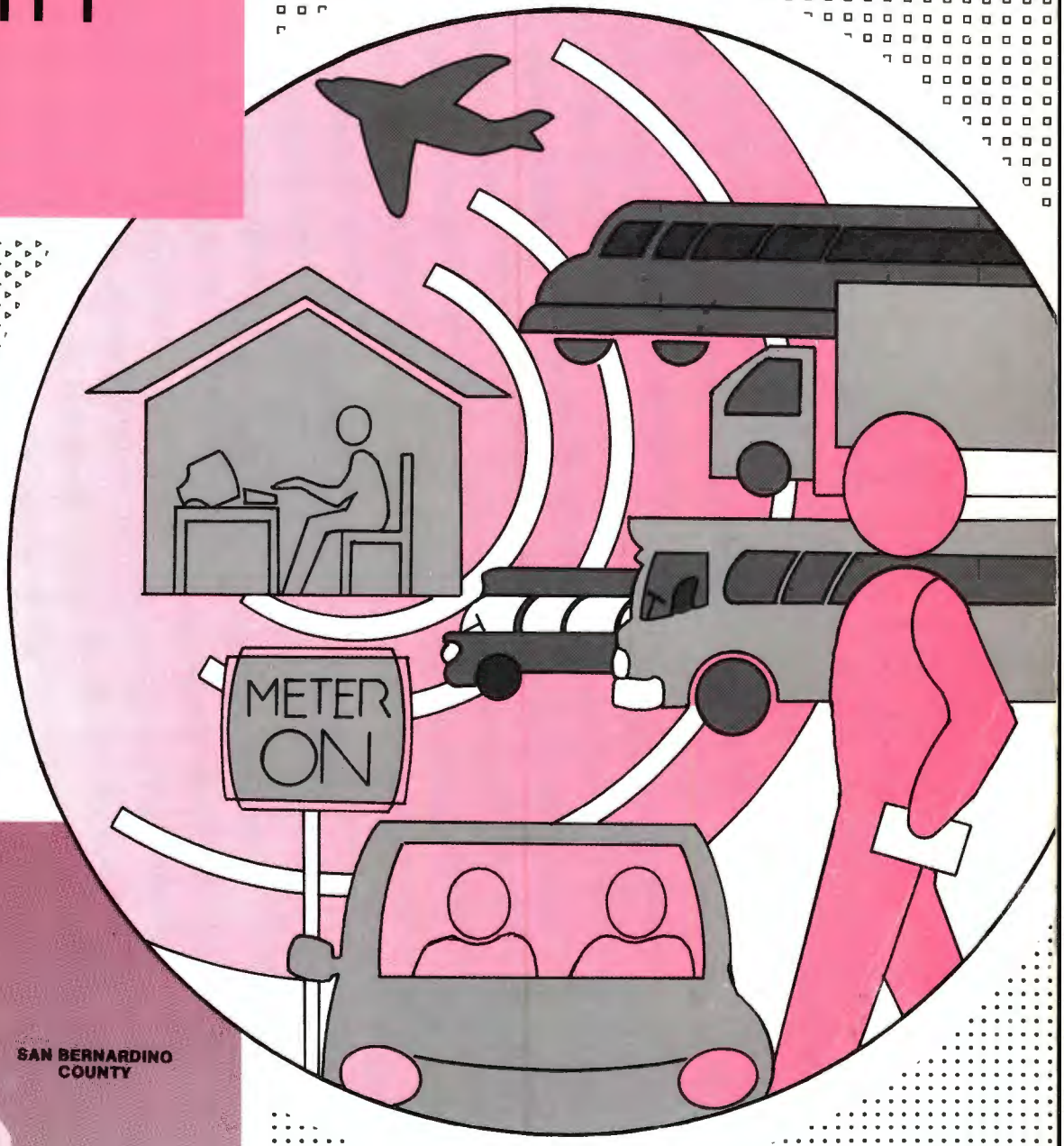
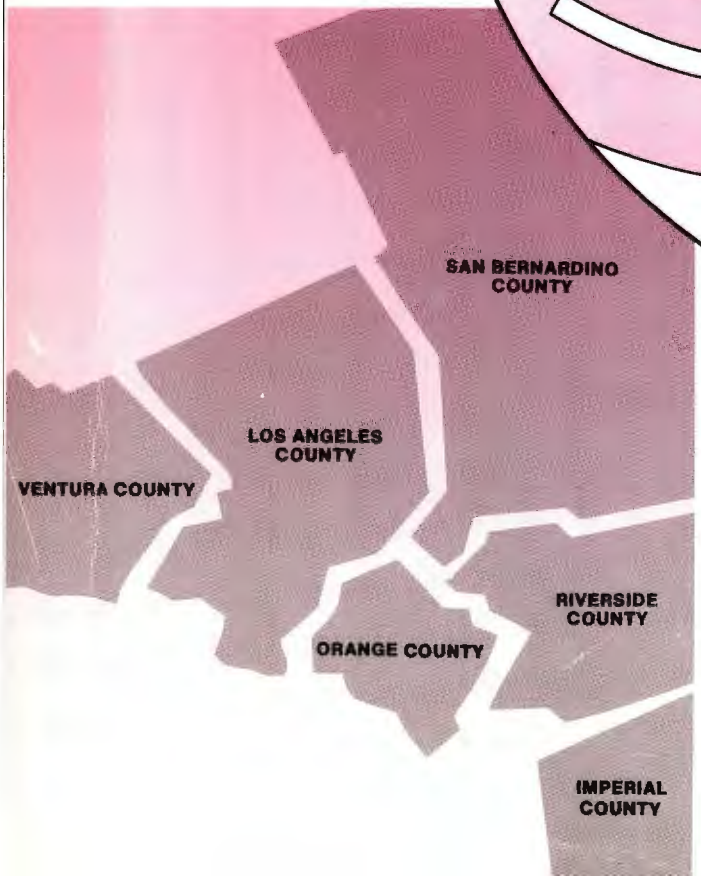
REGIONAL MOBILITY PLAN





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FOREWORD

The Regional Mobility Plan serves as the Federal and State required Regional Transportation Plan. It has a 20-year planning horizon and is intended to establish the policies and actions to address the region's mobility issues. It is presented as one element of a broader Regional Strategic Plan and has been developed in coordination with the Regional Growth Management and the Regional Air Quality Management Plan(s). This Plan serves as the basis for programming in the Transportation Improvement Program for this region. Projects in that Program must be consistent with this Plan.

The Regional Mobility Plan has been developed through a cooperative planning effort involving County Transportation Commissions, Caltrans, cities and counties, the Automobile Club of Southern California and other interested parties. A preliminary draft plan was developed where several mobility scenarios were presented for public review and discussion. This Plan is based on the selection of a preferred mobility strategy by the SCAG Executive Committee. That strategy stresses four component parts that must work in an integrated, coordinated manner – Growth Management Transportation System Management, Demand Management, and Facility Development.

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

PREAMBLE

This plan provides a flexible framework for the discussion and resolution of transportation planning issues expected to confront the SCAG region during the next 20 years. One difficulty of planning is making the appropriate choices in the face of uncertainty. Future decision-making must incorporate the ability to respond rapidly while maintaining the flexibility to meet future changes or innovations that could occur. Through a deliberate process of – periodic technical review and analysis, monitoring, and public debate – selective efforts shall be undertaken to ensure that this document adapts to the changes occurring in the region. To the extent this goal is achieved will depend upon participation from all communities within the region.

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I.

I - EXECUTIVE SUMMARY

Introduction

The goal of the Regional Mobility Plan is to recapture and retain the transportation mobility levels of 1984, and the Plan provides specific means to address the goal. Accomplishing the elements of the Plan will require commitment from the region's elected officials and a substantially more generous level of funding for transportation improvements than is currently available.

The Plan is part of an overall regional planning process and is directly linked to and dependent upon SCAG's Growth Management Plan, the Housing Allocation process, and the SCAQMD Air Quality Management Plan.

Within the Plan are four separate elements: growth management, transportation demand management, transportation systems management, and facility development. The degree to which each of these is successful will both depend on and determine what is required from the others. (If, for instance, the demand management program has only limited success, facilities development may have to be increased to meet mobility goals.)

Needs

The Region's primary mode of travel will continue to be the automobile. The congestion problem, already severe in certain places and at certain times, will become acute, and the current frustration over highway crowding will result in a groundswell of demand for better mobility.

- Our region, now home to 13.7 million people, faces significant growth. In the coming 22 years, nearly 5 million additional people will live here (the population is expected to be 18.3 million in 2010). The region's highways and streets - many of which have already reached saturation levels during peak commuting hours - will have to cope with the vehicles of the new residents as well as the increased freight traffic that serves consumer needs and the region's economy.

- By 2010, daily person trips and work commutes on the region's streets and freeways will increase by 42 percent:

	1984	2010
DAILY TRIPS (millions)	40.2	57.0
WORK COMMUTES (millions)	7.3	10.3

- If nothing is done to improve the transportation system, by 2010 these additional trips may bring traffic to a near halt on much of the system for much of the day.

This situation is detailed below:

TABLE I-1
MOBILITY PERFORMANCE INDICATORS

	1984	2010*
VEHICLE MILES TRAVELED (000's)	221,292	376,187
VEHICLE HOURS TRAVELED (000's)	6,343	19,575
HOURS OF DELAYS (000's)	629	10,132
Percent Delay	10%	52%
AVERAGE SPEED (MPH)		
All facilities	35	19
Freeways	47	24
MILES OF CONGESTION		
AM Peak	452	2,564
PM Peak	856	4,567
TRANSIT RIDERSHIP		
Home-to-Work Trips	6.6%	5.1%

* No Build Scenario

For every 1,000 vehicles on the road today, there will be **1,420** tomorrow.

These figures suggest two major issues. First, the streets and roads of the region simply cannot accommodate the additional traffic suggested by these projections, even with virtually unlimited construction. But perhaps even more importantly, the automobile is one of the major causes of the region's severe air pollution problem, well known to be the nation's worst. With the adoption of the District's Air Quality Management Plan, the region has come under strong Federal and State pressure to significantly reduce automobile use, and thus the automobile's contribution to pollution.

To support the population and meet the growing production of the region, the transportation system will have to handle many more trucks and move much more tonnage through the ports and airports of the region. Congestion and delays on the highways will be further aggravated unless improved access and alternative routes can be developed for this traffic.

Solutions to the problem will be expensive. To compound matters, California state law has placed severe restrictions on the ability of local and state governments to raise the additional revenues needed to respond to these problems. Thus, the mobility problem requires not only technical and technological solutions, but financial solutions as well.

An overall plan is essential. Only by following a comprehensive strategy – one that shares the costs and benefits of the solution equitably – can the region retain or improve its mobility. The Plan establishes a program to provide Southern Californians with substantially increased access to various travel modes.

Goals

The goals of the Plan are:

- To attain and maintain mobility in an environment of rapid population and economic growth.
- To provide sufficient capacity for the transportation demands of people and goods given the adopted growth-management forecast.
- To make the region accessible to everyone, including the elderly, the handicapped, and the transit-dependent.
- To induce changes in travel behavior that will lower the number of home-to-work trips and increase vehicle occupancy.
- To achieve an efficient balance among all modes, including new technologies.
- To maximize use of existing facilities through system and demand-management techniques.
- To protect the environment and support the region's plans for managing air quality.
- To support a pattern of development that shortens trip lengths through improved job/housing balance.

Objectives

To promote these goals, the following objectives for the ground transportation system have been established:

- Maintain the freeway system at 450 miles of congestion (level F) through 2010.
- Achieve a 19 percent transit share of home-to-work trips by 2010.
- Limit to 60 million miles the increase in daily vehicle miles traveled over the next 20 years.
- Limit the daily vehicle hours of travel at approximately 7,850,000 hours through the year 2010.
- Increase the number of people ridesharing to 1,610,000 by 2010.
- Eliminate 3 million daily home-to-work trips by 2010.
- Reduce transportation emissions back to 1987 levels by 2010.
- Fund the $23.2 billion shortfall in highway, transit and demand management capital costs.
- Fund the $2.9 billion annual shortfall in highway, transit and demand management operating costs.

A series of short-term objectives and policies to guide decision-makers in the implementation of this plan and in the adoption of related local plans and programs has been developed.

Actions

Four separate strategies, each of which would work toward achieving the mobility goals, were carefully examined by SCAG's Executive Committee. The first relied on a major program of building transportation facilities; the second emphasized a balance of jobs and housing within the subregions to shorten commutes; the third was built around a combined program of demand and growth management; and the fourth placed a heavy emphasis on demand management.

After long deliberation, the Executive Committee concluded that the approach best meeting the region's mobility requirements would combine all of these components. This approach is called the Preferred Strategy. (See Figure I-1.)

Under the Preferred Strategy:

- SCAG would work with county and local governments to encourage a better balance of jobs and housing in subregional areas. More people would live closer to where they work, and cross-region commute trips would be reduced. (See Figure I-2.)
- A program of managing transportation demand would induce commuters to change work and commuting patterns. Certain actions could reduce the number of trips made; others would redistribute necessary trips through the more efficient use of vehicles and by spreading peak period commute trips over more hours.
- A vigorous program of Transportation System Management would move traffic more efficiently to make maximum use of the existing system.
- New facilities would be added to the existing transportation system and give decided emphasis to modes that carry more than one person per vehicle: transit or car pooling.
- Establish a two level implementation effort of constrained and unconstrained projects. Constrained projects and programs would be completed over the 20-year period with monies from existing sources of revenue, and unconstrained projects and programs would be completed over the 20-year period from additional revenues raised through the implementation of the proposed financial program.

The Plan proposes a program of actions that foster the interaction of the components of this strategy. Actions are divided into those possible with present funding and those that require additional resources (these latter are almost exclusively new roadway construction projects and transit facilities). The Plan provides policy guidance to regional, county, and local

Figure I-1

THE MOBILITY STRATEGY

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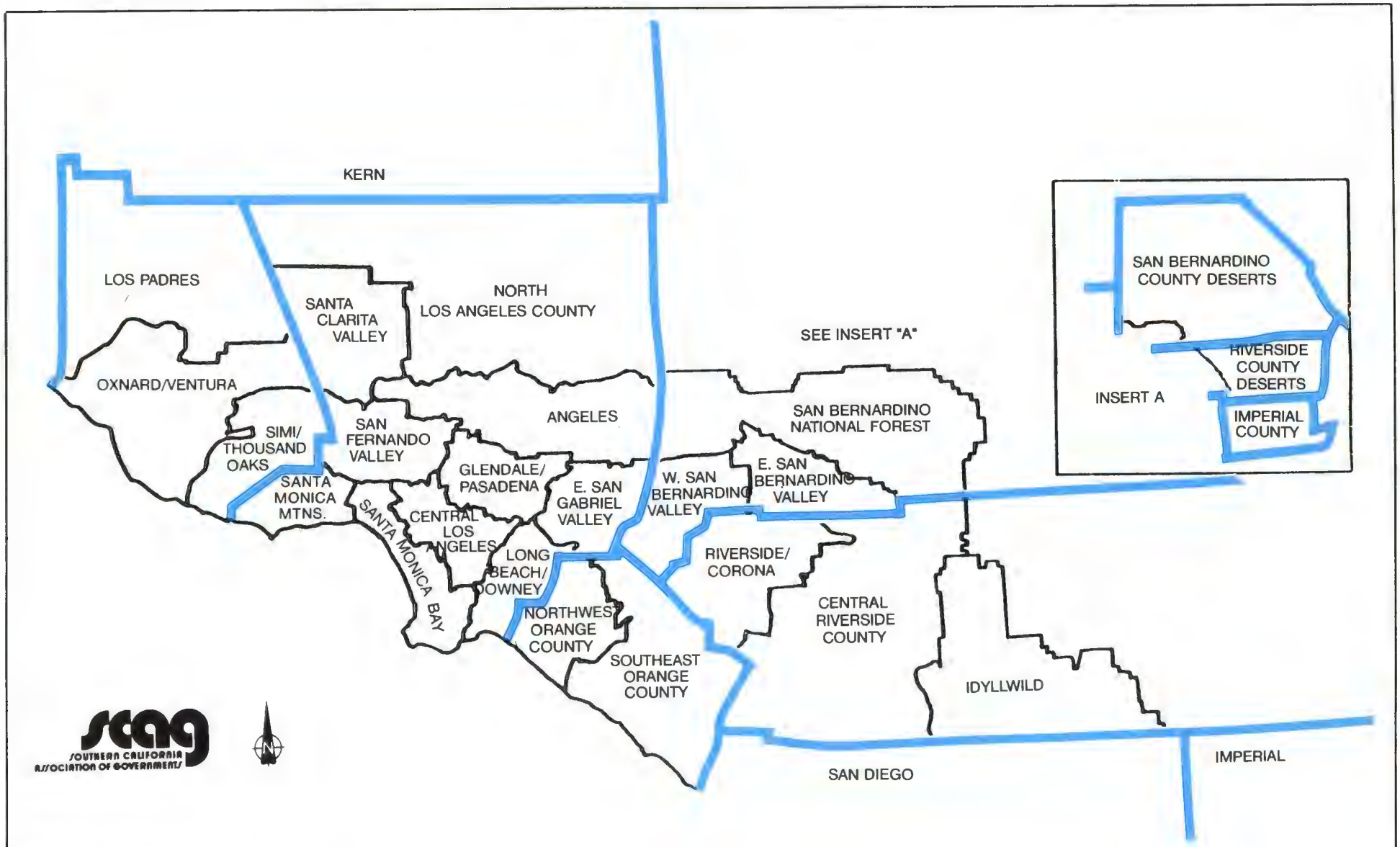

Figure I-2

SUBREGIONAL AREAS

COUNTY BOUNDARY

SUB-REGIONAL AREA

entities, and suggests how private sector groups can help meet the goals. Finally, there are contingency suggestions for approaching the mobility issue if strategic elements in the Plan cannot be achieved to the degree assumed.

Specific actions recommended under this Plan are:

Transportation Demand Management

- Eliminate 3 million daily work trips through work-at-home and telecommuting.
- Increase ridesharing to 1,610,000 daily work-trips.
- Increase transit usage to 1,400,000 daily work trips.
- Study the implementation of user charges for congestion, peak period use, tolls, parking, fuel taxes, and emissions fees.

Transportation System Management

- Increase ramp metering and High Occupancy Vehicle (HOV) bypass-lane programs.
- Promote advanced signalization and coordination of key intersections throughout the region.
- Improve programs to monitor, control, and respond to traffic incidents.

Taken together, these are expected to eliminate up to 800,000 hours of delay daily from the transportation system.

Highway Improvements

- Build 1,251 lane-miles of HOV and transitway lanes. (See Figure I-3.)
- Build 1,846 lane-miles of additions to existing highways. (See Figure I-4, I-5.)
- Protect rights-of-way for future use.

Transit Development

- Work with County transportation commissions and operators to implement all projects within the financially constrained program. (The RTD Locally Preferred Alternative, Long Beach, Century, Pasadena, Valley and Coast Light Rail links, and Metrorail extensions; and Orange County Transitway Program.) (See Figure I-6.)
- Identify and create new sources of funds needed to complete the unconstrained program of transit development. (See Figure I-7.)

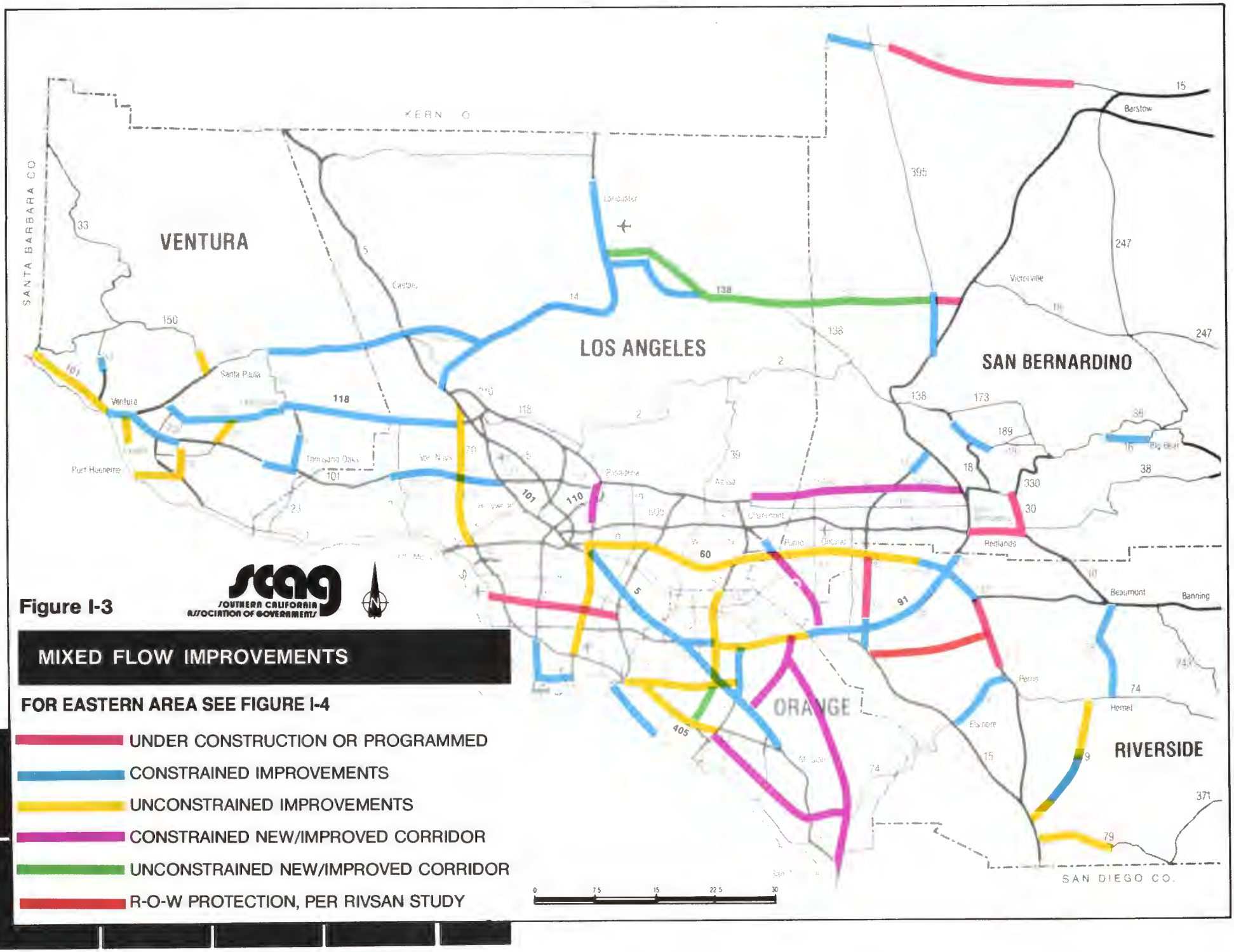

Figure I-3

SCAG SOUTHERN CALIFORNIA ASSOCIATION OF GOVERNMENTS

MIXED FLOW IMPROVEMENTS

FOR EASTERN AREA SEE FIGURE I-4

- UNDER CONSTRUCTION OR PROGRAMMED
- CONSTRAINED IMPROVEMENTS
- UNCONSTRAINED IMPROVEMENTS
- CONSTRAINED NEW/IMPROVED CORRIDOR
- UNCONSTRAINED NEW/IMPROVED CORRIDOR
- R-O-W PROTECTION, PER RIVSAN STUDY

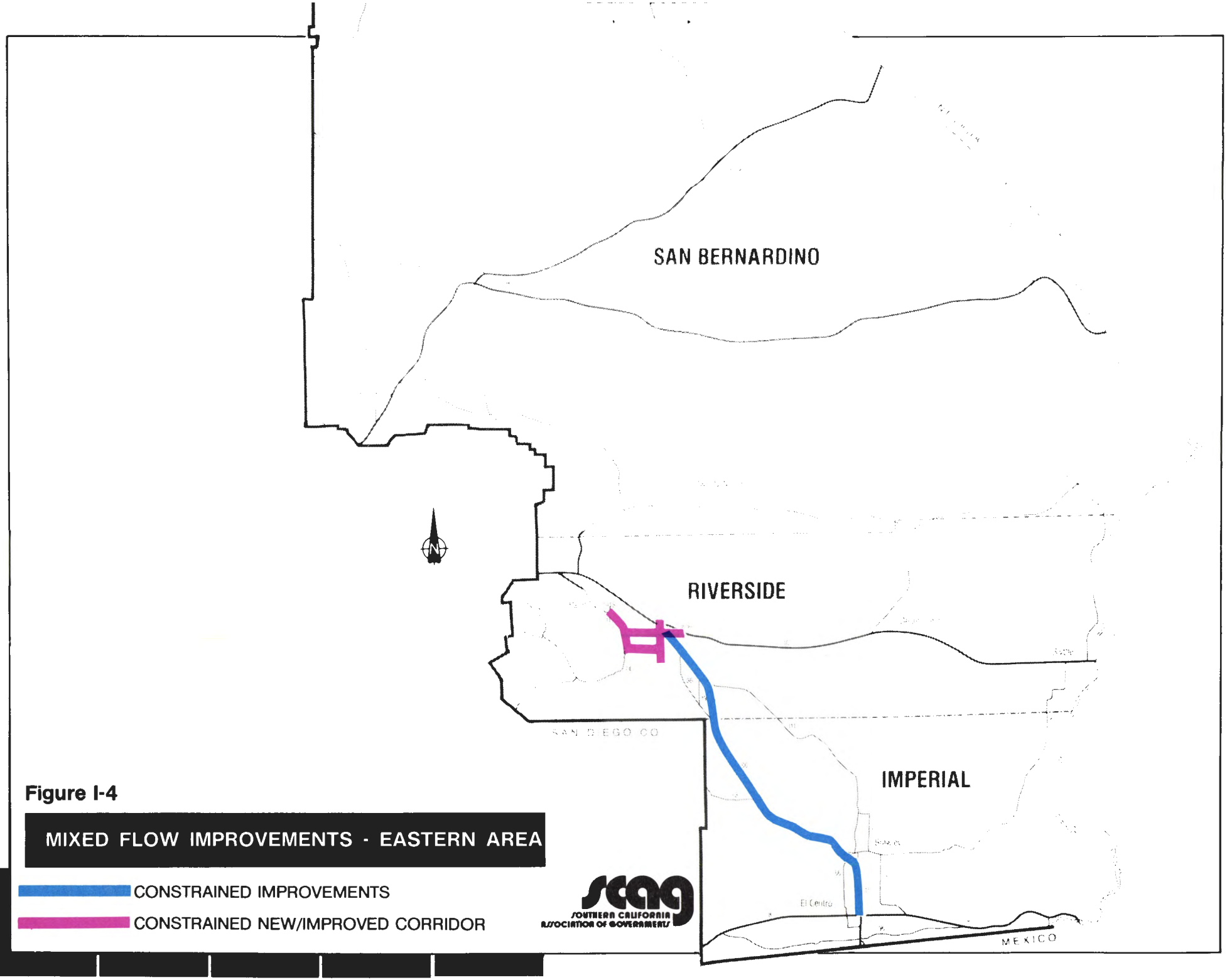

Figure I-4

MIXED FLOW IMPROVEMENTS - EASTERN AREA

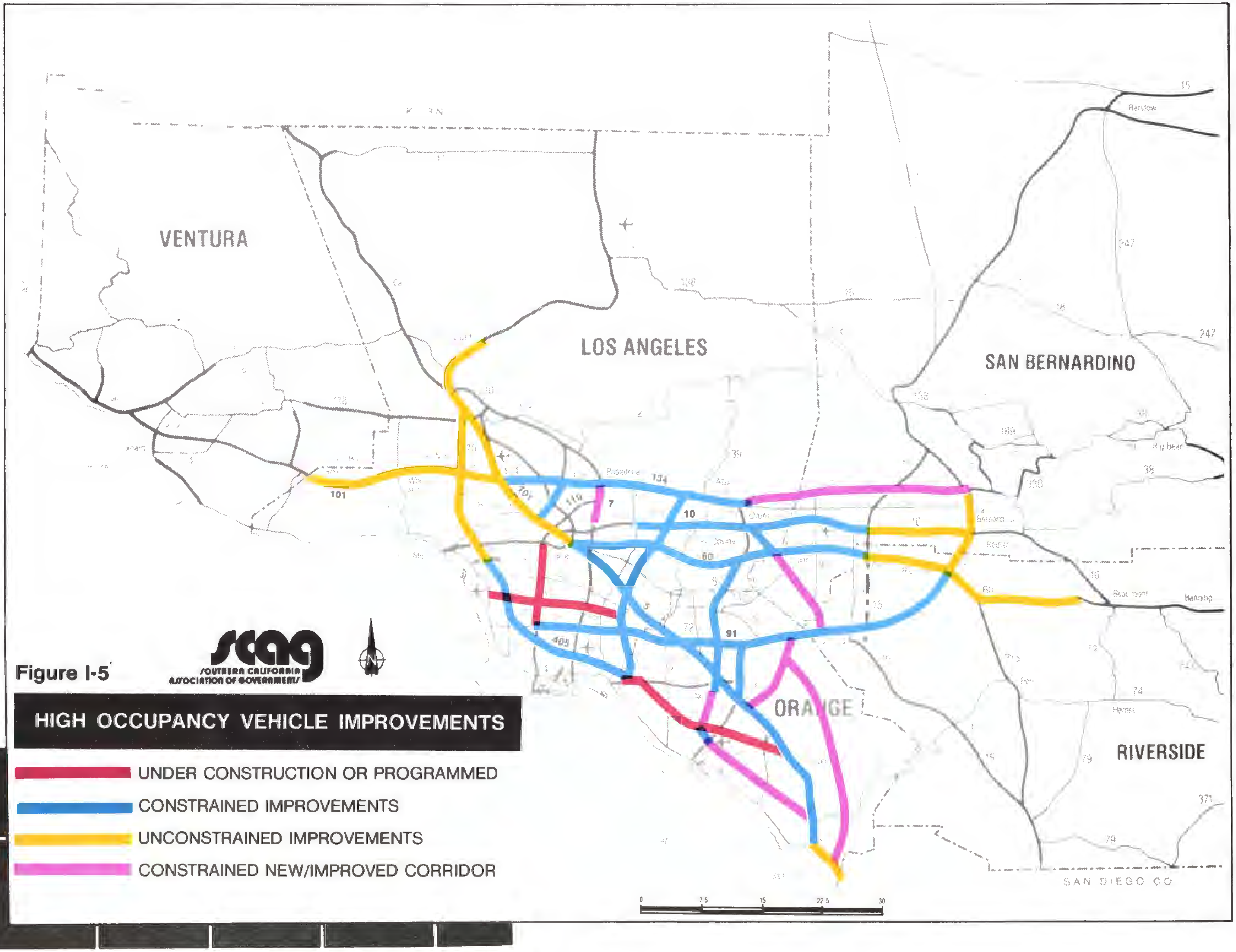

Figure I-5

HIGH OCCUPANCY VEHICLE IMPROVEMENTS

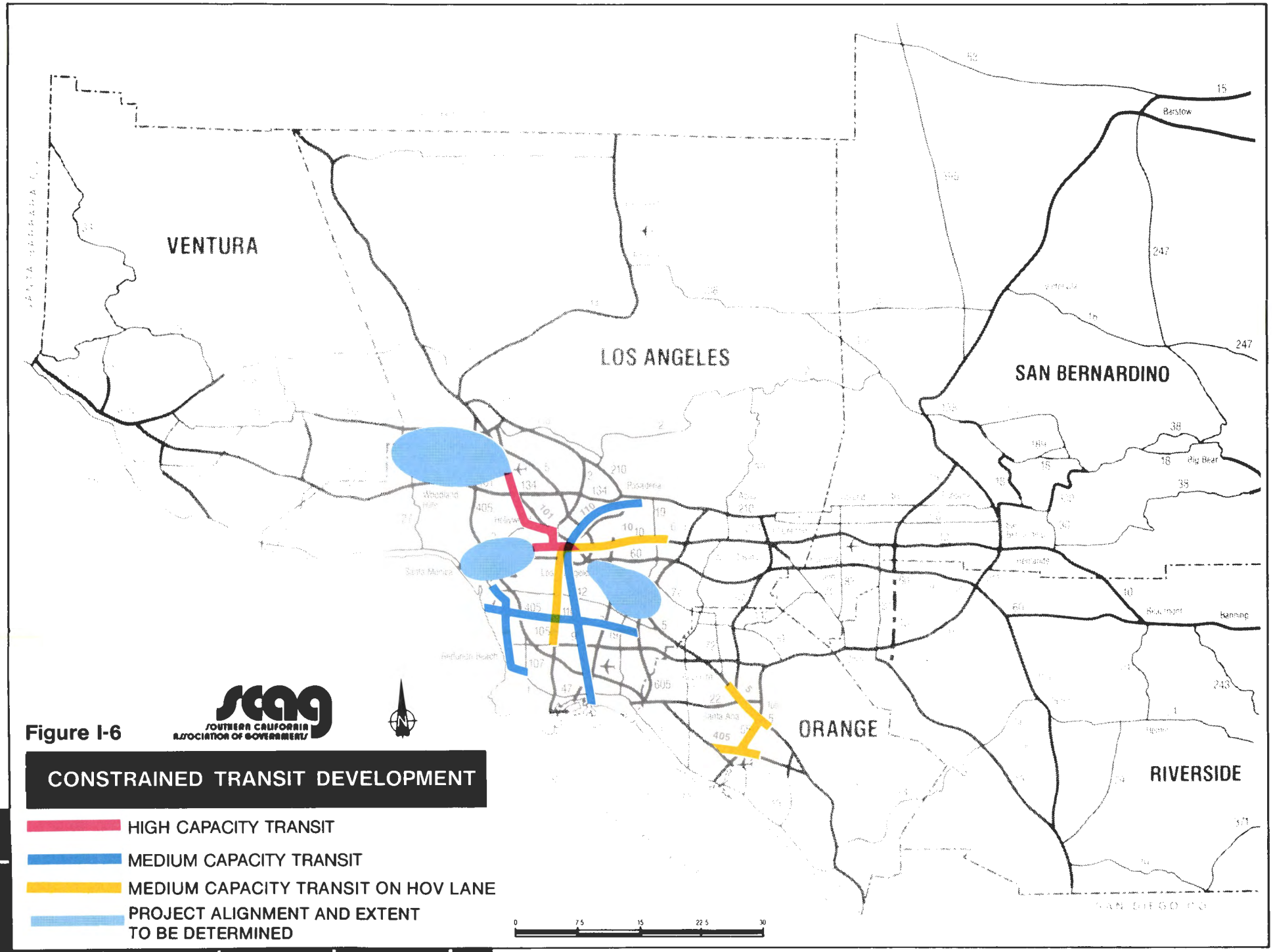

Figure I-6

SCAG SOUTHERN CALIFORNIA ASSOCIATION OF GOVERNMENTS

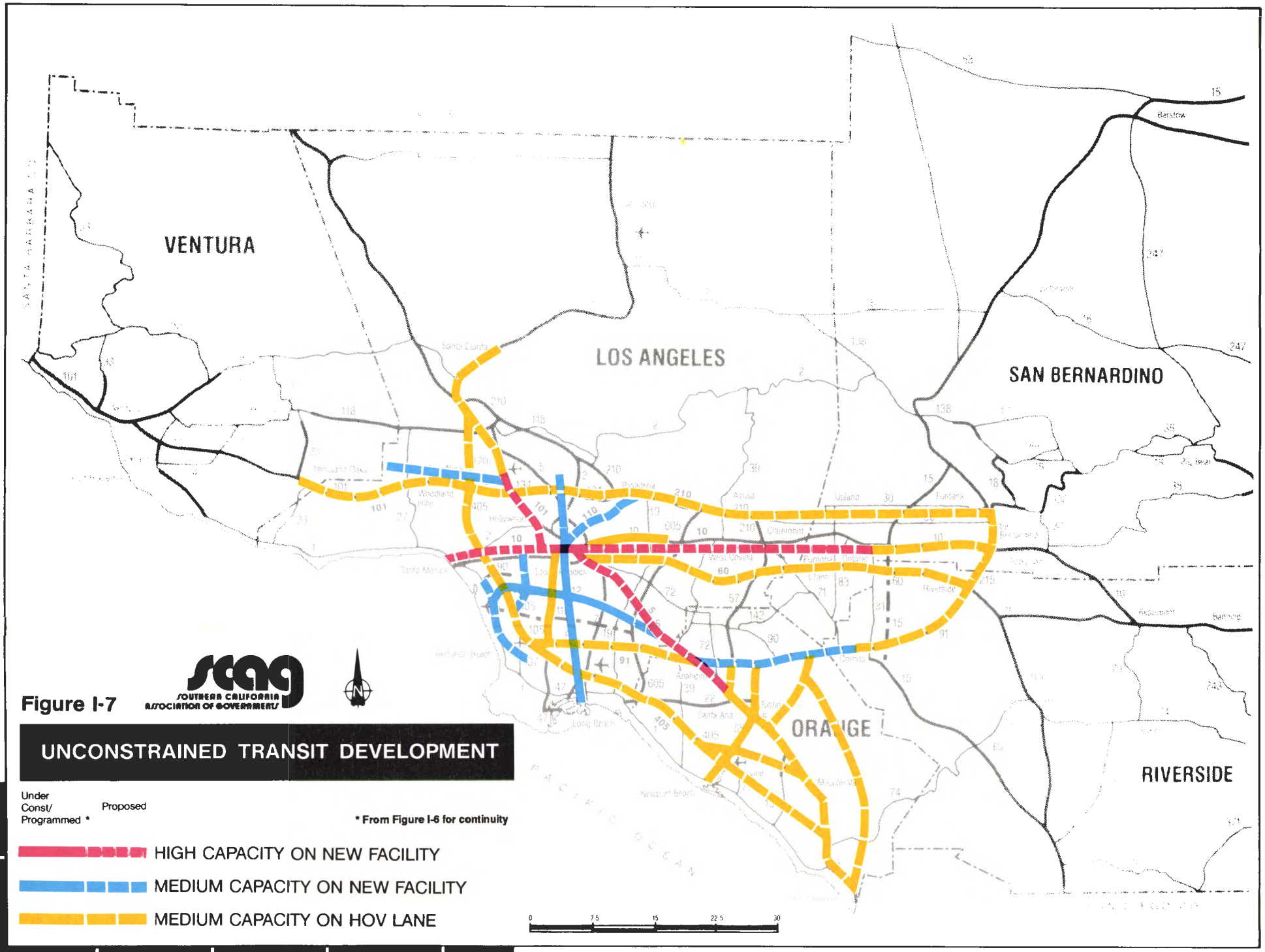

Figure I-7

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UNCONSTRAINED TRANSIT DEVELOPMENT

Under Const/ Programmed *

Proposed

* From Figure I-6 for continuity

- HIGH CAPACITY ON NEW FACILITY
- MEDIUM CAPACITY ON NEW FACILITY
- MEDIUM CAPACITY ON HOV LANE

- Work to improve regional and long-range planning for transit through better coordination, funding, and delineation of responsibilities.

Commuter Rail

- Study and implement appropriate new commuter services between Los Angeles and South Orange County, Saugus, Ventura/Oxnard, and San Bernardino, and between San Bernardino/Riverside and Orange County.

Aviation

- Increase capacity and safety of operations at existing air-carrier airports when environmental impacts and ground access can be mitigated.
- Plan for the creation of one or more new air-carrier airports to reduce pressure on the existing system. Each subregion should provide environmentally acceptable capacity within its own market area to serve local short-haul demand.
- Provide appropriate access to the region's commercial airports to meet demand and mitigate local impacts.

Goods Movement

- Encourage increased use of intermodal services.
- Examine trucking and its impact on the economy of the region.
- Explore alternative peak-hour routes and schedules for trucking operations.
- Coordinate local regulations to improve trucking access and movement through the region.

Ports and Maritime

- Improve physical access by truck and by rail to the Ports of Los Angeles and Long Beach, and to Port Hueneme.

System Performance

- The combined impact of these measures is expected to improve traffic over what would otherwise be expected as indicated in the following table. (See also Figure I-8.)

