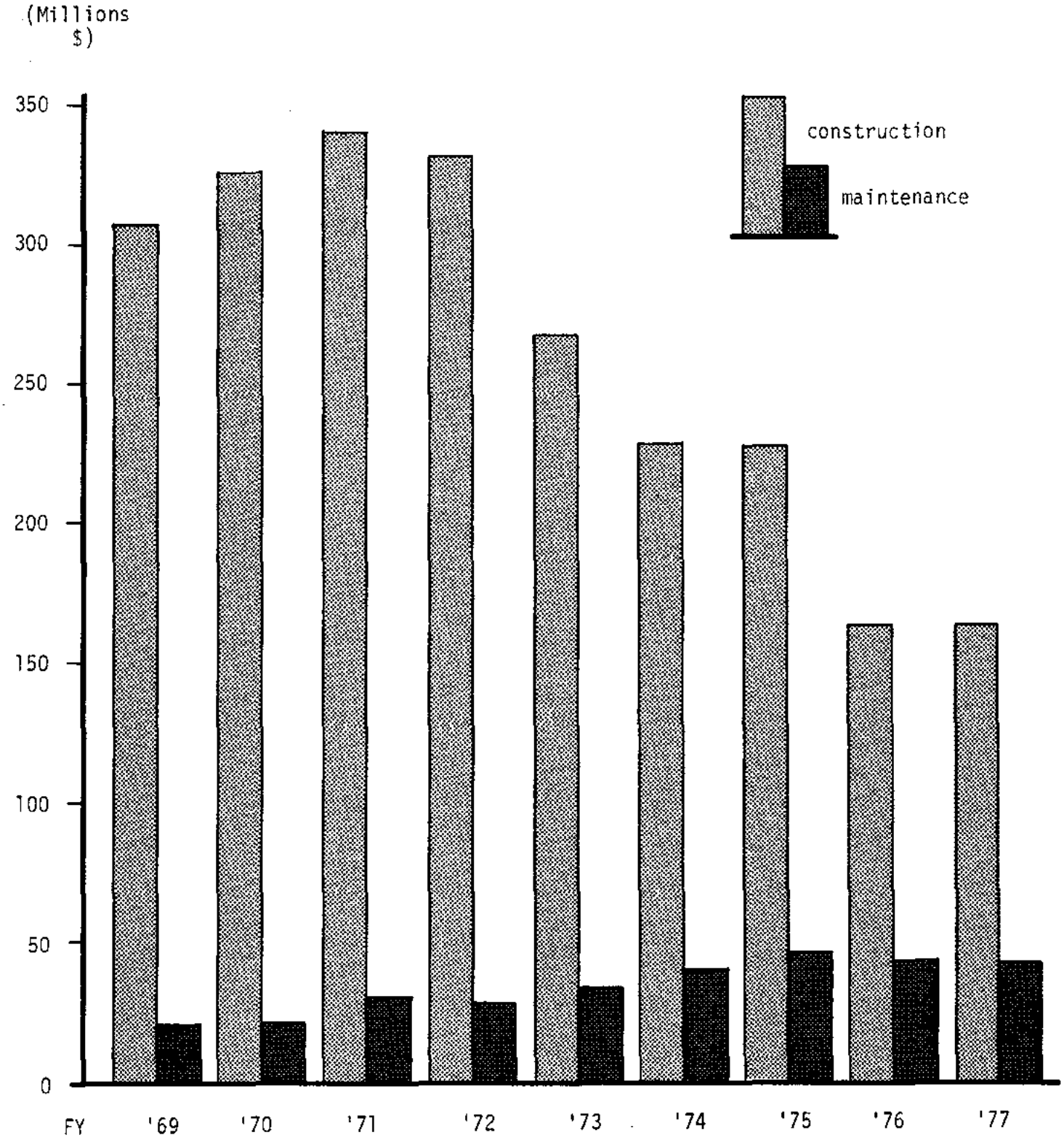
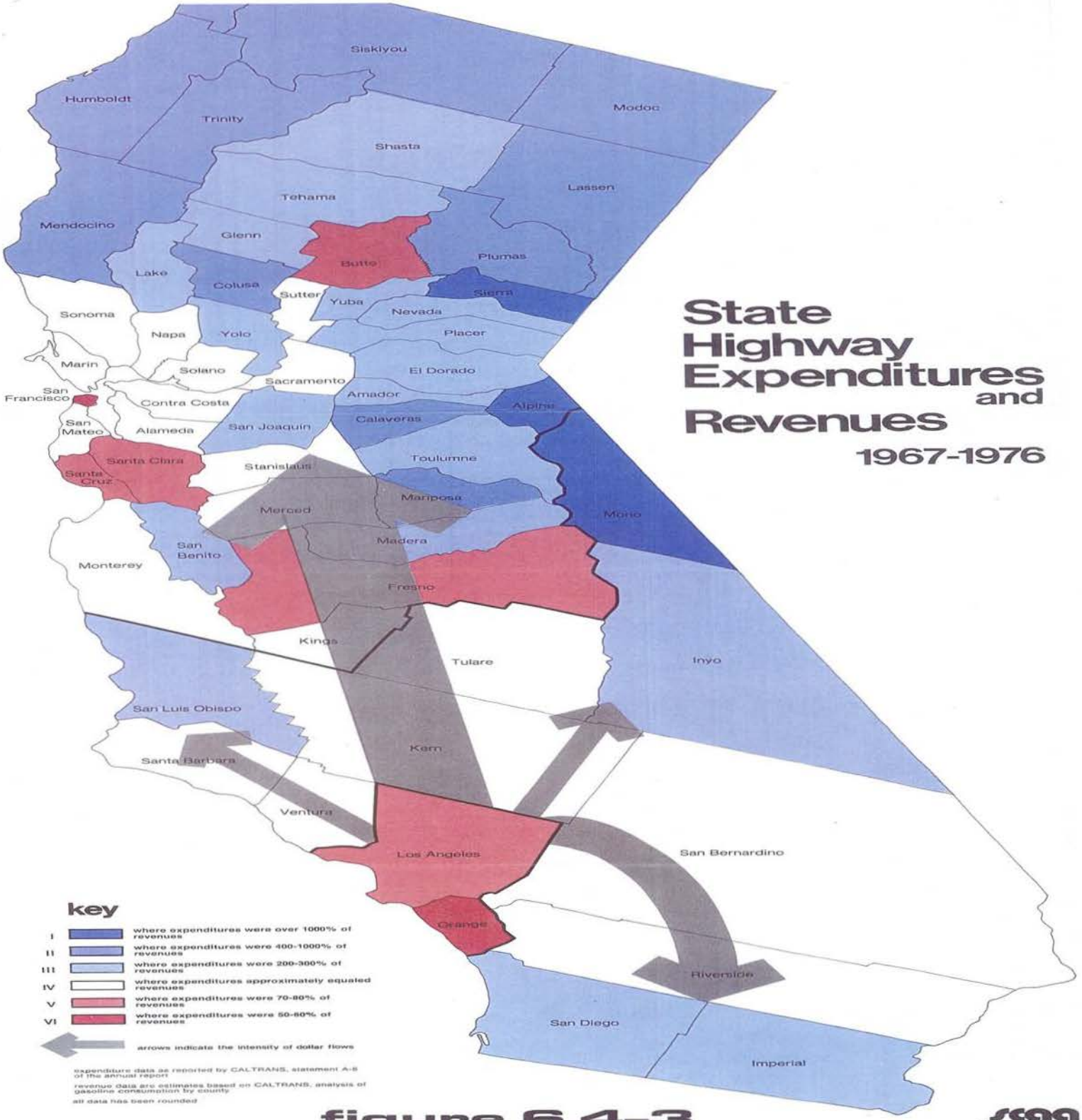


figure 6.4-2



State Highway Expenditures and Revenues 1967-1976

figure 6.4-3

SCAG

Over the ten year period $8 billion was expended statewide. In terms of dollar flows, $1.15 billion generated in Los Angeles ($900 million) and Orange ($250 million) Counties was spent in other counties of the state. Of the $1.15 billion approximately $525 million flowed to northern counties (an amount equal to the total contribution northern counties made to the North). The remaining $625 million worth of expenditures flowed to southern counties with 40% (or $250 million) of that going to San Diego County. Overall, besides financing their own highway improvements, Los Angeles and Orange County motorists financed 20% of the highway improvements in the other counties of the state.

Looking at the more recent five-year period 1972 - 1976, in terms of expenditures, Orange County received approximately 40% of the revenues it generated while Los Angeles County received 70% of the revenues it generated.

The map was prepared using the information presented below and does not consider monies that California counties as a whole donate to other states of the nation.

County	Expenditures in $ Millions				Revenues Generated % of State	Expenditure/ Revenue Ratio	Classification on map
	Count.	Match.	Total	% of State			
Southern Donor Counties							
Los Angeles*	1,685	161	1,847	22.98%	34.000%	.68	V
Orange*	288	39	326	4.05%	7.310%	.55	VI
Sub-total	1,973	200	2,173	27.00%	41.310%	.65	-
Santa Barbara	86	15	100	1.24%	1.400%	.89	IV
Tulare	47	15	62	.77%	.900%	.86	IV
Total	2,106	230	2,335	29.01%	43.610%	.67	-
Southern Recipient Counties							
Imperial*	77	11	82	1.02%	.440%	2.32	III
Inyo	31	11	42	.52%	.160%	3.25	III
Kern	178	32	210	2.61%	1.970%	1.32	IV
Mono	32	32	64	.80%	.060%	13.33	I
Riverside^	212	31	242	3.01%	3.600%	1.16	IV
San Bernardino*	355	50	404	5.02%	3.600%	1.39	IV
San Diego	710	38	749	9.31%	6.200%	1.50	III
San Luis Obispo	60	15	75	.93%	.570%	1.65	III
Ventura*	167	19	186	2.31%	1.850%	1.25	IV
Total	1,817	239	2,054	25.52%	17.441%	1.46	-
SCAG Total (noted by *)	2,779	311	3,087	38.36%	49.800%	.77	-
Southern Counties Total	3,923	469	4,389	54.54%	61.053%	.89	-
(% of State)	55.00%	44.97%	-	-	-	-	-
Northern Donor Counties							
Alameda	280	54	334	4.15%	4.700%	.88	IV
Butte	25	7	32	.40%	.550%	.73	V
Contra Costa	188	29	217	2.70%	2.900%	.93	IV
Fresno	98	18	116	1.44%	2.230%	.65	V
San Francisco	88	26	114	1.42%	2.000%	.57	VI
Santa Clara	296	27	323	4.01%	5.200%	.77	V
Santa Cruz	27	10	37	.46%	.600%	.77	V
Sonoma	63	15	78	.97%	1.100%	.88	IV
Stanislaus	69	7	76	.94%	1.000%	.94	IV
Total	1,134	193	1,327	16.49%	20.780%	.79	-
Northern Recipient Counties							
Alpine	6	3	9	.11%	.004%	27.50	I
Amador	11	5	16	.20%	.060%	3.08	III
Calaveras	20	6	26	.32%	.080%	4.00	II
Colusa	35	4	39	.48%	.088%	5.45	II
Del Norte	24	6	30	.37%	.085%	4.51	II
El Dorado	41	17	58	.65%	.318%	2.04	III
Glenn	16	3	19	.24%	.140%	2.40	III
Humboldt	132	19	151	1.88%	.500%	3.75	II
Kings	26	4	30	.37%	.320%	1.16	IV
Lake	20	5	25	.31%	.120%	2.08	III
Lassen	17	11	27	.34%	.080%	3.38	II
Madera	45	5	50	.62%	.220%	2.82	III
Marin	59	14	73	.91%	.850%	1.07	IV
Mariposa	14	3	17	.21%	.035%	6.00	II
Mendocino	73	16	89	1.11%	.310%	3.58	II
Merced	45	9	54	.67%	.585%	1.15	IV
Modoc	12	6	18	.22%	.054%	4.23	II
Monterey	94	12	106	1.32%	.950%	1.39	IV
Napa	27	6	33	.41%	.370%	1.11	IV
Nevada	33	14	47	.58%	.174%	3.33	III
Placer	73	17	90	1.12%	.510%	2.20	III
Plumas	16	8	24	.30%	.074%	4.05	II
Sacramento	246	22	268	3.33%	3.200%	1.12	IV
San Benito	14	2	16	.20%	.090%	2.22	III
San Joaquin	189	16	205	2.55%	1.570%	1.62	III
San Mateo	248	29	277	3.44%	2.800%	1.23	IV
Shasta	66	19	85	1.06%	.490%	2.16	III
Sierra	11	7	18	.22%	.013%	16.90	I
Siskiyou	101	17	118	1.47%	.230%	6.39	II
Solano	70	27	97	1.21%	.843%	1.43	IV
Sutter	18	3	22	.27%	.215%	1.26	IV
Tehama	19	7	26	.32%	.135%	1.64	III
Trinity	15	9	24	.30%	.040%	7.50	II
Tuolumne	31	7	38	.47%	.175%	3.41	III
Yolo	81	12	93	1.16%	.500%	2.32	III
Yuba	18	5	23	.29%	.190%	1.53	III
Total	1,979	377	2,355	29.20%	16.450%	1.78	-
Northern Counties Total	3,113	570	3,682	45.77%	37.230%	1.23	-
(% of State)	44.00%	54.65%	-	-	-	-	-
State Total	7,005	1,043	8,048	-	-	-	-

Notes: All data has been rounded and may not add to totals.

The Expenditure/Revenue ratios were rounded to the nearest .1 for ratios less than one and to the nearest 1 for ratios greater than one. Based on its rounded ratio each county was placed in the color classification shown on the front of the map.

The $8 billion expended statewide during the ten year period does not include an additional $1 billion spent on administration ($570 million), Federal Urban Area Taplane programs ($200 million), and special and miscellaneous activities ($330 million) such as highway planning, tort liability claim payments, air pollution activities, and work done on city and county streets.

STATE HIGHWAY TAX DOLLAR DONATIONS
SCAG REGION

Five Year Totals FY 1947-FY 1983

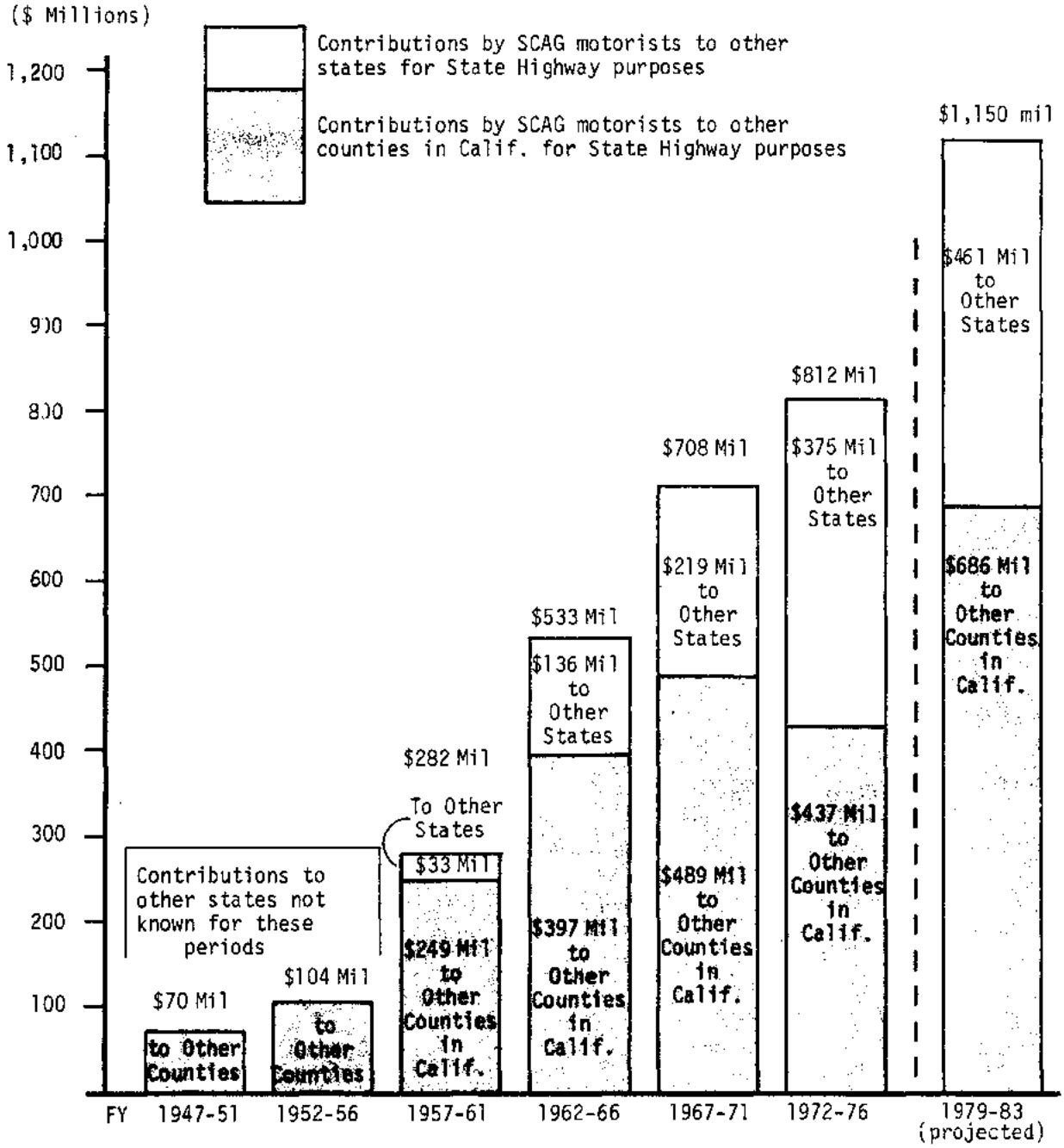


figure 6.4-4

HIGHWAY USER TAX DOLLARS GENERATED
VERSUS PROJECTED EXPENDITURES

SCAG REGION FY 1979-FY 1983

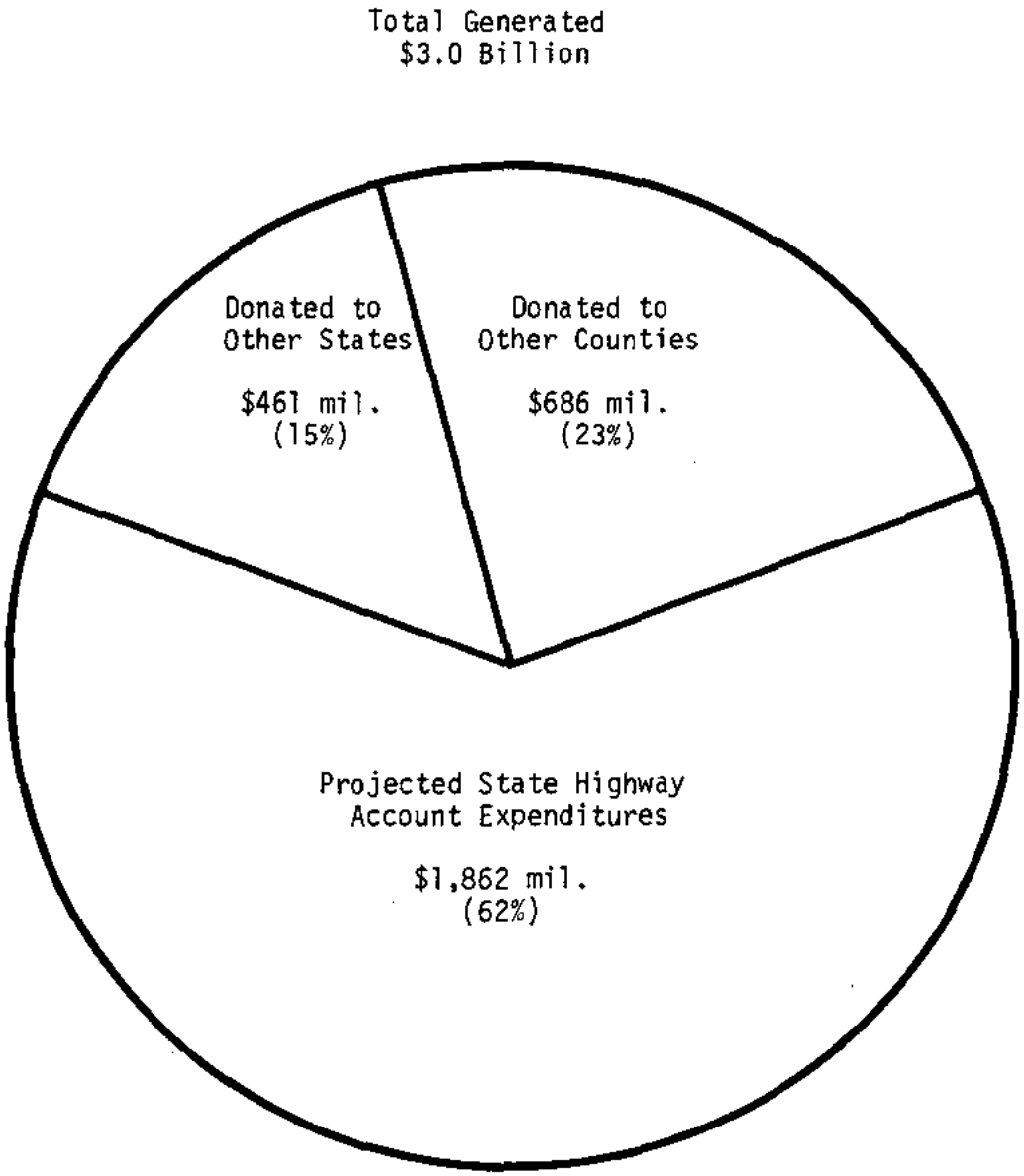


figure 6.4-5

Projected Expenditures vs. the 1977 "Now" Needs Study

One way to measure the need for additional financial resources is to compare projected state highway expenditures to the "Now" Needs Study compiled quadrennially by Caltrans. This study measures existing state highway needs and is used to set the legally required minimum expenditure on right-of-way, construction, and reconstruction in each transportation district of the state. Figure 6.4-6 shows that Caltrans' programmed expenditures on state highways in the SCAG region will fund the equivalent of only 21 percent of the existing state highway needs, as measured by the 1977 "Now" Needs Study.

Potential for Increased Funding

AB 402 does not revise existing state law requiring a North/South division, and district minimum expenditure of state highway construction funds. These geographical requirements, when combined with the amounts available in the Federal-Aid funding pots (Interstate, Primary, Urban), constrain the California Transportation Commission's ability to reprogram highway projects. The Southern California Association of Governments has determined, however, that (although there are definite statewide tradeoffs which must be made in determining funding levels) the California Transportation Commission does retain sufficient flexibility to increase the amount of highway expenditures programmed in the SCAG region. For example, through accelerated state cash financing and minimal North/South Interstate, Primary and State-Only funding shifts, an increase of $91 million could be made available in Primary and State-Only funds to the SCAG region for the five-year period FY 79-FY-83. This would represent a 10% increase to the current SCAG capital outlay program.

The California Transportation Commission could also provide an additional $145 million to the SCAG region, to reach the region's legal "maximum" funding level.* Such an increase would, however, have significant impacts on interstate funding in San Diego County.**

Programmed Expenditures vs. Required District Minimums

As demonstrated earlier, the SCAG region fails to receive an equitable share of state highway funds. Moreover, Caltrans estimates that it will

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* This legal "maximum" funding level assumes the SCAG region receives all Southern California discretionary moneys and that the SCAG portion of District 11 (Imperial and parts of Riverside Counties) receives a proportionate share of District 11's district minimum.

** A complete discussion of alternative capital outlay funding levels and their impacts may be found in the report, "1978 Financial Plan for State Highways, Background Analysis and Discussion".

fail to expend the legally prescribed* district minimum during FY '76-FY '79 for State Transportation District 7 (Los Angeles, Orange and Ventura Counties). The estimated shortfall is approximately $60 million. Compounding this projected violation of state law has been a growing imbalance in the legally required expenditure between Northern and Southern California.

Projected Funding Gap for New Facilities Construction
(State Highways Only)

Figure 6.4-7 shows estimated levels of support for capital improvements for state highways in the SCAG region. Estimates are for the two five-year periods, FY '79-'83 and FY '84-'88.

Revenue estimates assume a return to the region of approximately 50%** of the projected capital outlay in the state. Though feasible under current funding provisions of state law, such a return would require, in implementation activities, a more intensive and broader-based project development effort than is now under way by Caltrans. For example, the plan estimates $1140 million available for the period FY '79-'83, compared with the $854.1 million included in the Caltrans 1977 Six-Year Planning Program.

Expenditures are estimated for the following program categories: maintenance and rehabilitation, operational improvements, and new facilities. Estimates for the first two categories correspond generally to the amounts included in the Caltrans Six-Year Planning Program. For illustration purposes, the additional dollars that would be made available to the region, given "maximum" legal funding, are dedicated to new facilities.

Even under these conditions, the funding level shown for new facilities would not be sufficient to fund all projects submitted to SCAG for inclusion and prioritization in the Regional Transportation Plan (see Table 6.4-3). Based on the projects submitted to date, a deficit of approximately $700 million would be projected -- which, if funded, would require the equivalent of a 1.4-cent/gallon gasoline tax increase during FY '79-'88.*** Expected additions to the project list and the highway requirements of the Regional Transit Development Program could add significantly to this amount.

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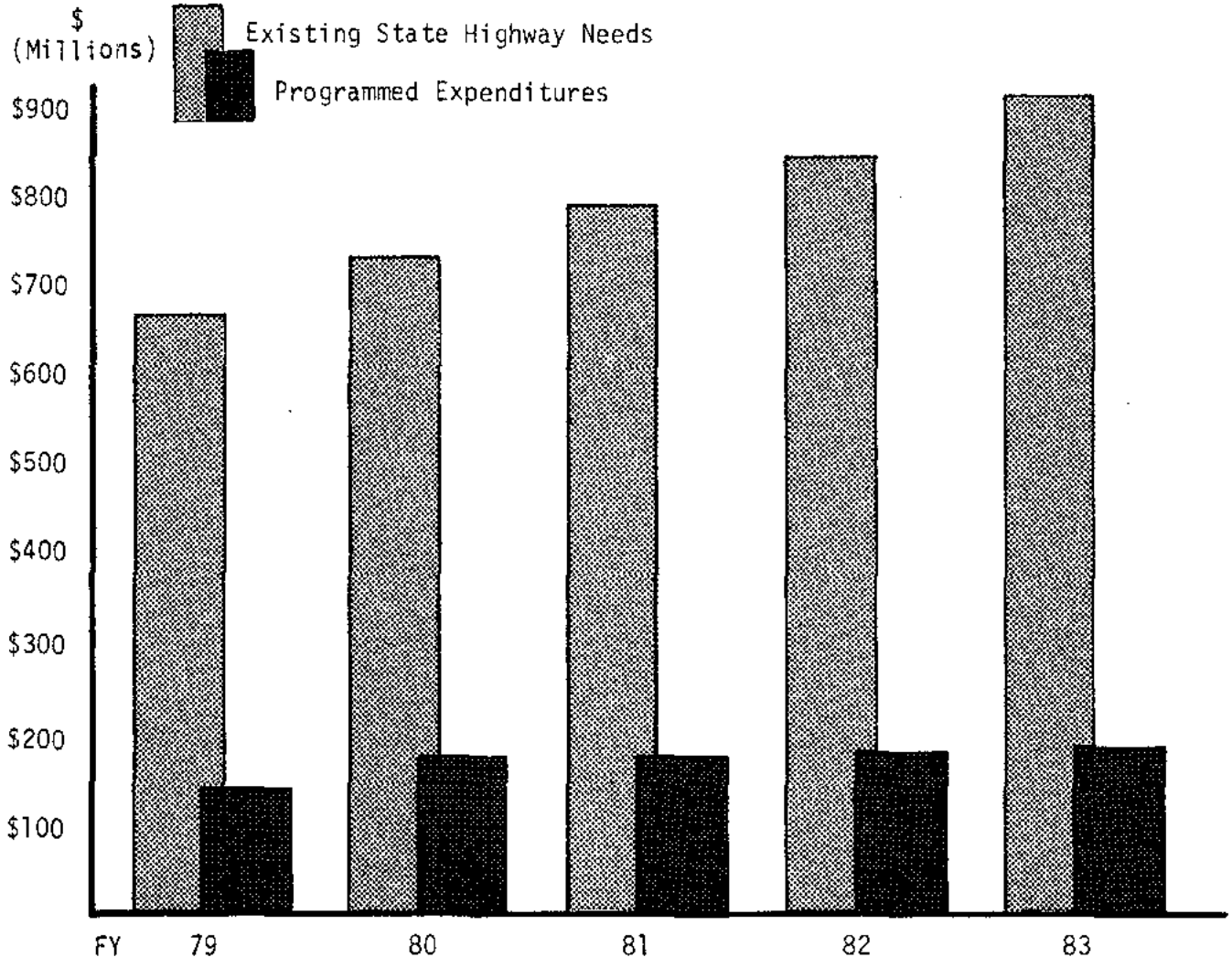
* Section 188.8 of the Street and Highways Code

** The estimated 50% would represent an equitable return of funds to the SCAG region, given that the region generates about 50% of the state's gas tax revenues. In addition, the resulting revenues would be approximately equal to the legal "maximum" funding levels discussed above.

*** Assumes that gasoline consumption in the SCAG region equals 50% of California gasoline consumption and that all gas tax revenues generated by the increase in the SCAG region are returned to the region.

