ON THE ROAD TO THE YEAR 2000














FITTING THE TRANSPORTATION PUZZLE TOGETHER

The Los Angeles County Transportation Commission is planning, developing, and funding a balanced transportation system to improve mobility in Los Angeles. The overall system is designed to provide opportunities for people to select the mode of transportation which best suits individual needs, convenience, and lifestyle. A "balanced" transportation system not only provides choices (and reduces demand on our street and freeway system), it also results in improved mobility.

Streets and Highways

The plan described in this report to improve freeways and streets in Los Angeles is a vital component of the Los Angeles County Transportation Commission's program to develop an integrated transportation system for the entire county. The Commission is also working on a broad variety of other transportation improvements. These include: rail, regional bus, community and special transit services, bikeways and improved public information regarding transportation.

Rail Transit

When completed, the 150-mile Proposition A rail system will provide fast and convenient access to most major centers, avoiding street and freeway congestion.

Regional Bus System

The LACTC is supplying funding to ensure that the SCRTD and municipal operators will continue to provide frequent, safe, and accessible bus service.

Community Transit

Twenty-five percent of all Proposition A revenues are returned to cities for local transit systems. The choice of what type of system best meets local needs is left to cities to decide; however, the LACTC requires that local systems be coordinated with the regional bus system and with each other.

Special Transit Services

Due to age or disability, many residents of Los Angeles cannot use the available general

(Continued on Back Cover)

PAT McLAUGHLIN

LACTC

HIGHWAY PLAN FOR LOS ANGELES COUNTY

ON THE ROAD TO THE YEAR 2000

August 1987

LOS ANGELES COUNTY TRANSPORTATION COMMISSION
403 WEST EIGHTH STREET, SUITE 500
LOS ANGELES, CALIFORNIA 90014

"ON THE ROAD TO THE YEAR 2000" WAS PREPARED WITH THE ASSISTANCE OF THE FOLLOWING AGENCIES AND INDIVIDUALS:

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Honorable Marc Wilder, Past Chairman, City of Long Beach
Honorable Jacki Bacharach, City of Rancho Palos Verdes
Honorable Edd Tuttle, City of Long Beach
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Keith Gilbert, Automobile Club of Sourthern California
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Joe Ruggiero & John Kielbasa, California Highway Patrol
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IN COOPERATION WITH:

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Southern California Association of Governments
County of Los Angeles
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Gardena
Long Beach
Lancaster
Los Angeles
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TABLE OF CONTENTS

EXECUTIVE SUMMARY

E X E C U T I V E S U M M A R Y

For decades, transportation in sprawling Los Angeles has been dominated by the area's system of highways, freeways and roads. But now, our world famous freewheeling lifestyle is being crushed by eight million people and six million registered vehicles traveling nearly 150 million miles a day.

Los Angeles drivers suffer through nearly 485,000 hours of daily delay, more than half of which is caused by recurring congestion. This delay costs at least $507 million each year in wasted time. It pollutes the air and causes driver frustration, and wastes at least 72 million gallons of gas each year.

As if things were not bad enough, planners expect that our population will grow by another two million people by the next decade. At least half a million new jobs will be created. And freeway congestion will increase by 50 percent over the next 20 years. Because the jobs are so spread out, there are traffic snarls in both directions on most freeways during rush hour, and by the year 2000, almost all freeways and major streets will be congested for longer periods of time each day.

Not only are our freeways and major streets bumper-to-bumper, but the local streets are falling apart. It's no wonder we are fed up with traffic jams and dodging potholes.

For many Los Angeles residents the character of driving in the city has changed—freeway snarls extend to local streets during rush hours.

A Call To Action

Though the Los Angeles County Transportation Commission (LACTC) is committed to developing balanced transportation, we recognize that the automobile will continue to be the backbone of our transportation system. The bulk of the 25 million daily trips in Los Angeles are made by car, and will continue to be made in a car even when the rapid transit system now entering construction is complete.

During the past four years, LACTC has focused its efforts on developing the Proposition A countywide rail transit system and improving regional and local transit service. The Commission is now embarking on an ambitious project to halt the decay of our streets and improve the operation of our freeways by managing congestion and adding needed improvements. We are committed to doing more than just talking "On the Road to the Year 2000". The current plan reflects a commitment by LACTC to improve the operation and condition of streets and freeways throughout Los Angeles. This report is more than a technical document citing our needs; it's a call for action and a plan to create adequate financial resources and institutional responsibilities to respond to pressing transportation priorities.

WHAT WE MUST DO

Cities have less than half the funds necessary to rehabilitate and maintain their streets.

STREETS

For the first time, a recently completed comprehensive survey shows that cities in Los Angeles have less than half of the money needed to properly repair our streets. If we continue on this trend, in 40 years over 57 percent of our streets will be falling apart. Another $150 million is needed, each year, to do the job right.

In addition, proper maintenance will improve safety, save scarce public funds and will also reduce the number of tire repairs and front-end realignments that are a constant hassle for most automobile owners. Systematic pavement management provides a cost-effective alternative to deferred road maintenance and reconstruction. All cities must be encouraged to establish pavement management systems to reduce potholes and stretch scarce road maintenance funds. Along with repairing the streets, dramatic improvements are desperately needed in the coordination of all signals and parking policies on our major streets to help regional traffic flow faster throughout Los Angeles.

FREEWAYS

We must make a major effort to reduce congestion and improve mobility by constructing new facilities, changing commuter attitudes and making significant improvements in how our streets and freeways are operated. We must link all traffic management together to improve commuter travel times and reduce congestion. And we must treat the entire network of freeways, state highways, and major streets as one integrated travel network.

Construction Required

Approximately $4.5 billion of short-term freeway construction projects are absolutely necessary. The report also identifies longer term problems. The recommended projects provide improvements in capacity, rehabilitation, safety and traffic operations. Low cost improvements include a linked system of carpool lanes, additional bypass lanes on onramps, increased ramp metering, freeway gap closures and interchange improvements. Unfortunately, with our most optimistic projection of the funds available to us during the next decade, we are $1.5 billion short of the $4.5 billion required by the year 2000.

Bumper-to-bumper traffic pollutes the air, wastes gasoline and time and causes tremendous stress for drivers.

Traffic Management

Untangling the congestion in travel corridors requires a commitment to aggressive traffic management. Inter-agency traffic management teams are recommended to minimize the congestion on our freeways and major streets. A primary objective is to link the freeways and major parallel streets into a single countywide computer-coordinated regional system.

During rush hours, these traffic management teams would have the authority to restrict on-street parking on major streets, control intersection and ramp meter signals, and to

use high technology communication systems to immediately advise motorists of traffic conditions and divert them to alternate routes.

By using centralized computer-controlled signalization systems and communications procedures already proven in the City of Los Angeles, traffic can be routed along the least congested corridors and the efficiency of our streets and freeways can be maximized at relatively low cost. Before countywide implementation, a demonstration project is recommended to test the feasibility and effectiveness of computerization and the traffic management team concept.

Improve Emergency Response

Accidents cause nearly half of the congestion on our freeways.

Accidents during rush hours are one of the major causes of freeway congestion. The California Highway Patrol and other emergency agencies ensure that the victims of accidents receive prompt attention. However, the motorists who follow in the wake of an accident are not being adequately served. New systems and technologies are available to make significant improvements in our response to accidents. A system-wide network of closed circuit television cameras at critical locations could provide confirmation of the nature and extent of the accident.

All traffic information should be consolidated into one automated up-to-the-minute data base. The information should be made directly available to the public through improved electronic message signs on the roads and in parking garages, more accurate and up-to-date radio traffic reporting, roadside radio, FM sideband radio, home and office computer, or by simply using the telephone for a specific traffic condition report.

With reliable, accurate traffic and alternate route information, motorists can choose the fastest way to get to work.

We need roving service trucks patrolling short segments of the freeway system, to clear most minor traffic incidents faster.

Our freeway call box system must be finished and the service improved so that motorists don't spend up to two hours waiting for help. Caltrans must increase the number of emergency response traffic teams and spread them geographically throughout the county to expedite the flow of traffic around major accidents.

Reroute Trucks

Statistics show that more than one major truck accident occurs every day on freeways in Los Angeles; one-third of the truck accidents cause slow-downs during the rush hour. Since truck accidents usually take three to four hours to clear and create significant congestion, truck traffic should be restricted during the rush hours on some critical freeway segments. Along those freeways, city noise ordinances that restrict truck delivery hours in non-residential areas should be modified to minimize the impact on business.

An average of one major truck accident occurs every day on Los Angeles freeways and usually takes three to four hours to clear.

Reduce Demand

Tremendous cost and time savings can be achieved by reducing the number of cars on freeways during peak hours. A much more intensive effort must be made to reduce demand for precious freeway space. Recommended programs include improved ridesharing marketing, adoption of local ridesharing ordinances, developer fees, significantly staggered work hours for public and private employees, creation of private sector transportation management associations, employer-subsidized ridesharing programs, emergency ridesharing assistance, and increased promotion of flex-time and telecommuting by the public and private sector.

FINANCES

Faced with these urgent needs, Los Angeles must fight to slow the erosion of federal and state highway dollars. Even with the most cost-effective procedures and projects, there is a $3 billion shortage of funds needed in the next decade to repair streets and battle gridlock. Los Angeles must develop innovative new funding sources.

We must take steps to develop a stable source of additional local revenue to assure proper maintenance of all our streets and solve our short-term freeway construction problems. We should also begin to address long-term transportation problems.

Given our revenue raising potential in Los Angeles, and our historic difficulties in being able to count on a dollar-for-dollar return of taxes collected by the state or federal governments, a local revenue raising measure is probably the best approach.

Coordination With Other Plans

"On the Road to the Year 2000" has been designed as a compilation of needed short-term mobility improvement projects and strategies. Although this report is consistent with, and supports other transportation planning studies, it is not designed to duplicate or replace general plans or transportation elements prepared by local jurisdictions, the SCAG Regional Transportation Plan, or the Caltrans Systems Plan. The report does not address issues of land use and population growth since they are beyond LACTC's legislative authority. The report also recognizes that existing law requires every individual project to undergo environmental review prior to construction.

ACKNOWLEDGEMENTS

The conclusions and recommendations contained in this report are those of the Los Angeles Transportation Commission.

Although this report was prepared by LACTC, it is a joint effort of many governmental agencies and individuals from throughout Los Angeles. An effort of this magnitude could not have been undertaken without the guidance of the LACTC's Streets and Highways Technical Advisory Committee and the Local Streets and Roads Technical Task Force. Invaluable assistance was provided by Caltrans, the Southern California Association of Governments, the California Highway Patrol, the Los Angeles City Department of Transportation, the Los Angeles County Public Works Department, the Automobile Club of Southern California, the Los Angeles Area Chamber of Commerce, numerous cities and members of the public.

STREETS

S T R E E T S

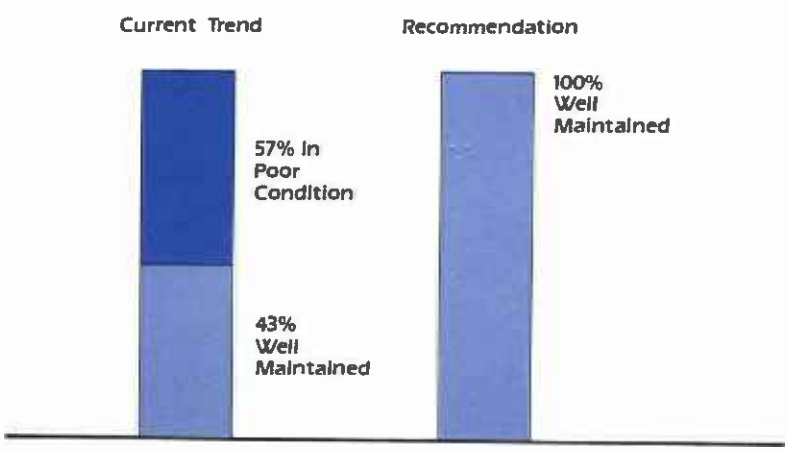
Streets in Los Angeles urgently need attention. Our streets are falling apart and rush hour traffic delays are now more of the rule than the exception. The county's projected growth during the next decade requires new initiative to fill potholes and fight gridlock. This chapter does not address the need for new streets, but emphasizes street maintenance and traffic management on our existing streets. New roads will have to be built. However, cities have the necessary resources for this, through assessment districts and developer fees. They do not have sufficient funds to adequately maintain their streets.

Cracks and potholes are estimated to cost each car driver $100 a year in auto repairs.

MAINTENANCE

Have you ever driven down a street with so many potholes it felt like you were driving on a washboard? That street was probably a victim of old age, improper maintenance, or poor design. The streets need immediate attention if we are to prevent further deterioration and costly damage to our trucks and cars. In California, poor street repairs are estimated to cost each automobile owner about $100 every year in auto repairs. Other studies have concluded that severely cracked and potholed roads can cost drivers between 5 and 10 cents for every mile driven.

PAVEMENT CONDITION IN LOS ANGELES IN 40 YEARS*



*Total Pavement Area is 511 Million Square Yards of Pavement.

Pothole dodgers in Los Angeles are probably not surprised that cities are spending less than half of the funds needed for cost-effective maintenance and rehabilitation. If we continue on the current trend, 57 percent of the streets will fall apart and not be repaired. Clearly, common sense tells us we must maintain the streets properly, starting now!
Properly maintained pavement in Los Angeles has a life expectancy of 40 to 50 years. Poorly maintained streets will only last about 20 to 25 years. Since rebuilding a road costs five times as much as proper maintenance over the lifetime of a street, it makes good economic sense to implement aggressive maintenance programs.

Almost as important as the amount of money committed to street maintenance is the manner in which it is spent. Different types of street repairs - - reconstruction, rehabilitation, and maintenance - - have varying effects on total city expenditures and street quality. Timing of street repairs also affects quality and cost.

Pavement Management

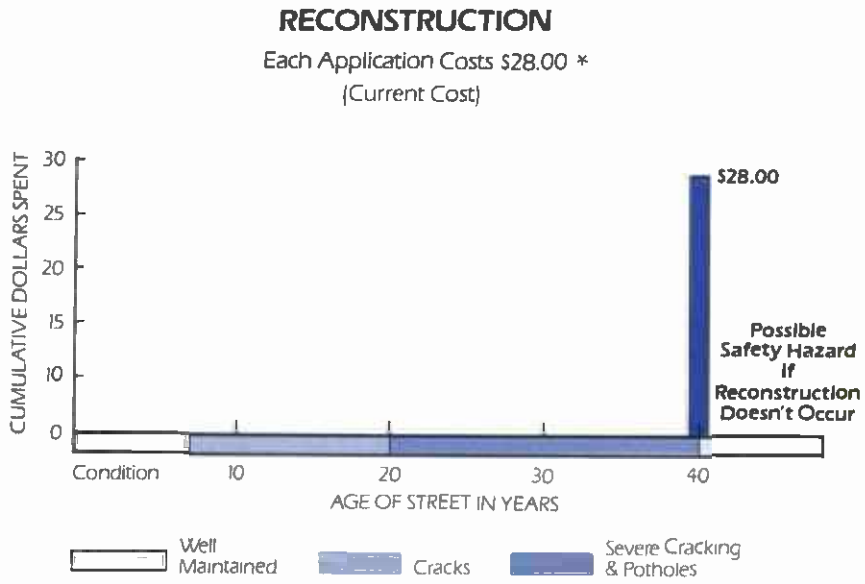
The coordinated planning of street repairs is known as pavement management. By using field tests and computerized records, today's city engineer can figure out optimal schedules for street repairs which maximize pavement quality while minimizing costs.

According to a survey of cities done by the Southern California Association of Governments, only 19 of 84 cities in Los Angeles are currently using pavement management to maximize the amount of work done with their maintenance dollars. Cities must manage their funds in the best way possible, through effective pavement management.

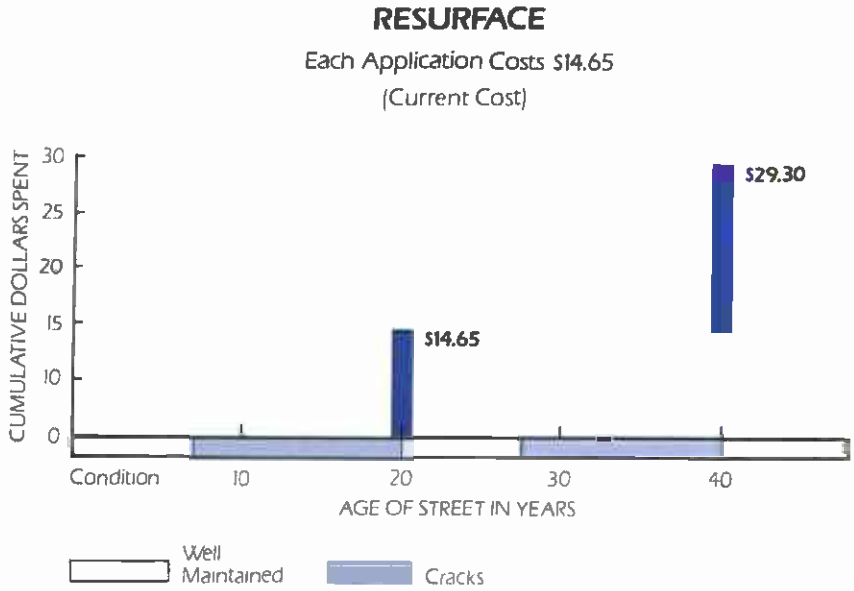
The key elements of pavement management are determining when, where, and how street repairs should be done. The charts below contrast two repair strategies: reconstruction and resurfacing.

Most of the streets in Los Angeles are **reconstructed** once every 40 years by replacing the soil and repaving the entire street with new asphalt. Reconstruction costs about $28 for every square yard of pavement. Since major repairs are only made once every 40 years, lots of cracks and

potholes appear before the street is reconstructed.



Many other cities resurface their major streets every 20 years by pouring a two inch thick layer of new asphalt over the existing streets. Although the street does get cracked, not as many potholes are likely to appear. By resurfacing twice in 40 years, a city will spend slightly more than a single reconstruction, about $29.30 per square yard of street, but the road will be far more attractive and safer due to its mid-life face lift.

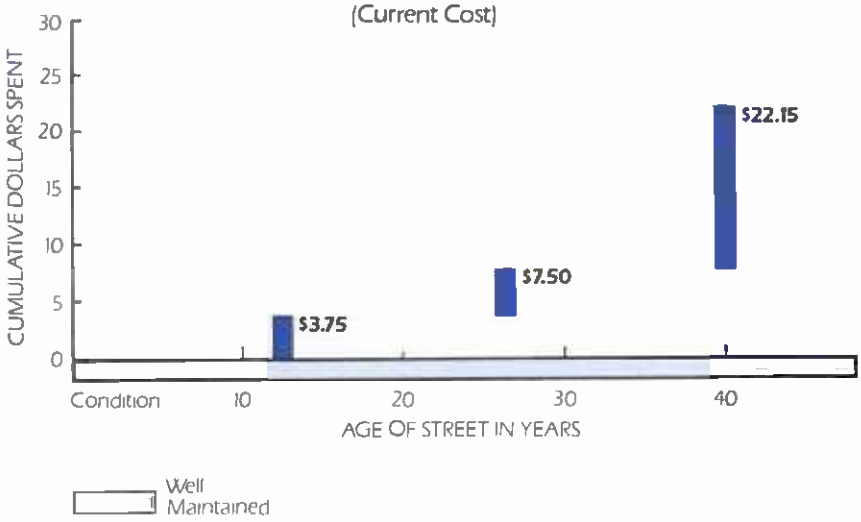


*The County of Los Angeles has indicated that based on its experience, the lifetime of a street is only 20 to 25 years without maintenance. Therefore, the actual cost of reconstruction may be as high as $45 to $55 per square yard.

As shown below, a **maintenance** program is the most cost-effective way to maintain streets. For local streets, the total cost is about two-thirds less than either reconstruction or resurfacing -- $9.90 a square yard. For major streets the cost is about one-third less than either reconstruction or resurfacing -- $22.45 per square yard of pavement. With good maintenance, potholes do not appear at all.*

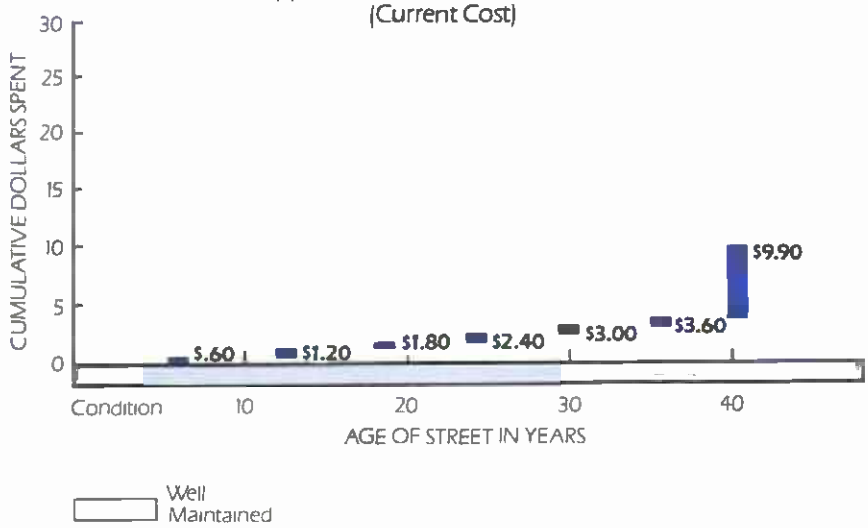
THIN RESURFACE MAINTENANCE FOR MAJOR STREETS

Each Application of Thin Resurface Costs $3.75
Each Application of Rehabilitation Costs $14.65
(Current Cost)



SLURRY SEAL MAINTENANCE FOR LOCAL STREETS

Each Application of Slurry Seal Costs 60 cents
Each Application of Rehabilitation Costs $6.30
(Current Cost)



*Nationwide research indicates that it costs about five times as much to rebuild a street as to maintain it.

Streets are kept in the best condition, and cost the least to maintain, when proper pavement management techniques are used at the proper intervals. The appendix contains a more complete description of these preferred pavement management techniques.

TRAFFIC MANAGEMENT

One of the major obstacles to coordinated action is the fact that traffic does not form the basis for management of our streets and freeways. Each city has independent budget criteria and operating policies regarding street repair and traffic control within its jurisdiction. These locally managed streets have hundreds of interchanges with Caltrans' 504-mile web of freeways. Yet, none of the cities have formal agreements with Caltrans, or each other, to optimize traffic flow.

One way to ensure that our major streets move traffic most effectively is to create regional traffic management teams comprised of local public works directors, Caltrans, the California Highway Patrol, Los Angeles Police Department and other local law enforcement agencies. These teams should have the responsibility to manage the major streets and freeways during rush hour.

A combination of traffic signal computer coordination and parking restrictions can go a long way towards minimizing congestion. These improvements can no longer be delayed. Current congestion problems and the expected 25 percent increase in major street traffic by the year 2000 warrant a low-cost, cooperative attempt to increase capacity. The concept of improving street traffic through computer controls has been nicknamed the "Smart" street concept.

The Santa Monica Freeway and parallel major streets including Adams, Washington, Venice, Pico, and Olympic boulevards would provide a valuable test of the "Smart" street concept. Technical components would include computer controlled traffic signals, freeway ramp meters, traffic informa-

tion signs and peak hour parking restrictions. The Santa Monica Freeway "Smart" Corridor demonstration project is discussed in greater detail in the Freeway Chapter.

If the Santa Monica Freeway "Smart" Corridor demonstration project successfully reduces congestion, a countywide technical task force should be established to determine where else this strategy should be introduced throughout the county.

Traffic Management Techniques

There are low-cost methods to improve major street flow. Restricting on-street parking during the peak hour, creating one-way streets, limiting shopping center access, and adding bus turnouts are widely accepted methods to improve traffic flow. Consistent policies are needed to strictly enforce no-parking and no-stopping zones, along with aggressive ticketing of motorists who block intersections.

If everyone shared a ride just once every two weeks, demand would be cut by 10 percent and much of the freeway congestion would evaporate.

Traffic Signals

When was the last time you got a green light at every intersection? The most important factor to improve driving on our major streets is to ensure that traffic flows unimpeded by red lights and gridlock. Recent advances have taken the traditional synchronized traffic signal a step further by using a computer which responds to actual traffic conditions to change the timing of the signal. In preparation for

the 1984 Olympics, the City of Los Angeles installed its first computerized fiber optic traffic management system for 110 intersections in the vicinity of the Los Angeles Coliseum. From a central control room in City Hall, a small team of traffic engineers manipulates signals to clear intersections, feed a freeway on-ramp or divert traffic around congestion bottlenecks.

For the first time, Los Angeles has the ability to link computerized signals, engineers and traffic officers at major intersections to improve traffic flow, thereby creating "smart" streets. A regional traffic management team can use this technology in high priority corridors that cross jurisdictional boundaries to provide continuous high-capacity travel corridors. And with centralized control, the system can be managed to provide temporary relief in areas congested by rush hour traffic, accidents or special events. Most importantly, the system can be designed to include surface streets, freeways and ramps so that all transportation resources are most efficiently managed.

Though computer coordination of traffic signals is very effective at reducing congestion, it is also fairly expensive -- about $50,000 for each intersection or about $400 million if used on all major intersections within Los Angeles. However, it would improve traffic flow at least ten percent. The individual motorist would save money and time and the public would benefit from improved air quality.

Computer-coordinated streets are also an appropriate solution to congestion. In effect, managing the existing streets with computer-coordination should prove preferable to costly construction of overpasses at congested intersections. In addition to being more costly, overpasses are a 24-hour solution to a six hour problem which can be lessened without construction and environmental impacts.

Teams of engineers could act as "ground traffic controllers" to reduce congestion delays.

Improve Enforcement and Driver Education

Blocked intersections cause gridlock. People who park in "no parking" zones block a travel lane and cause delay on busy streets. It is clear that there are many inconsiderate motorists who create problems for everyone else.

Parking tickets written in Los Angeles nearly doubled from 1.7 million to 2.9 million last year.

Education and public awareness programs, through the schools and the media, should emphasize the motorist's role in causing congestion. Self service gas stations have created a dangerous and costly void in vehicle maintenance. Owners must be better educated in the basics of vehicle maintenance. The State Department of Motor Vehicles should expand its driver's license test to include basic maintenance questions. In addition, driver's education in schools should teach students how to maintain their cars.

Drivers must be informed that laws can and will be more strictly enforced. To prevent gridlock, drivers who block intersections must be ticketed and illegally parked cars must be towed from the travel lanes promptly. Fines for "no parking" and "no stopping" violations should be increased.

Motorist cooperation and stricter law enforcement will improve traffic flow on our streets.

FUNDS REQUIRED

To properly maintain all streets and improve traffic flow on our major streets, $236 million must be spent by Los Angeles County cities and the County unincorporated areas each year. Yet Los Angeles is currently spending only $86 million, which leaves an annual shortfall of $150 million. The shortfall consists of $113 million in maintenance and $37 million in signal coordination.

The following chart shows what each city and the county unincorporated area should annually spend to maintain its major and local streets. This dollar amount is based on the square yards of existing pavement and a methodology agreed upon by a technical task force of public work directors. The appendix contains a more detailed description of the approach and a series of charts which were used to calculate the pavement maintenance needs. Total needs are subtracted from expenditures to give a city-by-city maintenance shortfall estimate.

Preventive car maintenance helps avoid the nightmare of breaking down on the freeway.