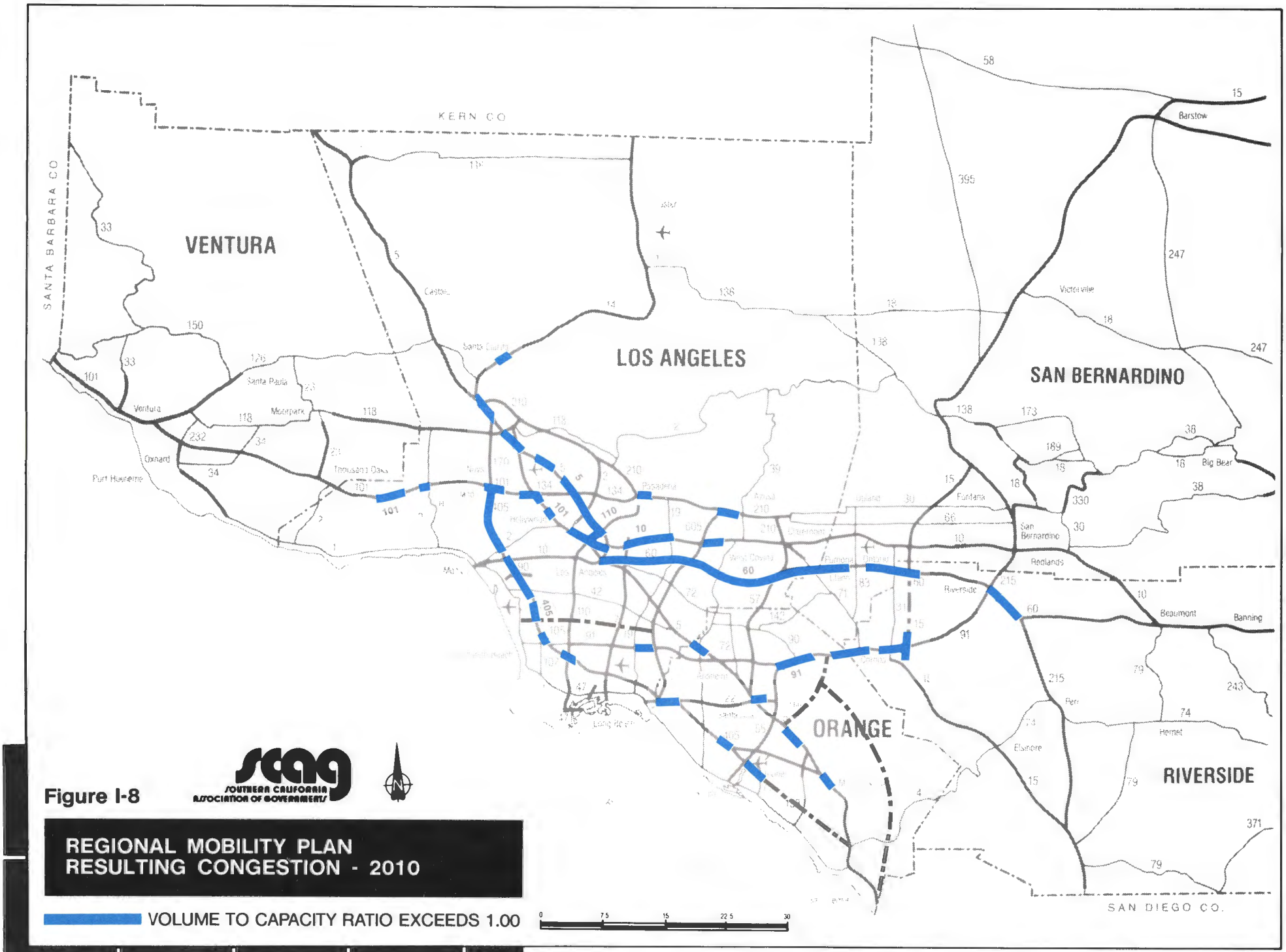

Figure I-8

REGIONAL MOBILITY PLAN
RESULTING CONGESTION - 2010

TABLE I-2
PREFERRED STRATEGY PERFORMANCE INDICATORS

	1984	2010 Without Plan	2010 With Plan
VEHICLE MILES TRAVELED (000's)	221,292	376,187	284,382
VEHICLE HOURS TRAVELED (000's)	6,343	19,575	7,850
HOURS OF DELAY (000's)	629	10,132	899
Percent Delay	10%	52%	11%
AVERAGE SPEED (MPH)			
All facilities	35	19	36
Freeways	47	24	45
MILES OF CONGESTION			
AM Peak	280	2,564	452
PM Peak	612	4,567	856
TRANSIT RIDERSHIP			
Home-To-Work Trips	6.6%	5.1%	19.3%

Long-Range Corridors

- Plan for the future through the designation of long-range corridors and by establishing a System of Regional Significance. (See Figure I-9.)

As the actions listed above will require more resources than are available or programmed, financial strategies are an integral part of the Plan. While the Plan strategy is expensive, the costs of losing mobility are far greater.

Financial Strategies

The Financial Element provides the cost and revenue estimates for the Plan, and defines the financial actions to implement the various components of the Plan.

Revenue Shortfall

Table I-3 shows the revenue shortfall in the capital and in the operating and maintenance programs. As the table shows, revenues from existing sources will not cover the cost required to fund the various programs called for in the Plan. Approximately 60 percent of the transit capital needs cannot be met with existing revenues, leaving a $18.1 billion shortfall in the transit capital program. Annual operating and maintenance requirements for the transit and demand management programs also show large deficits.

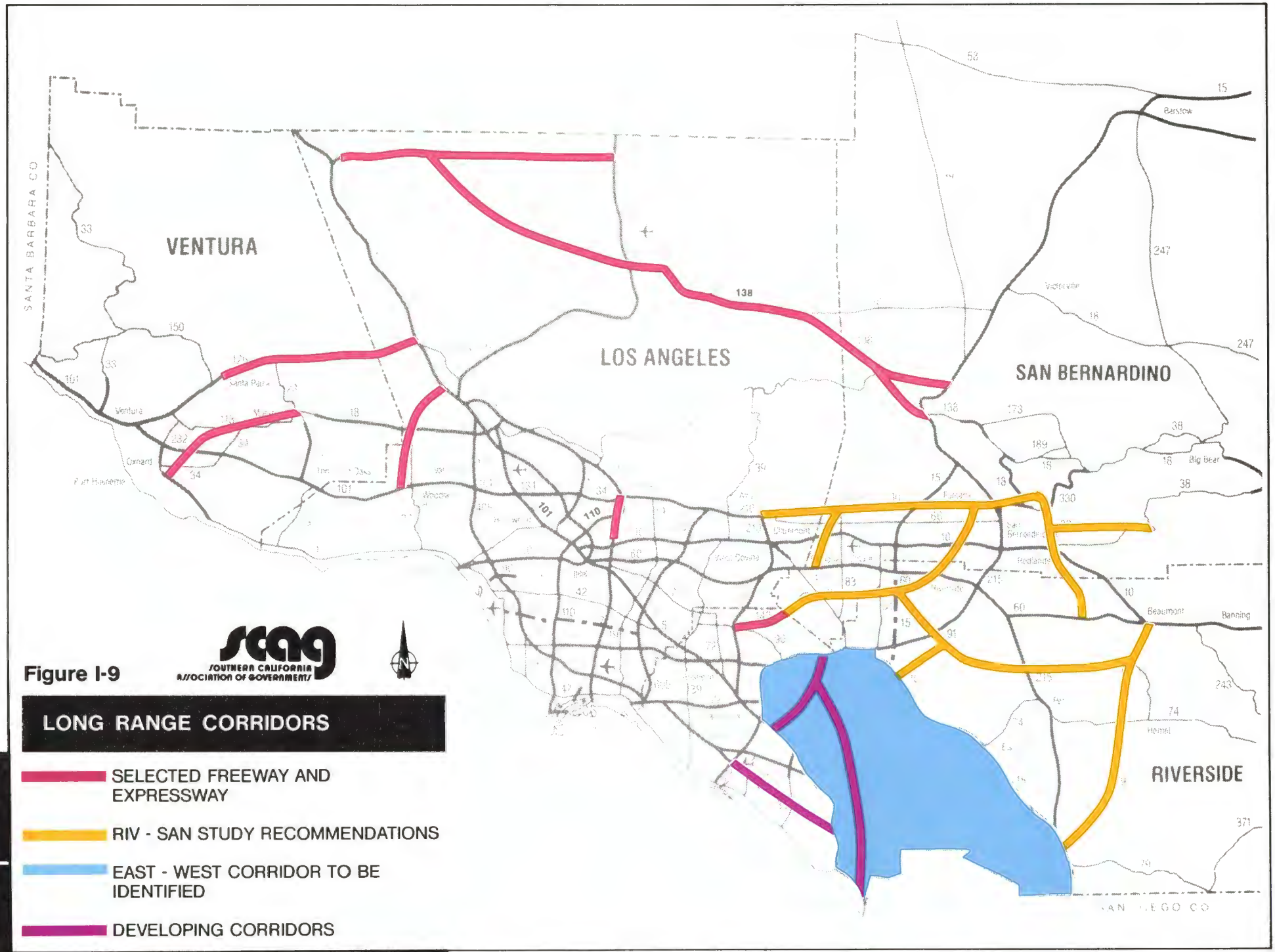
VENTURA
LOS ANGELES
SAN BERNARDINO
RIVERSIDE
SANTA BARBARA CO
SAN DIEGO CO
138
101
110
scag
SOUTHERN CALIFORNIA ASSOCIATION OF GOVERNMENTS
LONG RANGE CORRIDORS
SELECTED FREEWAY AND EXPRESSWAY
RIV - SAN STUDY RECOMMENDATIONS
EAST - WEST CORRIDOR TO BE IDENTIFIED
DEVELOPING CORRIDORS

Figure I-9

TABLE I-3
REVENUE SHORTFALL
(1987 $ Millions)

CAPITAL SHORTFALL *(1992-2010)*		**O & M SHORTFALL *(ANNUAL)***	
HIGHWAY	$ 5,000 (36%)	HIGHWAY	-0-
TRANSIT	18,100 (60%)	TRANSIT	1,300 (49%)
DEMAND MANAGEMENT	50 (100%)	DEMAND MANAGEMENT	
		• Ridership Main.	1,510 (100%)
		• Vehicle Operation	100 (41%)
TOTAL SHORTFALL:	**$23,150**	**ANNUAL O&M SHORTFALL:**	**$2,910**

Constrained and Unconstrained Costs

The Plan has categorized projects into Constrained and Unconstrained to distinguish between two levels of implementation. Those actions and facilities which can be constructed or completed under existing revenue sources constitute the Constrained program. Actions and facilities which cannot be funded without additional revenue are in the Unconstrained program.

The Financial Strategy

Major reliance for increasing revenues to meet the funding shortfalls in the Plan would be on user-based approaches. In addition to the user charges in Strategy 3, the Plan financial strategy categorizes gas taxes as user fees, and includes possible congestion charges or tolls. It also would require the removal of the Gann limit on transportation expenditures. Finally, this financial strategy emphasizers flexibility in the use of traditional and nontraditional revenue sources to fund necessary transportation improvements.

Where necessary, benefit assessments may be included which support the job/housing policy in the Plan; for example, assessing nonresidential units in Los Angeles and Orange Counties while assessing dwelling units in Riverside and San Bernardino Counties.

Table I-4 is a table of equivalents which estimates revenues for each county which could be anticipated to be raised from increases in various funding sources. Each county can use this table to calculate their own program to raise funds based on their own priorities and needs.

As financing is such a critical aspect to the implementation of the Plan, and because present funding is so inadequate, it must be restated that the entire Plan is built on a series of

TABLE I-4
REVENUE SOURCES AND EQUIVALENTS FOR SCAG REGION
(1987 DOLLARS IN MILLIONS)

	SOURCE					
COUNTY	**State Gas Tax 1 cent/gal***	**Regional Gas Tax 1 cent/gal**	**Local Sales Tax 1/4 cent**	**Benefit Assessment $100/DU $0.50/s.f.**	**Tolls Congestion 10 cents on 20% of VMT**	**Centers Parking Fees $1/veh/day**
LOS	$ 400	$ 560	$ 3,570	$ 7,820	$ 2,710	$ 3,100
ORA	100	140	1,360	610	1,020	1,160
RIV	60	80	480		410	180
SAN	80	120	530	170	430	530
VEN	40	40	300		240	310

* Revenues raised would increase if State Gas Tax were indexed for inflation.

actions which will require strong leadership in order to bring out the necessary support. Any lessening of the level of achievement in any of the areas will put an added burden on the others to help meet the overall goals, and possibly force a revision if the deficiency is too great.

INTRODUCTION

II.

II - INTRODUCTION

Our transportation system is in serious trouble. Freeways and streets are becoming more crowded every day. Congestion has increased dramatically in the last ten years and our population continues to grow. The region (see Figure II-1) lacks the money to build needed new highways and to fully maintain and repair our existing roads.

Despite the efforts of Commuter Computer and Commuter Network, most rush-hour cars carry only the driver, adding to congestion and worsening our poor air quality. (The 1982 Air Quality Management Plan called for ridesharing to increase substantially and that objective has not been met.)

The quantity of goods moving within and through the region has been growing, making truck traffic so heavy that it may have to be restricted during peak hours. The airports and seaports that ship goods may stagnate economically if the roads that serve them become more congested and impassable.

In the more rural areas, some communities are actively seeking economic growth and may begin to contribute congestion of their own to the regional system. The problems and concerns of the metropolitan portions of the region are different from those in the eastern region. (See Figure II-2.)

The transit picture is somewhat brighter: bus ridership has grown, although it has not kept pace with growth. The voters of Los Angeles County passed Proposition A, which made millions of dollars available to local government for transit and allowed initial construction on several rail lines. The private sector is providing more services. Lanes for high-occupancy vehicles have been added to Routes 91 and 55 and others are being built. Lack of funding however, may keep the region's bus fleet from growing significantly in the near future.

Transportation funding has not kept pace with inflation. While there have been increases in the gasoline tax and other fees, most public transportation officials say that more increases are needed. Some counties intend to pursue ballot measures to gain more funding, although voters have recently rejected sales-tax measures in Orange and San Bernardino Counties and turned down bond measures at the State level. Housing and office-space costs rise as developers are required to pay higher fees or even shoulder facility costs directly.

— — —

Improving the situation as it stands today would present a formidable challenge, but a workable mobility plan for the region must also consider the future and the changes it will bring. The best available assessment of that future is found in the Regional Growth Management Plan which forecasts growth in population and employment to the year 2010 and shows where housing and jobs will be located.

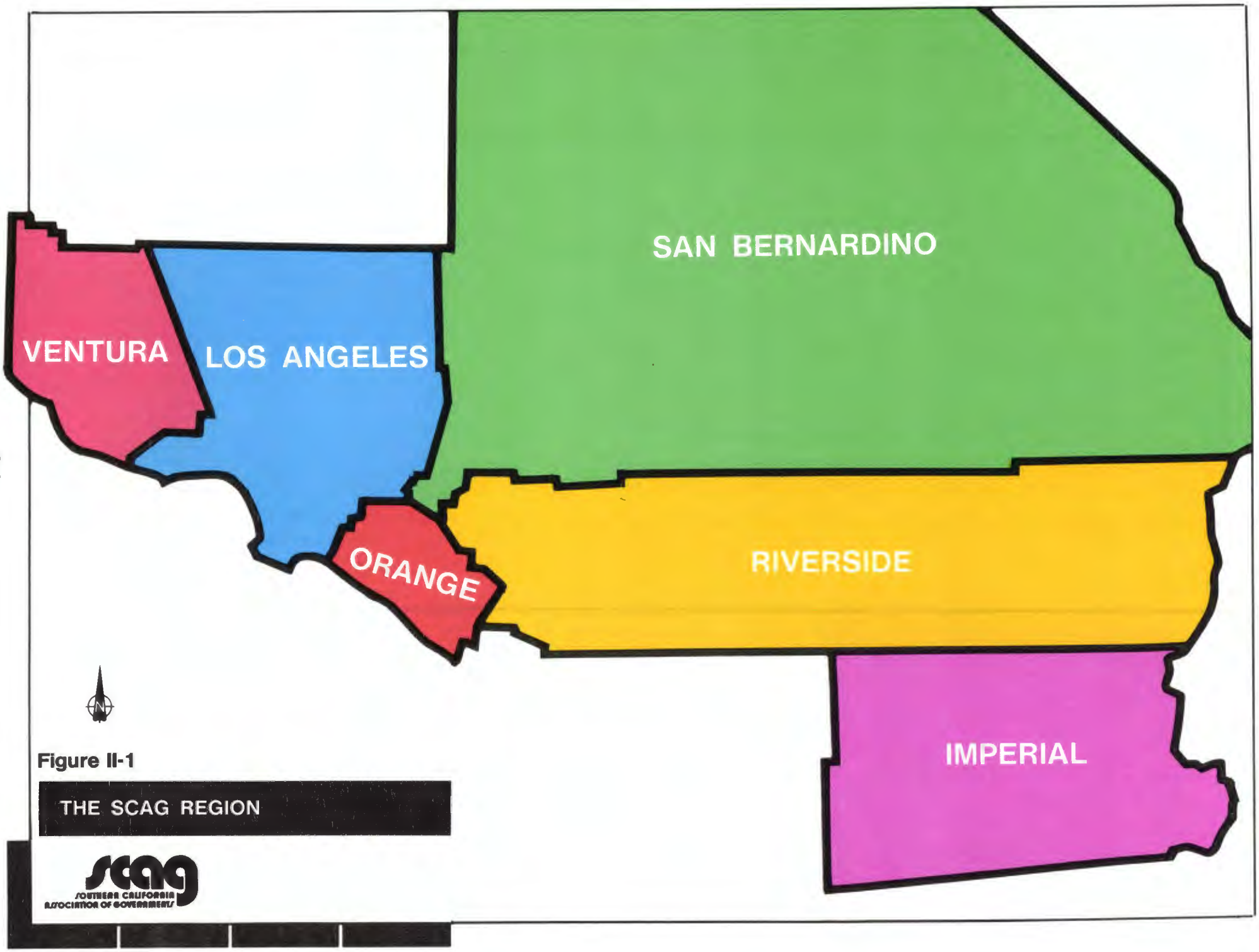

Figure II-1

THE SCAG REGION

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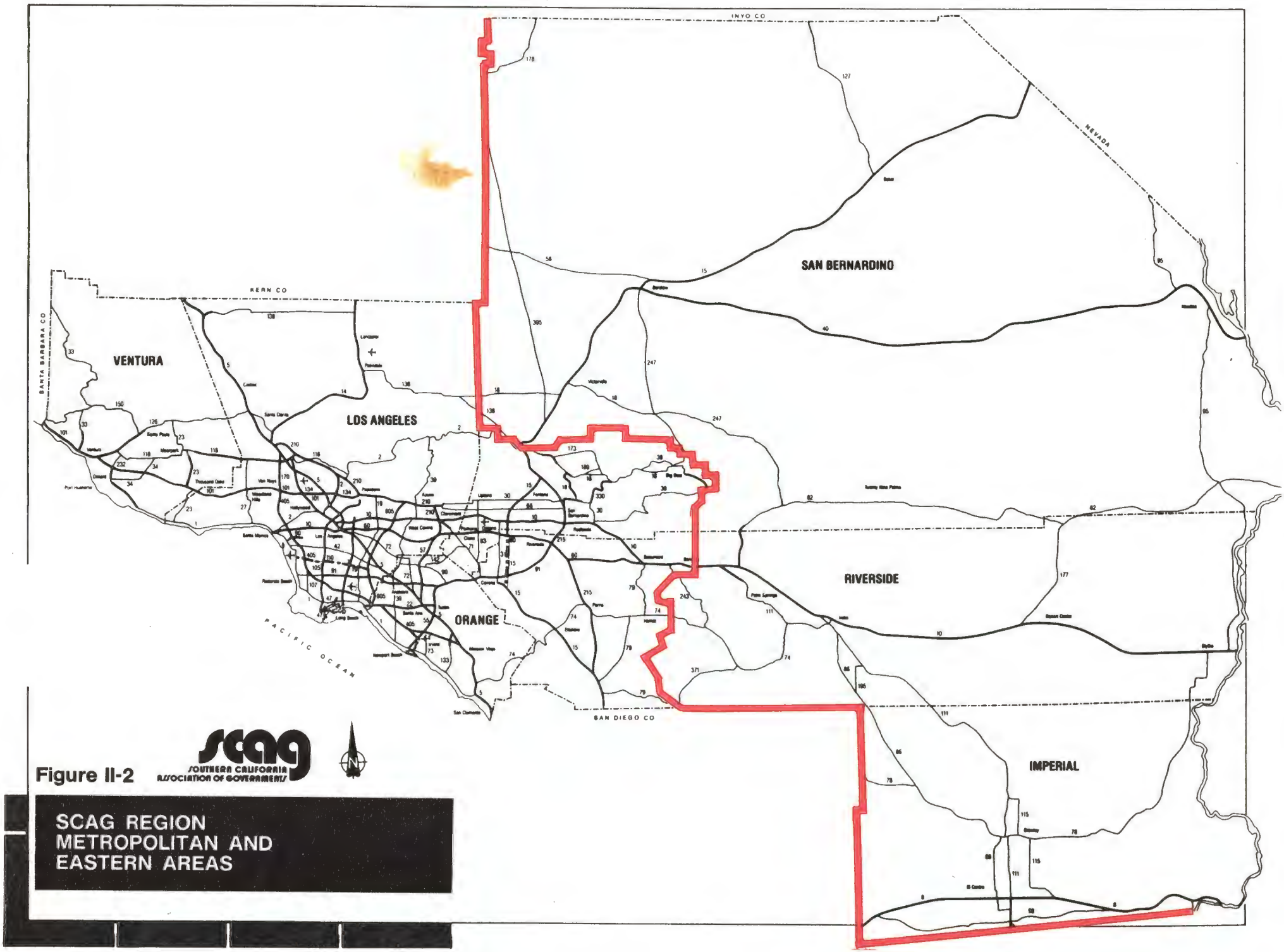

Figure II-2

SCAG REGION
METROPOLITAN AND
EASTERN AREAS

In SCAG's 1982 growth forecast (called SCAG-82 Modified), the region's total population in 2010 was estimated at 15.9 million. The region has grown much faster than expected and the 2010 population total is now expected to be 18.3 million. That's an additional 2.4 million people to plan for, and other socioeconomic variables and their impacts will increase in proportion. For example, daily person-trips on streets and freeways will increase from today's 40.2 million to 58.3 million in the year 2010.

Within the context of this enormous growth, SCAG has prepared this Regional Mobility Plan to keep the region moving at a pace comparable to today's. The Plan was developed through a process that included the evaluation of a number of alternative plans; the cumulative impact of projects that county transportation commissions and Caltrans were considering, new funding and a large construction program.

After two rounds of analysis, SCAG released four strategies that used different mixtures and degrees of growth management, demand management, and facility development to treat our transportation and mobility problems. (See Figure II-3.) Each scenario included rough estimates of the cost of accomplishing it. SCAG's Executive Committee deliberated these strategies and devised one (Strategy 3) which contained all of the components and in specified proportions. This Preferred Strategy is the basis of the Plan. The Executive Committee also established the region's basic mobility objective: providing the level of service on the highway system that we enjoyed in 1984.

The explosion in the region's population and jobs means that we cannot afford to plan as we used to, building roadways to accommodate haphazard patterns of growth. Voluntary public response to education campaigns on the need for ridesharing and transit use has been insufficient and can no longer be relied upon. If the region's mobility is to survive, planning will have to take a more vigorous and comprehensive approach. If an ill-considered distribution of jobs and housing causes mounting transportation problems, that distribution must be modified. Extremely ambitious programs of demand management, transit and reserved lanes for vehicles carrying multiple passengers must be part of the strategy for the region's mobility and important policy choices have to be made. The Regional Mobility Plan shows how those choices can rescue the region from gridlock.

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Jobs/housing balance is a major component of the Plan. The primary reason for the vast morning and evening rush hours on the region's freeways is that many of us live and work some distance apart. Thus, we need to address the mobility problem in part by achieving a better balance of housing and jobs within subregions so that more people can work close to where they live. Reduced travel distances and congestion are an expected result. This objective can be largely achieved by specific actions on the part of local governments and the objective affects only the location of future jobs and housing. It will take a balance of housing that people can afford with the jobs they have in those subregions - not just numerical balancing if we are to be successful.

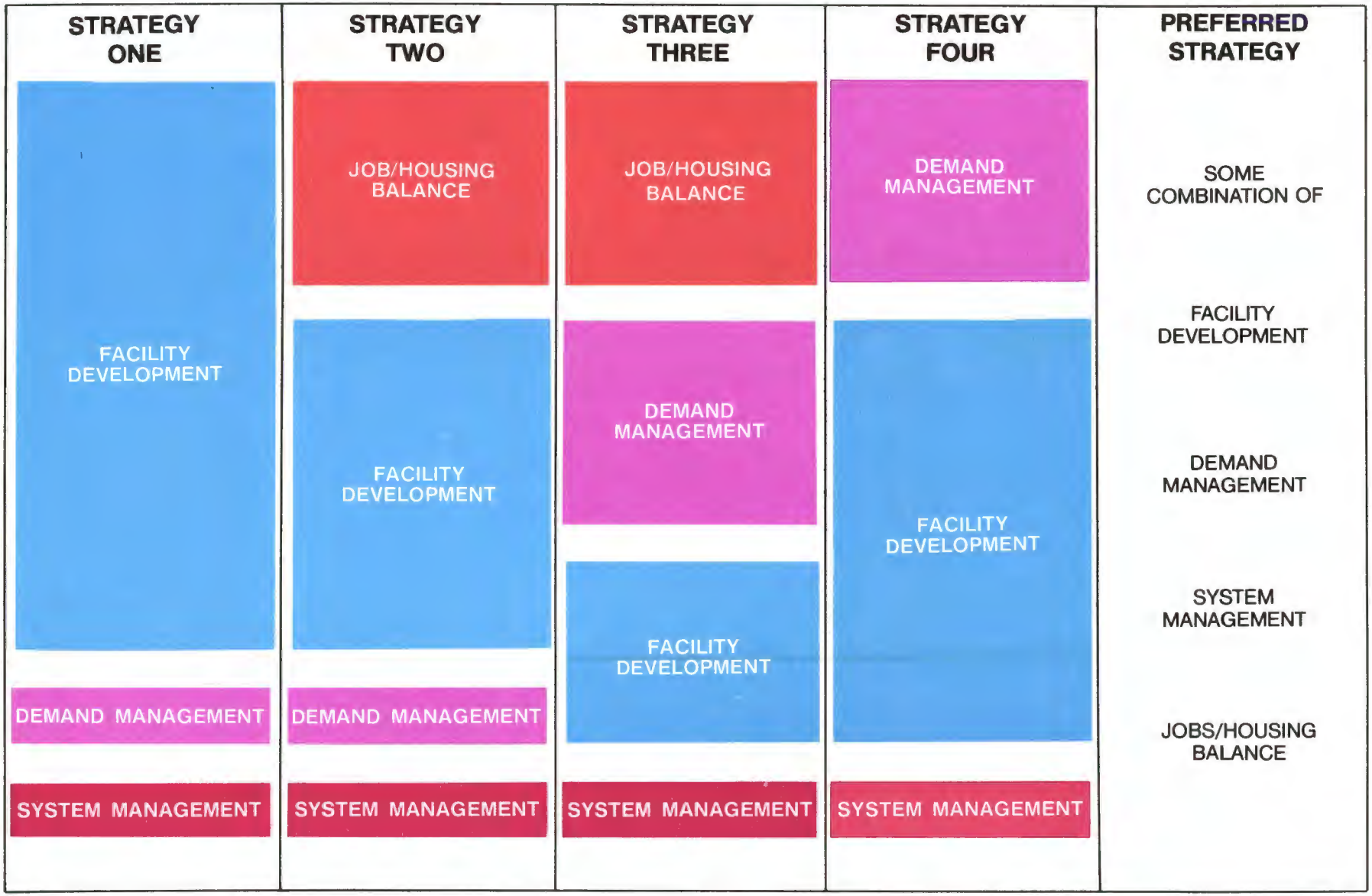

Figure II-3

URBAN MOBILITY STRATEGIES

The next major component of the Plan is the management of travel demand. Coordinated with provisions in the Air Quality Management Plan, the demand-management program contains bold programs to reduce total vehicle trips and overall miles of travel and to increase transit use and automobile occupancy levels. We know demand management works; our efforts to manage travel demand during the 1984 Olympics were a success. Voluntary programs implemented to date have not achieved the ridesharing rates needed to curb vehicle trips; travel will need to be reduced further through a combination of regulations and incentives. Only if individual contributions to society's good are made mandatory will the region's transportation system continue to function.

A third major component of the Plan is an emphasis on system management. We must use every available tool - synchronized traffic signals, improved information signs on freeways, meters at on-ramps, better communication systems, accident prevention and clean-up - to make the system we have already paid for work at peak capacity. All of these types of actions are essential and can be done today.

The last major component is to expand the capacity of the system through new facilities. New facilities improvements include the three modal elements of mixed-flow highways, HOV lanes and transit improvements.

- Mixed-flow highway improvements include both widenings to existing freeways and arterials as well as the construction of entirely new facilities. While mixed-flow improvements are not emphasized in the Plan, due to major reliance placed on demand-management and mode-shift strategies, a fairly large number of additional mixed-flow lane miles are included as necessary components of the mobility strategy.
- Transit must be significantly increased and become a major component of regional mobility. Some demand-management actions will increase the need to use transit; an expanded and improved transit network will spur the desire to use transit. The practical limitations on further expansion of highways make transit a key part of this Plan.
- Reserved lanes for High Occupancy Vehicles (HOV) help achieve system-management objectives for more efficient use of existing facilities and contribute to the realization of demand-management measures. HOV lanes by their existence tend to increase ridesharing because they save travel time; they will also be needed to accommodate the carpool formation generated as certain demand-management measures take hold. Every former driver sharing a ride removes an automobile from the roads.

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The Plan recognizes that the region's citizens will continue to use and prefer the automobile to other forms of intraregional travel and that the freeway system will continue to be the backbone of the region's transportation network. However, because of the emphasis on greater efficiency in the use of the existing system, the Plan requires less expansion of the highway system than would otherwise be needed.

Development of the needed major facilities in this Plan could not be held back by projections of available funding. The Plan, therefore, includes a financial strategy for funding its components. Within each modal element – transit, HOV, highways – the portions that can be paid for with projected funding over the period of 2010 are identified as the "constrained system" (i.e., constrained to available funding). All are important parts of the Preferred Strategy and represent the first priority for implementation.

In addition to ground transportation, the Plan includes components dealing with air and water transport, rail lines and nonmotorized modes, as called for in the State Guidelines.

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Each component plays an important part in the success of the entire Plan. If any element cannot be realized to the fullest or is less effective than expected, the Plan will require changes or its objectives may need to be re-evaluated.

Implementation of the Plan will not proceed as a normal matter of course. The Plan is based on major changes: it calls for major reorientation of travel from single occupant auto to transit and to ridesharing. It requires broad supportive action from local government and significant financial support. It is heavily based upon a range of important actions at every level in all sectors to provide the incentives and facilities to promote the implied behavioral adjustments. Without strong commitment from every quarter to implement the necessary actions, funding will not be secured, facilities and programs will not be implemented and travel behavior change will not occur. Lastly, adjustments to the Plan will be required.

NEEDS

III.

III - NEEDS

Ground Transportation Capacity

Southern California has a mobility problem. The scale and scope of any problem provides the basis for the development and for selection of solutions to the problem. The base year used was 1984; the year 2010 is used as the planning horizon. Population and employment growth for 2010 and the Draft Baseline Projection developed in August 1986 were used to establish current and future transportation needs. Table III-1 identifies base year and future planning year socioeconomic assumptions which were used in the analysis of transportation needs for the Regional Mobility Plan.

TABLE III-1
POPULATION AND EMPLOYMENT GROWTH BY COUNTY

	POPULATION		EMPLOYMENT	
COUNTY	**1984**	**2010***	**1984**	**2010***
Imperial	102,000	160,000	37,000	64,000
Los Angeles	7,863,000	9,949,000	4,053,000	5,524,000
Orange	2,065,000	3,050,000	1,048,000	1,920,000
Riverside	758,000	1,969,000	247,000	466,000
San Bernardino	1,015,000	2,218,000	325,000	640,000
Ventura	580,000	910,000	213,000	340,000
Region	12,383,000	18,256,000	5,923,000	8,954,000

Source: SCAG Draft Growth Management Plan 8/88.

* (GMA1)

Differences Between the Department of Finance and SCAG Growth Forecasts

Both the California Department of Finance (DOF) and the Southern California Association of Governments (SCAG) prepare population and housing projections for the Southern California area through the year 2010. The DOF provides projections at the county level only. Its research has projected that by year 2010, 17.1 million people will live in the SCAG region. By contrast, the SCAG Growth Management Plan projects a regional total population of 18.3 million in the year 2010. (See Table III-2.) There are two principal reasons which account for most of the differences between these two projections.

TABLE III-2
2010 POPULATION
(Millions)

COUNTY	GMA1 2010	GMA4MOD J/H 2010	DEPARTMENT OF FINANCE
Imperial	0.16	0.14	0.16
Los Angeles	9.95	10.23	9.62
Orange	3.05	2.98	2.83
Riverside	1.97	1.81	1.65
San Bernardino	2.22	2.18	1.98
Ventura	0.91	0.92	0.89
Region	18.26	18.26	17.14

1. Economic Projections

One of the key factors in the SCAG projections is the use of an economic projection which looks at the types of industries that are expeted to grow in Southern California and how much they are expected to grow. This then leads to estimates of the number of workers needed to fill those jobs and, subsequently, to the size of the population that would be supported by those jobs. This analysis resulted in a population projection total of 18.3 million people.

The DOF does not use economic considerations in its projections.

2. Development of Ethnic Assumptions

Both SCAG and DOF performed modeling efforts to look at the demographic factors determining growth. The type of modeling performed looked at birth, death and migration rates within the population.

In developing the birth, death and migration rate assumptions used in its modeling, the DOF assumed Statewide average rates as averages for the total population within the region without establishing ethnic differentiations.

SCAG went beyond that step to include different fertility and mortality rates for the different ethnic groups. This means that SCAG's projection of the region's population is higher than DOF's because of SCAG's higher concentrations of ethnic groups relative to the State average and their higher than average fertility rates. However, without this specific focus, the SCAG model run would have resulted in a population total of at least 18.8 million people.

In preparing the projections, SCAG assumed that an unconstrained, demographically-driven level of population growth could not be supported by the economic factors driving the region's job growth. Therefore, it was assumed that job growth would limit the population total to 18.3 million people. This meant that SCAG actually lowered the total that would have resulted from purely demographic factors.

This 1.2 million difference between SCAG's and DOF's population forecasts has several transportation implications: it means approximately 3.7 million more person-trips in the region, which translates to about 2.6 million more vehicle-trips and 24.56 million vehicle miles traveled.

The 1984 Base Network (Figure III-1) represents the current transportation system. The No-Build System used for analysis of 2010 was the Existing Plus Funded Network. The difference is the addition of projects programmed in the 1987 State Transportation Improvement Program (Figure III-2).

In 1984, the highway network carried a total of 40.2 million person-trips daily of which 7.3 million were Home-Work trips. By 2010, daily vehicle-trips are projected to be 42 percent higher, increased to almost 57 million trips. Home-Work trips will increase to 10.3 million trips, representing a 42 percent increase over the 1984 base year.

Mobility in the SCAG region is no longer adequately served by the transportation system and will get worse under the No-Build Scenario. (See Table III-3.) This is particularly true during the morning and evening peak commute periods.

TABLE III-3
NO-BUILD SCENARIO

	1984	2010
Vehicle Miles Traveled (000's)	221,292	376,187
Vehicle Hours Traveled (000's)	6,343	19,575
Hours of Delay (000's)	629	10,132
Percent Delay	10%	52%
Average Speed		
All Facilities	35	19
Freeways	47	24
Miles of Congestion		
AM	452	2,564
PM	856	4,567

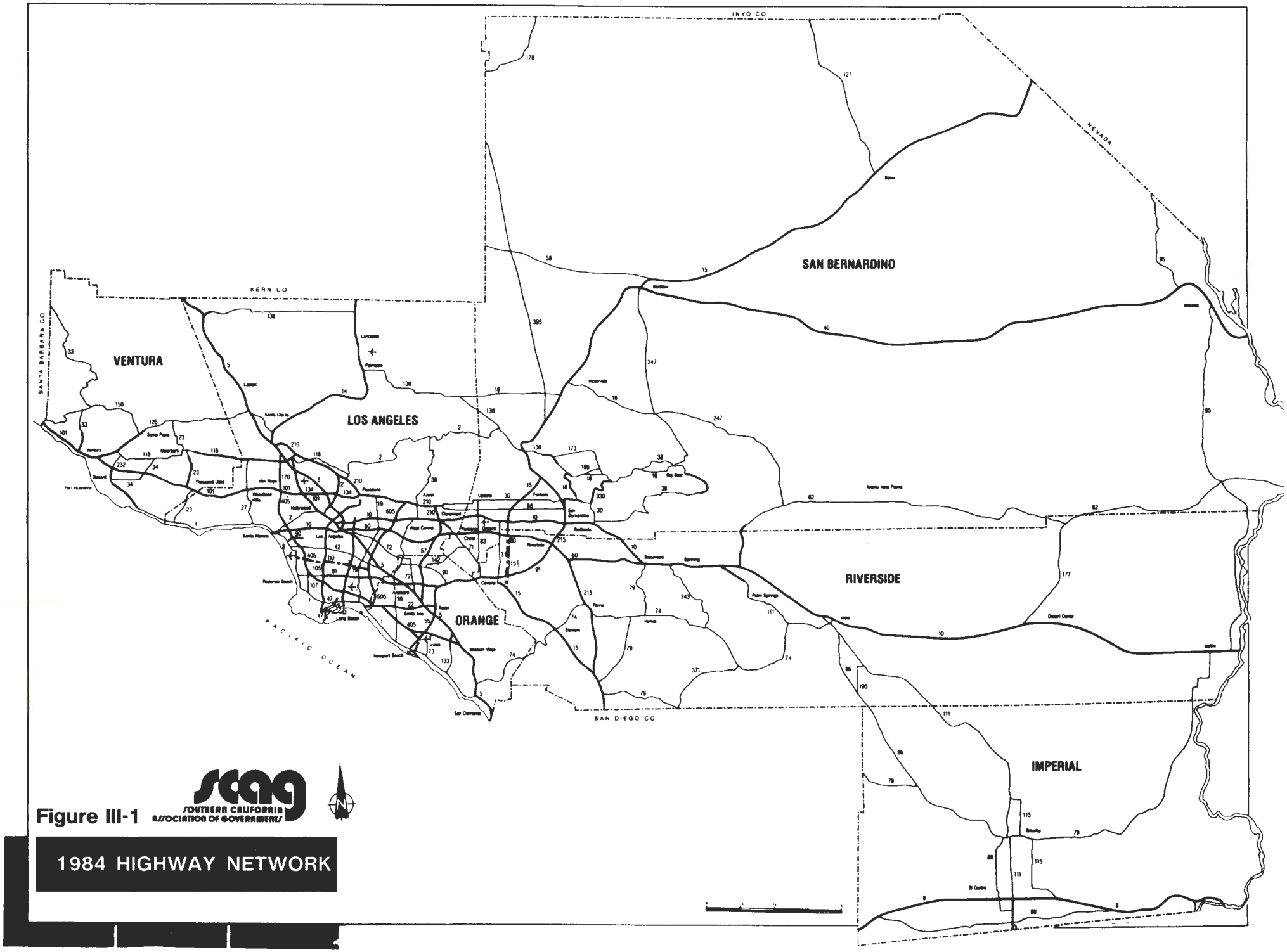


Figure III-1

SCAG SOUTHERN CALIFORNIA ASSOCIATION OF GOVERNMENTS

1984 HIGHWAY NETWORK

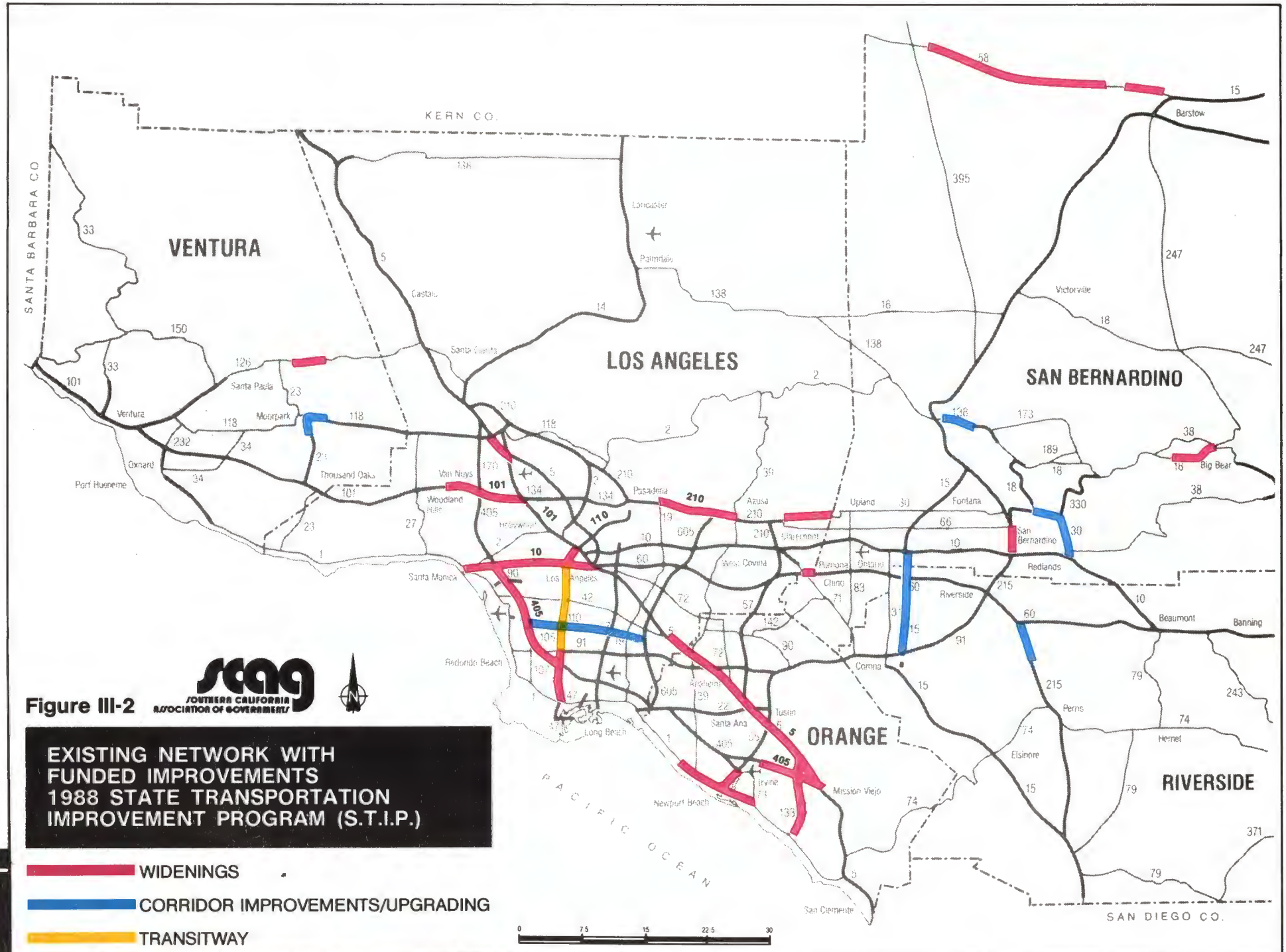


Figure III-2

scag SOUTHERN CALIFORNIA ASSOCIATION OF GOVERNMENTS

EXISTING NETWORK WITH FUNDED IMPROVEMENTS 1988 STATE TRANSPORTATION IMPROVEMENT PROGRAM (S.T.I.P.)