COMPARISON OF EXISTING STATE HIGHWAY
NEEDS TO PROGRAMMED EXPENDITURES

SCAG Region--FY 79-FY 83

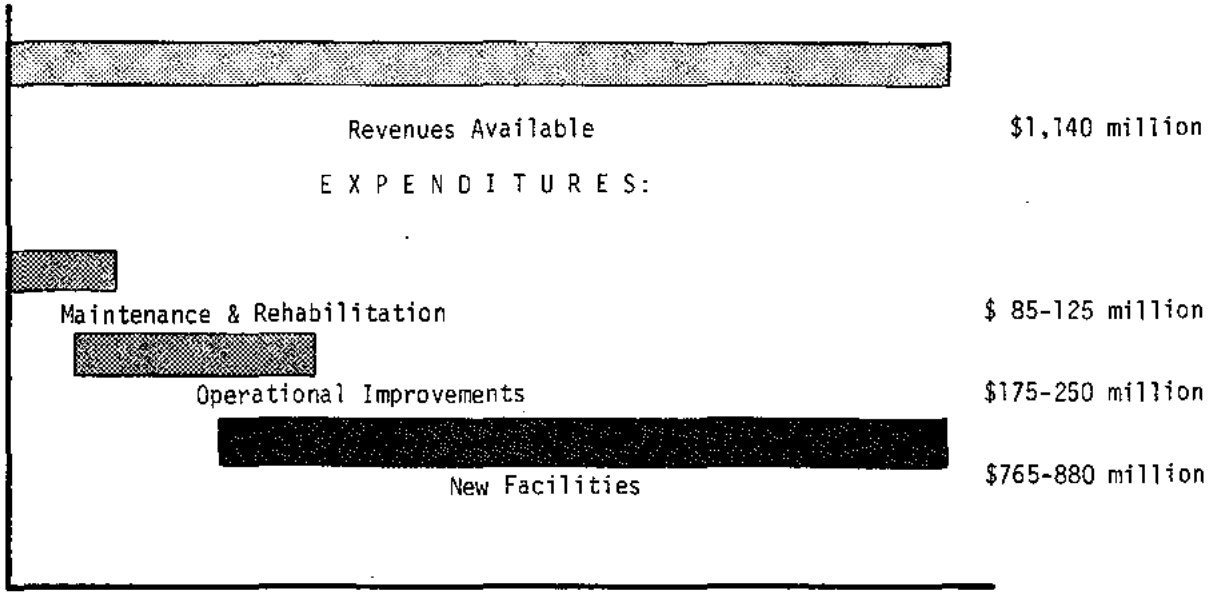


Note: Existing State Highway Needs are escalated at 8% over the five-year period.

figure 6.4-6

FINANCIAL PLAN FOR STATE HIGHWAY CAPITAL IMPROVEMENTS
(SCAG REGION)

FY 1979 - FY 1983



FY 1984 - FY 1988

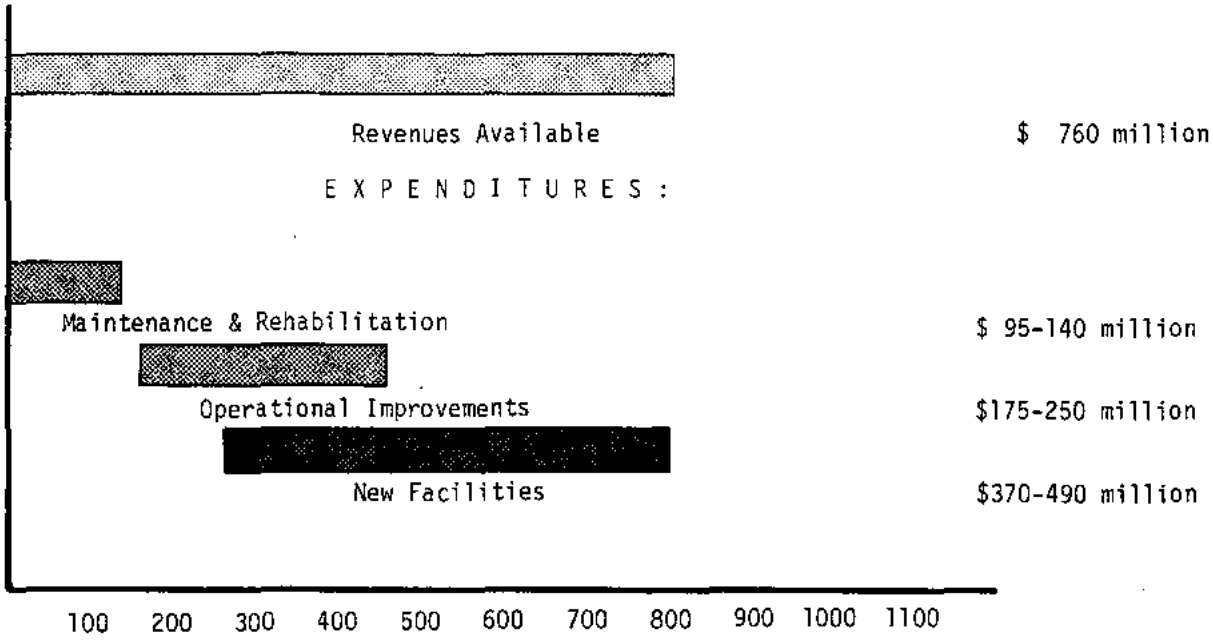


figure 6.4-7

Once remaining project submittals have been received, a constrained financial plan (required by AB 402) will be prepared. In preparing this plan, a decision will have to be made as to whether to constrain the plan based on available revenue estimates, or to seek additional sources of funds.

airports

6.5

6.5
AIRPORT SYSTEM

The basic goal of this airport system plan is to develop a system of airports which meets the air transportation needs of the region in a manner consistent with the adopted Growth Forecast Policy. In formulating the regional plan, basic data on the existing airport system were coordinated with material provided by the Federal Aviation Administration and the Division of Aeronautics of the California Department of Transportation. The air transportation forecasts used in this plan are consistent, on a regional level, with forecasts developed by the State Division of Aeronautics.

6.5.1
Setting

The locations of the major air carrier airports are shown in Figure 6.5-1. A comparison of the traffic at the air carrier airports in CY 1977 is shown in Table 6.5-1.

The inventory of air carrier and general aviation airports comprising the SCAG region Airport System Plan are listed alphabetically by county in Table 6.5-2. The airports listed in Table 6.5-2 meet the criteria for being included in the plan contained in the airport system policies presented in the Policy Section of the RTP.

6.5.2
Current Issues

Some of the most important unresolved problems and issues for the region's airports are described below.

Capacity Deficiencies

Forecasts indicate a demand of 88 to 97 Million Air Passengers (MAP) in 1995. (Table A-3-1, Appendix A.) However, current data show that the regional airport system (with presently planned expansions of existing facilities) will accommodate only 67 to 78 MAP by 1995 (Table A-3-2). Thus, it is possible that one out of three persons wishing to fly on air carriers in 1995 will not be able to.

General aviation forecasts indicate a growth from some 11,000 based aircraft in 1977, to 20,000 in 1995. Forecasts indicate a shortage of airport accommodations for general aviation aircraft by 1990: 850 accommodations in Los Angeles County, 690 in Orange County (Table A.3-3).

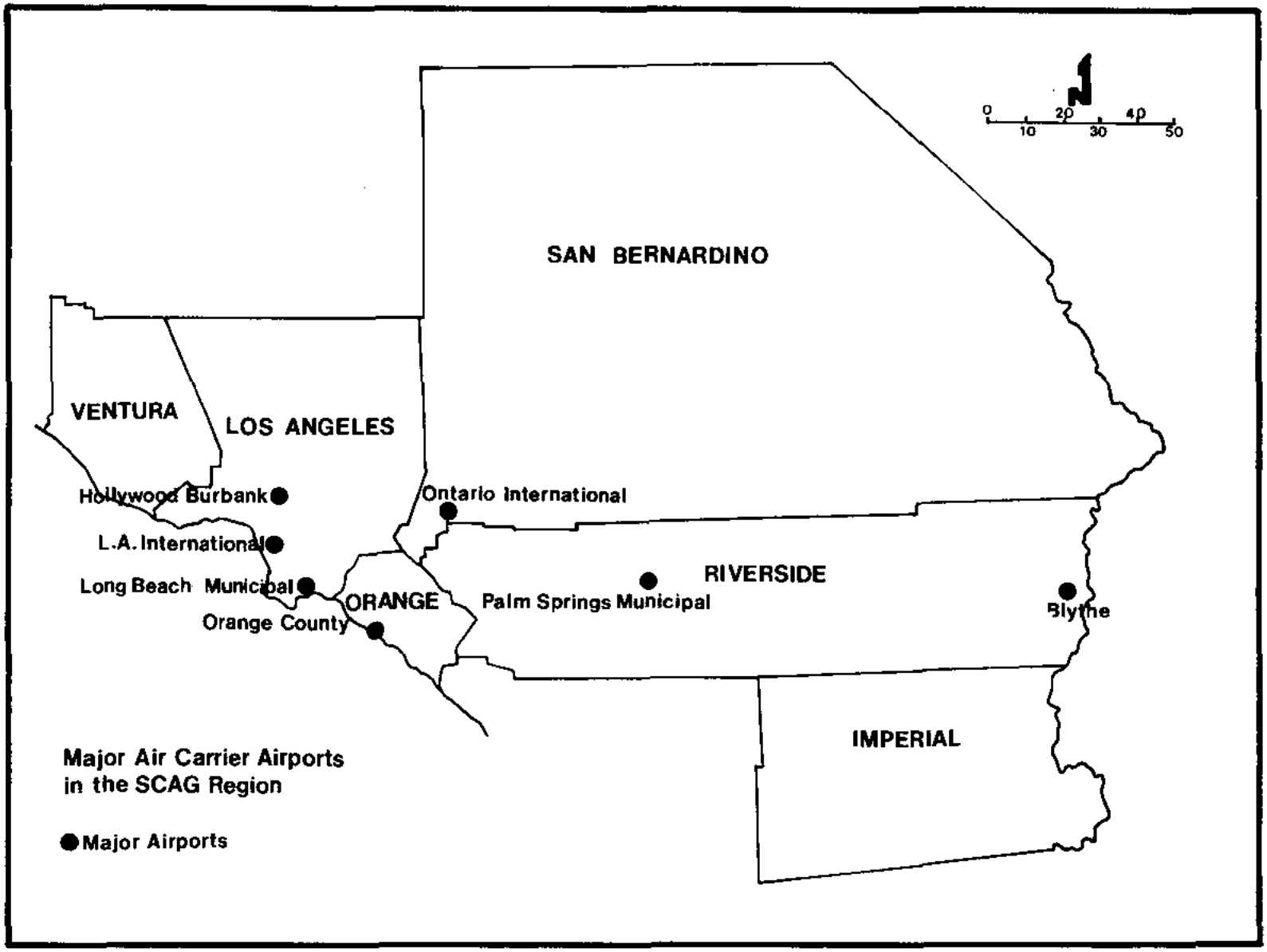

SAN BERNARDINO
VENTURA
LOS ANGELES
ORANGE
RIVERSIDE
IMPERIAL
Hollywood Burbank
L.A. International
Long Beach Municipal
Orange County
Ontario International
Palm Springs Municipal
Blythe
0 10 20 30 40 50
Major Air Carrier Airports
in the SCAG Region
Major Airports

figure 6.5-1

AIR CARRIER AIRPORTS

CY 1977 TRAFFIC COMPARISON

AIRPORT	PASSENGERS (NUMBER)	AIR CARGO (TONS)
LOS ANGELES INTERNATIONAL	28,361,863	812,290
ORANGE COUNTY	2,158,505	2,455
HOLLYWOOD-BURBANK	1,998,952	8,541
ONTARIO INTERNATIONAL	1,680,556	3,418
PALM SPRINGS	506,283	323
LONG BEACH	491,243	2,294
IMPERIAL COUNTY	48,683	203
PALMDALE AF PLANT 42	6,147	24
BLYTHE	3,726	21
SCAG REGION TOTAL	35,255,958	829,569

table 6.5-1

AIRPORTS IN THE SCAG REGION

County / Airport Type / Airport Name	Owner/ Operator: Public	Owner/ Operator: Private	Type of Civil Use: Air Carrier	Type of Civil Use: Third Level	Type of Civil Use: Gen'l Aviation	Airspace Capability	Classification: Regional Significance	Classification: Special Significance	Classification Criterion
IMPERIAL COUNTY									
Civil Airports									
Brawley Muni.	●				●	VFR	●		Projected activity
Calexico Int'l.	●				●	F-IFR	●		Projected activity
Calipatria Muni.	●				●	VFR		●	Current activity
Holtville	●				●	VFR		●	Current activity
Imperial County	●		●	●	●	S-2	●		CAB and PUC service
Salton Sea		●			●	F-IFR	●		Remote
Military Airports									
NPTR El Centro	●					S-2			
Demand Areas									
None									
LOS ANGELES COUNTY									
Civil Airports									
(1) Agua Dulce		●			●	VFR	●		Current activity
(2) Avalon Bay SPB/ Pebbly Beach SPB	●			●		F-IFR*	●		PUC Center
Brackett	●				●	F-IFR	●		Current activity
Catalina		●		●	●	L-IFR	●		PUC
Catalina Term'l SPB	●			●		LD*	●		PUC
Compton	●				●	VFR	●		Current activity
Crystal		●			●	VFR		●	Recreational use
El Monte	●				●	F-IFR	●		Current activity
Fox, Gen'l Wm. J.	●				●	F-IFR	●		Current activity
Hawthorne	●				●	L-IFR	●		Current activity
(3) Hollywood-Burbank		●	●	●	●	S-3	●		CAB/PUC/current activity
Hughes		●			●	L-D		●	Airspace conflict
Long Beach	●		●	●	●	S-3	●		PUC/current activity
Los Angeles Int'l	●		●	●	●	F-TCA	●		CAB/PUC/current activity
San Fernando		●			●	LD(a)	●		Current activity
Santa Monica	●				●	L-IFR	●		Current activity
Torrance Muni.	●				●	L-IFR	●		Current activity
Two Harbors SPB		●		●		VFR	●		PUC
Van Nuys	●				●	F-IFR	●		Current activity
Whiteman	●				●	LD(a)	●		Current activity
Military Airports									
(4) AF Plant 42 (Palmdale)	●			●		(i)	●		PUC
ALF San Clemente	●					F-IFR*		●	
Demand Areas									
Palmdale Int'l	●		●	●		L-TCA	●		Projected activity
(5) Azusa/Industry	●				●		●		Projected activity
(5) Montebello	●				●		●		Projected activity
(6) Saugus/Castaic/Fillmore	●				●		●		Projected activity
Avalon STOL	●			●			●		Projected PUC service
Reeves Field	●				●		●		Projected activity

table 6.5-2

AIRPORTS IN THE SCAG REGION

County / Airport Type / Airport Name	Owner/ Operator: Public	Owner/ Operator: Private	Type of Civil Use: Air Carrier	Type of Civil Use: Third Level	Type of Civil Use: Gen'l Aviation	Airspace Capability	Classification: Regional Significance	Classification: Special Significance	Classification Criterion
ORANGE COUNTY									
Civil Airports									
Fullerton	●			●	●	L-IFR	●		PUC/current activity
Meadowlark		●			●	LD	●		Current activity
Orange County	●		●	●	●	S-3	●		CAB/PUC current activity
Military Airports									
MCAS El Toro	●					S-3		●	
AFRC Los Alamitos	●					L-IFR		●	
MCAS Santa Ana	●					LD*		●	
Demand Areas									
County-Wide	●		●				●		Projected activity
(7) Los Alamitos/Seal Beach	●				●		●		Projected activity
South County	●				●		●		Projected activity
RIVERSIDE COUNTY									
Civil Airports									
Banning Muni.	●				●	VFR*	●		Current activity
Blythe	●		●		●	F-IFR	●		CAB/remote
Corona Muni.	●				●	VFR	●		Current activity
Desert Center	●				●	VFR	●		Remote
Fla-Bob		●			●	LD	●		Current activity
Hemet-Ryan	●				●	L-IFR	●		Current activity
North Shore		●			●	VFR	●		Remote
Palm Springs Muni.	●		●	●	●	S-2	●		CAB/PUC/current activity
Riverside Muni.	●			●	●	F-IFR	●		PUC/current activity
Chiriaco Summit	●				●	VFR	●		Remote
Skylark		●			●	LD		●	Recreational use
Thermal	●				●	F-IFR	●		Projected activity/remote
Military Airports									
March AFB	●					S-3		●	
Demand Areas									
(8) Edgemont/Sunnymead	●				●		●		Projected activity
(9) Elsinore/Temecula	●				●		●		Projected activity/remote

table 6.5-2

AIRPORTS IN THE SCAG REGION

	County / Airport Type / Airport Name	Owner/Operator: Public	Owner/Operator: Private	Type of Civil use: Air Carrier	Type of Civil use: Third Level	Type of Civil use: Gen'l Aviation	Airspace Capability	Classification: Regional Significance	Classification: Special Significance	Classification Criterion
	SAN BERNARDINO COUNTY									
	Civil Airports									
	Apple Valley	●				●	S-2	●		Current activity
	Baker	●				●	F-IFR	●		Remote
	Barstow-Daggett	●				●	F-IFR	●		Projected activity
	Big Bear City	●				●	VFR	●		Current activity
	Cable		●			●	L-IFR	●		Current activity
	Chino	●				●	F-IFR	●		Current activity
	El Mirage		●			●	VFR		●	Recreational use
	Giant Rock	●				●	VFR		●	Publicly owned/operated
	Hesperia Air Lodge		●			●	LD	●		Projected activity
	Morrow Field		●			●	LD		●	Airspace conflict
	Needles	●				●	F-IFR	●		Remote
	Ontario Int'l	●		●	●	●	L-TCA	●		CAB/PUC/current activity
	Redlands Muni.	●				●	LD	●		Current activity
	Rialto Muni.	●				●	VFR	●		Current activity
	Soggy Dry Lake	●				●	VFR*	●		Remote
	Tri-City		●			●	LD	●		Current activity
	Trona	●			●	●	VFR	●		PUC/remote
	Twenty-nine Palms	●				●	VFR	●		Remote
	Vidal Junction	●				●	VFR*		●	Publicly owned/operated
	Yucca Valley		●			●	LD	●		Remote
	Military Airports									
	Bicycle Lake AAF	●					F-IFR*		●	
	George AFB	●					S-2		●	
	Norton AFB	●					S-2		●	
	MCB Twenty-nine Palms	●					F-IFR*		●	
	Demand Area									
	East County	●				●			●	Recreational use
(10)	San Bernardino	●			●	●		●		
	VENTURA COUNTY									
	Civil Airports									
(11)	Ventura County-Camarillo	●				●	F-IFR(b)	●		Projected activity
	Santa Paula		●			●	VFR	●		Current activity
	Santa Susana		●			●	VFR	●		Current activity
	Ventura County-Oxnard	●			●	●	F-IFR	●		PUC/current activity
	Military Airports									
	NAS Pt. Mugu						S-2		●	
	OLF San Nicolas						F-IFR*		●	
	Demand Areas									
(12)	Simi Valley/Moorpark	●				●		●		Projected activity
	Ojai	●				●		●		Projected activity
(13)	Fillmore/Castaic	●				●		●		Projected activity
	Oxnard Plains	●		●		●		●		Projected activity

table 6.5-2

NOTES FOR TABLE 6.5-2

1. Leased and operated by the City of Los Angeles as a reliever airport for Van Nuys.

2. The publicly-owned Avalon Bay Seaplane Base is used only as an airline alternate for the adjacent, privately-owned Pebbly Beach Seaplane Base and is not open to public use.

3. The cities of Burbank, Glendale, and Pasadena have formed the Hollywood-Burbank Airport Authority to operate the airport.

4. Plant 42 is a civil and military flight test center. A joint-use agreement with the Air Force provides for airline service.

5. These two demand areas could potentially be served by one larger airport.

6. The Saugus/Castaic area is not expected to generate a regionally significant demand by itself. An airport serving the combined Saugus/Castaic/Fillmore demand area would be regionally significant. Also see Ventura County.

7. Reeves Field is currently being studied by the State of California and the County of Los Angeles to serve the regionally significant demand generated by the Los Alamitos/Seal Beach area as well as to relieve congestion at other general aviation airports in Orange and Los Angeles Counties.

8. An airport site at Moreno Valley is currently under consideration by the County of Riverside to serve the regionally significant demand projected for the Edgemont/Sunnymead area.

9. The County of Riverside currently is seeking a site for a regionally significant general aviation airport to serve the demand generated between Elsinore-Temecula Areas.

10. Although joint use of Norton AFB could serve these needs, the Air Force has adopted a no joint use position. SANBAG is presently conducting a Requirements and Site Selection Study to determine how these needs will be met.

11. Formerly Oxnard Air Force Base, the Airport is now operated by the County of Ventura as a general aviation airport.

12. The City of Simi Valley and Ventura County are preparing to undertake a joint study of alternative airport sites in the east end of the county.

13. An airport serving the regionally significant demand generated in the Fillmore area could also potentially serve the locally significant demand generated in the Castaic area of Los Angeles County.

"Airspace Capability indicates the maximum potential for development of an airport with respect to the local airspace available. The airspace capability categories shown for each of the airports in the listing were initially assigned to them by the California Airspace Utilization Committee Task 11. The objective of this categorization is to define a system of airports which will permit orderly growth of aviation with a minimum of airspace conflicts. The following abreviations and categories are used:"

F-IFR Full Instrument Flight Rules (airport can be developed to full IFR, including precision approach, and VFR capacity)
F-TCA Full Terminal Control Area
LD Limited Development (further development of airport is limited due to airspace conflicts with other airports)
L-IFR Limited Instrument Flight Rules (airport has only limited, i.e. non-precision, IFR capability, but can be developed to full capacity for VFR operations)
L-TCA Limited Terminal Control Area (arrival/departure corridor configuration)
S-2 Stage II Radar Approach Sequencing
S-3 Stage III Radar Approach Sequencing
VFR Visual Flight Rules (airport can be developed to full VFR capacity, but cannot accommodate any IFR operations)

* No airspace capability category assigned by Task 11; category shown obtained through consultation with Federal Aviation Administration.

(a) San Fernando and Whiteman have airspace conflicts which limit simultaneous development. Both currently serve regionally significant levels of demand.

(b) Full IFR development may be limited due to airspace conflicts with Ventura County, Oxnard Airport and Naval Air Station, Point Mugu.

table 6.5-2

Palmdale International Airport (Proposed)

Palmdale International Airport is the Los Angeles City Department of Airport's long-range project to meet future air carrier passenger demand. The City of Los Angeles has a development plan for this airport and has been acquiring property in recent years. The site appears to be acceptable to a majority of the local communities.

Airport Growth Constraints

A number of the SCAG region airports have local constraints on the increase of airport operations needed for the forecasted growth in air travel and cargo. Many constraints are due to the noise impact on the surrounding community, surface access congestion and lack of physical space to accommodate facility expansion without significant economic burden on the airport operator.

Reeves Field Airport

Reeves Field, an airport on Terminal Island in the City of Los Angeles Harbor, is now closed. A general aviation airport is needed to relieve flight operations and provide added space at Torrance Municipal, Hawthorne Municipal, Long Beach Municipal, and other south bay area airports. The Los Angeles Harbor District has plans for using Reeves Field as a central storage area for hazardous materials. The SCAG Aviation Technical Advisory Committee is currently communicating with the Los Angeles Harbor District, exploring possibilities for reopening Reeves Field as a reliever airport.

Airport Noise Standards

Los Angeles International, Hollywood-Burbank, and other major air carrier airports in California remain operating only through the issuance by the State of annual variances from the State regulation Title 4 Subchapter 6 Noise Standards. The State noise standard is sufficiently stringent that the ambient noise from a neighboring street reportedly exceeds the noise conditions that Los Angeles International Airport is required to meet.

Transit Between Orange County and Ontario International Airport

Recent studies by SANBAG and staff of the Orange County Board of Supervisors indicate the feasibility of a joint public and private bus service to operate a shuttle between the Orange County area and Ontario International Airport. Such service could be provided with little or no public subsidy and would help alleviate the passenger demand on Orange County Airport with the possibility of a decrease in the noise attributable to jet aircraft in Orange County.

6.5.3
Institutional Responsibilities

Institutions at federal, state, and local government levels as well as the private sector are involved in the regional airport system. The actions outlined above would be carried out primarily by local governments. Most airports are owned or leased and operated by cities and counties which would be responsible for capital improvements and planning of their respective airports.

The cities of Burbank, Glendale, and Pasadena formed the Hollywood-Burbank Airport Authority (a joint powers entity) and purchased for operation the Hollywood-Burbank Airport. The State Government Code was amended specifically to provide for the purchase and for the issuance of revenue bonds by the Authority.

The cities of Chino, Garden Grove, Santa Ana, and Stanton have formed a Joint Powers Authority, the Inter-County Airport Authority, for the purpose of developing a solution to the forecast public demand in the area defined in the State- and SCAG-adopted forecasts as consisting primarily of Orange County, but including parts of Southern San Bernardino and Western Riverside Counties.

6.5.4
System Management Actions

1. In the short term, SCAG will give priority to promoting greater use of special airport limousines or buses by increasing the frequency and points of service, and decreasing trip times. Provisions for priority lanes on freeways and on streets leading into the airport for these vehicles as well as other public transit buses are needed and should be vigorously supported.

2. The Los Angeles Department of Airports should make provisions for handling the increased volumes of air cargo expected at LAX through 1985.

3. SCAG supports improved ground access to Los Angeles International, Ontario, and Hollywood-Burbank airports, and urges that any improvements should be planned to also accommodate the expected increases in air cargo volumes.

4. Ontario International should be planned as the major reliever airport for Los Angeles International in terms of air cargo handling capability.

5. Remote passenger terminals located in the high-density centers of the Los Angeles metropolitan area and providing fast, convenient ground-access service directly to aircraft at Los Angeles International Airport should be in operation by the early 1980's.

6. Present remote parking capabilities and the intra-airport circulation system should be more fully developed at LAX.

7. By 1985, flight frequencies and the choice of destination at Ontario International Airport should be greatly extended over those available today.

8. SCAG should determine the impact on the regional airport system in making decisions on the use of unused airport facilities in the region, such as Reeves Field on Terminal Island.

9. SCAG will assist local governments in forecasting aviation demand to provide a basis for matching public need with airport facilities.

10. SCAG will assemble the data sufficient to permit the definition of general aviation demand areas, as has been done for air carrier demand areas. This will indicate facility development priorities.

6.5.5
System Development Actions

11. Land use compatibility will be developed around major regional airports in relation to California and Federal noise regulations.

12. Los Angeles International Airport should be developed to enable 40 million annual passengers to be enplaned and deplaned by the mid-1980's.

13. Ontario International should be developed to enable 4 to 6 million annual passengers to be enplaned and deplaned by 1985; to enable substantial growth in passenger volumes through the 1980's; and to enable 14 to 20 million annual passengers to be enplaned and deplaned by 1995.

14. Airline airport facilities in the Palmdale area should be developed to serve all of the air passenger demand attracted to an airport in that area.

15. SCAG will establish a task force of airline representatives of commercial airlines, airport operators, and regulatory agencies to determine specific implementation actions to achieve an average load factor of 70%. Recommendation for action to be made by July, 1979.

16. SCAG will utilize a task force of representatives of commercial airlines, airport operators and regulatory agencies to develop an implementation program which will reduce aircraft delays and excessive idle/taxi operations while on the ground. Recommendations for action to be made by July, 1981 with implementation by appropriate agencies or firms prior to 1983.

17. The airlines and regulatory agencies should evaluate existing operating procedures and flight schedules to minimize the taxi and queueing delays. Control of landings, and increased use of gate holds should be given high consideration. In addition, airport operators should design airport expansion and construction based on shorter taxi distances, reduced airplane ground congestion and runway configurations which minimize ground delay.

18. SCAG will seek assurances from FAA that it will initiate a technical feasibility study (if necessary) in FY 81 to determine impacts of modifying engine speeds during aircraft idling and reducing the number of in-operation engines during taxing.

19. The FAA should prepare, in conjunction with the affected agencies, an operating procedure for each type of aircraft in use. This procedure should include RPMs for engine, numbers of engines to be used, and allowances for reduced taxi speeds if necessary.

20. SCAG will encourage the ARB (California Air Resources Board), EPA and FAA to establish requirements for new piston aircraft engines to meet emission standards as proposed by the EPA in 1973.

21. SCAG will encourage EPA and FAA to establish emission standards for modifying existing jet aircraft engines to meet proposed 1978 Federal standards.

22. The total emissions from each airport should be determined and the public agency owning or operating these airports can implement the three AQMP measures relating to airports (H-1, H-2 and H-25) and their associated transportation actions or take whatever other actions are necessary to reduce the emissions by an amount equivalent to those that would be reduced by the individual airport and VMT control measures -- provided that the equivalent reduction takes place at the airport originating the emissions.

6.5.6
Financing

The regional airport system short-range capital improvements with cost estimates for the five-year period FY 80 through FY 84 (as planned by the region's airport operators) are provided in Table 6.5-3.

The region's air-carrier-airport operators have projects eligible for Federal Aviation Administration Airport Development Aid Program (ADAP) funding far in excess of the ADAP funding that is likely to be granted within the SCAG region in this period. The Los Angeles City Department of Airports' five-year plan shows a theoretical use of approximately $74.3 million in ADAP funds for Los Angeles International Airport, and approximately $18.9 million for Ontario International Airport. The figure for LAX is about double the approximate $7 million per year the Department has been obtaining in ADAP funds for that airport. However, the necessary extension of the Federal legislation might enable higher funding.

The region's general aviation airport operators have projects eligible for FAA ADAP funding which require about 12% more ADAP funds than estimated to be available.

The five-year capital improvement programs proposed by the airport operators for FY 85 - FY 89 are listed in Table 6.5-4. Very few of the airports have information for this period. The data for Los Angeles International and Palmdale International are for projects planned only through FY 85. Airport development is heavily dependent upon ADAP funding and Congress has only appropriated ADAP funds through FY 80.

The Airport and Airway Development Act Amendments of 1976 to the Airport and Airway Development Act of 1970 increased the amounts of Federal ADAP capital improvement funds previously available per year and added new airport improvement elements to the eligibility list. Since Congress provided for funding only through FY 80, it is assumed for planning beyond FY 80 that the present Federal funding pattern for the airport system will continue through FY 89.

Two-thirds of the Federal funding for air-carrier and commuter airports is assigned to air-carrier airports on the basis of annual passenger enplanements. The remaining one-third will be assigned to air-carrier and commuter airports at the discretion of the Secretary of the Department of Transportation. Since for this latter case there is no historical basis for the amount that will be assigned to the SCAG-region airport system, it is assumed that the proportion will remain about the same as when one-third was assigned on the basis of population and geographical area.

The Federal ADAP capital improvement funding available to the SCAG-region airport system shown in Table 6.5-5 reflects these assumptions.

The California Airport Aid Program (CAAP) derives its funds primarily from the tax on aviation fuel used by general aviation aircraft. Because of this, the Division of Aeronautics distributes the funds primarily to airports which provide service to the general aviation sector although there is a mandatory allocation of $5,000 annually to each public airport.