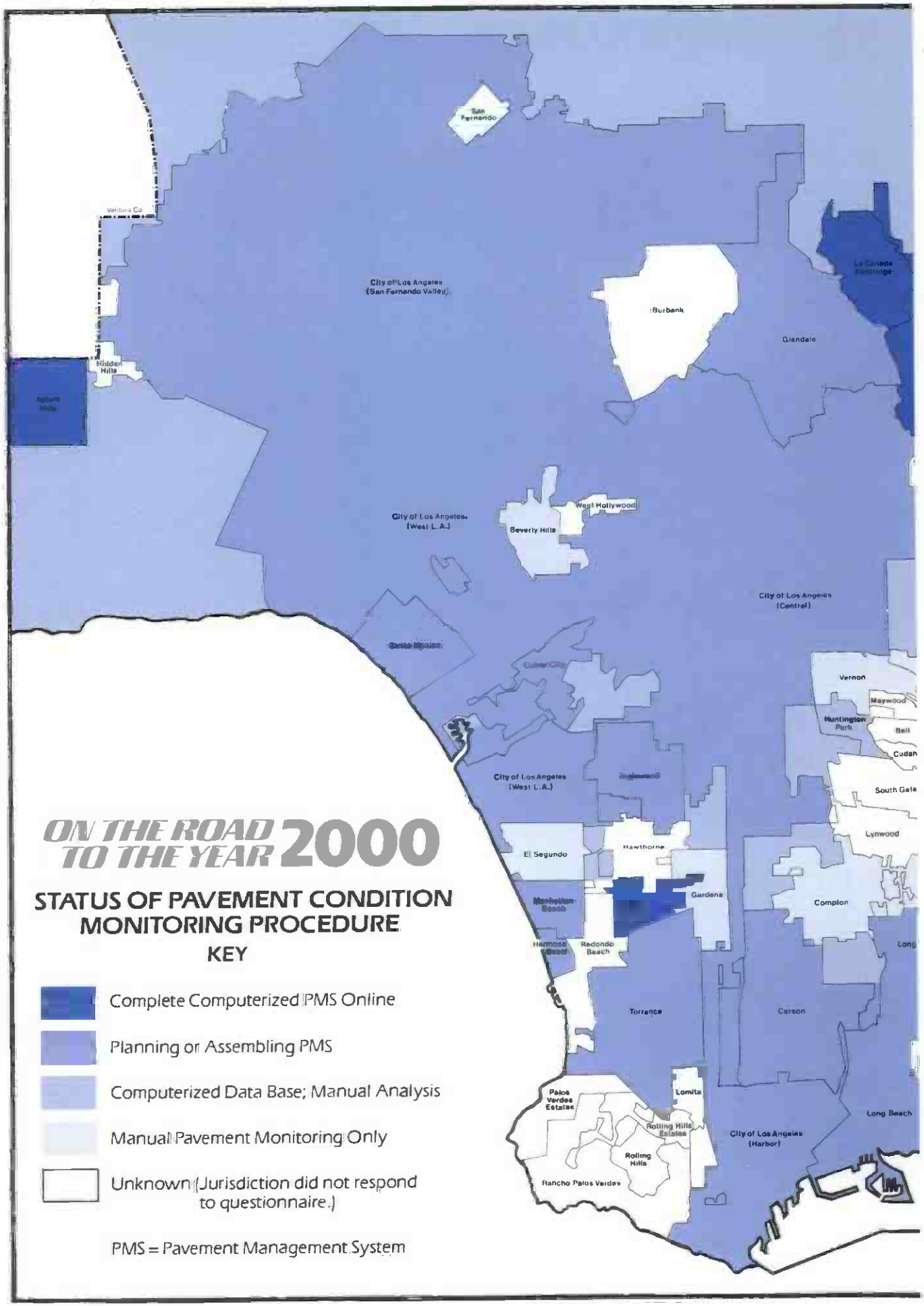
ANNUAL PAVEMENT MAINTENANCE NEEDS

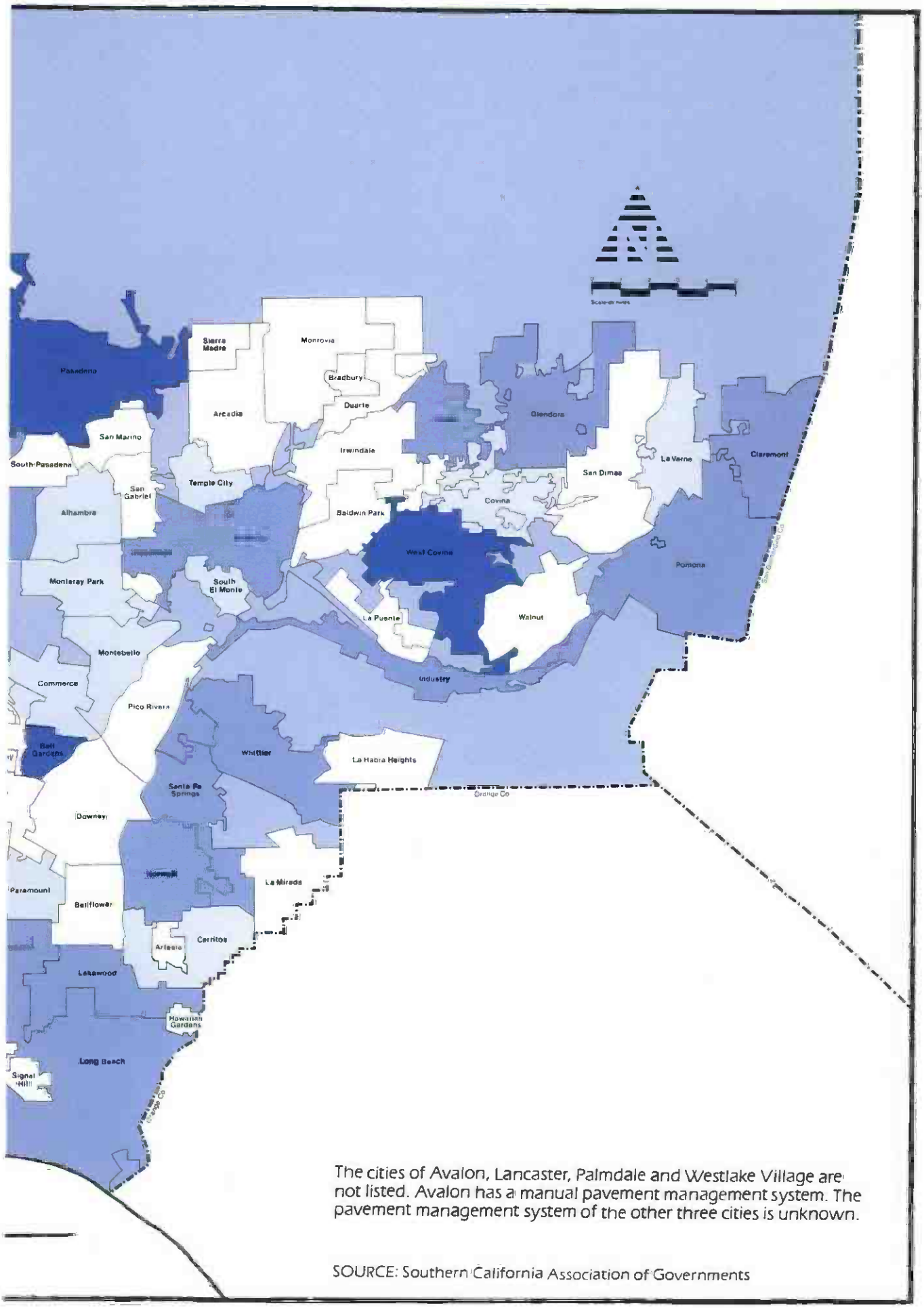
($ in thousands)

	MAJOR STREETS	LOCAL STREETS	CITY TOTAL	PAVEMENT MAINTENANCE EXPENDITURES	PAVEMENT MAINTENANCE SHORTFALL
AGOURA HILLS	$ 140	$ 159	$ 299	$ 500	$ -0-
ALHAMBRA	472	737	1,209	1,209	-0-
ARCADIA	709	586	1,295	497	798
ARTESIA	219	120	339	156	183
AVALON	-0-	22	22	4	18
AZUSA	316	338	654	165	489
BALDWIN PARK	726	396	1,122	314	808
BELL	274	149	423	68	355
BELLFLOWER	549	355	904	127	777
BELL GARDENS	676	74	750	255	495
BEVERLY HILLS	359	374	733	535	198
BRADBURY	24	11	35	-0-	35
BURBANK	803	1,058	1,861	957	904
CARSON	1,125	990	2,115	650	1,465
CERRITOS	903	492	1,395	243	1,152
CLAREMONT	737	541	1,278	193	1,085
COMMERCE	356	255	611	315	296
COMPTON	1,201	581	1,782	829	953
COVINA	582	465	1,047	128	919
CUDAHY	27	69	96	67	29
CULVER CITY	510	261	771	771	-0-
DOWNEY	1,371	748	2,119	631	1,488
DUARTE	156	228	384	3	381
EL MONTE	312	715	1,027	814	213
EL SEGUNDO	374	204	578	397	181
GARDENA	604	329	933	728	205
GLENDALE	1,657	1,198	2,855	1,838	1,017
GLENDORA	187	726	913	336	577
HAWAIIAN GARDENS	64	83	147	6	141
HAWTHORNE	463	336	799	434	365
HERMOSA BEACH	193	154	347	58	289
HIDDEN HILLS*			-0-		
HUNTINGTON PARK	449	228	677	143	534
INDUSTRY	430	241	671	120	551
INGLEWOOD	1,089	639	1,728	715	1,013
IRWINDALE	278	79	357	260	97
LA CANADA FLINTRIDGE	85	301	386	189	197
LA HABRA HEIGHTS	94	186	280	23	257
LAKEWOOD	685	858	1,543	568	975
LA MIRADA	334	526	860	333	527
LANCASTER	2,540	750	3,290	544	2,746
LA PUENTE	275	292	567	46	521
LA VERNE	342	366	708	388	320
LAWNDALE	306	167	473	17	456
LOMITA	116	116	232	100	132
LONG BEACH	3,930	3,836	$ 7,766	$ 4,200	$ 3,566
LOS ANGELES CITY	65,227	23,697	88,924	32,384	56,540

	MAJOR STREETS	LOCAL STREETS	CITY TOTAL	PAVEMENT MAINTENANCE EXPENDITURES	PAVEMENT MAINTENANCE SHORTFALL*
LYNWOOD	$ 768	$ 303	$ 1,071	$ 222	$ 849
MANHATTAN BEACH	187	338	525	136	389
MAYWOOD	69	137	206	73	133
MONROVIA	184	435	619	154	465
MONTEBELLO	954	427	1,381	1,095	286
MONTEREY PARK	779	424	1,203	394	809
NORWALK	640	817	1,457	1,457	-0-
PALMDALE	1,272	374	1,646	96	1,550
PALOS VERDES ESTATES	552	301	853	256	597
PARAMOUNT	153	336	489	150	339
PASADENA	1,979	859	2,838	2,095	743
PICO RIVERA	287	531	818	22	796
POMONA	884	1,661	2,545	967	1,578
RANCHO PALOS VERDES	662	528	1,190	397	793
REDONDO BEACH	741	336	1,077	356	721
ROLLING HILLS*			-0-		
ROLLING HILLS ESTATES	210	115	325	74	251
ROSEMEAD	538	294	832	832	-0-
SAN DIMAS	489	473	962	241	721
SAN FERNANDO	343	146	489	306	183
SAN GABRIEL	106	349	455	149	306
SAN MARINO	440	240	680	172	508
SANTA FE SPRINGS	537	435	972	600	372
SANTA MONICA	983	563	1,546	1,124	422
SIERRA MADRE	289	158	447	-0-	447
SIGNAL HILL	253	138	391	195	196
SOUTH EL MONTE	273	149	422	159	263
SOUTH GATE	313	586	899	456	443
SOUTH PASADENA	348	225	573	65	508
TEMPLE CITY	5	371	376	217	159
TORRANCE	1,500	1,507	3,007	1,603	1,404
VERNON	617	-0-	617	567	50
WALNUT	483	263	746	46	700
WEST COVINA	1,564	853	2,417	762	1,655
WEST HOLLYWOOD	293	160	453	470	-0-
WESTLAKE VILLAGE	184	100	284	384	-0-
WHITTIER	1,026	723	1,749	817	932
TOTAL 84 CITIES	113,173	60,691	173,865	70,367	103,816
LOS ANGELES COUNTY UNINCORPORATED AREA	14,112	8,986	23,098	14,000	9,098
TOTAL ALL AGENCIES	**127,285**	**69,677**	**196,963**	**84,367**	**112,914**

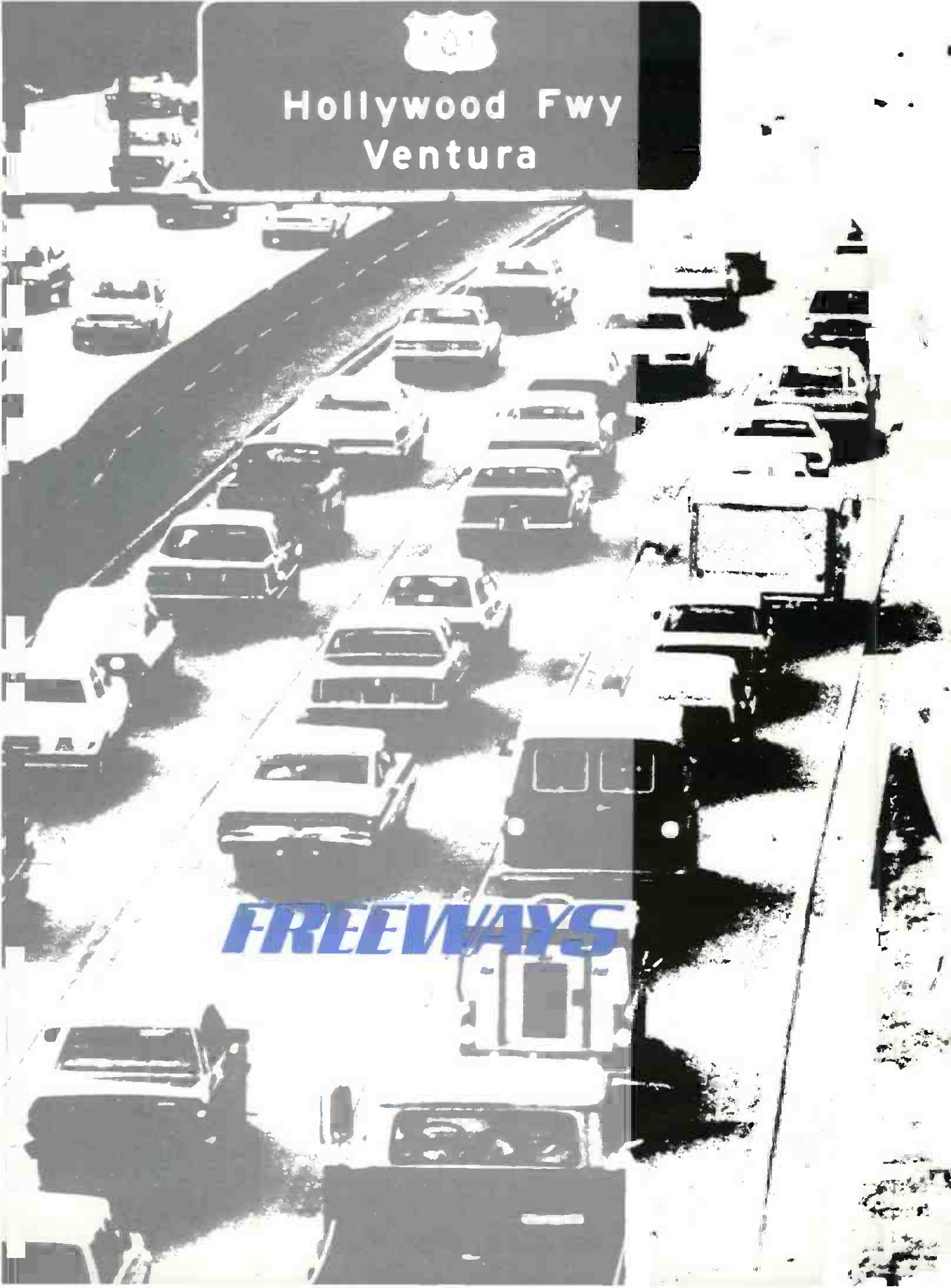
*Currently, some cities contribute general fund money (up to 90%) for streets. Without these significant general fund contributions, the maintenance shortfall for many cities would be greater.


ON THE ROAD TO THE YEAR 2000
STATUS OF PAVEMENT CONDITION MONITORING PROCEDURE
KEY
Complete Computerized PMS Online
Planning or Assembling PMS
Computerized Data Base; Manual Analysis
Manual Pavement Monitoring Only
Unknown (Jurisdiction did not respond to questionnaire.)
PMS = Pavement Management System
San Fernando
Ventura Co
City of Los Angeles (San Fernando Valley)
Burbank
Glendale
La Canada Flintridge
Hidden Hills
Agoura Hills
City of Los Angeles (West L.A.)
West Hollywood
Beverly Hills
City of Los Angeles (Central)
Culver City
Vernon
Maywood
Huntington Park
Bell
Cudahy
South Gate
Lynwood
El Segundo
Hawthorne
Gardena
Compton
Manhattan Beach
Hermosa Beach
Redondo Beach
Torrance
Carson
Palos Verdes Estates
Lomita
Rolling Hills Estates
Rolling Hills
Rancho Palos Verdes
Long Beach
City of Los Angeles (Harbor)



The cities of Avalon, Lancaster, Palmdale and Westlake Village are not listed. Avalon has a manual pavement management system. The pavement management system of the other three cities is unknown.

SOURCE: Southern California Association of Governments


Hollywood Fwy
Ventura
FREEWAYS

F R E E W A Y S

It's no secret that the major problem with the freeway system in Los Angeles is congestion. More than six million cars battle across 504 freeway miles each day.

With the second highest urban density in the nation, Los Angeles has grown to the point that our freeways are struggling to handle the daily rush hour demand. Currently, more than a half-million cars pass through the interchange of the Santa Ana, Pomona, Golden State and Santa Monica Freeways daily, making it the busiest interchange in the world.

The vast majority of commuters will continue to fight over the same pavement. With the expected congestion, average rush hour travel speeds will drop from the current 37 miles per hour to 17 miles per hour by the year 2000, according to the Southern California Association of Governments (SCAG). Traffic on some major freeways, like the Ventura, will crawl along at seven miles per hour during "rush" hours. The appendix contains a table showing the length of the daily rush hour and rush hour travel speeds on each freeway. Drivers are suffering through nearly 485,000 hours of delay daily, more than half of which is caused by regular recurring congestion. This delay costs commuters approximately $507 million a year in wasted time. It pollutes the air, creates driver frustration, and wastes at least 72 million gallons of gas (worth $60 million, based on December 1986 prices) each year.

There is another geographic fact of life in Los Angeles. We do not have a single "downtown" which dominates the metropolitan area to the same degree as other large cities. Jobs and residences are spread out over 4,000 square miles so that it is impractical for many commuters to rely on transit or ridesharing on a daily basis. Despite that fact, Los Angeles has the largest bus-only transit system in the country, carrying more than 1.5 million daily riders, and more than 500,000 commuters per day already carpool or vanpool. In some travel corridors bus and rail transit will shoulder a

Delay due to regular, recurring congestion costs commuters $507 million a year in wasted time.

significant portion of future travel demand, but in others they will only make a modest contribution. It will also take many years to develop an extensive enough rapid transit system to offer an attractive alternative to auto travel.

These problems are not simple to solve. With limited funds available, and strong concern for the environment, it should be clear that Los Angeles cannot build its way out of congestion during the next ten years. We can no longer assume that our freeways will accommodate the expected growth without major efforts ranging from new construction to new commuter attitudes. Local jurisdictions and Caltrans have to intensify their efforts to coordinate the operation of their streets and freeways. We must cooperatively link all traffic management together to improve commuter travel times and reduce congestion. And we must treat the entire network of freeways and major surface streets as one integrated travel system.

SCOPE OF STUDY

Even our best efforts during the next decade will not cure congestion woes. There are practical difficulties to adding additional capacity on our freeways and streets. And there are financial limitations which will make it difficult to construct the recommended projects by the year 2000. However, there are numerous low cost improvements which can be made that will maximize the use of every available inch of freeway and street pavement.

In addition to fighting congestion, we have a responsibility to continue to provide safe and environmentally acceptable freeways. Even with the expected shortage of funds, Los Angeles cannot walk away from high priority soundwall and landscaping projects. Further, the freeways must continue to be rehabilitated or reconstructed as they begin to wear out.

However, the highest priority during the next ten years must be to attack the congestion which is inevitable as two million people are added to our current population.

We have looked at our freeway system and major non-freeway state highways to identify how we can improve our mobility in the short-term, before the year 2000. In some instances, there are no short-term solutions available since new freeways currently cost $150 - $200 million per mile and require 15 to 20 years development time. In these corridors, we have identified long-term recommendations.

The focus of this chapter is three-fold: first, to improve the operating efficiency of our freeway system; second, to identify potential construction projects and minor capital investments that can be implemented by the year 2000; and, third, to study long-term projects to add new capacity beyond the year 2000. The bulk of this chapter will be spent identifying congestion problems and recommending construction solutions on specific stretches of the massive freeway network. However, before we launch into a comprehensive list of improvements, it is important to address some countywide solutions which promise to be more effective and much less costly than a massive construction program.

IMPROVE CONGESTION MANAGEMENT

We must provide the motorist with the broadest range of effective routes between work and home. This will require coordinated development and aggressive management of time-saving alternatives to the freeway, on the rights-of-way that currently exist and on major streets that parallel the freeway. Based on the best information available, and using daily driving experience as a guide, Los Angeles drivers would like to choose the fastest way to work. However, by the time the public identifies a problem, it is too late to prevent severe traffic delays. In addition, the problem has frequently been cleared by the time the public learns of its existence. This slow speed of communicating

current conditions causes as much confusion and frustration as it resolves. Consequently, the public ignores most traffic advisories and fumes at their inability to respond in a timely way to a developing emergency. The vast majority of motorists merely listen with interest to learn why they are at a standstill without considering detouring to a quicker route.

Los Angeles City has an automated traffic surveillance and control center.

Consolidate Traffic Surveillance Data

Los Angeles drivers are among the best in the world. They are highly skilled, cooperative and courteous. The nearly constant rush hour traffic condition reports attest to the motorists' interest in receiving helpful information.

New centralized computer-controlled signal systems, such as the network installed by the City of Los Angeles in the vicinity of the Coliseum for the Olympics, could provide immediate surface street detours of significant capacity. In conjunction with much more aggressive use of traffic reports on local radio stations, and an expanded electronic message sign network, such surface street detours would provide a powerful tool to clear freeway congestion bottlenecks.

Caltrans' freeway traffic control center.

All available traffic condition information should be consolidated in one automated data base and the information made directly available to the motorist. Fragments of information are currently compiled by Caltrans, the California Highway Patrol, Los Angeles City, the commercial traffic information services, and radio stations.

To minimize congestion, Caltrans and the California Highway Patrol must install a state-of-the-art computerized up-to-the-minute traffic surveillance system that is capable of monitoring and responding to congestion and emergencies as they occur. This system should include closed circuit television, video surveillance from aircraft, traffic monitoring loops in every freeway lane and on-ramp, and an interconnected system of "smart" on-ramp and major street signals.

Improve Public Information

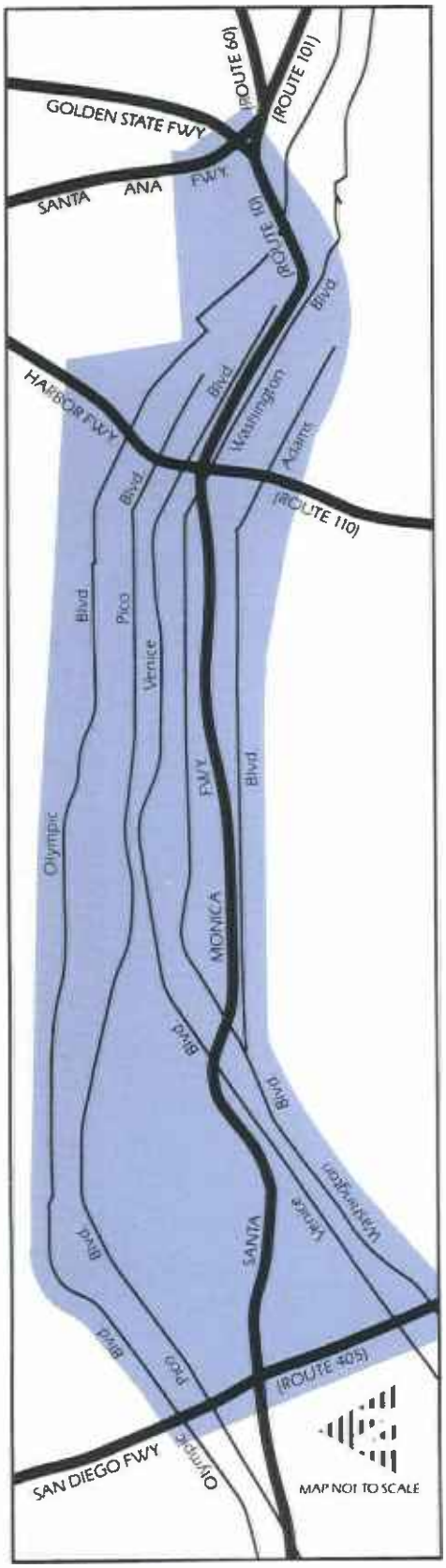
Technology exists to vastly improve the timeliness and accuracy of traffic condition information. Using the information provided by the improved surveillance of a centralized data base, and given an alternate route, commuters will take steps to avoid congestion delays. Through state-of-the-art communications, commuters could use up-to-the-minute information to plot a fast course around congestion by using alternate freeway routes and "smart" streets. Every available communications medium must be used to instantly transmit vital information. Examples of technology currently available to relay traffic information include: automated telephone information, cellular phones in cars, public access computer files, Silent Radio in parking garages, changeable message signs, roadside radio, and FM sideband transmission channels. The traffic information should be easily accessible from home, in the office, and on the road so that the motorist can choose where, when, and how to travel through Los Angeles.

Within our reach is a response system that will provide significant benefits at a modest cost. With proper information, traffic can be diverted onto alternate freeway routes and surface streets where signals can be managed to speed the flow of traffic to the next available ramp beyond the congestion.

Traffic Management Teams

Another major improvement in traffic flow would result from better coordination of the daily traffic management on freeways and surface streets. In the past, freeways have been able to absorb the growth, with surplus traffic spilling over onto major parallel streets to fend with local traffic. As major streets are congested, quiet neighborhoods will be swamped by motorists looking for faster routes. Rush hour will truly come to each of our doorsteps. Yet, in the next ten years, it will be practically impossible to build new capacity on our freeways to keep up with demand.

In a recent poll, 65 percent of the commuters surveyed said they "often" listen to radio traffic reports and 30 percent said they change their driving behavior based on what they hear.



Solving rush hour street congestion problems with street widenings and grade separations may not always make sense, since we will be spending large amounts of money and causing major environmental impacts to address a six-hour problem with a 24-hour solution. As congestion increases and clogs the major streets that parallel the freeways during rush hours, a solution is critically needed; one that provides significant improvement in traffic carrying capacity without major environmental impacts and funding commitments; one that provides a practical alternative to major new construction. LACTC believes that significant new capacity can be provided on existing freeways and streets by coordinating their operation during the rush hours. With coordinated, computerized signals, constant monitoring during rush hours, aggressive intersection management, and up-to-the-minute traffic information, major improvements in congestion are possible at a fraction of the cost of a new freeway or major street widening.

"Smart" Freeway Corridor Demonstration

The effectiveness of managing the freeways and surrounding local streets as one system deserves to be demonstrated, especially during periods of high congestion due to rush hours, accidents, or special events. One possible candidate for the "smart" street management concept is the Santa Monica Freeway and its parallel streets of Olympic, Pico, Venice, Washington, and Adams. By linking high-tech signals, improving surveillance and communication, capacity can be improved considerably.

Technical Task Force

An inter-agency traffic management team that includes Caltrans, the California Highway Patrol, Los Angeles City Department of Transportation, Los Angeles Police Department, Los Angeles County Transportation Commission and various public works directors, and representatives of other law enforcement and emergency agencies is needed to provide cooperative, unified, central management of the traffic system. Regional mobility must be improved. Bottlenecks caused by conflicting transportation objectives of local jurisdictions must be eliminated.

Coordinating the jurisdiction over traffic control in the county could help untangle congestion.

Peak Hour Truck Diversion

Trucks travel more than two billion miles a year in Los Angeles. A major truck accident paralyzes at least one freeway every workday in Los Angeles, tying up traffic from two to four hours. Nearly one-third of major truck accidents occur near the peak commuting hours. Voluntary changes in truck delivery schedules and route diversions during the 1984 Olympics proved to be one of the most effective traffic management strategies adopted, with the number of truck accidents decreasing 58 percent during the two-week Olympic period.

Trucks must be restricted from using the congested freeways during rush hour. It takes an average of three-and-one-half hours to clean up a major truck accident. The resulting congestion usually lasts four times as long. And to make matters worse, major truck accidents typically close more than half of the available freeway lanes or ramps reducing the freeway's capacity by up to 76 percent.

Congestion resulting from a large accident can take four times as long to clear as the clean-up.

Roving Service Trucks

Cars that become disabled on the freeway create a much greater traffic problem than a car that breaks down on a surface street.

The delay in traffic often is caused by minor vehicle breakdowns and minor accidents in freeway lanes. Motorists have the responsibility to see that their vehicles are properly maintained and that they don't enter the freeway when the gas gauge is on empty.

Currently the stranded driver must wait for a tow truck, or California Highway Patrol car, to respond. It can take several minutes to push the car out of traffic and up to two hours for that extra tank of gas, or spare tire, to arrive on the scene. For every minute it takes to clear the incident from travel lanes, four minutes of congestion are created.

Other urban areas have successfully implemented programs to contract with service trucks to patrol short segments of the freeway and provide the motorist with immediate assistance. In addition to clearing the travel lanes, these service trucks can often solve minor mechanical problems and speed the driver on his way. Besides being an appreciated public service, this extra help can considerably reduce congestion.

Emergency Response Traffic Teams

Another critical need is to improve the response to accidents on the freeways. Major accidents produce more than half of the congestion on Los Angeles freeways. Yet, there is only one on-call emergency response traffic team stationed at Caltrans headquarters in downtown Los Angeles. This team can only respond to major incidents that are expected to last for more than two hours and close two or more lanes.

Although the California Highway Patrol and other emergency agencies ensure that the victims of accidents receive prompt assistance, motorists following in the wake of an accident are not being adequately served. By quickly assessing the situation and determining the best way to clear the accident and managing detours around congestion, the Caltrans emergency response traffic team can minimize the delay to other motorists.

As previously stated, Caltrans estimates that congestion as a result of a major incident lasts four times as long as it takes to clean up the obstruction. We must increase the number of emergency response

traffic teams, with each team stationed in a different part of the county, to quickly reduce traffic congestion caused by major incidents.

Call Boxes

It can take up to two hours to obtain help when you use the freeway call boxes. Staffing and equipment are so overloaded at the California Highway Patrol dispatch center that unless your car is in a traffic lane, or someone is injured, you wait ... and wait until more important emergencies are handled.

There are gaps in the existing call box system which must be completed, and both the necessary staffing and equipment must be made available for this vital public service function. Call box response time must be improved dramatically.

Demand for help from call boxes is so high that non-urgent callers must sometimes wait up to two hours to obtain help.

Spectator Slowing

Motorists are arguing about a fender bender at the side of the road. A maintenance crew is working on landscaping. A motorist is getting a ticket. A high-rise construction crew is working in the middle of the street. Do you slow down to look? Slowing to gaze upon these daily distractions contributes significantly to congestion.

Much of this "spectator slowing" can be controlled. Before curiosity kills the commute, an aggressive public education program must be launched to remind motorists that

Spectator slowing causes congestion.

they are helping create congestion every time they slow to see what's happening.

In addition, the appropriate public agencies can also help by reviewing and enforcing their operating policies to reduce these distractions during rush hours.

Lane Closure Information

All construction work requiring closure of one or more freeway lanes should continue to be scheduled to avoid rush hours. Local jurisdictions must ensure that construction crews strictly adhere to local permit requirements.

Accurate and timely traffic information should be made available to the motorist for all planned lane closures, including weekends, in order to help motorists plan their route appropriately. This is needed because losing two freeway lanes results in a loss of up to 45 percent of a freeway's capacity.

REDUCE TRAVEL DEMAND

Carpool Lanes

On the freeways, preferential lanes should be provided for buses and carpool vehicles. Carpool bypass lanes must be added on all on-ramps. Experience has shown that ride-sharing lanes can provide an increase in people-carrying capacity beyond the capacity increases created by adding a mixed-flow traffic lane.

Whenever a new lane is added to the freeway, it must be evaluated for exclusive use by carpools and buses before the lane is designated for use by all freeway traffic. These lanes could be provided by restriping existing freeways, or by minor widening projects. Unlike the old Diamond Lane, an existing lane would not be converted. Instead, a new traffic lane would be added within the existing right-of-way, either on the median or the right shoulder of the freeway.

Carpoolers save money by sharing a ride. They may also save time by using a carpool lane or on-ramp bypass lane.

A comprehensive countywide linked network of carpool lanes must be developed and implemented.

Ridesharing

A much more intensive effort must be made to reduce demand for precious freeway space. Major efforts are needed to convince Los Angeles commuters that carpooling is an effective, long-term strategy to combat congestion. If everyone shared a ride just once every two weeks, demand would be cut by ten percent. The commuter must be provided with viable alternatives and be motivated to choose them when it's practical. During the next decade commuters and their employers must adopt variable work arrangements, whether through flexible work hours, ridesharing or telecommuting. Many people are afraid to rideshare because they fear they may be stranded at the office in an emergency. They claim that their job demands are too varied to allow a rigid schedule required by carpooling or riding the bus on a regular basis. An emergency backup system must be developed for those who would regularly rideshare and have an occasional need for an emergency ride to, or from, work.

Government, major employers and developers also must accept the responsibility for reducing the congestion caused by their employees and tenants. Many cities are now requiring new industrial and commercial developers to offset anticipated congestion with fees and extra efforts. Developers must also ensure that new buildings will accommodate telecommunication systems and offer ridesharing incentives such as: easy pedestrian access to public transit, convenient and safe off-street passenger loading areas and bus shelters.

Unfortunately, most employers currently are not required to share responsibility for the congestion their employees cause. Local ordinances are needed to require that major employers, including all federal, state, county, and local governments provide ride-sharing incentives.

All levels of government (city, county, state and federal) contribute greatly to congestion in downtown Los Angeles because of the large number of public sector employees. All government agencies should significantly stagger their work hours. In addition to improving rush hour traffic conditions, citizens would be better served by extended government hours. These extended hours would increase both freeway capacity and the utilization of public buildings at little additional cost. While some services must be performed exclusively during the day, government at all levels should investigate which services could be better performed early in the morning or at night.

At the worksite, free or low-priced parking must be replaced by transit passes, preferential parking for carpools and vanpools, and flexible work hours. Aggressive transportation management programs must be implemented in all congested business centers, with commuter assistance ranging from a ridesharing coordinator to private bus/vanpool networks, aggressive marketing programs and emergency commute assistance. In major employment centers, Transportation Management Associations should be formed to promote ridesharing, staggered work hours, coordinated individual employer efforts and to advocate for local transportation improvements.

Telecommuting

With the dawning of the telecommunications revolution, telecommuting is becoming a viable option for most governmental agencies and businesses. Recent advances in computer and telephone technology now provide an alternative to a long commute -- the "smart" neighborhood worksite equipped with commuter and communication equipment to link employees to their main office. Rather than traveling to the main office daily, employees could commute to a multiple-employer, high-tech work station near their home.

This futuristic vision is available today; it's known as telecommuting. But education and management acceptance are needed to encourage this very effective strategy.

Establishment of a model program for the "smart" worksite is recommended. Information developed from the model could be used to implement and market "smart" neighborhood worksite models throughout the county.