- WIDENINGS
- CORRIDOR IMPROVEMENTS/UPGRADING
- TRANSITWAY

Figures III-3 and III-4 illustrate congestion for both 1984 and the 2010 No-Build Project alternative. As the future No-Build congestion map shows, the congestion will increase substantially given baseline growth trends.

Transit

Transit is not achieving the goals that have been set for it, and there is widespread pessimism about its ability to meet those goals in the future. Many leaders in the field feel that "relieving congestion" is the most important goal of transit, but most also express strong doubt that transit can significantly increase its share of the trips in the region.

Meeting the needs of the transit-dependent is ranked second among the transit goals. Improving air quality and conserving energy were also considered to be important goals. However, they did not outweigh the concern expressed for reducing traffic congestion.

Among the key reasons cited for the lack of achievement of transit goals are lack of sufficient funding, the "love affair with the private automobile," and Southern California's land use patterns. These factors are beyond the control of public transit operators and partially explain why transit has been unsuccessful at meeting its goals.

Local Streets and Roads

In the SCAG region, local governments finance and control 92 percent (approximately 44,000 miles) of the existing publicly supported street and road mileage. This extensive street and road system constitutes the feeder and distribution network for the regional highway system.

Historical expenditure patterns during the period 1972 to 1982 show that real funding levels for street and road improvements declined almost $200 million annually (from $978 million in FY 72 to $813 million in FY 81, in constant 1982 dollars) in the SCAG region. This decline, combined with the negative effects of a decade of inflation on the purchasing power of lowered funding levels, served to substantially reduce local street and road improvement program capabilities. These lowered funding levels, in turn, result in decreased maintenance activity which can reduce pavement life to 20 to 25 years (instead of 40 to 50).

At the end of the 1984 calendar year, 2,850 miles of arterial and collector roadways needed $2 billion of improvements to eliminate backlogged deficiencies (over and above routine maintenance). Over a 10-year period, unmet local street and road improvement needs would increase from the $2.1 billion backlog to $3.6-$4.2 billion.

Air Quality

Cleaner air is one of the more urgent and vital needs in Southern California. This need and the legal requirements stemming from Federal and State clean air laws place a significant responsibility on transportation to be a key part of the solution to the smog problem. The region has three air basins - two of which, Ventura County and South Coast Air Basin fail to meet the

Figure III-3

LOCATION OF SIGNIFICANT HIGHWAY CONGESTION TODAY

1984 Base Year
A.M. Peak Period

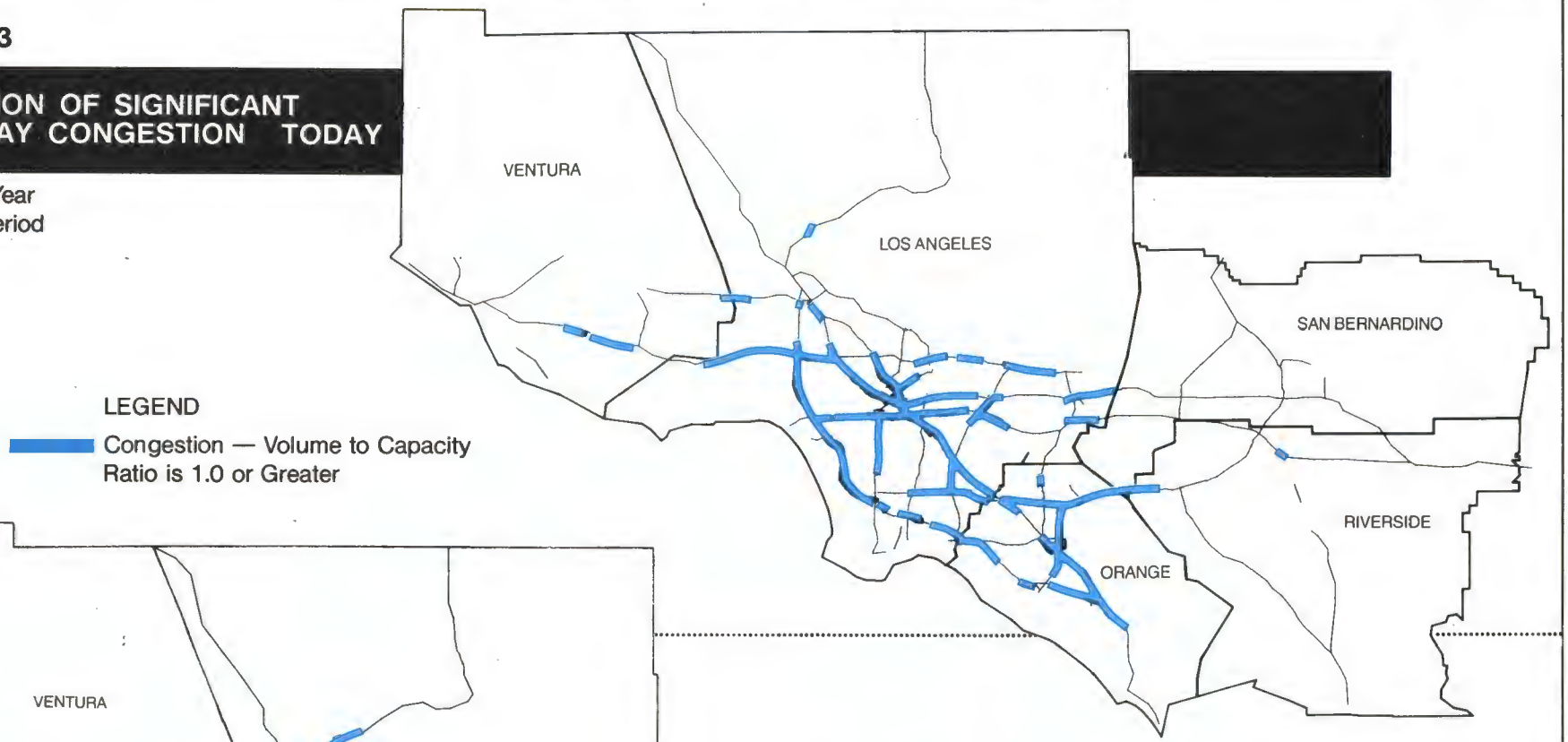
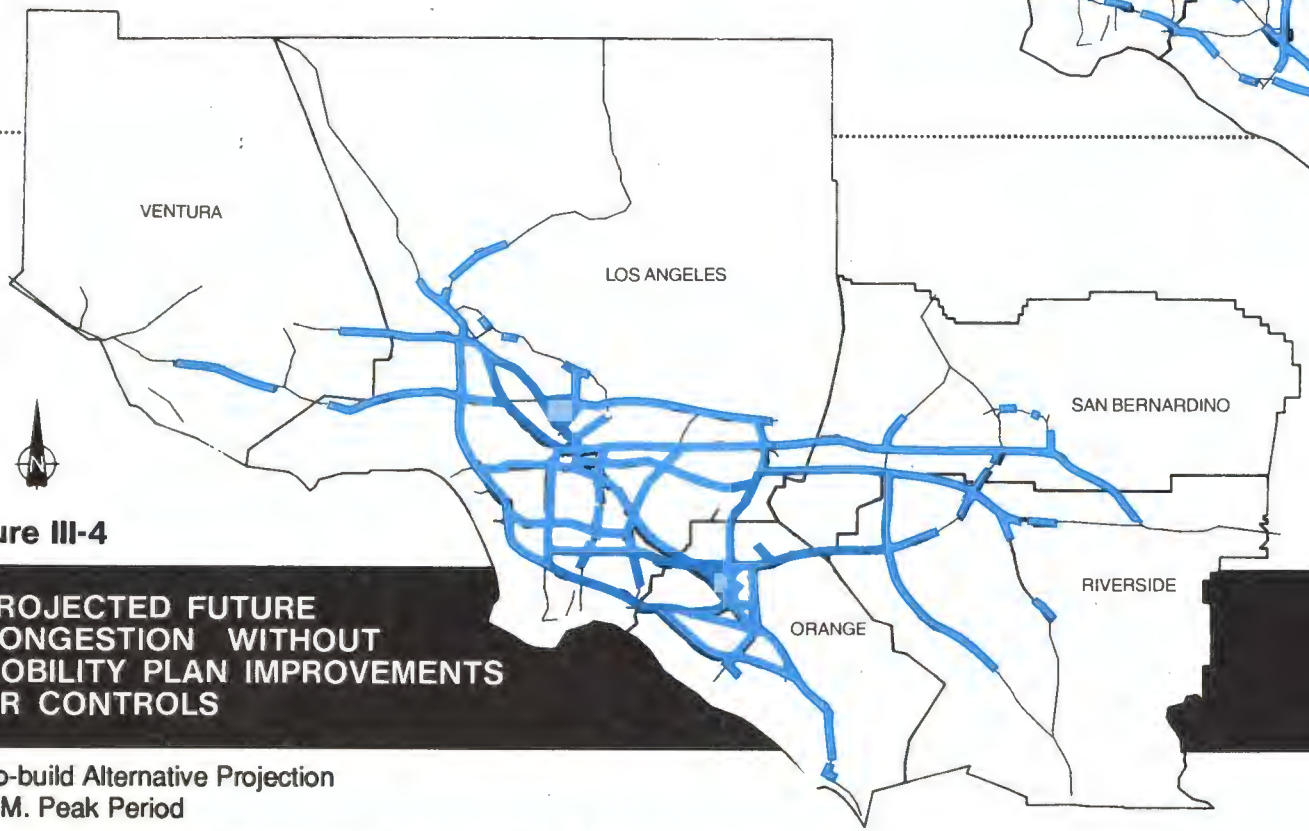


Figure III-4

PROJECTED FUTURE CONGESTION WITHOUT MOBILITY PLAN IMPROVEMENTS OR CONTROLS

No-build Alternative Projection
A.M. Peak Period



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required standards. Our violations of ambient air quality standards are five times worse than the next worse basin in the country. Attainment of the standards could present a severe constraint on our mobility choices. The challenge in the third air basin, the South East Desert Air Basin, is to maintain air quality standards in the face of tremendous growth pressures. (See the air quality management plans of Ventura County and South Coast Air Basins for more information.)

Goods Movement

Increased economic activity and residential growth leads to growing demands for trucking, freight movement by train, air cargo and waterborne shipping. All have seen significant increases in activity. The region's ports and airports, vital regional centers for goods transfer, may be choked by the ground access constraints leading to those facilities.

Growing train movements near the ports also cause severe traffic congestion in those locales. Truck movements and deliveries have become the subject of much debate and analysis recently. (See Figure III-5.)

The region has experienced steady growth of 6.3 percent/year in air cargo volumes between 1975 and 1986. In 1986, 1.2 million tons of cargo were handled at the region's airports with 80 percent at LAX and 18 percent at Ontario. By the year 2000, this amount could grow to about 2 million tons and by 2010 reach 2.7 million tons per year.

The SCAG region has three major commercial ports: Los Angeles, Long Beach, and Hueneme. The Ports of Los Angeles and Long Beach, combined, represent the largest port complex on the West Coast, handling nearly 66 million metric tons in 1985. This is expected to increase to 195 million tons in 2020. Containerized cargo is expected to be a major component of port growth. In order to accommodate this surge in port cargo, the ports are planning to construct an additional 2,400 acres of landfill south of Terminal Island. Preliminary plans for these new lands include 11 new container terminals, 6 new liquid bulk terminals, 4 new dry bulk terminals, and 17-18 neo/auto terminals. The Port of Hueneme handled 628,000 metric revenue tons in 1986 and that will increase to 1.5 million tons in 2010 with the building of an additional berth. All three ports are actively engaged in planning their respective expansions. One of the major issues each port faces is ground access.

In 1986, the Los Angeles Customs District processed $68.5 billion of international trade. All of these goods movement activities will come under closer scrutiny as the everyday traffic of residents and visitors continues to increase.

Commercial Aviation

The lack of adequate commercial airport capacity will become an issue during this 20-year planning period. With the population growth and the difficulty of raising operating constraints (because of impacts) at existing airports, this capacity shortfall will become significant. Unless the inability to develop a new site is overcome, pressure will mount to increase service at existing facilities. This would place inequitable impacts on those communities surrounding

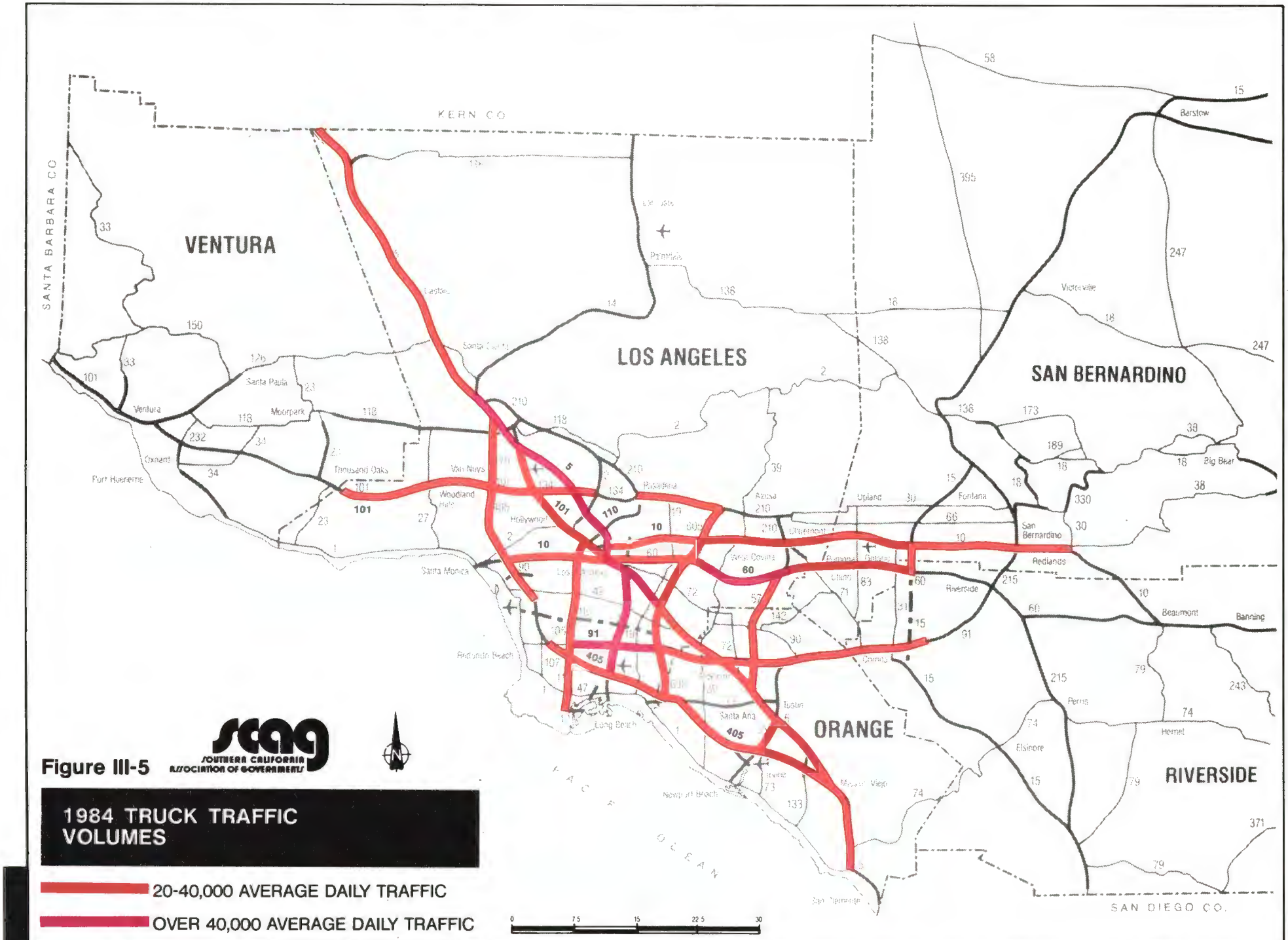


Figure III-5

SCAG SOUTHERN CALIFORNIA ASSOCIATION OF GOVERNMENTS

1984 TRUCK TRAFFIC VOLUMES

20-40,000 AVERAGE DAILY TRAFFIC

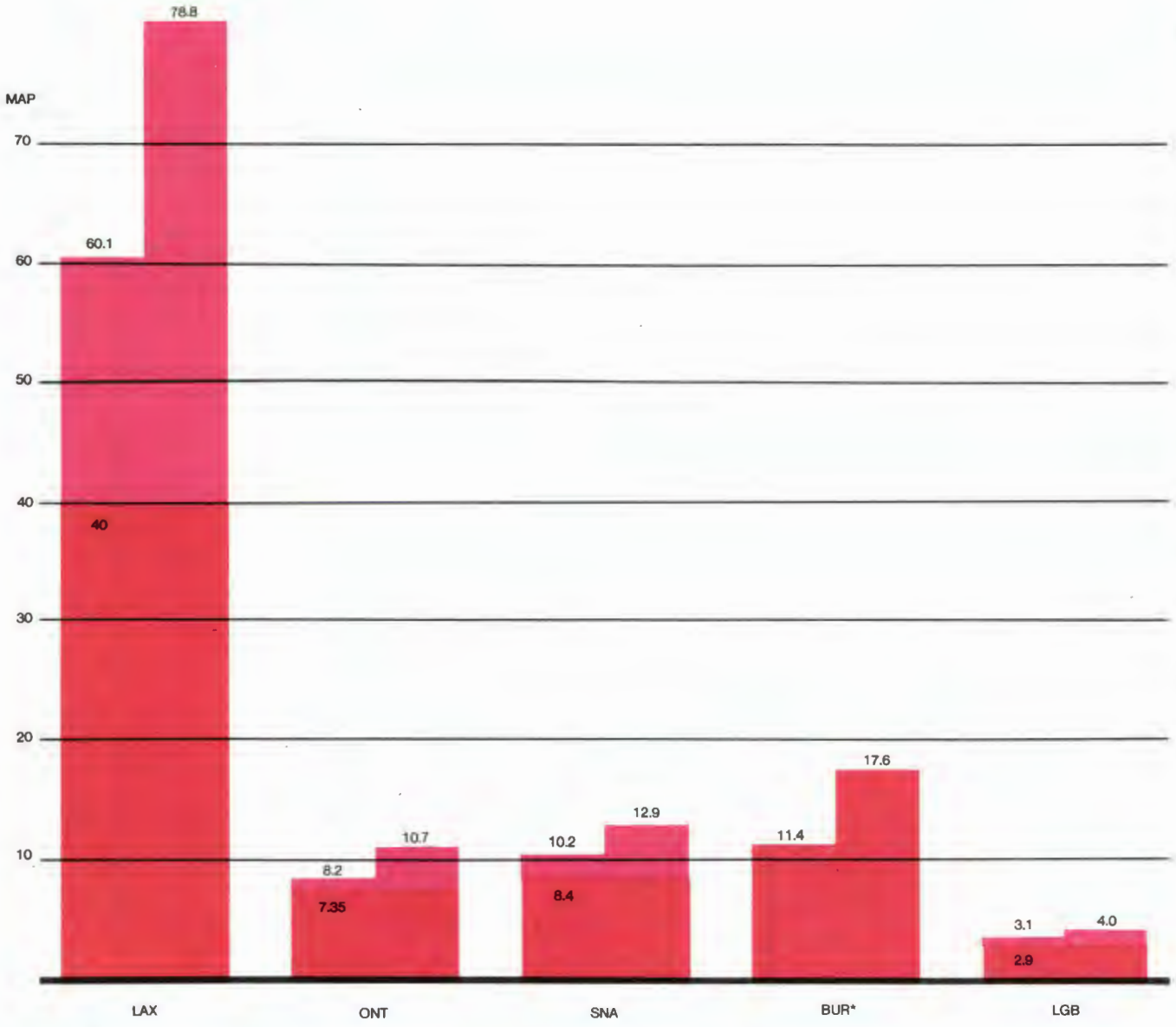
OVER 40,000 AVERAGE DAILY TRAFFIC

the airports which are providing air passenger service to residents of other areas. In 1987, the six urban area air carrier airports served 59 million passengers. This demand will grow to 118 million passengers per year in 2010. (Figure III-6.) The existing system will reach its physical capacity of 90-100 million passengers annually around the turn of the century. New airport facilities will take 15 to 20 years to construct.

Funding

One of the needs for almost all of the above is funding. The current State Transportation Improvement Program (5-year investment program) is short about $2 billion to build what is already committed. The quantity of facilities and services that this region needs to meet our mobility needs will only exacerbate the need for additional funding.

YEAR 2000 AND 2010
PROJECTED LEVEL OF SERVICE



*BUR HAS NO POLICY CONSTRAINT

Figure III-6

URBAN AREA AIR CARRIER AIRPORTS

DEMAND IN EXCESS OF CONSTRAINT

CONSTRAINED DEMAND

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POLICY ELEMENT

IV.

IV - POLICY ELEMENT

Goals

Over the next two decades, this region will face a number of challenges affecting the transportation sector which will demand creative solutions. The effects of the tremendous growth on the transportation system will be overwhelming. The situation holds serious economic and social implications for this region. If our transportation system becomes inadequate, our economic vitality will suffer. The goals of the Regional Mobility Plan set the directions the SCAG region will follow to meet the transportation challenges of the predicted growth. The goals reflect SCAG's multifaceted approach to meeting our transportation needs.

The goals of the Plan are:

- TO ATTAIN AND MAINTAIN MOBILITY IN AN ENVIRONMENT OF CONTINUING POPULATION AND ECONOMIC GROWTH.
- TO PROVIDE THE CAPACITY NECESSARY TO SAFELY AND EFFICIENTLY MEET THE DEMAND TO MOVE PEOPLE AND GOODS RESULTING FROM THE OVERALL LEVEL AND DISTRIBUTION OF POPULATION, EMPLOYMENT, LAND USE, AND HOUSING GROWTH PROJECTED IN THE ADOPTED GROWTH MANAGEMENT FORECAST.
- TO MAKE THE REGION ACCESSIBLE TO EVERYONE INCLUDING THE ELDERLY, THE HANDICAPPED, AND THE TRANSIT-DEPENDENT.
- TO ADAPT TO AND ENCOURAGE MAJOR CHANGES IN TRAVEL BEHAVIOR INCLUDING BOTH REDUCING THE NUMBER OF HOME-TO-WORK TRIPS AND REDUCING THE USE OF THE SINGLE-OCCUPANT VEHICLE.
- TO ACHIEVE AN EFFICIENT BALANCE AMONG ALL MODES INCLUDING AUTOMOBILES, TRUCKS, BUSES, VANS, RAIL, NONMOTORIZED VEHICLES AND NEW TECHNOLOGIES.
- MAXIMIZE THE PRODUCTIVE USE OF EXISTING FACILITIES BY IMPLEMENTING SYSTEM AND DEMAND-MANAGEMENT TECHNIQUES IN A COST-EFFECTIVE MANNER.
- TO BE COMPATIBLE WITH THE ENVIRONMENT AND TO SUPPORT THE AIR QUALITY MANAGEMENT PLANS OF THE SOUTH COAST, SOUTHEAST DESERT AND SOUTH CENTRAL COAST AIR BASINS.
- TO SUPPORT A PATTERN OF DEVELOPMENT WHICH SHORTENS TRIP LENGTHS THROUGH IMPROVED JOB/HOUSING BALANCE.

Objectives

The objectives of the Plan are intended to identify a quantified set of long-term (20 year) and short-term (5 year) milestones to assess implementation of the Plan. The long-term objectives reflect the performance of the fully implemented Plan and as such are not constrained. The short-term objectives reflect performance levels which are a realistic appraisal of implementation of the 5 years of actions described in the action element. The objectives of the Plan are as follows:

The long-term objectives for the ground transportation system are:

- Reduce daily congestion (Level of Service F) on the region's freeway system with congestion reduced to no more than 450 miles of freeway.
- Achieve a 19 percent transit share of home-to-work trips by 2010.
- Limit the increase in daily Vehicle Miles Traveled over the next 20 years to 60 million miles traveled.
- Limit the daily vehicle hours of travel to approximately 7,850,000 hours through the year 2010 (all trips).
- Increase the number of people ridesharing to 1,600,000 by 2010.
- Eliminate 3 million daily home-to-work trips by 2010.
- Reduce 2010 Mobile Source Emissions in the South Coast Air Basin by the following amounts:

Pollutant	**Reduction (Tons/Day)**
ROG	140
NOx	220
CO	1,533
SOx	30
PM_{10}	23

- Fund the $23.2 billion shortfall in annual highway, transit and demand management capital costs.
- Fund the $2.9 billion shortfall in annual highway, transit and demand management operating costs.

The short-term objectives of the ground transportation system are:

- Complete the construction of all highway and transit projects programmed in the 1987 State Transportation Improvement Program.
- Stop the current downward trend in transit's share of ridership in the region.
- Complete the initial 5-year list of actions identified in the Demand Management Program.
- Complete the initial 5-year list of actions identified in the System Management Program.
- Complete the initial 5-year list of actions identified in the Financial Element.

Policies

The programs and actions of the Plan are designed to meet the goals and objectives of the region. Policies provide guidance for decision making at specific decision points. The following policies shall provide guidance to Caltrans, transit operators, and the county transportation commissions in their programming decisions and will serve as a basis for conformity evaluations. In this Plan, the policies shall provide guidance to local governments in their programming and infrastructure decisions and in their demand-management and land use decisions. Finally, these policies will provide guidance to businesses, employers and individuals in determining their actions to implement demand-management programs.

The Plan contains major Transportation Demand Management, System Management, and Highway and Transit facility and operational improvements, as well as other programs. Each program includes specific implementation actions. Some of these programs and actions are to be implemented primarily through the Regional Transportation Improvement Program, which must be consistent with the Plan and in conformance with the Air Quality Management Plan. Programs and actions detailed in the Plan as well as other projects and actions not specified in the Plan will be evaluated for consistency and/or conformity on the basis of the following policies:

Policies Related to Growth Management Goals and Objectives

1. Transportation improvements shall be supportive of the adopted Growth Management Plan.
2. Growth should be monitored and, where adequate transportation capacity cannot be maintained, growth forecasts should be re-evaluated.
3. Land use and transportation decisions should be coordinated with and supportive of each other's capacity.
4. Potential rights-of-way for transportation corridors connecting subregions and major activity centers should be identified and protected for future transportation purposes through local government action.
5. Priority shall be given to transportation facility improvements and system management programs which improve access to and circulation between activity centers.

Policies Related to System Management

6. Local system expansion should be supported.
7. Support the development and application of pavement management systems by local jurisdictions as one means to optimize the expenditure of scarce maintenance funds.
8. New transportation infrastructure should incorporate advanced system technologies.

Policies Related to Roadway Development/Performance Goals and Objectives

9. Capacity expansion shall be coordinated with transportation system management techniques.
10. Alternative modes and projects shall be developed and implemented where implementation of HOV element projects is demonstrated to be unfeasible due to widespread local opposition.
11. High Occupancy Vehicle (HOV) lanes shall be provided for in new facility construction and for capacity enhancements of existing facilities in accordance with the High Occupancy Vehicle Program.
12. The full range of costs (including the cost of private automobile ownership and operation) should be considered in the evaluation of transportation improvements.
13. Adequate circulation and access systems to activity centers designated in the adopted Growth Management Plan shall be provided.

Policies Related to Meeting Air Quality Goals and Objectives

14. Transportation Improvement Programs shall be consistent with the Plan and should conform to the approved State Implementation Plan in this region. Priority shall be given to projects which implement adopted Transportation Control Measures.

Policies Related to Meeting Demand Management Goals and Objectives

15. Demand Management Programs and development of Transit and Ridesharing facilities shall be given priority over mixed-flow highway capacity expansion in order to achieve and maintain mobility in the future.
16. Support the development and public seed funding of Transportation Management Associations as one means to implement Demand Management Programs.
17. Transportation Demand Management Program implementation should be extended to non-commute trips for public and private sector activities.

Policies Related to Meeting Transit Goals and Objectives

18. Development of transportation services should have priority over other possible uses of excess railroad rights-of-way.
19. SCAG suggests competitive bidding for public transit projects and programs.
20. Expansion of private commuter/express bus operations and the use of private transportation services to meet transit needs shall be supported as a supplement to public transportation services.

21. Regional transportation terminals shall have adequate access systems and be designed to accommodate facility expansion.

22. Regional transfer facilities should be developed to allow transfers between corridors.

23. Transportation facilities and transit vehicles shall provide reasonable accessibility for handicapped persons.

Policies Related to Goods Movement

24. Ground access to ports and airports is regionally significant and shall be supported where part of a SCAG-approved access plan or program.

25. Eliminate unnecessary delay and circuitous routings of goods movement.

Policies Related to Plan Implementation

26. SCAG shall use the Transportation Improvement Program review and approval as one vehicle to implement the Plan and the appropriate air quality management plan.

27. Alternative, advanced technology research, testing and implementation shall be supported when it implements the Plan.

28. Elderly and handicapped persons shall be involved in ongoing transportation planning and programming efforts.

29. Projects from the unconstrained program which promote system continuity, or complete or connect projects within the constrained program, shall be given priority over other unconstrained projects when additional funding is made available.

30. The constrained program of the Plan shall be initiated first.

Policies Related to Financial Objectives and Programs

31. Primary reliance should be placed on user based financing approaches to finance transportation projects.

32. Increases in the State and/or local fuel taxes and weight fees, and flexibility in their use, shall be supported to fund implementation of the adopted Plan and its identified programs.

33. The addition of local transportation taxes (e.g., local sales tax) in all counties shall be supported to fund facility expansion, system and demand-management programs of the adopted Plan.

34. Peak period pricing, user fees or other mechanisms should be introduced to reduce peak period traffic demand.

35. Value capture approaches to raising revenues (e.g., benefit assessments and development fees) should be used to recoup some of the costs of the capital and operating shortfalls.

36. Increasing public funding levels for local streets and roads shall be supported in order to reduce backlogged improvement needs with priority given to deteriorated facilities.

37. Transportation funding should be exempt from the Gann limit (1978 California voter initiative Proposition 4).

Aviation Policies

38. Policy constraints on existing air carrier airports should be defined in terms of environmental impacts and should remain in place except where relevant noise, air quality and ground access impacts are mitigated. Airport proprietors and/or the Regional Airport Authority are encouraged to determine if additional service can be provided, but in no case should constraints be lifted until negative impacts are mitigated.

39. Air passenger demand should be met by the provision of adequate, environmentally compatible public airport and heliport facilities and where appropriate, high speed rail.

40. Each subregion should provide sufficient environmentally acceptable capacity within its own market area to meet local short-haul air passenger demand.

41. High speed intercity rail development as an alternative to airline or automobile travel should be considered in corridors where there would be positive benefits in terms of congestion relief and time and energy saved. Positive and negative impacts of this technology should be considered.

42. Private high speed intercity rail projects should be supported and encouraged when public benefits outweigh public costs.

43. Station location and termini for high speed rail projects must be planned in coordination with local and regional agencies.

These aviation policies are from the Southern California Aviation Element of the 1984 RTP. The entire set can be found in the Technical Appendix.

ACTION ELEMENT

V.

V - ACTION ELEMENT

Introduction

The action element contains a number of sections which describe the overall system plan. The ground transportation system in the metropolitan portion of the region is based on a preferred mobility strategy that contains the strategic components shown in Figure V-1.

These strategic elements were selected as the best approach to achieve the basic objective of improving our ground transportation: to get the region back to 1984 levels of service on the highway system and the balancing of many competing priorities and needs.

The Preferred Strategy emphasizes the reduction of demand for use of the highway system by single occupant cars during peak periods. It also emphasizes the management of the system itself in order to maximize the capacity of the existing facilities.

It recommends a substantial capital investment in both highways and transit. High Occupancy Vehicles (carpools, vans and transit) are emphasized over mixed-flow highway improvements because of their greater people-carrying capacity and the beneficial air quality impacts. The transit system is substantially larger than most public agencies have been discussing and certainly more than the region currently has the ability to pay for with existing sources of funding. This is due to the travel demand that is projected for the system.

Severe funding shortfalls are anticipated for the Preferred Strategy by the Regional Mobility Plan. While the financial element of the Plan will address policies, programs and actions needed to raise revenues, we need to prioritize projects and programs based on the availability of revenues. For facility programs (Mixed Flow, High Occupancy Vehicles and Transit) there are two components – constrained and unconstrained.

State guidelines for the preparation of the Plan require the establishment of a list of capacity-enhancing projects which could be funded with "the regional summation of funds available . . ."

In order to eliminate any confusion, in the use of the word "tier," and to clearly establish the basis for Air Quality (SIP/STIP) conformity findings, the Plan will use the terms "constrained" and "unconstrained" when describing projects and programs. The Plan will use "constrained" and "unconstrained" to distinguish between two levels of implementation. Those facilities which can be constructed with funds (over the 20-year period) from existing funding sources are shown as the "Constrained Program." Those facilities which require additional revenue over that which can be expected from existing sources to be implemented are shown as the "Unconstrained Program."

Figure V-1

THE MOBILITY STRATEGY

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GROWTH MANAGEMENT PROGRAM

The first element of the Preferred Mobility Strategy is the Regional Growth Management Plan (under separate cover) which outlines the growth expected in the region and a desired forecast of its distribution (jobs and housing) over the next 20 years. Controlling the region's total growth is impractical, but addressing the distribution of that growth can improve the quality of life for everyone. Coordinating infrastructure plans and others with the growth forecast is a cornerstone of the regional planning process.

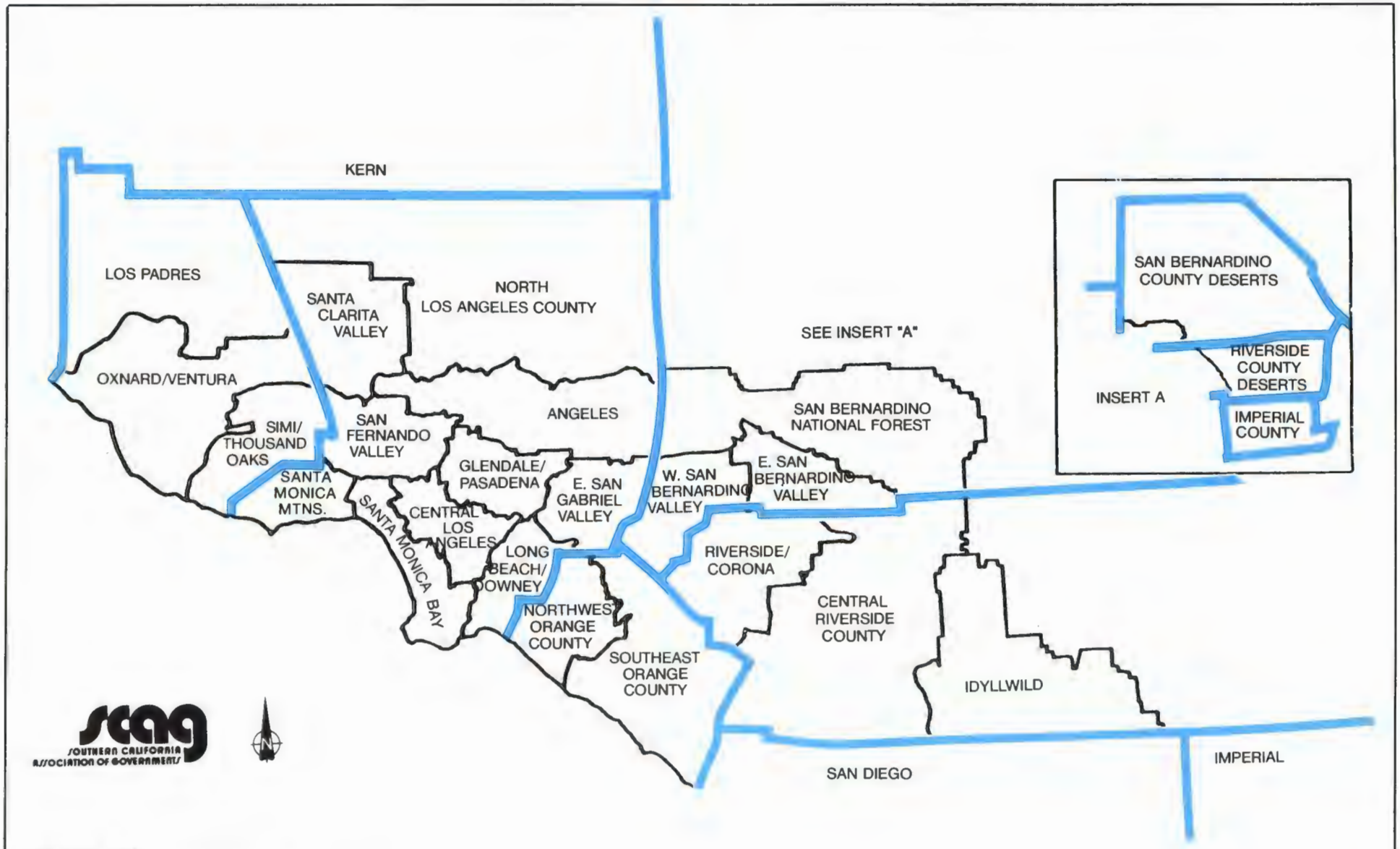
The Growth Management Plan aims at creating a better balance of future jobs and housing within subregional areas (Figure V-2). Existing housing and jobs are not affected, but the goal for the Growth Management Plan is to adjust growth patterns for 5 percent of new housing units and 9 percent of new jobs. This balance must ultimately address the issue of the type and cost of housing and the type and pay of jobs in those subregions if this improvement is to be effective. Simple numerical balance will not be sufficient for this to be successful in helping to improve mobility. In the analysis of a transportation capital expenditure project, the impact of job/housing balance should be considered. Those projects contributing to job/housing balance should be given high priority.