FIVE-YEAR CAPITAL IMPROVEMENT PROGRAMS PROPOSED BY SCAG REGION AIRPORT OPERATORS

BY MAJOR COST CATEGORY FOR FY 1980 THROUGH BY 1984 (DOLLARS)

COUNTY AND AIRPORT	PROJECT COST CATEGORY						FUNDING SOURCE		
	AIRFIELD AREA	PASSENGER TERMINAL AREA	OTHER BUILDING AREA	GROUND ACCESS FACILITIES	LAND ACQUISITION	TOTAL PROJECT COST	ADAP	CAAP	LOCAL
IMPERIAL COUNTY									
Brawley	0	0	330,000	0	0	330,000	0	70,000	260,000
Calexico									
Calipatria Municipal	330,000	152,500	36,100	77,400	0	596,000	0	536,400	59,600
**Imperial County	2,412,000	0	550,000	0	1,744,000	4,706,000	4,235,400	0	470,600
Salton Sea	680,000	0	120,000	0	100,000	900,000	0	0	900,000
County Total	3,422,000	152,500	1,036,100	77,400	1,844,000	6,532,000	4,235,400	606,400	1,690,200
LOS ANGELES COUNTY									
Brackett	1,933,987		650,200	0	0	2,584,187	1,660,247	57,600	866,340
Compton	0		138,000	0	0	138,000	0	0	138,000
El Monte	0	0	1,067,500	0	0	1,067,500	0	0	1,067,500
Fox, Gen. Wm. J.	64,000	0	0	0	0	64,000	0	57,600	6,400
Hawthorne Municipal	0	50,000	0	0	2,987,000	3,037,000	2,573,000	227,000	237,000
**Hollywood-Burbank	4,950,000	162,000	0	100,000	51,000,000	56,212,000	39,569,795	0	16,642,205
**Long Beach (a)	10,190,000	6,300,000	1,500,000	820,000	1,000,000	19,810,000	14,060,000	0	5,750,000
**Los Angeles Int'l.	49,421,000	158,150,000	66,296,000	169,474,000	0	443,341,000	74,338,500	25,000	368,977,500
**Palmdale Int'l.	0	63,330,000	0	0	500,000	63,830,000	0	0	63,830,000
Santa Monica Municipal	67,000	0	0	18,000	0	85,000	68,000	8,000	9,000
Torrance Municipal	1,007,500	1,000,000	283,600	696,000	0	2,987,100	1,026,540	304,650	1,655,910
Van Nuys	3,777,000	0	1,738,000	744,000	0	6,259,000	0	25,000	6,234,000
Whiteman	0	1,122,000	0	0	0	1,122,000	0	0	1,122,000
County Total	71,410,487	230,114,000	71,673,300	171,852,000	55,487,000	600,536,787	133,296,082	704,850	466,535,855
ORANGE COUNTY									
Fullerton	389,000	40,000	788,500	0	0	1,217,500	432,000	627,480	158,020
**Orange County									
County Total	389,000	40,000	788,500	0	0	1,217,500	432,000	627,480	158,020
RIVERSIDE COUNTY									
Banning Municipal	402,000	0	0	0	0	402,000	173,700	181,300	47,000
**Blythe	500,000	0	95,000	0	0	595,000	400,000	0	195,000
Corona Municipal	770,000	200,000	1,340,000	220,000	80,000	2,610,000	765,000	414,000	1,431,000(b
Desert Center	355,000	0	0	0	0	355,000	268,000	18,000	69,000
Hemet-Ryan	1,050,000	120,000	180,000	82,000	0	1,432,000	840,000	0	592,000
**Palm Springs Municipal	450,000	516,000	10,000	0	4,100,000	5,076,000	4,549,500	0	526,500
Riverside Municipal	905,000	0	0	629,000	258,000	1,792,000	1,585,800	24,600	181,600
Thermal	215,000	0	60,000	0	0	275,000	52,000	135,000	88,000
Chiriaco Summit	20,000	0	0	0	0	20,000	0	0	20,000
Moreno Valley	1,035,000	0	90,000	0	525,000	1,650,000	1,248,000	0	402,000
Temecula Area	1,035,000	0	90,000	0	600,000	1,725,000	1,308,000	0	417,000
County Total	6,737,000	836,000	1,865,000	931,000	5,563,000	15,932,000	11,190,000	772,900	3,969,100

table 6.5-3

FIVE-YEAR CAPITAL IMPROVEMENT PROGRAMS PROPOSED BY SCAG REGION AIRPORT OPERATORS

BY MAJOR COST CATEGORY FOR FY 1980 THROUGH FY 1984 (DOLLARS)

COUNTY AND AIRPORT	PROJECT COST CATEGORY						FUNDING SOURCE		
	AIRFIELD AREA	PASSENGER TERMINAL AREA	OTHER BUILDING AREA	GROUND ACCESS FACILITIES	LAND ACQUISITION	TOTAL PROJECT COST	ADAP	CAAP	LOCAL
SAN BERNARDINO COUNTY									
Apple Valley	376,680	0	0	0	577,733	954,413	858,973	0	95,440
Baker	30,000	0	0	0	0	30,000	0	27,000	3,000
Barstow-Daggett	446,115	0	0	0	0	446,115	0	401,504	44,611
Big Bear City	1,303,527	0	0	0	0	1,303,527	1,173,174	0	130,353
Chino	963,500	0	0	0	0	963,500	867,150	0	96,350
Needles Municipal	245,600	0	0	0	0	245,600	221,040	0	24,560
**Ontario Int'l	7,771,000	26,194,000	0	0	0	33,965,000	18,925,250	25,000	15,014,750
Redlands Municipal	52,000	0	0	60,000	0	112,000	0	46,800	65,200
Rialto Municipal	1,800,000	130,000	330,000	0	300,000	2,560,000	1,890,000	0	670,000
Twenty-Nine Palms	89,881	0	0	0	0	89,881	0	80,892	8,989
Trona	15,000	0	0	0	0	15,000	0	13,500	1,500
County Total	13,093,303	26,324,000	330,000	60,000	877,733	40,685,036	23,935,587	594,696	16,154,753
VENTURA COUNTY									
**Ventura Co. Oxnard	559,000	95,000	338,000	0	2,225,000	3,217,000	2,331,000	475,750	410,250
Ventura Co. Camarillo	1,058,000	915,000	300,000	0	0	2,273,000	1,227,400	454,300	591,300
County Total	1,617,000	1,010,000	638,000	0	2,225,000	5,490,000	3,558,400	930,050	1,001,550
SCAG REGION									
Air Carrier Airports	76,253,000	254,747,000	68,789,000	170,394,000	60,569,000	630,752,000	168,409,445	525,750	471,816,805
G. A. Airports	20,415,790	3,729,500	7,541,900	2,526,400	5,427,733	39,641,323	18,238,024	3,710,626	17,692,673
Total	96,668,790	258,476,500	76,330,900	172,920,400	65,996,773	670,393,323	176,647,469	4,236,376	65,509,478

** AIR CARRIER AIRPORTS

(a) PROJECTED IMPROVEMENT PROJECTS REPRESENT UNAPPROVED PLANNING FORECASTS ONLY

(b) PARTLY IS FROM PRIVATE FUND

table 6.5-3

FIVE-YEAR CAPITAL IMPROVEMENT PROGRAMS PROPOSED BY SCAG REGION AIRPORT OPERATORS BY MAJOR COST CATEGORY FOR FY 1985-86 THROUGH FY 1989-90
(Thousands of Dollars)

AIRPORTS	PROJECT COST CATEGORY						FUNDING SOURCE		
	Airfield Area	Passenger Terminal Area	Other Building Area	Ground Access Facilities	Land Acquisition	Total Project Cost	ADAP	CAAP	Local
Banning Municipal	200	0	100	100	0	400	360	20	20
**Blythe	0	0	95	0	0	0	0	0	95
Corona Municipal	600	330	1,640	220	0	2,790	1,206	0	1584*
Desert Center	NO IMPROVEMENTS						0	0	0
Hawthorne Municipal	0	0	0	0	1,698	1,698	1,373	142	183
Hemet-Ryan	0	110	340	0	0	450	0	0	450
**Imperial County						5,000	4,500	0	500
Redlands Municipal	2,500	0	0	0	0	2,500	2,039.75	210.25	250
Reno Valley (proposed)	150	0	90	0	0	240	80	0	160
Rialto Municipal	2,300	0	0	0	0	2,300	2,070	0	230
Santa Monica Municipal	1,000	1,000	0	0	0	2,000	900	110	990
Temecula Area (proposed)	0	0	90	0	0	90	0	0	90
Torrance Municipal	354	548.6	0	0	0	902.6	623.88	96.12	182.6
Ventura Co - Camarillo	250	0	0	0	0	250	225	12.5	12.5
**Ventura Co - Oxnard	250	0	0	0	0	250	225	12.5	12.5

*part of the funds is from private investment
**Air Carrier Airports

table 6.5-4

Preliminary planning within the State Division of Aeronautics indicates that approximately $3.0 million will be available for distribution to the California airports annually for capital improvements in FY 79. The available funds will drop to $1.0 million in FY 83. The SCAG region, from consideration of numbers of airports and airport activity, is entitled to approximately one-half of the California funding. The State CAAP capital improvement funding available to the SCAG region airport system shown in Table 6.5-5 is based on obtaining one-half of these funds.

It should be noted that the $101,776,000 in ADAP funds estimated to be available in FY 80-84 for air carrier airports will not cover the planned need of $158,409,445 (shown in Table 6.5-3). Nor will the $16,249,000 in ADAP funds estimated to be available for the same period cover the $18,238,024 shown as required for general aviation airports.

The $3,900,000 in CAAP funds estimated to be available in FY 80-84 will not cover the planned need of $4,236,376 for the regional airport system.

SCAG REGION AIRPORT SYSTEM
CAPITAL IMPROVEMENT FUNDING AID FORECAST
(THOUSANDS OF DOLLARS)

	FY 1980	FY 1981	FY 1982	FY 1983	FY 1984	TOTAL FY 1980-1984	TOTAL FY 1985-1989
Federal (ADAP)							
Aircarrier/Commuter	18,274	19,315	20,355	21,396	22,436	101,776	127,788
General Aviation	2,937	3,094	3,250	3,406	3,562	16,249	20,154
State (CAAP)	1,200	1,000	700	500	500	3,900	2,500

table 6.5-5

nonmotorized

6.6

6.6
NON-MOTORIZED

6.6.1
Setting

Non-motorized transportation includes all modes of travel that use human energy directly for propulsion. Bicycling and walking are the most common examples.

In the SCAG region each county has developed and adopted county wide plans for bikeways and related bicycle facilities. In conjunction with the counties, nearly 80% of the cities in the region have developed local plans for the same type of facilities interconnected and coordinated with the county facilities. For the most part, the plans include extensive networks of bike paths and describe projects being implemented progressively, using available funding to extend the basic system. Maps and material showing routes, convenience data and other physical information are available from the individual counties and cities. In addition, Caltrans has developed an extensive network of state bikeway routes on state highways throughout the state highway system with specific regional maps and convenience data available from Caltrans District Offices. They also provide standards and guidelines for facility design, operational use, safety and traffic practices. These city, county and state plans have been serving the cyclist adequately and, to date, a regional plan for bicycles, or non-motorized transportation, has not been developed by SCAG.

Plans for pedestrian facilities have not been developed in general practice as separately identifiable programs. These facilities are usually implemented and funded as part of local plans for traffic and street/highway development at city and county levels. As such, they are consistent within themselves and no regional plans have been developed or considered necessary. Regional level coordination of pedestrian facilities has been primarily for the administration of SB-821 funds which includes regional policies for pedestrian and physically handicapped and elderly needs in project application and A-95 review. Encouraging pedestrian facility coordination is exemplified by the City of Los Angeles's expanding pedway system in downtown Los Angeles.

6.6.2
Relation to Issues and Objectives

The use of non-motorized means of travel is most closely related to the air quality and energy conservation issues and objectives for the region. Neither walking nor bicycle riding burns fuel or emits pollutants which deteriorate air quality. The bicycle can be used effectively as an alternate means of transportation for many short trips made by the automobile. Every trip that can be made by this means instead of the automobile directly reduces vehicle miles of travel and emissions to the atmosphere. Currently, bicycle use is predominantly for recreational purposes although its use for work trips, shopping trips, and other errands is growing. Data on these uses is not readily available. Although the reduction in automobile use expected from bicycle travel is small, it does make a positive contribution. The use of the bicycle should be encouraged as much as possible by regional policies and actions.

6.6.3
Actions

County and city plans for bicycle and pedestrian facilities are consistent within the region and they adhere to Federal and State safety and design standards. Implementation and schedules of action are determined by local agencies. Coordination of these plans is provided by SCAG, as needed. The administration of SB 821 funds and the review process for A-95 and the Transportation Improvement Program (TIP) are continuing functions. Actions to encourage more bicycle use will be continued.

1. SCAG will coordinate bicycle planning, implementation, and safety programs among all participants in the transportation planning process.

2. SCAG and the CTCs will encourage cities and counties to use available SB 821 bicycle and pedestrian facilities funds in support of projects which discourage auto use.

3. SCAG will seek increased funding, from private, local, state and federal sources, for bicycle and pedestrian facilities, through its legislature/administrative advocacy program.

4. SCAG, the CTCs, and Caltrans will encourage and support promotional programs to increase the provision for and use of bicycle and pedestrian facilities.

5. SCAG will encourage cities and counties to consider amending zoning, subdivision and building ordinances to require the provision of bikepaths, over-crossings and pedways, bike racks and other facilities to encourage walking and bicycle riding.

SB 821 BICYCLE AND PEDESTRIAN FACILITIES FUND ALLOCATIONS

COUNTY	PROJECT TYPE	FY 1976	FY 1977	FY 1978
Imperial	Bicycle	15,264	21,308	13,753
	Pedestrian	---	---	6,900
	Total	15,264	21,308	20,653
Los Angeles	Bicycle	1,196,172	1,179,506	1,260,611*
	Pedestrian	213,943	198,326	247,263
	Total	1,410,115	1,377,832	1,507,874
Orange	Bicycle	292,324	383,216	370,707
	Pedestrian	7,273	42,468	49,146
	Total	299,597	425,684	419,853
Riverside	Bicycle	82,114	92,111	110,978
	Pedestrian	---	---	---
	Total	82,114	92,111	110,978
San Bernardino	Bicycle	65,714	62,382	44,802
	Pedestrian	38,059	45,375	80,969
	Total	103,773	107,757	125,771**
Ventura	Bicycle	60,870	77,331	55,225
	Pedestrian	1,600	---	22,000
	Total	62,470	77,331	77,225
TOTAL SCAG REGION	Bicycle	1,712,458 (87%)	1,815,854 (86%)	1,856,076 (82%)
	Pedestrian	260,875 (13%)	286,169 (14%)	406,278 (18%)
	Total	1,973,333 (100%)	2,102,023 (100%)	2,262,354 (100%)

*Unallocated funds included in Bikeway expenditures in County of L.A.

**$6,965 unallocated in San Bernardino County.

table 6.6-1

maritime, railroads

6.7

6.7
MARITIME AND RAILROADS

Maritime transport in the region is almost wholly concerned with worldwide freight movement. Since the majority of world trade is conducted by ship, the ports play a vital role for commercial, industrial and residential interests. The Los Angeles Customs District comprises the ports of Long Beach, Los Angeles and Port Hueneme. The District handled $14.5 billion worth of trade in 1974 -- 39% of the total trade at all West Coast ports.

The operation of the region's ports concerns an area much greater than the SCAG region. The Los Angeles Customs District serves a market area encompassing the southern portion of California as well as all or part of seven other Western states, and products imported here are shipped throughout the country. Thus the region's ports are of national significance.

The SCAG Region is served by three major railroad companies: The Southern Pacific, the Union Pacific and the Atchison, Topeka and Santa Fe. It is by far the busiest rail market in the Western United States. 21% of all goods produced in the SCAG Region for shipment to U.S. markets are transported by rail.

A study of passenger rail feasibility was conducted recently for the San Diego-Los Angeles Corridor Study. The Study found that, with only minor improvements, existing rights-of-way could provide reliable, frequent and environmentally acceptable inter-regional passenger transport in that corridor. In February 1978, additional commuter rail service was instituted in the Los Angeles-San Diego Corridor, jointly funded by Los Angeles County, Caltrans, and AMTRAK.

Actions

1. SCAG should take a more active role in regard to review of individual projects of regional significance at the Ports through 1) increased direct contact and communication with Harbor Commissioners and local Harbor Districts and 2) a strengthened EIR review process.

2. Continue to implement recommendations from the San Diego-Los Angeles Corridor Study as outlined. These recommended actions are:

   Short-Range

   - Inaugurate weekend express service between Los Angeles and San Diego.

   - Decrease trip time between Los Angeles and San Diego to two hours, twenty minutes (two hours, five minutes for express runs). This can be accomplished with the following improvements:

   - Install fencing along 12.2 miles of track in the areas of Fullerton, Orange, Santa Ana, and San Clemente.

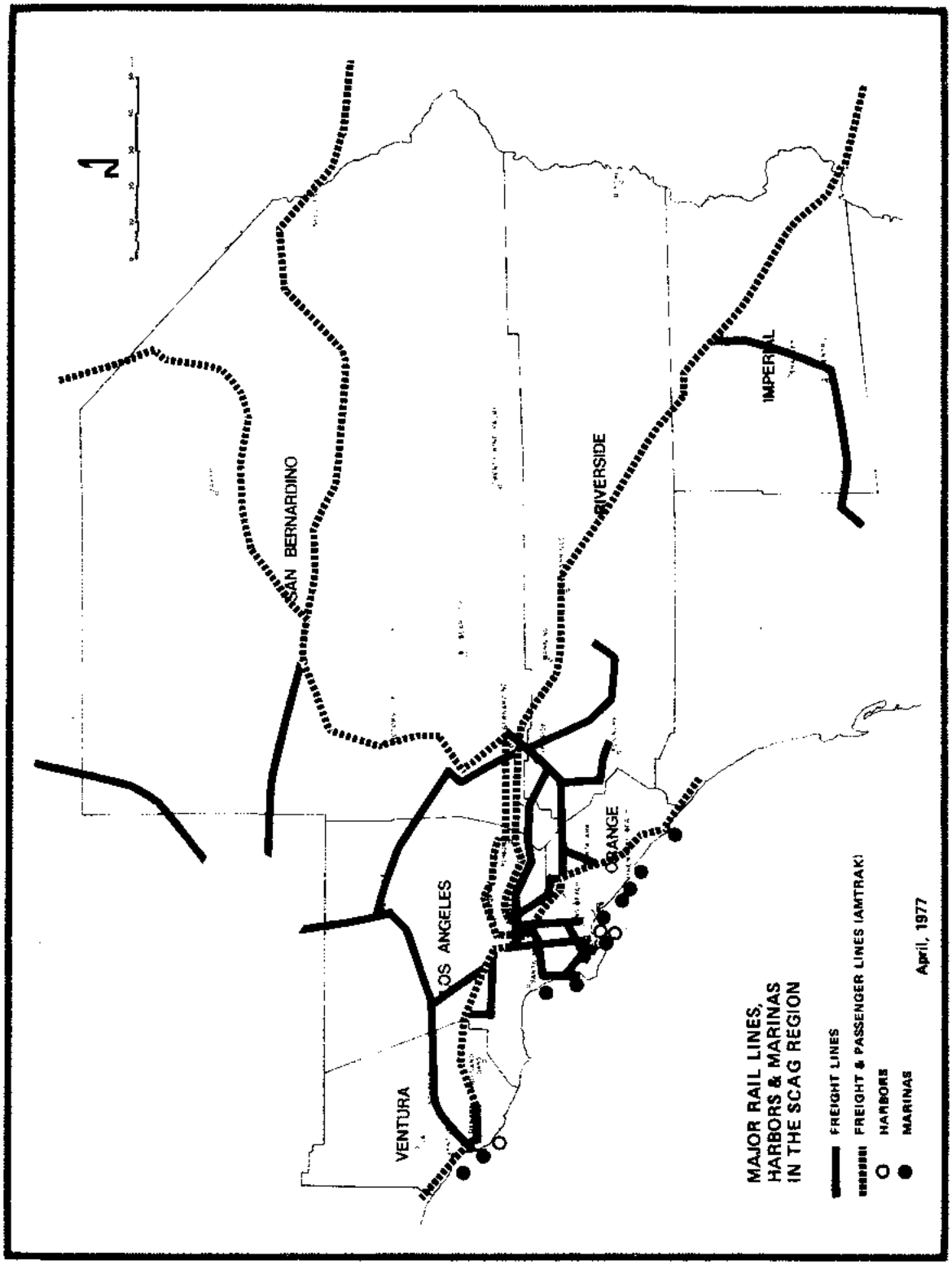

N
SAN BERNARDINO
RIVERSIDE
IMPERIAL
LOS ANGELES
ORANGE
VENTURA
MAJOR RAIL LINES,
HARBORS & MARINAS
IN THE SCAG REGION
FREIGHT LINES
FREIGHT & PASSENGER LINES (AMTRAK)
HARBORS
MARINAS
April, 1977

figure 6.7-1

- Upgrade 3.3 miles of track, ties, and ballast.

- Install automomatic gates at three grade crossings to increase safety in Santa Fe Springs, Fullerton, and San Clemente.

- Adjust 15 double-track and 23 single-track circuits to automatic gates at grade crossings.

- Legislatively authorize demonstration programs for inter-city rail improvements.

Medium Range

- Inaugurate daily express service between Los Angeles and San Diego.

- Increase super-elevations on three curves in the Santa Fe Springs area, and two curves in the San Juan Capistrano area to ease curves and increase speed limits.

- Decrease trip time to two hours, fifteen minutes (two hours for express runs).

- Refurbish and upgrade the existing station at Fullerton, in conjunction with the multi-modal station development at that site.

- Construct new stations at San Clemente and Anaheim Stadium, subject to local site selection and detailed project planning.

3. SCAG should support other attempts to utilize existing rail facilities for passenger (commuter) operations.

4. The SCAQMD should develop appropriate rules requiring marine diesel engine manufacturers and operators to install fuel injection timing systems.

5. SCAG will seek federal/state/private sector financial support of feasibility studies for the electrification of railroad switching yards and all operations, if appropriate, or other equivalent emission reduction measures.

6. SCAG will seek commitments from the major railroad companies owning/operating classification/switching yards at Colton, East L.A. (Hobart Yard), South Central L.A. (Watson Yard) and the Harbor Service Railway at Port Hueneme, Long Beach, and Port of L.A. to convert those yards to electric power pending the results of detailed feasibility studies.

7. The SCAQMD should develop appropriate regulations requiring marine operators to control organic emissions released during in-harbor and dockside transfer of petroleum products through appropriate vapor recovery systems.

finance

7.0

7.0 FINANCE

I. Introduction

This element presents the financial data associated with the Regional Transportation Plan. It projects future revenues for transportation; it also indicates costs of transportation proposals including new recommendations for transportation control measures, construction of the Regional Transit Development Program, and Ridesharing.

Projected revenues will fund a substantial portion of the plan; some system facility improvements in both transit and highways will be possible without tax increases. However, a comparison of costs and projected revenues over a 10 year time period shows that there is an unfunded deficit if the plan is to be fully implemented in that time period. A series of recommendations are made in order to fund all portions of the plan.

The detailed financial information is presented for two time periods: FY 79-83 and FY 84-88. The information is also given by major mode/facility (highways, transit, streets and roads and airports.) A breakdown of the funded dollar amounts are shown by mode or facility categories. Special attention is given to the transportation control measures being recommended in this amendment.

Figure 7-1 illustrates costs and revenues for the Regional Transportation Plan; public sector costs and revenues for system maintenance, system development, and air quality mobile source control are joined with private sector mobile source control measure costs. Projected public sector revenues of $15.5 billion dollars from existing sources will fund neither all of the system maintenance and development costs of $19.7 billion nor $1.2 billion in costs projected for public sector transportation control measures. In all, the public sector faces unfunded costs of $4.4 billion for system development and maintenance, and $1.0 billion for mobile source control measures. An additional $2.3 billion in mobile source measure cost is assumed to be borne by the private sector.

This deficit may be somewhat overstated for two reasons. First, it is assumed that the planned improvements are to be completed within the ten year period. As implementation is delayed, costs will rise but additional revenues will also become available. Second, the region is entitled to a large sum of UMTA Section 3 funds for the Regional Transit Development Program. However, since these revenues are discretionary it is somewhat misleading to include them as available revenues. Therefore Section 3 funds are excluded from available revenues, but are treated in more detail as a funding source later in this chapter.

FIGURE 7-1

COSTS AND REVENUES FOR REGIONAL TRANSPORTATION
MAINTENANCE, DEVELOPMENT AND AIR QUALITY CONTROL MEASURES
fy 1979-1988

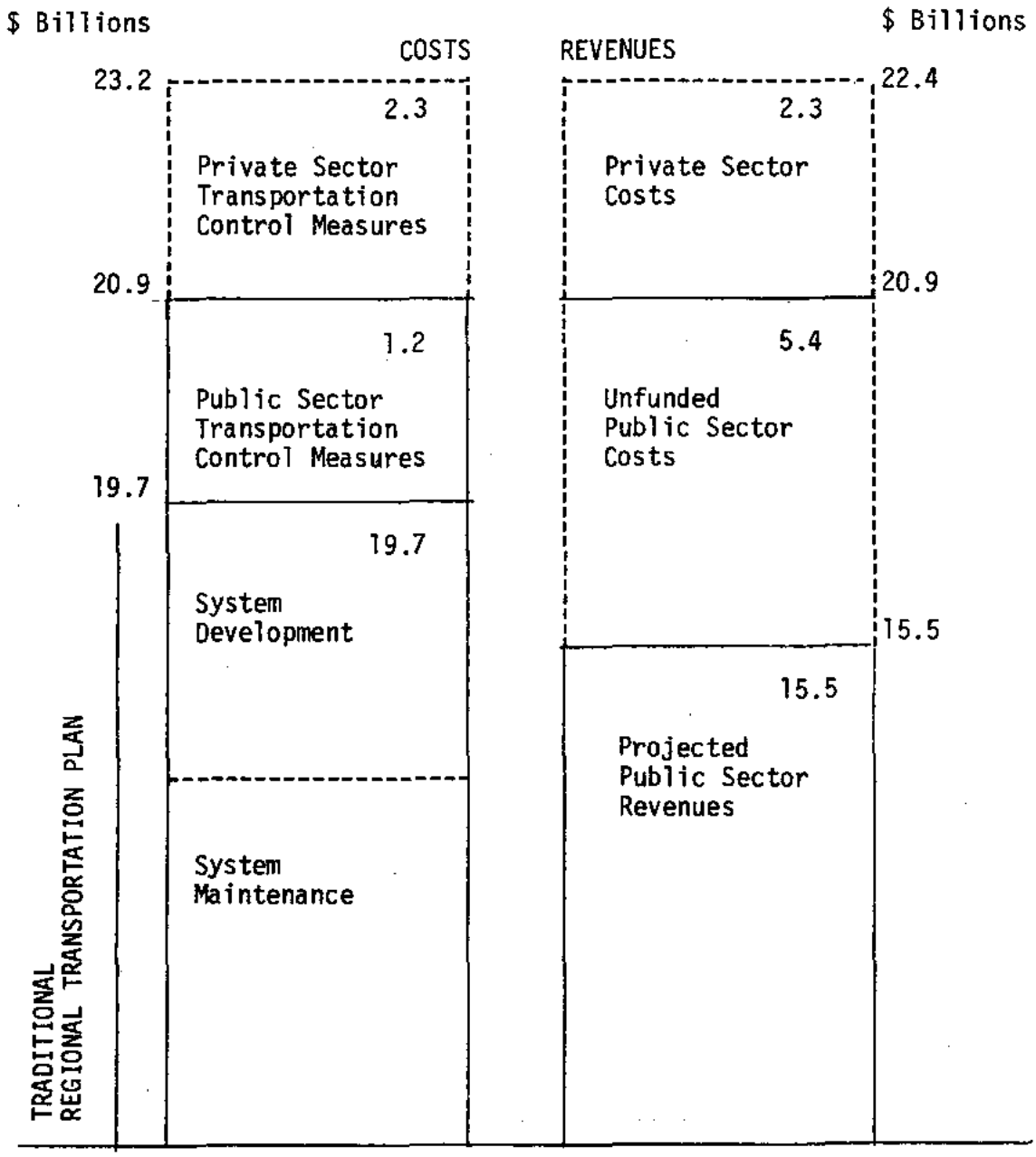


figure 7-1

There are alternatives methods to fund the public sector deficit. New sources of revenues are briefly discussed and the required amounts shown. A second approach is to achieve a greater return of the region's highway user tax dollar and the federal tax dollar being used for transit.

It is recommended that: (1) the percentage of regionally collected highway user revenues returned to the region be increased from 55% to 70%-75%. This would return approximately one billion additional dollars to the region by 1988; (2) 10%-15% of the national allocation of UMTA Section 3 funds (for transit capital) be allocated to the region during the ten-year period.

The second major recommendation is to index the state gasoline tax in the SCAG region so that revenues keep pace with rising costs.

A third alternative was also considered. This was to have reprogramming of funds from one plan proposal to another. This may be necessary to fund high priority items such as air quality projects. However, it does not provide a greater total amount of revenue which is what is needed if the Regional Transportation Plan is to be fully implemented.

There are additional policies that relate to greater financial flexibility in the use of transportation funds by local government. These are already a part of the Regional Transportation Plan.

The remainder of the financial element is broken into the following sections. Section II details the costs and revenues for transportation system maintenance and development. Section III deals with financial data for transportation control measures. Section IV elaborates on the funding strategies mentioned above. Section V presents the recommended financial actions.

II. System Maintenance and Development Costs and Revenues

Table 1 outlines total revenues projected to be available in the region for transportation purposes during the ten-year period. $6.1 billion is available for transit expenditure, $3.2 billion for highway expenditure, $4.9 billion for street and road expenditure, and $695 million for airport expenditures. An additional $600 million in State Proposition 5 gas tax and TDA funds has not been alloted to any mode. (A list of major assumptions used to develop these figures, as well as those in Table 7-2, can be found in Appendix I.) Several funding sources may, by law, be expended in more than one modal area. This results in some funding sources which are split into more than one mode (i.e., Federal Aid Urban). The distribution of revenues in Table 7-1 assumes that historical modal distribution of most revenues will be continued into the future.