The wide-spread use of computers suggests that many workers could telecommute instead of fighting traffic

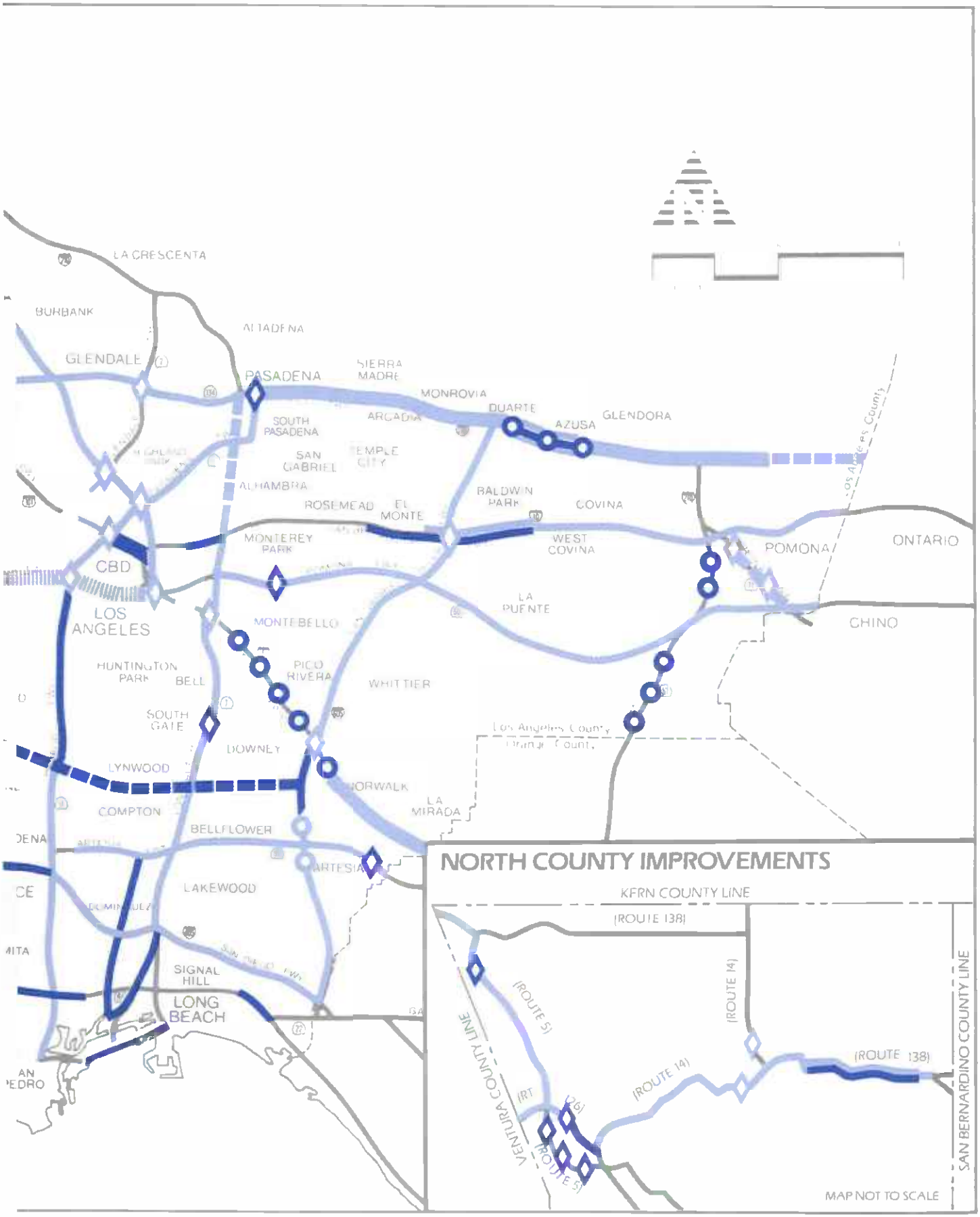
NEEDED CAPITAL IMPROVEMENTS

It will cost $4.5 billion to better operate the system and to construct needed short-term projects on our freeways and major state highways. After taking into account all of our existing financial commitments included in the State Transportation Improvement Program, and a reasonable estimate of additional federal and state money expected to be available in future years, we are faced with a shortfall of $1.5 billion for projects needed before the year 2000.

In the coming years we may also want to allocate money to make the freeways more compatible with their surroundings. Construction of soundwalls to reduce freeway noise in nearby homes and completion of landscaping on all of our urban freeways, such as the Artesia and Long Beach Freeways, are strongly supported by the affected communities. However, the costs of these projects have not been included in the report since they are not considered to be mobility improvements.

The following pages contain a summary of the problems, recommended improvements, and cost for each freeway corridor in Los Angeles. The freeways are discussed in alphabetical order. Where specific funding has been identified for a project, it is so noted. Other cost estimates have been derived from a recent Caltrans highway system study. The need to develop long-term strategies has been noted on twenty freeway corridors.


SAN FERNANDO
SIMI VALLEY
GRANADA HILLS
CANOGA PARK
RESEDA
THOUSAND OAKS
Ventura County
Los Angeles County
VAN NUYS
NORTH HOLLYWOOD
SHERMAN OAKS
HOLLYWOOD
TOPANGA
BEVERLY HILLS
WESTWOOD
CENTURY CITY
MALIBU
CULVER CITY
VENICE
MARINA DEL REY
LAX
HAWTHORNE
MANHATTAN BEACH
GARDENA
HERMOSA BEACH
TORRANCE
REDONDO BEACH
LOMITA
ROLLING HILLS
ON THE ROAD TO THE YEAR 2000
FREEWAY IMPROVEMENTS
KEY
FUNDED (in the 1988-92 TIP)
New Freeways
Freeway Widening
Ramps and Interchanges
Ramp Metering
PLANNED CONSTRUCTION
New Freeways
Freeway Widening
Ramps and Interchanges
Ramp Metering
"Smart Corridor" Demonstration


LA CRESCENTA
BURBANK
ALTADENA
GLENDALE
PASADENA
SIERRA MADRE
MONROVIA
DUARTE
AZUSA
GLENDORA
ARCADIA
SOUTH PASADENA
SAN GABRIEL
TEMPLE CITY
ALHAMBRA
ROSEMEAD
EL MONTE
BALDWIN PARK
COVINA
MONTEREY PARK
WEST COVINA
POMONA
ONTARIO
CBD
LOS ANGELES
MONTEBELLO
LA PUENTE
CHINO
HUNTINGTON PARK
BELL
PICO RIVERA
WHITTIER
SOUTH GATE
DOWNEY
Los Angeles County
Orange County
LYNWOOD
NORWALK
LA MIRADA
COMPTON
BELLFLOWER
ARTESIA
LAKEWOOD
SIGNAL HILL
LONG BEACH
NORTH COUNTY IMPROVEMENTS
KERN COUNTY LINE
(ROUTE 138)
(ROUTE 14)
(ROUTE 5)
VENTURA COUNTY LINE
(ROUTE 14)
(ROUTE 138)
SAN BERNARDINO COUNTY LINE
MAP NOT TO SCALE

ANTELOPE VALLEY FREEWAY (ROUTE 14)

EXISTING CONDITIONS

The Antelope Valley Freeway is one of two freeways serving rapidly growing northern Los Angeles County. In Los Angeles, the freeway extends 52 miles from the Kern County line to the Golden State Freeway.

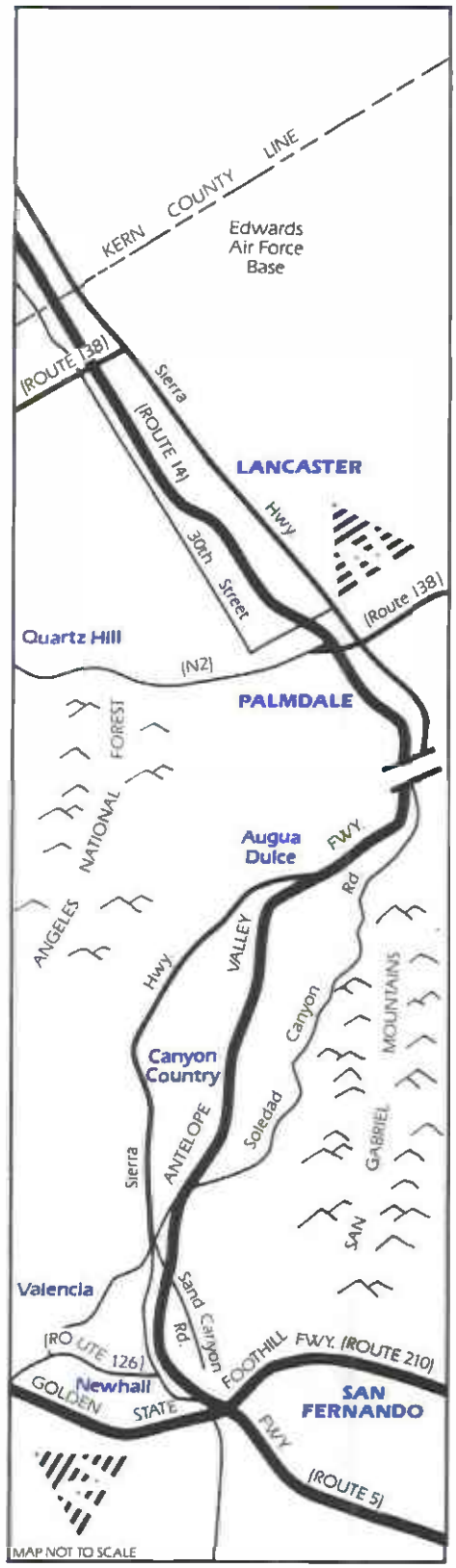
From the Kern County line, the Antelope Valley Freeway is a four lane wide freeway used by travelers from communities on the eastern side of the Sierra Mountains such as Mojave, Bishop and Mammoth. Commuter traffic is added to the freeway in Lancaster, Palmdale, and Quartz Hill. The freeway is also used by aerospace employees who work in Palmdale, Lancaster or at Edwards Air Force Base.

After traveling 18 miles through the sagebrush and suburbs of the Antelope Valley, the freeway crosses the San Gabriel Mountains. In the Santa Clarita Valley more commuter traffic uses the freeway which becomes six lanes wide as it crosses San Fernando Road (Route 126) in Newhall.

Because this part of the Antelope Valley Freeway was literally built through the middle of unstable rocky mountains with steep slopes, drivers must be alert for falling rocks. Frequent maintenance is required to remove the hazardous rocks from the freeway and off-ramps.

Both the population and traffic near the Antelope Valley Freeway is growing by about five percent a year, thus creating congestion where none exists today. With the expected growth it is anticipated that there may be a need for additional interchanges along the freeway.

The freeway ends at the Golden State Freeway, just north of the City of San Fernando.



RECOMMENDATIONS

Short-Term

Widen freeway segments to make a continuous sixth lane between Palmdale Boulevard (Route 138) and San Fernando Road (Route 126). Cost: $16.2 million

Construct a new freeway interchange at Avenue P-8, just north of Palmdale Boulevard and South of Avenue P. This work would require relocating the Avenue P interchange to 10th Street. Cost: Unknown

Widen the Sand Canyon Road overcrossing and reconstruct the eastbound on and off ramps. Cost: $1.8 million

NOT SHOWN

Request that the Southern California Association of Governments study what impact high growth in the Antelope and Santa Clarita Valleys will have on transportation facilities, including the Antelope Valley Freeway. Cost: Minimal

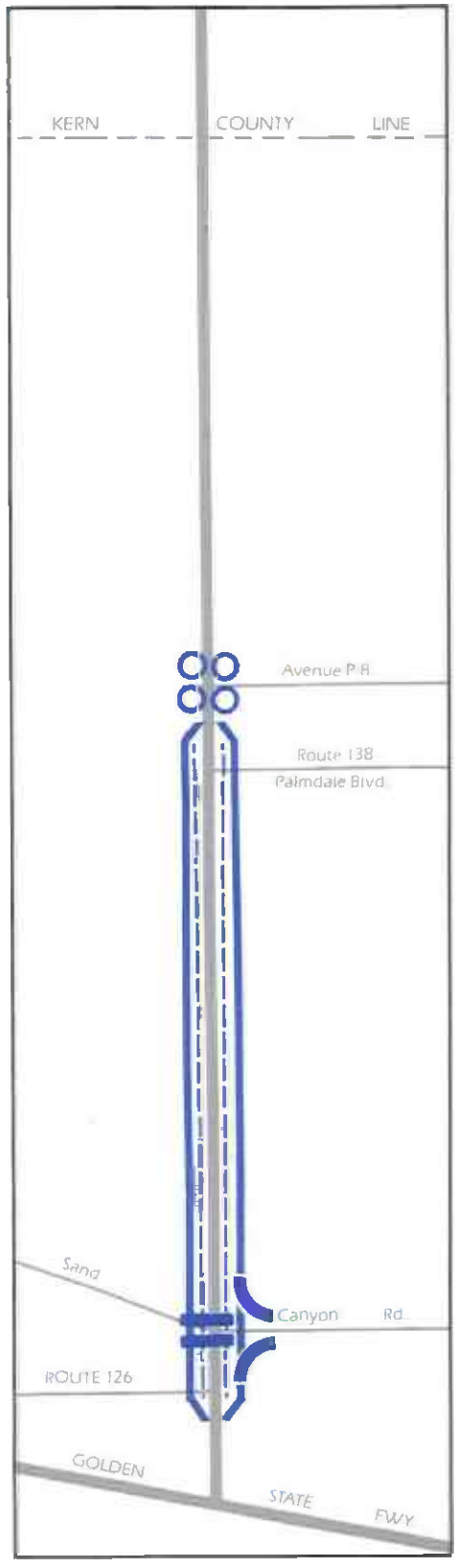
Total cost: $18 million plus unknown

New funds required: $18 million plus unknown

Long-Term

Implement study recommendations.

ANTELOPE VALLEY FREEWAY (ROUTE 14)



ARTESIA FREEWAY (ROUTE 91)

EXISTING CONDITIONS

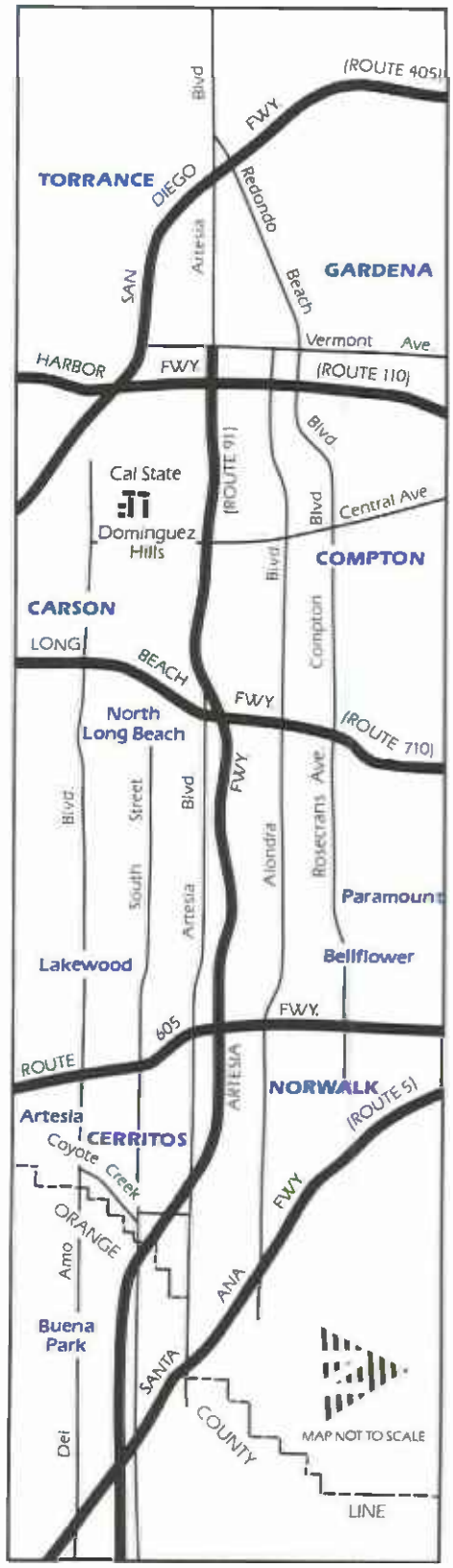
During rush hour, traffic on portions of the Artesia Freeway slows to 23 miles an hour. The Artesia Freeway is used heavily as a commuter route and also serves as the major east/west freight truck route connecting Los Angeles, Orange, Riverside and San Bernardino Counties. Trucks constitute 18 percent of the vehicles on the Artesia Freeway.

The Artesia Freeway starts west of the Harbor Freeway at the intersection of Artesia Boulevard and Vermont Avenue in Gardena. The interchange connecting the Harbor and Artesia freeways was just recently completed, greatly reducing congestion for commuters. Unfortunately, the Harbor Freeway is so congested that during the peak hour cars back up on the transition from the westbound Artesia to the northbound Harbor Freeway. This back up is expected to decrease once the Harbor Freeway bus and carpool lane is complete in the 1990's.

From the Harbor Freeway to the Long Beach Freeway, Artesia Freeway commuters from the communities of Los Angeles, Carson, Compton and North Long Beach encounter congestion between 6:00 and 8:00 a.m. in the morning and 3:00 and 6:45 p.m. in the evening.

Since June 1985, Caltrans has successfully tested an eastbound bus and carpool lane on the Artesia Freeway between Central Avenue and the 605 Freeway. The carpool lane carries 50 percent more people than a mixed flow lane without causing significant safety problems.

Since the nearest east-west freeway (the Santa Monica Freeway) is 11 miles to the north, many South-Central Los Angeles travelers use the Artesia Freeway. When the Century Freeway is complete in the early 1990's, many Artesia freeway travel-



ers are expected to divert onto the Century Freeway.

The Artesia Freeway, between the Long Beach and the 605 Freeway, serves residents of the cities of Long Beach, Lakewood, Paramount and Bellflower. Peak traffic flows east from 6:30 to 9:30 a.m. and west from 3:00 to 7:00 p.m.

From the 605 Freeway to the Orange County line, the freeway collects commuters from the cities of Cerritos, Artesia and Norwalk. Future speeds on the Artesia Freeway between the 605 Freeway and the Orange County line may slow from 49 to 33 miles per hour. Commuters transitioning from the southbound 605 Freeway to the eastbound Artesia Freeway are slowed down by an inadequate connection.

RECOMMENDATIONS

Short-Term

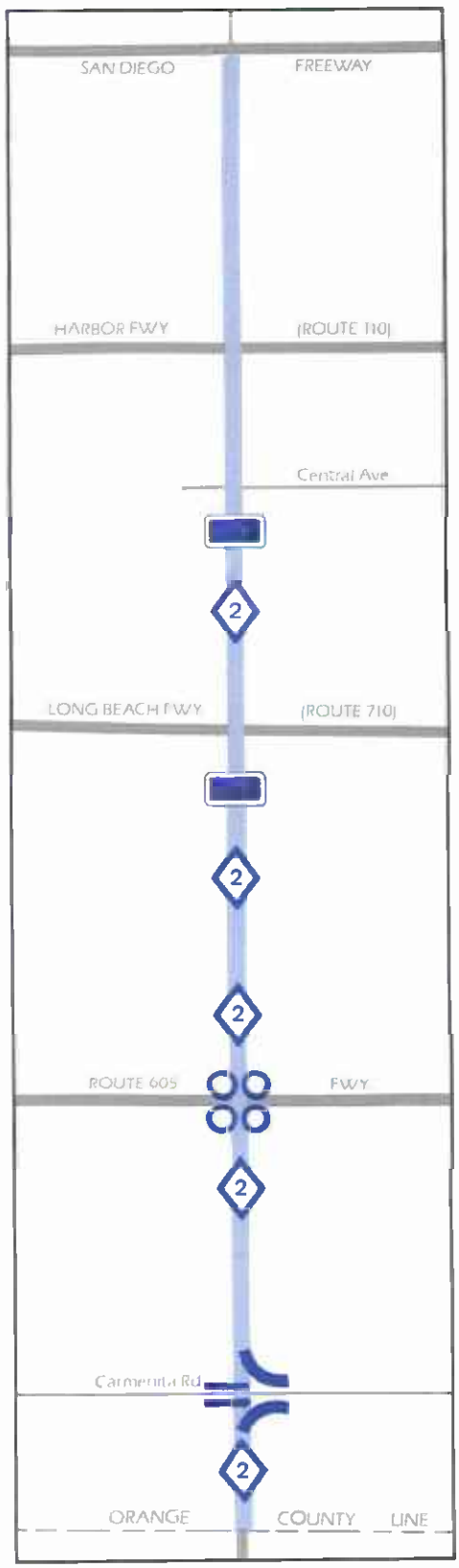
NOT SHOWN Change the status of the eastbound carpool lane between Central Avenue and the Route 605 Freeway from a temporary to a permanent basis. Expand the ridesharing coordination program in this area to increase the carpool lane use. Cost: Minimal

Create a westbound carpool lane between Central Avenue and 605 freeways by modifying the median and restriping where feasible. Cost: $0.5 million

Install automated traffic signs between Central Avenue and the Route 605 Freeway to relay information to motorists on carpool lane use. Cost: $4 million **Federal and state funds committed**

NOT SHOWN Complete the Century Freeway and Harbor Freeway Transitway. Cost: Included in the Century and Harbor Freeway descriptions.

ARTESIA FREEWAY (ROUTE 91)



Improve the Artesia/Route 605 Freeway to Freeway Interchange. Cost: $2 million

Construct an eastbound on and off-ramp and overcrossing from Bloomfield to Carmenita Avenue. Cost: $4.6 million. **Local funds committed**

Extend the carpool lane in both directions from the 605 Freeway to the Orange County line. Cost: $5 million

If the "Smart" corridor demonstration project is successful, add Artesia, Alondra, Del Amo and Redondo Beach Boulevards, South Street and other appropriate streets to the "Smart" Street system by computer coordinating traffic signals and freeway ramps. Cost: Included in "Streets" Chapter

Total cost: $16.1 million

New funding required: $7.5 million

Long-Term

Long term congestion solutions should be studied.

CENTURY FREEWAY (ROUTE 105)

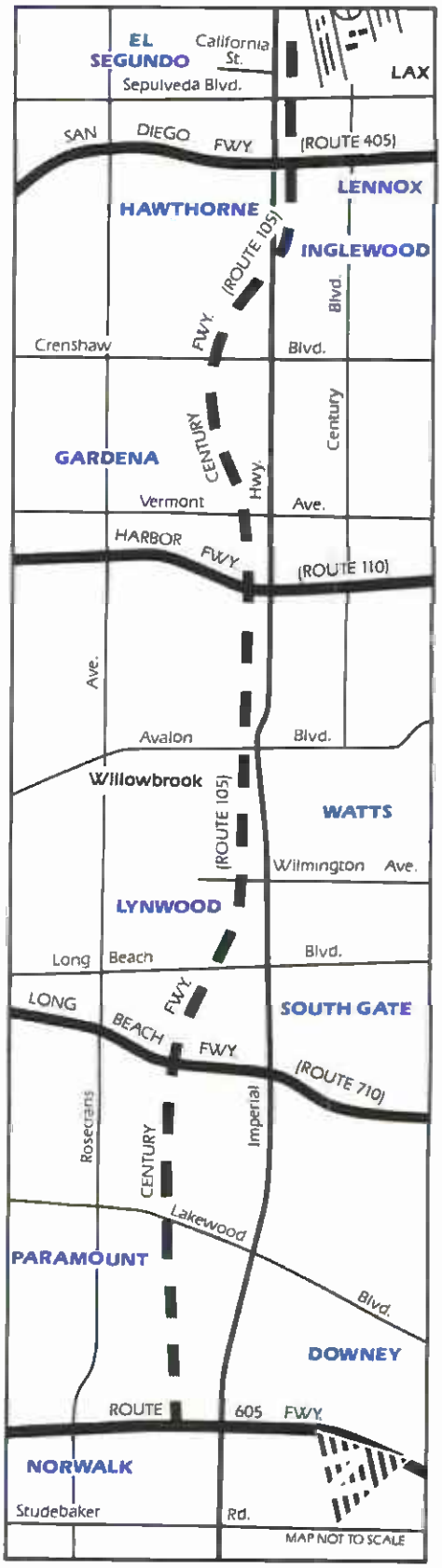
EXISTING CONDITIONS

The "bad news" about the Century Freeway is that it is needed now, yet construction of this 18-mile freeway will not be complete until the early 1990's. The "good news" is that the new freeway is being built as a model of twenty-first century commuting choice, with a six-lane freeway, carpool lanes in both directions and a rail transit line.

The freeway will run east/west between the cities of Norwalk and El Segundo. Hawthorne, Inglewood, Gardena, Lynwood, South Gate, Paramount, Downey and the City of Los Angeles communities of Lennox, Watts and Willowbrook will also be served by the new freeway. The freeway will also improve access to Los Angeles International Airport, Westchester, Inglewood, and Huntington Park employment and activity centers.

According to Caltrans, the freeway's peak period speeds in normal mixed flow lanes will be under 30 miles an hour, with light rail and carpool lane commuters enjoying free flow conditions. However, congestion should only last for one hour or less in each direction in the morning and in the evening.

Traffic currently traveling on the Santa Monica Freeway to the north and the Artesia and San Diego Freeways to the south may find that it is more convenient to take the Century Freeway once it is constructed.



RECOMMENDATIONS

Short-Term

Complete construction of the Century Freeway with the following improvements:

A light rail line in the center of the freeway.

A carpool lane next to the rail line in the freeway.

Three freeway lanes in each direction.

Interchanges with freeways and local streets.

The remaining cost to complete the freeway portion of the Century Freeway is estimated to be $981.7 million. **Federal and state funds committed**

If the "Smart" corridor demonstration project is successful, add Rosecrans Avenue, Century Boulevard, Imperial Highway and other major streets to the "Smart" street system of computer controlled traffic signals. Cost: Included in "Streets" Chapter

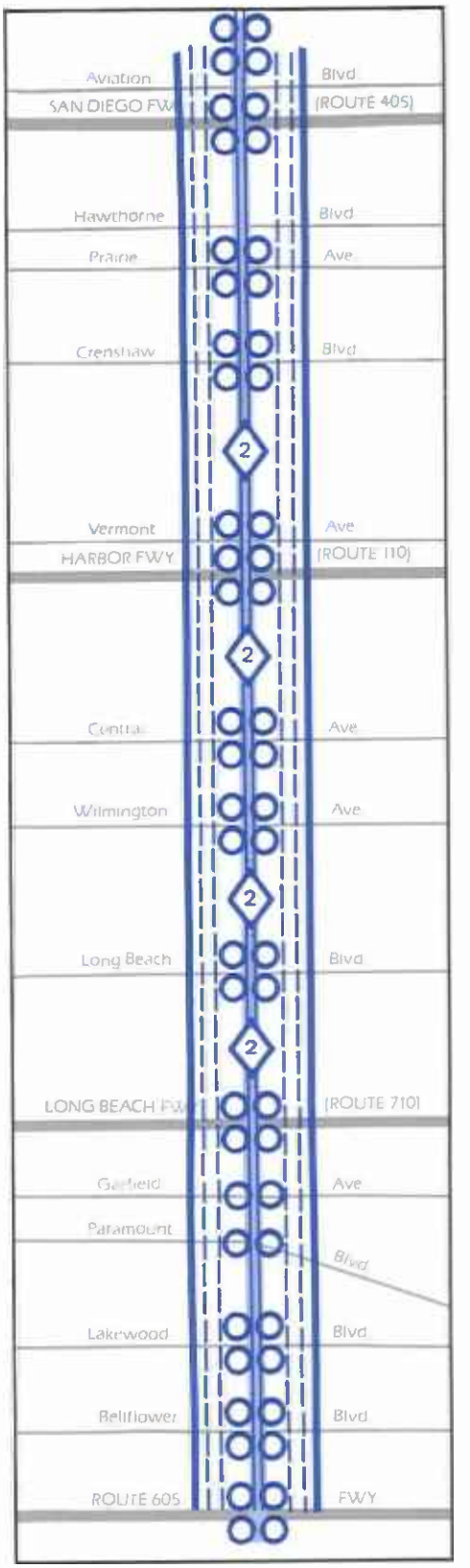
Total cost: $981.7 million

New funds required: None

Long-Term

No long-term improvements are recommended.

CENTURY FREEWAY (ROUTE 105)



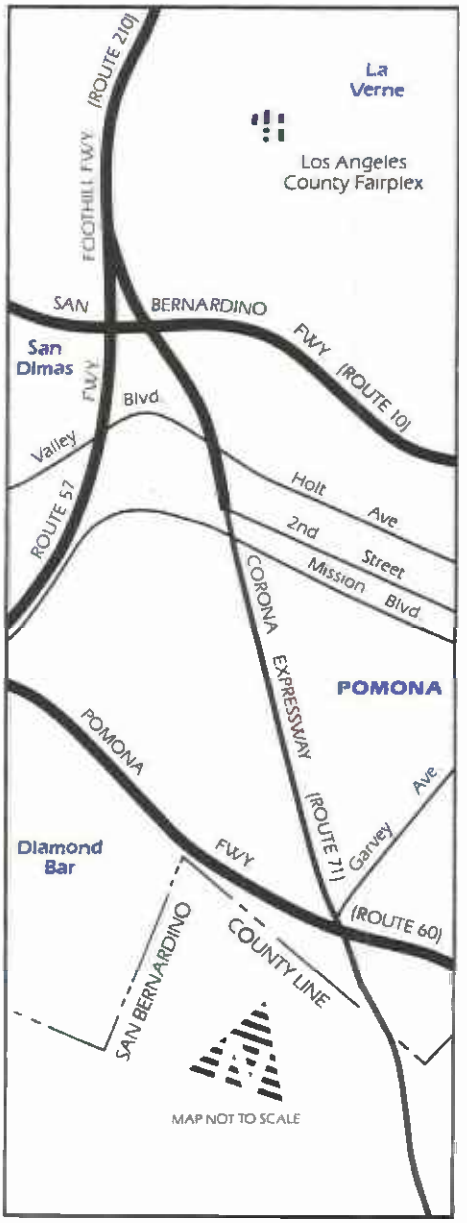
CORONA FREEWAY/EXPRESSWAY (ROUTE 71)

EXISTING CONDITIONS

The 1.3-mile Corona Freeway starts in San Dimas at the Foothill Freeway, and immediately crosses the San Bernardino Freeway and enters Pomona. The San Bernardino/ Corona Freeway (10/71) Interchange is incomplete. Northbound travelers cannot stay on the freeway to reach San Bernardino, and southbound travelers from San Bernardino cannot stay on the freeway to reach Pomona.

The freeway changes to an expressway at Second Street just north of Mission Boulevard. The 3.7-mile long expressway has four limited-access lanes and left-turn lanes at traffic signals. The Corona Expressway crosses the Pomona Freeway just before reaching the San Bernardino County line. A major problem on the Corona Expressway is the Interchange with the Pomona Freeway (Route 60/71 Interchange) which does not provide direct freeway connections.

Since the Corona Freeway and Expressway is located in one of the most rapidly growing areas in California, the number of vehicles using the freeway everyday is expected to triple in 20 years from 39,000 to 120,000. Normally, travelers on the mainline Corona Freeway/Expressway do not experience severe congestion, but, with these projected increases in traffic, future peak period speeds may average under 30 miles an hour.



RECOMMENDATIONS

Short-Term

- Complete the Interchange with the San Bernardino Freeway. Cost: $2.5 million

- Construct on and off ramps to Campus Drive from an existing connector ramp between the Corona and San Bernardino Freeways. Cost: $0.6 million **Local funds committed**

- Improve the Corona Expressway signal system from 9th Street to the Pomona Freeway by interconnecting, upgrading, and adding signals. Cost: $0.5 million **Federal, state and local funds committed**

- Construct an interchange at Rio Rancho Road. Cost: $4.4 million **Local funds committed**

- Make interim improvements to the Corona Expressway/Pomona Freeway Interchange. Cost: $25.0 million. **About $8.2 million of Federal, state and local funding is committed.**

- Construct a freeway between 2nd Street and the San Bernardino County Line. These added lanes should be evaluated for exclusive use by buses and carpools. Cost: About $87 million ($47 million to improve the Corona/Pomona Interchange and $40 million to improve the mainline freeway.)