Among the measures that local governments can use to attain job/housing balance targets are: if new development worsens job/housing balance in a subregion, require mitigation measures to be borne by developers; establish local and regional priorities for building the infrastructure needed to support job/housing balance; locate new major facilities that are job-inducing in job-poor subregions and those that are housing-inducing in housing-poor regions. Other actions include: develop human resources through education and training of workers so that businesses can find an appropriate labor force in job-poor areas; reduce limitations on housing construction in job-rich areas.

Government in Southern California now subsidizes and regulates growth through programs of capital improvements, regulations, exactions and zoning. Many of the actions proposed simply restructure the current system to incorporate regional job/housing balance actions.

The Plan can be largely carried out through existing institutional and governmental structures and some State and regional agencies. It requires that local governments modify current regulations and create incentives for either home building or the establishment of businesses. The striking result of these efforts will be a network of more self-sufficient subregions within the larger region and a vast improvement in the quality of life for all of the region's residents.

The overall actions to implement the Growth Management Plan are under separate cover. The following single action, however, is of special note:


KERN
LOS PADRES
SANTA CLARITA VALLEY
NORTH LOS ANGELES COUNTY
SEE INSERT "A"
OXNARD/VENTURA
SIMI/ THOUSAND OAKS
SAN FERNANDO VALLEY
ANGELES
SAN BERNARDINO NATIONAL FOREST
SANTA MONICA MTNS.
GLENDALE/ PASADENA
E. SAN GABRIEL VALLEY
W. SAN BERNARDINO VALLEY
E. SAN BERNARDINO VALLEY
SANTA MONICA BAY
CENTRAL LOS ANGELES
LONG BEACH/ DOWNEY
RIVERSIDE/ CORONA
NORTHWEST ORANGE COUNTY
CENTRAL RIVERSIDE COUNTY
SOUTHEAST ORANGE COUNTY
IDYLLWILD
SAN DIEGO
IMPERIAL
SAN BERNARDINO COUNTY DESERTS
RIVERSIDE COUNTY DESERTS
INSERT A
IMPERIAL COUNTY
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N
SUBREGIONAL AREAS
COUNTY BOUNDARY
SUB-REGIONAL AREA

Figure V-2

Agency	Action	Date
SCAG	SCAG shall work with county/local authorities to bring local general plans and Regional Plans into conformity for facilities, demand and growth management.	1989-2010

TRANSPORTATION DEMAND MANAGEMENT PROGRAM

Transportation Demand Management (TDM) constitutes a vital underpinning of the 1988 Plan. The concept of managing demand before it gets on the highway system is the key theme of this program. This in effect creates more people-moving capacity on existing facilities and services. Ridesharing, for example, has been a part of every regional transportation plan for the SCAG region since the first plan was adopted in 1975. In the ensuing years, carpooling and vanpooling promotional efforts have evolved into multi-faceted TDM programs which include such measures as flextime, modified work weeks, telecommunications, work-at-home, parking management and truck rescheduling. While each is unique, TDM measures all share a common goal of seeking to modify individual travel behavior to reduce peak period congestion.

The beneficial impacts of implementing TDM measures as a coordinated package were clearly demonstrated during the 1984 Olympics. In the present Plan, the emphasis on TDM has been vastly increased. A central objective of the TDM program is to achieve a virtual doubling of freeway capacity system-wide through implementation of the peak period modification strategy. All other programs in this Plan depend vitally on the success of the TDM program.

TDM Program Overview

As structured, the measures encourage people to change their mode of travel, principally away from single occupant auto use; change their time-of-day of travel; or to eliminate trips altogether. In addition to the trip length reduction which results from the job/housing balance strategy contained in the Growth Management Plan, strategic measures are grouped into three categories:

- ***Person Trip Reduction Strategy*** utilizes measures specifically aimed at eliminating trip-making at the individual, home-based level. Trip elimination not only directly reduces the need for new or expanded facilities, it also reduces (1) existing peak period vehicle trip demand, and (2) vehicle miles traveled.
- ***Vehicle Trip Reduction Strategy*** utilizes efficiency measures to accommodate person trip and commodity movements in the least number of vehicles. Measures are designed to replace single occupant auto trips by significant increases in the utilization of transit and ridesharing modes. Parallel goods movement measures improve performance by employing truck dispatching, rescheduling and rerouting techniques as well as truck-to-rail transfer.
- ***Peak Period Modification Strategy*** employs measures which are designed to achieve the smoothest peak period traffic flow by reducing demand so as not to exceed system capacity.

The TDM program consists of 10 measures as shown in Table V-1.

TABLE V-1
TRANSPORTATION DEMAND MANAGEMENT PROGRAM

TDM CATEGORY	MEASURES
Person Trip Reduction	• Alternative Work Weeks and Flextime • Telecommunications and Work-at-Home • Non-Work Trip Reduction
Vehicle Trip Reduction	• Employer Rideshare and Transit Incentives • Parking Management • Vanpool Purchase Incentives • Merchant Transportation Incentives • Auto Use Restrictions
Peak Period Modification	• Flextime (repeated) • User Fees

These measures focus primarily on work trips, most of which occur during peak periods of congestion. However, non-work trip-making contributes heavily to peak period traffic flows and thus measures to begin to reduce these trip purposes are also included in the TDM program.

Linkage of TDM Element to Other RMP Elements

The TDM Program has important linkages to other Plan elements. Specifically, trip reduction objectives to be accomplished through ridesharing measures will require the implementation of High Occupancy Vehicle facilities called for in the HOV Element. Likewise, the transit trip increases that will occur through transit measures assume that the transit facilities and services included in the Transit Element will be in place. It is unlikely that increases in transit mode split would occur without an expanded, reliable network of transit. Additionally, the user fee measure is linked to the Financial Element. User fees, including peak period pricing and increased gasoline taxes, are included in the Financial Element as part of the package of revenue sources to meet year 2010 projected shortfalls. Following study and demonstration applications, if the decision is made to increase user fees for TDM purposes, this measure will serve a dual purpose of managing demand and raising needed revenues.

The SCAQMD's Regulation XV goal is to reduce the number of home-to-work commute trips during the 6:00 a.m. to 10:00 a.m. peak traffic period. The District estimates that an increase in the average number of persons per commute vehicle (carpool, vanpool, and transit) from 1.13 to 1.5 throughout the South Coast Air Basin will generate currently needed congestion and air quality benefits. Existing Regulation XV's AVR goal of 1.5 meets 75 percent of the Plan/TDM program goals. In order to meet the 2010 regional mobility goal, the Plan/TDM

Program increases the average morning peak period goal from 1.5 to 2.0, primarily by using telecommunications/work-at-home and alternate work schedule strategies to achieve a 30 percent (or 3.1 million) overall home-to-work trip level reduction by the year 2010.

Action Plan

The TDM Action Plan describes the first five years of the TDM program. The measures, if implemented as described, would set the region on a course of action to attain TDM's share of the Plan's 2010 mobility goals. The measures are designed to promote a mode shift from single occupant automobile travel to greater usage of shared rides (in the form of carpooling, vanpooling and transit), and to modify the peak period traffic flow. In addition, and very importantly, the measures would reduce 3.1 million home-to-work trips (through alternative work weeks & flextime and telecommunications & work-at-home) above and beyond the trip reductions expected through implementation of SCAQMD's Regulation XV. The phasing of the 5-year action plan has taken into account the timing of the implementation of Regulation XV and the evaluation of first year results. The first cycle of Regulation XV trip reduction plan results should be available in the fall of 1990 and will provide a guideline to TDM program effectiveness that can be utilized in implementing post-1990 Plan actions.

The phasing of TDM actions was also developed to provide an opportunity for local governments to institute TDM programs beyond Regulation XV requirements prior to further requirements by SCAQMD. In this way, local governments can choose to tailor TDM programs to suit the specific needs of each community.

As a planning document, the Plan includes target reductions for some strategies (i.e., alternative work weeks & flextime and telecommunications & work-at-home). However, for other measures, the specific options and/or mix of vehicle trip reduction and peak period modification strategies to be used will follow from public review and comment when Plan actions are translated into regulatory requirements at the city, county, SCAQMD, State, or Federal levels. Terms used in the action statements, such as local government ordinances, are meant to be generic terms and do not preclude a jurisdiction from using other regulatory tools at its disposal that can achieve the same level of vehicle trip reduction and peak travel modifications.

The actions necessary to implement the TDM Program are listed below:

Agency	Action	Date
1. ***Alternative Work Weeks & Flextime***		
SCAG	SCAG shall establish an outreach program using both public forums and communications media to promote awareness of growth and mobility issues and possible solutions to them.	1989-2010

Agency	Action	Date
Local Government	Identify modified work schedule options for city/county employees and contracted-out activities. Develop 10 percent trip-reduction goal for city facilities and implement programs. Monitor/share results with city/county employers through public information programs.	1990
Local Government	Based on publicized results of city/county programs, adopt local ordinance which requires employers with 100+ employees to develop and to implement modified work schedule and flextime options.	1991
SCAG, SCAQMD Local Government	Introduce labor contract legislation that removes legal barriers and allows modified work schedules and flextime.	1990
SCAQMD	If necessary, expand Regulation XV or new Indirect Source Rule to include alternate work weeks and flextime.	1993
2. ***Telecommunications and Work-at-Home***		
Local Government	Based on publicized results of local government pilot programs, develop local ordinance to reduce government worker commute trips by 20 percent.	1991
ARB, EPA	Adopt trip reduction administrative regulation to reduce State/Federal employees' commute trips.	1992
SCAQMD	Under Regulation XV or Indirect Source Regulation require 20 percent reductions in work trips through telecommunications/work-at-home programs.	1993
3. ***Non-Work Trip Reduction***		
State Government	Introduce State legislation to require financial institutions and their regulators to determine the most feasible set of services (primarily banking and bill payment) that can be offered via telecommunications on an industry-wide basis.	1992

Agency	Action	Date
State Government, Financial and Utilities	Complete feasibility study to determine appropriate expanded automatic banking and bill payment programs to implement.	1993
State Government	Introduce legislation and implement banking and bill payment programs.	1994
State, Local Governments	Introduce State legislation/ordinance to require educational institutions (secondary, junior college and college levels) through their governing boards to determine the extent to which in-classroom hours (hence school-related trip making) could be reduced by designing core curriculum courses that could be learned at home either interactively or with video applications; programs would have phased implementation after 1993.	1992
Local Government	Ordinance/regulation to require local licensed businesses in conjunction with cable television operators to determine the feasibility of developing centralized ordering and home delivery services in order to partially eliminate the total need for individual trip-making for the movement of common household goods. If product prices could be discounted through business overhead savings, delivery costs may be offset. Programs would have phased implementation after 1993.	1992
4. ***Employer Rideshare and Transit Incentives***		
SCAQMD, Local Government	By ordinance/regulation require development and implementation of trip reduction plans from building owners and managers with facilities employing 100+ employees.	1990
SCAQMD, Local Government	By ordinance/regulation require employers with 25+ employees and building owners and managers with facilities employing 25+ employees to disseminate commuter trip reduction program information to their employees.	1991

Agency	Action	Date
SCAQMD	Evaluate the effectiveness of reducing Regulation XV employee threshold to 25.	1992
SCAQMD	If necessary, expand Regulation XV to cover businesses with 25+ employees, and building owners/managers with tenants employing 25+ employees. Also include employer provision of non-motorized transportation access.	1994
5. ***Parking Management***		
Local Government	Conduct local assessment and adopt Air Quality Element into each General Plan which considers as appropriate: graduated parking fees based on auto occupancy, elimination of peak period on-street parking, increase daytime parking fees; eliminate 100 percent employer subsidized parking, institute preferential parking for ridesharers, residential parking zone/permit programs, short term commercial parking zones; increase enforcement, and implement park-n-ride lots with shuttle service.	1990
6. ***Vanpool Purchase Incentives***		
SCAG/SCAQMD, Local Government	Support passage of vanpool credit tax legislation. Local governments should include provision of vanpools among list of options in trip-reduction ordinances and require employers to provide preferential parking for vanpool users.	1989
Federal/State	Legislate favorable tax credits for employers who purchase or lease employee vanpool programs.	1989
State	Legislate favorable tax benefits for employees who use employer-sponsored vanpools.	1990
Federal/State	Legislate special tax credits for owner-operators of battery/electric-powered vanpools.	1993

Agency	Action	Date
Federal/State	Legislate special tax credits for employers who sponsor work-day use of clean-fuel vans.	1993
7. ***Merchant Transportation Incentives***		
SCAQMD, Local Government	Adopt local ordinance which requires as a condition of approving business operating licenses that major retail/commercial facility operators in cooperation with tenants determine feasibility of providing alternate mode travel incentives commensurate with the value of providing free or subsidized parking. Alternative modes of transportation and incentives would consist of: (1) ridesharing, through graduated parking fees and preferential parking plans based on auto occupancy, (2) public transit, through subsidized transit fares in lieu of validated parking, and (3) non-motorized access modes through provision of bicycle and pedestrian facilities. Revenues generated from increased and graduated parking fees may offset the cost of incentives provided.	1991
SCAQMD	If necessary, adoption by January 1, 1992 of an SCAQMD Indirect Source Rule to implement the same control methods.	1992
8. ***Auto Use Restrictions***		
Local Government	Adopt an Air Quality Element into each General Plan which requires the analysis/identification of benefits, burdens, and applicability of requiring special event centers with occupancies of 10,000+ capacity to establish and operate Park-n-Ride and off-site facility lots with shuttle service and discounted transit passes offered for sale with event tickets, requires street closures, auto free zones, and provides enhanced local transit performance.	1990

Agency	Action	Date
SCAQMD	Assess the need for expanded Indirect Source Rule or Regulation XV to include special event centers.	1990
Local Government	Adopt local ordinance which implements as appropriate special event center trip reduction plans.	1993
Local Government	Adopt local ordinance to implement measures such as auto free zones and street closures in areas of dense pedestrian activity in conjunction with designated off-street parking facilities and improved transit services (Park-n-Ride/Shuttle).	1994
9. ***User Fees***		
SCAG, Caltrans Local CTCs, ARB	Conduct planning studies on User Fees (e.g., congestion charges, peak period charges, tolls, emission fees, other), including candidate locations for pilot testing or demonstration, application techniques, application technologies, and impacts.	1989-1991
SCAG, Caltrans Local CTCs, ARB	Based on planning study results, develop user fee pilot testing/demonstration program. Choose appropriate application technique(s), select application technology(ies), develop cost/funding components, select location(s), make decision to conduct demonstration(s).	1991-1993

SYSTEM MANAGEMENT PROGRAM

Under current conditions of funding and environmental constraints, it is imperative that a priority emphasis in addressing mobility needs be placed on system management. In accordance with regional policy, the utilization and capacity of the existing infrastructure must be managed with maximum efficiency in order to minimize costs and impacts. Accordingly, a strong emphasis on system management is included throughout the alternatives evaluation for the Plan. The development of both the needs assessment and the modal system components presupposed a far greater degree of management effort and effectiveness than currently excists. Programs to achieve the degree of efficiency anticipated in the Plan development process must therefore be implemented as a necessary precondition for other components of the Plan.

The expression "system management" addresses a very wide range of problems and facilities. Most broadly, system management (in contrast to demand management, which addresses the behavior of people) can be viewed as a set of programs to address freeways and arterials, on the one hand, and another set of programs to address both regular, recurrent congestion as well as nonrecurrent congestion on the other. In many cases, these programs overlap.

Taken together, all of these system management efforts must eliminate the equivalent of about 800,000 vehicle hours of delay daily. The effectiveness of all remaining Plan elements at reducing that delay resulting simply from excess vehicle demand depends directly on the success of these efforts.

The action program to achieve this reduction is outlined below:

Agency	Action	Date
Caltrans, County Commissions, SCAG	Program to implement 600 ramp meters and HOV by-pass lanes.	1989-1993
RCTC, Caltrans	Implement ramp meters and auxiliary lanes on Route 91 from Orange County line to San Bernardino County line.	1989-1993
Riverside County	Implement countywide program of signal mitigation districts.	1989-1993
City of Los Angeles, City of Anaheim	Implement ATSAC signal control on 1,000 intersections.	1989-1993
Local jurisdictions	Implement ATSAC or similar interconnected signal control at 1,000 intersections regionwide.	1989-1993

Agency	Action	Date
L.A. County Public Works	Finance and implement a 5-year signal synchronization program. Effect multi-jurisdictional coordination of traffic control centers.	1989-1993
SCAG	Survey local jurisdictions and identify candidate locations and targets for intersection channelization improvement (Overall Work Program).	1989-1990
Local jurisdictions	Implement projects to improve 125 intersection channelizations.	1989-1993
Caltrans 7, 8, 11, 12	Expand personnel and equipment for Incident Management Program; develop new program for Orange County; implement program to provide geographic dispersal of response team.	1989-1993
Caltrans	Program, purchase, and install changeable message signs and closed circuit cameras at appropriate locations.	1989-1993
SCAG	Evaluate costs, benefits, and feasibility of increased night time maintenance (OWP).	1989-1990
CHP	Implement stricter enforcement of regulations on spilled loads and cleanup costs.	1989-1993
CHP	Implement stricter enforcement of codes governing unsafe loads.	1989-1993
CHP	Implement refined law enforcement techniques which concentrate on congestion management and mitigation.	1989-1993
L.A. City, LACTC, Caltrans	Demonstrate and evaluate benefits of "smart" technology on a corridor basis.	1989-1993
OCTC	Implement Superstreet improvements on defined system.	1989-1993
Caltrans 7, 8, 12	Implement or upgrade Traffic Operations Centers.	1989-1993

Agency	Action	Date
Local jurisdictions	Implement remaining 375 projects to improve intersection channelization.	1993-2010
Local jurisdictions	Implement ATSAC or similar interconnected signal control at remaining 6,000 intersections.	1993-2010
SCAG	Develop and secure funding for OWP elements to study such areas as differential truck speed limits, more rigid commercial driver licensing requirements, safety aspects truck design, and other areas relating to reduced nonrecurrent congestion.	1989-1993
SANBAG	Develop an Arterial Backbone System.	1989-1990
OCTC	Develop and implement countywide signal coordination program.	1989-2010

MIXED FLOW HIGHWAY PROGRAM

Due to the very heavy focus of the Plan on strategies of growth management, demand management, and transit development in providing for mobility needs, the freeway element presents an improvement program which is quite modest relative to overall needs. The major portion of mobility needs is to be addressed by other means. As a consequence of this strategic focus, not only is the overall freeway element rather modest, but the element itself contains a large number of new corridors and freeway "gap closures" relative to widenings of existing facilities. The emphasis is more on connectivity and completion, particularly in the less developed areas, than on straight capacity expansion. In the more highly developed areas, freeway improvement is supplanted by the very heavy transit emphasis. Figures V-3 and V-4 identify the constrained and unconstrained mixed flow improvements.

Two of the new or improved corridors, the I-15 Norco Reach and the I-105 Century, have been under construction for a number of years. All the others are at various stages of the environmental process with some, like the Route 710 gap and the San Joaquin Hills corridor, already at or near final completion. Consistent with the overall strategic focus of the Plan, all the new freeway corridors except the I-15 Norco Reach are also designated for HOV development.

The actions to implement the freeway element are listed below:

Agency	Action	Date
SCAG, Caltrans, County Commissions	Implement AB 84 provisions to develop lists of priority improvements for Project Study Report preparation.	1989-1990
Caltrans, County Commissions, SCAG	Program Constrained System of freeway projects. (See Figures V-3 and V-4.)	1989-2010
Caltrans	Complete environmental and engineering studies and implement Constrained System of freeway products.	1989-2010
SCAG, all agencies	Develop and implement program to provide additional funding.	1989-2010
SCAG, Caltrans, County Commissions	Program Unconstrained System of freeway projects. (See Figures V-3 and V-4.)	1989-2010
SCAG	Support the identification of key arterial roadways for inclusion in the highway System of Regional Significance.	1989-2010

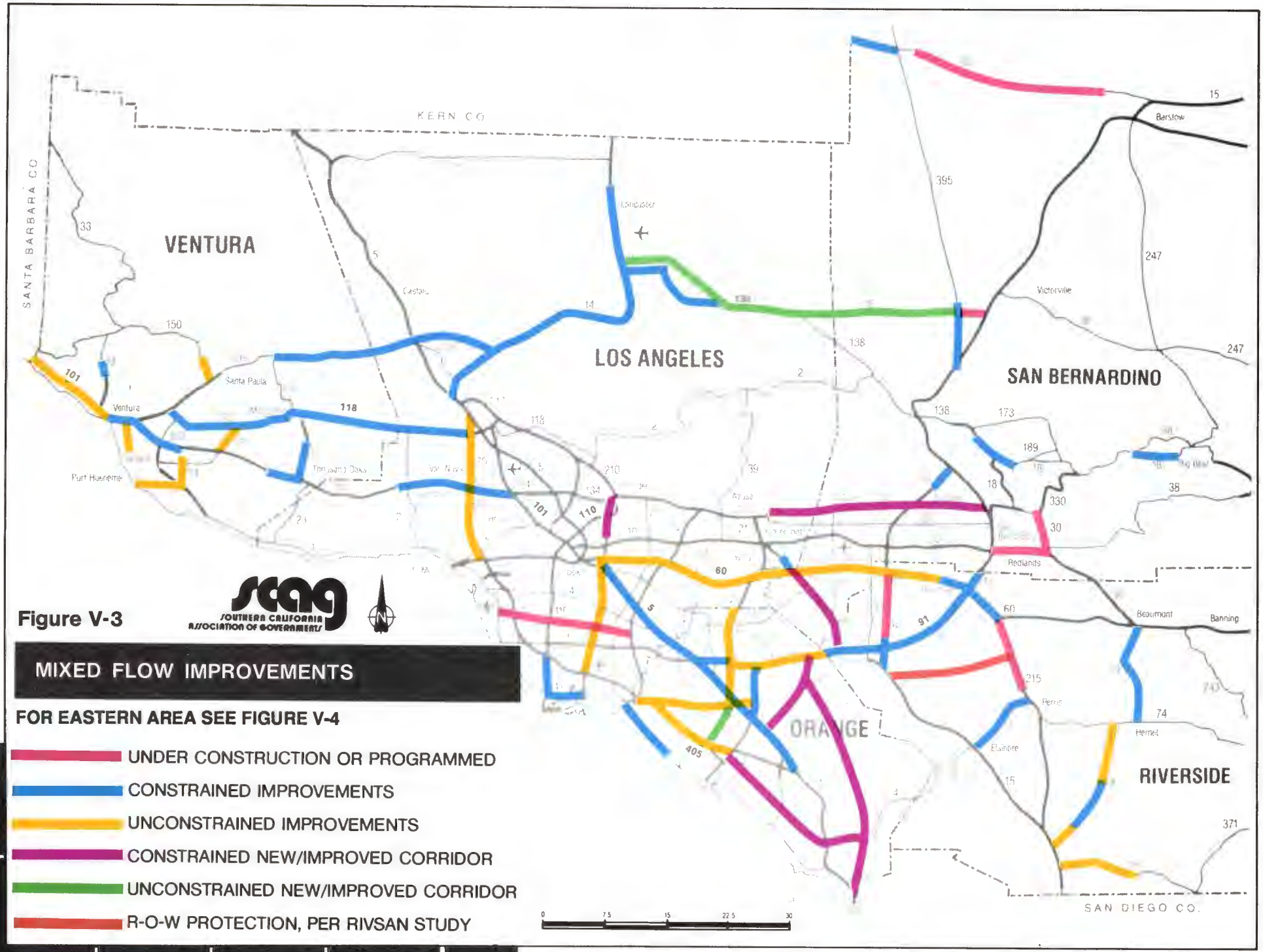

Figure V-3

SCAG SOUTHERN CALIFORNIA ASSOCIATION OF GOVERNMENTS

MIXED FLOW IMPROVEMENTS

FOR EASTERN AREA SEE FIGURE V-4

- UNDER CONSTRUCTION OR PROGRAMMED
- CONSTRAINED IMPROVEMENTS
- UNCONSTRAINED IMPROVEMENTS
- CONSTRAINED NEW/IMPROVED CORRIDOR
- UNCONSTRAINED NEW/IMPROVED CORRIDOR
- R-O-W PROTECTION, PER RIVSAN STUDY

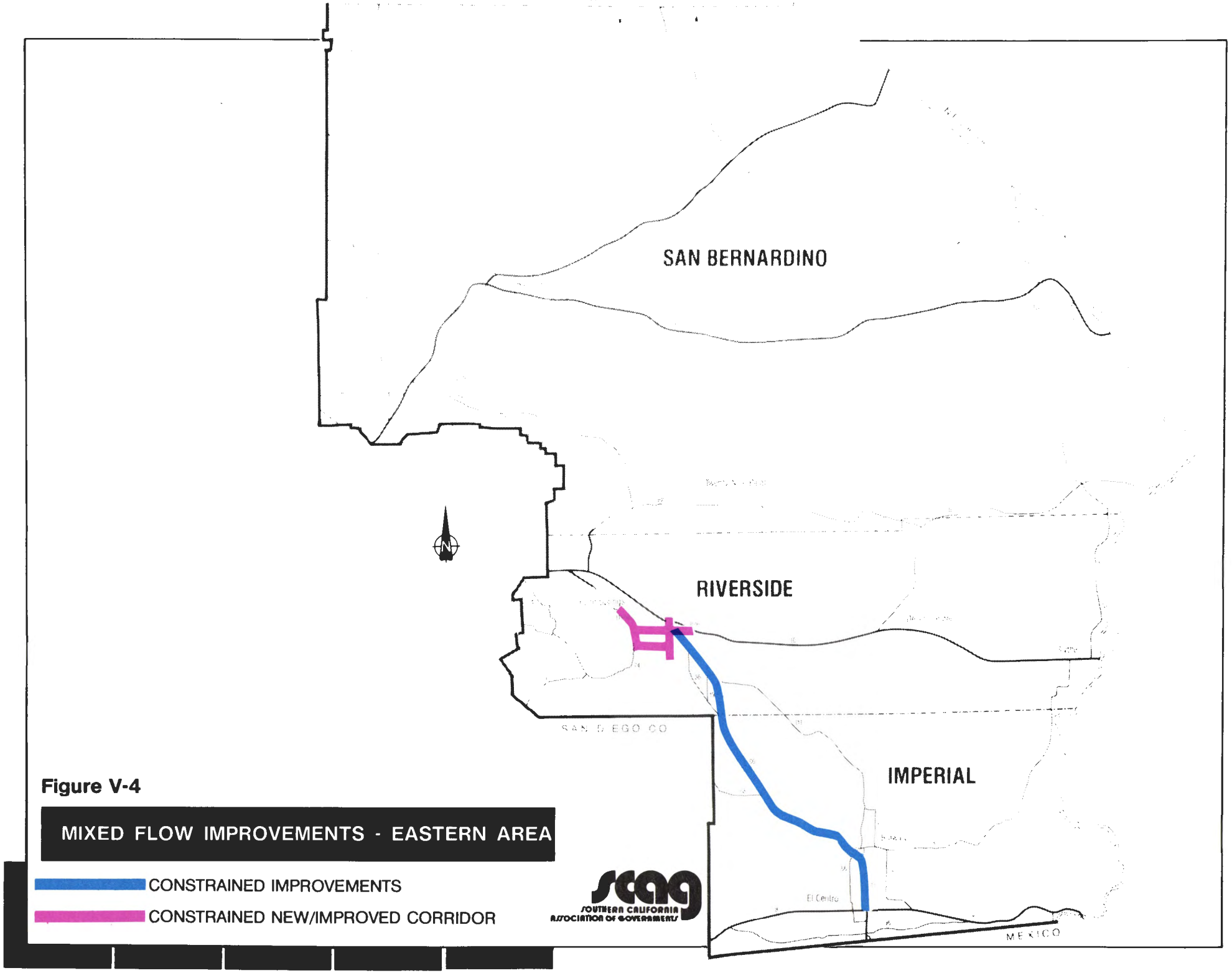
SAN BERNARDINO
RIVERSIDE
IMPERIAL
SAN DIEGO CO
El Centro
MEXICO
MIXED FLOW IMPROVEMENTS - EASTERN AREA
CONSTRAINED IMPROVEMENTS
CONSTRAINED NEW/IMPROVED CORRIDOR
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Figure V-4

LOCAL STREETS AND ROADS

Local streets and roads are the ultimate link in the transportation system. They provide the primary land use access function, and constitute the collector and distribution system for nearly all modes. They also provide important thoroughfare. Nearly half of all vehicle trips are made entirely on the local street and road system. Local streets and roads, however, are suffering from inadequate funding and consequently poor maintenance.

The following actions are necessary to address local street and road issues and problems:

Agency	Action	Date
SCAG, County Transportation Commissions, Local Governments	Develop local support to include sufficient additional levels of funding to meet local street and road needs (backlog and accruing needs).	1989-1990
SCAG, County Transportation Commissions	Encourage member jurisdictions to develop and utilize pavement management systems as a guide to setting priorities for maintenance on the local street and road system.	1989
Local Governments	Continue to seek the funds to serve new residential and commercial/industrial land uses primarily through the application of assessment districts and developer fees.	1989
SCAG	Develop ongoing plan implementation program(s) (in OWP) which includes the participation of effected local governments, agencies, operators and individuals.	1989-1993

HIGH OCCUPANCY VEHICLE PROGRAM

High Occupancy Vehicle (HOV) lanes have been implemented to provide additional incentives to increased ridesharing and transit usage. The provision of a separate lane for the exclusive use of carpools, vanpools, or transit vehicles provides valuable time savings in contrast to the travel times of single occupant vehicles in congested general use lanes. The time savings thus afforded has been widely recognized as a powerful incentive in the promotion of ridesharing and the reduction of vehicle trips and vehicle miles of travel.

In the context of the Plan, HOV lanes can be seen not simply as the inducement to increased ridesharing, but as accommodating the increased carpool and bus transit demand that will follow from the measures contained in the Transportation Demand Management element.

The HOV element, presented in Figure V-5, provides for an eventual system of about 1,258 miles of exclusive lanes, but does not distinguish among the various types of HOV facilities such as transit ways, commuter lanes, or simple restriping projects. Specific use and design designations must be made during the project development phases. HOV facilities have been provided in the Plan for every new corridor under development in the region and on existing high demand freeways such as the Santa Ana (I-5), the San Bernardino (I-10) and the Riverside (Route 91) Freeways.

The actions necessary to implement the HOV element are listed below:

Agency	Action	Date
SCAG, Caltrans, County Commissions	Implement AB 84 provisions to develop lists of priority improvements for Project Study Report development.	1989-1990
RCTC, Caltrans	Implement Park-n-Ride facilities for commuter bus and HOVs on Routes 15, 215, 91, and 60.	1989-1993
Caltrans, County Commissions, SCAG	Program Constrained System of HOV projects. (See Figure V-5.)	1989-2005
Caltrans	Implement Constrained System of HOV projects.	1989-2010
Caltrans 7, 12, SCAG	Implement generic HOV outreach program.	1989-1990
SCAG, all agencies	Develop and implement program to provide additional funding.	1989-2005
SCAG, Caltrans, County Commissions	When new revenues are raised, program Unconstrained System of HOV projects.	1989-2010

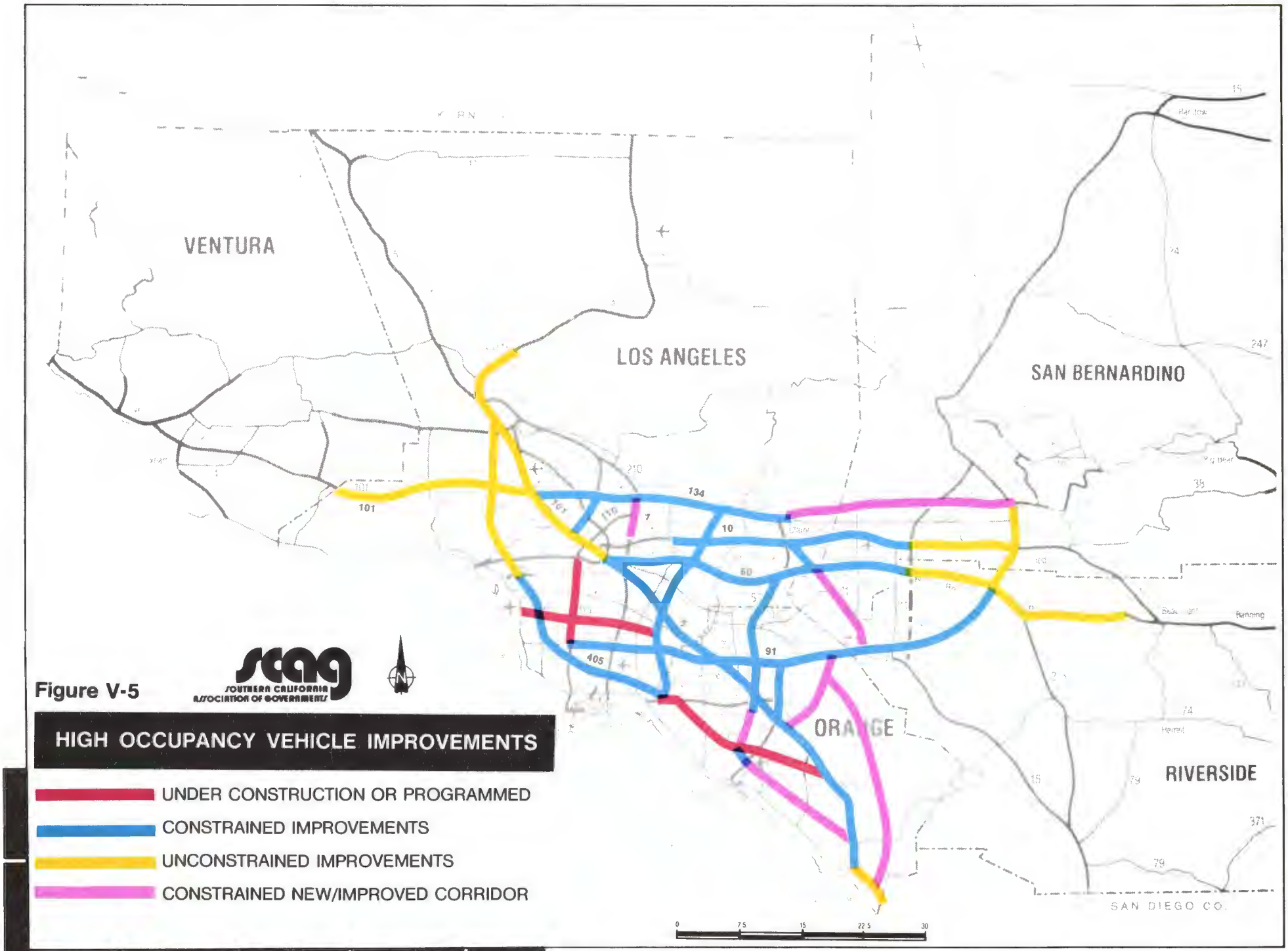

Figure V-5

SCAG SOUTHERN CALIFORNIA ASSOCIATION OF GOVERNMENTS

TRANSIT PROGRAM

One of the key objectives of this Plan is to reduce our reliance on the single-passenger automobile. The transit system will need to play a central and very much enhanced role in order to accomplish this. In addition, transit is one of the basic components of the Air Quality Plan for reduction of air pollution. A primary objective of the Plan, therefore, is to establish transit as a basic mode of transportation throughout the region by 2010.

Transit, if it is to be effective, will have to function in parallel to the existing network of highways and streets as part of an integrated transportation system. It must move people where they wish to travel, serving the activity centers directly, in contrast to the freeway/automobile system which by its nature puts them at the periphery. (See Figure V-6.) Transit must become a major system in its own right, providing balance to the transportation system and offering a truly viable alternative for a significant proportion of the trips.

The Southern California region has one of the largest markets for private entrepreneurial sources in the country. SCAG has been a leader in tapping the private sector market to provide customized transit services for both the commuter market and the paratransit market. SCAG will continue to promote private/public partnerships to improve transit services and to create more viable alternatives to the single occupant vehicle.

To meet the increased demand, three levels of transit service are envisioned:

- ***The longer distance, line haul network*** which serves the major flows and connects each of the major regional centers. Line haul, higher speed transit service would be provided within each of these transit corridors designed to move concentrated flows quickly and efficiently and interchanging with other lines to enable travel throughout the region. These corridor services will operate on dedicated rights-of-way to maximize the competitiveness of the transit system and eliminate conflicts with surface traffic. The corridors are further identified by the level of service required, rather than by specific mode. Provision of service on these corridors may be either developed incrementally, initially providing a more modest level of service and upgrading as demand warrants, or developed as part of the regional high capacity system where appropriate and feasible.