Among funds allocated to transit, UMTA Section 5 revenues are projected to increase by over 30% as a result of newly enacted transit legislation (HB1738). A similar increase is projected after FY 1983. UMTA Section 3 funds are shown to decline during the second five year period. However, Section 3 funds which may be available pending approval of portions of the Regional Transportation Development Plan are excluded from

Table 7-1

Existing Transportation
Revenues Projected Through Fiscal Year 1988
(Escalated $ Millions)

		FY 1979	FY 1979-1983	FY 1984-1988	FY 1979-1988	Alternative Modal Uses
(1)	TRANSIT					
(2)	UMTA Section 3	$ 52	$ 406	$ 251	$ 657	
(3)	UMTA Section 5	97	450	607	1057	
(4)	Federal Aid Urban	1	15	15	30	Highways, Streets & Roads
(5)	TDA (1/4¢ Sales Tax)	111	625	893	1518	Streets and Roads
(6)	FARES	102	557	1105	1662	
(7)	Miscellaneous	43	262	360	622	
(8)	Article 19-Gas Tax	-	0	44	44	
(9)	Federal Aid Interstate	-	26	472	498	
	TOTAL	$ 406	$ 2341	$ 3747	$ 6088	
	HIGHWAYS					
(10)	Federal Aid Interstate *	83	469	448	919	Transit Guideway
(11)	Federal Aid Primary *	40	189	182	371	
(12)	Federal Aid Urban*	10	45	45	90	Transit, Streets & Roads
(13)	Federal Aid, Other*	4	32	52	84	
(14)	Article 19-Gas Tax to State Highways	231	819	871	1690	Transit Guideway
	TOTAL	$ 212	$ 1554	$ 1598	$ 3152	
	STREETS AND ROADS					
(15)	Federal Aid Urban	38	190	190	380	Transit,Highways
(16)	Federal Aid Other	17	110	170	280	
(17)	Article 19-Gas Tax to Cities and Counties	180	900	900	1800	Transit Guideway
(18)	TDA (¼¢ Sales Tax)	10	90	140	230	Transit
(19)	Local	224	1125	1125	2250	
	TOTAL	$ 469	$ 2415	$ 2525	$ 4940	
	AIRPORTS					
(20)	Airport Development Aid Program	19	190	NA	190+	
(21)	California Airport Aid Program	2	5	NA	5+	
	Local	9	500	NA	500+	
	TOTAL	$ 30	$ 695	$ NA	$ 695+	
(22)	TDA Available for Further Development	$ -	$ 156	$ 320	$ 476	Transit Streets & Roads
(23)	State Article XIX-Prop. 5	-	65	80	145	Transit Guideway, Highways
	GRAND TOTAL	$ 1117	$ 7226	$ 9270	$15,496	

* For capital expenditure only.

table 7-1

the totals in Table 7-1. Since this is a discretionary program, it would be misleading to include grants which may or may not occur in the future. A more thorough treatment of UMTA Section 3 funds may be found in Section III.

The treatment of TDA funds requires some detailed explanation. TDA funds can be used for a variety of transportation activities. Forecasts of total TDA revenues were provided by the UCLA Business Forecasting Project. Based on a number of assumptions (see Appendix J), the TDA amount needed to maintain existing levels of transit service is projected at $1.5 billion. This is shown in row 5.

Based on historical data, 10% of TDA funds are projected for street and road use. The remainder of TDA funds (row 22) are shown as available for system development. In other words these funds could be used for either street and road development, or transit capital and operational needs. A weakness of this projection is that the analysis of TDA fund availability was done on a region-wide, rather than county by county, basis. It is difficult to predict how much of these remaining funds will be used for transit, and what portion would be committed to streets and roads.

Because of this ambiguity, further county by county analysis will be undertaken in the future which will help to clarify what portion of TDA funds will likely be eligible for each modal use. Of course, any future decision on the distribution of TDA funds will be contingent upon unmet needs hearings and actions by the county transportation commissions, IVAG, VCAG, and SCAG.

Fares and miscellaneous revenues are expected to grow as a function of increased operating expenditures.

Highway revenue projections, based on fund estimates from Caltrans, show a slight increase in federal funds coupled with a small decline in state gas tax funds. As can be seen in Table 7-1, Federal Aid Interstate funds are allocated both to transit and highways. Analysis done for this chapter suggests that currently planned Interstate highway gaps, missing links, and widenings (e.g. I-105 and I-15) will require approximately $750 million of FAI funds during the ten year period. Remaining Interstate funds of $498 million will be available for freeway transit guideway. $44 million in state gas tax revenue will be needed to match these FAI funds.

Federal aid to streets and roads is expected to grow slightly, but the two major sources of street and road revenue, the gas tax and local support, are assumed to remain relatively constant. Airport funding is based on plans submitted to SCAG by regional airports operators.

Finally, in the last row of Table 7-1 is an entry for State Article XIX Proposition 5 - Gas Tax, based on an estimate provided by Caltrans. These Proposition 5 funds are listed separately because, to date, they have not been expended for construction. Because use of this revenue for transit requires a policy decision, it is considered separately.

Table 7-2

Funded and Unfunded Costs
Transportation System Maintenance and Development
(escalated $ Millions)

	FUNDED			UNFUNDED			TOTAL COSTS		
	Fiscal Years			Fiscal Years			Fiscal Years		
	1979-1983	1984-1988	1979-1988	1979-1983	1984-1988	1979-1988	1979-1983	1984-1988	1979-1988
TRANSIT									
Operations, Short-Range Transit Plans	$1742	$2560	$4302	$ 0	$ 0	$ 0	$1742	$2560	$4302
Capital, Short-Range Transit Plans	437	358	795	0	0	0	437	358	795
Wilshire Rail Line-RTDP Element IV	20	106	126	1145	575	1720	1165	681	1845
L.A. Downtown People Mover - RTDP Element III	141	41	182	33	0	34	174	41	215
Freeway Transit - RTDP Element II	1	532	533	0	66	66	1	598	599
Santa Ana Corridor	0	0	0	0	331	331	0	331	331
TOTAL TRANSIT	2341	3597	5938	1178	972	2150	3519	4569	8088
HIGHWAYS									
Non-Capital Capital	731	814	1545	0	62	62	731	876	1607
*Operational Improvements									
- Metered Freeway Ramps*	10	14	24	0	0	0	10	14	24
- Other	147	133	280	0	0	0	147	133	280
*Rehabilitation	133	122	255	0	0	0	133	122	255
*New Facilities	521	485	1006	488	874	1362	1009	1359	2368
- Missing links, gaps, widenings*							1009	1268	2277
- Congestion relief widenings*							0	91	91
TOTAL HIGHWAYS	1542	1568	3110	488	936	1424	2030	2504	4534
RIDESHARE									
Metered Ramp Bypasses*	5	18	23	0	0	0	5	18	23
TOTAL RIDESHARE	5	18	23	0	0	0	5	18	23
STREETS AND ROADS									
Maintenance & Administration	1680	2165	3845	0	301	301	1680	2456	4146
Capital	722	348	1071	191	968	1158	913	1316	2229
TOTAL STREETS & ROADS	2402	2513	4915	191	1269	1460	2593	3782	6375
AIRPORTS									
Capital	695	NA	695+	0	NA	0+	695	NA	695+
TDA AVAILABLE FOR FURTHER DEVELOPMENT	139	293	432	(139)	(293)	(432)	-	-	-
STATE ARTICLE 19 PROPOSITION 5	65	80	145	(65)	(80)	(145)	-	-	-
GRAND TOTAL	7189	8069	15,258	1653	2804	4457	8842	10,873	19,715

* Capital Cost Only

Table 7-2 divides escalated costs for transportation system maintenance and development into funded and unfunded portions. Projected expenditures, escalated at 8% annually, are assumed to be completed no later than fiscal year 1988. Obviously, if some expenditures are delayed until after 1988, lower unfunded amounts during the ten year period will result. However, delaying strategies have historically, during times of high inflation, resulted in less real purchasing power. This problem will be exacerbated in the future if revenue increases fail to keep pace with cost increases.

Following is a discussion of the financial implications, by mode, of the figures presented in Table 2.

TRANSIT

The Regional Transportation Plan calls for maintenance and operation of the current transit system, coupled with expansion of service via the feasible Regional Transportation Development Program elements. As a result of Proposition 13, bus fleet expansion is likely to be curtailed. The RTDP, as mentioned in a previous chapter, is now being examined in terms of both a full program and a staged, currently implementable plan.

Transit expenditures for the FY 1979-1983 period are modified from Short-Range Transit Plans (SRTPs) submitted by regional operators prior to passage of Proposition 13. These SRTPs envisioned bus fleet expansion of 450 buses during the five year period, largely in Orange County. It has been assumed that, as a result of Proposition 13, no expansion will occur. Projected costs have been reduced accordingly. Bus expansion is nonetheless a goal of the RTP. Costs for this measure are included in Table 7-3 as an air quality measure.

The costs for elements II, III and IV of the feasible Regional Transit Develop Program are also shown in Table 7-2. Revenues for these three elements fall short of costs by about $2 billion.
However, this phase is fundable contingent upon:

1. UMTA approval of projects and receipt of UMTA Section 3 funds,

2. Use of all available Proposition 5 funds for RTDP projects

Also included in Table 7-2 is the cost of the Santa Ana Corridor transit developments, approximately $300 million.

HIGHWAYS

Highway revenues are projected to remain virtually constant over the ten year period. This is primarily the result of increasingly strict vehicle mileage standards coupled with increased travel. It means that non-capital costs (primarily maintenance and administration), which are rapidly growing, will require a larger portion of the total revenues. Therefore, the portion of highway revenues available for new facilities will diminish.

Highway new facility costs reflect construction of the full highway system (Table 6.4-3) by FY 1988. New facility costs for the 1987 feasible system would be approximately $1.0 billion less. Until regional prioritization of highway projects is undertaken, it will not be possible to determine which projects are unfunded.

By the mid-1980s, non-capital costs may exceed state highway user revenues. Current federal law precludes the use of almost all federal funds for non-capital expenditures. This means that regardless of non-capital needs non-capital expenditures will be fixed, constrained by the amount of state gas tax funds. It is assumed in Table 7-2 that enough state funds will be retained to match federal capital funds. However, this creates a rather anomalous situation in which continued new facility construction occurs despite inadequate maintenance funding.

Although it is assumed for the purpose of analysis that capital expenditure will continue despite inadequate maintenance funding, it is not clear that this is the policy of the state. Conceivably all state funds will be used for maintenance. This is an unresolved issue with possible major ramifications for the region. Staff will continue to study this issue.

There are at least two possible solutions to this problem. The first is legislation enabling states to use all federal dollars for non-capital purposes. But, this solution merely delays the inevitable. By 1990 all projected highway revenues may be needed to cover non-capital expenditures.

A second solution is to generate new revenue. For example, a regionally indexed gasoline tax would provide approximately $1.6 billion. This strategy is discussed in more detail in Section IV.

STREETS AND ROADS

Total maintenance, administration, and capital needs for streets and roads are projected to be underfunded by $1.5 billion during the ten year period. Most of the problems occur during the second five year period, when unfunded maintenance and administration costs total $300 million, and unfunded capital costs total $1.2 billion.

Once again, it is assumed that sufficient funds will be retained to match federal capital dollars. This explains the $300 million maintenance and administration deficit during the period fiscal year 1984-1988.

Tabl[redacted]-3

Funded and Unfunded Costs: Mobile Source Control Measures
(escalated $ Millions)

	Measure Number		FUNDING SOURCE	FUNDED Fiscal Years 1979-1983	FUNDED 1984-1988	FUNDED 1979-1988	UNFUNDED Fiscal Years 1979-1983	UNFUNDED 1984-1988	UNFUNDED 1979-1988	TOTAL COSTS Fiscal Years 1979-1983	TOTAL COSTS 1984-1988	TOTAL COSTS 1979-1988
		PUBLIC SECTOR DIRECT COSTS										
(1)	H-11	Electrify Rail Yards*		$ 0	$ 0	$ 0	$ 0	$ 14	$ 14	$ 0	$ 14	$ 14
(2)	H-13	Trip Reduction Program		0	0	0	24	43	67	24	43	67
(3)	H-23	Increase Bicycle & Pedestrian Facilities	TDA	17	27	44	53	85	138	70	112	182
(4)	H-25	Reduce Jet Aircraft Queuing Delays		0	0	0	4	13	17	4	13	17
	H-34	Rideshare Program										
(5)		• Park-n-Pool Lots		0	0	0	1	1	2	1	1	2
(6)		• Employer/Commuter Computer Matching, Promotion, Administration*	FAU, Highway User Revenues	1	2	3	14	42	56	15	44	59
(7)	H-35	Traffic Signal Synchronization	Highway User Rev.	19	22	41	57	114	171	76	136	212
(8)	H-36	Voluntary Retirement of Old Cars		0	0	0	75	142	217	75	142	217
(9)	H-62	Marine Vapor Recovery Operations*		0	0	0	0	25	25	0	25	25
(10)	H-89	Transit Improvements	Fares	0	150	150	0	590	590	0	740	740
	H-113	Purchase of Gov't Cars for Low Emission and high Fuel Economy			Undetermined							
	H-114	Reg. Prgm. of Insp/Maint for Gov't Veh (Discounts Impact of H-18)			Undetermined							
	H-118	Non-Recurrent Congestion Relief			Savings							
		TOTAL PUBLIC SECTOR		$ 37	$ 201	$ 238	$ 228	$ 1069	$ 1297	$ 265	$ 1270	$ 1535
(11)		PRIVATE/HOUSEHOLD SECTOR DIRECT COSTS										
	H-1	Increased Air Passenger Load Factor			Savings							
	H-2	Jet Aircraft Ground Taxi Operation			Savings							
	H-3	Triple Trailer Trucking			Savings							
	H-4	Modified Work Schedules			Savings							
	H-5	Carpool Preferential Parking			No Direct Cost							
	H-6	New General Aviation Aircraft Engine Controls								$ 2	$ 17	$ 19
	H-7	Emissions Standards for New Non-Farm Heavy-Duty Off-Road Vehicles								0	13	13
	H-11	Electrify Rail Yards*								0	14	14
	H-15	Emissions Standards for New Farm Equipment								0	12	12
	H-16	Modify Jet Aircraft Engines: Proposed 1978 Standards								0	156	156
	H-18	Inspection & Maint. of Light-Duty Vehicles								361	887	1248
	H-24	Improved Emission Controls for Motor Vehicles								0	401	401
	H-34	Rideshare Program*								31	92	123
	H-60	Electric Vehicles								0	217	217
(12)	H-62	Marine Vapor Recovery Operations*								0	27	27
	H-72	Improved Trucking Efficiency			Undetermined					0	29	29
(13)	N-13	Marine Diesel Engine Controls										
		TOTAL PRIVATE/HOUSEHOLD SECTOR								$ 394	$1,865	$2,259

* Denotes a tactic which is assumed to be funded jointly by the public and private sectors.

Revised 1/25/79

table 7-3

III. MOBILE SOURCE CONTROL MEASURES

Mobile source transportation control measures are being recommended in the Air Quality Management Plan for the South Coast Air Basin. They are being highlighted here because of their importance in making funding decisions. Table 7-3 shows escalated mobile source measure costs over two five-year periods, FY 1979 through FY 1983, and FY 1984 through FY 1988. It should be noted that costs for several measures -- freeway transit and carpool lanes (H-85), the Wilshire rail line (H-86), the Los Angeles Downtown People Mover (H-87), and Congestion Relief Freeway Widenings (H-88) -- have already been accounted for in Table 7-2 as system development costs.

The escalated costs for most of the measures in Table 7-3 were developed by:

(1) Dividing current capital costs by the number of years between the beginning of implementation (from Table 5.1-1) and fiscal year 1988, and

(2) Adding that figure to annual operating and maintenance costs, and finally,

(3) Escalating this figure yearly by 8%.

Total public sector costs were broken into funded and unfunded categories. The source of funding for the four partially funded measures -- Increased Bicycle and Pedestrian Facilities (H-23), Rideshare Program (H-34), Traffic Signal Synchronization (H-35), and Transit Improvements (H-89) -- is given in the first column.

Over the ten year period, public sector mobile source control measures costs are projected to total $1.5 billion. However, costs for electrification of rail yards (H-11), reduction of jet aircraft queueing delays (H-25), voluntary retirement of old cars (H-36), and marine vapor recovery operations (H-62), are not traditionally viewed as public transportation costs. Therefore, after deducting costs for these measures, a total of $1.2 billion is charged to the RTP for mobile source control measures. Approximately $1.0 billion of this cost is unfunded. Partially because transit improvements are scheduled to begin at the onset of the second five-year period, over 80% of the unfunded public sector expenditures will be necessary after FY 1983. Approximately 80% of the $2.3 billion private sector costs are called for after FY 1983.

IV. FUNDING STRATEGIES

As the previous section has shown there is a substantial unfunded public sector portion of the plan recommendations. This is exacerbated by the addition of the transportation control measures for air quality. These measures are to be given priority for implementation according to the Clean Air Act. Thus, unless additional funding is developed, difficult trade-off decisions will be needed to implement the required air quality transportation control measures.

Three approaches have been considered in accomplishing the plan's proposals.

(A) Reprogramming of projected transportation revenues to the most cost effective measures.

(B) Reallocation of existing state and federal revenues so that the portion of these revenues allocated to the SCAG region is increased.

(C) Generation of new funding sources or increases in current tax rates.

A. Reprogramming

The aim of the reprogramming strategy would be to transfer funds earmarked for system development expenditure in one mode to expenditure for either system development in a different mode, or mobile source control measures. Reprogramming might also be referred to as reprioritization, since no new funds would be made available by this strategy.

How could funds be reprogrammed? Table 7-4 is a rough guide to those funds that may be used for multiple transportation purposes. There is enough flexibility among these sources to allow for a degree of reprogramming. For example, high occupancy vehicle lanes could be funded with Federal Aid Interstate or state gas tax monies assumed to be programmed for new highway facilities. Proposition 5 (state gas tax) funds could be employed to finance a portion of the mass rapid transit starter line or the downtown people mover. Federal Aid Urban dollars could be shifted from transit, or street and road capital uses to expenditure for highway capital projects.

Among transportation control measures, it appears at this time that transit improvements, traffic signal synchronization, the Rideshare Program, and increased bicycle and pedestrian facilities could be financed with TDA funds. Traffic signal synchronization, transit improvements, the Rideshare Program, and bicycle and pedestrian facilities would be eligible for highway user funds. Use of TDA funds for purposes other than transit capital and operations would be highly questionable in the areas served by the transit districts.

The reprogramming funding strategy is not recommended at this time because it would require a reduction in planned expenditure for regional

transportation maintenance and development. If, however, other funding strategies fail it may become necessary to use reprogramming as a method for funding.

B. Reallocation

Table 7-5 shows three existing sources of revenue - highway user funds, UMTA Section 3 and state sales tax - from which the SCAG region might reasonably expect a greater allocation. The first, increased state highway capital expenditure, is based on the expectation that the SCAG region should receive an increased percentage of state and federal highway capital expenditures.

For example, a SCAG document entitled State Highway Expenditures, 1967-1976 states that during that ten year period the SCAG region provided 50% of all highway user revenues collected in the state. During the same period only 40% of highway capital expenditures statewide, and 30% of highway maintenance expenditures were made in the SCAG region. Had the region received 50% of statewide capital expenditures alone, an additional $700 million would have been expended in the region.

Perhaps it is clearer to state the concept of fair share in terms of the percentage of tax dollars returned to the region.

Currently, approximately 55 cents of each highway user tax dollar collected in the SCAG region is spent here. As Table 7-5 illustrates, increasing this return to 75 cents would result in more than one billion dollars of additional expenditures in the region between now and 1988.

Such an increased return would require not only a reallocation of funds within the state, but also an increased return of highway user revenues to the state for the federal government. Approximately 75% of all highway user revenues generated in the state are currently returned. This policy would require a return of about 95% to the state.

UMTA Section 3 is a federal program which provides discretionary funds for transit capital projects on an 80/20 matching basis. The figures in Table 5 assume that those transit capital projects eligible for UMTA Section 3 funds will be funded at the 80% level. An allocation of Section 3 funds at the level specified in Table 7-5 would require that 10-15% of all UMTA funds distributed nationwide during that time period be allocated to the SCAG region.

Sales tax revenues could be reallocated from the state to the region in order to finance the Regional Transportation Plan. Assuming that the highway user revenue and UMTA Section 3 reallocations are fully successful, a reallocation of approximately one half cent per dollar of sales tax would be required to finance the remainder of the RTP. In other words, currently one fourth cent of the six cent sales tax is retained in the region for transportation expenditure, while five and three fourths cents is used for other purposes. This strategy would result in three fourths cent being retained for transportation and five and one quarter cents being used elsewhere.

Table 7-5

Reallocation Funding Strategy
(Escalated $ Millions)

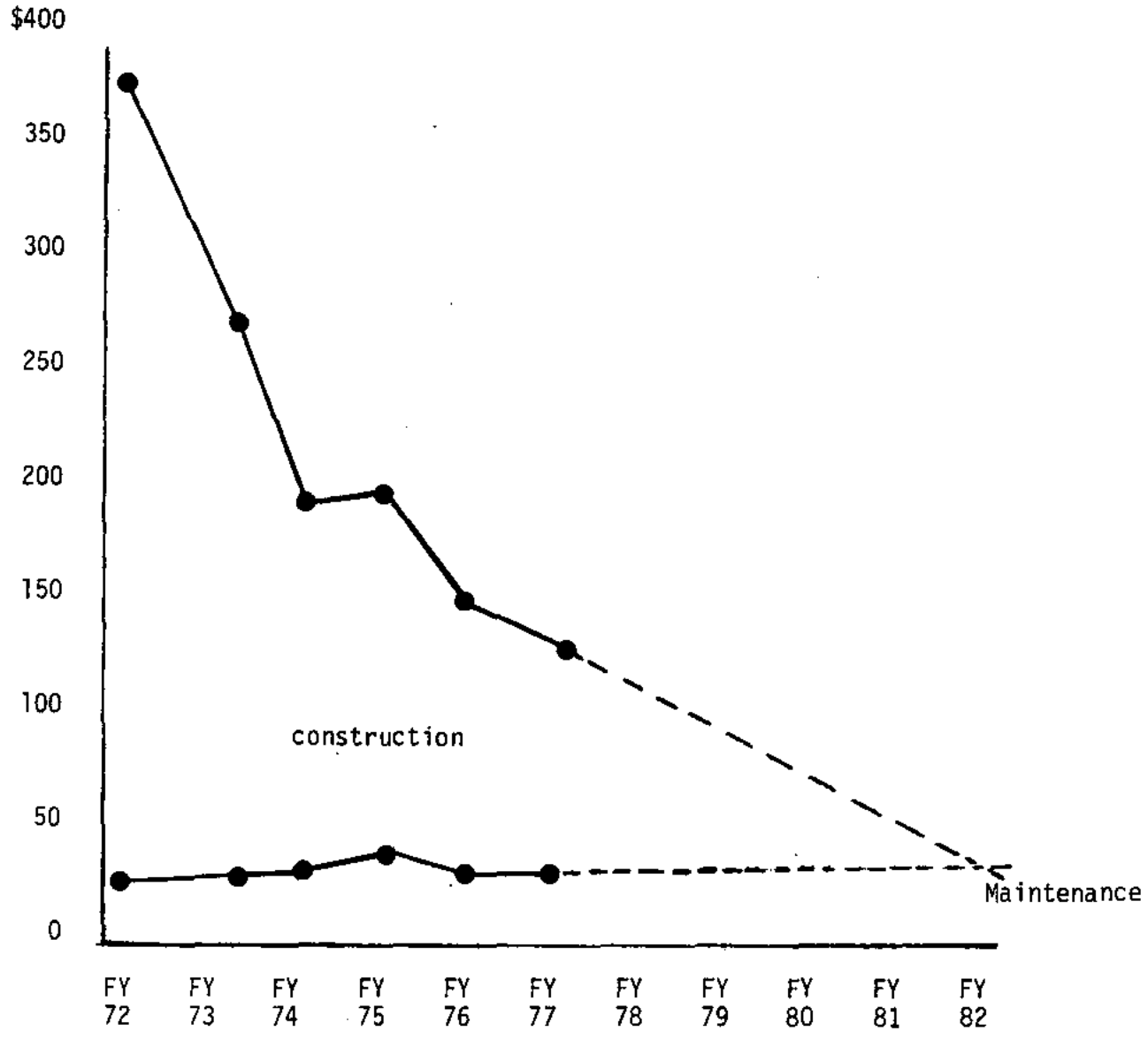
	FY 1979-1983	FY 1984-1988	FY 1979-1988
(1) Highway User Revenues Regional "Fair Share"	$ 215	$1,101	$1,322
(2) UMTA Section 3	932	733	1,665
(3) Sales Tax	655	1,845	2,500
(Requiring reallocation of)	.18¢/dollar	.52¢/dollar	
TOTAL	$1,802	$3,679	$5,481

table 7-5

Figure 7-2

Historical Expenditures for State Highways in the SCAG Region

(Millions of Constant 1972 Dollars)



Source: State Highway Program Financial and Statistical Reports, FY 1977, CALTRANS, and California Highway Construction Cost Index, CALTRANS.

figure 7-2

C. Generation of Additional Sources of Funds

A final strategy for financing the Regional Transportation Plan is generation of new funds via a tax rate increase(s) or imposition of a new tax(es).

Table 7-6 indicates what each of a series of different tax rate increases would have to be in order to fund the unfunded portion of the RTP. The top portion of the table shows the tax rate increases needed to finance the public sector gap assuming that UMTA Section 3 and highway user funds are successfully reallocated. The bottom portion of Table 6 indicates tax rate increases required to fund the entire unfunded portion of the RTP (i.e., none of the reallocation strategy is successful).

The first column in Table 7-6, FY 79-83, lists the rate increase required during that period. (The emissions tax and parking surcharge would be new taxes rather than tax increases.) The second column displays the additional tax required to fund measures during the FY 1984-1988 period. For example, in the top portion of the table (assuming successful reallocation) the sales tax would need to be increased immediately to 6.18% and would be increased to 6.51% in fiscal year 1984 in order to finance the gap.

Among the five potential tax sources, the sales tax and the gasoline tax are familiar means of revenue collection. A regional gasoline tax merely implies that any tax increase would be applied regionally rather than statewide, with additional revenues returned to the SCAG region. An indexed regional gasoline tax would link tax increases to some price index - wholesale, consumer, or possibly highway construction. For example, if prices increased by 8% in the first year of indexing, the state gas tax of 7 cents per gallon would also increase by 8%, to 7.6 cents per gallon.

An indexed gasoline tax is justified on the basis of the dwindling purchasing power of highway expenditure dollars. Figure 7-2 illustrates the decline of highway expenditures, in constant 1972 dollars, in the SCAG region. It shows that while maintenance expenditures have been increasing slightly in real dollars, real capital expenditures have plummeted. During the period 1972 to the first quarter of 1978, the cost of highway construction has skyrocketed by nearly 100%! Gas tax indexing would prevent the continued erosion of purchasing power in the future.

The emissions tax and parking surcharge are new taxes that have been frequently discussed in recent years. The former would probably be collected in conjunction with a vehicle inspection and maintenance program, with the charge based on a combination of vehicle miles traveled and emissions. The latter would be just what its name implies - an additional charge added to the normal price of parking a vehicle.

Table 7-6

Potential Funding Sources and Tax Rate Increases

	FY 1979-1983	FY 1984-1988
Public Sector Revenue Gap Assuming Reallocation of UMTA Section 3 and State Highway Revenue	$655 million	$1845 million
Potential Tax Sources	Rate Increase (cents)	(Additional) Rate Increase (cents)
a. Sales Tax	.18/Dollar	.33/Dollar
or b. Local Gasoline Tax	2.6 /Gallon	7.4 /Gallon
or c. Emmissions Tax	.23/VMT	.65/VMT
or d. Parking Surcharge	20/Park	55/Park
or e. Indexed Regional Gas Tax	12%/Year	
Total Public Sector Revenue Gap	$1802 million	$3679 million
Potential Tax Sources	(cents)	(cents)
a. Sales Tax	.51/Dollar	.66/Dollar
or b. Local Gasoline Tax	7.2 /Gallon	14.7 /Gallon
or c. Emmissions Tax	.6 /VMT	1.3 /VMT
or d. Parking Surcharge	55/Park	110/Park
or e. Indexed Regional Gas Tax	20%/Year	

Evaluation of revenue generating measures should be done on the basis of numerous criteria including economic efficiency and equity, political and administrative feasibility, and amount of revenue generated. Preliminary analysis has indicated the following:

(1) The emissions tax, parking surcharge and to a lesser extent, both gasoline tax schemes serve the dual role of discouraging emissions while raising revenue for the public sector. From an economic efficiency standpoint these measures are desirable because those who pollute are forced to pay a greater portion of the social costs they create.

(2) The source which appears inequitable on ability-to-pay grounds is the emissions tax. The older car is generally owned by lower income persons who would be least able to pay a higher tax.

(3) On administrative as well as political grounds the two taxes already in existence, the gas tax and the sales tax, are more easily justified because:

a. Increases in rates would not entail major administrative start-up costs, and,

b. The political difficulties associated with instituting a totally new tax would be avoided.

(4) The sales tax and indexed gasoline tax would be most likely to provide a revenue base which would keep pace with future cost increases.

CONCLUSIONS

This analysis has shown that during the next ten years a minimum of $15.5 billion dollars will be available for public expenditure on transportation in this region. This amount forms the basis for the constrained, or funded portion of the Regional Transportation Plan, shown in Tables 7-2 and 7-3. In addition, the plan calls for other public sector expenditures of $5.5 billion which are unfunded with projected available revenues. Included in this total is $1.0 billion in unfunded mobile source control measures, and $4.5 billion in system development projects.

Based on the discussion in Section IV concerning funding strategies, the following combination of tax increases and reallocations of currently unavailable funds is recommended to finance mobile source control measures, and transportation system development projects.

(1) 2 Cent Local Tax Increase and Statewide Indexing of the Gas Tax - The RTP calls for an increase of the gas tax by two cents per gallon, returned to local governments. This measure would generate approximately $100 million yearly. It is also recommended that the gasoline tax be linked to some price index so as to keep pace with rising transportation costs. If the price index used is assumed to escalate by 8% yearly, an indexed regional gasoline tax begun in fiscal year 1980 would generate an additional $1.6 billion in revenue by fiscal year 1988. An indexed gas tax would continue to generate more than $300 million additional dollars yearly for the region after 1988.

Table 7-7

Financially Balanced Plan
(escalated $ Billions)

	FY 1979-83	FY 1984-88	FY 1979-88
Unfunded Costs			
Mobile Source Control Measures*	.1	.9	1.0
Transportation System Development	1.7	2.8	4.5
Total Regional Transportation Plan	1.8	3.7	5.5
Revenues			
2¢ Local Gasoline Tax Increase and Indexed Regional Gas Tax	.7	1.8	2.5
Reallocation:			
Highway User Funds	.2	1.1	1.3
UMTA Section 3	.9	.8	1.7
	1.8	3.7	5.5
Remaining Unfunded Costs	0	0	0

*Excludes Railyard electrification, reduced jet aircraft delays, voluntary car retirement, and marine vapor recovery operations. These are not considered to be traditional transportation costs.