- If the "Smart" corridor demonstration project is successful, add the Corona Expressway, or other appropriate streets, to the "Smart" street system by computer coordinating traffic signals and freeway ramps. Cost: Included in "Streets" Chapter.

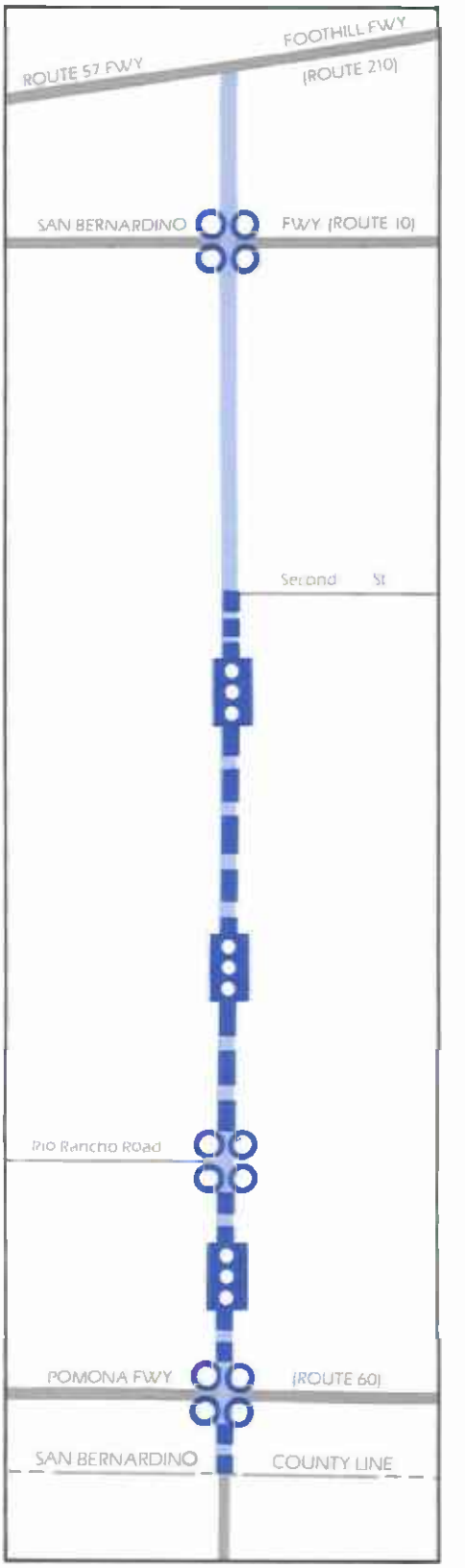
Total cost: $120 million

New funding required: $106.3 million

Long-Term

No long-term improvements are recommended.

CORONA FREEWAY/EXPRESSWAY (ROUTE 71)



FOOTHILL FREEWAY (ROUTES 30 & 210)

EXISTING CONDITIONS

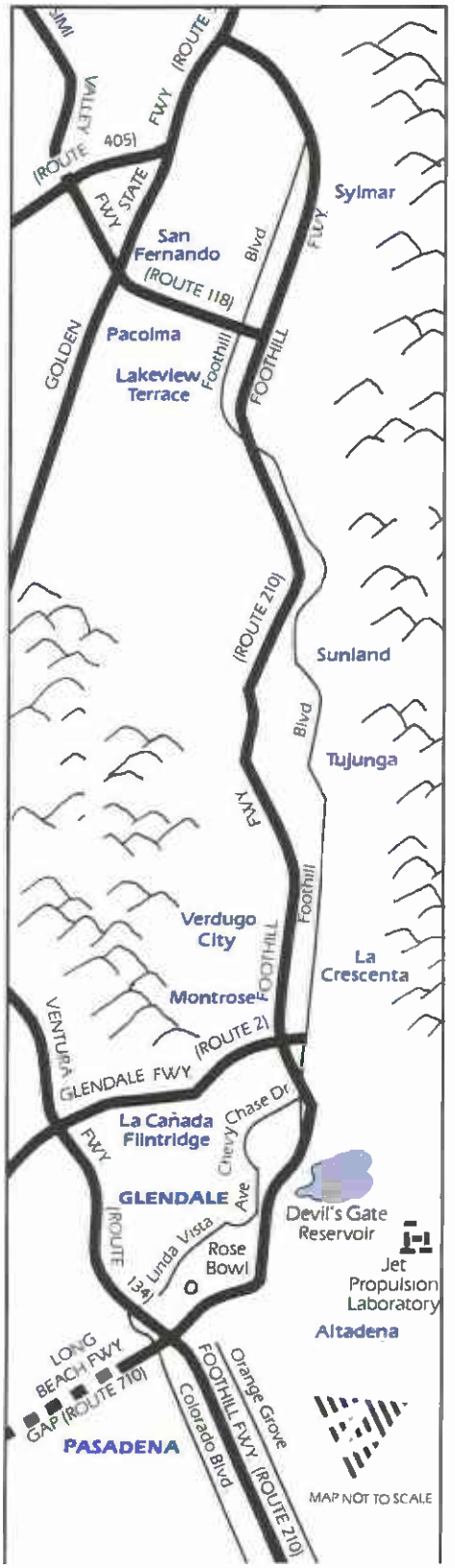
The Foothill Freeway hugs the foothills of the San Gabriel Mountains in northeastern San Fernando Valley and northern San Gabriel Valley for more than 48 miles. Future growth will make this freeway more congested.

The freeway's western end is at the Golden State Freeway in Sylmar. The freeway extends southeast through the city of San Fernando to the Simi Valley Freeway. Between the Simi Freeway and the Glendale Freeway, the six-lane Foothill Freeway passes through the communities of Pacoima, Lakeview Terrace, Sunland, Tujunga, La Crescenta, Verdugo Hills and Montrose. Congestion is virtually nonexistent on this portion of the freeway.

Continuing south, the Foothill Freeway crosses the Glendale Freeway in the City of La Canada/Flintridge and passes near Altadena. The Foothill Freeway makes a sharp turn to the east at its Interchange with the Ventura Freeway (Route 134) in Pasadena. The incomplete stub of the Long Beach Freeway extends to the south of this interchange. Between the Ventura and 605 freeways the eight-to-ten lane wide Foothill Freeway is congested from 6:30 to 8:15 a.m. with speeds of 39 miles an hour and 3:45 to 6:30 p.m. with speeds averaging 27 miles an hour. The freeway passes through the cities of Pasadena, Arcadia, Monrovia, and Duarte.

East of Route 605, the eight-to-ten-lane freeway passes through the cities of Azusa and Glendora. If there are no accidents, westbound speeds of 39 miles an hour in the morning between 6:30 and 8:15 are common. In the evening, eastbound speeds average 46 miles an hour.

East of Glendora, the Foothill Freeway splits, with part of the traffic continuing east on Route 30 and part veering south on Route 210. The southern branch of the



freeway extends 5 miles through San Dimas to the interchange of the San Bernardino, Corona and Orange freeways. The transition road, from eastbound Foothill Freeway to southbound branch, creates problems because it is only one lane wide.

The eastern branch of the freeway continues into the City of La Verne where it ends at Foothill Boulevard. This stretch of incomplete freeway is known as the Foothill Freeway gap. Because of high growth in this rapidly developing area, the Foothill Freeway needs to be extended east, into San Bernardino, to better serve residents of Claremont, La Verne and San Bernardino County. Baseline Road, (Route 30), is only two lanes wide in some locations and cannot carry all the projected traffic for this corridor.

RECOMMENDATIONS

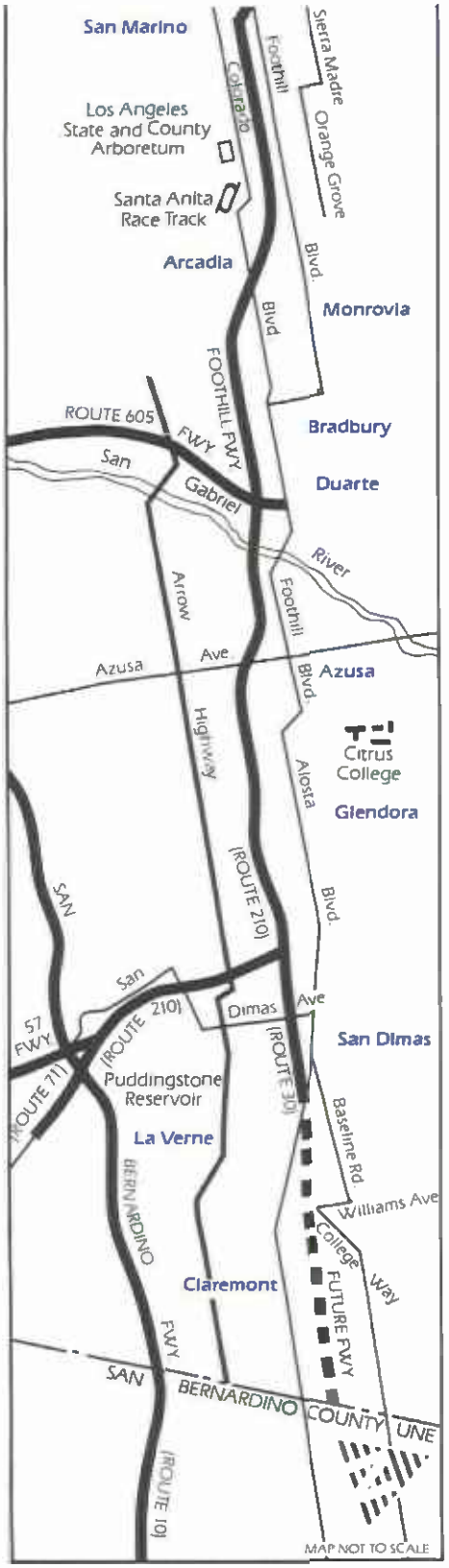
Short-Term

Widen the freeway between the Ventura and the Route 30 freeways by adding one lane in each direction. These added lanes should be evaluated for exclusive use by buses and carpools. Cost: $73.0 million

Construct eastbound on and westbound off ramps for the Fair Oaks Interchange. Cost $2.2 million. **Federal, state, and local funds committed**

Restripe the freeway to add a lane in each direction between Rosemead Boulevard and Azusa Avenue. Also add a westbound auxiliary lane. Cost: $5.5 million. **Federal and state funds committed**

Install westbound ramp meters and bypass lanes between the Route 605 Freeway and Route 30 (Foothill Freeway). Cost: $0.7 million **Federal and state funds committed**



Add on-and off-ramps at Bledsoe Street to improve access to Olive View Hospital. Cost: $3.5 million.

Complete the Route 30, Foothill Freeway, gap from Foothill Boulevard to the San Bernardino County line. At least one lane in each direction should be evaluated for exclusive use by buses and carpools. An environmental document is currently being prepared. Cost: $80.0 million

As an interim measure, until the freeway gap is complete, widen Baseline Road to four lanes between College Way and the San Bernardino County line Cost: $1.2 million **Federal, state and local funds committed**

As an interim measure, until the freeway gap is complete, widen Baseline Road to four lanes between Foothill Boulevard and College Way. Cost: $3.0 million

If the "Smart" corridor demonstration project is successful, add Foothill and Colorado boulevards, Huntington Drive, Baseline Road, College Way, Arrow Highway, Williams and Alosta avenues or other appropriate streets to the "Smart" street system by computer coordinating traffic signals and freeway ramps. Cost: Included in "Streets" Chapter.

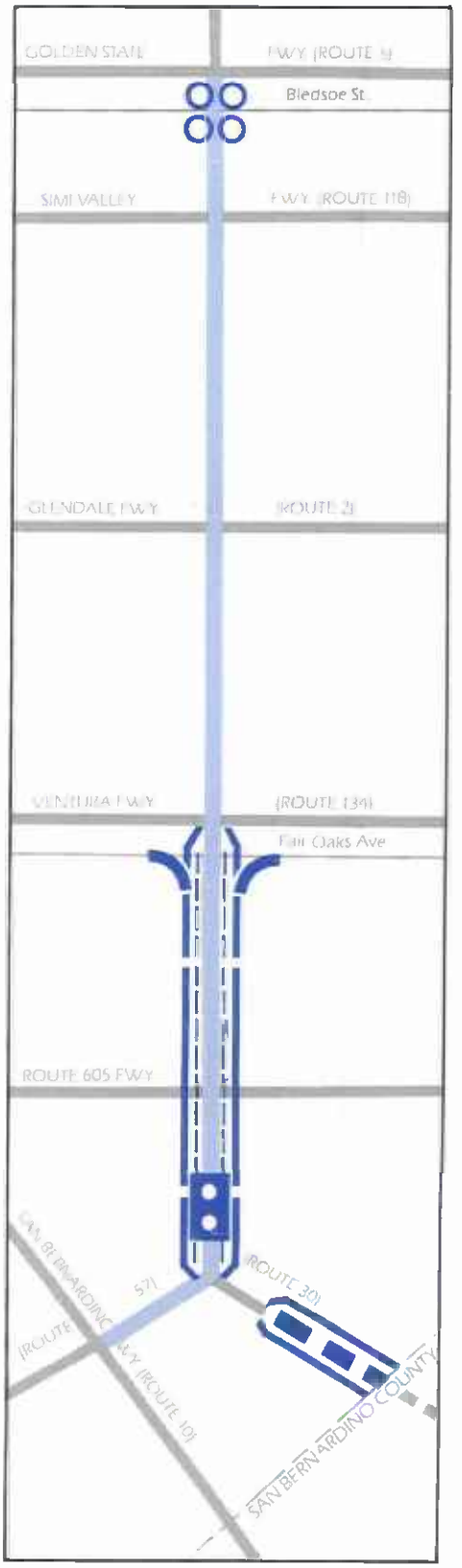
Total cost: $169.1 million

New funds required: $159.5 million

Long-Term

Study solutions to probable future Foothill Freeway congestion caused by high growth in the San Gabriel Valley and San Bernardino County.

FOOTHILL FREEWAY (ROUTES 30 & 210)



GLENDALE FREEWAY (ROUTE 2)

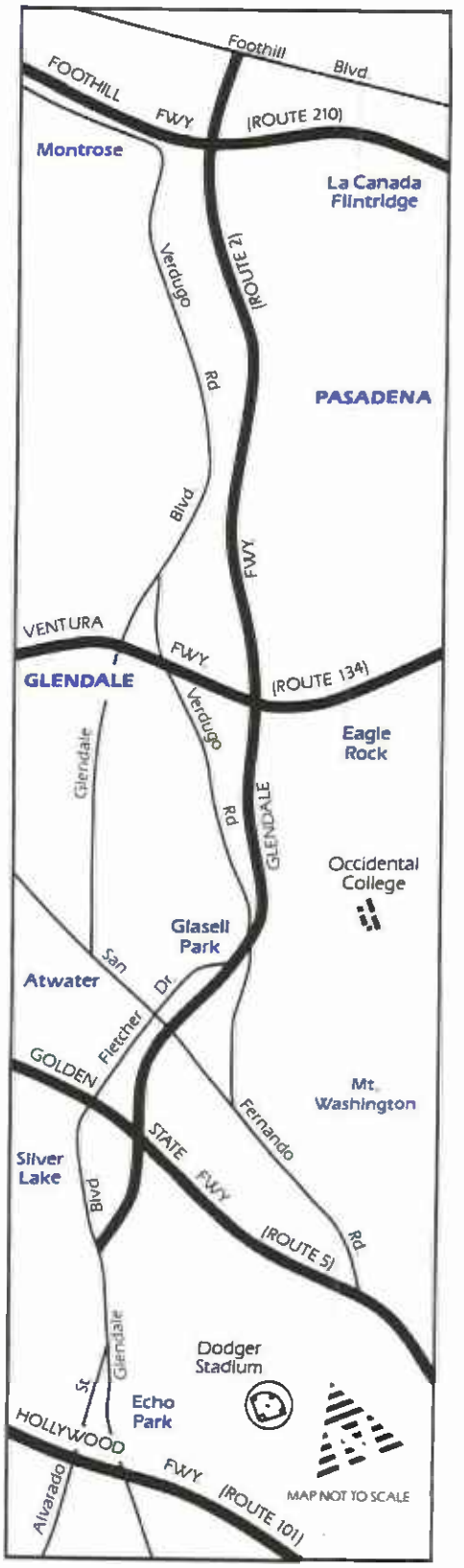
EXISTING CONDITIONS

The Glendale Freeway extends nine miles between Foothill Boulevard, just north of the Foothill Freeway in La Canada-Flintridge to Glendale Boulevard in the Silver Lake area of Los Angeles. This eight-lane freeway carries residents of La Canada-Flintridge, Montrose, Pasadena and Glendale to shopping and commercial areas of downtown Los Angeles. To actually get into downtown Los Angeles, Glendale Freeway users must either take the Golden State Freeway or surface streets.

Between the Foothill and the Ventura Freeways, the Glendale Freeway is relatively uncongested during the peak hour. This lack of congestion is probably due to the proximity of the south-bound stretch of the Foothill Freeway, ranging from one to three miles to the east, and the lack of major work centers along this stretch.

From the Ventura Freeway, south to the Golden State Freeway, the Glendale Freeway serves the communities of Glendale, Eagle Rock, Glassell Park, and Atwater. This area is expected to experience rapid growth in the near future. However, the freeway is still relatively uncongested, due to the proximity of the Golden State Freeway to the west and the Pasadena Freeway to the southeast. Traffic slows at both the Ventura and Golden State Freeways due to inadequate interchanges.

The Glendale Freeway ends one mile south of the Golden State Freeway in the community of Silver Lake. From the freeway's terminus, Dodger Stadium is about one-and-one-half miles away, and downtown Los Angeles is about three miles away. The freeway was not extended south to the Hollywood Freeway because residents were concerned about the proposed freeway disrupting their community.



Not having a direct southbound freeway causes problems for southbound Glendale freeway travelers in the morning peak period, which lasts from 7:15 to 8:00 a.m. Speeds average 27 miles an hour if no accident occurs. The freeway congestion is caused by commuters waiting to leave the freeway's southern terminus and travel south on Glendale Boulevard and Alvarado Street which cannot accommodate the freeway traffic.

RECOMMENDATIONS

Short-Term

No improvements to the mainline Glendale Freeway are proposed.

Widen the transition to two-lanes from southbound Glendale Freeway to the westbound Ventura Freeway (Route 134). Cost: $2 million

Improve the Glendale/Golden State Freeway Interchange Cost: $2 million

If the "Smart" corridor demonstration project is successful, add Glendale Boulevard, Verdugo Road, Fletcher Drive, San Fernando Road, Alvarado Street or other appropriate streets to the "Smart" Street system by computer coordinating traffic signals and freeway ramps. Cost: Included in "Streets" Chapter

Total cost: $4 million

New funding required: $4 million

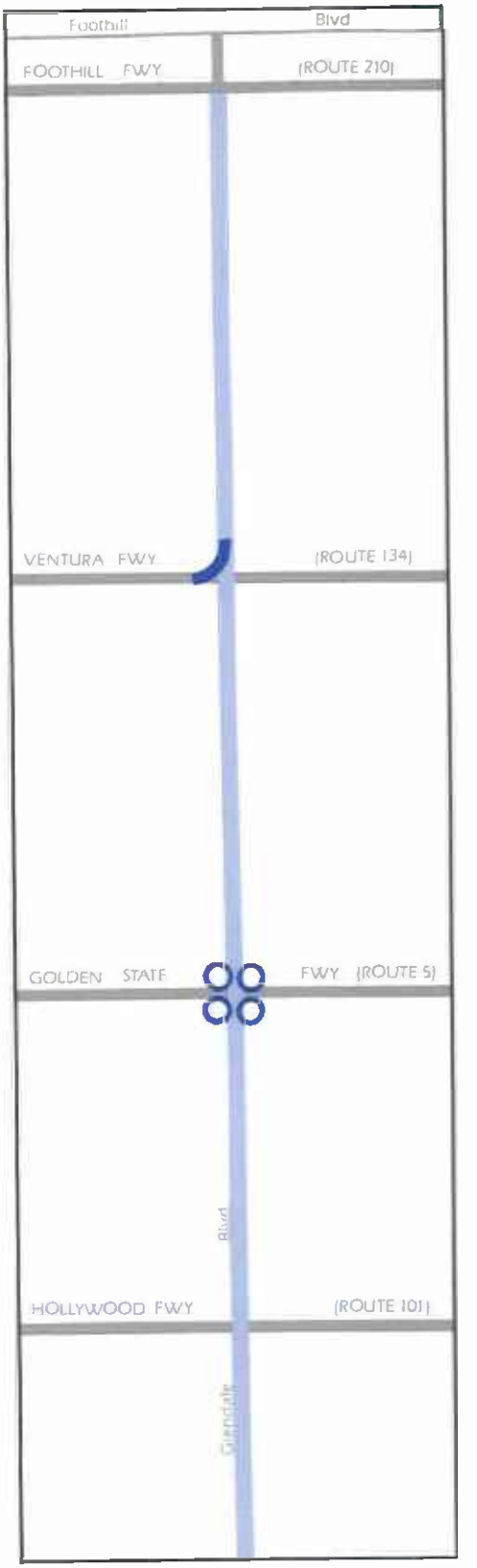
Long-Term

When implemented, the Los Angeles to Glendale Proposition A Rail Corridor should help relieve congestion on the Glendale Freeway.

A long-term solution to congestion at the southern terminus of the current freeway in Silver Lake should be found.

The need for a downtown bypass should be evaluated, in light of current transit projects to serve downtown such as Metro Rail, the Harbor Transitway, and the Long Beach-Pasadena Light Rail Line.

GLENDALE FREEWAY (ROUTE 2)



GOLDEN STATE FREEWAY (ROUTE 5)

EXISTING CONDITIONS

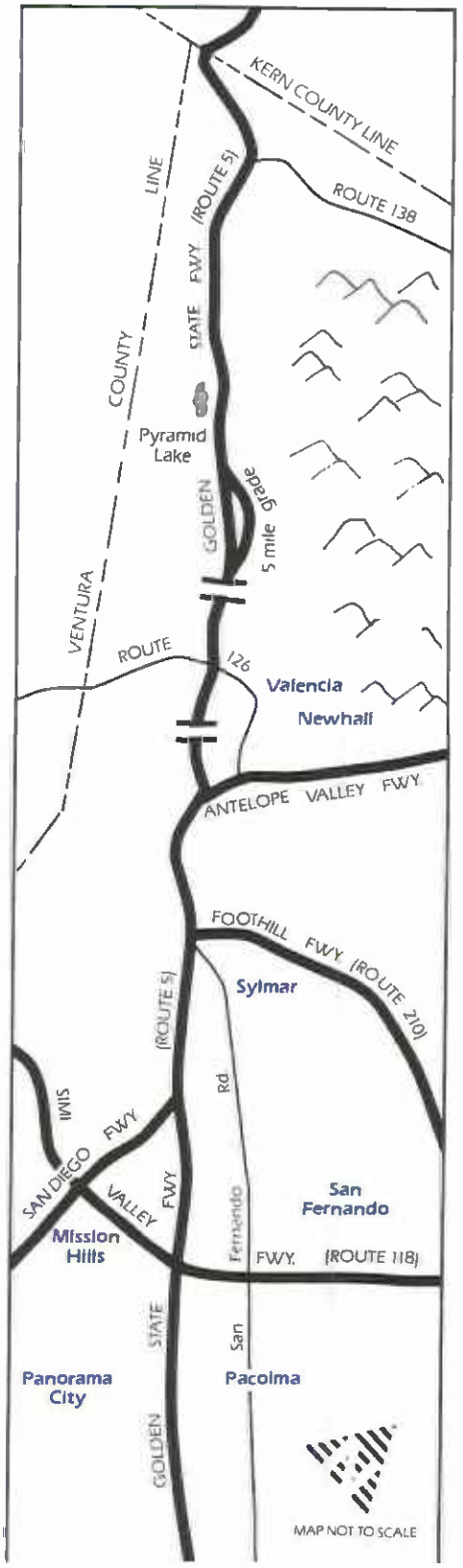
In the northern part of the county, between the Kern County line and Route 126 in Valencia, the Golden State Freeway serves as a major intercity route connecting Los Angeles to central and northern California.

Forty percent of all vehicles on the Golden State Freeway north of Route 126 are trucks. About one-third of all trucks traveling on the Golden State north of Route 126 are carrying hazardous material. As expected, the high volume of truck traffic and hazardous material movement makes this eight-lane freeway prone to closure and congestion due to accidents. The freeway is also occasionally closed in the winter due to snow. The steep grades on the Golden State Freeway cause conflicts between trucks and passenger vehicles.

Once it enters urbanized Los Angeles the freeway is used by commuters from the communities of Valencia, Newhall, Sylmar and San Fernando who are bound for employment/activity centers farther south. The freeway widens from six to 12 lanes in 15 miles and intersects with six freeways and expressways; Route 126, Antelope Valley Freeway, Foothill Freeway, San Diego Freeway, Simi Valley Freeway and the Hollywood Freeway.

Between the Simi Valley and the Hollywood Freeways the Golden State Freeway serves commuters from the residential areas of Pacoima, Mission Hills and Panorama City. The freeway is ten lanes wide at this location and has congestion that lasts from 6:45 to 8:15 a.m. (southbound) and from 4:45 to 6:30 p.m. (northbound). Morning speeds average 24 miles an hour and evening speeds average 36 miles an hour.

From the Hollywood Freeway (Route 170) to the Ventura Freeway (Route 134), the Golden State Freeway passes through the communities of Sun Valley and Burbank. This area



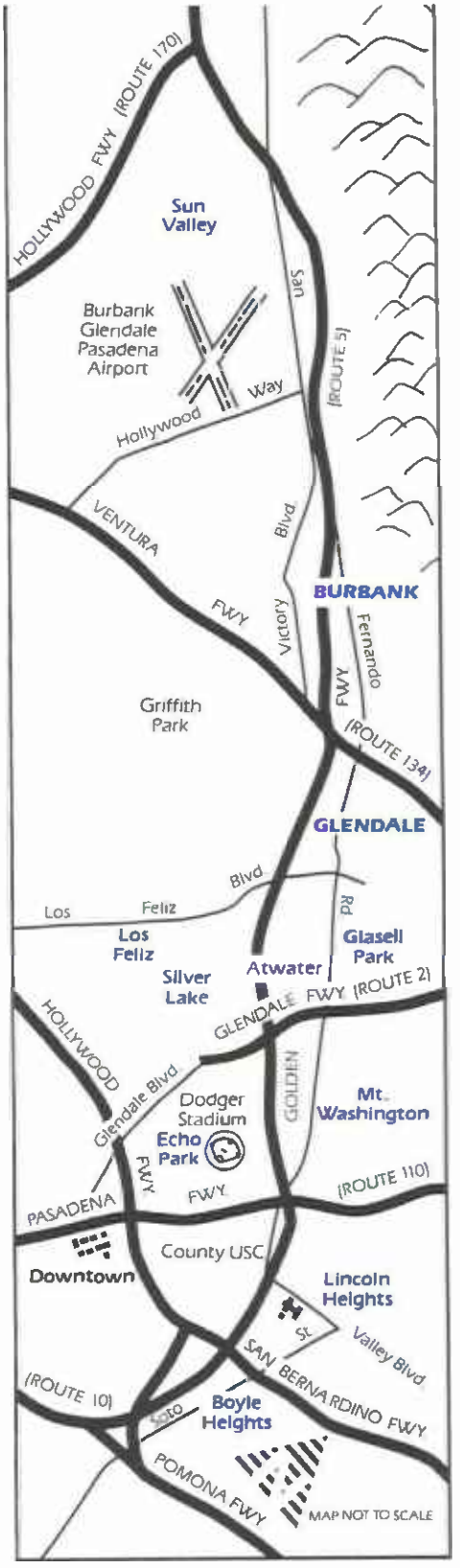
is expected to experience rapid growth in the near future. Airline passengers use the Golden State to get to the Burbank-Glendale-Pasadena Airport. Peak hour congestion occurs near the Hollywood Way exit because of airport and Lockheed traffic.

Between the Ventura and the Glendale Freeways, the Golden State Freeway is eight lanes wide and carries 146,000 vehicles, nearly one-third more than the freeway segment immediately to the north. Congestion lasts from 7:15 to 8:15 a.m. Additional congestion is caused by vehicles lining up on the freeway to exit at Los Feliz Boulevard. The freeway passes the City of Los Angeles' Griffith Park and the communities of Los Feliz, Silver Lake, Atwater and Glassell Park.

Between the Glendale and the Pasadena Freeways the Golden State Freeway passes through the communities of Echo Park and Mount Washington. The Glendale/Golden State Freeway Interchange is dangerous due to excessive weaving of vehicles entering or exiting at Stadium Way then crossing lanes to make the transition to or from the Glendale Freeway. The freeway is ten lanes wide and southbound speeds of 25 miles an hour last from 6:45 to 9:30 a.m. Major congestion is caused on the Golden State Freeway by an outdated and inadequate interchange with the Pasadena Freeway.

Between the Pasadena Freeway and the San Bernardino Freeway congested speeds of 24 miles an hour are common between 7:30 and 9:00 a.m. The Golden State freeway serves Downtown Los Angeles and Lincoln Heights. The freeway is congested, as are all downtown freeways, due to both the high volumes of traffic and problems exiting onto local streets.

In Boyle Heights, between the San Bernardino Freeway and the East Los Angeles Interchange, the Golden State Freeway remains congested, with speeds just over 30 miles an hour for four-and-one-half hours every day. The Golden State Freeway ends at the East Los Angeles Interchange (the junction of the Golden State, Santa Ana, Santa Monica, and Pomona Freeways). However, Route 5 continues southeast as the Santa Ana Freeway.