  The Plan identifies 9 high-capacity and 16 medium-capacity corridors to receive priority in the establishment of new regional line haul transit services. These corridors are based on estimated demand for travel where it exceeds highway capacity. They connect each of the 57 identified activity centers in the metropolitan portion of the region, and in three areas, extend beyond into the eastern region. Most of the corridors have been defined as high or medium capacity, depending on the projected level of traffic. They follow, but extend significantly, the corridors previously identified by

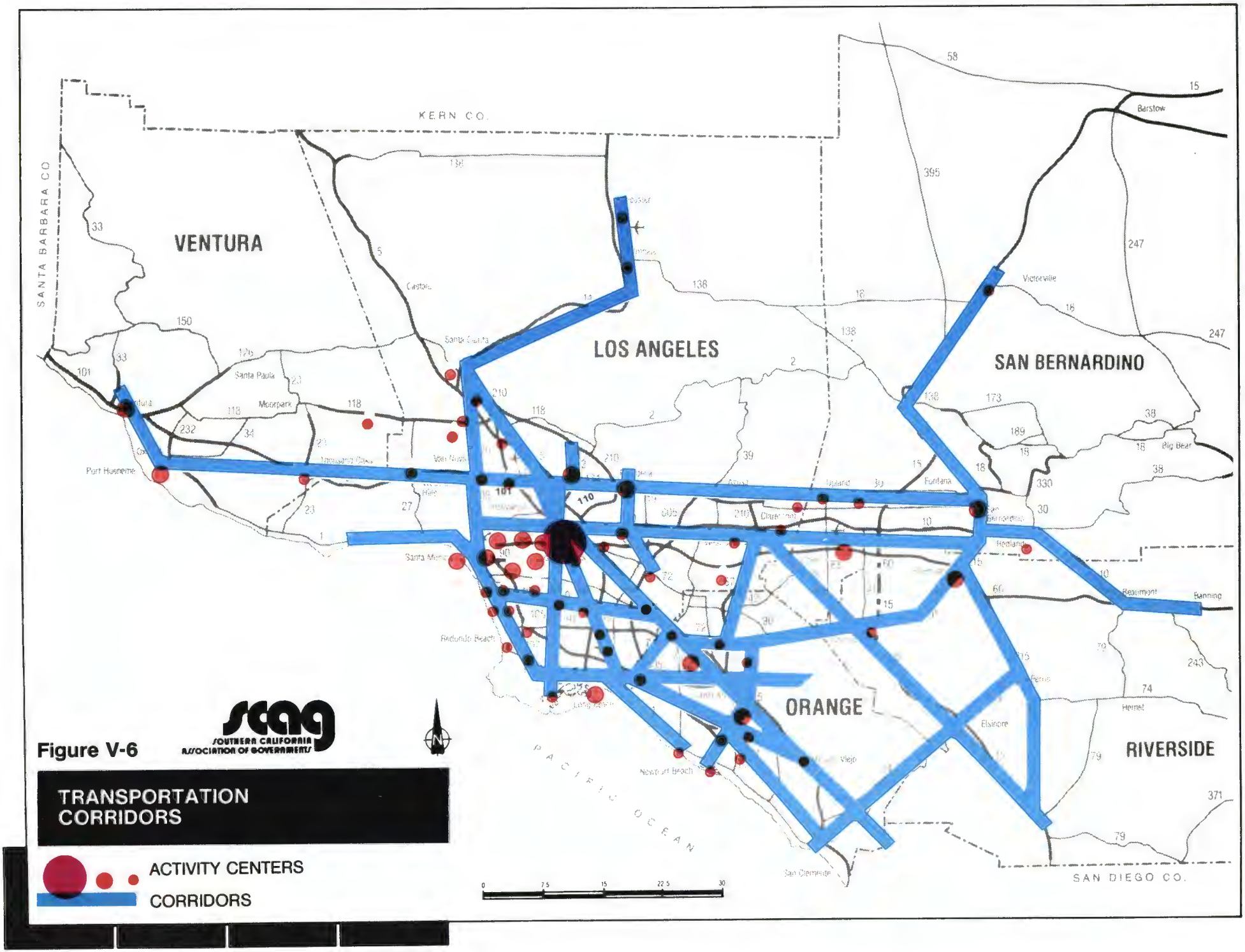

Figure V-6

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TRANSPORTATION CORRIDORS

ACTIVITY CENTERS

CORRIDORS

Proposition A heavy and light-rail systems and by the Orange County Transportation Commission in its Transitway Plan. Development of the corridors is expected to be incremental, initially using express bus and upgrading to a higher capacity as demand develops with the modal technology to be selected through detailed corridor studies.

- ***The feeder network,*** using more flexible, lower capacity vehicles including buses and vans supplemented by a regional network of park-n-ride facilities provides service between localities and the line haul, higher speed system at designated transfer points. By using smaller capacity services on the short runs (characteristic of spoke operations), the potential for greater frequency and reduced capital costs would permit higher utilization and diminished subsidy. The success of this approach is based on both frequency of service and its availability throughout the region. This network provides the combination of short local runs on the surface and high-speed operations on the core system to match the travel times and convenience of the private automobile for a significant proportion of trips, whether peak hour or off-peak. Development of the feeder system will be coordinated with the development of corridor line haul services as part of the overall restructuring process required to increase the transit mode share.
- ***The local circulation network,*** also primarily bus and paratransit, completes the structure of the regional transit network. Local and feeder services are best organized at the scale of the subregion where their geographic and social definition makes them more readily understood. The present route structure neither relates to locality nor is capable of effectively handling the long distance flows on local service routes. Provision of service, planned and implemented through these subregional units, will require extensive restructuring of routes and service areas and offer the opportunity for more extensive participation by the private sector in the transit market.

Included within the local and feeder networks is the full range of public and private services for both the general public and the transit-dependent. These services are provided by a reorganized pattern of bus, van and dial-a-ride services, focused on geographically circumscribed areas for maximum responsiveness to local needs.

In addition to regular transit, the Plan proposes a network of commuter rail lines shown in Figure V-9. Limited improvements to the San Diego-Los Angeles Line and the Riverside County portion of the Riverside to Orange County service are included in the constrained category. All other routes are in the unconstrained category.

The Constrained Program

The transit development program is by far the most ambitious element of this Plan. Development funding for transit has been declining nationally for many years. Within the

region, only Los Angeles and Riverside Counties have been able to make use of State legislation to generate local taxes to build new transit facilities. As a result, present estimates indicate that funds which can presently be anticipated will be sufficient for only about 40 percent of the total facility development proposed. ***New programs will have to be developed and implemented for Federal, State, local and private investments if the full dimensions of this Plan are to be realized.*** If transit service is to be built in anticipation of demand, the first years of operation may not receive sufficient ridership to meet current farebox recovery requirements. Changes in State requirements may be required. Figures V-7 and V-8 show the Constrained and Unconstrained transit programs.

Action Plan

The immediate first priority for implementation of this Plan is the development of new sources of revenue. Without them, the transit program will not come into being and the ability to absorb additional traffic and riders will be constrained below that required to meet either the mobility or air quality goals.

The actions required to implement the transit program are:

Agency	Action	Date
SCAG, County Commissions, Operators	Work with Federal and State governments to create new funding programs for transit.	1989
SCRTD, LACTC	Complete Locally Preferred Alternative Heavy Rail Line, Union Station to North Hollywood, Western to Wilshire. (Constrained program.) (See Constrained Transit Development map, Figure V-7.)	1989-1998
SCRTD, LACTC	Build 10 additional miles of heavy rail (Constrained program).	1998-2010
LACTC, SCRTD	Complete Los Angeles-Long Beach, Norwalk-El Segundo, Coast, Valley and Pasadena Light Rail Lines (Constrained program).	1989-2010
OCTD	Build Transitway System on Routes I-5, I-405, California 55, and California 57. (Constrained program.)	1989-2010
Transit Operators, County Commissions	Restructure operations serving fixed guideway transit lines as these open (Constrained program).	1991-2010
Omnitrans	Add 40 buses (Constrained program).	1989-2010

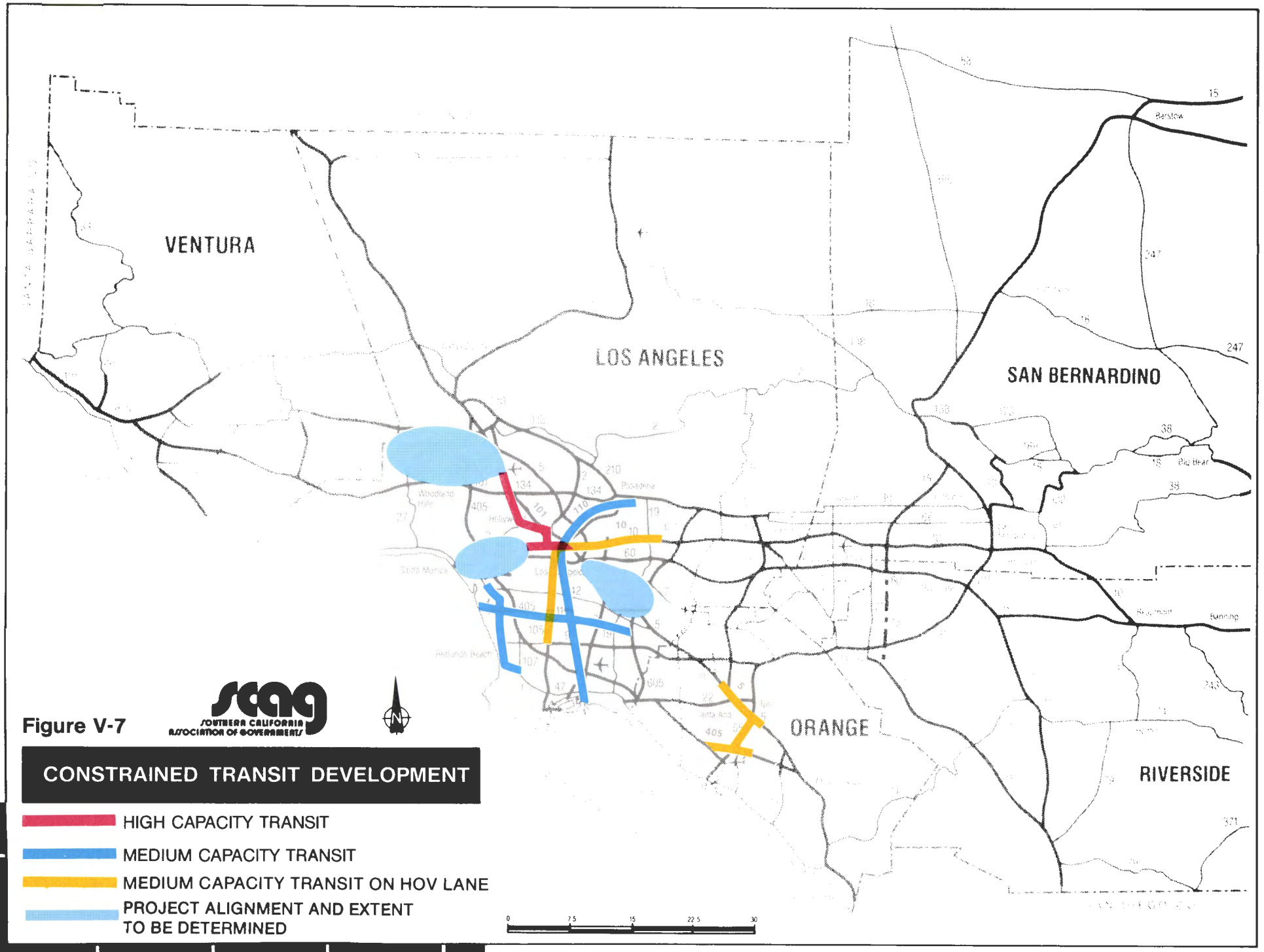


Figure V-7

SCAG SOUTHERN CALIFORNIA ASSOCIATION OF GOVERNMENTS

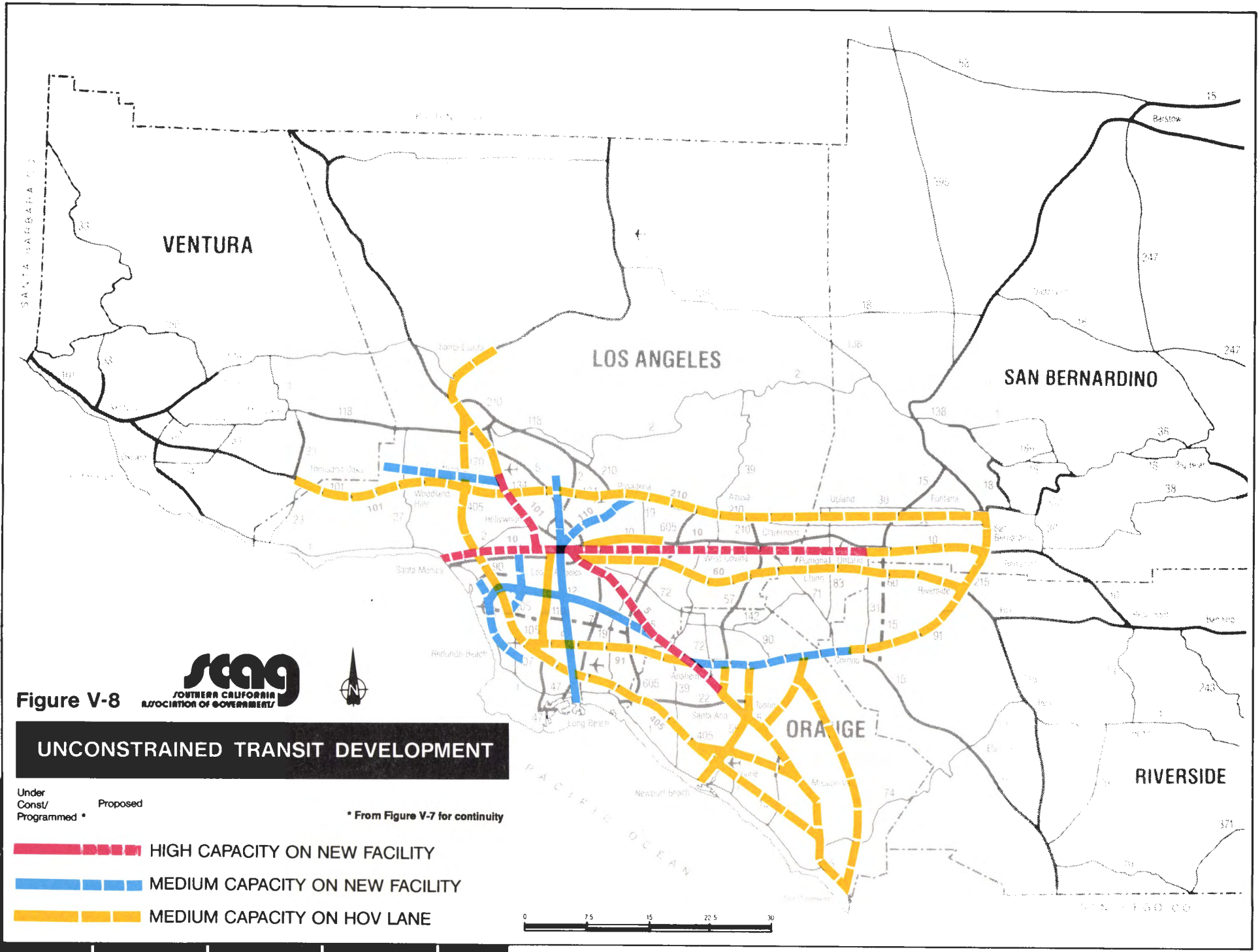

VENTURA
LOS ANGELES
SAN BERNARDINO
ORANGE
RIVERSIDE
Barstow
SANTA BARBARA CO.
PACIFIC OCEAN
SAN DIEGO CO.
scag
SOUTHERN CALIFORNIA ASSOCIATION OF GOVERNMENTS
UNCONSTRAINED TRANSIT DEVELOPMENT
Under Const/ Programmed *
Proposed
* From Figure V-7 for continuity
HIGH CAPACITY ON NEW FACILITY
MEDIUM CAPACITY ON NEW FACILITY
MEDIUM CAPACITY ON HOV LANE
0
7.5
15
22.5
30

Figure V-8

Agency	Action	Date
OCTD	Plan and implement express bus service on transitways (Unconstrained program).	1989-2010
SCAG, County, Local governments	Amend Circulation Elements of General Plans to adopt regional transit corridors.	1989-1994
SCAG, County, Commissions, Operators	Study organizational requirements of Regional Transit System Operators.	1989-1990
SCAG, County Commissions, Local Governments	Implement recommendations to create appropriate institutional framework for planning, construction, and operation of line haul transit network.	1990-1993
SCAG, State, Local Governments, County Commissions	Promote protection of rights-of-way for future transit use. Create funded acquisition program.	1989-2010
Caltrans, County Commissions, Transit Operators	When new revenues are raised, construct unconstrained extensions to regional transit system. (See Unconstrained Transit Development map, Figure V-8.)	1989-2010
County Commissions, Operators	Coordinate transit service restructuring to assure integration of services with commuter and intercity rail.	1989-on
SCAG, County Commissions, Operators	Implement restructuring of transit to create local service and line haul system feeder operations within subregional areas.	1991-on
Operators	When revenues are raised, add services equivalent to 2,920 buses to peak fleet for express, local and feeder service. (Unconstrained program.)	1989-2010
SCAG, County Commissions	Review local transit operations and policies for conformity with Regional Plan transit corridor proposals and operations.	annual
SCAG, County Commissions	Use SRTP process to assure transit service to and within all regional activity centers.	1989-on

Agency	Action	Date
County Commissions, Operators	Revise operator service provision policies to serve identified activity centers in support of the demand-management program.	1989-on
SCAG, County Commissions, Local Governments	Identify three to five additional regional transportation center locations.	1989
SCAG	SCAG shall work with the county level transportation agencies to ensure compliance with UMTA's policies on private enterprise participation.	1989-2010
SCAG, County Commissions	Encourage the continued development of paratransit services which complement and are coordinated with public and fixed route services.	1989-2010
SCAG	Encourage local governments to draft paratransit ordinances or revised taxi ordinances which permit shared-ride taxi service, independent driver.	1989-2010
SCAG	Continue to work with local public transit agencies and the public sector to encourage the development of public/ private sector partnerships to improve the delivery of transit services.	1988-on

COMMUTER AND INTERCITY RAIL PROGRAM

The SCAG region is favored by an extensive network of railroad main and branch lines, and there have been numerous proposals in the past to utilize some of these for commuter and intercity rail services. Commuter rail serves suburban travel markets with high peak and directional volumes and an average trip length of about 20 miles. Intercity rail serves business and recreational trip markets and is not oriented towards daily or peak trips: it provides service between urban centers, with most trips over 50 miles in length. Using existing infrastructure, commuter rail can be used to test the patronage potential of corridors without the need for major new fixed guideway transit facility construction.

Five commuter rail services are currently planned or under investigation in the SCAG region: Los Angeles-Oxnard; Los Angeles-Saugus; Los Angeles-San Bernardino; Los Angeles-Southern Orange County; and Riverside-Irvine (Figure V-9). Intercity rail routes serving the SCAG region include the Los Angeles-San Diego service with a recent Santa Barbara extension; this will form the basis of the proposed Southwest Corridor.

Implementation of these projects is limited by funding constraints. The passage of the Riverside County Measure A has provided funding for the Riverside County portion of the San Bernardino/Riverside to Orange County line and other funds are available for limited improvements to the Los Angeles-San Diego Rail corridor (LOSSAN). Implementation of all other projects will depend upon raising the necessary funding under the unconstrained financial program.

Southwest Corridor Intercity Service The San Diegan intercity rail service connects Los Angeles with San Diego (the LOSSAN Corridor). Push-pull service was recently initiated allowing one daily round trip to be extended from Los Angeles north to Santa Barbara. Connecting Amtrak bus trips and the Seattle-Los Angeles Coast Starlight intercity train service also operates over the Los Angeles-Santa Barbara Corridor.

The Los Angeles-San Diego State Rail Study recently recommended a program of improvements on the rail line between Los Angeles and San Diego. The Los Angeles-Santa Barbara State Rail Corridor Study is currently investigating similar improvements on the segment north to Santa Barbara (LOSSAN II Corridor).

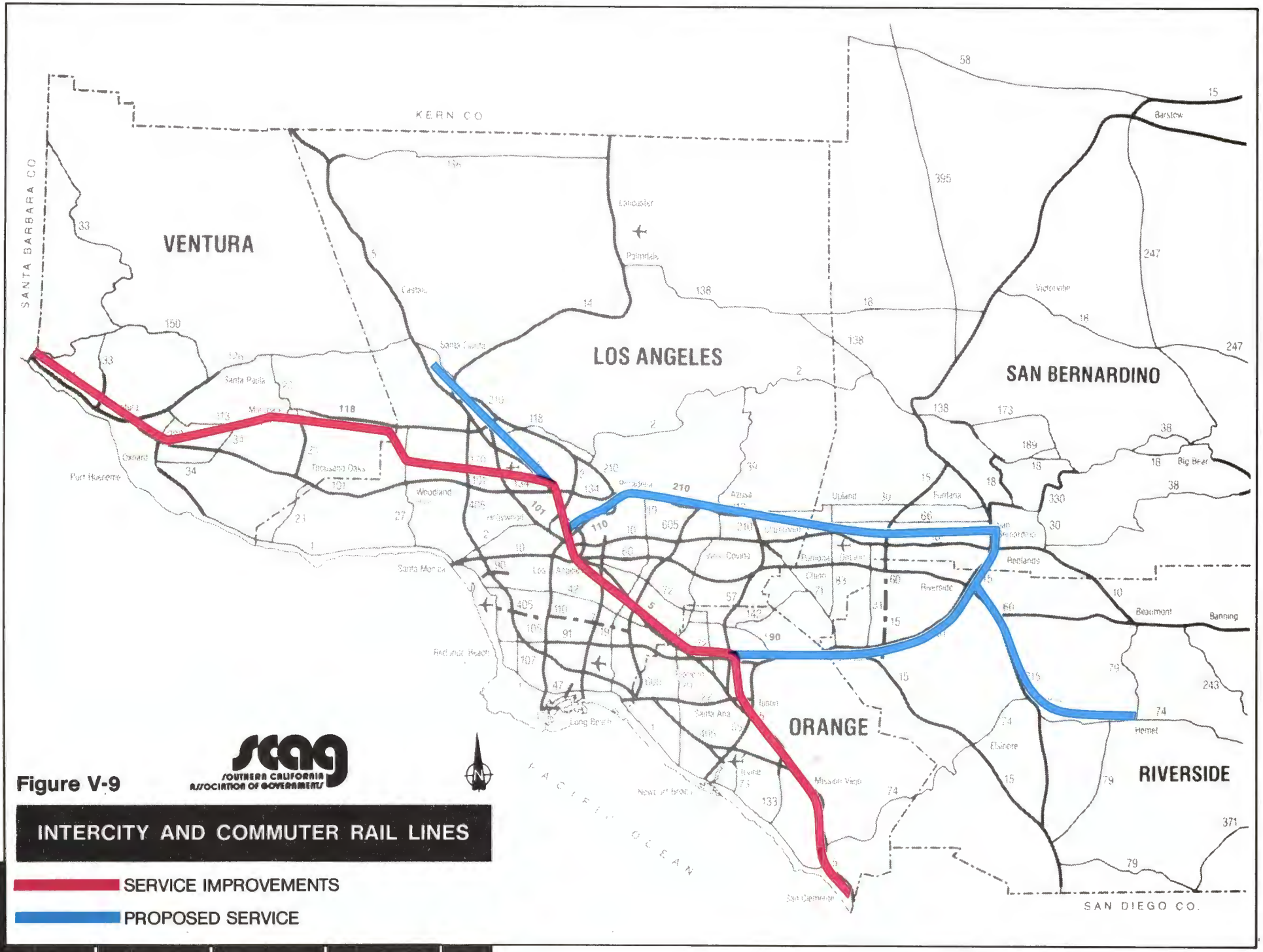
ACTIONS: LOS ANGELES-SAN DIEGO CORRIDOR SEGMENT

Agency	Action	Date
SCAG, Caltrans, County Transportation Commissions, SANDAG, MTDB, NSDTDB	Establish a Joint Powers Authority to plan and implement passenger rail improvements and seek local, State, and Federal funding.	1988-1989

Agency	Action	Date
SCAG, Caltrans, SANDAG, County Transportation Commissions, Amtrak, Santa Fe Railway (and future Joint Powers Authority)	Initiate funding as soon as possible for essential rail replacement and track upgrading from Fullerton to San Diego. (See Figure V-9).	1988-1995
Joint Powers Authority (SCAG, Caltrans, County Transportation Commissions, SANDAG, MTDB, NSDTDB, Local Governments)	Begin implementation of improvement program including necessary track, signaling, grade crossing, and station improvements.	1988-1995
Joint Powers Authority	Provide one new Amtrak Station in southeast Los Angeles County and one in northern San Diego County.	1988-1995
Amtrak	Add a ninth and tenth San Diegan train and acquire more passenger cars to increase the capacity of existing trains.	1990-1995
Joint Powers Authority	Acquire the railroad right-of-way between Fullerton and San Diego.	1995-2000
Joint Powers Authority	Implement additional higher-cost time savings projects and evaluate upgrading of signaling systems.	1995-2000
Joint Powers Authority	Develop a long-range system development plan for further improvement of the Corridor beyond the year 2000.	1993-1996

ACTIONS: LOS ANGELES-SANTA BARBARA CORRIDOR SEGMENT

Agency	Action	Date
SCAG, Caltrans, VCAG, Santa Barbara COG, County Transportation Commissions, Local Governments	Complete a consultant study of the LOSSAN II Corridor, recommending track, signaling, station, and train service improvements.	1989
SCAG, Caltrans, VCAG, Santa Barbara COG, County Transportation Commissions, Local Governments	Determine the institutional framework (such as a JPA) needed to implement corridor improvements.	1988-1989
SCAG, Caltrans, VCAG, Santa Barbara COG, County Transportation Commissions, Local Governments	Provide necessary track and signaling improvements to improve running time and reliability of corridor intercity service.	1989-1995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PACIFIC OCEAN
Barstow
Victorville
Big Bear
Riverside
Redlands
Beaumont
Banning
Hemet
Elsinore
Temecula
Oxnard
Port Hueneme
Thousand Oaks
Santa Paula
Moorpark
Simi Valley
Woodland
Santa Monica
Los Angeles
Long Beach
Santa Ana
Irvine
Mission Viejo
Newport Beach
Lancaster
Palmdale
Castaic
Santa Clarita
Pomona
Ontario
Upland
Fontana
Azusa
Glendora
San Clemente
SCAG
SOUTHERN CALIFORNIA ASSOCIATION OF GOVERNMENTS
INTERCITY AND COMMUTER RAIL LINES
SERVICE IMPROVEMENTS
PROPOSED SERVICE

Figure V-9

Agency	Action	Date
Amtrak, Caltrans	Provide additional San Diegan train extensions to Santa Barbara and add cars as required.	1990-1995
Amtrak, Caltrans	Provide additional intercity station stops at Chatsworth, Van Nuys, Ventura, Goleta, and Lompoc.	1988-1995

Los Angeles-Ventura County Commuter Rail Service The first phase of the Los Angeles-Santa Barbara Rail Corridor Study was an accelerated study of commuter rail service from Los Angeles to Oxnard, serving the San Fernando and Simi Valleys. Station stops would include existing facilities at L.A. Union Passenger Terminal, Glendale, Burbank Airport, Van Nuys/Panorama City, Chatsworth, Simi Valley, Moorpark, and Oxnard. In addition, there is room for new stations at Northridge, Camarillo, and Ventura. A report on this work was sent to the State Legislature on August 15, 1988.

ACTIONS:

Agency	Action	Date
SCAG, VCAG, County Transportation Commissions, Local Governments	Designate a bi-county joint powers authority (JPA) involving Los Angeles and Ventura Counties as the operating entity for the commuter rail service.	1988-1989
SCAG, VCAG, County Transportation Commissions, City of Ventura	Determine track and signaling improvements necessary for extension of the commuter rail service to the City of Ventura.	1988-1989
Joint Powers Authority (SCAG, VCAG, County Transportation Commissions, Local Governments)	Implement a starter service from Los Angeles to Ventura with two daily round trips and 11 station stops.	1990-1991
Joint Powers Authority	Provide dedicated feeder/distributor services at Burbank Airport and in the Los Angeles Central Business District, and additional station parking, particularly at Burbank Airport and Oxnard.	1990-1991
Joint Powers Authority	Implement a track and signaling improvements program, including passing sidings every 10 miles and a centralized traffic control (CTC) system.	1990-1991
SCAG, LACTC, Cities of Los Angeles and Burbank	Evaluate possible additional commuter rail stops in the San Fernando Valley.	1988-1989

Agency	Action	Date
Joint Powers Authority	Provide additional commuter rail service on the Los Angeles-Oxnard corridor and implement necessary track, signaling, and station improvements.	1992-1995

Los Angeles-Saugus Commuter Rail Service

ACTIONS:

Agency	Action	Date
SCAG, LACTC, Local Governments	Conduct a detailed study of the Los Angeles-Saugus commuter rail corridor.	1989-1990

Los Angeles-San Bernardino Commuter Rail Service

ACTIONS:

Agency	Action	Date
SCAG, County Transportation Commissions, Local Governments	Conduct a detailed study of the Los Angeles-San Bernardino commuter rail corridor.	1988-1990

Los Angeles-Southern Orange County

ACTIONS:

Agency	Action	Date
SCAG, OCTC, LACTC, Local Governments	Conduct a detailed study of Los Angeles-Southern Orange County commuter rail service.	1988-1990

Riverside-Orange County Commuter Rail Service

ACTIONS:

Agency	Action	Date
SCAG, County Transportation Commissions, Local Governments	Conduct a detailed study of Riverside-Irvine commuter rail service.	1988-1990

Overall Commuter Rail Needs

ACTIONS:

Agency	Action	Date
SCAG, LACTC, LACRA	Determine the future role of Los Angeles Union Passenger Terminal (Union Station) with respect to regional commuter rail needs.	1988-1990
SCAG, VCAG, County Transportation Commissions, Local Governments	Take steps to preserve rights-of-way which may be required for commuter rail service until further studies to assess corridor needs have been completed.	1988-1991
SCAG, VCAG, County Transportation Commissions, Local Governments	Conduct a study of the regional rail concept providing direct service without a change of trains between the urbanized areas of Ventura, Los Angeles, San Bernardino, Riverside, and Orange Counties.	1989-1991
SCAG, VCAG, County Transportation Commissions, Local Governments	Investigate the formation of a Southern California Regional Commuter Rail Joint Exercise of Powers Agency (JPA) to implement commuter rail service and improvements for the entire five-county urbanized area.	1989-1991

AVIATION PROGRAM

The regional airport system consists of 57 airports (Figure V-10) and has more aviation activity than any other region in the country. There are 7 air carrier airports, 39 general aviation airports, and 11 military air bases. In 1987, there were approximately 7 million air operations in the region, making it one of the busiest air traffic areas in the world. Assessment of this aviation system has been the subject of a number of adopted SCAG plans which include the Aviation System Study (1980-82), the Helicopter System Study (1984), the Airport Impact Mitigation and Management Study (1985), and the General Aviation System Study (1987). Actions are aimed at providing needed capacity.

A. Air Carrier Airports

Providing increased capacity is the subject of the following actions:

Agency	Action	Date
SCAG/Orange County Airport Site Coalition/Inter-County Airport Authority	Conduct an update of the Aviation System Study to identify sites in Orange County for new airports and perform technical analysis.	1988
SCAG	Complete Airport Impact Mitigation and Management Study (AIMMS) which will develop noise, air quality and ground access mitigation strategies for each of the region's five air carrier airports.	1989
SCAG, Regional Airport Authority and Airport Operators	Following completion of AIMMS, SCAG will work with airport proprietors to achieve implementation of appropriate mitigation measures. Implementation of the measures is guided by SCAG policy as a condition for increasing air service above the constrained level for each airport.	1989-1995
SCAG/California Regional Airport Authority	Participate in the Super 150 Program which is designed to meet market demand for air travel throughout the region.	1989
SCAG	Investigate new technology which may relieve some of the market demand on existing airports. Such technology includes STOLports, tiltrotor aircraft and vertiports, and super-speed rail.	1988

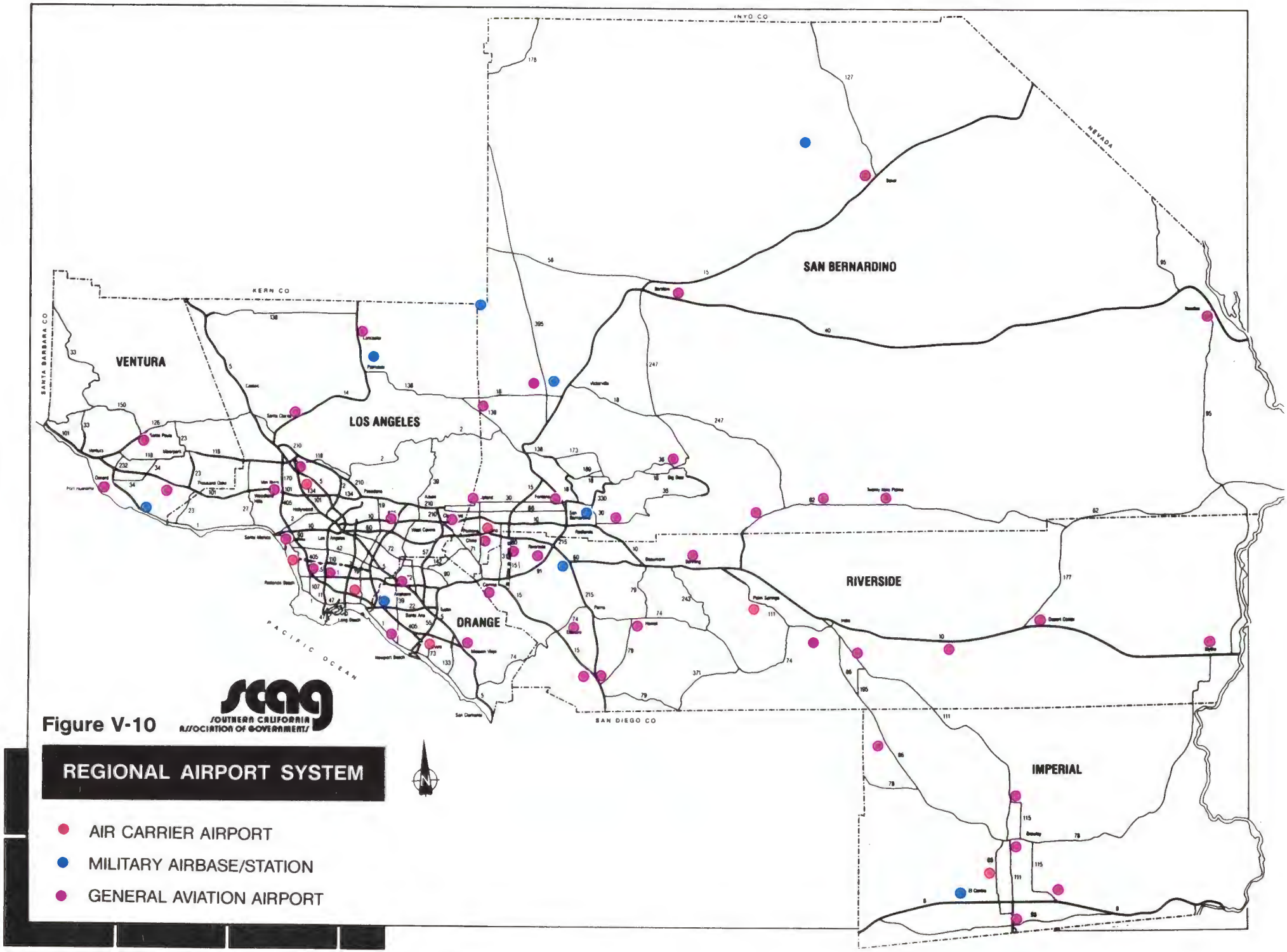
INYO CO
KERN CO
SANTA BARBARA CO
VENTURA
LOS ANGELES
SAN BERNARDINO
RIVERSIDE
ORANGE
IMPERIAL
SAN DIEGO CO
NEVADA
PACIFIC OCEAN
scag
SOUTHERN CALIFORNIA ASSOCIATION OF GOVERNMENTS
REGIONAL AIRPORT SYSTEM
AIR CARRIER AIRPORT
MILITARY AIRBASE/STATION
GENERAL AVIATION AIRPORT
N

Figure V-10

B. Air Cargo

The need to accommodate future growth in air cargo is reflected in the following actions:

Agency	Action	Date
SCAG/Consultant	Conduct SCAG's Air Cargo Assessment, Phase II which is intended to identify air cargo facility requirements through the year 2010.	1989
SCAG	Conduct LAX Goods Movement Study to determine the most efficient and least polluting way of moving cargo to and from the region's largest airport.	1989

C. Airport Ground Access

Airports are major generators and attractors of ground traffic and, as such, contribute to congestion problems on major freeways and arterials. However, in terms of total ground traffic volume in the vicinity of airports, the percentage of trip ends generated by airports in the year 2000 will tend to be small, ranging from 5.4 percent at Burbank Airport to 39.1 percent at Los Angeles Airport. Of the airport-generated trips, only about 30 percent of the total airport trips can be attributed to air travelers, with another 30 percent attributed to visitors, well-wishers, and greeters. Employees and those providing service comprise the remainder. The following efforts are designed to provide adequate ground access to airports as airport service and ground traffic volumes grow:

Agency	Action	Date
SCAG	Complete Airport Ground Access Study which seeks to identify ground access mitigation strategies.	1988
SCAG	Seek funding support for airport ground access strategies at the state and federal levels.	1989-1990
SCAG	Support implementation of approved ground access improvements at Ontario Airport and John Wayne Airport.	1989-1990

D. Helicopters and Heliports

The 1985 Helicopter System Study identified 552 helicopters based in the SCAG region and estimates that the number would increase to 684 by 1990. The Study also identified a

number of heliports in the region, but only six are available for public use. This highlights the need to develop a system of public-use heliports to accommodate the projected increase in helicopters and market demand for scheduled helicopter service.

Agency	Action	Date
SCAG	Support public-use heliport development in high potential heliport development areas identified in the Helicopter System Study and adopted SCAG policy. Those areas include: Beverly Hills/ Westwood; Fullerton/Anaheim; Santa Fe Springs/Norwalk; Los Angeles CBD; Commerce/Vernon; and Pasadena/ Industry/El Monte.	1989-1990
SCAG/Airspace Users	Promote noise-compatible use of helicopters through the Helicopter Airspace Study.	1989

E. General Aviation

From a regional perspective, the general aviation (GA) fleet is continuing its slow decline. In 1984 there were 13,676 total GA aircraft in the region, and in 1987, there were 13,424. However, even with the slight decline, there has been a shift of based aircraft from urban core airports to urban fringe airports. This has resulted in a decline of 8.9 percent in urban areas and a 34.3 percent increase in urban fringe areas which is creating a need for additional general aviation capacity in the urban fringe. The 1987 General Aviation System Study recommends the following actions.

Agency	Action	Date
SCAG	Complete the review of programs and actions in the 1987 General Aviation System Study and adopt the resulting recommendations into the RMP Aviation Program.	1989

MARITIME, RAILROADS, AND GOODS MOVEMENT

An important goal of the Plan is to facilitate highway and railroad access to the region's ports while mitigating adverse impacts of port growth. As described in the chapter on Needs, the Ports of Long Beach, Los Angeles, and Hueneme are anticipating significant growth in exports and imports. Accommodating the surge in port traffic will require not only significant expansions of port terminals and wharves, but major improvements to ground transportation facilities as well. Communities are concerned about the impacts of port growth on grade crossing delays, noise, and congestion. The Plan recognizes, however, that the ports are major generators of jobs and income in the region, and that continued growth of these facilities is in the best interests of the regional economy. The actions dealing with improved access to the ports represent a balancing of economic and environmental goals.

The trucking and railroad industries also play a vital role in the economy of the SCAG region. There are significant opportunities, however, for reducing traffic congestion by adjusting truck delivery schedules and routes. The railroad industry is undergoing a restructuring which may result in the sale of several excess properties and rights-of-way. It is important that local governments explore the possibilities for preserving these rights-of-way for potential transit use. A partnership of local government with the railroad and trucking industries could go a long way in reducing traffic congestion as well as fostering economic growth in the region.