(2) Reallocation of Highway User Revenues and UMTA Section 3 Funds to the SCAG Region. As mentioned earlier, a "fair share" return of highway capital funds, and maximum federal contribution for transit capital projects would channel approximately $3.0 billion into the SCAG region during the next ten years.

Table 7-7 displays a plan which is not only balanced financially, but which is also balanced in another, possibly more important way. It calls for a balanced effort by various groups to make the Regional Transportation Plan a reality. It calls for sacrifice by the private sector in the form of mobile source measure implementation. It calls for sacrifice by the general public within the SCAG region in the form of modestly increased gas tax contributions. Finally, it calls for sacrifice by geographic areas outside of the Southern California region, both inside and outside the state, in the form of increased return of tax dollars to the region via highway capital expenditures and UMTA capital grants.

5.0 Financial Actions

Multi-modal

1. SCAG urges the State Legislature to amend the TDA to relax restrictions (such as the 50% limitation, the maintenance of local effort requirement, and the 15% capital expenditure requirement) which limit the amount of funds a claimant may utilize for transit purposes.

2. SCAG supports legislation and amendments to Article 19 of the State Constitution, which would remove the "guideway" transit constraint and allow highway user revenues to be allocated for any type of transportation without percentage limitations.

3. SCAG urges the State Legislature to enact legislation to provide $25 million for the first year funding of an Old Car Fund and Used Car Dealer Credit. In addition, the Department of Motor Vehicles should increase registration fees for out-of-state vehicles over ten years old and establish a nominal registration fee in lieu of tax for the change of ownership of vehicles purchased to replace vehicles sold to the State under the program.

4. SCAG supports a 2-cent-per-gallon gasoline tax increase, with the funds to be returned directly to local governments for transportation purposes. Also, SCAG encourages the State Legislature to initiate necessary action to allow annual indexing of the gasoline tax in the SCAG region (A standard index such as the Consumer Price Index or Highway Construction Cost Index should be selected as a basis to keep revenues in pace with increasing prices).

Aviation

5. SCAG will seek methods for spreading the financial burden of constructing any major new general aviation facility among all areas in the region to be served by that facility.

Transit

6. SCAG will encourage increased efficiency of transit operations by development and implementation of transit efficiency standards, allocation incentives, and improved data gathering and analysis capabilities.

7. SCAG and the CTCs will encourage transit operators to establish a desired ratio of fares to subsidy. As costs increase over time, it is necessary for financial stability, that either a) this relative level be maintained through periodic review and increase of fares or b) the subsidy share of total costs be increased by increasing taxes.

8. SCAG and the appropriate CTCs will allocate available Section 5 funds within the Los Angeles-Long Beach urbanized area only for operating assistance requirements.

9. SCAG will take the necessary united action to ensure the availability of Section 3 funds to meet all reasonable capital requirements as approved in the Regional Short Range Transit Plan.

10. SCAG, the CTCs and the transit operators will seek increased funding for transit operations.

11. SCAG the CTCs and the transit operators will make every effort to maximize the use of available federal transportation grants to support transit system operating costs and capital improvements.

12. SCAG and the CTCs will encourage local governments to use Federal Revenue Sharing funds for transit.

13. SCAG, the CTCs and the transit opertors will seek necessary legislation and constitutional changes to facilitate implementation of value capture financing mechanisms by transit districts.

14. SCAG will examine more closely the possibility of utilizing loan financing as a means to fund transit improvements.

15. SCAG urges the State Legislature to amend the Transportation Development Act to allow a new category of claims to be filed by existing claimants to implement public transportation control measures to improve air quality, such as ridesharing programs, where such transportation control measures have been identified by the designated Regional Transportation Planning Agency through the Regional Transportation Plan.

16. SCAG will actively seek operating and capital funds to place in express service approximately 1000 high capacity buses to provide a high level of bus rapid transit over the regional freeway network.

17. SCAG will actively seek operating and capital funding to support expansion of local transit service as identified in the SRTP expansion plans.

Highways

18. SCAG will urge the state and region to take the necessary steps to allow federal highway dollars to be used for maintenance when circumstances demand such flexibility.

19. SCAG and the CTC's will urge the State Legislature to initiate necessary action to allow a greater return of highway user funds within the State to the region in which such funds are generated.

20. Although it would be more appropriate for increases in gasoline taxes to be levied by state governments, it is possible that federal action may result in imposition of an additional gas tax. SCAG will oppose imposition of any federal tax from which revenues are not retained in the region for public transportation or highway purposes. Federal and state efforts to increase gasoline taxes should be coordinated to avoid simultaneous imposition of taxes on the SCAG region.

21. SCAG and the CTC's will urge the state to seek a greater return on our federal highway user taxes than the present 75%.

22. SCAG, the CTC's and Caltrans will take all necessary steps to ensure adequate funding of maintenance, rehabilitation, safety, and operational improvements on the existing highway system.

23. SCAG, in cooperation with CTCs and implementing agencies, will investigate additional funding for signal synchronization and prepare necessary recommendations to obtain such funding.

24. The SCAQMD and ARB should seek private-sector funding of the program for voluntary retirement of older vehicles, and allow it as a stationary-source offset action.

25. SCAG recommends that the state and federal governments consider a tax credit or tax deduction for low-income individuals to mitigate the vehicle maintenance costs attributable to a mandatory inspection and maintenance program.

7.A INSTITUTIONAL ARRANGEMENTS

In the Southern California region there are a number of state and local government agencies involved in transportation activities. The large number of agencies involved, result in a complex set of interrelationships and procedures for transportation planning, programming, and implementation. These interrelationships are identified in Table 7.1A-1.

A brief survey of the roles and authorities of agencies at each level of government is helpful to understanding the transportation planning and implementation process in this region.

7.1A
FEDERAL

Under the Department of Transportation, the Federal Highway Administration (FHWA), Urban Mass Transportation Administration (UMTA), and Federal Aviation Administration (FAA) each fund planning efforts and projects and have established rules and regulations for their programs based on the enabling legislation.

Funds made available for planning are programmed through the regional Overall Work Program (OWP) which documents specific work tasks, dollars to be used on them and which state, regional or local agency will actually complete the work. Included in the OWP are: specific tasks required to maintain the certification of the area so that project funds are available. Examples of the required tasks are development of a regional transportation plan and short range transit plans. These plans become the basis for programming specific projects and justifying their construction.

Of particular interest to state and local agencies are federal requirements for eligibility for the various projects, programs and any formulas or guidelines they use in allocating the funds. While some of these provisions are found in the law, others are left to the discretion of the agency. In addition, agency procecures shape the implementation process.

While federal funding agencies are not involved in the actual construction of projects, they do oversee implementation by local and state agencies. Agency approval must be obtained at varying project phases with final funding for the project available only after satisfactory completion according to agency standards.

Federal law requires that environmental impact analyses be conducted on all projects with the potential of affecting the environment. These documents are reviewed by the funding agency and Environmental Protection Agency as part of the funding approval process. An incomplete or inaccurate document, or one which shows unmitigated negative impacts on the environment can be the basis for denial of project funds.

In addition, under the Clean Air Act Amendments of 1977, standards for air quality have been established. The EPA has named programs for improving air quality. Such programs must be tied to the transportation systems of

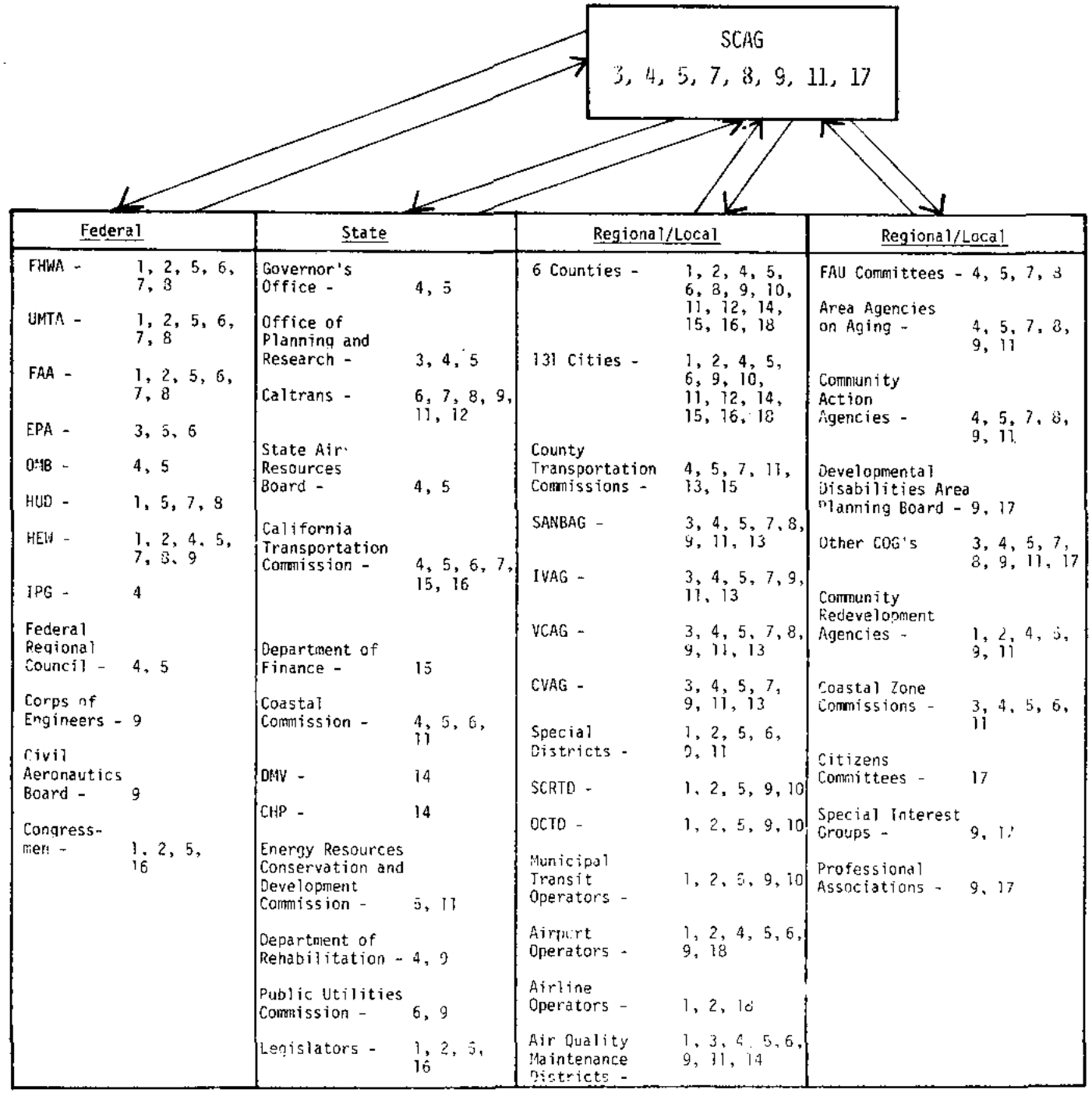


table 7.1A-1

Table 7.1A-1

INTERRELATIONSHIPS BETWEEN SCAG AND OTHER TRANSPORTATION RELATED AGENCIES

these areas and will govern their development. The SCAG region, with the exception of the far eastern desert portions of Riverside and San Bernardino Counties, is a non-attainment area. Therefore, a major area of emphasis of our transportation planning work will be directed towards meeting these clean air standards. The South Coast Air Basin, because of its severe air quality problems, is the main initial focus of these activities.

7.2A
STATE

Transportation Planning, programming and implementation procedures at the state level were revised under AB 402 of 1977, providing an opportunity for local and regional agencies to join a partnership with the state.

7.2.1A
CALIFORNIA TRANSPORTATION COMMISSION

AB 402 established the California Transportation Commission which assumes the responsibilities of four past boards: The California Highway Commission, State Transportation Board, California Toll Bridge Authority, and the State Aeronautics Board. The Commission has both planning and programming responsibilities. It is responsible for developing a biennial report on transportation to the legislature which serves as a California Transportation Plan. It will include an evaluation of significant transportation issues, an overview of necessary future investments, and recommendations for allocation formulas for highway funds. The state plan will consider all adopted regional transportation plans and long range issues, such as energy, which affect transportation.

The Commission has considerable authority in the regional and statewide programming of projects. It determines an estimate of state and federal revenues available to local, regional and state agencies under several funding programs including all state and federal highway funds processed through the state highway account, Proposition 5 diversion transit projects, capital improvements under the State Aeronautics Account, and Toll Bridge Authority funds. Local, regional and state agencies must be consistent with these estimates in their programming of projects.

A specific procedure and time-table are established for development of local, regional and state TIP's. The California Commission receives regional TIP's from throughout the state and a proposed TIP from Caltrans. The regional TIP's are consolidated into a state TIP unless one of three findings is made: overriding statewide significance, insufficient funds, or a conflict between regional TIP's. In the case of one of these findings, a regional TIP project can be dropped or a different project added. Once the statewide TIP is adopted by the Commission, it is implemented by all related state, regional, and local agencies.

7.2.2A
Department of Transportation

Another principal actor on the state level is the Department of Transportation (Caltrans). Caltrans has planning, programming and implementation responsibilities, particularly for the state highway system. The department is a planning agency in that it studies long and short range needs for transportation in the state and proposes means of meeting those needs. It coordinates and develops research programs on tranportation issues of statewide concern.

It is a programming agency in that it develops a proposed statewide TIP for submittal to the California Transportation Commission. It also estimates the funds available for TIP preparation and supplies this revenue estimate to the Commission for its final action.

Caltrans' role as an implementing agency gives it additional authority in the programming area. Caltrans has considerable control over the scheduling and completion of any work on state highways. Also through delegation by the Federal Highway Administration, Caltrans is involved in processing and approving local grant applications under federal highway programs. In Riverside-San Bernardino, Oxnard-Ventura-Thousand Oaks, and Simi Valley urbanized areas Caltrans has been named the designated recipient for UMTA Section 5 funds, giving it the responsibility of administering these transit funds. Caltrans also administers UMTA special funds for elderly and handicapped transit, as well as special bicycle funds.

7.2.3A
State Air Resources Board

The Air Resources Board (ARB) is designated the state air pollution control agency for all purposes set forth in federal law. Under its mandate, the ARB is responsible for setting ambient air and vehicle emission standards and for administering Federal and State requirements. The ARB also reviews and comments on a multitude of programs which are not solely or primarily related to air quality. For example, the ARB reviews Regional Transportation Plans, and Environmental Impact Reports and Statements on projects of major significance.

The ARB is designated the State agency responsible for the preparation of the State Implementation Plan required by the Clean Air Act. Under the Lewis Act, the ARB shall approve the Air Quality Management Plan unless it finds, after public hearing, that the plan does not include all reasonable and available methods to achieve and maintain the State ambient air quality standards. Upon such a finding, the ARB shall revise the submitted plan and approve it by June 1, 1979.

7.2.4A
State Office of Planning and Research

The State Office of Planning and Research is involved in transportation development through two channels. First is any statewide development or land use policies it adopts, such as those incorporated in the State Urban Development Strategy. The second is through its role as the statewide clearinghouse for review of Federal Grant Applications. OPR comments on the conformance of potential projects with statewide policies and their potential impact on the environment.

7.3.A
REGIONAL

In this region, SCAG is the principal agency involved in transportation activities. Others include the South Coast Air Quality Management District, which is concerned with transportation as it affects air quality, and the South Coast and South Central Coastal Commissions which govern development in the coastal areas.

As recommended by the Governor, SCAG has been designated by the federal Department of Transportation as the Metropolitan Planning Organization (MPO) for this region. Under this designation, SCAG serves as the coordinating and approval agency for all transportation planning undertaken with federal funds. SCAG passes through much of these federal funds to local agencies in the region which in turn complete studies and plans for local and regional transportation development.

As the MPO, SCAG is also responsible for a regional transportation plan (RTP). This requirement is similar to that under state law (AB 402) where SCAG has been designated Regional Transportation Planning Agency. As a part of the federally-required RTP, SCAG incorporates transit operators' plans in the transportation system management and long range transit elements of the RTP. The RTP also includes major components on highways, aviation, and goods movement, in response to Federal and State mandates. Transportation strategies for improving air quality are also being developed jointly with the South Coast Air Quality Management District for incorporation in the RTP.

The adopted regional transportation plan serves as the policy basis for all transportation programming in the region, and in particular for the transportation improvement program (TIP) required under both federal regulations and state law (AB 1246/ AB 402).

While there are different requirements for the state and federal TIP's, SCAG will prepare one consolidated TIP containing all required data. Essentially it will include all transportation projects for which local and state agencies seek federal or state funds. The California Transportation Commission has authority over projects funded from those moneys under its jurisdiction (as previously discussed) and the federal agencies will have authority over projects funded from federal dollars, except those funds under the jurisdiction of the California Transportation Commission.

Under state law, SCAG bases its TIP for the four county transportation commission counties (Los Angeles, Orange, Riverside, San Bernardino) on TIP's submitted to it by the commissions. (SCAG has also agreed to accept county TIP submittals from IVAG and VCAG for their respective jurisdictions.) SCAG may revise these commissions' TIP's in certain instances. The entire regional TIP must be consistent with the RTP.

Consolidated into the TIP-approval process are SCAG's A-95 Clearinghouse responsibilities. SCAG is designated by the Governor on behalf of the federal Office of Management and Budget to review all federally-funded projects for consistency with regional plans and policies, for their environmental impacts, and to give to give interested agencies and parties notice of these proposed projects. SCAG then forwards comments it has and those it receives from concerned agencies to the project sponsor and funding agency for their use in determining whether to fund the project.

As state-designated Regional Transportation Planning Agency, SCAG administers the Transportation Development Act funds (sales tax funds available for transit, road, bicycle/pedestrian projects). As in the case of the TIP, SCAG bases its approval of projects under these funds in the four commission counties on lists of projects submitted to it from the commissions. These lists can be revised if they are inconsistent with the plan or are an inappropriate use of funds under the law. In Ventura and Imperial Counties, IVAG and VCAG recommend projects for approval. SCAG has a further responsibility to determine whether a portion of the TDA funds will be used for bicycle/pedestrian projects and, jointly with the commissions in Los Angeles and Orange Counties, if a portion of the funds will be available for community level transit projects.

SCAG is also the designated recipient for UMTA Section 5 funds for transit projects in the Los Angeles-Long Beach Urbanized Area. It determines policies for use of these funds, and allocates the funds among the three counties in that urbanized area. Again, state law provides for the county transportation commissions to allocate the funds within their counties with SCAG's final approval through the TIP.

SCAG is also responsible for the Federal Aid Urban Program for urbanized areas over 50,000 in population. SCAG approves the programming for these dollars, the system of roads, and the urban area boundaries based on approvals received from the four county commissions and VCAG.

SCAG is not an implementing agency per se. It relies on its counties and cities, transit and airports operators, Caltrans and other operating agencies to implement mutually developed policies and plans. SCAG serves only as initiator and coordinator of programs to implements its policies.

7.4A
LOCAL AGENCIES

There are a number of local agencies involved in transportation efforts in the SCAG region. Four groups of agencies have predominant roles: county transportation commissions, designated subregional agencies, cities and counties, and transit and airport operators. The planning, programming and implementation responsibilities of each are as follows:

7.4.1A
County Transportation Commissions

County Transportation Commissions were established in 1977 in Los Angeles, Orange, Riverside and San Bernardino Counties by AB 1246. These commissions set policies for and coordinate transportation development in their respective counties. They are given decision-making authority over short-range capital and service planning and programming for transit and highway projects. This includes the allocation of federal and state project funds within their county areas and establishment of priorities for project implementation.

Each county commission has requested that SCAG designate it to coordinate transportation planning in its county. This involves a role for them in the Overall Work Program process. In most cases the commission delegates the planning responsibilities to other agencies such as the county or transit operators while overseeing their efforts and consolidating their work into a county-wide short range transportation plan and other related products.

The commissions have numerous programming responsibilities. They compile a county-wide TIP for submittal to SCAG as a part of the regional TIP. They allocate TDA transit and bicycle/pedestrian funds in their counties and jointly decide with SCAG if a portion of these funds should be available for Article 4.5 community level transit projects. The commissions develop service and productivity improvements to transit operators within their counties and make performance audits of the operators. They also allocate FAU and UMTA Section 5 funds among their jurisdictions. As in the case of SCAG, the commissions use the programming of these funds to implement policies they have adopted for transportation development. All federally and state funded projects they approve must also be consistent with the regional transportation plan.

As in the case of SCAG, the commissions are not implementing agencies themselves. But to the degree that they set transportation priorities and program funds, they guide local agencies and Caltrans in their implementation process.

The Los Angeles Commission is given two additional notable authorities. One is to place a sales tax measure on the ballot to generate revenues for transit purposes. Second is to report to the legislature on the status of transportation planning and programming in the county and to recommend any changes necessary to improve them.

With the growing importance of the transportation system in improving air quality, the commissions are becoming more active in this field as well. The San Bernardino Commission, for example, is also serving as the Air Quality Coordinating Committee for that county.

7.4.2A
Designated Subregional Agencies

In the two counties where transportation commissions do not exist (Imperial and Ventura), SCAG has designated subregional transportation planning agencies to assume similar responsibilities. In Ventura County this agency is the Ventura County Association of Governments; in Imperial County it is the Imperial Valley Association of Governments. These agencies coordinate their counties' planning tasks under the Overall Work Program.

Each of these agencies is involved in programming activities for their counties such as review of TDA and FAU projects. While these agencies do not have the legal authorities of the four commissions, SCAG looks to them as the decision-making bodies in their counties. SCAG depends on them for input on issues affecting their areas and jointly sponsors hearings and workshops on such topics as the regional transportation plan and unmet transit needs.

7.4.3A
Cities and Counties

Cities and counties have a primary role in planning and implementing Southern California's transportation system. Local jurisdictions are required by state law to develop local circulation elements. These elements should be consistent with countywide and regional transportation plans. They are the initiating agencies for most highway and transit projects. They are also the implementing agencies for these projects. Locally elected officials also comprise the governing boards of many other transportation agencies such as county transportation commissions, other designated subregional agencies such as IVAG and VCAG, transit and airport boards and joint powers entities (such as airport land-use commissions), and the SCAG governing bodies.

Subregional air quality planning agencies have been designated by SCAG to prepare plans identifying measures or policies to improve air quality in their jurisdictions. Los Angeles, Orange, Riverside, and San Bernardino Counties and the City of Los Angeles are acting in this capacity. AQMP Coordinating Committees have been established to advise the subregional air quality planning agencies in each county. In each of the counties the Executive Director of the County Transportation Commission serves on the committee to assure close coordination of local transportation/air quality planning.

7.4.4A
Transit Operators/Airport Operators

Transit and airport operators are also planning and implementing agencies. They develop plans for their future development, such as short range transit plans for transit systems or master plans for airports. These plans meet state and federal requirements to provide the basis and justification for their application for funds for implementing projects. Throughout the planning and implementation process, operators function within the procedures and restrictions established by local, regional, state and federal agencies as described below.

7.5A
INTERRELATIONSHIPS

Planning is required by state and federal law and is a prerequisite to receiving federal and state project grants. The transportation plan enumerates specific types of programming actions which should be used to implement broader policies.

Under federal law*, programs of projects resulting from regional plans, for federal highway and transit funds are submitted to the Secretary of DOT. These programs are based on a continuing transportation planning process which results in multi-modal transportation plans and programs. Federal rules and regulations** further specify that programs of highway and transit projects included in the Transportation Improvement Program

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* 23 USC 105, 134 (a) and 135 (b); 49 USC 1602, 1603 (a) and 1604
** 23 CFR 450, Subpart C (Section 450.306)

7.6A
Institutional Arrangements Actions

1. SCAG will assume an advocacy role with the state and the federal governments' to make transportation planning and programming requirements more responsive to local and regional needs.

2. SCAG will develop and execute regional transportation memoranda of understanding with the County Transportation Commissions, Imperial Valley Association of Governments and Ventura County Association of Governments enumerating transportation roles and responsibilities of these agencies in relationship to SCAG and vice versa.

3. SCAG will work with Caltrans to update the current transportation memoranda of understanding between them.

4. SCAG will periodically review transportation planning, programming and project review processes and seek to reduce review time and red tape.

5. The county transportation commissions and the subregional air quality planning agencies should clarify transportation/air quality roles and responsibilities.

appendices

APPENDIX A
TECHNICAL ASSUMPTIONS

A.1
INTRODUCTION

This appendix identifies the major assumptions made during the development of the Regional Transportation Plan (RTP). It is important to identify these assumptions and recognize their strengths and weaknesses, since they are often the basis for the conclusions reached in the RTP.

One of the inputs to transportation planning is estimates of future travel demand. Surface travel estimates are made with the LARTS Transportation Model. Inputs to the model include socioeconomic data and transportation system characteristics. A key element in developing the socioeconomic data is SCAG's growth forecast policy. The growth policy forecasts population, housing, employment, and land use. The forecasts represent a combination of trends, assumptions, and local and regional policies.

Also included in the RTP are estimates of future air travel demand from SCAG's Southern California Regional Airport System Plan.

Finally, in evaluating strategies for improving air quality and reducing energy consumption, a number of technical assumptions must be made. These are used both in establishing a baseline or reference case and in estimating the relative effectiveness of alternative strategies. These assumptions will be examined in the last section of this appendix.

A.2
GROWTH FORECAST POLICY

Although population growth is increasing in the less developed areas of the region, the SCAG-76-Modified Growth Forecast Policy* checks this trend by allocating a large share of the regional growth to existing urban areas.

Some of the basic assumptions of the SCAG-76-Modified forecast are listed in Table A-1. In addition to the assumptions listed in this table, other assumptions can be inferred from the design of the forecast.

- The SCAG region will continue to capture its present share of the national employment growth. Jobs will be created at a simple annual rate of 1.7% between the years 1975 and 2000.
- The labor force participation rates will increase slightly. Male participation rates will decrease slightly due to earlier retirements and female participation rates will increase significantly. This will result in a higher ratio of jobs to populations.

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* SCAG-76 was adopted by SCAG's Executive Committee in December 1975. It was modified slightly in November 1977 for analysis purposes. SCAG-78, scheduled for adoption in January 1979, will be used as the basis for RTP amendments scheduled for adoption in February 1979.

SCAG '76 MODIFIED GROWTH FORECAST ASSUMPTIONS

A. Population	
1. Fertility Rate	1. 2.5 live births per woman. Source: 1974 DOF D-100 forecast
2. State Migration	2. 100,000 net immigrants per year. Source: 1974 DOF D-100 forecast
3. Average Household Size	3. A forecasted regional average household size of 2.52 for 1990.
B. Natural Environment	
1. Air	1. Air quality is expected to improve the next decade with implementation of stricter air quality standards. Some of the region, however, will continue to experience periods of heavy smog.
2. Energy	2. Energy will continue to be in short supply and at an increasing cost.
C. Infrastructures	
1. Transportation	1. A more balanced transportation system will be developed over the next decades as specified in the 1975 RTP.
2. Airport	2. a. LAX will continue to be the region's major airport. b. Palmdale Airport will be small to moderate, with 6 to 8 million passenger trips annually by 1990. c. Ontario Airport will develop in accord with the criteria of the SCAG Airport Plan.
3. Water Supply	3. The water supply to the region will be adequate to accommodate forecasted growth.

table A-2-1

- Housing supply will meet housing demand, despite a significant decrease in the number of persons per dwelling unit. This implies that consumer purchasing power will increase in proportion to the cost of housing; the supply of money will be sufficient for the investment in housing; housing technology and institutions will adjust sufficiently; conservation and rehabilitation of existing housing will increase over past rates; and federal, state and local programs will be developed to help meet the housing demand.

- The highway network from the 1975 Final RTP is assumed to be completed. Significant improvements in transit service in the older urbanized areas of the City of Los Angeles are also assumed.

SCAG '76 MODIFIED POPULATION FORECASTS

COUNTY	1975	1995
Imperial	83,250	109,000
Los Angeles	7,020,772	7,732,000
Orange	1,684,500*	2,513,000
Riverside	531,679	797,000
San Bernardino	696,064	913,000
Ventura	432,407	700,000
Regional Total	10,488,672	12,764,000

*County Total -- 1975 California Department of Finance Estimate

SCAG '76 MODIFIED HOUSING UNIT FORECASTS

COUNTY	1975	1995
Imperial	26,256	35,300
Los Angeles	2,695,401	3,100,600
Orange	607,631*	948,400
Riverside	214,889	336,300
San Bernardino	285,831	375,200
Ventura	144,108	240,200
Regional Total	3,974,116	5,036,000

* County Total - 1975 Ca. Department of Finance Estimate

table A-2-2
table A-2-3

SCAG '76 MODIFIED EMPLOYMENT FORECASTS

COUNTY	1970	1995
Imperial	29,000	50,000
Los Angeles	3,170,000	4,008,000
Orange	475,700	1,201,000
Riverside	149,100	286,800
San Bernardino	219,400	359,100
Ventura	115,800	247,200
Regional Total	4,159,300	6,152,100

SCAG's adopted growth forecast is based on policies -- such as reducing vehicle miles traveled and balancing population with jobs -- which are described in the forecast report. The numbers themselves are policies; that is, targets to be sought through A-95 reviews, functional plans, and coordination. The forecasts are not just extensions of trends; instead they modify trends to fit policy. Prior to adopting a forecast, several alternatives are considered. Those alternatives include higher and lower total growth than the adopted forecast, and different distributions of the adopted total. An environmental assessment has been prepared on SCAG-76.

table A-2-4

A.3
REGIONAL AIRPORT SYSTEM ELEMENT

Assumptions made in the 1978 RTP regarding future air travel demand are based upon the following tables. These tables have been updated from those contained in the 1977 RTP.

Regional air transportation forecasts indicate an air passenger travel demand of 44 to 48 million annual passengers in 1985, and 88 to 97 million in 1995, compared to a 1977 level of 35.1 million. Air cargo shipment demand is expected to increase from 0.83 million annual tons today to 1.8 million in 1985 and 5.8 million in 1995. General-aviation demand is projected to grow from the current 11,825 based aircraft to 15,000 in 1985 and 20,000 in 1995 (Table A-1).