RECOMMENDATIONS

Short-Term

Add truck climbing lanes between Route 126 and the Kern County line. Cost: $7.9 million

Construct Interchange near Pyramid Lake. Cost: $5.4 million **Federal and state funds committed**

Construct ramps at Rye Canyon. Cost: $0.6 million **Local funds committed**

Modify interchange at McBean Parkway. Cost: $1.8 million **Local funds committed**

Widen overcrossing at Lyons Avenue. Cost: $ 1.6 million **Federal, state and local funds committed**

Improve the Simi Valley/Golden State freeway Interchange in two projects. Cost: Included in Simi Valley Freeway description

Widen the freeway to add a lane in each direction between the Simi Valley and the San Bernardino Freeways. Cost: $156 million

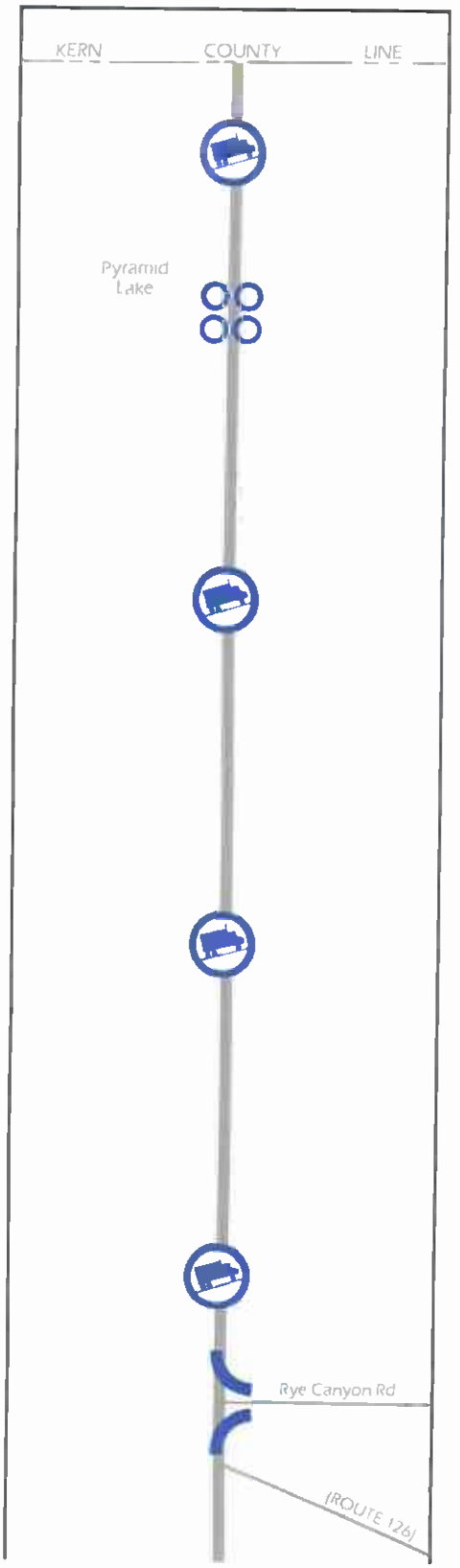
Add north and southbound auxiliary lanes between Roscoe Boulevard and Lanark Street. Cost: $0.4 million **Federal and state funds committed**

Restripe to make a southbound 6th lane from the Hollywood Freeway (Route 170) to Van Nuys Boulevard Cost: $3.7 million **Federal, state and local funds committed**

Improve the Glendale/Golden State Freeway Interchange. Cost: $2 million

Improve the Interchange of the Southbound Golden State/Pasadena Freeways. Cost: $5 million. Evaluate the viability of creating one or more high capacity routes connecting Downtown Los Angeles and the Golden State Freeway before revising this Interchange. Cost: Unknown

GOLDEN STATE FREEWAY (ROUTE 5)



Test peak-hour-only operation of a second lane on the southbound Golden State to southbound Pasadena Freeway Cost: Minimal

Improve the San Bernardino/Golden State Freeway Interchange. Cost: $2 million

Improve the East Los Angeles Interchange (Intersection of Golden State, Santa Ana, Santa Monica, and Pomona Freeways.) Cost: Included in Pomona Freeway Description

Conduct a test to determine if limiting freight truck operation on the Golden State during peak commuting periods will improve commuting conditions. As part of this project, also allow truck deliveries to be made at different times. Cost: Minimal.

If the "Smart" corridor demonstration project is successful, add San Fernando Road or other appropriate streets to the "Smart" Street system by computer coordinating traffic signals and freeway ramps. Cost: Included in "Streets" Chapter

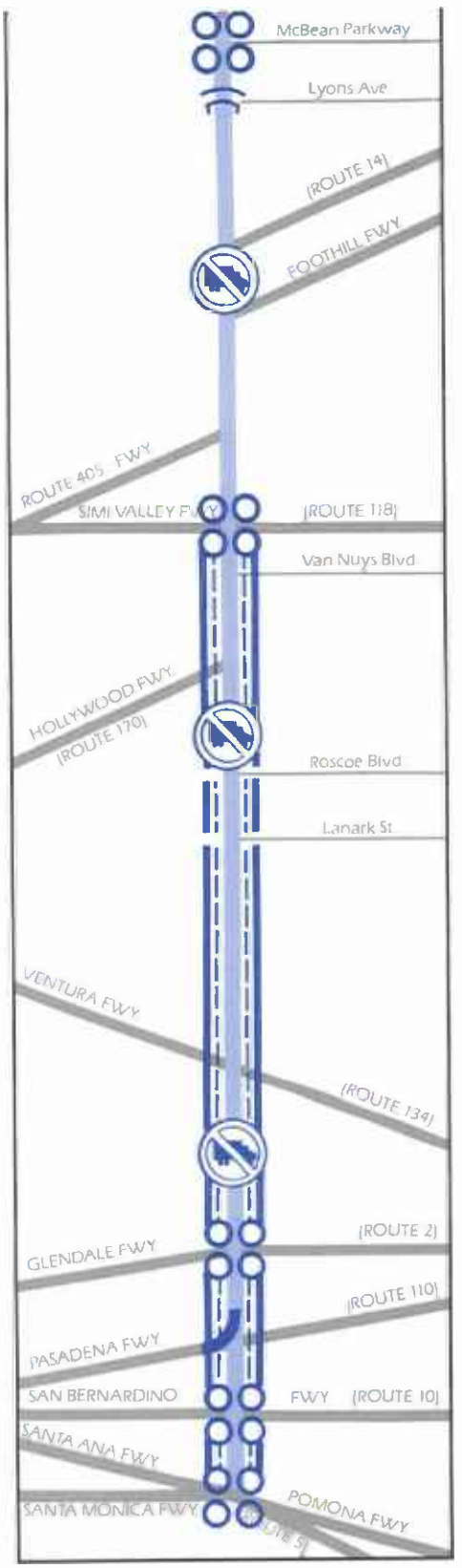
Total Short-Term Cost: $181.4 million plus unknown

New funds required: $167.9 million plus unknown

Long-Term

The Los Angeles to Glendale Proposition A Rail corridor should help relieve congestion on the Golden State Freeway when it is constructed.

GOLDEN STATE FREEWAY (ROUTE 5)



HARBOR FREEWAY (ROUTE 110)

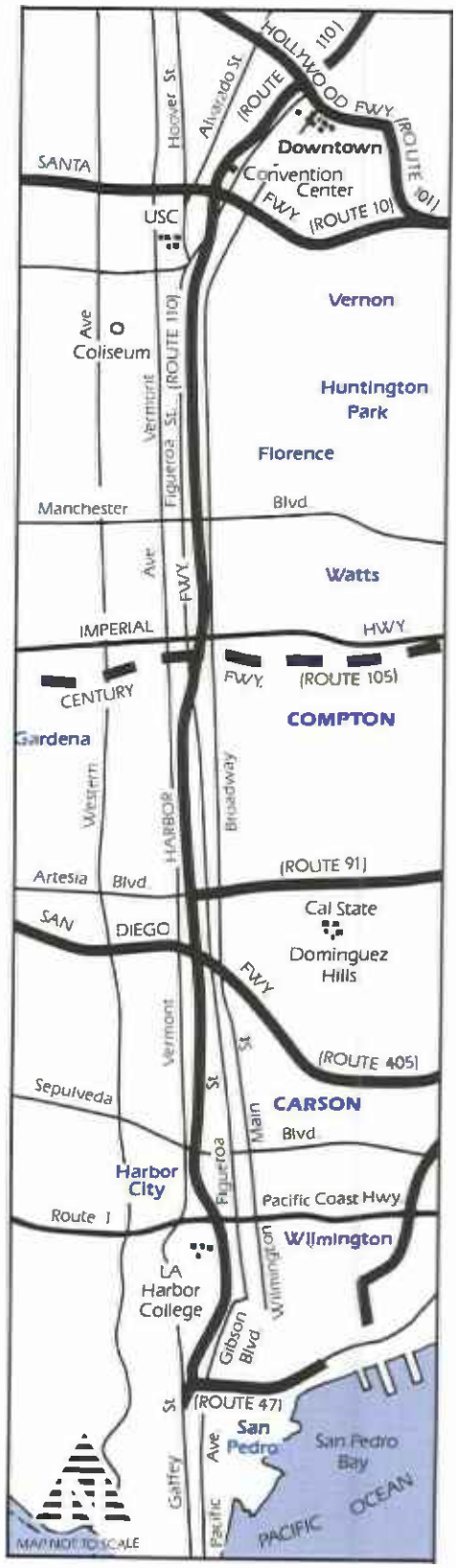
EXISTING CONDITIONS

The Harbor Freeway connects downtown Los Angeles with the Port of Los Angeles.

The 24 mile north-south freeway starts at the Hollywood/Santa Ana/Pasadena Freeway Interchange. The worst section of the Harbor Freeway is here, between the Hollywood/Santa Ana and the Santa Monica freeways. In this location, the Harbor freeway is 12 lanes wide and carries nearly 228,000 vehicles each day. During the nine hour peak period speeds of 15 miles an hour are common.

South of the Santa Monica Freeway, the Harbor Freeway narrows to eight lanes. More than 190,000 vehicles use the freeway between the Santa Monica and the Artesia Freeways. Congested speeds of 30 miles an hour occur between 6:30 and 10:00 a.m. and 2:45 and 7:00 p.m., almost eight hours a day. Just south of the Santa Monica Freeway, accidents occur nearly three times more frequently than on similar freeways throughout California. Between the Santa Monica Freeway and the Artesia Freeway, the Harbor Freeway serves the communities of Florence, Watts, Gardena, Compton, and unincorporated county areas. The Century Freeway, which is currently under construction, will intersect the Harbor Freeway near Imperial Highway. When complete, the Century Freeway may increase Harbor Freeway congestion.

Caltrans recently finished the Harbor/Artesia Freeway Interchange connection project. In the morning, northbound commuters usually slow to speeds averaging 33 miles an hour here. Between the San Diego Freeway and the Terminal Island Freeway (Route 47), the Harbor Freeway serves the communities of Carson, Wilmington, Harbor Gateway, Harbor City and San Pedro. Many truck and commuter trips on the Harbor Freeway are Port-related.



Short-Term

Construct an additional southbound transition lane between the Hollywood Freeway and 2nd Street. Cost: $0.6 million **Federal and state funds committed**

Construct a southbound auxiliary lane between 7th Street and Pico Boulevard. Cost: $1.7 million. **Federal, state and local funds committed**

Low cost improvements to improve the transition from the eastbound Santa Monica to the northbound Harbor Freeway should be examined. Cost: Unknown

Construct the Harbor Freeway Transitway (an elevated bus and carpool lane) extending from the Los Angeles Convention Center on Pico Boulevard to the Century Freeway. Cost: $209.7 million **Federal and state funds committed**

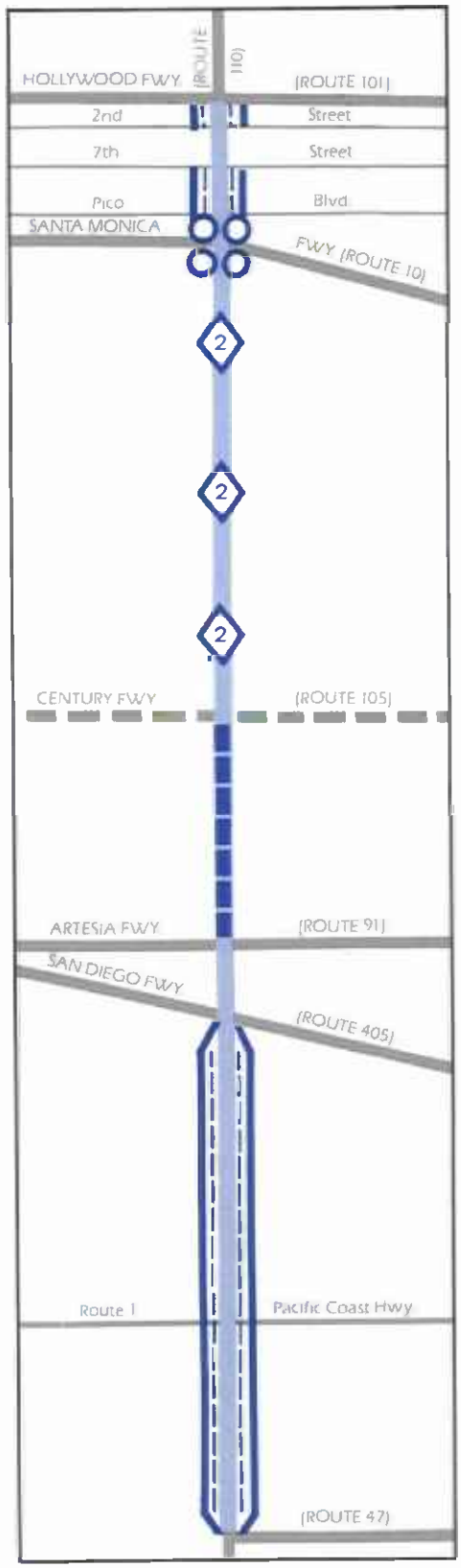
Extend the Harbor Freeway Transitway from the Century to the Artesia freeways. Also widen from the Artesia Freeway to the Terminal Island Freeway. Cost: $277.9 million

Add a lane northbound from Sepulveda Boulevard to the San Diego Freeway. Cost: $10.3 million.

NOT SHOWN

Complete the Los Angeles to Long Beach commuter rail project which is being built with funds from the County's 1/2 cent sales tax for transit. This project will reduce congestion by transferring peak hour commuters from the freeway to the train.

HARBOR FREEWAY (ROUTE 110)



If "Smart" corridor demonstration is successful, add Figueroa and Gaffey Streets, Vermont, Pacific and Western Avenues, Wilmington Avenue, Main Street, Broadway, or other appropriate streets to the "Smart" street system of computer controlled traffic signals and freeway ramps. Cost: Included in "Streets" Chapter

Total cost: $500.2 million plus unknown

New funds required: $288.2 million plus unknown

Long-Term

1. The Harbor Freeway Transitway is being designed to be convertible to a rail transit line. If the rail conversion takes place, the rail line would connect with other rail lines at 12th Street.

2. Improve access to the freeway network to serve projected demand west of the Harbor Freeway.

HOLLYWOOD FREEWAY (ROUTES 101 & 170)

EXISTING CONDITIONS

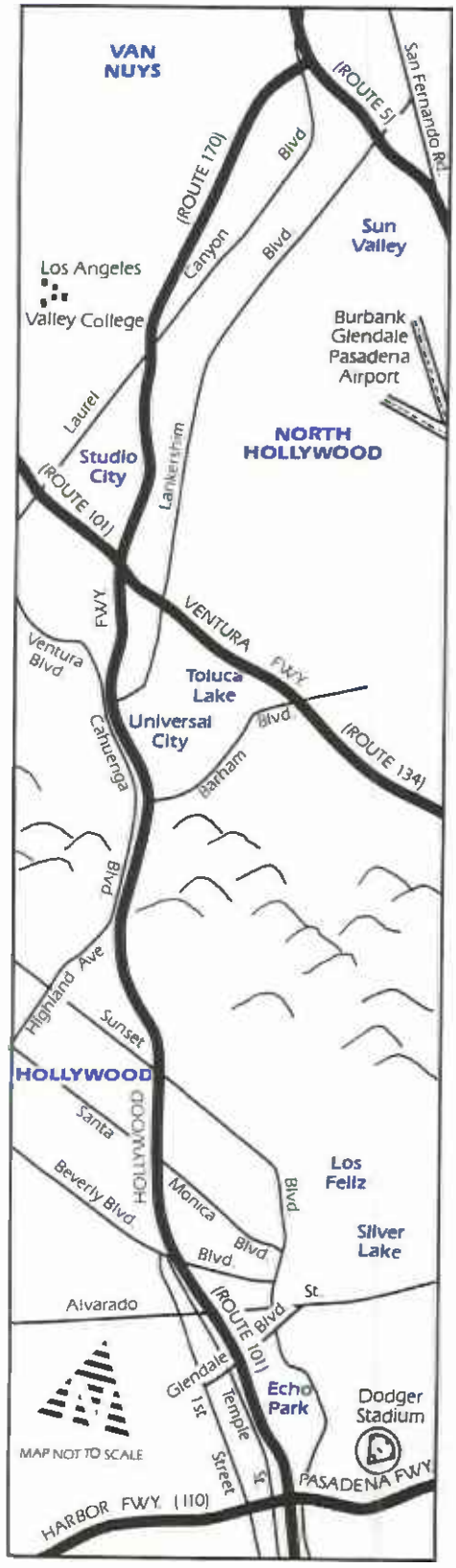
The Hollywood Freeway starts in the middle of the San Fernando Valley at the Golden State Freeway. It serves Van Nuys, Glendale, Hollywood, Wilshire, and downtown Los Angeles.

From the Golden State Freeway to the Ventura Freeway the Hollywood Freeway is called Route 170. It is eight lanes wide and carries 85,000 vehicles each day. Many of the commuters using this freeway reside in nearby Sun Valley, North Hollywood, or Van Nuys and work at locations farther south. Current peak hour speeds average 40 to 50 miles an hour. However, the interchange with the Ventura Freeway is congested with speeds of 30 miles per hour for up to four hours each day. In addition, the Interchange between the Ventura and Hollywood Freeways was never finished, leaving commuters trying to travel from the southbound Hollywood to the westbound Ventura or from the eastbound Ventura to the northbound Hollywood, stuck in local street traffic.

South of the Ventura Freeway the Hollywood Freeway is renumbered as the 101. The freeway serves the communities of Studio City, Universal City, Toluca Lake, Hollywood, Los Feliz, Silver Lake, and Echo Park on its way to downtown Los Angeles.

Although the Hollywood Freeway remains only eight lanes wide, it now carries almost three times as many vehicles as the segment north of the Ventura Freeway -- 217,000 on an average day. Most of the commuters are attempting to travel south towards Downtown Los Angeles in the morning and to return north in the evening. Southbound congestion can last from 6:30 to 10:00 a.m. and northbound congestion can last from 3:00 to 7:30 p.m. Current peak hour speeds are about 30 miles an hour.

The Hollywood Freeway ends downtown, at the interchange of the Pasadena, Harbor and Santa Ana Freeways.



RECOMMENDATIONS

Short-Term

Install ramp meters between the Golden State and Ventura Freeways. Cost: $1.0 million

Improve the Ventura/Hollywood Freeway Interchange including providing for direct connections between the Hollywood southbound and the Ventura westbound, and between the Ventura eastbound and the Hollywood northbound. Cost: Unknown

Construct northbound on-ramps at Barham Boulevard. Cost: $3.1 million **Local funds committed**

Construct auxiliary connectors from the Hollywood to the Harbor Freeway. Cost: Included in Harbor Freeway description.

NOT SHOWN Undertake a study of the scope of improvements needed to improve Hollywood Freeway access to downtown.

If the "Smart" corridor demonstration project is successful, add Laurel Canyon, Sunset, Beverly, Lankershim, Ventura and Cahuenga boulevards, Macy Street and Temple Street to the "Smart" street system by computer coordinating traffic signals and freeway ramps. Cost: Included in "Streets" Chapter

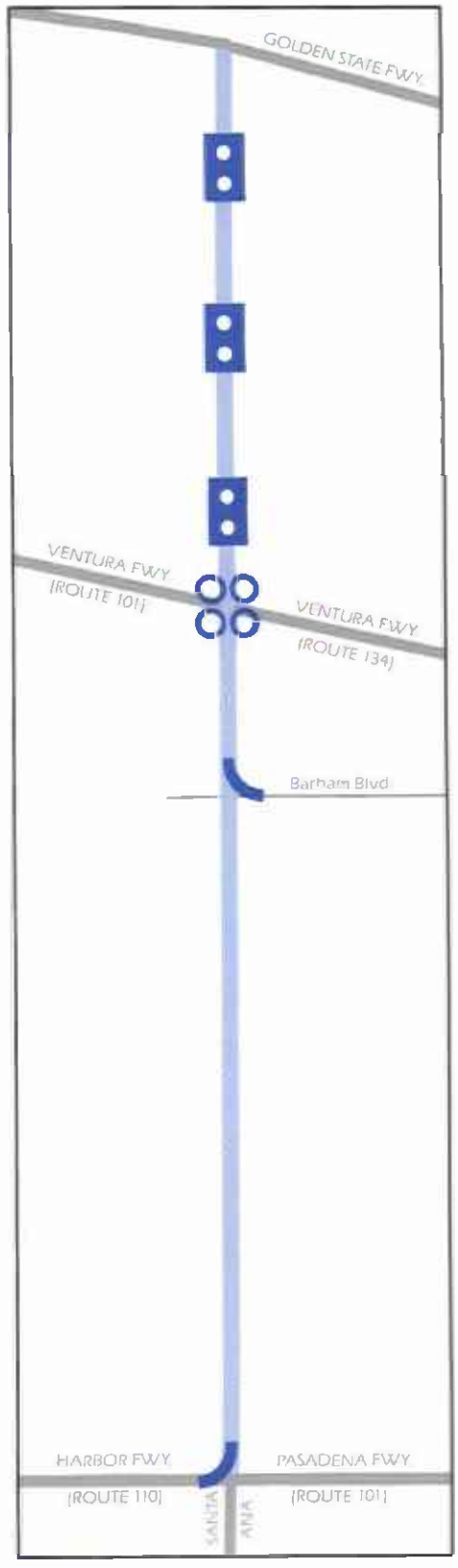
Total cost: $4.1 million plus unknown

New funds required: $1.0 million plus unknown

Long-Term

A long-term solution for congestion on the Hollywood Freeway should be studied in light of the planned construction of Metro Rail and the Proposition A funded San Fernando Valley light rail line. Suitable bus and auto access to the Metro Rail stations to the Hollywood freeway should be pursued.

HOLLYWOOD FREEWAY (ROUTES 101 & 170)



LONG BEACH FREEWAY (ROUTE 710)

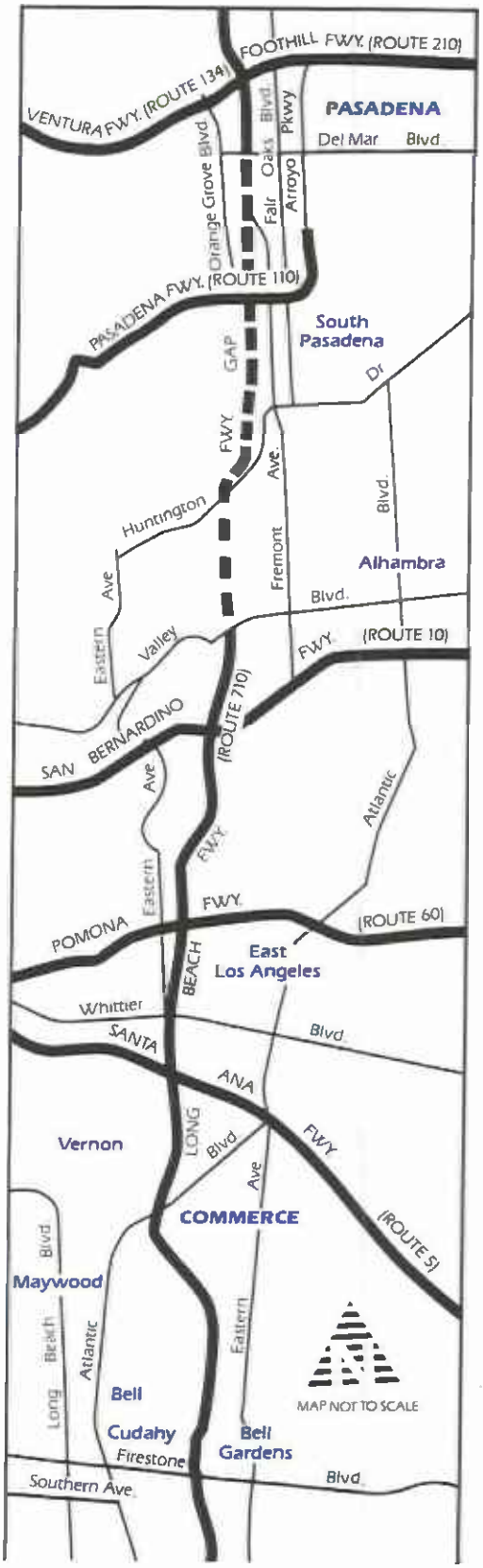
EXISTING CONDITIONS

As originally conceived, the Long Beach Freeway would have connected three of the largest cities in the county: Pasadena, Los Angeles, and Long Beach. Unfortunately, between Pasadena and Alhambra the freeway has never been completed, leaving what is known as the Long Beach Freeway Gap between the San Bernardino and the Foothill Freeways. Completion of the gap closure has been delayed because of concern about the environmental impacts.

From the Foothill Freeway to its end at Del Mar Boulevard in Pasadena, approximately a half mile, the Long Beach Freeway is four lanes wide. Anyone making a through trip must travel on such streets as Orange Grove Boulevard, Fremont Avenue, Fair Oaks Avenue, Huntington Drive and Atlantic Boulevard until the freeway resumes at Valley Boulevard.

Between Valley Boulevard and Pacific Coast Highway in Long Beach the Long Beach Freeway carries more than 148,000 vehicles per day and connects to five other freeways: San Bernardino, Pomona, Santa Ana, Artesia, and San Diego.

From Valley Boulevard to the Santa Ana Freeway, the Long Beach Freeway passes through the communities of Alhambra, Monterey Park and East Los Angeles. The most severe congestion occurs southbound in the evening on this six-lane freeway between 4:15 to 6:00 p.m. Speeds average 20 miles per hour between the Pomona Freeway and the Santa Ana Freeway.

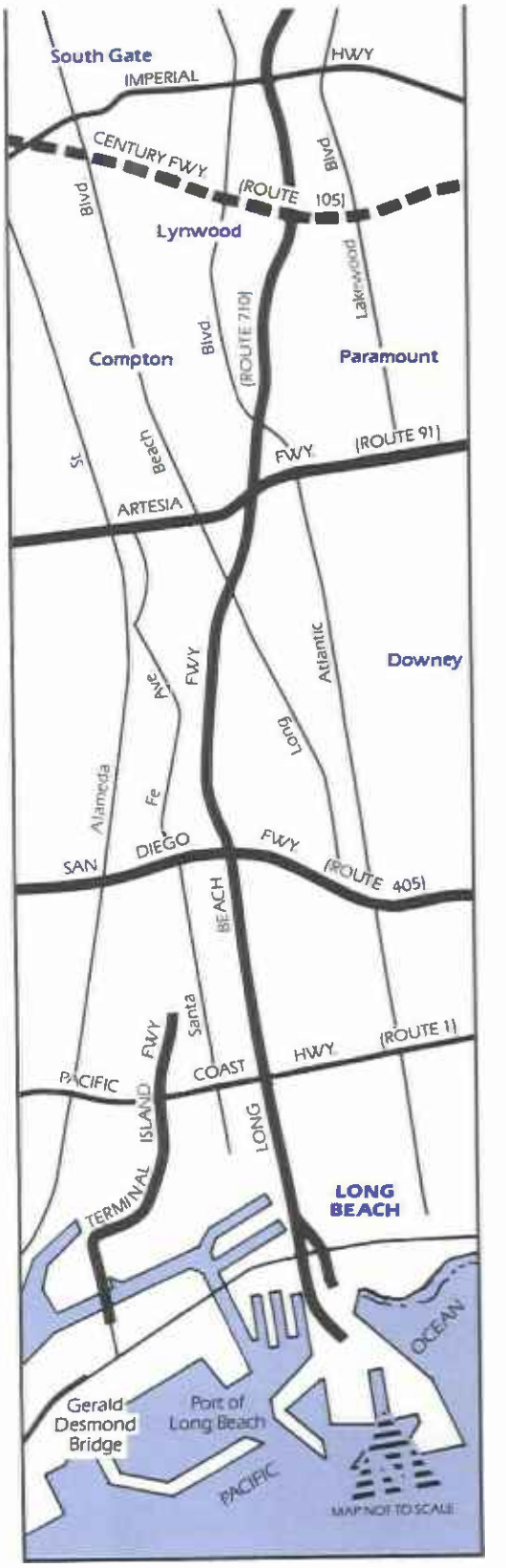


The Long Beach Freeway from the Santa Ana Freeway to the Artesia Freeway follows the path of the Los Angeles River through the communities of Commerce, Vernon, Bell, South Gate, Lynwood, Paramount and Long Beach. Heavy industry predominates in this area. Commuters encounter congested conditions northbound in the morning between

7:00 a.m. and 8:30 a.m. with speeds averaging 41 miles per hour on this 8 to 10 lane freeway. The Century Freeway when its opened in the 1990's will intersect with the Long Beach Freeway near the city of Lynwood.

From the Artesia Freeway to its southern terminus at 7th Street, the six to eight lane freeway continues through the city of Long Beach. Trucks comprise 25 percent of the traffic south of the San Diego Freeway. Ports-related truck traffic is expected to double over the next 20 years.

A demonstration project currently under construction in the ports area of Long Beach will improve truck access to ports facilities on surface streets and decrease truck traffic on the Long Beach Freeway south of the Artesia Freeway.



RECOMMENDATIONS

Short-Term

- Complete the Long Beach Freeway gap, by constructing a six lane freeway between Valley Boulevard and the Foothill Freeway. The freeway should be built to allow right-of-way in the median for the Pasadena rail transit line and possibly a carpool lane. Cost: $396.0 million

- Major streets such as Orange Grove, Atlantic boulevards and Fremont Avenue, which currently carry most of the traffic traveling between the freeway's terminus in Alhambra and the Foothill Freeway, should be evaluated both for widening and inclusion in the "Smart" street network of computer controlled signals. Cost: Included in "Streets" Chapter

Widen the freeway and add auxiliary lanes between the San Bernardino and San Diego Freeways. The added lanes should be evaluated for exclusive use by buses and carpools. Cost: $68.1 million

Construct a northbound off-ramp at Southern Avenue. Cost: $0.3 million **Federal, state and local funds committed**

Improve the Long Beach Freeway terminus at Gerald Desmond Bridge to accommodate truck traffic increases. Cost: Included in Terminal Island Freeway recommendations. **Federal funds committed**

If the "Smart" corridor demonstration project is successful, add Eastern Avenue, Telegraph Road, Atlantic Boulevard/Avenue, Santa Fe Avenue, Long Beach Boulevard, Garfield Avenue, Imperial Highway and other appropriate streets to the "Smart" street system by computer coordinating traffic signals and freeway ramps. Cost: Included in "Streets" Chapter

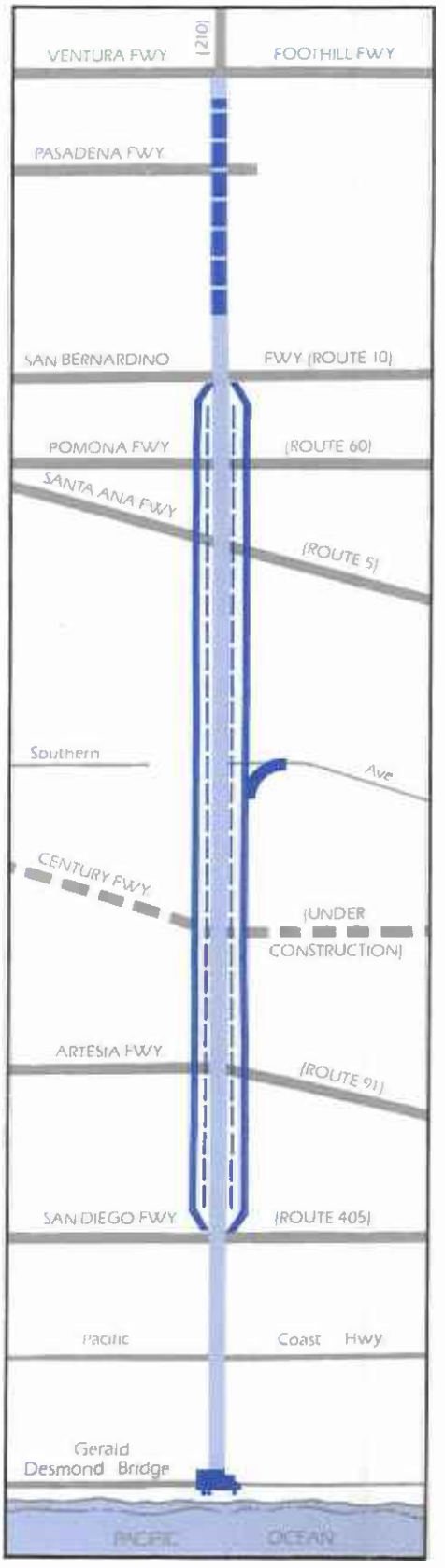
Total cost: $470.4 million

New funds required: $464.1 million

Long-Term

No long-term improvements are recommended.