Action Plan

The actions necessary to implement the Maritime, Railroads, and Goods Movement program are listed below:

Access to the Ports of Los Angeles and Long Beach (Figures V-11 & V-12):

Agency	Action	Date
Local Government, Ports, Caltrans	Complete Ports Highway Demonstration Program involving highway widening, interchange improvements and grade separations. (See Figure V-11.)	1989-1993
Ports, Local Government	Form Joint Powers Authority for the Consolidated Railroad Corridor. (See Figure V-12.)	1989
Joint Powers Authority	Conduct engineering, obtain financing and environmental clearance.	1989-1990
Joint Powers Authority	Begin construction of the Consolidated Railroad Corridor.	1991
Ports	Initiate planning, engineering, and construction of new on-dock or additional near-dock container loading yards.	1989-1993

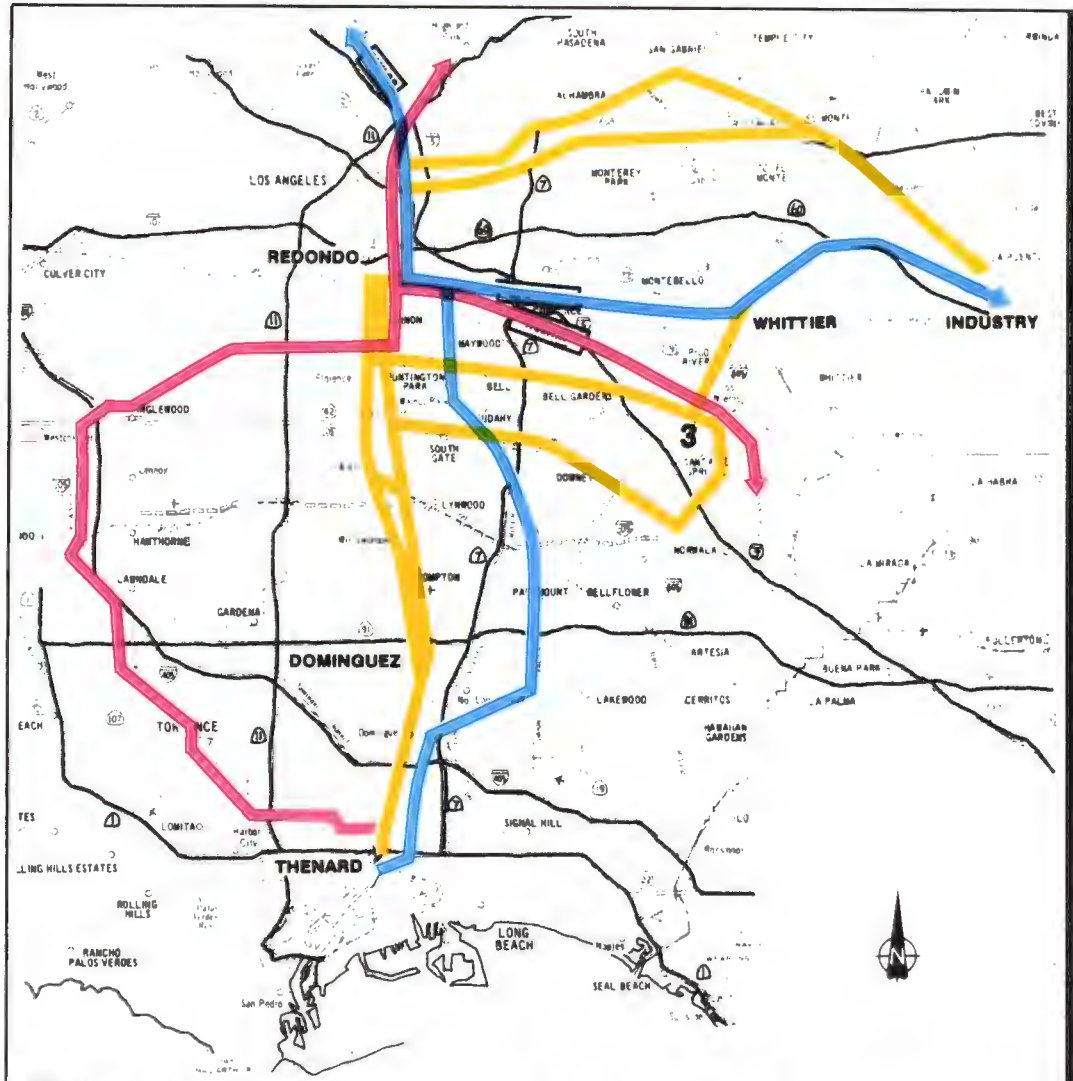

Figure V-11

RAIL LINES SERVING THE PORTS OF LOS ANGELES AND LONG BEACH

SANTA FE

UNION PACIFIC

SOUTHERN PACIFIC

scag
SOUTHERN CALIFORNIA ASSOCIATION OF GOVERNMENTS

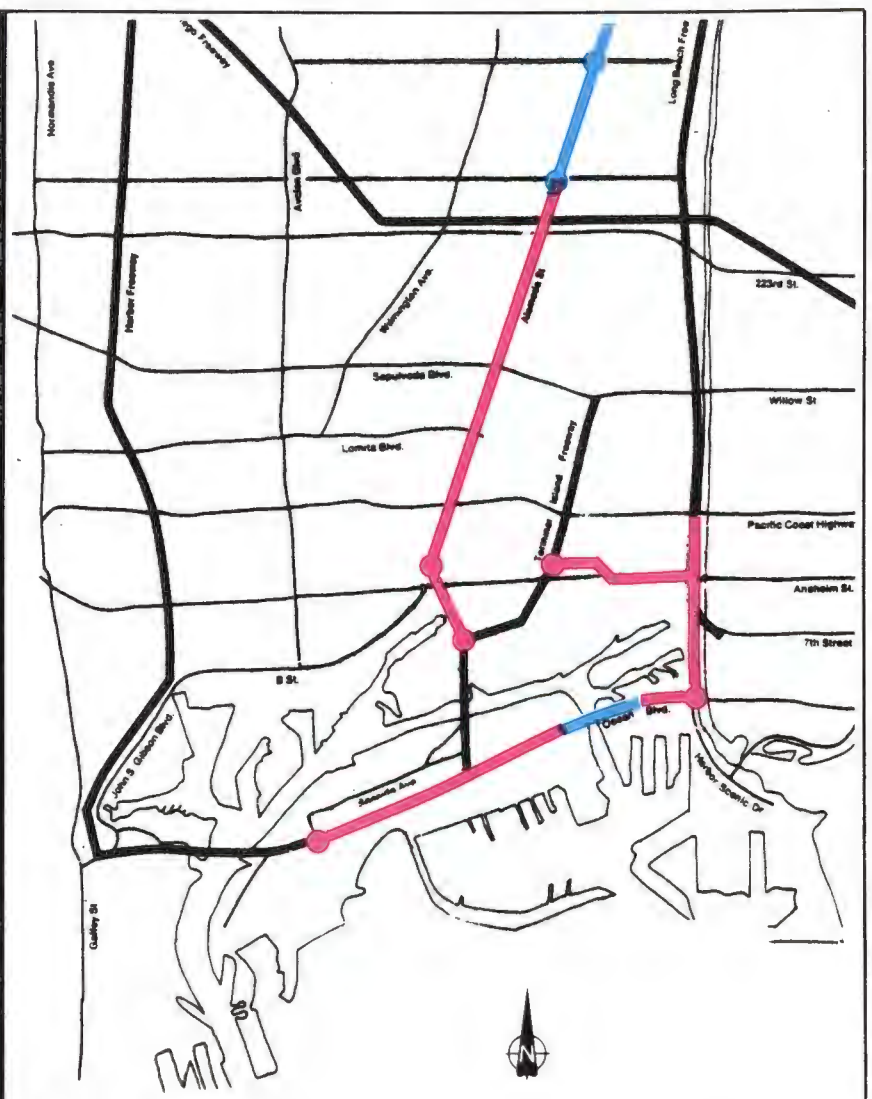

Figure V-12

LOS ANGELES/LONG BEACH PORT TRUCK ACCESS

PROPOSED HIGHWAY IMPROVEMENTS

Phase I

Phase II

Access to Port of Hueneme (Figure V-13):

Agency	Action	Date
Local Government, Caltrans	Conduct engineering, obtain financing and environmental clearance for adopted port access plan. (See Figure V-13.)	1989-1993
Local Government, Caltrans	Begin construction of port access improvements.	1993

Railroads:

Agency	Action	Date
SCAG, Local Government	Investigate potential of using surplus railroad rights-of-way for transit purposes.	1989-1990

Trucking:

Agency	Action	Date
SCAG, Caltrans	Aid local governments to establish Truck Delivery Zones.	1990
SCAG, Local Governments	Promote stricter enforcement of loading zone regulations through aggressive parking management programs.	1989
Caltrans	Continue the real-time freeway conditions information system and expand the system to include a real-time continuous traffic information broadcast system to alert commercial vehicles of traffic congestion locations, accidents, etc.	1995
DMV, CHP, Caltrans, SCAG and Trucking Industry	Give priority attention to the reduction of truck accidents by encouraging stricter examination of driver qualifications, vehicle maintenance and safety inspections. Support legislation to increase the standards for driver qualifications and safety inspections.	1990

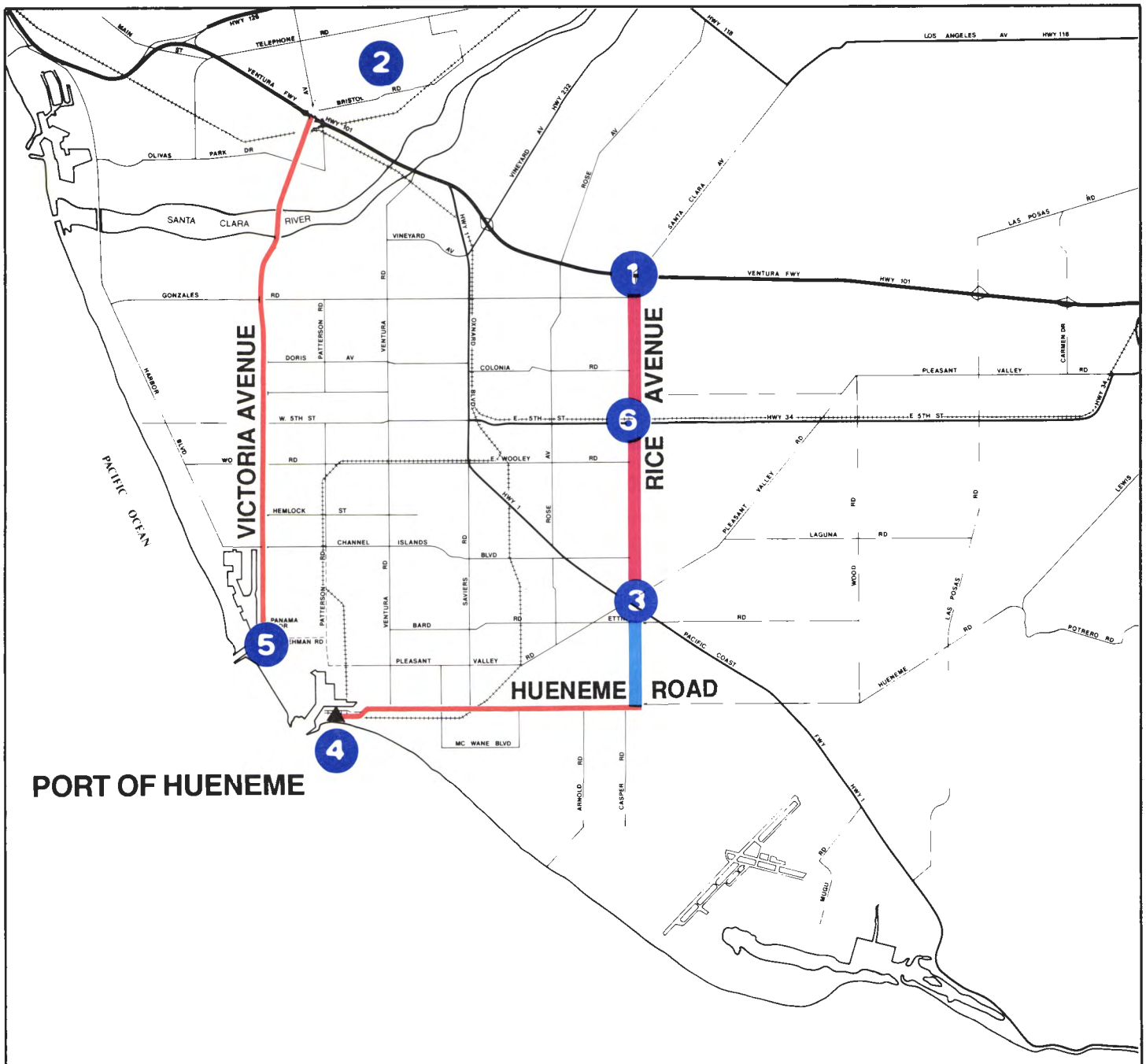

Figure V-13

SCAG SOUTHERN CALIFORNIA ASSOCIATION OF GOVERNMENTS

PORT OF HUENEME ADOPTED ACCESS ROUTES

1. RECONSTRUCTED RT. 101/RICE AVE. INTERCHANGE
2. IMPROVED RT. 101/VICTORIA AVE. INTERCHANGE
3. RECONSTRUCTED RT. 1/PLEASANT VLY./RICE AVE. INTERCHANGE

PROPOSED EAST OXNARD BYPASS (RT.1)

PROPOSED RICE AVE. EXTENSION TO SOUTH

EXISTING ARTERIAL ROUTE TO BE IMPROVED

4. HUENEME GATE ACCESS
5. MARINA GATE ACCESS
6. GRADE SEPARATION AT RICE AVE. AND SOUTHERN PACIFIC MAINLINE

Agency	Action	Date
SCAG, Local Governments, Caltrans, CHP	Conduct a study of the rapid incident response program to determine the effectiveness of the current system and examine new ways to upgrade it for implementation throughout the region.	1990
SCAG, Local Governments	Conduct a rapid incident response study to determine the effectiveness of the current service and examine new ways to upgrade it for implementation throughout the region.	1990
SCAG, Trucking Industry	Develop training programs for truck dispatchers, emphasizing alternative routing and scheduling.	1991
SCAG, Local Governments	Assist shippers and receivers to develop off-peak delivery plans to alter delivery schedules and, if necessary, alter routes to minimize peak hour truck traffic. Encourage local governments to modify noise ordinances to accommodate these changes.	1991
SCAG, Local and State Governments, Trucking Industry	Evaluate the impacts of altering delivery schedules on perishable goods, and assist special truck operators for local and statewide industries to develop voluntary plans to limit operations during peak hour periods for construction, dairies, package deliveries, produce, etc.	1990
Caltrans, Trucking Industry	Develop computerized navigation and dispatching systems.	1995
Local Governments	Adopt Air Quality Element in each General Plan which will assess truck delivery routes and local delivery schedules and to alter these routes and schedules if necessary.	1990

Agency	Action	Date
Local Governments	Adopt ordinances and Memorandum of Understanding (MOU's) regarding truck delivery routes and local delivery schedules.	1990
SCAG	Adopt a SCAQMD Truck Delivery Rule if necessary.	1991
SCAG	Assess needs for federal regulation to assist in the implementation of this measure.	1991
Local Governments	Evaluate the feasibility of establishing peak period pricing and issuance of permits for commercial trucks operating during a.m. and p.m. peak on congested portions of freeways and arterials.	1991
Caltrans, Local Governments	If necessary, encourage Caltrans to develop bypass routes or alternative routes to allow for rerouting of heavy duty trucks on freeways during peak hours on congested portions of freeways and arterials.	1991

NONMOTORIZED TRANSPORTATION PROGRAM

Introduction

Nonmotorized transportation is the term used in transportation and air quality planning to describe trips made by bicycle or on foot and which have a specific origin and destination. Trips taken by these alternative modes are nonpolluting and do not create congestion if facilities to serve them are designed properly.

ACTIONS:

Agency	Action	Date
SCAG	Coordinate with local agencies for the development of a system of bikeways that connects with transit facilities.	1989-on
Local Government	Increase planning and implementation efforts to incorporate pedestrian facilities in future general plans.	1989-on
SCAG	Encourage county transportation commissions, in conjunction with local governments, to expend all Transportation Development Act (TDA) and other bikeway funding sources for facilities development and enhancement. Also, identify alternative or creative funding to support increased facilities development through existing funding programs, (e.g., demonstration projects) or new sources.	1989-on
Local Governments	Introduce legislation to include bicycle parking facilities and adequate pedestrian walkways and access points in future business parks, industrial, and commercial development plans.	1993
Local School Districts, Local, County and State Law Enforcement Agencies	Sponsor bicycle safety and education programs aimed at adult cyclists, motorists, as well as children of elementary, junior high and high school grades.	1993
Local, County, and State Government	Approve legislation to increase enforcement of bicycling and driving laws to provide a safer climate for bicycle use.	1993
County Transportation Commissions	Continue efforts to review local projects to insure the development of a bikeway system that connects with facilities in adjacent jurisdictions.	1993

SYSTEM PERFORMANCE

The ground transportation system performance of the Plan is shown in Table V-2. The congestion that still remains is shown in Figire V-14.

TABLE V-2
MOBILITY PLAN PERFORMANCE INDICATORS

INDICATOR	1984	NO PROJECT	PREFERRED STRATEGY
Vehicle Miles Traveled (000)	221,292	376,187	284,382
Vehicle Hours Traveled (000)	6,343	19,575	7,850
Hours of Delay (000)	629	10,132	899
Percent Delay	10% (6 min/hr)	52% (32 min/hr)	11% (7 min/hr)
Average Daily Speeds (MPH) All Facilities Freeways	 35 47	 19 24	 36 45
Miles of Congestion AM Peak PM Peak	 452 856	 2,564 4,567	 280 612
Transit Mode Split Home-to-Work	6.6%	5.1%	19.3%
Average Auto Occupancy Home-to-Work Trips	1.129	1.150	1.186

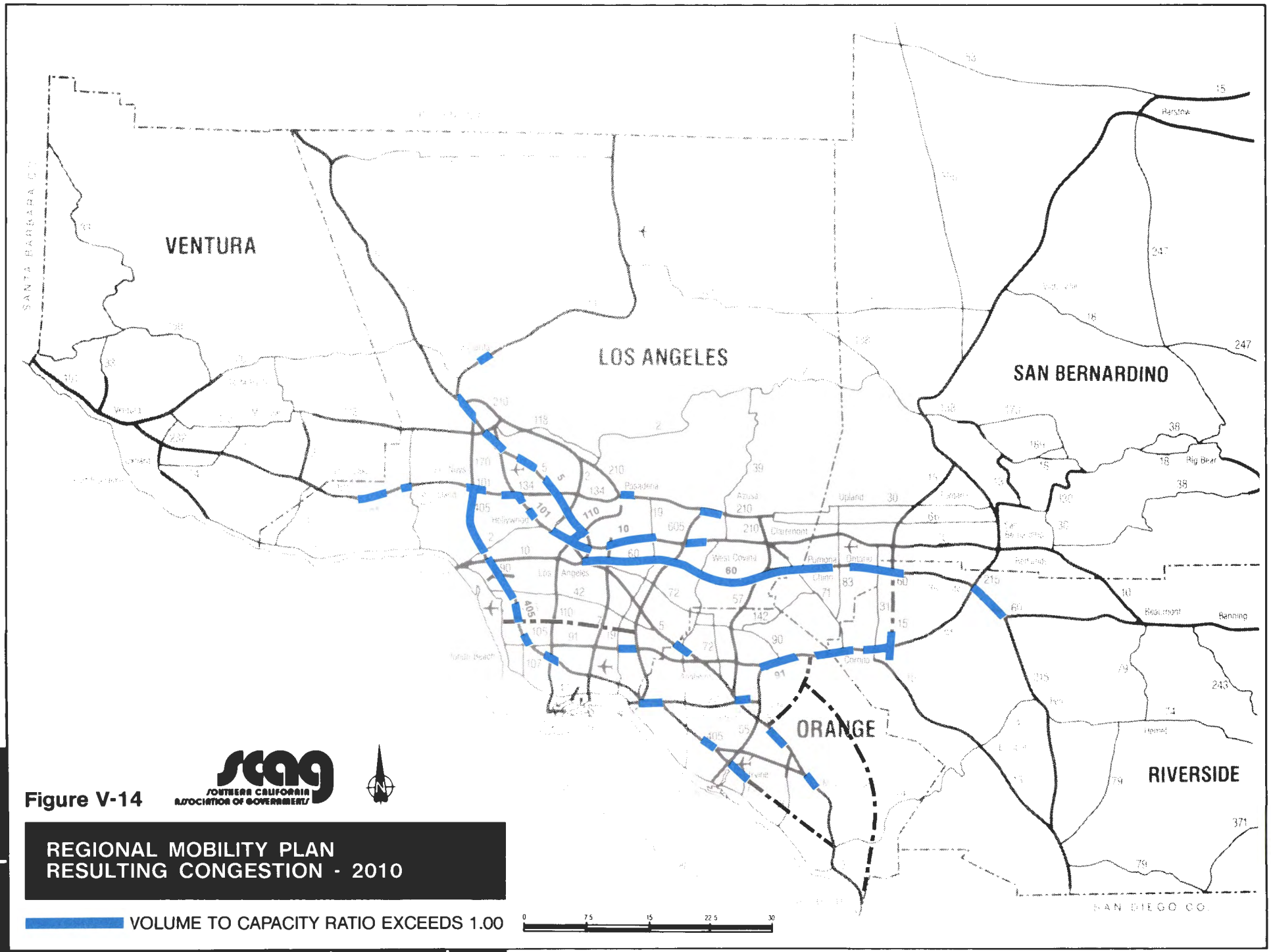

Figure V-14

REGIONAL MOBILITY PLAN
RESULTING CONGESTION - 2010

VOLUME TO CAPACITY RATIO EXCEEDS 1.00

SYSTEM OF REGIONAL SIGNIFICANCE

The regional freeway system is clearly the backbone of mobility in the SCAG region. Comprising less than 15 percent of total roadway system mileage, freeways carry slightly more than 50 percent of total travel. On the other hand, the relatively massive arterial system blanketing the region must carry the other 50 percent of travel. Functionally, much of the arterial system performs as a direct complement to the freeway system by providing thoroughfare for both regional and local automobile trips; by providing the principal guideway for all existing regional transit service, both local and line-haul; and by providing direct access both to local land use and to major regional centers and facilities. To a great extent, the freeway and arterial networks must be viewed as complementary parts of a single system. Unfortunately, the massive importance of the freeway system has, with some exceptions, understandably focused the attention of regional agencies away from the arterial system. The present definition of the regional transportation system to include a large arterial component is designed to be corrective and to reconcile the level of detail present in recent corridor and area studies with that of the Plan. (See Figure V-15.) The inclusion of the major ports and airports recognizes these facilities as integral components of the regional transportation system.

The purpose of a broader definition of the regional transportation system is to better indicate the full scope of facilities which most significantly serve the variety of regional mobility needs and thereby provide a more comprehensive statement of the regional transportation planning focus and concern. Above all, the system as presented defines an area towards which much greater regional attention must be directed, particularly in corridor and area studies conducted as part of the plan refinement process.

The system presented in Figure V-13 was developed with primary regard to the current needs of regional mobility. Most fundamentally, this included the identification through modeling processes those arterial routes most desirable for longer, regional trip making. It also incorporated planning efforts at the county level to develop "highflow," "superstreet," or "backbone" systems of functionally enhanced arterials; those facilities providing essential access to regional transportation facilities, including ports and airports; and those facilities providing or enhancing essential access to regional activity centers. Additional facilities will be added to the system of regional significance as recommended by continuing planning studies.

As noted, the system was developed primarily on the basis of a modeling analysis. As such, it does not fully reflect local plans and purposes. Appropriate refinement activities, undertaken with the cooperation and assistance of the county transportation commissions and local jurisdictions will, therefore, be required to ensure compatibility with local conditions. In particular, all designated major arterials from the county general plans will be considered for possible inclusion in the system. System refinement is therefore included as a plan implementation action.

The relationship between the regional transportation system and the level of transit expansion provided in the Plan may also result in future modification to the system. Given the relative population and employment densities in the region, the heavy volumes of projected rail transit will require the development of major bus feeder and distribution routes. The feeder volumes themselves may require that certain arterials directly serving transfer and access facilities be given a bus preferential treatment. Such routes, if not already included, must be added to the regional highway system as identified.

ACTIONS:

Agency	**Action**	**Date**
SCAG, Local Jurisdictions, County Commissions	Refine system of regional significance.	1988-1989


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P
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EASTERN SCAG REGION
Map Not To Scale
SCAG
SOUTHERN CALIFORNIA ASSOCIATION OF GOVERNMENTS
N
SYSTEM OF REGIONAL SIGNIFICANCE
FREEWAY
ARTERIAL STREET OR HIGHWAY
A AIR CARRIER AIRPORT
P PORT

Figure V-15

LONG-RANGE CORRIDORS

The improvements and programs identified in the Plan are designed to meet projected mobility needs to the year 2010. Some level of growth, however, will clearly continue in the region beyond the 2010 horizon. It is not unreasonable to suppose that much of the growth after the year 2010 will occur in the outlying areas of the region, in those areas which are presently less urbanized. This continued growth will create future transportation needs in these areas well beyond those presently being addressed.

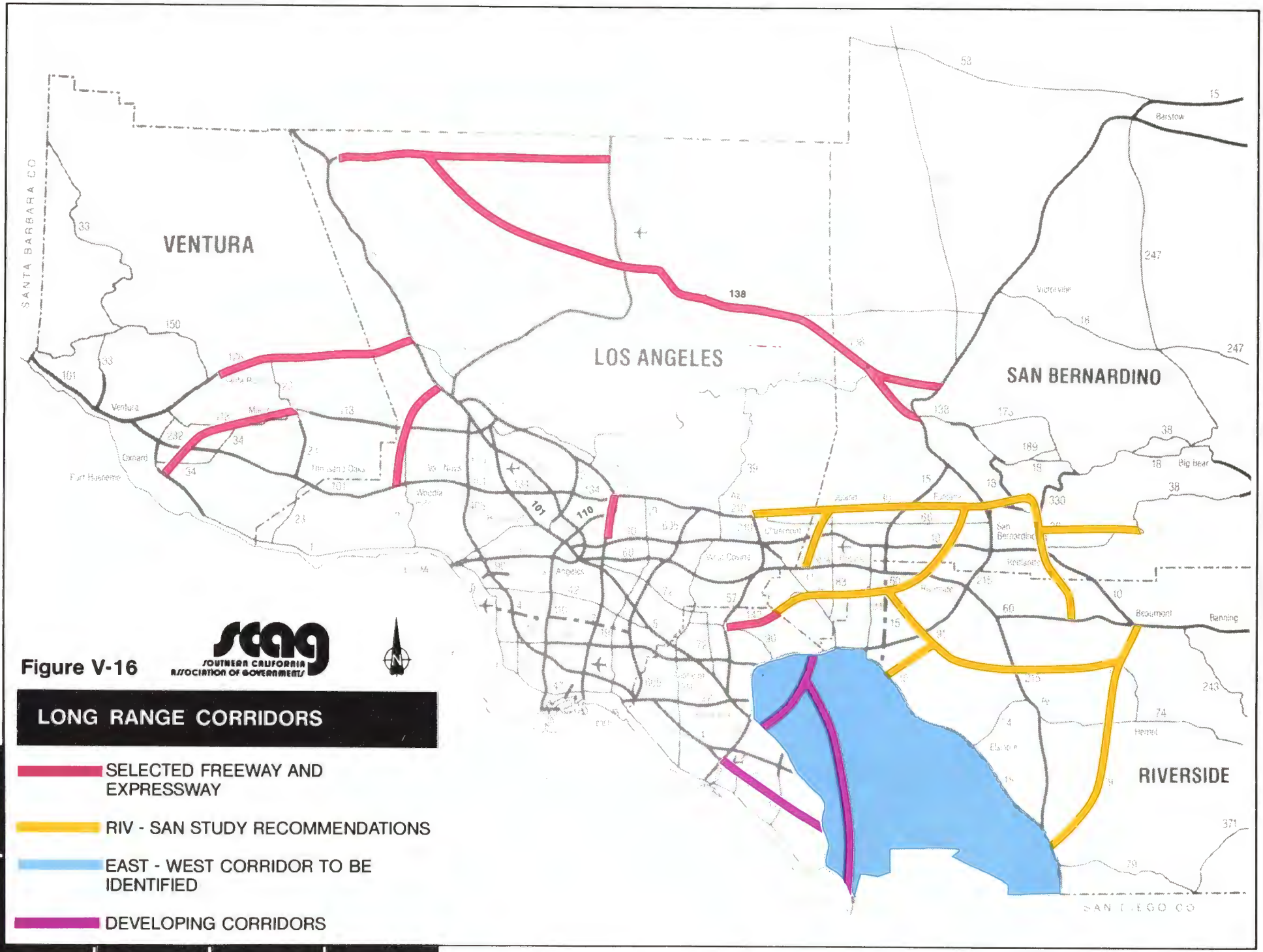
Without an early effort to identify locations for potential future transportation corridors which might be needed after 2010, and without an effort to protect these corridors by guiding anticipated development away from the probable corridor path, the opportunity for future transportation corridor improvement would be greatly complicated in the long term. Early attention must be given to the prospect of very long-term needs if the immense financial, environmental, and social costs associated with new corridor development in the presently urbanized areas are to be avoided.

If reasonable consensus can be achieved regarding the need and probable location of long-range transportation corridors in the region, appropriate programs can be developed to help protect those corridors from encroachment by the very development which, in the long-term, they must serve. Corridors can then be locatd on city circulation maps and county master plans of arterial highways. Appropriate land use decisions can be made, and perhaps even right-of-way dedications obtained.

The first step in this long-range strategy to provide for future transportation needs is the identification of potential corridors. To this end, an initial effort was undertaken in 1986-87 in the Riverside and San Bernardino County areas to locate new corridors. This was a cooperative effort involving SCAG, the Riverside County Transportation Commission, the San Bernardino County Associated Governments and Caltrans District 8. The staff recommendations which were developed through this effort are included in Figure V-16. Much work remains to achieve consensus regarding the probable need and location of these corridors before a program to protect them can be initiated. There is agreement, however, that these corridors deserve further study.

SCAG's fiscal year 1988-89 Overall Work Program contains a work element to expand the work completed in the Riverside/San Bernardino areas to the rest of the region and to initiate development work for a corridor protection program. Undeveloped or incompletely developed routes from California's legislated "freeway and expressway system" will comprise the major set of opportunities to be examined.

Significant analysis and a major consensus building effort will be required before a final definition of long-range transportation corridors can be presented and effective steps taken to protect those corridors to meet the needs principally of the next generation of Southern Californians.


VENTURA
LOS ANGELES
SAN BERNARDINO
RIVERSIDE
SANTA BARBARA CO
SAN DIEGO CO
138
101
110
15
247
Barstow
Victorville
Big Bear
Ventura
Oxnard
Fort Hueneme
Thousand Oaks
Moorpark
Simi Valley
Woodland Hills
Pasadena
Glendale
Burbank
San Bernardino
Redlands
Riverside
Beaumont
Banning
Hemet
Elsinore
Corona
Angeles
Santa Monica
Malibu
Long Beach
Anaheim
Irvine
Laguna Beach
Mission Viejo
Lake Forest
Temecula
Murrieta
Escondido
Oceanside
Carlsbad
Encinitas
San Clemente
Dana Point
Huntington Beach
Newport Beach
Costa Mesa
Fountain Valley
Westminster
Garden Grove
Santa Ana
Orange
Tustin
Yorba Linda
Brea
Fullerton
La Habra
Whittier
Norwalk
Downey
Bellflower
Lakewood
Cerritos
Artesia
Hawaiian Gardens
La Mirada
Buena Park
Cypress
Los Alamitos
Seal Beach
Huntington Beach
Figure V-16
scag
SOUTHERN CALIFORNIA ASSOCIATION OF GOVERNMENTS
LONG RANGE CORRIDORS
SELECTED FREEWAY AND EXPRESSWAY
RIV - SAN STUDY RECOMMENDATIONS
EAST - WEST CORRIDOR TO BE IDENTIFIED
DEVELOPING CORRIDORS

SUBREGIONAL AREA AND CORRIDOR STUDIES

Many entities conduct localized planning for transportation facilities and services. Every city and county has a circulation or transportation element, and they conduct specialized studies as necessary and appropriate. Transit operators conduct special studies and periodically prepare Short-Range (5-year) Transit Plans. The county transportation commissions prepare numerous studies and plans – both short-range and long-range, countywide, smaller area and corridor. Caltrans prepares systems plans, route concepts, projects and special studies (i.e., double decking). Developers and others in the private sector are also preparing studies and plans. More recently, the South Coast Air District has also been preparing special transportation studies.

SCAG also prepares subarea planning and corridor studies (Figure V-17). Corridor/area studies are performed for areas with: (1) high travel demand corridors with major transportation problems; (2) significant levels of growth and travel activity; (3) significant transportation/land use issues and multijurisdictional planning coordination needs, and (4) regional facilities (ports/airports) that have access issues. Within the framework and the goals of the Plan, these SCAG-sponsored corridor/area studies provide a plan refinement process through evaluation of alternative solutions to specific mobility problems. They promote implementation of the Plan as well as input to refining it.

Corridor/area studies allow for involvement from all local sectors, e.g., elected, public agency, private sector and community leadership. Participation from these sectors enables multijurisdictional policy development, coordination of various agency plans, refinement of regional data and planning for future project implementation. These studies provide intermediate solutions and recommendations for improving mobility in the study area following an evaluation of alternatives to mitigate the problem(s). Such alternatives can include, but are not limited to: new facilities, transit improvements, system management, demand management, new technologies and land use recommendations.

All of the above efforts have a relationship to the Plan and the Plan benefits from the more specific facility and nonfacility recommendations contained in these studies. Generally these types of studies (and even more detailed project studies) are required to be completed prior to any funding decision being able to be made. CEQA and NEPA requirements for individual projects are satisfied at this detailed level.

Establishing the appropriate planning and decision continuum between regional plans, local plans and projects is an important and difficult issue. These subregional planning activities are a method to improve these linkages. The region has to improve this process as it improves the land use and transportation balance. Appendix B contains a summary of the SCAG-sponsored studies.

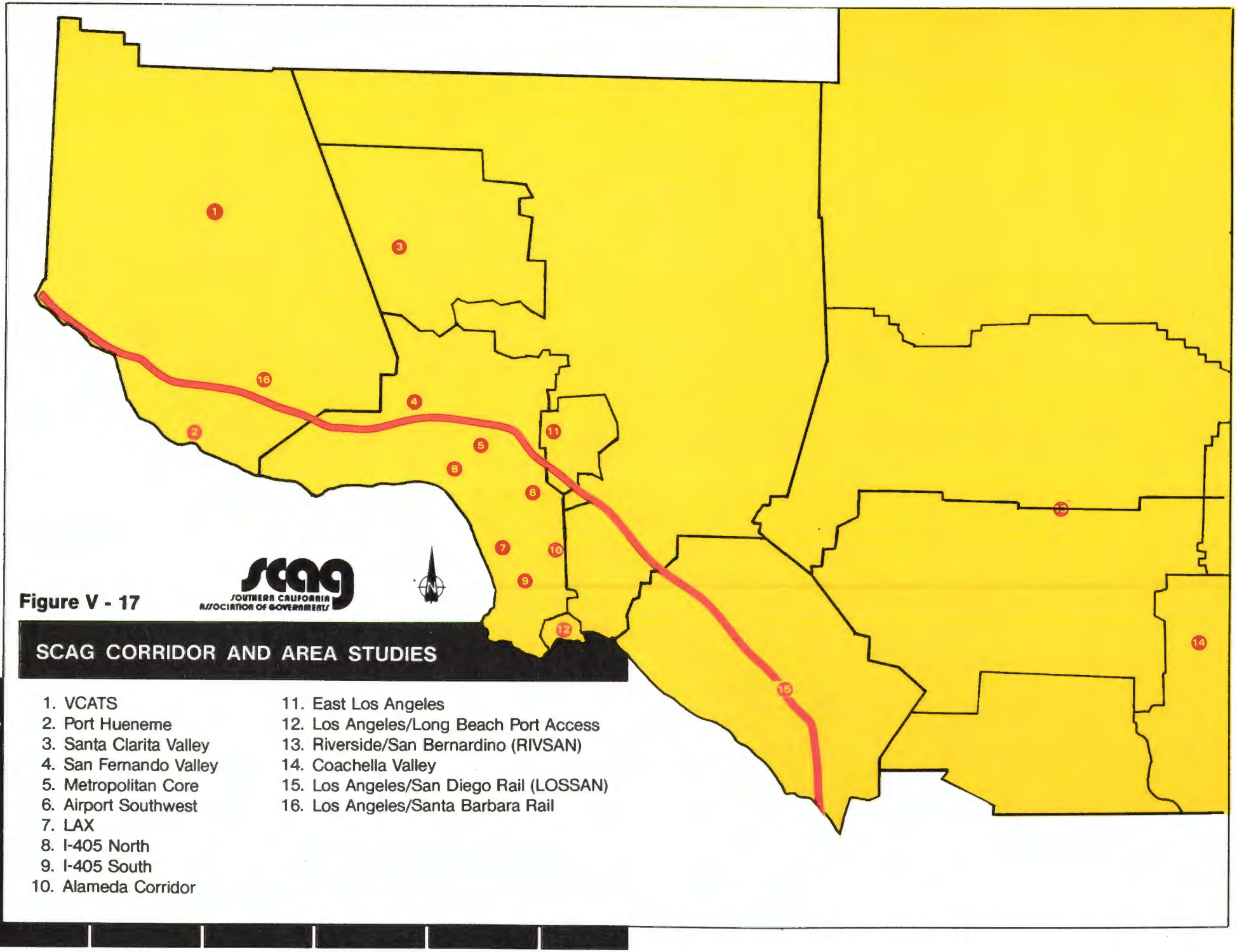

SCAG CORRIDOR AND AREA STUDIES
1. VCATS
2. Port Hueneme
3. Santa Clarita Valley
4. San Fernando Valley
5. Metropolitan Core
6. Airport Southwest
7. LAX
8. I-405 North
9. I-405 South
10. Alameda Corridor
11. East Los Angeles
12. Los Angeles/Long Beach Port Access
13. Riverside/San Bernardino (RIVSAN)
14. Coachella Valley
15. Los Angeles/San Diego Rail (LOSSAN)
16. Los Angeles/Santa Barbara Rail
SCAG
SOUTHERN CALIFORNIA ASSOCIATION OF GOVERNMENTS

Figure V - 17

FINANCIAL ELEMENT

VI.

VI - FINANCIAL ELEMENT

The Financial Element provides the cost and revenue estimates for the Regional Mobility Plan and defines the financial actions required to implement the various components of the Plan. Policies and objectives relating to finance are in the Policy Element.

Current Financial Obligations

Current financial obligations are the costs of maintaining and operating the existing transportation system and of implementing those projects programmed in the 1987 State Transportation Improvement Program (STIP). The shortfall in funding to complete the 1987 STIP, which includes projects programmed after the second year (approximately $2 billion), has been carried over in this analysis as the first priority for future revenues.

The 1987 STIP covers a period of five years - 1987 through 1991. All revenues generated through 1991 are assumed to be used to fund the STIP. For this reason, revenues used throughout the financial element begin with 1992.

Costs

The financial cost of the Plan transportation system includes the capital cost of: (1) Highways, including HOV, mixed flow, and system management improvements; (2) Transit, including medium and high capacity corridor improvements, buses - both expansion and replacement, and commuter and inter-city rail lines; and (3) Demand Management, including express buses, shuttles, and park-and-ride facilities. (See Table VI-1.)

Table VI-2 indicates the costs of operating and maintaining the regional transportation system, both for highways and for transit. Also included are the costs required to provide comprehensive demand management services and to facilitate and maintain the changes in mode.

Note that in the analysis capital costs are shown as total costs for 1992 through 2010 while operating and maintenance costs are shown as annual costs. All costs are in 1987 dollars and are order-of-magnitude costs. They should not be applied on an individual corridor or project basis.

The Plan financial element costs do not include the capital or operating and maintenance costs for local streets and roads. In 1985, a SCAG assessment of street and road needs showed that the existing arterial and collector roadways needed $2 billion of improvements over and above routine maintenance. The study noted that this was expected to nearly double by 1993. More analysis needs to be done in this area.

Finally, these are by no means the total public and private costs to build and operate the transportation system. For instance, they do not include the cost of private purchase and operation of the automobile, nor do they include the capital and operating costs of parking facilities.