SCAG REGION AVIATION FORECASTS

	1977	1985	1995
Air Passengers* (millions of annual passengers)	35.1	44 - 48	88 - 97
Air Cargo** (millions of annual tons)	0.83	1.8	5.8
General Aviation (thousands of based aircraft)	11.8	15	20

* Air Passengers enplaned and deplaned at major airline airports

** Air Cargo is defined here to include air freight, air express, and air mail.

While the overall capacity of the regional airport system may be adequate to handle the forecasted air transportation demands through 1985, by 1995 capacity will be a problem unless additional capabilities are developed (Table A-6). Although some airport limitations may be necessary in the urban areas due to airspace conflicts, generally the airspace can accommodate the increased air traffic volumes. There will be runway capacity deficiencies by 1995 (Table A-7), in terms of both airline and general-aviation operational demands, especially if environmental problems continue to necessitate operating restrictions. Again, this problem will be confined mostly to the urban areas. Improvements in ground access, including a system of remote passenger-processing terminals, will be necessary at most major airline airports in the region by 1995.

table A-3-1

AIR PASSENGER VOLUMES AT MAJOR AIRLINE AIRPORTS

(MILLIONS OF ANNUAL PASSENGERS ENPLANED AND DEPLANED)

AIRPORT	PASSENGERS SERVED 1977	1985 Forecast	1995 Forecast
CURRENT MAJOR AIRLINE AIRPORTS			
Los Angeles International (LAX)	28.362	30 - 40	40
Orange County (SNA)	2.159	2	2
Hollywood-Burbank (BUR)	1.999	2 - 3	2 - 3
Ontario International (ONT)	1.681	4 - 6	14 - 20
Palm-Springs Municipal (PSP)	0.506	0.8	1.5
Long Beach (LGB)	0.491	0.5	0.5
TOTAL	35.198	39.3 - 52.3	60 - 67
FUTURE MAJOR AIRLINE AIRPORTS			
Palmdale Area	0.006*	0.09	6 - 10
Imperial County (IPL)	0.005	0.06	0 - 11
Ventura County Area	0.500**	0.05	0.7 - 1.1
TOTAL	0.061	0.20	6.8 - 11.21
TOTAL PASSENGERS SERVED — ALL MAJOR AIRLINE AIRPORTS	35.2	39 - 52	67 - 78
ANTICIPATED REGIONAL DEMAND	35.2	44 - 48	88 - 97
UNSERVED DEMAND	—	0 - 9	10 - 30

*Present airline service point is Palmdale - Air Force Plant 42 (PMD)
**Present airline service point is Ventura County Airport at Oxnard (OXR)

The aviation forecasts adopted in the Regional Airport System Plan rely upon the forecasting model developed for the Division of Aeronautics of the California Department of Transportation. The use of this model provides a forecast revision capability and enables the SCAG region aviation forecasts to remain consistent with forecasts prepared for other parts of California. Inputs to the model involve certain social and economic factors, including population, employment, gross regional product and average disposable income per capita, as well as such aviation service characteristics as travel time and ticket price.

table A-3-2

GENERAL-AVIATION BASED AIRCRAFT FORECASTS

COUNTY	1977	1990	
	Served by Airports in County	County Demand	Served by Airports in County
IMPERIAL	265	465	460
LOS ANGELES	6,785	10,295	9,445
ORANGE	2,280	3,140	2,450
RIVERSIDE	785	1,315	1,795
SAN BERNARDINO	1,035	1,765	2,630
VENTURA	675	1,190	1,425
Regional Total	11,825	18,170	18,205

The original population assumptions employed in the model were the California Department of Finance "Series D" forecasts. These forecasts indicated a 1990 SCAG region population of 13.9 million. The SCAG-76 growth forecast policy has a revised 1990 forecast of 12.25 million. Because of lower population and economic forecasts, the SCAG Executive Committee approved using the aviation forecasts for a later five-year time period until new aviation forecasts are developed for the region.

This modification is reflected in the preceding tables, and partially offsets the high population forecasts originally used in the model. The SCAG-76 1995 population estimate for the region is 12.8 million, which is 1.1 million below the 1990 projection used in the model. Based upon SCAG-76 population forecasts, the aviation forecasts of these tables may still be too high.

The projected rise in aviation demand, though, is much more a response to forecasted economic growth, especially in gross regional product and per capita disposable income, than it is to increases in population. Revisions of the economic forecasts to conform with the new population forecasts are not yet completed. Although it is probable that employment and gross regional product projections will be lowered slightly, substantial overall regional economic growth is still anticipated.

table A-3-3

RUNWAY DEMANDS AND CAPACITIES

DEMANDS	1972	1985	1995
CARRIER			
Total annual passengers (millions)	26.4	44 - 48	88 - 97
Passengers per operation (regional average)	45	75	100
Annual aircraft operations (thousands)	581.4	587 - 640	880 - 970
GENERAL AVIATION			
Based aircraft (thousands)	8.6	15	20
Operations per based aircraft	650+	700	750
Annual aircraft Operations (millions)	5.65	10.5	15.0

CAPACITIES	PRACTICAL ANNUAL CAPACITY (MILLIONS OF OPERATIONS)		
	AIR CARRIER	GENERAL AVIATION	TOTAL
6 Existing Major Air Carrier Airports	.885	1.5	2.4
52 Other Civil Airports in Plan	-	11.9	11.9
Total for 58 Civil Airports		13.4	14.3
22 Other Public-Use Airports* (Not in Plan)	-	3.8	3.8
Total All Airports		17.2	18.1

CAPACITY EXCESS OR DEFICIENCY	1995 ANNUAL AIRCRAFT OPERATIONS
AIR CARRIER	
Assuming only the six existing major air carrier airports and the current aircraft mixes:	5,000 excess to 85,000 deficiency
Assuming continued restrictions due to environmental problems:	up to 300,000 deficiency
GENERAL AVIATION	
Assuming only the 58 civil airports included in the plan:	1,600,000 deficiency
Assuming all 80 public owned or public used airports	2,200,000 excess

*Most of the additional 22 airports are located in outlying portions of the region where the demand is low.

table A-3-4

A.4
TRAVEL DEMAND FORECASTING

Estimates of future transit patronage and highway traffic expected on a given transportation alternative are based on forecasting methods employed by the California Department of Transportation in the Los Angeles Regional Transportation Study (LARTS). This travel-demand forecasting process was reviewed and accepted by the Urban Mass Transportation Administration for the recent SCRTD Technical Analysis of Alternatives for Los Angeles. The same models and processes have provided forecasts for the evaluation of regional and sub-regional transportation plans since 1971.

The LARTS multi-modal transportation model consists of four sequential sub-modes: Trip Generation Model, Trip Distribution Model, Modal Split Model, and Trip Assignment Model. These models were developed and calibrated for travel patterns and behavior observed in the origin-destination travel survey conducted by LARTS in 1967 and described in the LARTS 1967 Base Year Report, December 1971. The sub-mode models assume that the relationships established in the base year remain unchanged over time. These precepts are being reviewed and updated based on the 1976 Urban/Rural Travel Survey data. Analysis results to date indicated that trip rates and other behavior are actually very stable over time.

A detailed description of the LARTS model and its assumptions is contained in Technical Report TR/2, The LARTS Transportation Model: Description and Assumptions, January 1974.

Trip generation is the process of forecasting the total number of trips that will begin and end in a given traffic analysis zone (generally two census tracts). Trip generation is assumed to be based on the number of vehicles owned per household, which in turn is a function of median household income, population per housing unit, number of housing units, and proportion of single housing units to total housing units. Trip generation internal to the LARTS area is also assumed to be generated in the zone of residence. Non-home-based trips are assumed to be generated by household but modified by regression equations using population, retail employment, and total employment. Trips which cross boundaries of the LARTS area (external trips) are estimated independently of the internal trip generation procedure by assigning cordon volumes to each of 30 cordon stations.

The trip generation model essentially extrapolates trip-making behavior to a future year and reflects anticipated socioeconomic changes. It cannot predict changes in trip rates resulting from the unavailability of gasoline, for example, or the advent of an extensive mass transit system.

Trip distribution is the method by which the number of person-trips between each pair of zones is determined. The resulting person-trip interchange table is the travel demand for any given land use forecast. Trip distribution is assumed to be a function of four variables: the inter-zonal travel times on the highway network, the number and types of trips produced by each zone, the travel time factors as a function of inter-zonal travel time, and zonal attraction factors. The gravity model used to calculate trip distribution distributes trips between the zone of generation to zones of attraction by the following equation:

$$T_{ij} = \frac{T_i \; F_{ij}A_j}{\sum_{j=i}^{n} (F_{ij}A_j)}$$

Where T_{ij}= trips between any zone i and any zone j

T_i = trips produced at zone i

A_j = attraction factor for zone j

F_{ij} = travel time factor for trips between zones i and j

n = total number of zones of attraction

The attraction factors used were derived by regression analysis from the 1967 O & D data. The major assumption of the gravity model is that the relative frequency distribution of travel times observed in the 1967 Origin and Destination survey remains constant over time. The 1976 travel time distribution is not much changed from that of 1967. The gravity model does not consider the effect of travel cost or mode on the choice of destination.

The mode choice portion of the model splits person trips into transit trips and vehicle trips. Walking is considered only in relation to access to and egress from the transportation system. The mode choice sub-model is the only place in which travel costs and levels of service are considered. The most important factors related to transportation system performance and mode choice are travel "running" times (operational speeds, vehicle acceleration, deceleration; highway speeds, duration of required stops etc.), and "excess" time (walking and waiting times to gain access to the transportation system, and transfer waiting time). Travel costs are computed as functions of transit fare, auto operating costs, auto parking costs, and family income. It is assumed that increased travel costs or reduced levels of service for a particular mode will not reduce the total number of trips generated, but will reduce the share of trips made by that mode.

The assignment portion of the model loads the transit trips (between each pair of zones) onto transit lines represented by the input network, according to a minimum path algorithm, and loads vehicle trips onto the highway network, using two path values. For each zone-to-zone interchange, two paths are developed: a "minimum time" route and a "city street" route (assumed to be 1/3 time on all surface links), to avoid unrealistically high loadings on freeways. For highway assignments, trips between each pair of zones are divided between the two routes according to the California Diversion Formula:

$$p = 50 + \frac{50(d + 0.5\ t)}{(d-0.5\ t)^2 + 4.5}$$

where p = percentage assigned to the minimum time routing

d = distance in miles saved on the minimum time routing over the city street routing

t = time in minutes saved on the minimum time routing over the city street routing

Travel times between zones are based on average speeds for each link, LARTS subregion (rural, suburban, urban and central city), "peak" and "offpeak" conditions.

INPUTS TO THE LARTS MODEL

Primary inputs to the LARTS model are socioeconomic data and transportation system characteristics. Socioeconomic data such as population, housing, and employment are forecast by SCAG (see Table A.2.1, Growth Forecast Policy). LARTS, in turn, distributes the SCAG totals for the 46 regional statistical areas (RSA) contained within the LARTS area to the 1285 traffic analysis zones (AZ).

The following assumptions were made as part of this process:

- The median household income forecast assumed an annual real income compound growth rate of 1% between 1970 and 1990.
- The income growth rate was applied to the 1970 median household incomes of all AZ's and maintained for those zones considered stable.
- For unstable zones, the median income was modified depending on the projected number and type of dwelling units, a knowledge of current and anticipated new single-family dwelling unit prices and apartment rents in the zone, and factors affecting the income stability of existing units.

While Caltrans is largely responsible for preparing the computerized description, transportation system characteristics are generally defined by the agencies conducting the analysis and evaluation of alternative transit/highway systems. For example, the RTDP regional-core transit lines were defined by SCRTD, with review by UMTA/local governments.

A.5
TRAVEL FORECASTS; MOBILE-SOURCE EMISSIONS

Transit patronage, average daily traffic, vehicle miles traveled (VMT) and mobile-source emissions were estimated by the LARTS transportation model for three systems:

(1) The "No-Build" system, consisting of the 1976 transit system and 1976 highway network, applies existing travel conditions and behavior to the 1990 growth forecast (SCAG-76 Modified).

(2) The "NULL TRANSIT" system projects the impacts on vehicle usage in 1990 of an improved highway system with no change in the 1976 transit system.

(3) The "RTDP" system estimates the impact that the Regional Transit Development Program would have on vehicle usage in 1990, given the 1990 highway system.

LARTS model travel forecasts for the three systems are compared in Table A-5-1 to results obtained for the base year, 1976. The travel demand, i.e. person trips, was obtained in each case with revised trip generation rates and vehicle ownership models derived from data collected in the 1976 Urban/Rural Travel Survey. Analysis of the 1976 survey data showed that vehicle occupancy rates (by trip purpose) were essentially unchanged from those of 1967, when the first origin-destination survey was conducted. The distribution of home-based work trip travel times had not changed significantly from 1967. While the average trips per vehicle remained nearly constant, the per-capita trip rate increased from 3.2 in 1967 to 3.45 in 1976. This is attributed primarily to an increase in the percentage of households owning two or more vehicles and a concomitant drop in the proportion of zero-car households. Furthermore, the average number of persons per household decreased from 1967 to 1976, increasing households at a greater rate than population.

The SCAG-76 Modified Growth Forecast assumes a further drop in family size by 1990, and projects more housing units than the previous growth forecast did, Table A-5-2. Then, given the updated trip generation model, the 1990 travel demand, 42,661,000 person trips per weekday, is about 700,000 person trips greater than the travel demand generated by SCAG-76 Revised. Thus vehicles (LDV) will travel 5,133,000 more miles in the No-Build system - 212,667,000 - under SCAG-76 Mod. than under SCAG-76 Revised. Transit and vehicle usage projected for the No-Build system is simply an estimate of what would result if today's population, employment, and housing were replaced by those of the growth forecast. An average vehicle occupancy factor of 1.2 for work trips was assumed because the 1976 highway system operating in 1990 is deemed to offer no more carpooling incentives than it did in 1976.

With an improved highway system, which includes completed segments in the freeway system, ramp metering on all freeways and other TSM improvements, light duty VMT drops to 205 million in the NULL Transit system. This decrease results primarily from the assumption of 1.3 for commuter vehicle

TABLE A-5-1

LARTS MODEL TRAVEL FORECASTS

	1976 BASE	No-Build	NULL Transit	RTDP
Forecast Year	1976	- - - - - -	- - 1990 - -	- - - -
Growth Forecast	1976	- - - - - SCAG-76 Modified - - -		
Population (LARTS)	10,133,893	- - - - - -	11,828,257	- - - -
Assumptions:				
Auto Occupancy (Work)	1.2	1.2	1.3	1.3
Auto Occupancy (Non-Work)	1.52	- - - - - - - - 1.52 - - - - - - -		
Fare Structure	'76 Zonal	- - 40 ¢ local & 5 ¢/Fwy mile - -		
Auto Operating Cost ('67$)	5.29 ¢/mi	- - - - - - - 5.76 ¢ /mi - - - - -		
Person Trips (Weekday)	34,944,000	- - - - - - - 42,661,000 - - - - -		
Average Trips Per Person	3.45	- - - - - - - - - 3.6 - - - - - - -		
Transit Trips	1,174,000	1,570,000	1,559,000	1,832,000
% Transit Usage	3.36	3.68	3.65	4.29
Auto Driver Trips	23,920,000	29,119,000	28,359,000	28,164,000
Auto Passenger Trips	9,850,000	11,972,000	12,739,000	12,661,000
Total Vehicle Trips	33,770,000	41,091,000	41,098,000	40,825,000
Vehicle Miles-Work (LDV)	67,015,000	81,832,000	75,034,000	73,162,000
Vehicle Miles-Non-Work (LDV)	104,113,000	130,835,000	133,168,000	131,291,000
Total VMT (LDV)	171,128,000	212,667,000	208,202,000	204,453,000
Vehicle Miles (HDV)	8,556,000	10,633,000	10,410,000	10,223,000
Total VMT	179,684,000	223,300,000	218,612,000	214,676,000

table A-5-1

TABLE A-5-2

COMPARISON OF GROWTH FORECASTS

COUNTY	SCAG-76 Revised			SCAG-76 Modified		
	Population	SDU	MDU	Population	SDU	MDU
Los Angeles	7,561,540	1,631,561	1,228,780	7,554,637	1,707,566	1,215,994
Orange	2,368,370	490,257	336,935	2,369,120	518,338	340,997
Ventura	631,997	139,688	64,514	632,000	143,933	65,822
Riverside	549,510	164,858	35,762	549,500	168600	36,100
San Bernardino	722,929	204,110	45,260	723,000	212,595	44,650

SDU = Single Dwelling Units
MDU = Multiple Dwelling Units

Source: LARTS Model Input Data

table A-5-2

occupancy. This represents almost a 100 percent increase in carpooling by 1990, brought about by various carpooling incentives incorporated in highway improvements.

Addition of an extensive freeway line-haul bus transit system and a regional core rapid transit line converts 277,000 vehicle trips to transit usage in the RTDP System. This increase in patronage reduces auto driver trips by nearly 200,000 and VMT by nearly 4 million from the NULL Transit system. Achieving a 20 percent reduction of VMT requires the removal of another 14.57 percent, or 31 million vehicle miles, of No-Build VMT. Further reductions of VMT are possible by carpooling incentives or drive-alone disincentives, or combinations of them. These tactics and strategies are discussed in Appendix C-1.

Figure A-5-1 shows past and future estimates of VMT. The latest estimate for which data was available is 180 million VMT in 1976. The relatively low rate of change from 1970 to 1974 reflects the efffects of the 1973-74 oil embargo. From 1974 to 1976, vehicle usage accelerated as gasoline became more available and price increases were absorbed by the economy. For the No-Build system, VMT is projected to increase by 24.1 percent over that of 1976, compared to a population increase of 16.7 percent. Implementation of the Regional Transit Development Program could potentially limit VMT growth to 17.3 percent of that in 1976.

Although VMT will increase, mobile source emissions are expected to decrease, as indicated in Table A-5-3. Emissions were calculated by means of the Direct Travel Impact Model (DTIM), which applies composite (vehicle) emission factors to VMT output by the LARTS model. The revised emission factors, released by the Environmental Protection Agency in January 1978, take into account the mix of model year cars expected to occur in 1990. Thus as more and more "clean" cars enter the fleet, replacing older model year vehicles, mobile source emissions are expected to decrease. The reader should note that the 1990 emissions calculated with the revised EPA factors (January 1978) are about twice as high as the emissions calculated by earlier EPA factors, those published in AP 42 Supplement 5.

TABLE A-5-3

MOBILE SOURCE EMISSIONS INVENTORIES

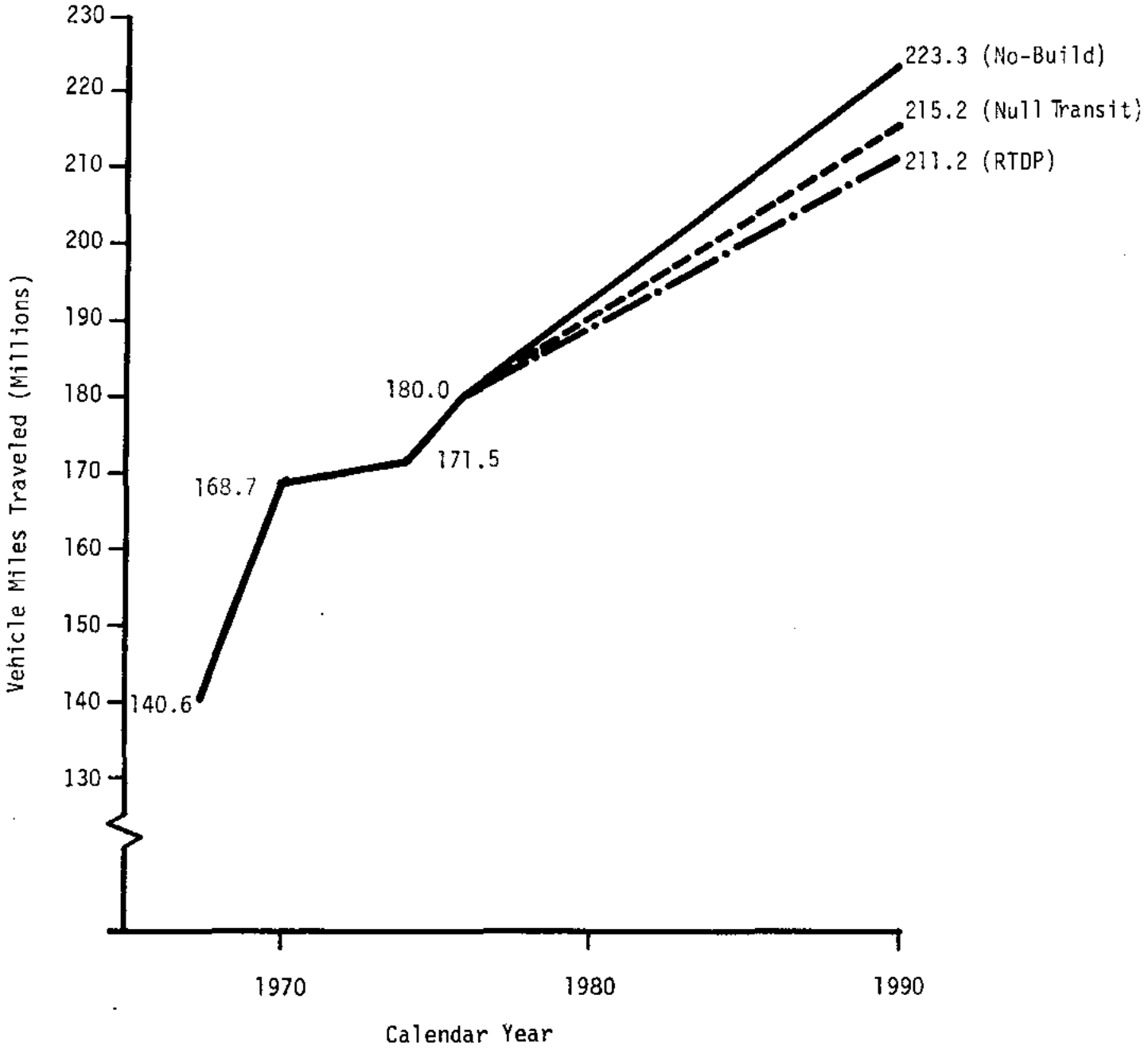
SYSTEM	THC	NOx	SOx	CO	TOTAL
	(tons/day)	(tons/day)	(tons/day)	(tons/day)	
1974 BASE YEAR	1184	931	40	7726	9881
No-Build	353	510	50	3054	3967

Source: Caltrans Direct Impact Travel Model (Jan. 1978)

table A-5-3

VMT ESTIMATES

(Light and Heavy Duty Vehicles)



Source: Caltrans LARTS Transportation Model

figure A-5-1

A.6
FINANCING STATE HIGHWAYS

Figure 6.4-2 Historical Exp. for Const. & Maint. on State Highways in the SCAG Region.

- Amounts shown taken from Statement A-8 "State Highway Program Financial Statement and Statistical Reports".

Figure 6.4-3 Map
Notes on back

Figure 6.4-4 State Highway Tax Dollar Donations -- SCAG Region

- Historical donations calculated from Caltrans' statistical reports and U.S. Highway Trust Fund data.
- Projected donation based on November CHC adopted Planning Program Assembly. SCAG Region generates 48% of California's State and Federal Highway User Tax Revenues

Figure 6.4-5 Highway User Tax Dollars Generated vs. Projected Exp.

- Revenues generated based on November CHC Planning Program and California's estimated payments to the Federal Highway Trust Fund.
  Assumes SCAG Region generated 48% of California's State and Federal Highway User Tax revenues.

Figure 6.4-6 Comparison of Existing State Highway Need to Programmed Expenditures

- Programmed expenditures based on November CHC adopted Planning Program.
- Existing State Highway needs from Caltrans' 1977 "Now" Needs study, capitalized over a 5-year period with costs escalated at 8%/year.

Figure 6.4-7 Financial Plan for State Highways

- Revenues available based on statewide totals available for capital outlay of $2.28 billion for FY 79-83 and $1.526 billion for FY 84-88.
- Assumes SCAG region receives 50% of total State capital outlay.

APPENDIX B

Summary of Public Participation Activities

The Southern California Association of Governments, as an areawide planning organization, formulates plans which affect the future of 10 million people in this six-county, 151-city region. SCAG thus tries to inform and involve members of the public in its activities, to ensure development of sound and viable plans.

Policies of the Public Participation Program

SCAG's public participation program has, over the years, developed its own set of policies for the overall, on-going planning process. These are:

- SCAG is committed to a broad-based public participation program which will:

  a) involve a cross section of affected/interested parties and ensure participation from all segments of the population, including low-income and minority citizens;

  b) provide public access to the planning and decision-making process through a variety of means, including the formal public hearing process;

  c) include a public information component providing complete, readily understood information to help the public formulate their recommendations to decision-makers. In addition, technical material will be available on request.

- SCAG is committed to an on-going process of public participation which encourages public input in all phases of the planning process, including development of public participation programs, plan development, evaluation, and program implementation. Further, SCAG formally considers and responds to inputs from local officials and technical staff, as well as the public. SCAG documents inputs from all of these sources throughout the planning process.

- SCAG is committed to developing a unified public participation program, with appropriate governmental units and participating agencies, which will emphasize joint responsibility for effectively involving the public in the planning process.

- Within the resources of the program, SCAG is committed to providing human and financial resources to implement the Public Participation Program.

Key Elements of the Program

Policies give the Public Participation Program only general direction. In presenting the DRTP, DEIR, and seeking public input for the final documents, these policies were translated into four primary functions: (1) information dissemination, involving a comprehensive media campaign; (2) public involvement in the planning process, through meetings, workshops, and hearings; (3) identification and communication of public concerns to elected officials; and (4) integration of public concerns into the planning process.

As in previous years, two key elements of the program were public workshops and hearings. Beginning at the end of May and continuing through June, public workshops were held in each of the counties, culminating in a public hearing in Los Angeles County.

Mobile Source Emission Control Measures
Considered in Draft AQMP

Appendix C-1
Air Quality Control Measures

The following control measures are being considered in the evaluation and includes all measures earlier suggested by AQMP Early Action Plan, Clean Air Act Amendments of 1977, Energy Policy and Conservation Act, National Mass Transportation Assistance Act, Subregional Transportation Plans, 1977 Regional Transportation Plan, various literature reviewed, and comments received.

#	Control Measure
	Increased Air Passenger Load Factor
	Jet Aircraft Ground Taxi Operation Improvements
	Triple Trailer Trucking
	Modified Work Schedules
	Parking Mgmt., Carpool Preferential Parking
	New General Aviation Aircraft Engine Controls
	Emission Standards for all (construction, land fill and other vehicle types) New Non-Farm Heavy Duty Off-Road Vehicles
	Retrofit Gasoline Powered, Non-Farm, Off-Road Heavy Duty Vehicles
	Tow Jet Aircraft
	Electrify Railroad Switching Yards
	Fuel Transfer at Jet Airports
	Trip Reduction Program
	Emission Standards for New Farm Equipment
	Modify Old and New Jet Aircraft Engines to Meet Proposed 1978 Federal Standards
	Exhaust Emission Controls, Existing Farm Tractor -- Gasoline Powered

Inspection and Maintenance of Light Duty Vehicles

Increased Bicycle and Pedestrian Facilities

Improved Emission Controls for Motor Vehicles

Reduce Jet Aircraft Queuing Delays

Pedestrian Facilities

Rideshare Program

Traffic Signal Synchronization

Voluntary Retirement of Old Cars

Reduce Use of Aircraft Auxiliary Power Unit

Reduced Transit Fares

Auto Free Zones

Electric Vehicles

Marine Vapor Recovery Operations

Expanded Transit Level of Service

Off-Road Motorcycle Emission Standards

Tax Bunker Fuels

Parking Management: Increased Parking Surcharge

Congestion Pricing

Automobile Operating Cost Increase (Gas Tax)

Parking Mgmt: Reduced Carpool Parking Cost

Increase Use of Rail, Air, and Bus for Intercity Travel

Increase Truck Trailer Piggy-backing on Rail

Eliminate On-Street Parking; Select Arterials Peak Hour

Motor Fuel Blended with Methanol and Ethanol

Paratransit

Expand Capacity and Improve Flow on Highway Network

Employers Rideshare Program

Emissions Tax

18 Year Old Licenses

Home Goods Delivery

Coordinate Tanker Arrivals

Pipeline Freight Transport

Freeway Facility and Transit Improvements Supporting High-Occupancy Vehicle Movement

Wilshire Rail Line

Los Angeles Downtown People Mover

Congestion Relief-Freeway Widenings

Transit Improvements

Railroad Diesel Engines

Marine Diesel Engine Controls

APPENDIX D

LEVEL OF SERVICE STANDARDS FOR FIXED-ROUTE LOCAL SERVICE

1) I. Fixed-Route Service - Scheduled service operating repeatedly over the same street or highway pattern.

   a. Local Service -- Routes or segments of routes having 4 or more stops per mile.

      (1) Primary Service -- Scheduled routes operating at least 5 bus trips per day, 5 days per week, and 52 weeks per year.

      (2) Other Service -- All routes not included in primary service, such as seasonal service, and routes operating less than 5 trips per day and less than 5 days per week.

   b. Express Service -- Routes or segments of routes having less than 4 stops per mile.

   II. Demand-Responsive Service -- Unscheduled service which responds to demand and which is not restricted to a fixed street pattern (e.g., Dial-A-Ride).

2) Route-miles -- Sum of the street or highway mileage of all routes in the same service category, adjusted for duplication. For example, if two local primary routes operate along the same segment of street, regardless of the direction of travel, this segment should be counted only once. If a particular route operates in both directions over a street segment, this segment would be counted only once.

3) Bus-mile -- Sum of the total bus-miles of all routes in the same service category. One bus-mile is one bus traveling one mile.

   (1) Primary Service -- Scheduled routes operating at least 3 times per day, 5 days per week, and 52 weeks per year.

   (2) Other Service -- All express routes not included in primary service.

APPENDIX E

The Metropolitan Transportation Engineering Board (MTEB), which serves as the SCAG technical committee for the regional highways system, has been developing a process for establishing regional priorities for major highway projects through efforts of a subcommittee. The MTEB and the Transportation and Utilities Committee have reviewed and endorsed continuing with the proposed process for establishing regional priorities. The process is presently being reviewed by the four county Transportation Commissions and IVAG and VCAG.