LONG BEACH FREEWAY (ROUTE 710)



MARINA FREEWAY (ROUTE 90)

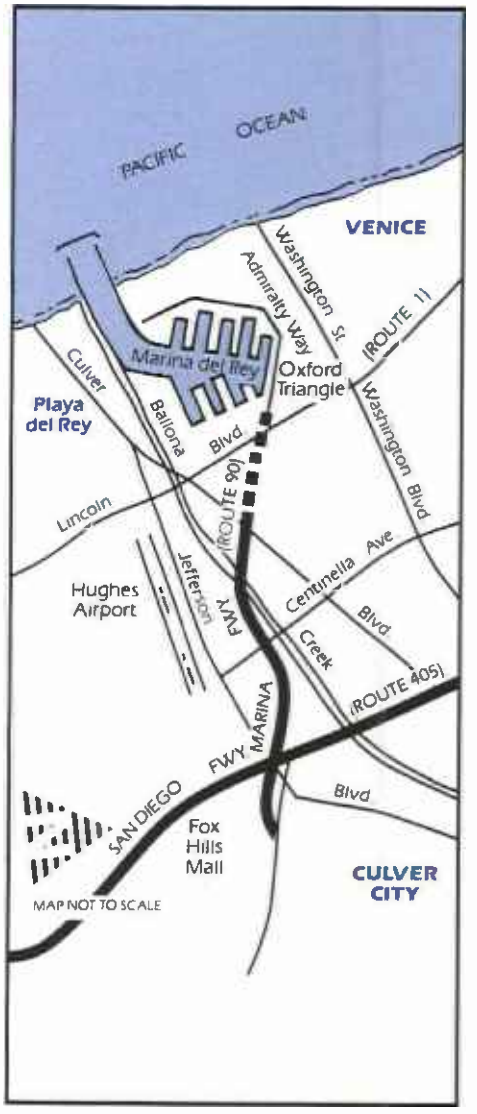
EXISTING CONDITIONS

Extending only two and a half miles between Culver Boulevard and Slauson Avenue, the Marina Freeway is the second shortest freeway in Los Angeles County. The Marina Expressway extends one mile to the northwest of the Marina Freeway between Culver and Lincoln boulevards.

The Marina Expressway starts at Lincoln Boulevard in the City of Los Angeles, just north of Marina del Rey. After crossing Culver Boulevard, the expressway becomes a freeway. The Marina Freeway provides access to the the high-density residential community and popular tourist center of Marina del Rey. Residents of Venice and Playa del Rey also use the Marina Freeway. Westbound evening peak period speeds average under 35 miles per hour near Culver Boulevard as freeway traffic merges onto the expressway.

Before crossing the San Diego Freeway the Marina Freeway enters a primarily residential area, with Hughes Airport/Summa Corporation property just to the south. Near Centinela Avenue, about 62,000 vehicles travel on the freeway every day. Due to ongoing development in the Marina area and on Summa property, future demand for the Marina Freeway is expected to increase.

During the morning peak hours, the interchange with the San Diego Freeway is congested. Between the San Diego Freeway and the end of the Marina Freeway at Slauson Avenue, the freeway passes through Culver City.



RECOMMENDATIONS

Short-Term

- Extend the freeway northwest to Washington Street. This project should include environmental mitigation measures for the residential community of the Oxford triangle. The exact alignment has not yet been determined. Design of this project should consider the opportunity to allow either bus transit or light rail to use adjacent right-of-way, especially since two Proposition A rail system corridors meet at the Marina. Cost: $50 million.

- Construct the westbound on-ramp at Slauson Avenue. Cost: $6.0 million. **Local funds committed**

- If the "Smart" corridor demonstration project is successful, add Washington and Culver Boulevards, Slauson Avenue or other appropriate streets to the "Smart" Street system by computer coordinating traffic signals and freeway ramps. Cost: Included in "Streets" Chapter

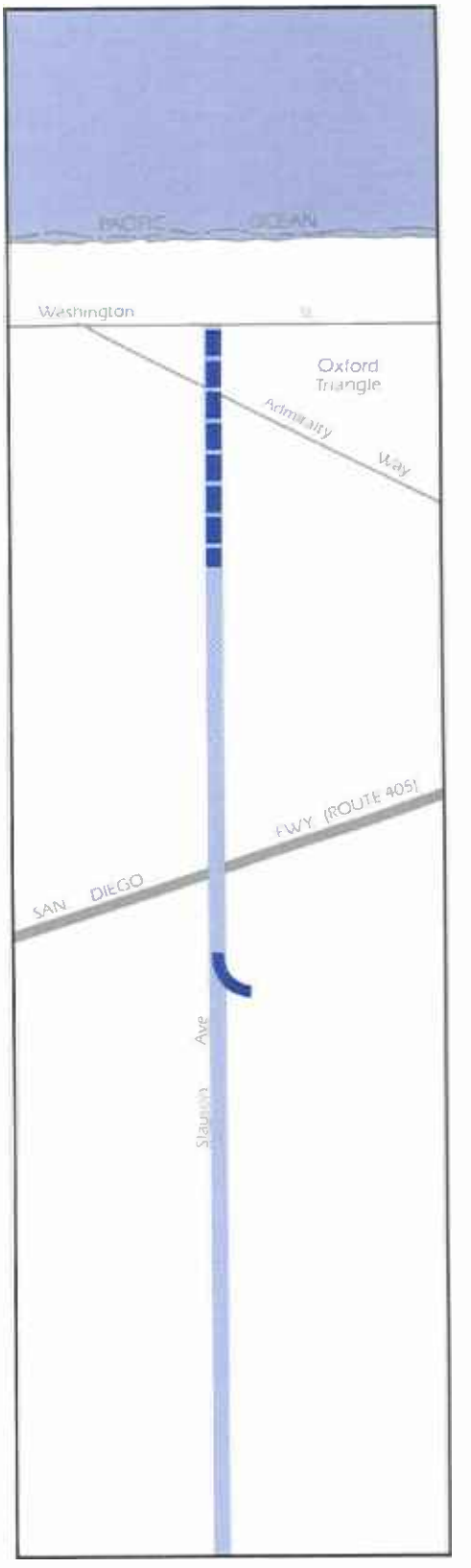
Total cost: $56.0 million

New funds required: $50 million

Long-Term

No long-term improvements are recommended.

MARINA FREEWAY (ROUTE 90)



PASADENA FREEWAY (ROUTE 110)

EXISTING CONDITIONS

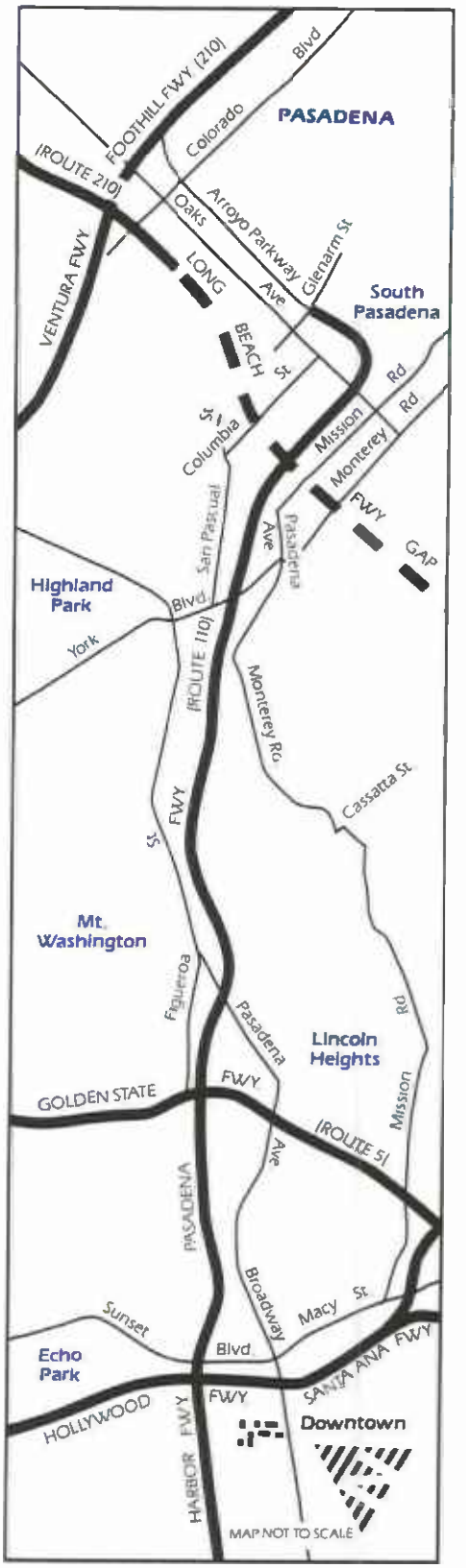
The Pasadena Freeway was built by the cities of Pasadena and Los Angeles between 1920 and 1947 as the Arroyo Seco Parkway. It was the first freeway in Los Angeles and has been designated a National Historical Monument.

The freeway design illustrates how far freeway engineering has progressed in the past 40 years. For example, the freeway is only six lanes wide, has short on and off-ramps, and lots of tight curves. These substandard characteristics create problems for Pasadena Freeway commuters.

The Pasadena Freeway starts at Glenarm Street in Pasadena. Southbound traffic from Pasadena enters the freeway on Arroyo Parkway. Mount Washington, Lincoln Heights, Highland Park, and South Pasadena residents and employees also use the Pasadena Freeway. In the morning peak period speeds inbound to Los Angeles average 31 miles an hour from 6:45 to 9:15 a.m. Slow speeds are caused by congestion closer to downtown Los Angeles backing up into this section, the small number of freeway lanes available, and inadequate length of on and off-ramp merging lanes.

The Pasadena Freeway's accident rate is above the statewide average for similar freeways for much of its length. The short merging lanes at freeway on and off-ramps may be causing accidents. Because of these conditions, heavy trucks are prohibited from traveling on the Pasadena Freeway.

The Pasadena Freeway is even more congested between the Golden State and the Hollywood/Santa Ana Freeways. As southbound commuters try to gain access to downtown Los Angeles every morning, peak hour speeds of 30 miles an hour between 6:45 and 9:30 a.m. are common. In the evening, the fast lane of the Pasadena Freeway slows as cars wait to enter the Golden State Freeway. Peak hour speeds of 20 miles an hour last from 2:45 to 7:15 p.m. The Pasadena Freeway ends as it turns into the Harbor Freeway south of the Hollywood/Santa Ana Freeway (Route 101) Interchange.



RECOMMENDATIONS

Short-Term

NOT SHOWN Examine ways to lengthen the on and off-ramps to improve the speed and safety of the Pasadena Freeway along its entire length. Cost: Unknown.

Future freeway plans recommend that the Pasadena Freeway connect to the Long Beach Freeway near Magnolia Street. The cost of this interchange would be covered as part of the construction of the Long Beach Freeway.

Improve the Interchange of the Golden State/Pasadena Freeways. Cost: Over $10 million Evaluate the viability of creating one or more high capacity routes connecting downtown Los Angeles and the Golden State Freeway before revising this interchange. Cost: Unknown.

If the "Smart" corridor demonstration project is successful, add North Broadway, Figueroa Street, Mission Road/Huntington Drive, Arroyo Parkway and other appropriate streets to the "Smart" Street system of computer coordinated traffic signals and freeway ramps. Cost: Included in "Streets" Chapter

Total cost: $10 million plus unknown

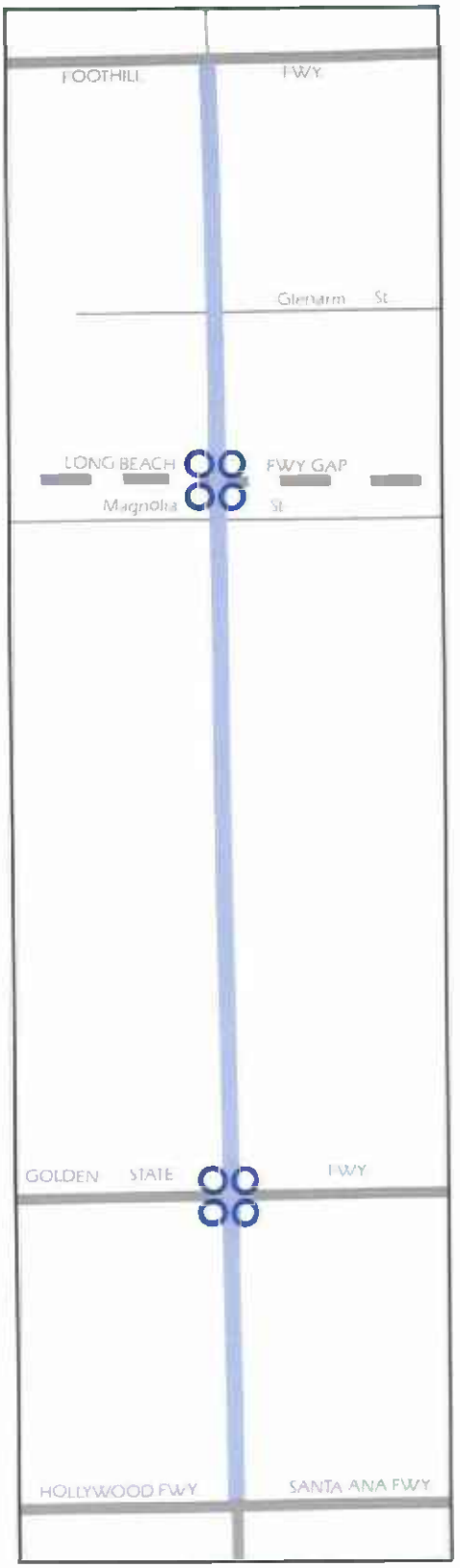
New funds required: $10 million plus unknown

Long-Term

Determine if the freeway can be modernized (add lanes and straighten curves) without undue environmental and community impact.

Construct the Proposition A Light Rail Line to Pasadena to provide an alternative to freeway travel for commuters. The present concept is to use the freeway's right-of-way for part of this rail line when it is built.

PASADENA FREEWAY (ROUTE 110)



POMONA FREEWAY (ROUTE 60)

EXISTING CONDITIONS

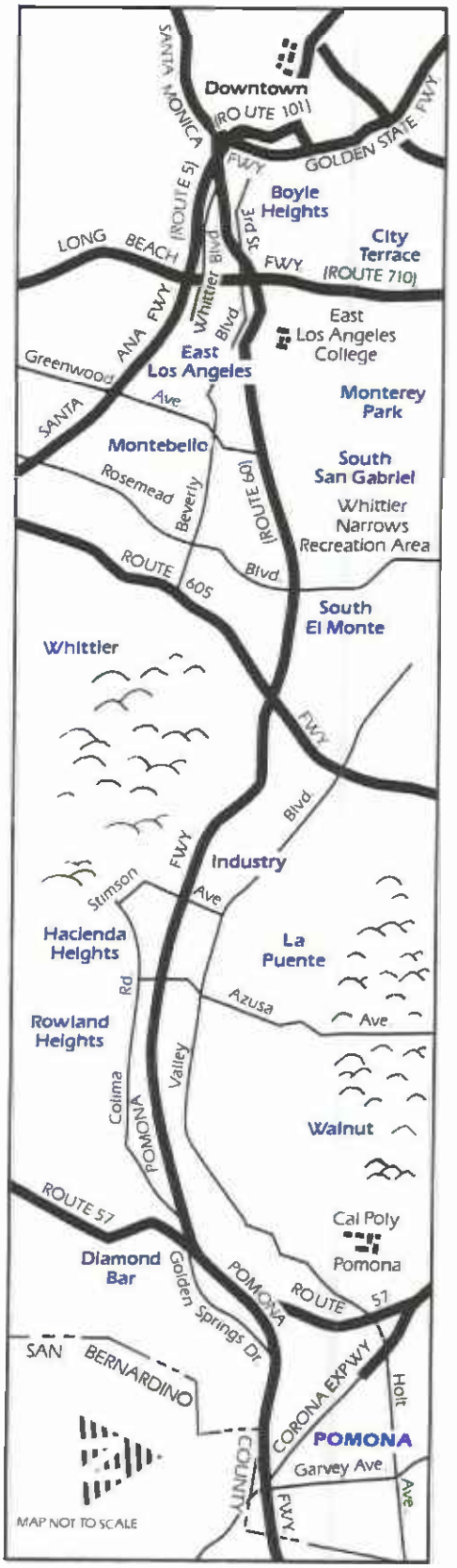
For five-and-a-half hours every workday Pomona Freeway commuters experience congestion between the San Bernardino and Long Beach freeways. The Pomona Freeway is normally congested westbound in the morning and eastbound in the evening.

The Pomona Freeway is congested because it is one of only two commuter routes between residential eastern Los Angeles areas and downtown Los Angeles. The other east-west commuter route, the San Bernardino Freeway, is also severely congested during the peak period.

Congestion frequently occurs in the East Los Angeles Interchange (the intersection of the Pomona, Santa Monica, Santa Ana and Golden State freeways). Between the East Los Angeles Interchange and the Route 605 Freeway, the Pomona Freeway passes through the communities of Boyle Heights, City Terrace, East Los Angeles, Montebello, Monterey Park, South San Gabriel and South El Monte. If an accident does not occur, congestion lasts from 5:45 to 9:30 a.m. and from 3:45 to 6:15 p.m.

Between the Route 605 Freeway and the San Bernardino County line, the Pomona Freeway serves commuters from the communities of Whittier, Hacienda Heights, Diamond Bar, Rowland Heights, Walnut La Puente and Pomona. The freeway also serves industrial areas in the Cities of Pomona and Industry. Future industrial development may occur near the freeway's interchanges with the Route 57 and Corona Freeways. Congestion lasts from 5:30 to 8:30 a.m. and from 4:15 to 7:00 p.m.

The accident rate on the Pomona Freeway west of Route 57 junction and west of the San Bernardino County line are roughly twice the statewide average for similar types of freeways.



RECOMMENDATIONS

Short-Term

- Improve the East Los Angeles Interchange (the junction of Golden State, Santa Monica, Santa Ana, and Pomona freeways). Cost: $5.0 million

NOT SHOWN Identify solutions to safety problems. Cost: Unknown

Construct the Greenwood Avenue Interchange including related auxiliary lanes. Cost: $5.4 million. **Federal, state and local funds committed**

Add auxiliary lanes, ramp meters and bypass lanes between Paramount Boulevard and the Route 57 Freeway. Cost: $2.0 million **Federal and state funds committed**

Modify eastbound ramps between Paramount and San Gabriel boulevards. Cost: $0.8 million **Local funds committed**

Add an additional lane between the Long Beach and Foothill/Route 57 Freeway Interchange by modifying the median and restriping and widening. This lane should be evaluated for use as a peak-direction only carpool lane. Cost: $25 million

Add a lane which should be considered for exclusive use by buses and carpools between the Route 57 Freeway and the San Bernardino County line. Cost: $8.8 million

Make interim improvements to the Corona Expressway/Pomona Freeway Interchange Cost: $8.6 million. **$7.4 million of federal and state funds committed**

Improve the Corona/Pomona Freeway Interchange (Route 60/71). Cost: Included as part of the Corona Freeway construction cost.

If the "Smart" corridor demonstration project is successful, add Whittier, Beverly and Valley Boulevards, Colima Road, Golden Springs Drive or other appropriate streets to the "Smart" street system by computer coordinating traffic signals and freeway ramps. Cost: Included in "Streets" Chapter

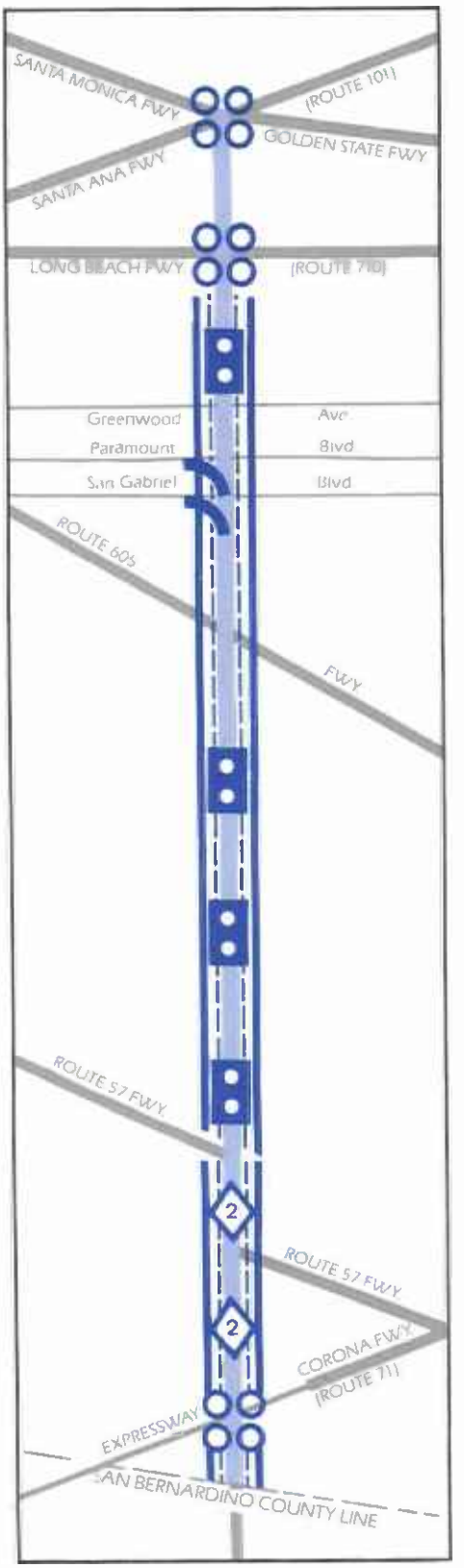
Total cost: $55.6 million plus unknown

New funds required: $40.0 million plus unknown

Long-Term

Long-term solutions to Pomona Freeway congestion should be studied.

POMONA FREEWAY (ROUTE 60)



ROUTE 1 (PACIFIC COAST HIGHWAY, SANTA MONICA FREEWAY, LINCOLN BOULEVARD AND SEPULVEDA BOULEVARD)

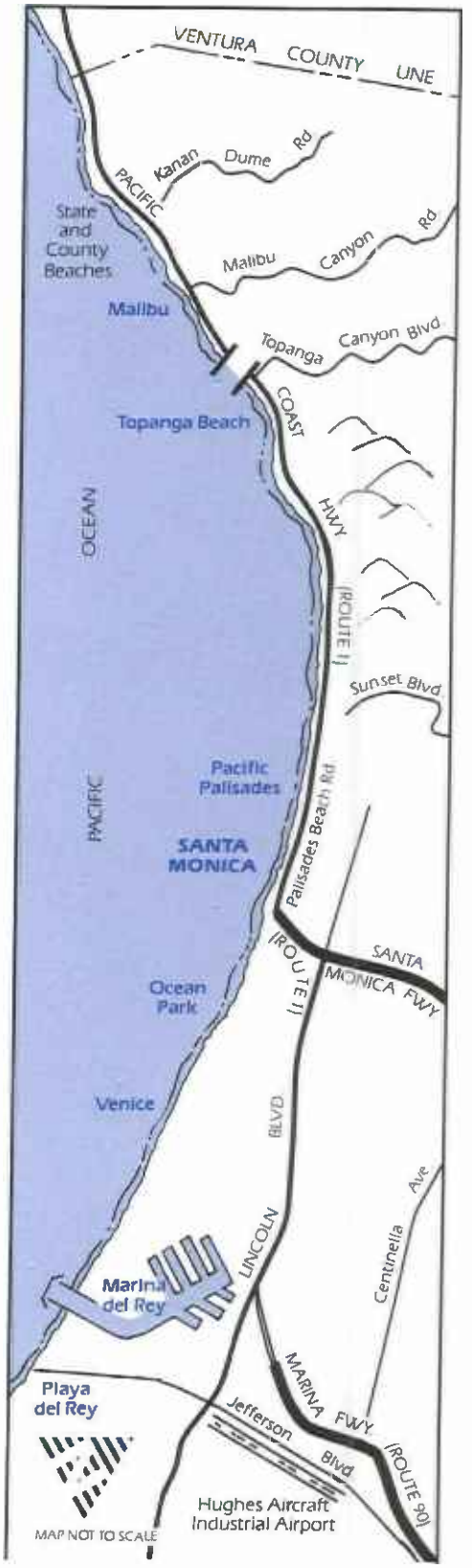
EXISTING CONDITIONS

Route 1 extends for 63 miles along the coast in Los Angeles County. This scenic state highway serves local residents, beachgoers and commuters who live near the coast and travel inland to their jobs. Five major employment/activity centers which generate traffic along Route 1 are Malibu, Santa Monica, Marina del Rey, El Segundo/ Los Angeles International Airport and Long Beach.

During both morning and evening peak commute hours, Route 1 is at maximum capacity. Most of the congestion occurs at the Route's 122 signalized intersections. Evening rush hour traffic is especially intense in the summer months as both commuters and beachgoers travel on Route 1. By the year 2005, demand on Route 1 is expected to increase 20 to 50 percent due to continued coastal area development.

From the Ventura County Line to Malibu Canyon Road, Route 1 is known as Pacific Coast Highway. This four-lane highway winds along a largely undeveloped region of unincorporated Los Angeles County. Recreational use of the beaches and the Santa Monica Mountains contributes to the traffic on the road. This section of Route 1, however, is the least congested with 12,000 vehicles using the road each day. Future growth in the Oxnard and Camarillo areas is expected to generate increased traffic on Pacific Coast Highway. The only alternative route is the Ventura Freeway, 12 miles to the north, which is only accessible through winding mountain roads such as Kanan Dume and Malibu Canyon.

Route 1 continues as Pacific Coast Highway south of Malibu Canyon Road until it reaches the north-western boundary of the city of Santa Monica. From this boundary to the Santa Monica Pier, south for a length of one-and-one half miles, Palisades Beach Road is considered Route 1. From



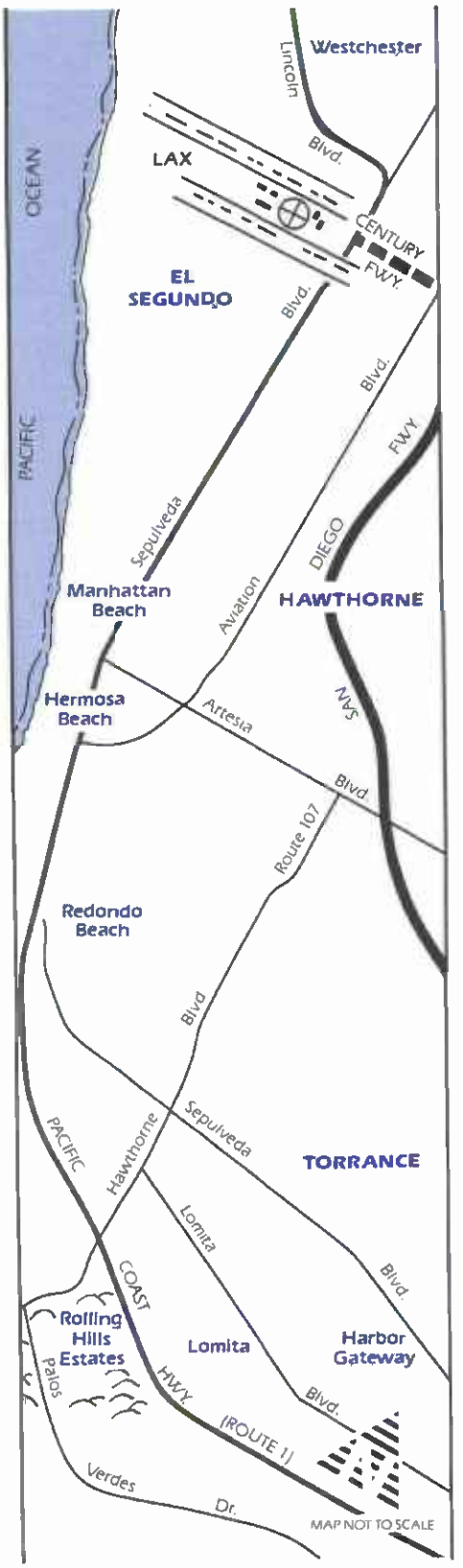
Malibu Canyon Road to the MccLure Tunnel, near the Santa Monica Pier, Route 1 lies along a narrow strip of land that separates Pacific Palisades from the Pacific Ocean.

Substantial portions of this four to six lane roadway border steep cliffs which are subject to recurring slides. These landslides cause major maintenance problems and periodic highway closures. The average daily traffic varies from 15,000 near Malibu Canyon Road to 69,000 vehicles per day at the MccLure Tunnel. At peak hour, 1,800 to 4,900 vehicles travel along this section of Pacific Coast Highway. One cause of congestion on Pacific Coast Highway are the Ventura Freeway commuters seeking to bypass freeway congestion. Access to the Ventura Freeway is via Topanga Canyon Boulevard, a narrow mountainous road.

East of the McLure Tunnel, Route 1 exists as a freeway for 1/2 mile until it reaches Lincoln Boulevard, which then becomes Route 1. From the Santa Monica Freeway to the Los Angeles International Airport, Lincoln Boulevard passes through the communities of Santa Monica, Venice, Marina Del Rey, Playa Del Rey, Westchester, and the City of Los Angeles.

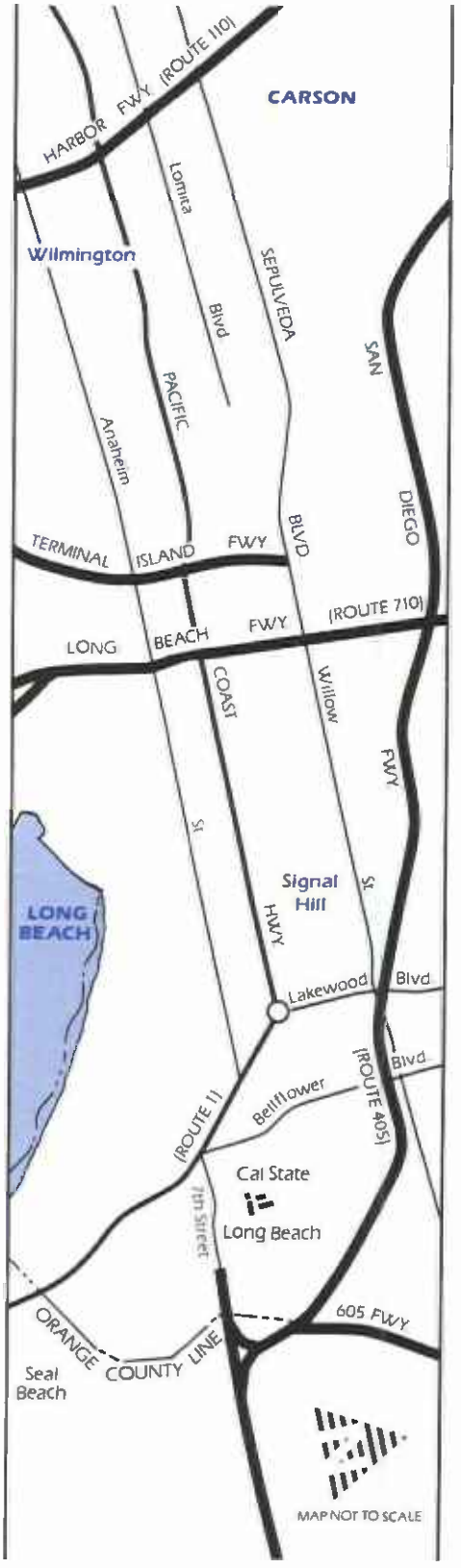
Route 1 changes to Sepulveda Boulevard near Century Boulevard in the Los Angeles International Airport Area and continues through El Segundo and Manhattan Beach to Artesia Boulevard. Daily traffic is highest at Century Boulevard with 64,000 vehicles per day and lowest at Jefferson Boulevard with 28,000 vehicles. The average number of vehicles for Route 1 from Santa Monica to Artesia Boulevard is 38,000 per day. At peak hour, volumes range from 2,550 to 5,400 cars per hour. The accident rate is higher than the statewide accident rate for similar roadways near the intersection of Artesia and Sepulveda boulevards. Traffic on Lincoln and Sepulveda Boulevards in the Los Angeles International Airport area is expected to increase once the Century Freeway is completed in the early 1990's.