TABLE VI-1
CAPITAL
COSTS, REVENUES, AND SHORTFALLS (%)
(1987 $, Millions)

	HIGHWAY	TRANSIT	DEMAND MANAGEMENT	TOTAL
COSTS				
LOS	$ 7,400	$ 25,700	$ 30	$ 33,130
ORA	4,100	2,600	10	6,710
RIV	800	500	4	1,304
SAN	800	1,300	4	2,104
VEN	600	200	2	802
TOTAL	$ 13,700	$ 30,300	$ 50	$ 44,050
REVENUES				
LOS	$ 4,500	$ 11,400	Costs	$ 15,900
ORA	2,700	400	Assumed	3,100
RIV	600	200	To Be	800
SAN	600	100	Paid	700
VEN	300	100		400
TOTAL	$ 8,700	$ 12,200		$ 20,900
SHORTFALLS				
LOS	$ 2,900 (39%)	$ 14,300 (56%)	$ 30 (100%)	$ 17,230 (52%)
ORA	1,400 (34%)	2,200 (85%)	10 (100%)	3,610 (54%)
RIV	200 (25%)	300 (60%)	4 (100%)	504 (39%)
SAN	200 (25%)	1,200 (92%)	4 (100%)	1,404 (67%)
VEN	300 (50%)	100 (50%)	2 (100%)	402 (50%)
TOTAL	$ 5,000 (36%)	$ 18,100 (60%)	$ 50 (100%)	$ 23,150 (53%)

TABLE VI-2
OPERATING AND MAINTENANCE COSTS, REVENUES, AND SHORTFALL (%)
(1987 $, Millions)

	HIGHWAY	TRANSIT	DEMAND MANAGEMENT
COSTS			
LOS		$ 1,900	$ 976
ORA	Costs	400	413
RIV	assumed	120	136
SAN	to be	160	158
VEN	funded	50	77
TOTAL		$ 2,630	$ 1,760
REVENUES			
LOS		$ 1,000	
ORA	N/A	180	
RIV		40	
SAN		80	
VEN		30	
TOTAL		$ 1,330	$ 150
SHORTFALL			
LOS		$ 900 (47%)	
ORA	N/A	220 (55%)	
RIV		80 (67%)	
SAN		80 (50%)	
VEN		20 (40%)	
TOTAL		$ 1,300 (49%)	$ 1,610

Available Revenues

Several key assumptions were made in estimating constrained revenues:

(1) The Gann limit on transportation expenditures will be maintained;

(2) There will be no change in distribution formulas for Federal and State funds allocated by the State with respect to North-South split or county minimums;

(3) The Federal gas tax will continue and will provide 85 percent return to source;

(4) All existing funding programs will continue at current levels;

(5) Riverside and San Bernardino Counties will join Los Angeles and Orange Counties as eligible for Proposition 5 Guideway funds;

(6) Riverside County will pass its local sales tax; and

(7) Orange County will use tolls to fund part of its new corridors.

Based on these assumptions, available revenues from existing sources were projected for the years 1992-2010. Initially, these revenue estimates were developed in a strictly technical

manner by a team of financial consultants (Financial Analysis of Alternative Strategies for the Plan). Refinement of projections occurred in consultation with Caltrans and the county transportation commissions. These refined revenue projections are presented in Table VI-1 for capital and Table VI-2 for operating and maintenance. It was assumed that all highway operating and maintenance costs could be met by application of existing sources of revenue.

Again, as in the situation of cost, there are revenues outside of the Plan financial element which are not included. For example, jurisdictions are collecting substantial developer exactions for transportation management investments, and it is expected that these exactions will continue to be collected and that they will be developed in other jurisdictions.

Revenue Shortfall

Table VI-1 indicates revenue shortfall pertaining to capital, Table VI-2 the shortfall in the operating and maintenance programs. As the tables indicate, revenues from existing sources will not cover the cost required to fund the various programs call for in the Plan. Approximately 60 percent of the transit capital needs cannot be met with existing revenues, leaving an $18.1 billion shortfall in the transit capital program. Annual operating and maintenance requirements for the transit and demand management programs show large deficits.

TABLE VI-3
REVENUE SHORTFALL SUMMARY
(1987 $, Millions)

CAPITAL SHORTFALL (1992-2010)		O & M SHORTFALL (ANNUAL)	
HIGHWAY	$ 5,000 (36%)	HIGHWAY	-0-
TRANSIT	18,100 (60%)	TRANSIT	1,300 (49%)
DEMAND MANAGEMENT	50 (100%)	DEMAND MANAGEMENT	
		• Ridership Main.	1,510 (100%)
		• Vehicle Operation	100 (41%)
TOTAL SHORTFALL:	**$23,150**	**ANNUAL O&M SHORTFALL:**	**$ 2,910**

Constrained and Unconstrained Costs

The Plan has categorized projects into Constrained and Unconstrained to distinguish between the two levels of implementation. Those actions and facilities which can be constructed or completed under existing revenue sources constitute the Constrained program. Actions and facilities which cannot be funded without additional revenue are in the Unconstrained program. The Constrained and Unconstrained facility improvement and development projects are displayed in the Action Element, Chapter V. (See Figures V-3, V-4, V-5, V-6, V-7.)

Revenue Issues

Forecasting revenues at the Federal level is clouded by a number of issues. As stated above, the 1987 STIP reflects a shortfall in State funds which comes about because of the need to use State funds to backfill for decreases in Federal funding. This analysis assumed Federal funding would continue at current levels. The revenue situation will be drastically altered should this decrease in Federal funding continue.

Second, the forecasts used in the Plan were derived by projecting Federal and State gas tax revenues and then refined in consultation with Caltrans and the county transportation commissions. SB 140, passed recently, sets the annual State highway expenditure at $1 billion per year. This policy-driven forecasting approach yielded results comparable to the earlier revenue forecasts.

Another uncertainty is that the Interstate System will be completed in 1992 and a new Federal program will have to be initiated in 1993. The size and nature of this Federal program has yet to be determined. Finally, gas tax revenues may be affected as the problems of air quality require more extensive use of alternative fuels.

Financial Actions to Meet Shortfall/Revenue Generation Approaches

Three basic approaches are considered for raising the necessary revenues. These revenue generation approaches are:

General Taxation Based Approaches: Taxes and fees are applied generally to pay for transportation system improvements. The underlying assumption behind such financing is that the benefits of such improvements accrue to the population as a whole with relatively little direct correspondence between amounts paid and benefits received. An example of this type of approach would be an increase in State and local sales taxes.

Value Capture Based Approaches: An effort is made to recoup a portion of the benefits that differentially accrue to the private sector as a result of a transportation improvement. Examples of this approach include benefit assessment fees, community facility district fees, and development impact fees.

User Based Approaches: Under this approach, those who use a particular mode or facility pay in proportion to their actual use and potentially for exercising their right to live and work where they choose. Toll financing of highways, congestion fees, gasoline taxes and increases in transit fares are examples of user based transportation financing approaches.

The Financial Strategy

Table VI-4 outlines one possible strategy to raise the revenue shortfalls in the Plan. Choices of revenue raising approaches, in the form of different scenarios, are detailed for shortfalls in highway capital only. Major reliance for increasing revenues would be on user-based approaches. In addition to the user charges, this financial strategy categorizes gas taxes as user fees and includes congestion charges and tolls. It also would require the removal of the Gann limit on transportation expenditures.

Following is the relative reliance on alternative types of revenue sources in Table VI-4:

HIGHWAY CAPITAL
- Scenarios I, II, IV are 100% user-based
- Scenario III is 100% taxation-based

The scenarios raise revenues from various sources such as State gas tax, regional gas tax, local sales taxes, the addition of tolls during the peak periods on selected facilities in appropriate counties, or any combination of the aforementioned methods.

DEMAND MANAGEMENT
- 100% user-based

TRANSIT CAPITAL
- 61% user-based
- 39% taxation-based

TRANSIT O & M
- 65% user-based
- 25% value capture
- 10% taxation-based

Where necessary, annual benefit assessments were included to raise revenues for transit operating and maintenance. These have been estimated in a way which supports the job/housing policies of the Growth Management Plan, assessing nonresidential units in Los Angeles and Orange Counties while assessing dwelling units in Riverside and San Bernardino Counties.

The financial strategy emphasizes flexibility in the use of traditional and non-traditional revenue sources to fund necessary transportation improvements. The reliance on user-based approaches to raising transit capital is an example of the intended flexibility of this program.

TABLE VI-4
FINANCIAL STRATEGY
(1987 $)

HIGHWAY CAPITAL

Shortfall: $5.0 billion

The shortfall for Highway Capital could be met under any one of the following four scenarios:

Scenario I

State Gas Tax of 15 cents.

Distributed as follows:
—50% to local streets and roads ($5 billion);
—50% to Highway Capital ($5 billion); and
—Distributed among the SCAG region as needed.

Scenario II

Regional Gas Tax of 10.5 cents.

Distributed as follows:
—50% to local streets and roads ($5 billion);
—50% to Highway Capital ($5 billion); and
—Distributed as needed in the region.

Scenario III

$5 billion could be raised by local sales taxes:
in Los Angeles County of 0.20%,
in Orange County of 0.25%,
in Riverside County of 0.10%,
in San Bernardino County of 0.10%, and
in Ventura County of .25%.

Note: 0.2% region-wide would also raise $5 billion, but some revenues from Riverside and San Bernardino would have to be redistributed to Orange and Ventura Counties.

Scenario IV

Tolls on selected facilities in both peak periods as follows:

Los Angeles County - 10 cents on 21% of the VMT;
Orange County - 10 cents on 27% of the VMT;
Riverside County - 10 cents on 10% of the VMT;
San Bernardino County - 10 cents on 9% of the VMT; and
Ventura County - 10 cents on 25% of the VMT.

(TABLE VI-4 Continued)

HIGHWAY O & M

No shortfall.

DEMAND MANAGEMENT CAPITAL

Shortfall: $50.3 million

a) Congestion fees on selected facilities in the morning peak as follows would raise $50.3 million:

Los Angeles County - 10 cents on 0.7% of the VMT;
Orange County - 10 cents on 0.6% of the VMT.

b) Farebox recovery increase in the form of partial elimination of employer provided and subsidized parking and the substitution of demand management services, including express commuter bus, park-n-ride facilities and shuttle services would be used to reduce the above congestion charges.

DEMAND MANAGEMENT O & M

Shortfall: Maintenance $1.6 billion;
Operating $104 million.

a) Parking fees at employment centers as follows (roughly $404 million):

Los Angeles - up to $1.90/veh/day;
Orange - up to $1.60/veh/day;
Riverside - up to $3.80/veh/day;
San Bernardino - up to $1.20/veh/day; and
Ventura - up to $1.40/veh/day.

b) Farebox recovery increase would be needed to generate the remaining shortfall. Farebox recovery increase would be in the form of employer provided transit passes, reduction of employer provided parking, and transfering this into a transportation allowance usable for transit and special demand management services.

(TABLE VI-4 Continued)

TRANSIT CAPITAL

Shortfall: $18.1 billion

a) State Gas Tax of 5.6 cents (Roughly $3.8 billion)

Distributed 100% to rail transit as Article XIX funds. This tax distributed by county minimums would fund all of shortfalls for Riverside and Ventura Counties.

b) Parking fees at employment centers as follows (roughly $3.8 billion):

Los Angeles - $1.90/veh/day;
Orange - $0.75/veh/day;
San Bernardino - $0.90/veh/day.

c) Farebox recovery increase would also be used to reduce the above user based charges.

d) Local Sales Tax as follows (roughly $6.9 billion):

Los Angeles - 0.42%;
Orange - 0.13%;
San Bernardino - 0.10%.

TRANSIT O & M

Shortfall: Roughly $1.3 billion per year in 2010.

a) Parking fees at employment centers (roughly $ .85 billion):

Los Angeles - $5.8/veh/day;
Orange - $2.9/veh/day;
Riverside - $6.5/veh/day;
San Bernardino - $1.9/veh/day; and
Ventura - $1.1/veh/day.

b) Farebox recovery increase would be used to reduce parking fees.

c) Local Sales Tax (roughly $ .13 billion):

Los Angeles - 0.11%;
Orange - 0.07%;
Riverside - 0.23%;
San Bernardino - 0.06%; and
Ventura - 0.09%.

Note: Riverside and Ventura Counties include an extra 25% of the shortfall as there is no benefit assessment attributable in these counties.

d) Benefit Assessment (roughly $ .31 billion):

Los Angeles - $ .56/sq ft non residential;
Orange - $ .81/sq ft non residential;
San Bernardino - $220/DU.

Increases to revenue sources which traditionally raise monies for highway programs are proposed to be used more flexibly for transit programs. This and the use of toll roads or user fees would require revisions to current legislative authority.

Table VI-4 is one way the region could raise the revenues to fund the shortfall in the Plan. There are other ways the region could accomplish this. Each county has its own priorities and needs. Therefore, attached is a Revenue Sources and Equivalents Table for the SCAG region (Table VI-5). The table estimates revenues for each county which could be anticipated to be raised from increases in various funding sources. Each county can use this table to calculate its own program to raise the necessary revenues.

TABLE VI-5
REVENUE SOURCES AND EQUIVALENTS FOR SCAG REGION
(1987 DOLLARS IN MILLIONS)

	SOURCE					
COUNTY	**State Gas Tax 1 cent/gal***	**Regional Gas Tax 1 cent/gal**	**Local Sales Tax 1/4 cent**	**Benefit Assessment $100/DU $0.50/s.f.**	**Tolls Congestion 10 cents on 20% of VMT**	**Centers Parking Fees $1/veh/day**
LOS	$ 400	$ 560	$ 3,570	$ 7,820	$ 2,710	$ 3,100
ORA	100	140	1,360	610	1,020	1,160
RIV	60	80	480		410	180
SAN	80	120	530	170	430	530
VEN	40	40	300		240	310

* Revenues raised would increase if State Gas Tax were indexed for inflation.

ACTIONS

Following are the actions necessary to implement the financial program:

Agency	Action	Date
SCAG	Support State gasoline tax increase.	1989
SCAG	Complete coordinated research and develop legislation to increase gasoline taxes to a level necessary to finance Plan improvements which benefit air quality.	1989
SCAG	Support the removal of the Gann limit on transportation.	1989
SCAG	Support the implementation of select toll facilities in Orange County.	1989
SCAG, County Commissions, Caltrans	Conduct study to identify specific mix of appropriate revenue sources, revenue collecting authorities and long range expenditure programs for the Unconstrained program of the Plan.	1989-1990
SCAG, Caltrans, County Commissions, ARB	Conduct planning studies on User Fees (e.g., congestion charges, peak period charges, tolls, emission fees, other), including candidate locations for pilot testing or demonstration, application techniques, application technologies, and impacts.	1989-1991
SCAG, Caltrans, County Commissions, ARB	Based on planning study results, develop user fee pilot testing/demonstration program. Choose appropriate application technique(s), select application technology(ies), develop cost/funding components, select location(s), make decision to conduct demonstration(s).	1991-1993
SCAG	Support study and development of congestion charges in metropolitan counties as both a Transportation Demand Management measure and as a revenue measure to fund the overall Transportation Demand Management Program.	1989-2010
SCAG, County Commissions	Support and seek financial programs which support transit financing.	1989-2010

Agency	Action	Date
SCAG	Support local sales tax initiatives in all metropolitan counties.	1989-2010
SCAG, County Commissions, Local Governments	Support an increase in the State fuel tax.	1990-2010
SCAG, County Commissions, Local Governments	Support increased flexibility in the use of fuel tax revenues to fund needed transportation improvements.	1989-2010
SCAG, County Commissions, Local Governments	Support annual benefit assessments in all metropolitan counties where required to fund shortfalls.	1989-2010
SCAG, Local Governments, County Commissions	Support the increase of parking fees for all metropolitan counties where needed.	1989-2010
SCAG, Local Governments, County Commissions	Support the partial elimination of employer-provided and subsidized parking, with such revenues being used to fund transit and demand management services.	1989-2010
SCAG, Local Governments, County Commissions	Support introduction of legislation to index the State gas tax.	1989-1993

Other Funding Issues

Commuter/Intercity Rail Program

The five commuter rail services which are currently planned or under investigation in the SCAG region are in varying stages of financial development. In addition, intercity rail improvements are planned or under study on two of the same corridors. Needed capital improvements amounting to $388 million have been identified for the five corridors. Thus far, $8 million for LOSSAN Corridor rail replacement has been approved, leaving a shortfall of $380 million.

Aviation

To fund capacity enhancement, maintenance and operations for the General Aviation airports in the SCAG region requires $35 million annually. Available resources come to approximately $22 million, leaving a shortfall for the next 10 years of $130 million.

Maritime, Railroads, and Goods Movement

San Pedro Bay Ports: Phase 1 of the ports access demonstration program, which costs $58 million, has been fully funded from the Surface Transportation Assistance Act (STAA) of 1982.

Phase 2 of the program will cost a total of $74 million, and 80 percent of this amount was made available by the STAA of 1987. The remaining 20 percent will come from the ports and local jurisdictions in the ports area.

A financial plan for the $220 million consolidated rail corridor is currently being negotiated.

Port of Hueneme: Estimated costs of highway access projects for the Port of Hueneme are approximately $62 million. A more extensive set of improvements, involving upgrading Rice Avenue to freeway status, would cost approximately $208 million. These improvements are reflected in the mixed flow program of actions in the Action Element.

A financial plan will be developed as part of Phase II of the port access study.

Non-Motorized Programs

Funding for local and regional bikeway programs is provided from a number of sources. TDA Article 8 Bikeway funding within the SCAG region was $5.6 million in Fiscal Year 1985-86 and has increased by 8 percent to $6.1 million for Fiscal Year 1988-89.

TRANSPORTATION ISSUES & CHOICES

VII.

VII - TRANSPORTATION ISSUES AND CHOICES

The Regional Mobility Plan was developed within the context of pronounced uncertainty. The element of uncertainty extends into the realms of projected growth, both in population and transportation demand, as well as the efficacy of the planned mobility and air quality measures. Finally, it extends to the realm of political will and commitment and even into the arena of new technology. Given this uncertainty, a number of issues must be treated as unresolved. Further analysis and debate will be required either to resolve these issues to the extent possible or to establish policy direction for responding to them.

Such policy direction should extend to the establishment of contingency provisions. The current Plan, for example, is necessarily based on certain assumptions within each issue area. To some extent, the validity of those assumptions is the specific point at issue. The Plan is also based on the close integration and coordination among its component programs. Thus, should any of the assumptions on which the Plan has been developed prove inappropriate, or should other issues deter Plan implementation or effectiveness of its measures, major adjustments may be required. In recognition of these possibilities, the contingency provisions must seek to establish the directions the region will pursue in responding to identified issues and possible unfavorable outcomes.

The most significant of these issues are discussed below:

Growth Management

The Plan is part of an overall strategic plan for the region. From the transportation standpoint, the most significant other component of the Regional Strategic Plan is the Growth Management Plan. All transportation measures were developed and scoped in response to anticipated growth. The level and distribution of that growth, which is the main antecedent condition to which transportation planning must respond, has been established in the Growth Management Plan. In turn, part of the objective of the Growth Management Plan itself has been to modify the level and pattern of projected growth in such a way as to minimize transportation needs and, in particular, to reduce the extent of long-distance commuting. The provisions of the Plan thus depend immediately on the effectiveness of the Growth Management Plan. Should the extensive local government cooperation necessary for implementation of the Growth Management Plan not be forthcoming and should the desired level and distribution of growth not actually be achieved, corrections to the Plan will be required.

Program Effectiveness

Major reliance in the Plan is placed on the Transportation Demand Management and Transit Programs. The major expansion in these programs over previous plans is central to the entire Plan. Transit, for example, is no longer viewed primarily as a social service, but as a truly competitive mode of travel which will carry a significant share of regional trips. The massive investment called for in the transit program to effect this change justifies what, in light of the

projected growth in travel demand, is the comparatively very modest level of investment in freeway facilities. The Transportation Demand Management Program assumes similarly massive new proportions in the current Plan. Perhaps most significantly, the Demand Management Program is structured to achieve an expansion through alternative work week and flex time actions of the peak travel periods sufficient to constitute a virtual doubling of freeway capacity. This further contributes to justifying the modest level of freeway investment. Accordingly, the entire Plan can be seen as depending directly upon the effectiveness of these two programs, although other programs are also important to the Plan's overall effectiveness.

The inability of the region to fully implement any one of the various Plan components, or the failure to the program actions to achieve intended objectives, could seriously impede the attainment of our goals. Further analysis and discussion will be necessary to evaluate the impacts on the overall Plan of implementation difficulties in any area.

Financial Uncertainty

The Plan incorporates a financial strategy to raise significant new revenues primarily to fund the stipulated transit expansion and the Transportation Demand Management Program. To a lesser extent, the financial strategy addresses other program area needs as well. New revenues, particularly in the transit and Transportation Demand Management areas, however, are vital to success of the overall Plan. The Plan has set forth a detailed program for raising the revenues needed to implement the Plan. This represents one of the many possible mix of sources; the rates proposed for each of these sources may be varied according to specific local circumstances. The securing of the needed new revenues will require a major regional effort. The success of that effort is not guaranteed. An inability to successfully implement the financial strategy will necessitate a major revision in the Plan's objectives and programs or, perhaps more optimistically, adjustments to the financial strategy itself.

Air Quality Needs

The Plan was developed to meet the transportation needs of the region. The need to reduce mobile-source emissions, however, has been recognized throughout and incorporated in many aspects of the Plan. Difficulties in this and other areas in meeting statutorily established air quality standards may require that further reductions be made to mobile-source emissions. The implications of further mobile-source reductions, if required, could be significant for the attainment of mobility goals and objectives.

Political Commitments

Implementation of the Plan will not proceed as a normal matter of course. The Plan is based on major changes. The Plan calls, in the first place, for significant revenue enhancement. It further calls for major reorientation of travel from single occupant auto to transit and to ridesharing. It requires broad supporting action from local government. It is heavily based on a range of important actions at every level and in every sector to provide the incentives and

facilities to promote the implied behavioral adjustments. Without the strong commitment from every quarter to implement the necessary actions, funding will not be secured, facilities and programs will not be implemented, and travel behavior change will not occur. Consequently, adjustments to the Plan will be required.

New Technology

Perhaps the most uncertain of all the unresolved issues which may ultimately impact the Plan concerns new technology. To some extent, the Plan relies on the development, or at least the further refinement, of new technology to achieve its objectives. This is especially true in the air quality arena, where the Plan provides for the electrification of some vehicles, cleaner burning engines, and improved fuels for a portion of the fleet. The Plan employs existing new technology in other areas, as well, like telecommunications. To some extent, the Plan also anticipates significant breakthroughs in technology. These breakthroughs, should they occur, could radically alter both the scope and nature of the needs that must be addressed. Highway electrification and automation, should it prove feasible on a systemwide basis, could change the entire context of the planning effort. On the negative side, broad implementation of electrification could seriously disrupt our fuel tax based revenue structure for transportation. Other technological developments, as yet unrecognized, could have similar impacts. Although the impacts of new technology remain to be seen, provisions need to be made to anticipate most likely changes and to make adjustments to the Plan for the opportunities and difficulties they may present.

Adaptability

As noted, the limited extent of traditional highway expansion plus the major extent of transit and HOV lane provisions of the Plan depend upon the effectuation of significant changes in travel behavior. Whether as a result of financial incentives, facility provisions, improved operational competitiveness, or the more reasonable distribution of jobs and housing growth from the Growth Management Plan, these behavioral changes are in large measure the precondition for the success of all Plan components. On the one hand, however, the provisions of the Plan to cause these changes may not be effective. Some of the local mythology regarding love affairs with the auto may prove more truth than myth. On the other hand, some of the intended changes may prove to be naturally occurring as people adjust to new or worsening circumstances. The impacts of both possibilities on the Plan need to be further assessed.

APPENDICES

APPENDIX A

(The attached pages present a comparison, as required in the California Transportation Commission Guidelines, of the Regional Mobility Plan and the Caltrans System Management Plan. This attachment was reviewed at the November 17, 1988 Transportation and Communications Committee meeting and action was taken to recommend Executive Committee approval for inclusion in the Appendix to the Regional Mobility Plan.)

Draft Regional Mobility Plan:
Comparison of Mixed Flow and HOV Elements to
Caltrans System Plans

The Caltrans System Management Plans for Districts 7 (i.e., 7 and 12), 8, and 11 were developed in 1985. As described by Caltrans, system planning includes three elements: the development of individual Route Concept Reports (RCRs); the development of the Route Development Plan; and the overall document, the System Management Plan. The RCRs provide a detailed route-by-route analysis and specification of performance and facility objectives over a 20-year period. The primary guide in developing the RCRs "is that the result be both affordable and implementable." The Route Development Plan (RDP) identifies specific improvements that can be funded in the near term (STIP plus 5 years) to implement the RCRs. The final step, the System Management Plan (SMP), integrates the RCRs and RDPs into a coordinated district plan for improvement and management of the state highway system. The System Management Plan does not provide a unified graphic display of the Route Concept improvements, although summaries of the individual Route Concept Reports are provided. The heart of the SMP is thus the presentation of the RDP.

Recommended improvements in the System Management Plan RDP are deemed "affordable and implementable." This system is strictly constrained to expected funding. Caltrans is currently preparing updates to the System Management Plans which are due for release around January, 1989. Although not yet finalized, and thus not available for this comparative discussion, the new plans will extend the RDP horizon to the year 1998 and be generally more comprehensive and more specific in dealing with HOV lane improvements.

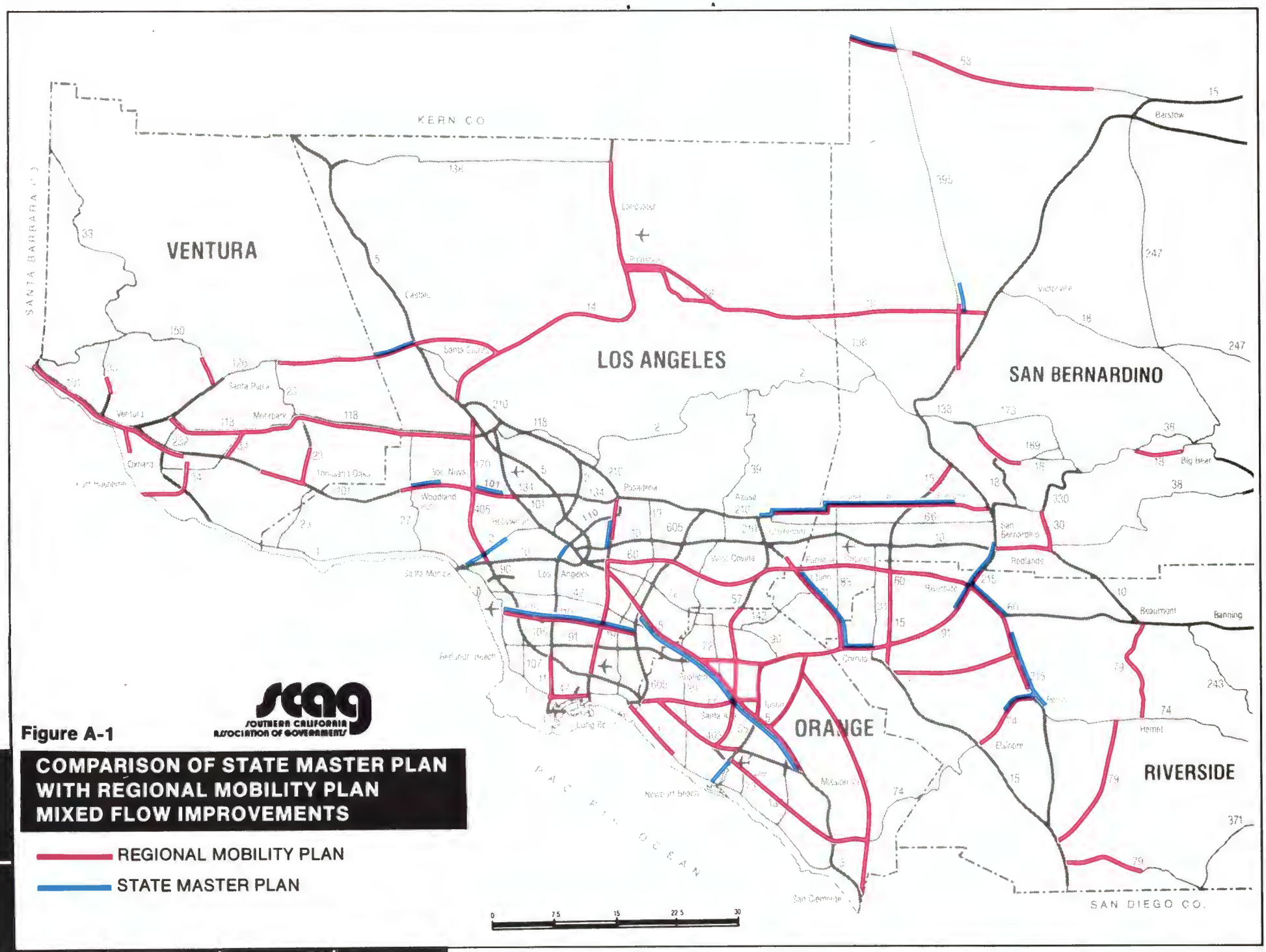
The program and system improvement elements of the Plan are designed to provide regional mobility to the year 2010. The Plan has been developed on the basis of SCAG's recent Baseline Projection of population, housing and employment and includes certain revisions to the distribution of growth intended to partially mitigate regional mobility needs. The Plan includes major growth management, demand management, system management and transit development components in addition to the mixed flow and HOV lane provisions. The growth management, demand management, and transit development components contribute greatly to reducing the total level of mobility needs that must be addressed through mixed-flow and HOV lane improvements. As a result, the Plan includes only 1,840 lane-miles of mixed-flow improvements for freeways and conventional highways and 1,285 lane-miles of HOV improvements, as opposed to the 5,300 lane-miles of mixed-flow and 2,290 lane-miles of

HOV improvement which would have been otherwide required. There must be continued effort to develop commitment from other transportation agencies and local governments in the region to support and help implement the growth management, demand management, and transit components of the Plan, as well as the mixed-flow and HOV components.

Figures A-1 and A-2 present geographic comparisons of the Plan and the 10-year RDP of the System Management Plan provisions for mixed-flow improvements, including new corridor development and for HOV lanes. The primary differences between the two Plans result from differences in horizon year (1995 vs. 2010) and growth projection, and differences in funding constraints (constrained vs. unconstrained). The Plan is thus far more comprehensive and ambitious than the 1985 System Management Plan although the 1988 System Management Plan, the development of which is being closely coordinated with the Plan, should significantly narrow the gap. The Plan is also more specific than the System Management Plan in designating HOV lane improvements. The System Management Plan does not go beyond the identification of HOV "candidate" routes without further commitment. This issue is also being addressed in the SMP update. Although there are major obvious differences between the Plans in terms primarily of scope, there is also major agreement. With only minor exceptions, all the Caltrans project recommendations are entirely comprehended within the Plan.

In terms of the specific route concepts prepared by Caltrans, the principal difference concerns level of service objectives. Following Executive Committee direction, the Plan was developed with the specific objective of achieving and maintaining 1984 service levels over the course of the planning period. The vigorous growth management, demand management and transit development components of the Plan, coupled with the mixed-flow and HOV freeway improvements are projected to largely achieve this objective. The overall Plan thus cannot be constrained to anticipated funding but includes a financial plan to develop new revenues to make up shortfalls.

The route concepts, on the other hand, were developed with reference to available funding and right-of-way and must therefore accept much lower "concept levels of service." The lower level of service objectives contained in the route concept reports, however, are merely compromises required by the perameters which govern their preparation. Level of Service D is still regarded as desirable, even if not attainable under the constrained scenario. As noted in the District 7 System Management Plan relative to the 1984 RTP, "although project inconsistencies exist, overall policies and goals appear to complement each other." That observation remains true.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SAN DIEGO CO.
PACIFIC OCEAN
scag
SOUTHERN CALIFORNIA ASSOCIATION OF GOVERNMENTS
COMPARISON OF STATE MASTER PLAN
WITH REGIONAL MOBILITY PLAN
MIXED FLOW IMPROVEMENTS
REGIONAL MOBILITY PLAN
STATE MASTER PLAN
0 7.5 15 22.5 30

Figure A-1

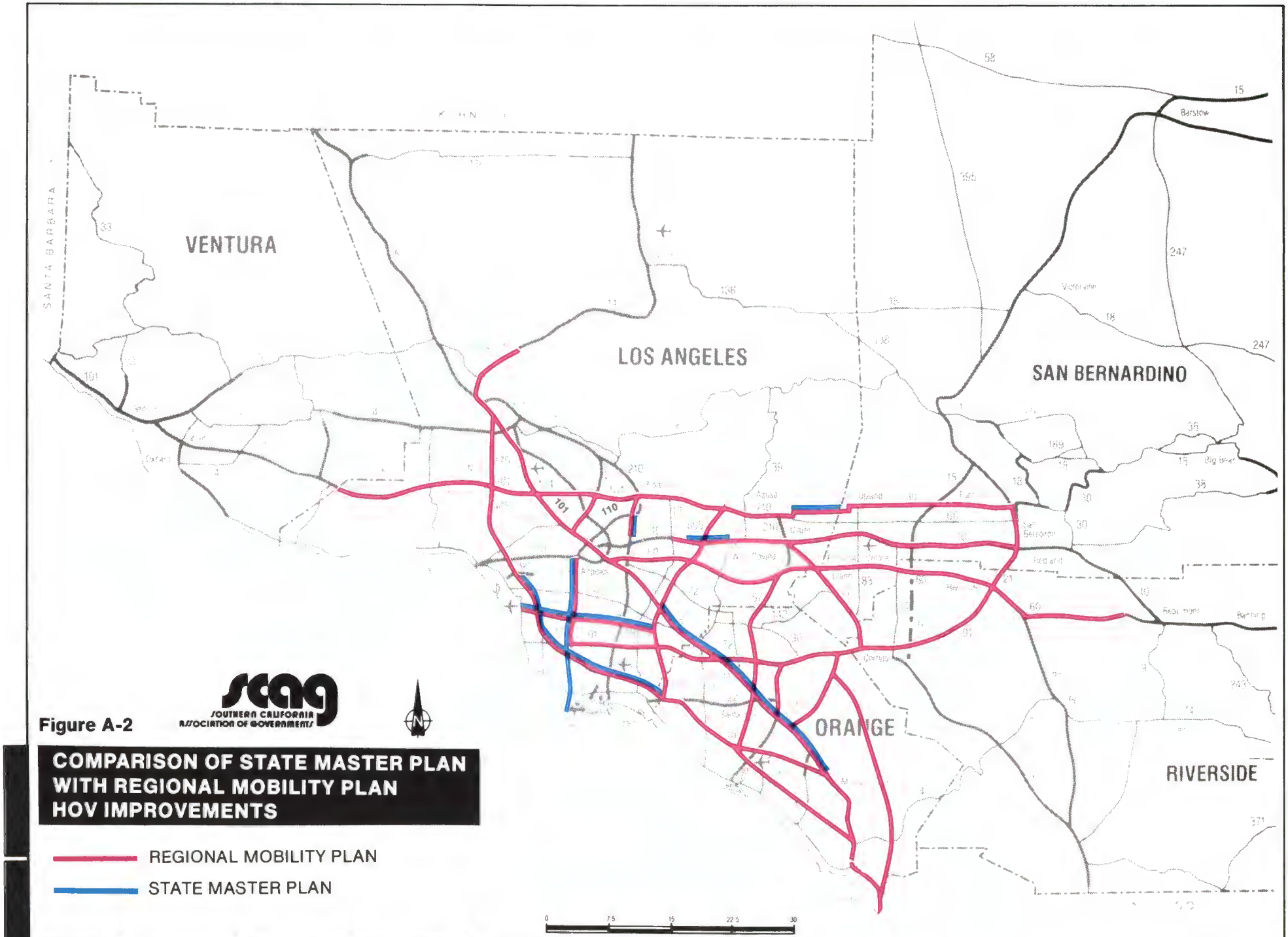

Figure A-2

COMPARISON OF STATE MASTER PLAN WITH REGIONAL MOBILITY PLAN HOV IMPROVEMENTS

REGIONAL MOBILITY PLAN

STATE MASTER PLAN

APPENDIX B
AREA STUDY SUMMARIES

The Ventura County Area Study

This Study provided the first exclusive countywide highway modeling system for Ventura County. Following validation of the model based on 1984 traffic data, the study analyzed year 2010 capacity deficiencies from a null scenario. Several future highway improvement and growth scenarios were developed and tested. Results of this Study became the basis for the update of the Circulation Element of the Ventura County General Plan. Following the completion of the Study in 1986, the modeling networks and the data were transferred to the County Public Works Agency to become the basis for an in-house transportation modeling system.

Port of Hueneme Transportation Task Force

In December, 1986, the Port of Hueneme Transportation Task Force was created to achieve consensus on a port access plan for the Port of Hueneme. Its goal has been to find ways to facilitate port access while minimizing negative impacts of port growth.

The Task Force was composed of representatives from public and private sector organizations concerned about port growth and the impacts of port generated traffic in the Oxnard-Port Hueneme area. Members of the Task Force include officials from the Cities of Santa Paula, Oxnard, Port Hueneme, Ventura, Camarillo and Thousand Oaks; the County of Ventura, Caltrans, California Highway Patrol, the United States Navy, Oxnard Harbor District, State Assemblymen Tom McClintock and Jack O'Connell, the Channel Island Beach Community Services District and several private sector organizations representing the Automobile Club of Southern California, railroads, oil companies and development interests.

This diverse group oversaw the technical planning process in which many alternatives for solving the port access issue were evaluated. Early in the process, the Task Force decided to concentrate on evaluating alternative truck access routes. If one or two routes could be designed that were compatible with heavy duty truck traffic, then capital improvements could be concentrated on those routes in order to provide needed capacity and to mitigate environmental impacts.

A consensus emerged for the selection of two primary routes for truck access to the port and the Construction Battalion Center:

1) Victoria Avenue

   This route follows Victoria Avenue from U.S. 101 to Marina Gate, which is the western entrance to the Navy Base;

2) Rice Avenue and Hueneme Road

   This route would require the construction of an extension of Rice Avenue from Route 1 to Hueneme Road. The route would follow Rice Avenue from U.S. 101 to Route 1, the proposed extension to Hueneme Road, then Hueneme Road west to the Port.

With the planning work completed, the Port of Hueneme Transportation Task Force will shift its focus to implementation of the Access Plan. In the month's ahead, the Task Force will be exploring alternatives for funding the package of port access improvements. Considering the regional and national significance of the adopted program, it is hoped that federal funds could be used for a substantial share of the total costs.

Santa Clarita Valley Area Transportation Study

Santa Clarita Valley is one of the fastest growing areas in Southern California. This Study stems from concerns expressed by the local community about the growth impacts in the area with regard to existing transportation problems and the impacts of projected growth on local infrastructure. As a result of these concerns, a Santa Clarita Valley Area Transportation Study Policy Advisory Committee was formed in November, 1987.

A Technical Advisory Committee, composed primarily of the planning and engineering staff of municipal and regional planning agencies, was formed to make recommendations on technical issues and coordinate all planning and technical efforts. The Study was initiated in October, 1987 by SCAG.

The purpose of the Study is to bring together the various public and private interest groups in the Santa Clarita Valley to develop a coordinated, analytical and political framework for transportation solutions and development issues in the area. In order to improve sub-regional mobility and alleviate congestion in the study area, the following study objectives were established:

- To examine the growth impacts in the Santa Clarita Valley which is one of the fastest growing areas in Southern California;
- To recommend policies and transportation improvements to alleviate the existing and future congestion caused by the expected growth; and
- To work with the County of Los Angeles, City of Santa Clarita, other government agencies and major developers in the study area to determine the most feasible methods of implementing the necessary improvements.

Santa Clarita Valley is located 35 miles northwest of Los Angeles Civic Center and 40 miles east of the Pacific Ocean at Ventura at the base of the San Gabriel Mountains. The recently incorporated City of Santa Clarita includes Canyon Country, Newhall, Saugus and Valencia. The study area is bounded on the north by a point located one mile north of Lake Hughes overpass on I-5 Freeway; on the south by the southern portion of Route 14 and I-5 Freeway interchange; on the west by the intersection of Chiquita Canyon Road and Henry Mayo (Route 126); and on the east by a boundary located one mile east of Shadow Pines on Route 14 Freeway.

The Study Area is served by two major freeways: I-5 which passes through the study area, and Route 14 which starts from the study area and leads northeast to Lancaster.

The San Fernando Valley Study Area

Phase I - Short Range Recommendations

The focus of the Short Range Study was the year 1995. The Study recommended short term, easily implementable projects and accompanying policy statements. Recommended improvements covered various modes and areas of transportation including surface street capital improvements, minor freeway mainline and interchange improvements, TSM improvements on surface streets, transportation demand management actions specifically focused on identified activity/employment centers and transit system improvements including additional express bus services connecting the Valley with adjacent areas. Study recommendations also called for the need for quick implementation of all capital improvement projects programmed by the City of Los Angeles in the Five Year Plan as well as all improvements programmed in the Five Year State Transportation Improvement Plan (STIP) for the San Fernando Valley.