The process under consideration involves taking the list of priority projects from each county and applying the following criteria with their respective weight factors to the county projects to establish the regional priority list of projects:

I.	Performance Criteria	80 Points
	A. Safety	30 points
	B. Delay	10 points
	C. Volume/Capacity Deficiencies	10 points
	D. Demand	10 points
	E. System Continuity	20 points
II.	Impact Criteria	60 Points
	A. Compatibility with Local, Sub-regional and Regional Plans	20 points
	B. Community Support	20 points
	C. Environmental Impacts (Economic, Natural, Social) and Multi-Modal Benefits	20 points
III.	Special Factors	60 Points

APPENDIX F
Subregional Plans

- Imperial Valley Association of Governments (IVAG 1977)
- County of Los Angeles, Transportation goals and policies, from County's Environmental Development Guide, adopted October 1, 1970. Goals policies and actions from the County's General Plan Element, adopted 1975: and the County's Preliminary General Plan, Transportation Element, January 1977; not adopted
- Riverside Countywide Transportation Study 1977, update; and Riverside Countywide Transportation Study Final Report 1977
- San Bernardino Associated Governments (SANBAG), Transportation Plan for San Bernardino County, January 1975: SB County Subregional Transportation Plan, pre-draft, 1977
- Ventura County (VCAG), Ventura County 1976 Subregional Plan, and Transportation Plan, Ventura County, update, adopted October 1977
- Orange County Issue Paper 3/24/78

APPENDIX G
Airports of Regional Significance

The following criteria define airports of regional significance:

Any airport meeting or projected to meet one or more of the following minimum levels of activity.

50 based aircraft.
25,000 annual itinerant operations.
35,000 annual local operations.

Any airport served by a CAB or PUC certificated route air carrier.

Selected public use airports located more than 30 minutes ground access time (about 20 miles) from the nearest airport meeting the above minimum-activity-level criterion.

Other airports in the regional plan are airports having special significance.

A specially significant airport is one which provides special or unique services to the region as a whole or to a major portion thereof or has a direct effect on the operation of a regionally significant airport.

- Airports of special significance to the region include:

  All active military airports.

  All publicly owned or operated airports.

  Selected airports providing unique recreational opportunities (e.g., skydiving and sailplane soaring).

  Selected airports providing special emergency facilities (e.g., fire fighting bases).

  Selected airports having an existing or potential airspace conflict with an existing regionally significant airport.

All remaining airports in the region are considered to have local significance only and are not included in the regional plan. These airports include:

- Most privately owned, publicly used airports not meeting the minimum-activity-level criterion.
- Most privately owned, privately used airports.
- All civil heliports and helistops.

The regional or local significance of an airport is primarily an indication of its importance to the region as a whole, not to the local airport area. An airport is not necessarily of less importance to the community it serves because it is classified as having special or local significance rather than regional significance.

APPENDIX H

SECTION 5 TRANSIT MONEYS DISTRIBUTION AGREEMENT

1. This agreement will apply to the inter-county allocation of UMTA Section 5 funds in the Los Angeles/Long Beach urbanized area for FY-79 through the authorization period covered by pending federal transportation assistance legislation.

2. Additional funds which become available for FY-78/79 will be allocated concurrently with FY-79/80 funds;

3. Additional Section 5 funds available in FY 78/79, and all Section 5 funds in FY 79/80 will go to Los Angeles County after the following dollar amount guarantees to Orange and San Bernardino have been met:

	FY-79	FY-80
Orange	$13,700,000	$13,022,000
San Bernardino	$ 1,259,000	$ 1,366,000

4. A formula approach for UMTA Section 5 allocations in the Los Angeles-Long Beach urbanized area is endorsed. The agreed-upon formula will apply to allocations beginning in FY-80/81 and continue through the period of this agreement.

5. Allocations for FY-80/81 and subsequent years covered by this agreement will be made by a three-factor formula. The factors, and their respective weightings are:

   1. % Population - 60%
   2. % Revenue Vehicle Miles - 20%
   3. % Boardings - 20%

6. The allocation of UMTA Section 5 funds will be treated independently from other funds, e.g. TDA funds.

7. A "one plus two" carry-over rule at the regional level; that is, funds are to be available for use by the county to which they are allocated and for two years after is established. If they have not been expended (drawn-down) during these years, they will revert to the regional fund for redistribution by the SCAG Executive Committee.

8. A principle of fiscal prudence is adopted to the effect that increases in service or reduction in fares will not be undertaken unless they can be sustained throughout the entire period of this agreement.

9. To continue to examine the utility of including efficiency and effectiveness measures in future year allocations, but not to include these measures in the formula during the period of this agreement.

10. Each of three factors in the formula will be updated annually for purposes of making allocation calculations. FY-77/78 transit operating data and January 1, 1978 population data will be used for making FY-80/81 allocations. FY-78/79 data will be used for FY-81/82; and so on.

11. Transit system data submitted to SCAG for purposes of making annual formula calculations will be verified by each county transportation commission.

12. SCAG will update population figures annually.

Appendix I

Finance Element Major Assumptions

The following major assumptions were used in Section I and II of this analysis. (Other assumptions are detailed in the text and in the notes in Appendix J.)

(1) Costs will generally grow by 8% annually.

(2) Federal Highway Administration funds allocated to California will grow by approximately 5% annually.

(3) After fiscal year 1983 the state will continue to retain sufficient state cash to match all federal funds. This will be done despite a projection of inadequate funds for full highway maintenance after that time.

(4) Consistent with preliminary five year highway capital fund estimates provided by Caltrans, the SCAG region will be allocated 40% of revenues available statewide for highway capital outlay.

(5) Cities and counties will retain sufficient local funds to match federal capital revenue apportionments.

(6) Transit capital expenditures after 1982 will remain at approximately 15% of operating expenditures (the percentage for 1983 in the aggregated Short-Range Transit Plans.)

(7) Caltrans will pay for maintenance costs of high occupancy vehicle lanes, highway transit stations, and park-n-ride lots.

(8) All operating costs for the Mass Rapid Transit Starter Line, and the Downtown People Mover will be covered by fares, advertising, parking fees, and other miscellaneous operating revenues.

(9) Except for a small portion of the costs for element II of the complete RTDP all costs will be incurred by FY 1988.

Appendix J Continued

Appendix J - Notes for Tables 1 - 6

Table 1

(1) Except for UMTA Section 5, FY 1979 figures from short-range transit plans of regional transit operators for all entries as noted. Section 5 funds are taken from the new transit legislation.

(2) Based on the SRTPs it is assumed that 70% of capital expenditures will be funded by UMTA Section 3 funds. An additional $100 million is assumed to be available for the DPM during FY 1979-1984.

(3) Federal legislation has increased the region's Section 5 allotment by approximately 35%. It is assumed that the FY 1984-1988 allotment will be 35% greater than that for FY 1979-1983.

(4) Federal legislation leaves FAU funds at current levels. It is assumed that FAU funds will remain at current levels over the ten-year period.

(5) Total TDA forecasts from the UCLA Business Forecasting Project. It is assumed that system maintenance costs not covered by other sources are covered by TDA funds.

(6) Fares and miscellaneous revenues are assumed to provide 32% of operating revenues. This is a region-wide percentage taken from the SRTPs. Additionally, all operating costs for the DPM and MRT, as well as 32% of operating costs for commuter/express buses, are assumed to be financed via fares and miscellaneous revenues. For the sake of simplicity all of these revenues are included under fares.

(7) See Note 6.

(8) The portion of state gas tax needed to match Federal Aid Interstate for freeway transit guideway.

(9) Assumes that all FAI funds needed to complete the Interstate system in the SCAG region by FY 1988 will be made available. The portion going to transit is for freeway transit guideway.

(10) See note 9.

(11) Assumes that federal revenues to California will grow by 14% every three years. This percentage is based on analysis of federal highway legislation. All additional federal aid is assumed to be used for capital expenditure.

It is also assumed that the proportion of FAP, FAO, and state gas tax funds for capital expenditure is the same as in the 1979 Proposed STIP for FY 1980-1984 provided by Caltrans (39%).

(12) See note 4. After deducting FAU funds to transit, it is assumed (based on estimates of current FAU use provided by Caltrans) that approximately 19% of remaining funds go to highways, and 81% to streets and roads.

Appendix J - Notes for Tables 1 - 6

Table 1 (Continued)

(13) See note 11.

(14) Sum of Article 19 funds used for capital and non-capital purposes. Capital revenue amount based on assumption in note 11. All non-capital expenditures are assumed to be made from Article 19 funds.

(15) See note 4.

(16) Base numbers from State Controller's Financial Transactions Concerning Streets and Roads, FY 1976-1977, and SCAG working paper entitled, Preliminary Impacts of Proposition 13 on Transportation in the Region. Assumed to grow 14% every three years beginning in FY 1979.

(17) Base numbers, see note 15. Assumed to remain at FY 1979 level.

(18) Assumes that 10% of TDA funds will be allotted to streets and roads.

(19) See note 16.

(20) From 1978 Draft Regional Transportation Plan. No figures available for FY 1984-1988.

(21) See Note 6.

(22) Remainder of TDA funds after transit and streets and roads funds removed per notes 5 and 18.

(23) Estimate from 1979 Proposed STIP.

Appendix J - Notes for Tables 1 - 6

Table 2

(1) FY 1979-1983 calculated by deducting operating expense for 450 buses from the SRTPs. This adjustment is made to reflect the projected impact of Proposition 13, particularly in Orange County. Costs assumed to grow at 8% annually after FY 1983.

(2) FY 1979-1983 calculated by deducting capital expense of 450 buses from the SRTPs. FY 1984-1988 costs assumed to be approximately 14% of operating expenditures. This percentage is consistent with the regionwide ratio provided in the SRTPs for FY 1983.

(3) Alternative J, from the Regional Transit Development Program Integrated Program Report, November 1978. All operating costs are assumed to be financed by fares. All costs are escalated at 8% per year.

(4) From the Regional Transit Development Program Integrated Program Report, November 1978. Assumes capital expenditures from FY 1979 through FY 1981, escalated at 8% yearly. All operating costs are assumed to be financed via fares, advertisements, parking, and other miscellaneous sources. $116 million of capital costs are assumed to be financed with UMTA Section 3 funds. $25 million in capital costs is assumed to be financed by the FHWA. Note that Proposition 5 funds which could be used for additional financing, are for the purpose of analysis, excluded.

(5) From the Regional Transit Development Program Integrated Program Report, November 1978. Capital funding from FAI, and State Article 19. Based on SRTP's, 32% of bus operating revenue assumed to be covered by fares.

(6) Estimates provided by Caltrans.

Appendix J - Notes for Tables 1-6

(7) Highway expenditures are derived from the following assumptions about Caltran's revenues and expenditures.

(a) Capital and non-capital expenditures are constrained by total revenue.

(b) FAI and FAP revenues provided to Caltrans are assumed to grow by 14% every three years.

(c) All new federal monies are assumed to be used for capital expenditures during FY 1979-1984.

(d) After FY 1984, non-capital needs are assumed to grow by 6% annually.

(8) It is assumed that 30% of state non-capital revenues (assumed to be equivalent to expenditures) will be used in the SCAG region. Historically (1967-1976) approximately 30% of Caltrans maintenance expenditures have been made in the SCAG region. From the total, all FAU, other local federal aid, and Proposition 5 is deducted.

(9) Approximates totals from the California Transportation Commission's 1979 Fund Estimate. Excludes the amount for metered ramp bypasses (Note 19) and traffic signal synchronization (Table 3, Note 7).

(10) Assumes an additional 82 or 83 ramps will be built per year between FY 1979 and FY 1988. Capital costs assumed to increase at 8% yearly. Operating costs assumed to be paid from Caltrans' non-capital funds.

(11) Total for operational improvements less metered ramps, traffic signals, ramp bypasses, and Commuter Computer.

Appendix J - Notes for Tables 1 - 6

Table 2 (Continued)

(12) From the Proposed 1979 STIP.

(13) From Table 6.4-3. Assumes equal yearly costs (in current dollars) are escalated at 8% annually. Maintenance costs are assumed to be paid from Caltrans' noncapital funds.

(14) Costs escalated beginning in FY 1980. Maintenance costs assumed to be paid from Caltrans' non-capital budget.

(15) Assumes an additional 136 bypasses built during FY 1979-1983 (from the TIP) and 304 during FY 1984-1988. Capital costs escalated at 8% yearly funded from highway operational improvements. Maintenance costs assumed to be paid from Caltrans' non-capital funds.

(16) Base data from State Controller's Financial Transactions Concerning Streets and Roads, FY 1976-1977. Assumed to escalate at 8% annually until all non-federal funds are expended, except for those needed to match federal funds.

(17) Total street and road revenue less maintenance, administration, traffic signals, and rideshare ($1 million in FY 1984-1988).

(18) See note 20, Table 1.

Table 3

(1) Costs escalated annually beginning in FY 1984. Costs are assumed to be borne 50% by the public sector and 50% by the private sector.

(2) Costs escalated annually beginning in FY 1979.

(3) Costs, escalated annually beginning in FY 1979, are assumed to be funded from TDA funds. Private sector costs are undetermined.

(4) Costs escalated annually beginning in FY 1982.

(5) Costs escalated annually beginning in FY 1979. Assumes 24 additional lots built yearly until FY 1984, plus 10 lots in 1985.

(6) Costs escalated annually beginning in FY 1979. One third of costs are assumed to be borne by the public sector.

(7) Assumes that 660 additional intersections will be synchronized per year by local governments and Caltrans beginning in FY 79. Extrapolating from the TIP, it is assumed that approximately $19 million will be funded during FY 1979 - 1983. Another $22 million is assumed to be funded during the next 5 years.

(8) Costs escalated beginning in FY 1981 and ending in FY 1987. Assumes that 53,000 cars will be purchased yearly.

(9) Annualized costs are taken from the Draft Air Quality Management Plan, August 1979. This cost is escalated beginning in FY 1984, and is assumed to be borne 50% by the public sector.

(10) Costs escalated yearly beginning in FY 1984. Assumes purchases of 200 buses yearly, and fare funding of 32% of operating costs. This is a regional percentage taken from the short-range transit plans of the transit operators.

(11) All private sector costs are derived per the explanation in the text except as noted below.

(12) Costs escalated beginning in FY 1981.

(13) See note 9.

Appendix J Continued

Appendix J - Notes for Tables 1 - 6

Table 5

(1) Calculated by increasing the regionwide return on highway user revenues from approximately 55% to approximately 75%.

(2) Calculated by taking 80% of the capital costs for the Wilshire MRT and the Santa Ana Corridor.

(3) Assumes demand for taxed merchandise is perfectly price inelastic.

Table 6

(1) Assumes perfectly price inelastic goods (i.e., demand does not change with imposition of tax).

Appendix K Continued

Notes for A-3

(1) There will be an estimated 17% reduction in fuel consumption. There may be additional operating and maintenance costs, but these costs should be offset by a savings in fuel consumption.

(2) This measure should result in an actual savings in operating and maintenance costs, although exact costs haven't been determined.

(3) The public sector may assume 50% of the financing of this measure.

(4) Operating and maintenance costs may be included in the street system budget.

(5) The costs included are for the first 5 years of the program only in order to be consistent with estimated emission reductions. The costs for the program are likely to continue into the future.

(6) Includes a savings from the resource recovery of scrap metals.

(7) Costs for this measure are undetermined at this time.

(8) The Project life for all elements of this measure is assumed to be 30 years with the exception of the commuter express buses which are assumed to have a project life of 12 years.

(9) Caltrans assumes that all costs are capital and that there will be no additional operating and maintenance co costs.

Appendix L

CAPITAL, OPERATING, AND MAINTENANCE COSTS FOR THE AQMP RECOMMENDED MEASURES

Measure Number	Name of Measure	Total Capital Costs (Crnt.$1,000's)	Annualized Capital Costs (Crnt.$1,000's)	Annual Operating and Maintenance Costs (Crnt.$1,000's)	Direct Total Annualized Costs to Public Sector (Crnt.$1,000's)	Direct Private/ Household Sector Total Annualized Cost (Crnt.$1,000's)	Unit Cost (Current $'s) Capital O+M	Number of Years of Project
H-1	Increased air passenger load factor		Net	Savings				
H-2	Jet Aircraft Ground taxi operation		Net	Savings				
H-3	Triple Trailer Trucking		Net	Savings				
H-4	Modified work schedules		Net	Savings	(to employers & employees)			
H-5	Parking Management: Carpool Preferential Parking	0	0	0	0			
H-6	New General Aviation Aircraft engine controls	15,000	1,530	(1)	0	1,530	$700-$1,500/ Vehicle	20
H-7	Emission standards for all new non-farm heavy-duty off-road vehicles (construction, landfill and other vehicle types)	6,500	662	980	0	1,642	$450-$1,000/ Vehicle	20
H-11	Electrify Rail yards	24,000	2,100	(2)	0	2,100 (3)		
H-13	Trip Reduction Program	0	0	5,000	5,000	0		
H-15	Emmissions stds. for new farm equip.	6,600	670	740	0	1,410	$500/Vehicle	20
H-16	Modify old and new jet aircraft engines to meet proposed 1978 Federal Standards	132,000	13,500	Undetermined	0	13,500		20
H-18	Inspection & maintenance of light-duty vehicles	250,000	37,000	69,505	0	106,505	$15/Vehicle	10
H-23	Increased bicycle & pedestrian facilities	120,000	10,600	(4)	10,600	0		
H-24	Improved emissions controls for motor vehicles	325,500 (1982-1987) (5)	81,525	3,250	0	84,775	$100/Car $1,000/Truck	5
H-25	Reduce jet aircraft queuing delays	15,000	1,530	-400 (Annual Savings)	1,130	0		20
H-34	Rideshare Program	1,500	224	37,776	12,000	26,000		10
H-35	Traffic signal synchronization	49,500	5,040	-	5,040	0		20
H-36	Voluntary retirement of older cars	153,100	21,200	1,300 (6)	22,500	0	$425/Car	7
H-60	Electric Vehicles	0	0	19,500	19,500	19,500		
H-64	Apply on-road Motorcycle emmissions standards to off-road motorcycles	37,500	5,600	11,500	0	17,100	$150/Vehicle $40/Vehicle	10
H-72	Improved trucking efficiency	(7)	(7)	(7)	(7)	(7)		
H-85	Freeway facility & transit improvements supporting high occupancy vehicle movement	1,722,294	161,108	112,554	273,662	0		30 (8)
H-86	Wilshire Rail Line	1,120,000	91,549	23,000	114,549	0		50
H-87	Los Angeles Downtown People Mover	167,000	14,835	4,000	18,835	0		30
H-88	Congestion Relief-Freeway Widenings	77,800	6,911 (9)	0	6,911	0		30
H-89	Transit Improvements	150,000	19,905	86,000	105,905	0		12
H-113	Purchase of Gvt. Cars for Low Emission and High Fuel Economy		Undetermined					
H-114	Reg.Prgm. of Insp/Maint for Govt. Veh. (Discounts impact of H-18)		Undetermined					
H-117	Santa Ana Corridor	207,500	18,432	0	18,432	0		30
H-118	Non-Recurrent Congestion Relief	Saving						
	TOTAL							

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APPENDIX M

KEY SCAG* DOCUMENTS CONTRIBUTING TO THE ANNUAL REGIONAL TRANSPORTATION PLAN

YEAR		Descriptive Title	Author	RTP Topic/Subtopic
1973	1.1	Regional Development Guide	SCAG	Development Guide
	1.2	Transportation Plan Evaluation Process	Gruen Associates	Plan Development
	1.3	Southern California Regional Airport System Plan	SCAG	Aviation
	1.4	SCAG 1990 Transportation Study, Methodology, Analysis, Results: Phase I	Caltrans/LARTS	Plan Development
1974	2.1	Critical Decisions Plan for Regional Transportation	SCAG	Plan
	2.2	Critical Decisions, Transportation Frameworks	SCAG	Plan Development
	2.3	Critical Decisions, Highway Element	SCAG	Highways
	2.4	Critical Decisions, Transit Element	SCAG	Transit
	2.5	Short Range Transportation Plan	SCAG	Air Quality
	2.6	An Assessment of Social Impacts Related to the SCAG Short Range Transportation Plan	ASI	Impacts, Social
	2.7	The Regional Impacts of Near-Term Transportation Alternatives: A Case Study of Los Angeles	Rand	Impacts, Air Quality, Energy
	2.8	Short Range Planning for Reduced Vehicle Miles of Travel	Voorhees, Alan M.	Impacts, Social, Economic, Political
	2.9	Transportation Energy in Southern California	Lansing, Neal	Energy
	2.10	Energy Consumption by Transit Mode	Ross, Howard, et. al.	Energy
	2.11	San Bernardino Freeway Express Busway Evaluation, First Year Report	Crain and Associates	Ride-sharing
	2.11	Transit Alternatives for the Los Angeles Region	Ross, Howard, et. al.	Transit
	2.12	Guideway Transit for Southern California, A Policy Analysis	Cambridge Systematics	Transit
	2.13	Commuter Railroad Feasibility Study ...	Englund, Carl	Maritime and Railroads
	2.14	Commuter Railroad Feasibility Study ... Supplement	Englund, Carl	Maritime and Railroads
	2.15	San Bernardino Freeway Express Busway Evaluation, Second Year Report	Bigelow-Crain Associates	Ride-sharing
	2.16	Procedural Guide for Development of the Regional Transportation Plan	SCAG	Plan Development
1975	3.1	1975 Regional Transportation Plan (EIR appended)	SCAG	Plan
	3.2	Alternative Transportation Institutions for Southern California	Stern, Wendy, et al	Institutional Arrangements
	3.3	1974-1975 SCAG Transportation Development Program	SCAG	Transit
	3.4	Procedural Guide to the 1976 Regional Transportation Plan	SCAG	Plan Development
1976	4.1	1976 Regional Transportation Plan (EIR appended)	SCAG	Plan
	4.2	SCAG '76 Growth Policy	SCAG	Development Guide
	4.3	Needs and Deficiencies: Auto and Transit Accessibility in the SCAG Region. Draft report	SCAG	Plan Development
	4.4	Private Sector Study, An Analysis of Dial-A-Ride in the SCAG Region. Draft report	SCAG	Ride-sharing
	4.5	The Parking Management Planning Study, Draft Final Report	SCAG	Air Quality
	4.6	Planning for the Automobile in the SCAG Region	SCAG	Auto
	4.7	Transit Service Policies	SCAG	Transit
	4.8	Transit Safety and Security: A Design Framework	SCAG	Transit
	4.9	Institutional Arrangements for Transit	SCAG	Institutional Arrangements
	4.10	Transportation Systems Management Element	SCAG	TSM
	4.11	The 1976 Urban and Rural Travel Survey. Volume I Background and Description	Caltrans	Plan Development
	4.12	Transit Barriers, An Operators Guide to Identification of ...	SCAG	Transit
	4.13	The Regional Economy and Trend Projections	Natelson Co.	Plan Development
	4.14	Guide for Economic Income Analysis	Natelson Co.	Plan Development
	4.15	The Use of Models in Evaluating the Impacts of Transportation Policy on the Private Sector ...	Natelson Co.	Plan Development
	4.16	San Bernardino Freeway Express Busway Evaluation, Third Year Report	Crain and Associates	Ride-sharing

* Documents prepared by or for SCAG.

1977	5.1	1977 Regional Transportation Plan	SCAG	Plan
	5.2	Environmental Impact Report for the 1977 RTP	SCAG	Impact
	5.3	Regional Short Range Transit Plan	SCAG	Transit
	5.4	Air Quality Impact of Local, State and Federal Plans	SCAG	Impact, Air Quality
	5.5	Ground Access of Airports in the SCAG Region	SCAG	Aviation
	5.6	The Development of a Disaggregate Behavioral Work Mode Choice Model	Cambridge Systematics	Plan Development
1978	6.1	1978 Regional Transportation Plan	SCAG	Plan
	6.2	Environmental Impact Report for the 1978 RTP	SCAG	Impact
	6.3	San Bernardino Freeway Express Busway, Evaluation of Mixed Mode Operations, Final Report	Crain and Associates	Ride-sharing
	6.4	Air Quality Management Plan, Draft	SCAG	Air Quality
	6.5	Prospectus for the SCAG Region (A Multi-Year Rationale for the SCAG Planning Work Program)	SCAG	Plan Development
	6.6	Inventory of Paratransit Services Vols. I-VIII	SCAG	Ride-sharing
	6.7	1978 Transportation Systems Management Report	SCAG	TSM
	6.8	Regional Transit Development Program	SCAG	Transit
	6.9	SCAG Regional Airport System Plan Status, Draft	SCAG	Aviation
	6.10	1978 Regional Transportation Plan Amendment Draft	SCAG	Plan
	6.11	Environmental Impact Report Supplement to the Draft 1978 RTP Amendment	SCAG	Impact
	6.12	Come Together Ridesharing Program Draft Report	SCAG	Ridesharing

APPENDIX N
SUBREGIONAL PLANS CONTRIBUTING TO RTP DEVELOPMENT

IMPERIAL COUNTY

Imperial Valley Association of Governments(IVAG)

- o Public Transportation Element. September, 1978.
- o Imperial County Subregional Transportation Plan, prepared for Imperial Valley Association of Governments (IVAG) by Wilbur Smith and Associates. April, 1975.

LOS ANGELES COUNTY

County of Los Angeles

- o Short-Range Transportation Plan for Los Angeles County, by Los Angeles County Road Department. January 15, 1975.
- o Plan of Bikeways (a sub-element of the Transportation Element) and final environmental impact report, by Los Angeles County Department of Regional Planning. July 30, 1975.
- o Environmental Development Guide: General Plan Program, by Los Angeles County Regional Planning Commission. February, 1972.
- o Noise Element, proposed element, draft environmental impact report for Los Angeles County General Plan, Los Angeles County Board of Supervisors. Adopted January 31, 1975.
- o Safety Element, proposed element, draft environmental impact report for Los Angeles County General Plan, Los Angeles County Board of Supervisors. Adopted January 1, 1975.
- o Scenic Highway Element, proposed element, draft environmental report for Los Angeles County General Plan. Los Angeles County Board of Supervisors. Adopted January 31, 1975.
- o Draft Transportation Element, Los Angeles County Proposed General Plan, Department of Regional Planning. August, 1978.

City of Los Angeles

- o Citywide Plan, City of Los Angeles, Department of Planning. April 3, 1974.
- o Circulation Distribution Program Phase One, the Los Angeles Bunker Hill and Central Business District, a report prepared for the Community Redevelopment Agency (CRA). August, 1975.
- o Circulation Distribution Program Phase One Community Participation... The Los Angeles Bunker Hill and Central Business District, a report for the Community Redevelopment Agency(CRA). August, 1975.

- o Circulation Distribution Program Phase One Appendix...The Los Angeles Bunker Hill and Central Business District, a report prepared for the Community Redevelopment Agency(CRA). August, 1975.

- o Comparative Evaluation of Alternative DPM Segments of Circulation Distribution System (Draft), Community Redevelopment Agency. July, 1976.

- o Downtown People Mover Element of the Circulation Distribution System Proposal, Community Redevelopment Agency. July, 1976.

- o DPM System Description - Circulation Distribution System (Draft), Community Redevelopment Agency. July, 1976.

- o Evaluation of Bus Improvements - Circulation Distribution System (Draft), Community Redevelopment Agency. July, 1976.

- o Downtown People Mover Program, Draft Environmental Impact Report, Community Redevelopment Agency. September, 1978.

Southern California Rapid Transit District(SCRTD)

- o Alternative Transportation Corridors and Systems, Phase I Report, SCRTD. Prepared by Alan M. Voorhees and Assoc.

- o Final Report, Transit Improvement Program for the San Gabriel Valley, SCRTD. November, 1975.

- o Transit Technical Studies, San Gabriel Valley Transit Improvement Plan, prepared for SCRTD by Wilbur Smith and Assoc. June, 1975.

- o Final Report, A Recommended Transit Improvement Program For the Los Angeles-Mid-Cities Area, prepared for SCRTD by CENTERS FOR STUDY. May 16, 1975.

- o Final Report, Transit Improvement Program, Mid-Cities Area-Phase II, SCRTD. November, 1975.

- o Medium Capacity Transit Study - Traffic Analysis, prepared for SCRTD by De Leuw Cather and Co. October, 1975.

- o Preferential Facilities for High Occupancy Vehicles, prepared for SCRTD by Wilbur Smith and Assoc. March, 1974.

- o Evaluation of Transit Alternatives for the Los Angeles Starter Line Corridor. Summary Report. July, 1976.

- o Final Report "A": System Level Evaluations. April, 1976.

- o Final Report "B": Corridor/Project Environmental Impact Assessment. April, 1976.

- o Final Report "C": Corridor/Project Cost-Effectiveness Comparison. April, 1976.

- o Application for Preliminary Engineering. September, 1976.
- o SCRTD Resolution R-74-12. Adoption of Transportation Goals and Objectives Policy Statement for Submission to Los Angeles County Citizens' Planning Council. January, 1974.
- o Technical Analysis of Rapid Transit Alternatives for Los Angeles. Summary Report. 1976.
- o Short Range Transit Plan, Annual, FY 1977, FY 1978.

ORANGE COUNTY

Orange County Multi-Modal Transportation Committee (MMTC)

- o Preliminary Transportation Plan, A Planning Document, County of Orange, October, 1974. Revised October, 1975.
- o South East Orange County Circulation Study, prepared by VTN/AMV, August 15, 1975.

Orange County Transit District (OCTD)

- o Orange County Transit District Alternative Transit Corridors Study, Vol. I and Vol. II, prepared for OCTD by VTN/AMV. May 1975.
- o Orange County Transit District County-Wide Market Research Study, prepared by Decision Making Information Inc. November, 1974.
- o Short-Range Transit Plan and Transportation Improvement Program, Annual, FY 1977, FY 1978.
- o FY 1977 Short-Range Transit Plan; Appendices. September, 1976.

RIVERSIDE COUNTY

County of Riverside

- o A Five-Year Transit Development Program For...The Urban Portion of Riverside Co., Area I; The Western Portion of Riverside Co., Area II, The Coachella Valley of Riverside Co., Area III; The Palo Verde Valley of Riverside County, Area IV. Prepared by Alan M. Voorhees and Assoc. June, 1974.
- o Riverside Countywide Transportation Study, Final Report, prepared for Riverside Co. by Alan M. Voorhees and Assoc. May, 1975.
- o A Five-Year Transit Development Program for Riverside County, prepared by Riverside County Road Dept. June, 1975.
- o Riverside Countywide Transportation Plan, Subregional Update, 1976, Final Report, prepared by the Riverside County Road Department. September, 1975.

- o Riverside Countywide Transportation Study, Final Report, prepared for Riverside Co. by Alan M. Voorhees and Assoc. May, 1975.

- o A Five-Year Transit Development Program for Riverside County, prepared by Riverside County Road Dept. June, 1975.

- o Riverside Countywide Transportation Plan, Subregional Update, 1976, Final Report, prepared by the Riverside County Road Department. September, 1975.

- o Riverside Countywide Transportation Plan, Subregional Update, 1976, Final Report, for...The Urban Portion of Riverside Co., Area I; The Western Portion of Riverside Co., Area II; The Coachella Valley of Riverside Co., Area III; The Palo Verde Valley of Riverside Co., Area IV. Prepared by Riverside County Road Dept. September, 1975.