From Artesia Boulevard to the Orange County line, Route 1 continues via the four-lane



Pacific Coast Highway. Pacific Coast Highway serves the communities of Hermosa Beach, Redondo Beach, Torrance, Lomita, Harbor City, Wilmington, Signal Hill and Long Beach. In this area the greatest amount of traffic occurs at the intersection of Lakewood Boulevard and Pacific Coast Highway in the City of Long Beach. At peak hour, 2,000 to 3,900 vehicles travel on Pacific Coast Highway. Accident rates are higher than the statewide average near Catalina Avenue in Hermosa Beach and near Seventh Street in Long Beach.

From the Ventura County line to the Orange County line, bicyclists may ride along the shoulder of Route 1. Bicyclists mix with traffic where there is no shoulder or where automobiles are parked. This reduces the speed of the automobiles and causes safety problems. The safety problem appears to be especially severe on the Pacific Coast Highway between Sunset Boulevard and the Santa Monica Freeway and between Artesia and Redondo Beach city limits.



RECOMMENDATIONS

Short-Term

Interconnect signals between John Tyler Drive and Carbon Canyon Road. Cost: $0.7 million. **Federal and State funds committed**

Widen roadway by adding one additional lane reversible for peak operation between Malibu Canyon Road and Topanga Canyon Road. Consider limiting parking on the landward side of Pacific Coast Highway. Evaluate measures to mitigate this widening's impact on bicyclists such as completing the Coastal bikeway. Cost: $0.4 million plus unknown

Add pedestrian undercrossings at flood control channels to increase coastal access and decrease safety hazards. Cost: $1 million

Construct flyover and widen roadway by adding one additional lane reversible for peak operation between Topanga Canyon Road and the Santa Monica Freeway. Consider limiting parking on the landward side of Pacific Coast Highway as part of this improvement. Evaluate measures to mitigate this widening on bicyclists. Cost: $30.0 million

Construct overcrossing and ramp at Westchester Parkway. Cost: $5.8 million **Local funds committed**

Widen Lincoln Boulevard to eight lanes from the Santa Monica City Boundary to Sepulveda Boulevard, a distance of 6 miles. Cost: $9.0 million

Change right turn lanes at Washington Boulevard. Cost: $1 million

Add northbound to westbound left-turn lane at Lincoln. Cost $0.5 million

Widen to eight lanes between Lincoln and Centinela. Cost $4.7 million

Improve intersection with Jefferson Boulevard. Cost: $0.9 million

Widen the Sepulveda tunnel under the Los Angeles International Airport as proposed in House Resolution 2. Cost: $50.0 Million

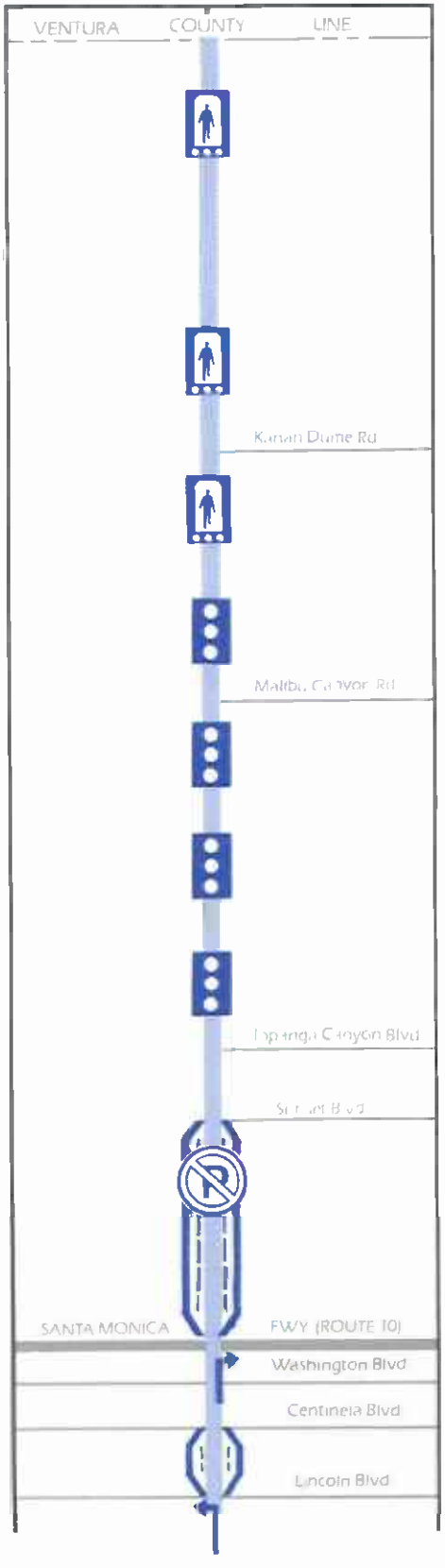
Construct overcrossing at 96th Street. Cost: unknown

Widen roadway from six to eight lanes between Grand and Rosecrans Avenues. Cost: $2.2 million **Federal, state and local funds committed**

At Rosecrans Avenue make left-hand turn lane. Cost: $0.6 million. **Federal, state and local funds committed**

Interconnect signals between Rosecrans and 21st Streets. Cost: $ 1.2 million **Federal and local funds committed**

ROUTE 1 (PACIFIC COAST HIGHWAY, SANTA MONICA FREEWAY, UNCOLN BOULEVARD AND SEPULVEDA BOULEVARD)



NOT SHOWN

Construct the Coastline Proposition A Light Rail Line which would run from Lincoln and Culver Boulevards in Marina Del Rey to Pacific Coast Highway and Hawthorne Boulevard in Torrance and which would connect with the Century Freeway Rail Transit Line at the Aviation/Imperial station. Cost: Unknown

Widen from six to eight lanes between El Segundo and Manhattan Beach Boulevard. Cost: $1.0 million

At Sepulveda Boulevard and the Manhattan Overhead widen the northbound roadway and the railroad overhead. Cost: $0.5 million **Federal and state funds committed**

Make double left turn lanes at Marine Avenue. Cost: $0.3 million **Federal, state and local funds committed**

At Hawthorne Boulevard modify pavement markings and signal. Cost: $0.3 million **Federal and state funds committed**

Between Walnut and and Airport Drive interconnect signals. Cost: $0.8 million **Federal and state funds committed**

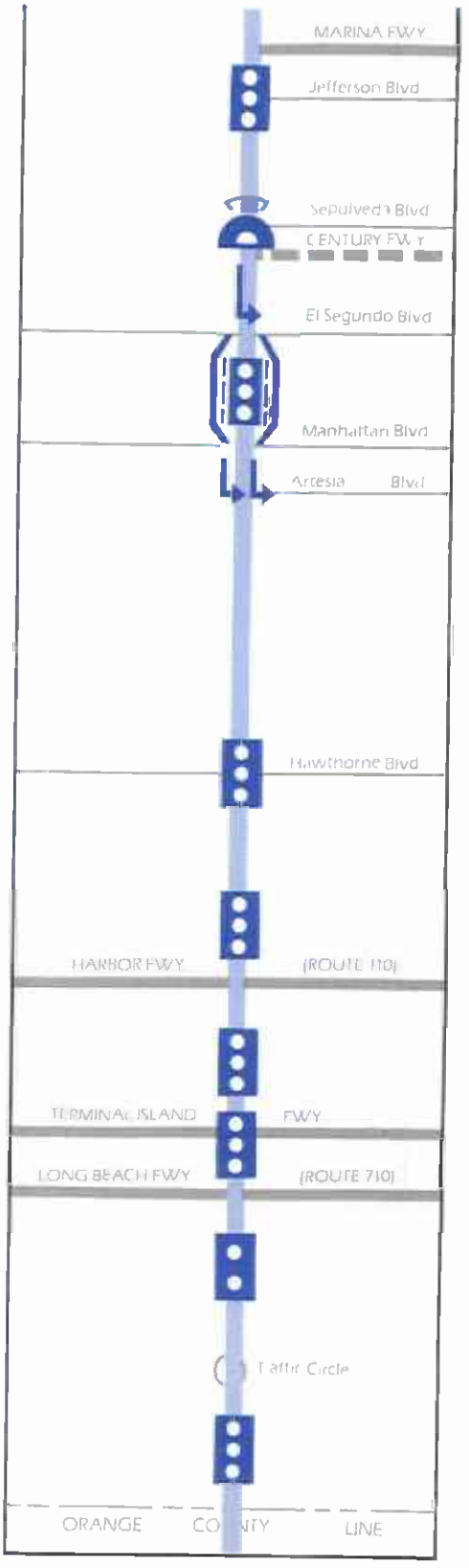
Interconnect signals between Alameda and Western Avenues. Cost: $1.6 million **Federal and state funds committed**

Interconnect signals between Termino and Judson Avenues. Cost: $2.1 million **Federal and state funds committed**

From Ximeno Avenue to the Orange County Line interconnect signals. Cost: $0.9 million **Federal, state and local funds committed**

If the "Smart" corridor demonstration project is successful, add Route 1 and

ROUTE 1 (PACIFIC COAST HIGHWAY, SANTA MONICA FREEWAY, LINCOLN BOULEVARD AND SEPULVEDA BOULEVARD)



other appropriate streets to the "Smart" Street system by computer coordinating traffic signals and freeway ramps. The signal interconnection projects recommended above will be needed to make the "Smart" street system work correctly. Cost: Included in "Streets" Chapter

Total Cost: $114.5 million plus unknown

New funding required: $97.5 million plus unknown

Long-Term

Long-term congestion solutions for Route 1 should be studied.

ROUTE 57 (ORANGE FREEWAY)

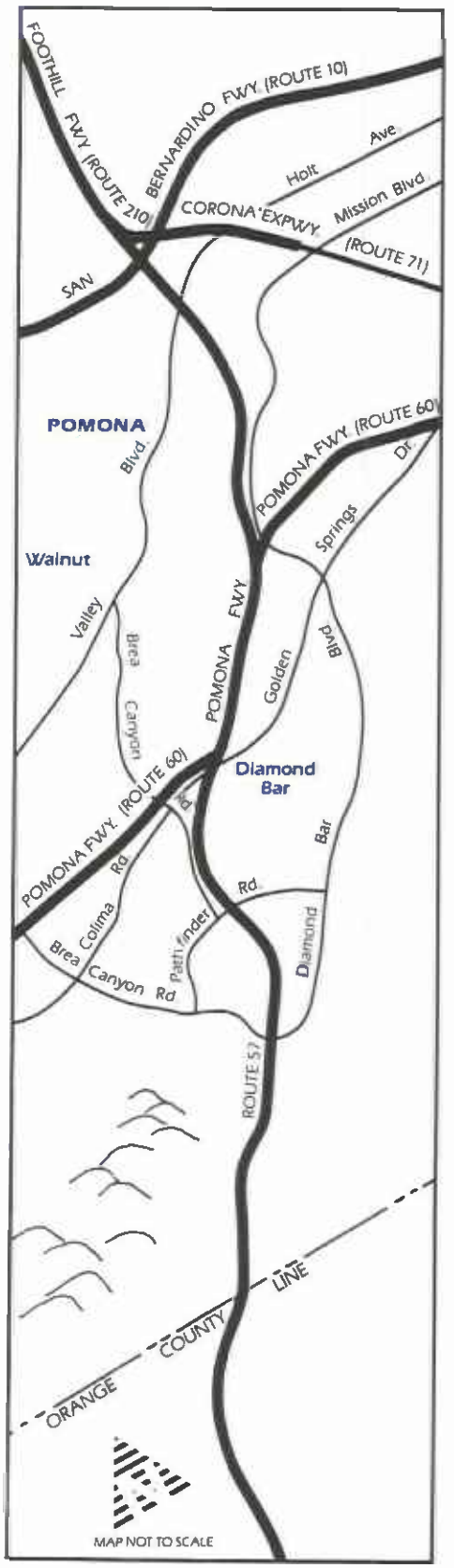
EXISTING CONDITIONS

The Route 57 Freeway is located in a rapidly growing area of eastern Los Angeles County. Except on the portion of Route 57 that is shared with the Pomona Freeway, existing capacity should adequately serve projected growth until the Year 2000.

The Route 57 Freeway begins in Pomona at the interchange of the Foothill, Corona and San Bernardino Freeways. The freeway goes south for about two-and-one-half miles before it reaches the Pomona Freeway.

For three miles, in the Diamond Bar/Walnut area, Route 57 and the Pomona Freeway (Route 60) are the same. Due to Pomona Freeway traffic, this is the most congested part of Route 57 with speeds averaging 32 miles an hour between 3:45 and 6:00 p.m.

The Route 57 Freeway splits off on its own again at Colima Road/Golden Springs Drive. Many nearby residents commute to jobs in the Orange County cities of Fullerton, Anaheim and Santa Ana. The eight to ten lane wide freeway has peak hour congestion which sometimes occurs both north and southbound. The average peak hour speed is 42 miles an hour.



RECOMMENDATIONS

Short-Term

Add ramp meters and carpool bypass lanes on onramps between the Pomona Freeway and the Orange County Line to improve traffic flow. Cost: $0.3 million. **Federal and state funds committed**

Widen overcrossing and modify southerly ramps at Pathfinder Road Interchange. Cost: $1.6 million. **Local funds committed**

Add one lane in each direction on the Pomona Freeway where it runs as one freeway with the Route 57 Freeway. Cost: Included with Pomona Freeway description.

Add ramp meters between the Pomona Freeway and the Foothill Freeway. Cost: $1 million

If the "Smart" corridor demonstration project is successful, add Diamond Bar Boulevard, Brea Canyon Road, Golden Springs Drive, or other appropriate streets to the "Smart" street system by computer coordinating traffic signals and freeway ramps. Cost: Included in "Streets" Chapter

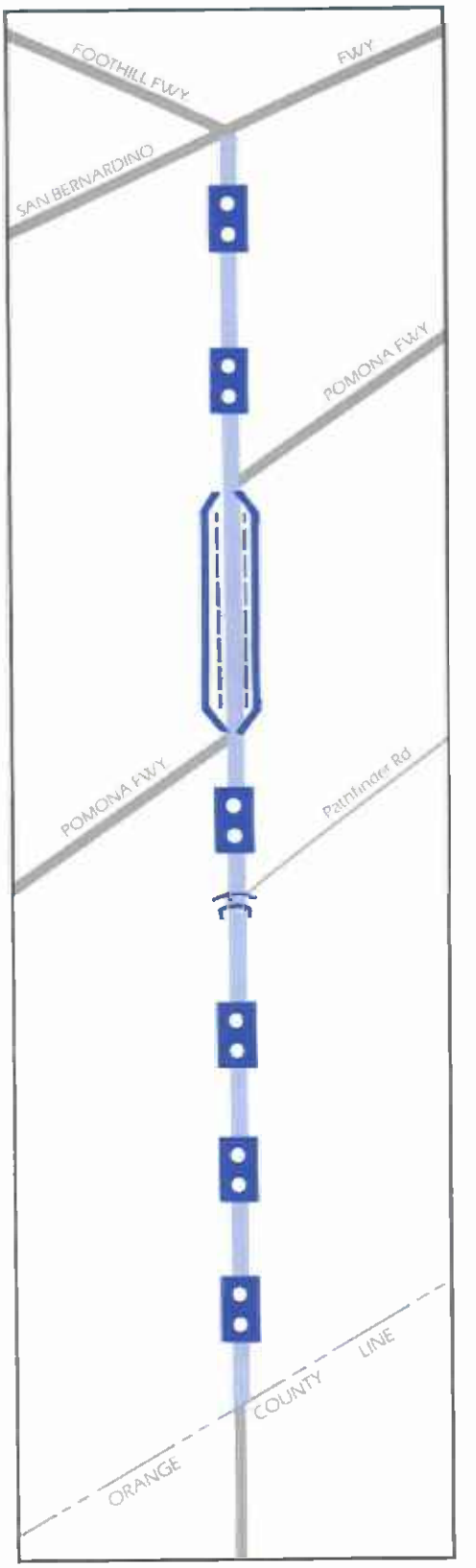
Total cost: $2.9 million

New funds required: $1 million

Long-Term

The impact of growth on future congestion problems on the Route 57 Freeway should be studied.

ROUTE 57 (ORANGE FREEWAY)



ROUTE 126 (HENRY MAYO DRIVE, MAGIC MOUNTAIN PARKWAY, SAN FERNANDO ROAD)

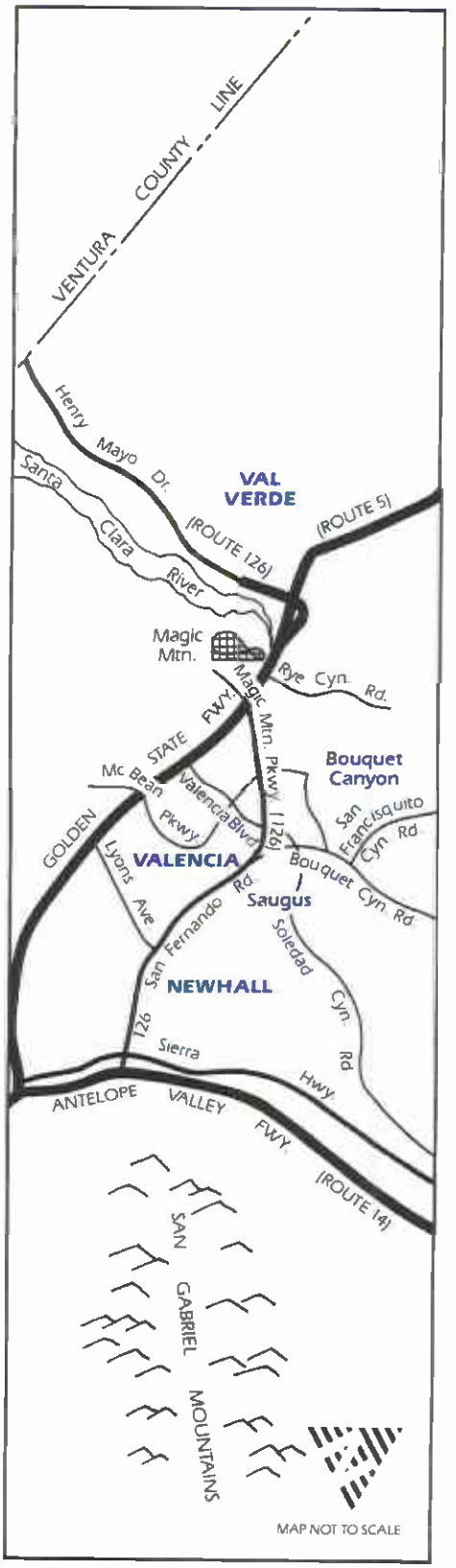
EXISTING CONDITIONS

The Route 126 designation is given to three, two-to-four-lane wide, east/west highways in the Santa Clarita Valley: Henry Mayo Drive, Magic Mountain Parkway, and San Fernando Road. Due to the Santa Clarita Valley's expected rapid growth, Route 126 may need to be widened or replaced by a freeway in the future. It is the only major east/west route in the Santa Clarita Valley.

From the Ventura County line to the Golden State Freeway, Route 126 is known as Henry Mayo Drive. Henry Mayo Drive is a two to four lane rural conventional highway. It is frequently used by residents of the Ventura County cities of Piru and Fillmore. Recreational travelers also use this portion of Route 126.

Through traffic on Route 126 must enter the Golden State Freeway at Henry Mayo Drive and exit at Magic Mountain Parkway.

From Magic Mountain Parkway to the Antelope Valley Freeway, Route 126 is known as San Fernando Road. San Fernando Road serves the urbanized areas of Valencia and Newhall. Most of the road in this location is two lanes wide and congested during peak hours. Rapid residential and commercial growth in the area requires that San Fernando Road be widened to four lanes from the Antelope Valley Freeway to Bouquet Canyon.



RECOMMENDATIONS

Short-Term

Widen Henry Mayo Drive to four lanes between the Ventura County Line and the Golden State Freeway. Cost: $14.2 million

Widen Magic Mountain Parkway to four lanes between the Golden State Freeway and San Fernando Road. Cost: Unknown

Improve the Intersection of Magic Mountain Parkway, San Fernando Road and Bouquet Canyon Road. Cost: $1.2 million Federal, State and Local funds committed.

Widen San Fernando Road and install signals between Bouquet Canyon and 15th Street. Cost: Unknown

Widen San Fernando Road and install signals between 15th and 11th Streets. Cost: $1.5 million Federal and State funds committed

Widen San Fernando Road to four lanes between 5th and Sierra highway Cost: $3.4 million. Federal and State funds committed

If the "Smart" Corridor Demonstration project is successful, add appropriate streets in urbanized areas to the "Smart" street system by computer coordinating traffic signals and freeway ramps. Cost: Included in "Streets" Chapter

NOT SHOWN Request that the Southern California Association of Governments study the impact of high growth in the Santa Clarita Valley on transportation facilities including Route 126.

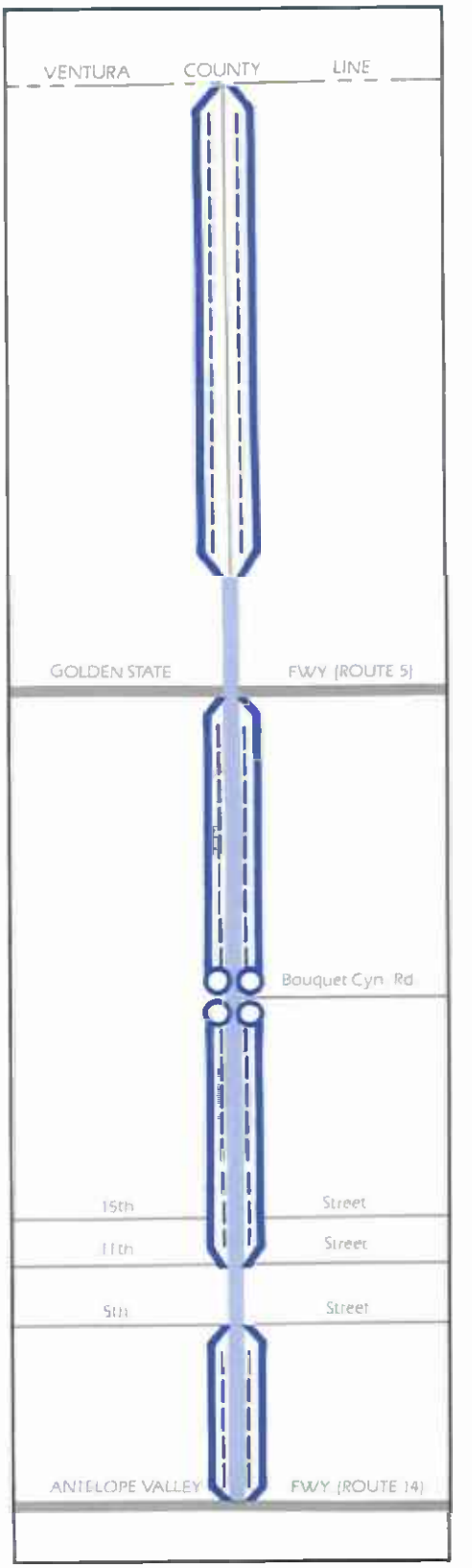
Total cost: $20.3 million plus unknown

New funds required: $14.2 million plus unknown

Long-Term

LACTC is working with Caltrans and local jurisdictions to develop a long range improvement plan for Route 126.

ROUTE 126 (HENRY MAYO DRIVE, MAGIC MOUNTAIN PARKWAY, SAN FERNANDO ROAD)



ROUTE 138 (LANCASTER ROAD, AVENUE D, PALMDALE BOULEVARD, PEARBLOSSOM HIGHWAY)

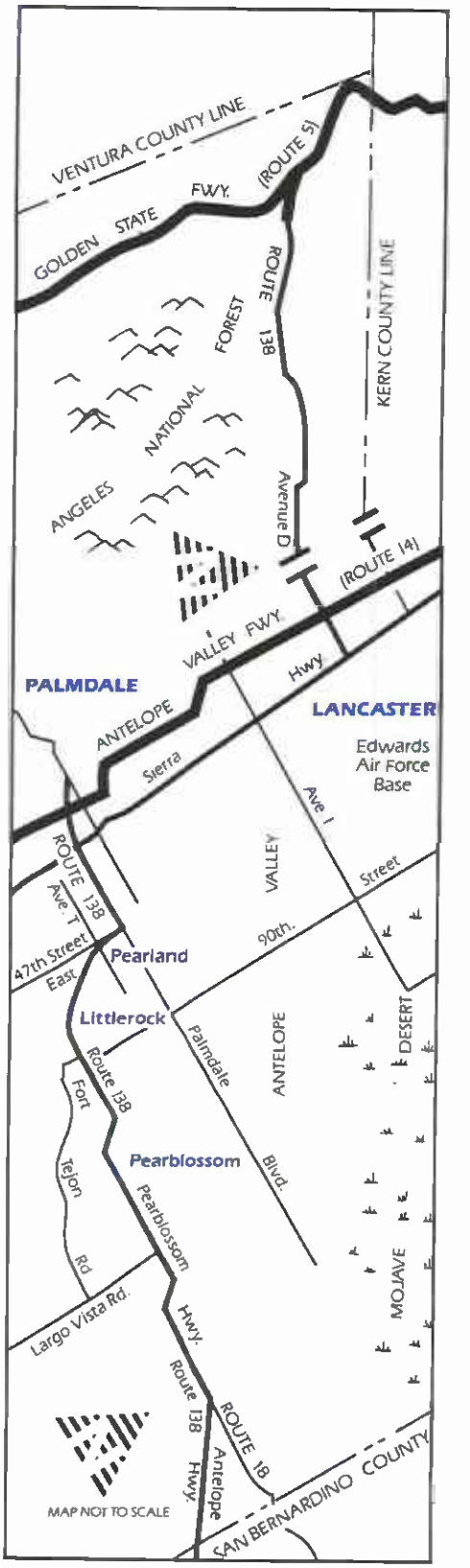
EXISTING CONDITIONS

Route 138 serves the rapidly growing areas of Lancaster and Palmdale in the Antelope Valley of northern Los Angeles. Due to available land space, the Antelope Valley is expected to see continued development. Major employers include: Edwards Air Force Base, Rockwell and Lockheed Aircraft Assembly Plants and Palmdale Airport. Route 138 also serves as a major route for recreational travelers driving to the Angeles National Forest and the San Gabriel Mountains.

Route 138 is a designation for a number of different roadways. Route 138, starting at the Golden State Freeway south of the Kern County line, is a four lane freeway for two miles. Route 138 then continues for six miles as a two lane roadway via Lancaster Road. For 34 miles, Route 138 is designated as Avenue "D", a two lane roadway. At the junction of the Antelope Valley Freeway (Route 14), Route 138 becomes the Antelope Valley Freeway for 14 miles to Palmdale Boulevard.

As Palmdale Boulevard, Route 138 moves eastward to 47th Street and then turns into Fort Tejon Road near the community of Pearland. Just after Littlerock, Route 138 takes another corner to become the Pearblossom Highway. Between Route 18 and the San Bernardino County line, Route 138 is designated at the Antelope Highway.

In the City of Palmdale, Route 138 is four lanes wide. The remaining eastern segment of Route 138 is two lanes wide. Trucks account for 15 percent of the traffic between Avenue "T" in Palmdale and the San Bernardino County Line. Vacationers traveling to Las Vegas or to skiing and camping areas also account for a significant amount of traffic on Route 138. Motorists find it difficult and dangerous to pass slower-



moving vehicles on the two-lane stretch of Route 138 because the view of oncoming traffic is obstructed by the hilly terrain.

For much of Route 138 there is a problem with flash floods. Water washes over the roadway during the rainy season and major maintenance work is required.

RECOMMENDATIONS

Short-Term

- Widen Route 138 between the Antelope Valley Freeway and Pearland (Avenue "R") from four to six lanes by re-striping the existing parking lane as a traffic lane. Cost: $1.4 million

- Widen Route 138 to add a lane in each direction from Pearland (Avenue "R") to Littlerock (57th Street/Cheseboro Road) Cost: $1.2 million

- Add one-mile passing lanes from Avenue "T" to Route 18. Cost: $6.1 million **Federal, state and local funds**

- Connect passing lanes built in recommendation #3 to create a continuous four lane wide road on Palmdale Boulevard from Avenue "T" to Route 18. Cost: $15.7 million.

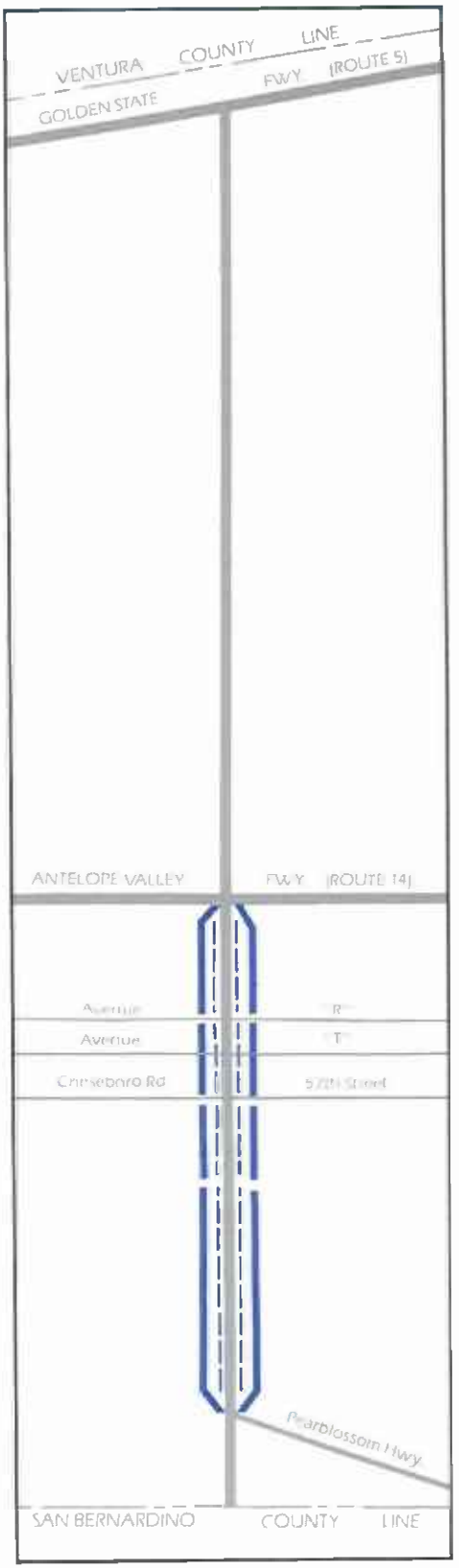
Total cost: $24.4 million

New funds required: $18.3 million

Long-Term

LACTC is working with Caltrans and local jurisdictions to develop a long range improvement plan for Route 138.