Proposed policies dealt with the areas of land use and development, transit service, parking and housing.

Major proposed additional streets and freeway improvements included:

- Interchange improvements at Burbank Boulevard and the I-405 Freeway
- Interchange Improvements on the 134 Freeway in Burbank
- Victory Boulevard High-Flow arterial
- Reversible peak hour lanes on Sepulveda Boulevard
- Extension of Saticoy Street through the East Valley
- Completion of Mulholland Drive east of Reseda Boulevard
- Freeway spot widening on the 118 Freeway near Balboa Boulevard
- Extension of Haskell and Mason Avenues across SP Mainline tracks
- Widening of Barham Boulevard, Woodman Avenue, Canoga Avenue, Owensworth Avenue at selected locations
- Parking removals and/or peak hour restrictions on Ventura Boulevard, Topanga Canyon Boulevard, Sherman Way, Olive Avenue and Alameda Avenue through selected lengths.

Phase II - Long Range Mobility Plan

The focus of the Long Range Plan for mobility improvements in San Fernando Valley was the year 2010. In planning for this time horizon, many of the constraints imposed on problem solution alternatives in Phase I were removed based on the decision of the Steering Committee. The Plan, according to the study assumptions, would consider and explore all options necessary to fully meet anticipated mobility problems regardless of financial, political and environmental constraints. Following an analysis of year 2010 conditions under a "no-project" scenario, two alternative mobility improvement systems were developed.

The first system alternative was heavily based on new freeway construction both inside and outside the Valley to create new travel corridors which would alleviate congestion on the existing freeways. The transit component of this alternative included the entire Proposition A light rail system in the San Fernando Valley.

The second system alternative reinforced the present travel patterns by improving traffic carrying capacity on existing freeways, mainly by widening and HOV facilities. On the transit side, the alternative examined new rail corridors and variations on the ones previously considered in the Proposition A Plan.

The third considered system, which was called the Preferred Alternative, was a result of the analyses conducted on the previous two systems. It integrated some of the better features of the two and added other new elements and further detailed arterial improvements, not considered in either of the previous alternatives.

All improvement alternatives were analyzed based on their effectiveness in mitigating congestion and improving mobility. Alternatives were thencompared to help in selection of the most effective set of improvements. Finally, with consideration of costs and implementation issues, a set of improvements were recommended in the following categories:

- Freeway Widenings or Capacity Improvements
- Arterial System Improvements
- Light Rail
- Commuter Rail

In addition to the above physical, capital improvement recommendations, the overall recommendations also included long range policy statements which would contribute to improvement of mobility in three general categories of:

- **Demand Management and Development,** including policies on job/housing balance and balanced Valley and outlying area development, housing costs, zoning for work at home, peak hour travel demand management, other modes of travel, transit priority, traffic safety, air quality management, hazardous materials transportation and demand management education.
- **Facilities Management and Development,** including policies on right-of-way protection, growth management and new transportation facilities, high occupancy vehicle facilities, signal synchronization, development design and access control, intersection design improvements, commercial strip redevelopment, arterial and off-street parking, other TSM measures and timing and coordination of improvement projects.
- **Financing,** including policies on benefit and developer assessments, truck tolls and weigh fees, toll roads, public-private partnerships, airspace leases, tax-based financing, transit support by jurisdictions and transit privatization.

Metropolitan Core Area Study

Metropolitan Core is an area study which stretches from the beaches of Santa Monica easternly through Downtown Los Angeles to Interstate 5 and from Mulholland Drive on the north to Exposition Boulevard on the south.

The primary objective of the study is to further refine the Regional Mobility Plan transportation corridors in the core area.

Multimodal in scope, the study will identify and prioritize corridors and areas of needs and deficiencies within the study area into a multi-year, long-range planning program. The study will also focus on the inter-related effects of the various ongoing transportation planning projects underway in the various jurisdictions within the metropolitan core area.

The Airport Southwest Study

The Airport Southwest Study (APSW) was initiated by officials concerned about economic growth, community development and the need for an improved transportation system to serve the residents in the community. The study was initially developed to evaluate whether there was demand for a rapid transit line in the study area. This issue was expanded to include the identification of overall transportation problems, needs, and solutions, as well as the land use and economic linkages to help provide improved quality of life for the community.

The APSW Study was launched in June, 1986, with SCAG as the lead agency. SCAG organized a Steering Committee to direct the study. Membership included local elected officials, municipal and regional planning entities, private citizens from the study area and representatives from the private sector and business community.

The study area encompasses 39 square miles, including portions of the City and County of Los Angeles and the City of Inglewood. The area is bounded by the Santa Monica Freeway (I-10) on the north, Harbor Freeway (I-110) on the east, Imperial Highway on the south and La Cienega/San Diego Freeway (I-405) on the west.

The APSW Study provided an examination of the transportation and land use issues in the area. It produced the conclusion that given the transit dependency of the community and the potential for economic development improvements, a Crenshaw rail line is a favorable alternative to any other system at this time.

Although the Los Angeles County Transportation Commission has planned a Metro Rail extension along Wilshire from Western Avenue to the City of Santa Monica, it is highly controversial. An alternative or additional rail line through the study area was examined. The objectives used in providing guidance to recommend the rail line extension were: (1) serving higher-than-average population densities in the study area; (2) connecting major employment centers (Inglewood, USC) with other regional centers (Downtown Los Angeles, LAX); (3) increasing the accessibility of special attractors, grouped around USC and eastern Inglewood; (4) serving a transit-dependent population; and (5) utilizing existing rights of way when possible.

These objectives led to the consideration of two different alignments (Line A and B). The two lines differ at each end, while the middle section (from Crenshaw at Exposition, south on

Crenshaw to the Santa Fe railroad line), and southwest on the Santa Fe line to Prairie at Florence is the same for both. Line A begins at the northern end of the study area from Wilshire/Metro Rail terminus to Crenshaw Boulevard and continues south on Crenshaw. Line B begins at Wilshire and Vermont (thereby connecting to the Metro Rail line north to the San Fernando Valley), proceeds south on Vermont (past USC and the Coliseum) to Exposition Boulevard, then follows the Southern Pacific right-of-way west to Crenshaw.

At the southern end, Line A proceeds south on Prairie (past the Forum, racetrack, Inglewood employment centers) and curves southwest to connect to the Century Freeway transitway station at Hawthorne Boulevard. Line B follows the Santa Fe right-of-way southwest to Eucalyptus, and terminates in Lot C (remote parking for LAX, with free shuttle service to the airport).

The Crenshaw rail line is considered an unconstrained project because funding is not available and has not been identified by LACTC as a Proposition A corridor which allows for local match funding. Also, UMTA has not authorized LACTC to study a north/south corridor such as Crenshaw. However, this does not preclude local governments in the APSW Study area from seeking additional federal, state and local planning funds to develop a route alignment study.

The LAX Area TSM/Corridor Study

The LAX Area TSM/Corridor Study encompassed 34 square miles in the general South Bay area of Los Angeles County. The area includes such major traffic generators as the Los Angeles International Airport, (LAX), the third largest and second busiest airport in the United States and Marina Del Rey, the largest marina on the West Coast.

The Study Area included nine jurisdictions: the entire city of El Segundo and parts of the cities of Los Angeles, Culver City, Manhattan Beach, Redondo Beach, Hawthorne, Inglewood, and Lawndale, as well as unincorporated areas of the County of Los Angeles. The boundaries were: on the north by Venice Boulevard, on the west by the Pacific Ocean, on the south by Manhattan Beach Boulevard and on the east by the San Diego Freeway.

The LAX Area TSM/Corridor Study had a two-fold purpose. First, to identify and quantify traffic problems in the study area as a result of existing and projected growth and development. Second, to develop a multimodal set of transportation alternatives which would improve the mobility in the study area.

I-405 North Corridor Study

This report was generated to present the existing and anticipated future conditions in the I-405 Corridor Study Area. Upon an analysis of the data, a set of alternatives will be designed for testing through the Los Angeles Regional Transportation Study (LARTS) computer network. The data used for the present highway analysis is from the model run which utilized SCAG '82 forecasts. Year 1980 and 2000 highway data used result from that modeling exercise. Transit ridership data comes from the most recent model runs – those for 1984 and 2010. This model data is preliminary as the modeling for these years is still under development.

The corridor study boundaries extend from Victory Boulevard in the San Fernando Valley as the northernmost point to Rosecrans Avenue south of Los Angeles International Airport as the southern boundary. The coastline forms the western boundary with a straight line extending from Reseda Boulevard at Victory Boulevard, south to the ocean. The eastern boundary begins at Beverly Glen Boulevard in the north and ends at Western Avenue in the south. Since the study boundaries are defined through the LARTS Analysis Zone (AZ) system, the eastern boundary reflects the geometric patterns of the Analysis Zones.

From the analysis performed, several improvement projects considered responsive to both existing and future highway deficiencies in the I-405 Corridor (San Fernando Valley to LAX) have been identified. Staff identified highway facility improvements; developed transit alternatives which are tied to other rail systems currently under consideration by the Los Angeles County Transportation Commission and proposed transportation system management strategies for implementation. In coordination with other area studies currently underway at SCAG (LAX Area Transportation Study and San Fernando Valley Area Study), staff also identified and examined a variety of transportation and TSM alternatives proposed by these studies.

This report has been referred to Caltrans and LACTC for implementation.

I-405 South Corridor Transportation Study

The Study report documents findings of the Phase II of the San Diego Freeway (I-405) South Corridor Study. The first phase of this Study stemmed from concerns SCAG and numerous cities and local agencies along the corridor had expressed over the increase in congestion, delay time and further anticipated traffic growth. The first phase of the Study was completed in July, 1986.

The intent of the Study was to evaluate the alternative solutions required to alleviate the increased traffic volumes on the I-405 (San Diego Freeway) from the intersection of I-405 and I-5 (Golden State) Freeways in the San Fernando Valley to the intersection of I-405 and I-605 (San Gabriel River) Freeways at the Los Angeles-Orange County line.

Route I-405, 72.8 miles long, is located within Los Angeles and Orange counties, 24.2 miles are in Orange County with the remaining 48.6 miles located in Los Angeles County. The portion of I-405 studied in this report initially extended from the San Gabriel River (I-605) Freeway in Long Beach to Imperial Highway in the City of Los Angeles, approximately 23.5 miles. By the direction of the study group, these limits were extended to the intersection of I-405 and I-5 Freeways (48.6) miles total in Los Angeles County.

SCAG had the overall responsibility for the performance of the work program. Commuter Transportation Services, Inc. (Commuter Computer) provided data and analysis for Transportation System Management Strategies for various centers along the corridor. The Los Angeles County Transportation Commission and Caltrans assisted in providing technical data for the development of the proposed alternatives.

SCAG also established a study group advisory committee whose membership was broadly representative of the corridor interests, including local elected officials, municipal and regional planning entities, employers and developers.

In order to alleviate congestion and improve the mobility of persons and goods in the corridor, which serve the study area's activity centers, the following objectives were established:

- Develop mutimodal sets of transportation improvements to increase the capacity of the 1984 transportation system while reducing the demand;
- Develop a system of improvements which will preserve, or have the least negative impacts on the physical environment of the corridor;
- Ensure that the selected transportation system will be cost effective;
- Develop a transportation system alternative for the study area that can be realistically attained under future available funding mechanisms;
- Enhance the effectiveness of recommendations by encouraging the local jurisdictions and the public to participate in all stages of the study.

To accomplish the above objectives, it was necessary to develop a set of multimodal transportation alternatives which will combine two distinct elements:

- Capital intensive improvements; and
- Transportation System Management (TSM) strategies.

The capital intensive improvements include solutions such as highway improvements (roadway widening and/or additional lanes) and a rail alternative. TSM strategies include, but are not limited to, increased bus transit, reversible lane techniques, ridesharing, and staggered work hours.

Based upon the analysis contained in this study, the Los Angeles County Transportation Commission has recently decided to add two HOV lanes (one in each direction) to this segment of I-405.

Alameda Corridor Study

An outgrowth of the San Pedro Bay Ports Access Study, Phase II, the Alameda Corridor Study Task Force was formed to pursue selected aspects of the findings and recommendations of the initial work program. In a cooperative effort with the three major carriers: the Santa Fe, Southern Pacific and Union Pacific railroads, the Ports of Long Beach and Los Angeles and the cities along the corridor, a plan was developed to consolidate the traffic of the three carriers onto a single line. This plan was developed for implementation in conjunction with port plans to load containers onto rail at dockside rather than transloading them from remote container storage areas.

The East Los Angeles/West San Gabriel Valley Area Study

This is an on-going area study involving six jurisdictions: the County of Los Angeles and the Cities of Los Angeles, Alhambra, Pasadena, Monterey Park, and South Pasadena. The goal of the study is to propose a set of multimodal improvements to mitigate the anticipated year 2010 mobility deficiencies in the study area.

The Study has analyzed past and recent development patterns, land use policies, travel trends and existing mobility problems. An important element of the Study was the land use/transportation analysis which resulted in a set of proposed transportation/land use policies for improving mobility and a voluntary area-wide planning council to coordinate transportation and land use planning efforts. The Study also has developed a Transportation Demand Management Plan for the study area including recommendation of specific TDM measures and an implementation plan through a Transportation Management Organization (TMO) structure. A comprehensive transit needs analysis for the study area resulted in a set of short-range transit improvement recommendations which included an implementation and financing plan.

The Study is currently completing an assessment of future (year 2010) mobility deficiencies to recommend a long-range multimodal capital improvements plan. A financing and implementation plan will also be developed for all recommendations. The anticipated date of completion for the Study is Fall of 1989.

San Pedro Bay Ports Access Study

Phase 2: Railroad Access

The San Pedro Bay Ports Access Study was coordinated by SCAG's Port Advisory Committee (PAC). The PAC's representation included local elected officials, city and port officials, Caltrans, the railroads, the trucking industry, the Los Angeles County Transportation Commission, the United States Navy, the Army Corps of Engineers, Assemblyman David Elder, Senator Robert Beverly and Congressman Glenn Anderson. The Committee served to advise and guide the planning effort for land-side transportation to and from the Ports of Los Angeles and Long Beach. The Committee also made recommendations to SCAG's Transportation and Communications Committee regarding policy and projects for improving transportation access to the Ports and facilitated consensus among the participating entities.

Study results suggested, as the recommended long-range option, the development of a consolidated route for through freight trains of the following railroads: Union Pacific Railroad, Southern Pacific Transportation Company and the Atchison, Topeka and Santa Fe Railway. This proposed development would occur along the Southern Pacific San Pedro corridor, paralleling Alameda Street.

Another recommendation included that, in a continuing process of planning for improved port access, a Task Force be created to resolve issues of financing, institutional arrangements, legislation, physical design, engineering, coordination with related projects and mitigation of adverse impacts. It would also analyze alternative designs for grade separations and other improvements along the SP-San Pedro Branch Corridor and investigate the feasibility of a grade-separated trainway within the City of Compton. This Task Force should be composed of affected railroads, affected jurisdictions, public agencies and other interest groups.

To the extent possible, the Study recommended that public and private investments in grade separations, track and signal improvements and public works be consistent with the long-term goal of developing a consolidated rail corridor along the SP-San Pedro Branch.

RIVSAN Area Study

The Riverside-San Bernardino Area Study (RIVSAN), first initiated in 1986, has incrementally developed an improved transportation modeling capability for this fast growing area of the SCAG region and has provided refined transportation infrastructure deficiency projections for the area. Data developed and analysis performed under the several RIVSAN efforts have been used extensively by local agencies and jurisdictions to develop and refine general plan circulation elements, review traffic impacts of major development plans, evaluate specific transportation projects and corridor proposals and plan future improvements.

In the current year, the major focus has been on the evaluation of specific corridor level improvements of concern to local agencies and, relatedly, on the refinement of demographic projections within the I-125 corridor. In the coming year, particular emphasis will be placed on the transfer of a comprehensive RIVSAN modeling capability to SCAG's Eastern Regional Office in Riverside; the updating of the base year to 1987; development and evaluation of build out socio-economic projections; the development of locally support year 2010 traffic projections; and the promulgation, and implementation of Regional Plan policies and actions.

The Coachella Valley Area Study

This Area Study was a cooperative effort between SCAG, CVAG, Riverside County and all the cities within the Coachella Valley. The Study began by building the first transportation modeling system, encompassing the entire Coachella Valley, to forecast the year 2010 growth and traffic conditions and analyze future mobility deficiencies. By incorporating improvement projects from city and county general plan circulation elements and analyzing various alternative improvement systems, the Study finally arrived at a recommended set of

improvement projects to the transportation system for the year 2010 representing a Valleywide consensus. This improvement plan included completion of major missing links in the arterial network, widening and improvement of critical existing arterial links and construction of a major multi-jurisdictional expressway facility called the Mid-Valley Parkway.

Through a cooperative committee participation process, the Study, also recommended implementation and financing strategies for the approved plan of improvements. The study results became a major driving force behind the Riverside County efforts to obtain an additional ½ cent county-wide sales tax earmarked for transportation improvements. The process culminated in approval of the ballot measure which also included a uniform Valley-wide developer mitigation fee ordinance, as recommended by the Area Study, to jointly finance the system of improvements.

The area's jurisdictions, through the CVAG structure and the established committee process, are currently developing a prioritization and implementation mechanism for the proposed improvements. SCAG will maintain participation in this through a follow-up area study update effort by providing technical modeling and analytical assistance.

Los Angeles-San Diego (LOSSAN) State Rail Corridor Study

The Los Angeles-San Diego State Rail Corridor Study was undertaken in direct response to Senate Bill 1095 (Craven). SB 1095 created the Los Angeles-San Diego State Rail Corridor Study Group and mandated that the Study Group develop a program for incremental upgrading of the existing rail line. The upgrading program that was developed in this Study includes improvements along the line which will reduce train running times, increase the reliability of service, facilitate additional frequencies for intercity service and provide for the introduction of commuter rail service, while maintaining capacity for current freight operations.

The Study Group was comprised of representatives of the State Department of Transportation (Caltrans); Southern California Association of Governments; the Orange County Transportation Commission; the San Diego Association of Governments; the Speaker of the Assembly; the Senate Committee of Rules; the National Railroad Passenger Corporation (Amtrak); the Atchison Topeka and Santa Fe (AT & SF) Railway Company; and the California Labor Federation.

Implementation of the Study is being pursued by the newly formed LA-SD Rail Corridor Agency.

The Los Angeles-Santa Barbara State Rail Corridor Study

The Los Angeles-Santa Barbara (LA-SB) State Rail Corridor Study was initiated in 1988 by SB 2446, to study additional passenger rail service between Los Angeles and Santa Barbara. The Study will recommend capital improvements and a program of service expansion. Phase I of the Study, completed in 1988, considered the feasibility of commuter rail service between Oxnard and Los Angeles. Phase II, currently in preparation, considers expanded Intercity service between Los Angeles and Santa Barbara.

The Study Group and its Technical Advisory Committee have considered a number of issues including: travel time savings, train operations, projected ridership volumes, financial and institutional considerations, potential branch line to Woodland Hills and provision of Intercity and Commuter service to Lompoc.

The Study Group consists of representatives from Caltrans, the Santa Barbara Area Planning Council, the Ventura County Transportation Commission, the Los Angeles County Transportation Commission, the Orange County Transportation Commission, the San Bernardino Association of Governments, the Riverside County Transportation Commission, SCAG, Amtrak, Southern Pacific, the California Labor Federation, as well as a consumer delegate selected by the State Legislature. The TAC consists of staff representatives from each of the entities represented on the Study Group, as well as representatives from the cities along the LA-SB corridor, elected officials and the private sector.

APPENDIX C
GLOSSARY

DEFINITION OF TERMS

Terms	Definition
AB-84	A State law providing that the Regional Transportation Plan may include a "future development list of capacity-increasing state highway projects in priority order for the initiation of project studies reports." This list is to be based on the amount of funds available in the adopted STIP for capacity improvements distributed by county minimum formula to the RTPAs.
Accessibility	That characteristic of fixed-route and demand-responsive systems that allow handicapped persons to travel unimpeded.
Access Systems	See "ground access."
Action	A specific activity to be undertaken in the near-term as a step toward achieving a particular policy.
Air Quality Management Plan (AQMP)	A comprehensive policy document that delineates goals, policies, pollution reduction strategies, and implementation responsibilities for improving air quality in one of three air basins in Southern California.
Benefit Assessment	A periodic (e.g., annual) charge assessed on identified land uses which benefit from the transportation improvement.
Bypass Lane	A reserved traffic lane in a metered freeway ramp entry which permits buses or high-occupancy vehicles to circumvent the ramp traffic control signal when entering the freeway.
California Freeway and Expressway System	The legislated catalog of routes, known as the Collier System, which was initially adopted for development by the California Highway Commission.
Collector roadways	System of roads which direct neighborhood traffic within local areas, feeding to higher type facilities, and providing access to individual land use sites.

Terms	Definition
Commercial Aviation	Aircraft activity licensed by State or federal authority to transport passengers and/or cargo for hire on a scheduled or nonscheduled basis.
Commuter Transportation Service (Commuter Computer)	Nonprofit corporation which provides information and marketing services to aid the formation of ridesharing.
Commuter Rail Service	Short-haul rail passenger service operated in metropolitan and suburban areas within or across the geographical boundaries of a state; usually characterized by reduced fare, multiple-ride and commutation tickets and by morning and evening peak period operations.
Congestion	Traffic conditions on roads, highways, or freeways which do not permit movement on the facility at optimal legal speeds. Characterized by unstable traffic flows. Recurrent congestion is caused by excess volume capacity. Nonrecurrent congestion is caused by actions such as special events and/or traffic accidents.
Constant Dollar	Unit of value measured in a dollar's worth of goods during some base period of time (e.g., constant 1988 dollars).
Constrained Projects and Programs	Actions and facilities which can be constructed or completed under existing revenue sources.
Current Dollar	Unit of value measured in a dollar's worth of goods during the year of purchase. Also called escalated for nominal dollar.
Development Fee	See "value capture."
Demand Management	The implementation of measures which encourage people to change their mode of travel or not to make a trip at all, e.g., ridesharing, pricing incentives and disincentives, parking management and telecommunications.
Elderly	Persons 60 years of age or older.
Employment Centers	Locations having a concentration of jobs or employment. Centers may vary in size and density, serving subregional or local markets, generally meeting the needs of the immediate population.

Terms	Definition
Facility	A physical structure allowing a transportation mode to operate (including travel, as well as the discharge and loading of passengers). This includes highways, guideways, terminals and administrative support locations.
Feeder Transit	A transit service that transports passengers to a station or transfer point for rapid transit bus or rail service.
Fixed-Route Transit Service	Scheduled service operating repeatedly over the same street or highway pattern on a determined schedule.
Gann Limit	Proposition 13, approved by the voters in November, 1979 that placed a limit on how much State and local governments could spend in California. Spending was confined to the amount spent in 1978, adjusted annually for population growth and inflation. The adjusted inflation formula is based on either the National Consumer Price Index or the California Consumer Price Index, whichever is lower.
General Aviation	All aircraft which are not commercial or military aircraft.
General Taxation	Taxes and fees generally applied to pay for transportation system improvements, under the assumption that improvements benefit the population as a whole, with little direct relation between the amount of tax paid and the service received. Examples: sales tax and general obligation bonding.
Ground Access	Facilities and services for air passengers and air freight handlers to reach airport terminals, e.g., highways, public transit, taxi, or other means of ground transportation.
Ground Access Constraints	Physical capacity of the highway system.
High-Occupancy Vehicle (HOV)	Motor vehicle occupied by two or more persons. Vehicles include automobiles, vans, buses, and taxis.
High Occupancy Vehicle Lane	Lanes on a highway or freeway which are restricted for use by vehicles carrying two or more passengers.

Terms	Definition
High Speed Rail	Passenger rail service with operating speeds in excess of 125 miles per hour and limited stops (e.g., Japanese Bullet Trains, French TGV and experimental maglev systems).
Highway Electrification	Propulsion technology based on the transfer of energy from the roadbed to vehicles equipped with electric motors based on inductive coupling technology. No permanent connection exists between the vehicle and the power source in the roadbed.
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. Examples include HOV lanes, preferential parking and financial incentives.
Infrastructure	The basic facilities, equipment, services, and installations needed for the growth and functioning of a community.
Intersection Channelization	Geometric design of the intersection to increase traffic flow and thereby increase the capacity.
Joint Powers Authority	A multijurisdictional special district with specified powers and responsibilities established by a legally binding agreement between two or more units of government.
Level of Service	A measure of the congested level on a highway facility based primarily on the comparison between the facility's capacity and the traffic volume it carries. Increasing levels of congestion are designated along a scale from A to F.
Line-Haul Transit	Transit operations (generally express) along a single corridor or variety of corridors.
Mixed Flow	Traffic movement having autos, trucks, buses, and motorcycles sharing traffic lanes.
Mobility	A transportation system user characteristic referring to the ability of the user to take advantage of the available transportation services.
Mode	A means or method of conveyance, e.g., auto, transit, airplane, bicycle, bus, etc.
Mode Split	The proportion of total person-trips using various specified modes of transportation.

Terms	Definition
Nonmotorized	Transportation that is not powered by a motor, e.g., horseback riding, bicyling, hiking, walking, etc.
Operations 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.
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.
Park-n-Ride	A procedure that permits a patron to drive a vehicle to a transit station, park in the area provided for that purpose and ride the transit system to his or her destination.
Peak Period/Peak Hour Demand	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.
Peak Period Pricing	Refers to congestion pricing involving charging tolls to drivers during the peak period. This tactic is used to encourage drivers to travel at off-peak times or to shift to other modes.
Preferential Treatment	Privileged treatment for high-occupancy vehicles and buses in the use of traffic lanes, freeway lanes and entry ramps, and parking facilities. Also, traffic control for the purpose of encouraging shifts to HOVs and buses.
Project Planning	The evaluation of alternatives to select a project and to prepare an EIR, an EIS or both.
Prop A (Proposition A)	A measure approved by the voters of Los Angeles County on November 4, 1980 to increase the sales tax by one-half cent for the purpose of improving public transit in the County and to construct rail rapid transit facilities.

Terms	Definition
Proposition 5	A California voter initiative 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.
Public Transportation	Transportation service by bus, rail, paratransit, airplane, and ship offered by an operator on a regular 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 Development Guide	Adopted SCAG forecasts of future population, housing, land use, and employment. These growth forecast policies are used as the basis for planning, grant reviews, and sizing future public facilities.
Regional Transportation Improvement Program (RTIP)	A five-year, multi-modal program of regional transportation improvements for highways, transit and aviation. The RTIP consists of projects drawn from the Regional Transportation Plan. The projects are directed at improving the overall efficiency and people-moving capabilities of the existing transportation system while incrementally being developed into the long-range plan.
Regulation XV	A regulation developed by the South Coast Air Quality Management District regulation affecting public and private employers in the South Coast Air Basin. It is designed to reduce air pollution by reducing the number and type of commuter vehicle trips between home and work during the 6:00 a.m. to 10:00 a.m. period.
Ridesharing	The cooperative effort of two or more people traveling together.
Short-Range Transit Plan	The five-year plan for development of transit service in the SCAG region.
STOLports	Short take-off and landing airport runways of 3000 feet or less.

Terms	Definition
Subregions (Development Guide)	Identifiable subareas of the SCAG region (smaller than counties) as defined by the SCAG Development Guide. There are 23 subregions in the SCAG region categorized into (a) Mountain and Desert, (b) Urbanizing and (c) Urbanized subregions.
System Management	Increasing the flow of travel on existing facilities through such improvements as ramp metering, signal synchronization, removal of on-street parking and others. Improvements typically have a low capital cost, do not call for major construction and can be implemented in a relatively short time frame.
Telecommunications	The conveyance of information by electronic means. Examples include the telephone, interactive cable facilities, computer networks and video conference centers.
Tiltrotor Aircraft	Aircraft that takes off vertically, rotates its engine and flies like an airplane.
Traffic Signal Synchronization	A process by which a number of traffic signals are synchronized to affect efficient progression.
Transit	The transportation of passengers by public conveyance. Transit may be fixed, regular route, or demand operated.
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 Facility	A physical structure developed for the specific use and support of transit.
Transitway Lanes	An exclusive lane, preferably barrier or buffer separated from adjacent traffic, dedicated for the use of buses and carpools.
Transportation Centers	Transportation terminals or locations where people can change their travel from one mode to another, i.e., auto to bus, bus to airline, etc.
Transportation Corridor	A broad geographical band that follows a general directional flow connecting major sources of trips and that may contain a number of streets and highways and transit route alignments. The RTP identifies 27 corridors in the SCAG region.

Terms	Definition
Transportation Development Act (TDA)	A pool of funds from a 1/2% State sales tax established by SB 325 for local transportation purposes.
Transportation Handicapped	Those individuals who, by reason of illness, injury, age, congenital malfunction, developmental disabilities or other permanent or temporary incapacity or disability, including those who are nonambulatory wheelchair-bound and those with semiambulatory 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.
Transportation Systems Management (TSM)	See System Management.
Unconstrained Projects and Programs	Actions and facilities which cannot be funded without additional revenue.
User Fees	Fees charged to users of a particular transportation mode or facility which are assessed in proportion to their actual use. Examples: toll financing of highways, increases in transit fares, gasoline tax, parking fees and truck weight or vehicle registration fees.
Value Capture	A revenue raising approach which recoups a portion of the benefits that the private sector enjoys from a transportation improvement. Examples: benefit assessment fees, community facility district fees and development impact fees.
Vehicle Miles Traveled (VMT)	The total miles traveled by all vehicles in a particular geographic area measured over a 24 hour period.
Vertiports	Facility to access tiltrotor aircraft.

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Phil Aker	City of Los Angeles Department of Transportation
Todd Beeler	Riverside County Planning Department
Adrienne Brooks	Orange County Transportation Commission
Glen Campbell	Orange County Transit District
Zahi Farenesh	Caltrans, District 7
Kerry Forsythe	San Bernardino Association of Governments
Gary Green	Caltrans, District 8
Heather Iwamuro	Commuter Computer
John Johnson	Riverside County Road Department
Barry Kurtz, P.E.	Los Angeles County Department of Public Works
Gene McKnight	Los Angeles County Department of Regional Planning
Dr. James Ortner	Automobile Club of Southern California
Diane Perrine	Los Angeles County Transportation Commission
Bob Peterson	Orange County Environment Agency
Dick Platkin	City of Los Angeles Department of Planning
Dale Ratzlaff	Caltrans, District 12
Hideo Siguta	Riverside County Transportation Commission
Ron Taira	Orange County Environmental Management Agency
Steve Tontz	Southern California Rapid Transit District
Mary Travis	Ventura County Association of Governments

STAFF ACKNOWLEDGMENTS

SCAG Management

Mark Pisano	Executive Director
Lou Moret	Chief Operating Officer
James Gosnell	Director of Transportation Planning
Arnold Sherwood	Director of Community and Economic Development
Pat Nemeth	Director of Environmental Planning (Former employee)
Anne Baker	Director of Environmental Planning
Gil Smith	Director of Membership Services/Government and Public Affairs
Frank Hotchkiss	Director of Regional Strategic Planning

Transportation Staff

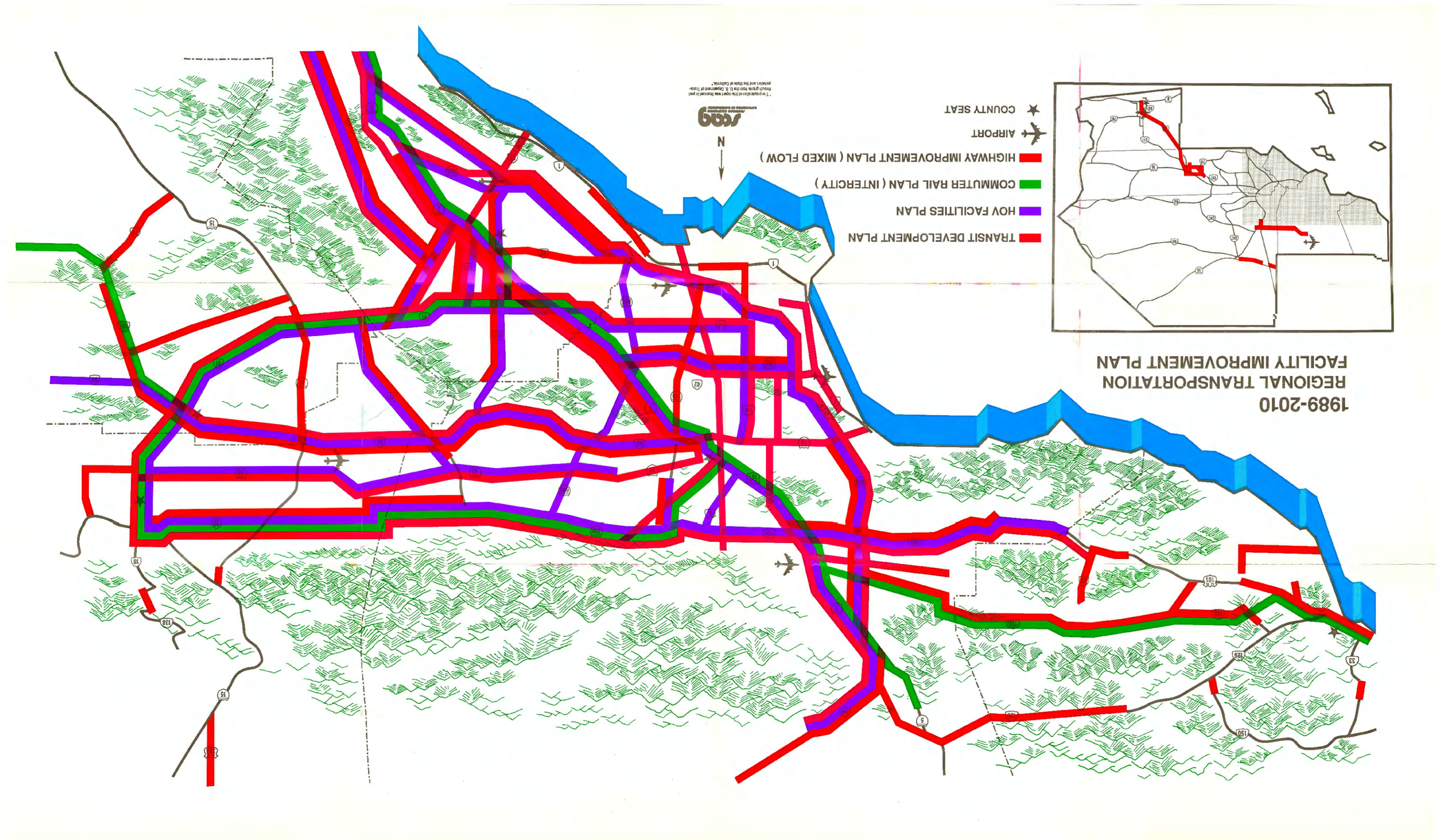
Ralph Cipriani	Principal Planner, Regional Mobility Plan
Gary Moon	Principal Planner, Highways and HOV
Viggen Davidian	Principal Planner, Corridor and Area Studies
Gill Hicks	Principal Planner, Corridor and Area Studies
Tim Merwin	Principal Planner, Aviation and Airports
Bijan Yarjani, Ph.D.	Principal Planner, Corridor and Area Studies
Alan Bowser	Principal Planner, Special Studies, Ridesharing/Demand Management
Betty Werthman	Principal Planner, Area Studies
Roger Riga	Principal Planner, RTP (Former employee)
Diane Collins	Senior Planner, Transportation Improvements Program
Brian Lin	Senior Planner, Transportation Planning
Judith Hamerslough	Senior Planner, Regional Transportation Plan
Helen Mullally	Senior Planner, Highways
Alan Havens	Senior Planner, Area Studies
Sharon Buchalter	Senior Planner, Demand Management & Special Studies
Teresa Wang	Senior Planner, Transportation Modeling
Evelyn Vasquez Freeman	Associate Planner, Regional Transit Programs
Kathy Jones Irish	Associate Planner, Regional Transportation Plan
David Stein	Associate Planner, Regional Transportation Plan
Andy Olszewski	Associate Planner, Highway and HOV
Warren Ferrell	Assistant Planner, Aviation and Airports
Lynne Gear	Assistant Planner, Demand Management & Special Studies
Art Cueto	Aide, Corridor and Area Studies
Barry Samsten	Planner
Annette Escobedo	Administrative Secretary, Transportation
Bernice Villanueva	Administrative Secretary, Transportation
Asha Jadeja	Planning Aide (Former employee)
Jose Carlos Navarro	Intern (Former employee)

Others

Sharon Greene & Associates	Financial Analysts
Barbara Sullivan	Principal Planner, Air Quality Planning
Truman Jacques	Principal Planner, Public Communications
Hong Kim	Principal Planner, Transportation Modeling
Paul Hatanaka	Principal Planner, RFP & EIR for RMP
Charlie Wagner	Principal Planner, Operations
Arun Naik	Senior Planner, Air Quality Planning
Viviane Doche-Boulos	Senior Planner, Growth Management Planning
Richard Armida	Senior Planner, Economic Analysis and Data Base Development (Former Employee)
Anne Keegan	Senior Planner, Economic Analysis and Data Base Development
John Oshimo	Senior Planner, Growth Management Planning
David Ross	Senior Planner, Public Communications
Victor Ryden	Senior Planner, Operations
Cindy Krebs	Associate Planner, Public Communications
Delaine Winkler	Associate Planner, Environmental Impact Analysis & Water Quality
Suzanna Berzsenyi	Assoc. Graphic Designer, Graphics
Don Dumandan	Assistant Graphic Designer, Graphics
Welma Fu	Assistant Graphic Designer, Graphics
Pat Cadena	Reproduction Clerk, Reproduction and Mail
Cathy Rachal	Reproduction Clerk, Reproduction and Mail
Kirby Burns	Reproduction Clerk, Reproduction and Mail
Gloria Diaz	Receptionist

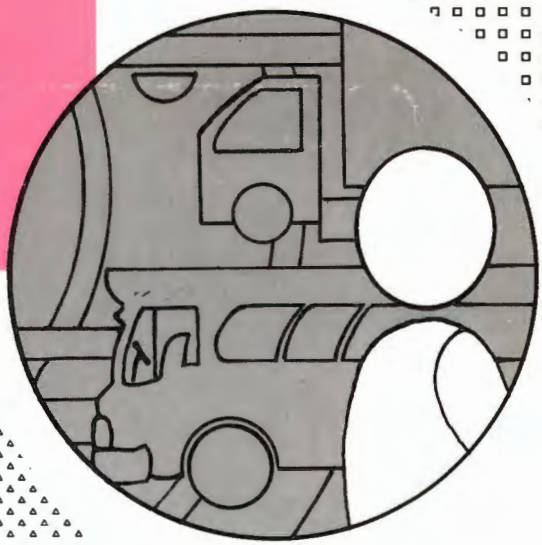
Production

Alta Bradford	Bradford Design Group, Arcadia - Cover Design
David Cooper	DFC Graphics & Design, Arcadia - Typesetting/Pasteup
Bert Wood	Bert Wood Design, Pasadena - Technical Illustrations


1989-2010
REGIONAL TRANSPORTATION
FACILITY IMPROVEMENT PLAN
TRANSIT DEVELOPMENT PLAN
HOV FACILITIES PLAN
COMMUTER RAIL PLAN (INTERCITY)
HIGHWAY IMPROVEMENT PLAN (MIXED FLOW)
AIRPORT
COUNTY SEAT
N

REGIONAL MOBILITY PLAN

FEBRUARY 1989



Growth Management Plan

Regional Housing Needs Assessment

Transportation, Land Use, & Energy Conservation Measures

Appendix IV-G of the 1989 Air Quality Management Plan

The Regional Mobility Plan serves as the Federal and State required Regional Transportation Plan. It has a 20 year planning horizon and is intended to establish the policies and actions to address the region's mobility issues. It is presented as one element of a broader Regional Strategic Plan and has been developed in coordination with the Regional Growth Management and the Regional Air Quality Management Plan(s).

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