- o Riverside Countywide Transportation Study; Final Report, prepared for Riverside County and its incorporated cities by Alan M. Voorhees and Associates. 1977 Update.

- o 1976 Riverside County Subregional Short-Range Transit Plan, by Riverside County Planning Department. Approved by the Riverside County Advisory Transportation Committee, July 19, 1976.

- o Elderly and Handicapped Transit Needs Study, Riverside County Road Department. August, 1978.

SAN BERNARDINO COUNTY

San Bernardino Associated Governments(SANBAG)

- o Goals Summary, A Report to the San Bernardino Associated Governments, by Alan M. Voorhees and Assoc.

- o A Transportation Plan for San Bernardino County,... A Look at 1990, Technical Report, prepared by SANBAG, CALTRANS (District 8), and Alan M. Voorhees and Assoc. January, 1975.

- o A Transportation Plan for San Bernardino County...A Look at 1990, Executive Summary, prepared by SANBAG, CALTRANS (District 8), and Alan M. Voorhees and Assoc. January, 1975.

- o Transit Development Program for San Bernardino County, prepared for SANBAG by Alan M. Voorhees and Assoc. July, 1974.

- o Transportation Plan Update Assessment, SANBAG. October, 1975.

- o Short-Range Transit Plan, (SANBAG), Annual, FY 1976, FY 1978.

- o Elderly and Handicapped Special Services Transportation Plan prepared for SANBAG by De Leuw Cather and Company. August, 1978.

VENTURA COUNTY

Ventura County Association of Governments(VCAG)

o Transportation Plan, Ventura County, Annual, 1975, 1976, 1977, 1978.

REASONABLY AVAILABLE CONTROL MEASURES

COMPARISON OF SOUTH COAST AIR BASIN AQMP MOBILE SOURCE CONTROL MEASURES
TO THE TRANSPORTATION CONTROLS LISTED IN SECTION 108 OF THE CLEAN AIR ACT AMENDMENTS

Clean Air Act Reasonably Available Control Measures	Measures Considered in the Analysis	Adopted Measures Implementation Schedule: Through 1982	Adopted Measures Implementation Schedule: 1983-1987	Other Measures to be Studied for Possible Inclusion in Later Plan Amendments	Comments	Rationale for Exclusion from AQMP
• Inspection/Maintenance	H-18 Inspection and Maintenance of Light-Duty & Medium Duty Vehicles (Annual-Marketing) H-114 I/M for Govt. Vehicle	H-18 H-114		-Expanded Vehicle Warranties -I/M of Non-Light Duty Vehicles -Complementary Roadside Inspection	A change of Ownership Program is currently underway	
• Vapor Recovery	H-62 Marine Vapor Recovery Operations H-12 Fuel Transfer at Jet airports H-24 Improved Emission controls for Motor Vehicles		H-62 H-24	-Drain Piston Aircraft Engine Fuel (Pre-and post-flight) -Control Purging and Ballisting of Ships in Coastal Waters -Bladder tanks on Piston Engine Aircraft	SCAQMD has existing vapor recovery rules for gas stations and marine petroleum transfers	H-12 Absolute emission reduction is insignificant
• Improved Public Transit	H-85 Freeway Facility and Transit Improvements Supporting High Occupancy Vehicle Movement H-87 Los Angeles Downtown People Mover H-89 Transit Improvements H-63 Expanded Transit Level of Service H-71 Increase Use of Rail, Air, and Bus for Intercity Travel H-76 Paratransit H-41 Reduced Transit Fares H-102 Improve Bus Movement on Urban Street H-109 Increase Bus Benches and Bus Shelters H-117 Santa Ana Transportation Corridor		H-85 H-87 H-89	-Priority Treatment of Transit on Streets and Roads -Additional Fixed Guideway for Transit -Other Improvements to Increase Transit Use	The baseline RTP Transit Element maintains the current level of service.	H-63 Operating cost limitations preclude this tactic as financially feasible, especially if H-85 & H-89 are implemented. H-71 Implementation not possible by 1982. By 1987, this measure would only result in the reduction of one ton of NOx. The cost of this measure is undetermined but expected to be very high. Phasing delays prohibit its immediate implementation. H-41 Transit operators in the region strongly oppose this measure based on its lack of financial feasibility. Additional deficit operations could ultimately result in the cutback of essential transit services. There are limited funds available for this program, and there is a State Constitutional barrier to using any gas tax revenue to finance transit operating and maintenance costs. H-76 Undetermined emission reductions and costs.

Revised 1/25/79

REASONABLY AVAILABLE CONTROL MEASURES

COMPARISON OF SOUTH COAST AIR BASIN AQMP MOBILE SOURCE CONTRAL MEASURES
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Clean Air Act Reasonably Available Control Measures	Measures Considered in the Analysis	Adopted Measures Implementation Schedule: Through 1982	Adopted Measures Implementation Schedule: 1983-1987	Other Measures to be Studied for Possible Inclusion in Later Plan Amendments	Comments	Rationale for Exclusion from AQMP
• Exclusive Bus and Carpool Lanes	H-85 Freeway Facility and Transit Improvements Supporting High Occupancy Vehicle Movement H-A High Occupancy Vehicle Lanes- Add-a-Lane		H-85		Currently the 11-mile El Monte Busway is in operation.	H-A Incorporated into H-85 Freeway High Occupancy Vehicle Improvements
Area-wide Carpool Programs	H-34 Rideshare Program	H-34			Currently the Commuter Computer and the Regional Rideshare Program are underway	
• Private Car Restrictions	H-58 Auto Free Zones H-67 Parking Management: Increased Parking Surcharge H-69 Automobile Operating Cost Increase(Gas Tax) H-80 Emissions Tax H-81 18 year old license H-8 High Occupancy Vehicle Lanes-Take-a-Lane H-13 Trip Reduction Program	H-13		-Ban Single Passenger Autos During Peak Periods on Selected Freeways -Those revenue generating measures that may be required to finance unfunded programs and projects	-Most measures lacked emission reduction effectiveness and/or met with public objection	H-58 Implementation not possible by 1982. By 1987, this measure would only result in the reduction of one ton of NOx. Due to the construction time requirements, this measure cannot be phased in prior to 1987. H-67 The cost-effectiveness of this measure ($175,000/ton of NOx) is very low. This disincentive to travel represents a significant out-of-pocket cost to the region for a minor amount of NOx reduction. The social acceptability of such disincentives has been strongly questioned by the political process. H-69 A 50% increase in gas prices has a very low cost effectiveness in reducing NOx emissions ($678,000/ton. Any further gas tax increase beyond that proposed in the Regional Transportation Plan (Gas Tax indexing and a 2¢ increase for revenue purposes) is considered politically, economically and socially undesirable. H-81 Because of the social inequities involved, and the impact on youth employment, this measure is considered unacceptable. H-8 Politically infeasible in light of Diamond Lane experience.

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COMPARISON OF SOUTH COAST AIR BASIN AQMP MOBILE SOURCE CONTROL MEASURES
TO THE TRANSPORTATION CONTROLS LISTED IN SECTION 108 OF THE CLEAN AIR ACT AMENDMENTS

Clean Air Act Reasonably Available Control Measures	Measures Considered in the Analysis	Adopted Measures Implementation Schedule: Through 1982	Adopted Measures Implementation Schedule: 1983-1987	Other Measures to be Studied for Possible Inclusion in Later Plan Amendments	Comments	Rationale for Exclusion from AQMP
• Long-Range Transit	H-86 Wilshire Rail Line		H-86	-Continued analysis of alternatives developed as part of Regional Transit Development Program	Current difficulties associated with financing current transit operations make long range improvements uncertain.	
• On-Street Parking Measures	H-74 Eliminate On-Street Parking;Select Arterials Peak Hour	Not Recommended		-Subregional Plan Recommendations for On-Street Parking Controls	Parking Controls are an active program of most local governments with most major arterials having existing controls. A regional systematic program of controls is not being recommended.	H-74*
• Park-and-Ride and Fringe Parking Lots	H-85 Freeway Facility and Transit Improvements Supporting High Occupancy Vehicle Movement H-C Park-and-Ride Lots Served by Commuter Express Buses		H-85		-Numerous Park-and-Ride/ Park-and-Pool Lots exist.	H-C Incorporated into H-85 (Freeway HOV Improvements) and H-117 (Santa Ana Transportation Corridor).
• Pedestrian Malls	H-58 Auto Free Zones	Not Recommended			Various malls exist throughout the region but the analysis does not conclude any significant emission reduction effectiveness.	H-58 (see rationale under Private Car Restrictions)
• Employer Programs to Encourage Car and Vanpooling, Mass Transit, Bicycling, and Walking	H-5 Carpool Preferential Parking H-34 Rideshare Program H-70 Parking Mgmt: Reduced Carpool Parking Cost H-79 Employers Rideshare Program H-112 Carpool Signups for Government Employees	H-34 H-112	H-5		Regional Rideshare Program, Commuter Computer, various Employer Programs, Transit Operator Programs, and Local Government Paratransit Programs exist.	H-70 This measure has been incorporated into the revised program for Carpool Preferential Parking (H-5). H-79*

* Undetermined emission reductions and/or costs.

REASONABLY AVAILABLE CONTROL MEASURES

COMPARISON OF SOUTH COAST AIR BASIN AQMP MOBILE SOURCE CONTROL MEASURES
TO THE TRANSPORTATION CONTROLS LISTED IN SECTION 108 OF THE CLEAN AIR ACT AMENDMENTS

Clean Air Act Reasonably Available Control Measures	Measure Considered in the Analysis	Adopted Measures Implementation Schedule: Through 1982	Adopted Measures Implementation Schedule: 1983-1987	Other Measures to be Studied for Possible Inclusion in Later Plan Amendments	Comments	Rationale for Exclusion from AQMP
• Bicycle Lanes and Storage Facilities	H-23 increased Bicycle and Pedestrian Facilities	H-23		Moped Lanes	Bicycle paths and related facilities exist in many areas.	
• Staggered Work Hours (Flexi-Time)	H-4 Modified Work Schedules	H-4			Numerous Employers currently operate staggered work hour schedules.	
• Road Pricing to Discourage Single Occupancy Auto Trips	H-67 Parking Mgmt: Increased Parking Surcharge H-68 Congestion Pricing H-69 Automobile Operating Cost Increase(Gas tax) H-80 Emissions Tax	Not Recommended		-Increased taxation of Leaded Fuels	-Measures lacked emission reduction effectiveness and/or met with public objection.	H-68 This disincentive results in small reductions of NOx for a very high cost ($285,000/ton reduced). Would result in significant economic hardship for low-income commuters with no effective travel alternatives. Local arterial congestion would also increase significantly. Inadequate political support at any level of government.
• Controls on Extended Vehicle Idling	H-25 Reduce Jet Aircraft Queuing Delays H-35 Traffic Signal Synchronization H-38 Reduce Auxiliary Power Units (APU) Usage for Jet Aircraft	H-35	H-25			H-38 Implementation not possible by 1982. By 1987, this measure would result in less than one ton of NOx reduction. Its effectiveness would be diminished by aircraft emission standards proposed by EPA and recommended as proposed 1978 Emission Standards-Jet Aircraft Engines (H-16). Phasing delays prohibit the immediate implementation of this tactic.

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REASONABLY AVAILABLE CONTROL MEASURES

COMPARISON OF SOUTH COAST AIR BASIN AQMP MOBILE SOURCE CONTROL MEASURES
TO THE TRANSPORTATION CONTROLS LISTED IN SECTION 108 OF THE CLEAN AIR ACT AMENDMENTS

Clean Air Act Reasonably Available Control Measures	Measures Considered in the Analysis	Adopted Measures Implementation Schedule: Through 1982	Adopted Measures Implementation Schedule: 1983-1987	Other Measures to be Studied for Possible Inclusion in Later Plan Amendments	Comments	Rationale for Exclusion from AQMP
• Traffic Flow Improvements	H-3 Triple Trailer Trucking H-35 Traffic Signal Synchronization H-72 Improved Trucking Efficiency H-73 Increase Truck Trailer Piggy Backing on Rail H-77 Expand Capacity and Improve Flow on Highway Network H-88 Congestion Relief-Freeway Widenings H-96 Improve Traffic Flow Through One Way Streets and Intersection Modifications H-97 Peak Period Truck Restrictions H-103 Improve access to and Within Major Airports H-107 Restrictions on Truck Delivery During Peak Hours H-118 Reduce Non-Recurrent Congestion H-D Metered Ramps By-Pass Lanes	H-35	H-3 H-72 H-88 H-118	-Subregional Plan Recommendations on Traffic Flow Improvements -Exclusive Truck Lanes and Routes -Freeway-to-Freeway Metering	-Pilot Freeway-to-Freeway Metering Projects are currently under development -The Base RTP calls for the completion of 1150 metered ramps by 1987 with 350 By-passes by 1982.	H-73 Implementation of additional piggy backing is not feasible by 1982. Additional study of this measure is needed to determine its effectiveness. The lack of flexible rail destination points limits the application of this measure to selected port operations. H-77 This program has been incorporated into the revised program for congestion relief - Highway Widenings (H-88). Much of the reductions which would occur due to H-77 will be realized if H-88 is implemented. H-96* H-97* H-103* H-107* H-D Now in AQMP Baseline

* Undetermined emission reductions and/or costs.

REASONABLY AVAILABLE CONTROL MEASURES

COMPARISON OF SOUTH COAST AIR BASIN AQMP MOBILE SOURCE CONTROL MEASURES
TO THE TRANSPORTATION CONTROLS LISTED IN SECTION 108 OF THE CLEAN AIR ACT AMENDMENTS

Clean Air Act Reasonably Available Control Measures	Measures Considered in the Analysis	Adopted Measures Implementation Schedule: Through 1982	Adopted Measures Implementation Schedule: 1983-1987	Other Measures to be Studied for Possible Inclusion in Later Plan Amendments	Comments	Rationale for Exclusion from AQMP
• Alternative Fuels or Engines and Other Fleet Vehicle Controls	H-11 Electrify Railroad Switching Yards H-60 Electric Vehicles H-75 Motor Fuel Blended with Methanol and Ethanol H-82 Home Goods Delivery H-83 Coordinate Tanker Arrivals H-111 Develop Landfill Disposal Sites to Discourage Individual Trips to Landfills H-113 Purchase of Government Cars for Low Emission and High Fuel Economy		H-11 H-60 H-113	-Fleet Engine Line-up Program		H-111*
• Retrofit Devises or Controls on Vehicles Other Than Light Duty Vehicles	H-16 Jet Aircraft Emission Standards H-17 Retrofit Gas Powered Farm Tractors H-8 Retrofit Gasoline Powered, Non-Farm, Off-Road Heavy Duty Vehicles H-64 Off-Road Motorcycle Emission Standards N-12 Railroad Diesel Engines		H-16	-Moped Controls		H-64 Cost effectiveness of this measure decreased based on increased cost estimate. There was also extreme public reaction against this measure. N-12 Considered to have less effectiveness with the implementation of H-11 Electrify Railroad Switching Yards.
• Extreme Cold-Start Emission-Reduction Programs		Not Recommended			Does not pertain to region ---relates to colder climates.	

* Undetermined emission reductions and/or costs.

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OTHER SOUTH COAST AIR BASIN AQMP MOBILE SOURCE CONTROL MEASURES CONSIDERED

Other Adopted Control Measures	Measures Not Included in AQMP
H-1 Increased Air Passenger Load Factor H-2 Jet Aircraft Ground Taxi Improvements H-7 Emission Standards-New Off-Road Heavy Duty Non-Farm Equipment H-15 Emission Standards-New Farm Equipment H-36 Voluntary Retirement of Older Cars	H-10 Tow Jet Aircraft H-66 Tax Bunker Fuel H-78 Incorporate Non-Residential Uses into Residential Areas H-84 Pipeline Freight Transport H-104 Develop Design Standards for New Parking Facilities H-108 Parking Management Plan (City of Los Angeles) H-116 Identify and Cluster Trip Attractions

9.0
GLOSSARY OF TERMS

Term	Definition
Accessibility	Characteristic of the transportation system itself and not of users of that system. It relates to the geographic coverage of the system, time of operation, the way various transportation links connect, and the travel time required to reach any area within the region.
Full Accessibility	That characteristic of both demand-responsive and fixed-route systems that allows the maximum number of disabled persons in each disability category to move freely, unencumbered by barriers, on and between systems,from origin to desired destination. Specifically, full accessibility has three components: 1. Access to vehicles, 2. Access within and between modes, 3. Access to opportunities. In practice, conversion of existing services and facilities to a higher level of accessibility can be accomplished by eliminating travel barriers associated with each of these three components.
Action	A specific activity to be undertaken in the near-term as a step toward achieving a particular policy or objective.
Arterial	General term denoting a roadway primarily for through traffic, usually on a continuous route.
Article 19	Article of the State Constitution. Designates how State taxes on motor fuel and motor vehicles may be used for streets and highways and guideway transit.
Barrier Reduction	Planning or action to reduce or eliminate impediments to movement by the elderly and physically handicapped in transportation systems and public facilities, or in the design thereof.
Bus-on-Freeway	Line-haul express bus service on existing and future freeways.
Bypass	A reserved traffic lane in a metered freeway ramp entry which permits buses or high-occupancy vehicles to bypass the ramp traffic control signal when entering the freeway.
Carpool	Prearranged automobile ride-sharing.

Circulation/ Distribution System	Provision of transit service in an activity center (such as downtown Los Angeles or Westwood) for improved intra-area circulation. May involve use of such measures as pedestrian overcrossings, mini-buses, or moving sidewalks. One element of the Regional Transit Development Program is a circulation/distribution system for the Bunker Hill-Central Business District area of Los Angeles.
Community Level Transit	System providing transit service within a local community.
Commuter Computer	Common name for non-profit corporation Commuter Transportation Services, Inc., which provides information to aid the formation of carpools and ride sharing.
Commuter Rail	Operation of rail service on existing railroad lines for service to commuters.
Constrained/ Unconstrained Financial Plan	The 1977 RTP has both a constrained and an unconstrained financial plan. The constrained plan limits construction, maintenance, and operation of the transportation system to that which can be funded without increasing taxes and using available state and federal funds. The unconstrained plan is the cost of funding all improvements recommended in the RTP. To fund this total package would require an increase in taxes.
County Transportation Commission	AB-1246 created County Transportation Commissions in Los Angeles, Orange, Riverside and San Bernardino Counties for the purpose of short-range transportation planning. SCAG will be working closely with these commissions.
Disincentives	Measures designed to discourage certain actions or behavior. These include: parking surcharges, increased gasoline taxes (if intended to decrease travel), and ramp metering.
Demand-Responsive/ System	A transportation system which responds to the requests of users; may be non-stop or multi-stop service to destinations, e.g., Dial-a-Ride, taxi.
Dial-A-Ride	Transit service where individual trips are scheduled by means of a telephone call. The service is flexible, only responds to demands, and is usually provided by a van or mini-bus.
Directional Flow Experiments	Use of one-way traffic flow on selected major arterials to accommodate peak hour traffic and decrease travel time.
Efficiency Standards	Criteria used to measure the operating efficiency of transit systems in terms of service provided and costs involved.

Elderly	Persons 60 years of age or older.
E/H Interim Program	A SCAG interim or near-term program to provide more accessible transportation to the elderly and the handicapped through identifying and eliminating barriers to travel on existing transit systems and identifying transportation services by other than municipal and district systems.
Express Busway	An exclusive freeway lane either separated from or on one of the lanes of the freeway, i.e., the San Bernardino Freeway Express Busway, that allows buses to operate separate from normal traffic.
Facility	A facility allowing a transportation mode to operate (including travel, as well as discharge and loading of pasengers). This includes highways, guideways, terminals, and administrative support facilities.
Fixed-Guideway System	A transit system with an exclusive guideway. This could be a rail transit system, a separated roadway for use of buses only, or other means of providing a separate right-of-way for transit.
Fixed-Route Transit Service	Scheduled service operating repeatedly over the same street or highway pattern on a determined schedule.
Free-Flow Condition	Freeway condition where traffic flow is uninterrupted by stopping or excessive slowing.
General Aviation	All aircraft which are not commercial airlines, air-carrier aircraft or military aircraft.
Goal	A goal describes a desired condition or set of conditions toward which effort should be directed.
Ground Access	Ability of air passengers and air freight handlers to reach airport terminals through use of automobile, public transit, taxi, or other means of ground surface.
Growth Forecast Policy	SCAG adopts forecasts of future population, housing, land use and employment which modify current trends. These growth forecast policies then become the basis for planning, grant reviews and sizing future public facilities.
Handicapped	Those individuals who, by reason of illness, injury, age, congenital malfunction, developmental disabilities, or other permanent or temporary incapacity or disability, including

Handicapped (Continued)	those who are non-ambulatory wheelchairbound and those with semi-ambulatory capabilities, are unable without special facilities or special planning and design to utilize mass transportation facilities and services as effectively as persons who are not so affected.
High-Occupancy Vehicle (HOV)	Motor vehicle occupied by two or more persons. Vehicles include automobiles, vans, buses, and taxis.
Incentives	Measures designed to encourage certain actions or behavior. These include inducements for the use of carpools, buses, and other high-occupancy vehicles in place of single-occupant automobile travel, e.g., preferential freeway lanes and parking, ramp bypasses, bus passes.
Inspection Maintenance Program	A program of periodic vehicle inspections to reduce air pollution. If, upon inspection, certain emission standards are exceeded, specific vehicle maintenance would be recommended, e.g., tune up, catalytic converter replacement.
Institutional Arrangements	The method of coordinating between agencies involved in related activities. This includes formal and/or operational relationships between transportation services, facilities, and control.
Inter-modal Transfer Points	Transportation terminals or locations where people can change their travel from one mode to another, i.e., auto to bus, bus to airline, etc.
Jitney	Motor vehicle operating continuously over a fixed route and supplying service to passengers who hail a ride any place along the routes.
Joint Powers Authority	A legally binding agreement between two or more units of government which establishes a multi-jurisdictional special district with specified powers and responsibilities.
Light-Duty Vehicle	Any motor vehicle weighing 6,000 pounds or less (most passenger automobiles).
Local Transportation Fund	Pool of funds from state sales tax established by SB-325 and SB-821 for local transportation purposes, e.g., community level bus system, bikeways.
Maintenance/ Rehabilitation	Activities associated with keeping the existing transportation system in a safe and usable state and protecting the public's investment.

Maritime	Transportation facilities or operations relating to ports, harbors, and water travel.
Memorandum of Understanding	Formal document between agencies defining interagency coordination and agency responsibilities. The SCAG public transit operator Memorandum of Understanding is an example.
Metro	Geographic area which is reasonably self-sufficient and geographically cohesive. It may or may not be encompassed by a single political boundary, e.g., the Wilshire District of Los Angeles or the City of San Bernardino.
Missing Link	A section of roadway to be constructed to freeway or expressway standards connected to completed portions of a designated route or connecting a constructed portion of a designated rote to one other major facility where the proposed section is less than six miles in length and provides a continuity of service in an established travel corridor.
Mixed Flow	Traffic movement having autos, trucks, buses, and motorcycles sharing traffic lanes.
Mobility	Mobility is a transportation system user characteristic. It refers to the ability of the user to take advantage of the available transportation services.
Mode	A means or method of conveyance, e.g., auto, airplane, bicycle, bus, etc.
Multi-modal	Involving more than one mode of travel.
Non-motorized	Transportation that is not powered by a motor, e.g., horseback riding, bicycling, hiking, walking, etc.
Objective	Precise and quantifiable statements of ends to be achieved in advancing toward goals.
Off-Road Vehicle	Vehicles which do not operate on the public road and highway system, e.g., dirt bikes, snowmobiles, farm machinery, construction equipment.
Operator	Agency responsible for providing a service or operating a facility, e.g., SCRTD is a transit operator, CALTRANS is the operator of the state highway system.
Paratransit	Those types of public transportation whose characteristics are between those of the private automobile and conventional scheduled transit, e.g., taxis, jitneys, dial-a-ride, carpools, vanpools, subscription bus service.

Parking Management Strategies	Planned procedures whereby automobile parking in metropolitan areas is controlled or managed for purposes of controlling traffic, access, and mobility.
Peak Period	Refers to the time of most intensive use of a service or facility. In terms of travel, generally there is a morning and an afternoon peak on the region's streets and highways.
Phased Decision-Making	The phasing of decisions so that actions that are needed in the short-term are taken, but options are not foreclosed for future action.
People Mover	A public transportation system where waiting time is minimal and usually consists of small vehicles or continuous conveyance operating over short distances, e.g., moving sidewalks, automated cars. A specific type of circulation/distribution system.
Person Trip	A trip made by a person.
Planning Policies	Policies which direct the course of future transportation planning in the region.
Preferential Treatment	Privileged treatment for high-occupancy vehicles and buses in the use of traffic lanes, freeway lanes and entry ramps, parking facilities, and traffic control for the purpose of inducing shifts to HOVs and buses.
Preliminary Engineering	Engineering design and cost analysis conducted prior to final detailed design and construction.
Private Sector	Non-governmental, profit oriented service providers. The economy minus the governmental sector.
Policy	A policy is a guide for decision-making. Policies imply commitment to goals and define courses of action directed toward fulfilling these goals.
Project Development	Preliminary engineering and environmental assessment conducted prior to the start of project construction.
Proposition 5	Ballot proposition adopted in 1974 which allows the use of gas tax funds available to a county area to be diverted to guideway transit use if the voters' county has passed a similar local proposition. In the SCAG region only Los Angeles County voters have adopted such a local proposition.

Public Transit	Transportation service by bus, rail, paratransit, airplane, and ship offered by an operator on a scheduled basis to the general public.
Ramp Metering	Traffic signal control on an entry ramp to a freeway for regulating vehicle access.
Region	The SCAG region is composed of Imperial, Los Angeles, Orange, Riverside, San Bernardino, and Ventura counties.
Regional Transit Development Program	The adopted four-element program for improved transit service consisting of a transportation system management element, regional high-level bus-on-freeway system, Los Angeles downtown circulation-distribution system, and a regional core area rapid transit element.
Revenue Bond	Bonds whose principal and interest are payable exclusively from earnings of a public enterprise.
Route Deviation Service	A transit system where the transit vehicles purposely deviate from their routes to provide more direct service to their patrons.
Section 5	The UMTA Act of 1964, as amended by the Urban Mass Transit Assistance Act of 1974, provides a six-year mass transportation assistance program (capital or operating assistance) for urbanized areas apportioned on the basis of a statutory formula.
Short-Range Transit Plan	The five-year plan for development of transit service in the SCAG region.
South Coast Air Quality Maintenance Area	Area designated by the state for the purpose of air quality planning. The area encompasses portions of Ventura, Los Angeles, Orange and Riverside Counties, contains 97% of the region's population, and is the most seriously impacted portion of the region in terms of air quality.
Starter Line	The initial segment of a fixed-guideway transit system.
Subregion	A county or other smaller area within the SCAG six-county region.
Subscription Bus Service	Prearranged ride sharing of regularly scheduled transportation service, for which passengers generally agree to pay a monthly fee.

System Development	Capital intensive additional development of the transportation system including road construction, rapid transit, expanded ports and new airports.
System Management	Making better use of the existing transportation, using such methods as encouraging carpooling, increasing transit ridership, and increasing the carrying capacity of highways, airports and other facilities. Generally, these methods cost less and can be implemented more quickly than system development actions.
System Policies	Policies applicable to the entire transportation system.
Traffic Management (Traffic operational Improvements	Regulation and control of the movement of traffic to expedite flow and reduce congestion. Techniques include signal synchronization and restriping to provide left turn lanes.
Transit Corridors	A path several miles in length and one-quarter mile to one mile wide within which line-haul transit service is provided or planned. An example is the Wilshire corridor.
Transit-Dependent	Individual(s) dependent on public transit to meet private mobility needs, e.g., unable to drive, not a car owner, not licensed to drive, etc.
Transit Service Policies	Policies which establish a priority rating for allocation of available resources based on minimum coverage and intensity standards for local service. The first priority is to maintain existing service, second is to improve service to below-standard areas, and third is to support service improvements to above-standard areas.
Transportation Systems Management (TSM)	An element of the Regional Transportation Plan which addresses short-term improvements to maximize the efficiency of the existing transportation system. Areas for review include traffic engineering, public transportation, regulations, pricing structures, management, and operational improvements (does not include system development).
Value Capture Financing	Emergent concept based upon the ability to recoup the social and economic benefits created by the construction of a public facility (e.g., transit system), through the amount of income generated from the enhancement--the increased value--of real property. Tax increment financing is one example of a value capture financing technique.

ACRONYMS

Plans and Programs and Planning Agencies

ADAP	Airport Development Aid Program
AQMP	Air Quality Maintenance Plan
CAAP	California Airport Aid Program
EIR	Environmental Impact Report
FARE	Uniform Financial Accounting and Reporting Elements
HOV	High-Occupancy Vehicle
IVAG	Imperial Valley Association of Governments
LACTC	Los Angeles County Transportation Commission
LARTS	Los Angeles Regional Transportation Study
OCTC	Orange County Transportation Commission
RTDP	Regional Transit Development Program
RTP	Regional Transportation Plan
RCTC	Riverside County Transportation Commission
SANBAG	San Bernardino Associated Governments
SBCTC	San Bernardino County Transportation Commission
SRTP	Short Range Transit Plan
SCAQMD	South Coast Air Quality Management District
TSM	Transportation System Management
VCAG	Ventura County Association of Governments

Legislative/Administrative

AB-69	Established the state and regional transportation planning process, and mandates the preparation of a regional transportation plan.
AB-402	Created California Transportation Commission and revised state and regional planning and programming procedures for transportation
AB-1246	Created county transportation commissions in Los Angeles, Orange, Riverside and San Bernardino Counties.
SB-325 (TDA)	California Transportation Development Act -- allocates portion of sales tax revenues fo transit and streets and roads.
SB-759	Amended SB-325 (TDA) program requiring performance audits and other provisions relative to funding limitations.
SB-821	Amended SB-325 to create a bicycle-pedestrian program.
SB-1687	Established funding for new (Article 4.5) Community-level transit in Los Angeles and Orange Counties from SB-325 moneys.

Technical Abbreviations

CBD	Central Business District
CO	Carbon Monoxide
LAX	Los Angeles International Airport
LOSSAN	Los Angeles - San Diego Corridor
MAP	Millions of Airline Passengers
NMHC	Non-methane hydrocarbons
NOx	Nitrous oxides
PRT	Personal Rapid Transit
RSA	Regional Statistical Area
VFR	Visual Flight Rules
VLF	Vehicle License Fee
VMT	Vehicle Miles Traveled