ROUTE 138 (LANCASTER ROAD, AVENUE D, PALMDALE BOULEVARD, PEARBLOSSOM HIGHWAY)



ROUTE 605 (SAN GABRIEL RIVER FREEWAY)

EXISTING CONDITIONS

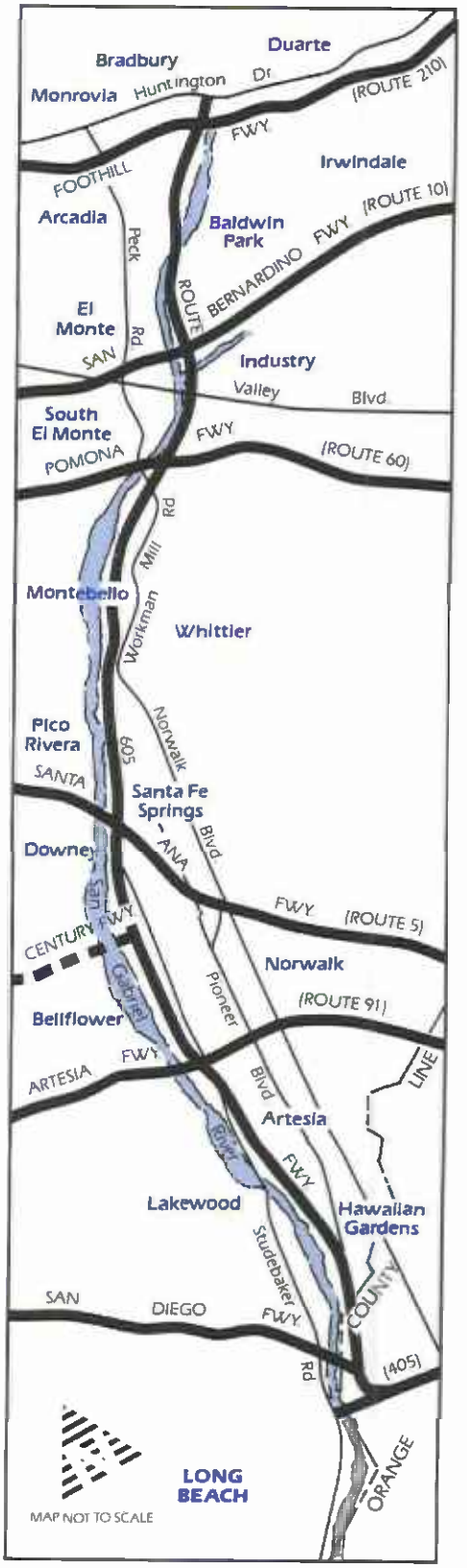
The 26-mile Route 605 Freeway connects the San Gabriel Valley and the City of Long Beach. The 605 Freeway is sometimes called the San Gabriel River Freeway because it follows the course of this river from the foothills to the Pacific Ocean. The eight-lane freeway is used by up to 187,000 vehicles every day.

Route 605 Freeway begins at Huntington Drive, one mile north of the Foothill Freeway. From the Foothill to the San Bernardino Freeway, the Route 605 Freeway bisects the Santa Fe Dam Flood Control basin. The nearest through street is Peck Road, which is more than two miles away. Peak period speeds average around 40 miles an hour. The communities of Bradbury, Arcadia, Monrovia, Duarte, Baldwin Park and El Monte are located nearby.

Between the San Bernardino and Pomona freeways, 605 Freeway access is limited to the Valley Boulevard on-ramp for residents and employees of the cities of Industry, El Monte, South El Monte, and unincorporated county. This section of the freeway experiences 3 hours of congestion each day; two hours southbound in the morning with speeds averaging 34 miles an hour and one hour northbound in the evening with speeds averaging 42 miles an hour.

Between the Pomona and Santa Ana Freeways Route 605 passes through the cities of Whittier, Pico Rivera, Montebello, Santa Fe Springs, Downey, and unincorporated county areas. Congestion in this freeway section lasts up to four hours, two in the morning and two in the evening.

The section of Route 605 from the Santa Ana Freeway, south to the Artesia Freeway, adds Bellflower and Norwalk to the list of communities served by the freeway. Peak period traffic patterns change direction on this section, from southbound to northbound. However, congestion still lasts about three hours each day.
Between the Artesia and the San Diego Freeway, congestion is heaviest flowing north out of Long Beach, Lakewood and Hawaiian Gardens. Because the 605 Freeway crosses the Orange County line just north



of the San Diego Freeway, the 605 is also heavily used by residents of Orange County. The 605 freeway ends at the San Diego Freeway.

When the Century Freeway is completed, traffic will increase on the Route 605 Freeway in both directions south of the Pomona Freeway.

RECOMMENDATIONS

Short-Term

- Restripe or widen the freeway from eight to ten lanes throughout its entire length. The added lanes should be considered for designation as exclusive bus and carpool lanes.
  - a. Between the Foothill and the Santa Ana Freeways Cost $35.3 million.
  - b. Between the Santa Ana and the Artesia Freeway Cost: $4.0 million
  - c. Between the Artesia Freeway and the Orange County line Cost: $6.6 million.
- Widen between Fairton Street and Rosecrans Avenue. Cost: $5.2 million **Federal and state funds committed**
- Widen between Imperial Highway and Firestone Boulevard. Cost: $5.2 million **Federal and state funds committed**
- Improve the San Bernardino Freeway Interchange. Cost: $5.0 million
- Work with Orange County to obtain improvements to the San Diego Freeway Interchange. Cost: $2.0 million
- If the "Smart" corridor demonstration project is successful, add Peck Road, Workman Mill Road, Norwalk Boulevard or other appropriate streets to the "Smart" street system by computer coordinating traffic signals and freeway ramps. Cost: Included in "Streets" Chapter

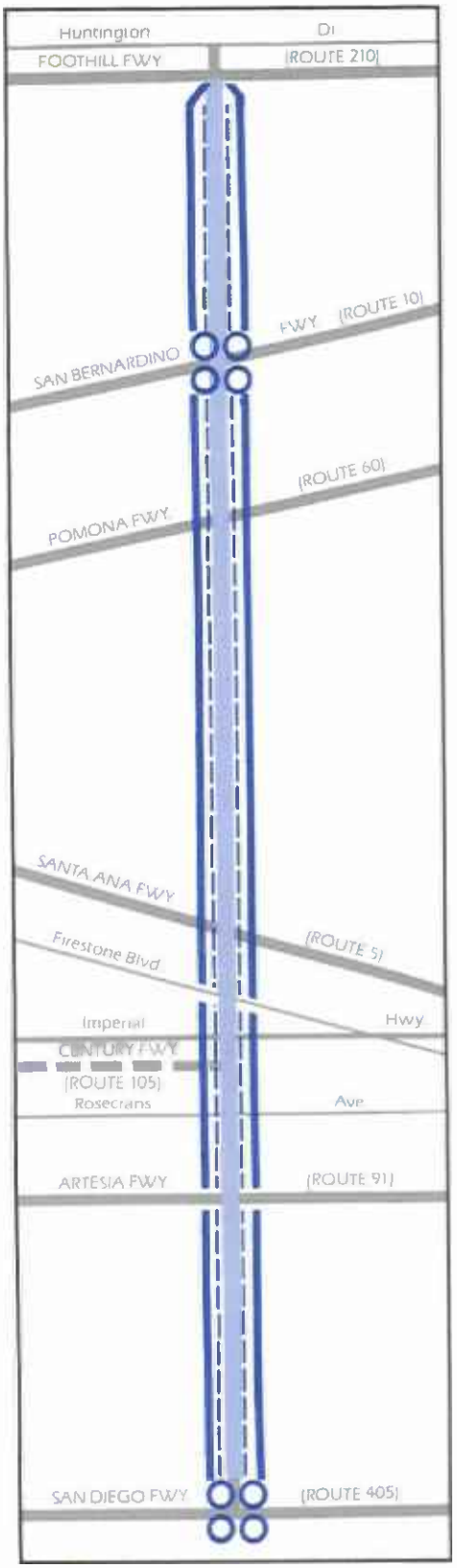
Total cost: $63.3 million

New funding required: $52.9 million

Long-Term

No long-term improvements are recommended.

ROUTE 605 (SAN GABRIEL RIVER FREEWAY)



SAN BERNARDINO FREEWAY (ROUTE 10)

EXISTING CONDITIONS

The San Bernardino Freeway begins at the Santa Ana freeway.

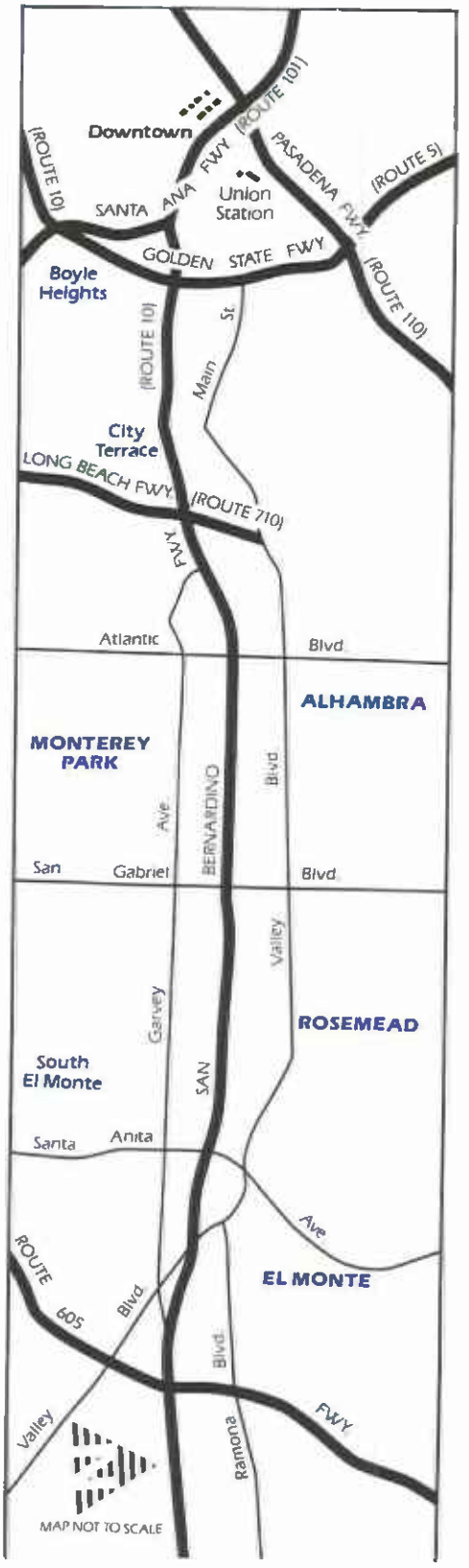
Rush hour on the San Bernardino Freeway lasts for five hours every workday. Congestion occurs westbound towards Los Angeles in the morning, and eastbound towards residential areas of the San Gabriel Valley in the evening.

The San Bernardino Freeway includes the El Monte Busway, one of only two bus and carpool lanes currently operating in Los Angeles. The El Monte Busway is 11 miles long, from Mission Road in downtown Los Angeles to Santa Anita Avenue in El Monte. Caltrans is constructing an extension of the busway into downtown Los Angeles' Union Station area. San Gabriel Valley residents have requested that the busway also be extended farther east, to the San Bernardino County line.

From Downtown to the Long Beach Freeway, the freeway is 12 lanes wide and carries over 200,000 cars each day. The San Bernardino Freeway passes through City Terrace and Boyle Heights here.

The worst congestion occurs from the Long Beach Freeway to the 605 Freeway because the freeway narrows from twelve to eight lanes, but still carries almost 200,000 vehicles daily, nearly as many vehicles as the 12-lane wide segment just to the west. Peak hour conditions last from 6:00 to 8:45 a.m. and from 3:30 to 6:45 p.m. The freeway passes through the cities of Monterey Park, Alhambra, Rosemead, South El Monte, and El Monte.

Between the 605 freeway and the Foothill Freeway, the San Bernardino is ten lanes wide and carries 138,000 vehicles daily through the cities of Baldwin Park, West Covina, La Puente, Covina, Walnut, Pomona, and unincorporated county areas.



From the Foothill Freeway to the San Bernardino County line, 160,000 vehicles a day travel on eight lanes through the cities of Pomona, San Dimas, and Claremont. Traffic is composed of both downtown commuters and Foothill Freeway users. The completion of the Route 30, Foothill Freeway gap, just to the north, will probably reduce congestion on this portion of the San Bernardino Freeway.

RECOMMENDATIONS

Short-Term

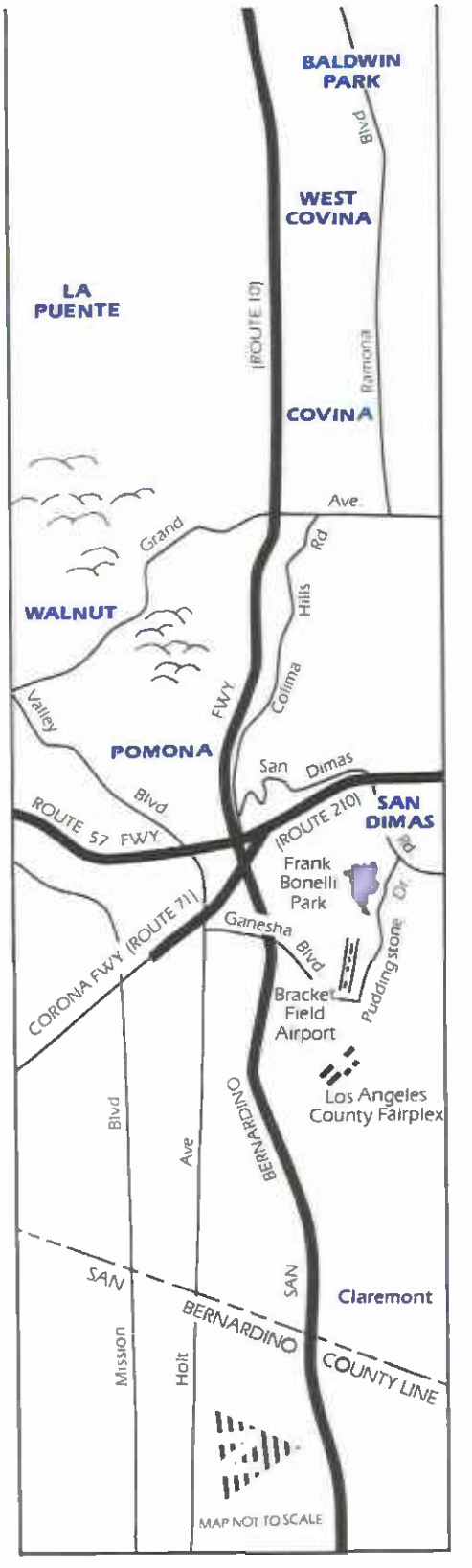
Finish construction of the westerly (downtown) extension of the El Monte bus and carpool lane to Union station. This project is currently under construction. Cost: $18 million **Federal, state and local funds committed**

Improve the Interchanges at the Long Beach and Route 605 freeways Cost: $4.0 million

Construct ramp meters, ramp bypass lanes, auxiliary lane and busway meter projects at various locations along the entire freeway. Cost: $2.6 million. **Federal and State funds committed**

Add eastbound fifth lane and upgrade median barrier between Baldwin Avenue and Route 605 Freeway. Cost: $3.5 million **Federal and state funds committed**

Widen and restripe the eastbound freeway between Route 605 and Puente Avenue to add a lane. Cost: $2.6 million **Federal and state funds committed**



Extend the El Monte Busway east from its current terminus at Santa Anita Avenue to the San Bernardino County line. Cost: $53.8 million

Improve the Corona Freeway Interchange. Cost: Included in Corona Freeway description

If the "Smart" corridor demonstration project is successful, add Valley Boulevard, Garvey Avenue, Ramona Boulevard, San Bernardino Road, Holt Avenue and other appropriate streets to the "Smart" street system by computer coordinating traffic signals and freeway ramps. Cost: Included in "Streets" Chapter

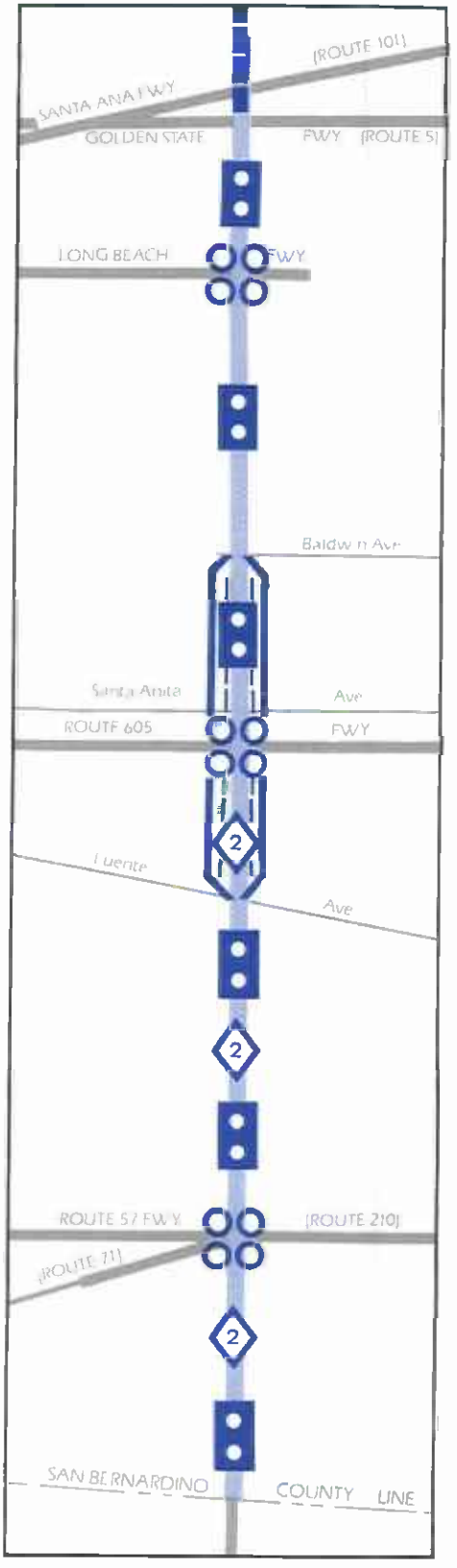
Total cost: $84.5 million

New funds required: $57.8 million

Long-Term

Long-term solutions to congestion on the San Bernardino Freeway should be studied in light of the potential conversion of the El Monte Busway to rail.

SAN BERNARDINO FREEWAY (ROUTE 10)



SAN DIEGO FREEWAY (ROUTE 405)

EXISTING CONDITIONS

On week days, the San Diego Freeway is congested on much of its 49-mile length for eight hours.

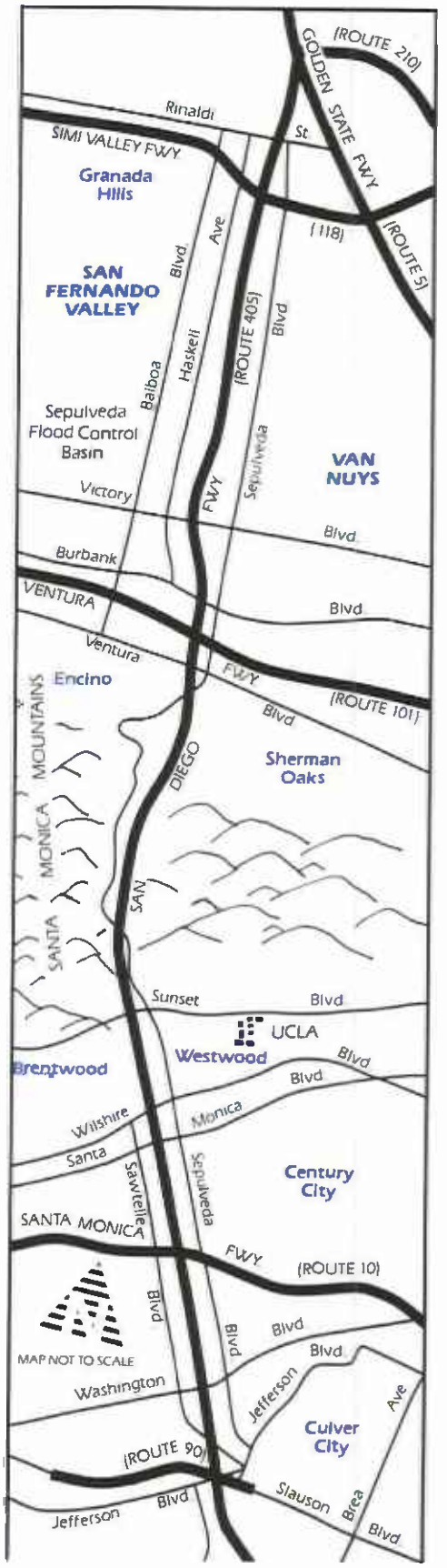
The San Diego Freeway provides the best route between outlying residential areas and jobs in the Los Angles basin. The freeway serves a number of high-density employment centers such as, Long Beach, El Segundo, Westwood and Century City.

The San Diego Freeway starts at the Golden State Freeway in the northern San Fernando Valley. As it crosses the Simi Valley Freeway, commuters from San Fernando Valley and Ventura County enter the freeway. Between the Simi and the Ventura freeways, if no accidents occur, speeds on the San Diego Freeway are 33 miles an hour in the morning and 44 miles an hour in the evening.

The Interchange of the San Diego and the Ventura freeways is severely congested, with traffic backing up several exits on each freeway during the peak. Together with the merged traffic from the Ventura Freeway, commuters crawl through the Sepulveda pass. Congestion on this steep pass is caused by overwhelming demand and the lack of an acceptable alternate route across the Santa Monica Mountains. Sepulveda Boulevard, the only major through street, cannot be improved sufficiently to accommodate the peak direction demands.

After crossing the mountains, many commuters exit the freeway to major employment areas such as, UCLA, Westwood and Century City. This busy section of the freeway is ten lanes wide.

Much of the congestion along the San Diego Freeway between the Santa Monica Freeway and Harbor freeways is caused by commuters to the El Segundo Employment area and travelers bound for the Los Angeles International Airport. The Century Freeway, which



is currently under construction, will connect to the San Diego Freeway near the Airport. After the airport, the San Diego turns to the east, along what is known as the "South Bay Curve". The South Bay Curve is congested for over seven hours every day. Peak period speeds average 30 miles an hour. The freeway serves South Bay coastal communities such as, Manhattan Beach, Torrance, Hawthorne, Lawndale and Gardena here.

The congestion is particularly bad at the Long Beach Freeway Interchange, where traffic backs up due to narrow transition lanes and many lane changes.

Most of the congestion from the Long Beach to the 605 Freeways is caused by Orange County and Long Beach commuters going to jobs in central Los Angeles, Carson, Compton and downtown. The San Diego Freeway crosses the Orange County line just before the intersection with the 605 Freeway. The San Diego/605 Freeway Interchange needs to be improved. The freeway eventually merges with the Santa Ana Freeway and continues south to the City of San Diego.

RECOMMENDATIONS

Short-Term

Add ramp meters on the San Diego Freeway in between the Simi and Golden State Freeways. Cost: $1.0 million

Widen, by modifying the center shoulder and restriping where feasible between the Simi and Ventura Freeways. This lane should be considered for designation for exclusive use by carpools and buses. Cost: $6.0 million **Federal and state funds committed.**

Improve the Ventura/San Diego Freeway Interchange to accommodate increased traffic from proposed widening projects. Cost: unknown

Stripe a southbound fifth lane between the Ventura Freeway and Wilshire Boulevard. This lane should be considered for designation for exclusive use by buses and carpools Cost: $1.5 million. **Federal and State funding committed**

Widen the northbound freeway between Wilshire Boulevard and the Ventura Freeway. This lane should be considered for designation for exclusive use by buses and carpools Cost: $80.0 million

Widen the freeway to add a lane in each direction between Wilshire Boulevard and the Marina Freeway. This lane should be considered for designation for exclusive use by buses and carpools Cost: $105.6 million

Add a fifth lane in each direction between the Marina Freeway and the Harbor Freeway by restriping and modifying the median. This lane is being considered for designation for exclusive use by carpools and buses. Cost: $11.1 million. **Federal and State funding committed**

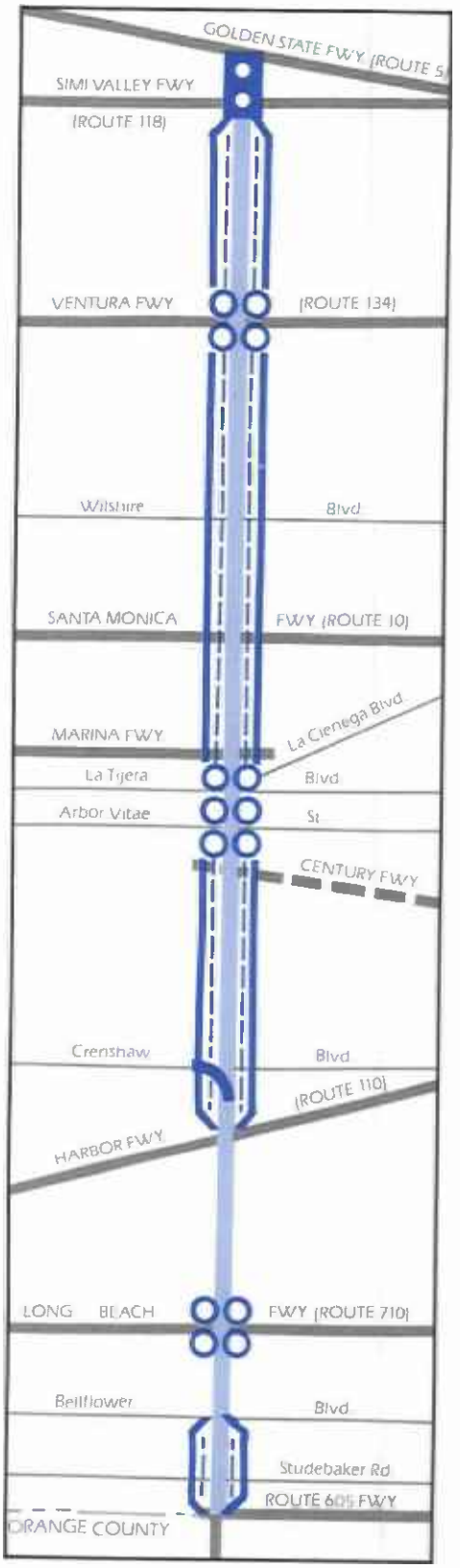
Construct ramps and an auxiliary lane at La Tijera Boulevard. Cost: $7.4 million **Local funding committed**

Construct a new interchange at Arbor Vitae Street near the Inglewood/LAX area. Cost: $13.0 million. **Federal and State funding committed**

Improve the San Diego/Long Beach Freeway Interchange Cost: $7.0 million

Stripe a fifth lane from Studebaker to Bellflower. Cost: $1.1 million. **Federal and State funds committed**

SAN DIEGO FREEWAY (ROUTE 405)



Construct a southbound on-ramp at Crenshaw Boulevard. Cost: $0.4 million **Local funds committed**

Widen within existing right-of-way between the Harbor Freeway and Route 605. The added lanes should be considered for exclusive use by buses and carpools. Cost: $250.0 million

If the "Smart" corridor demonstration project is successful, add Sepulveda, La Cienega boulevards or other appropriate streets to the "Smart" street system by computer coordinating traffic signals and freeway ramps. Cost: Included in "Streets" Chapter

Total cost: $484.1 million plus unknown

New funding required: $443.6 million plus unknown

Long-Term

A long-term solution for congestion on the San Diego Freeway should be studied in light of planned construction of Proposition A rail lines along the freeway corridor between San Fernando and Marina del Rey, and from Marina del Rey to Torrance and from Torrance to Long Beach.

SANTA ANA FREEWAY (ROUTES 101 & 5)

EXISTING CONDITIONS

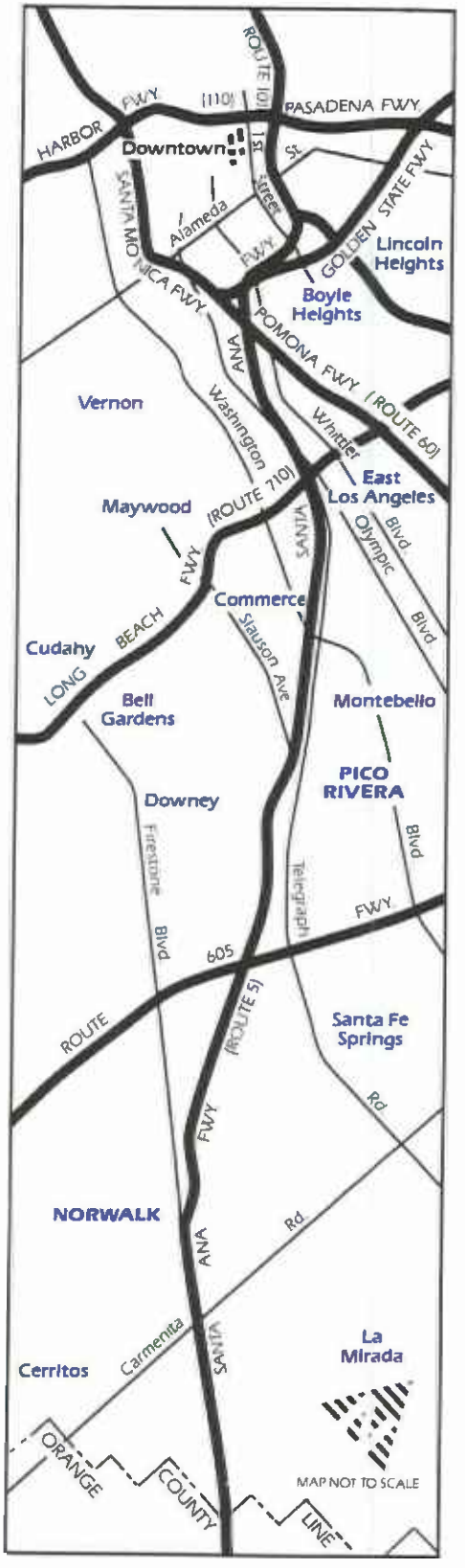
The Santa Ana Freeway starts as Route 101 at the intersection of the Hollywood, Harbor and Pasadena Freeways. As Route 101, the Santa Ana curves around the northern and eastern portions of downtown Los Angeles. The freeway is quite congested here, with peak period speeds of 20 miles per hour for six hours daily between the Harbor and San Bernardino Freeways. Between the San Bernardino freeway and the East Los Angeles Interchange (juncture of the Santa Ana, Golden State, Santa Monica, and Pomona freeways), speeds of only 16 miles an hour are common during the peak period.

Part of the congestion problem is caused by numerous lane changes as vehicles try to exit the freeway. Trucks constitute 13 percent of the vehicles on the Santa Ana Freeway. Since the Santa Ana was one of the first built, it is narrower than other freeways. Besides providing access to downtown commuters, the Santa Ana also provides freeway access to residents of Lincoln Heights and Boyle Heights and El Sereno.

From the East Los Angeles Interchange to the Long Beach Freeway, the Santa Ana Freeway is 10 lanes wide. Congestion occurs both north and southbound from 6:45 to 9:15 a.m. and from 3:00 to 6:30 p.m. The freeway is located near the communities of Vernon and East Los Angeles.

The Santa Ana Freeway between the Long Beach Freeway and the 605 Freeway is eight lanes wide. The freeway bisects the cities of Commerce, Pico Rivera, Bell Gardens, Montebello and Downey. Congestion occurs northbound from 6:15 to 9:15 a.m. southbound from 3:00 to 6:30 p.m. Slowing occurs from the northbound Santa Ana to the northbound Long Beach Freeway since the transition is only one lane wide.

Between the 605 Freeway and the Orange County Line the six-lane Santa Ana Freeway passes through the communities of Norwalk, Santa Fe Springs, Cerritos and La Mirada. Peak period speeds average 34 miles an hour.



RECOMMENDATIONS

Short-Term

Improve freeway access to downtown streets and widen the southbound bridge over the East Los Angeles Interchange from two to three lanes. Cost: Unknown

Modify the ramp metering system between the San Bernardino Freeway and Norwalk Boulevard. Cost: $0.6 million **Federal and state funds committed**

Widen the northbound Santa Ana Freeway to the northbound Long Beach Freeway connector to two lanes. Cost: $ 2.0 million

Widen the freeway between Route 605 Freeway and the Orange County line. This project includes reconstruction of many freeway interchanges. Cost: $90.0 million. **$0.2 million dollars of Federal and state funds for rights-of-way is committed**

If the "Smart" corridor demonstration project is successful, add Olympic, Firestone and Whittier Boulevards, Slauson and Washington Avenues, Telegraph Road and other appropriate streets to the "Smart" street system by computer coordinating the traffic signals and freeway ramps. Cost: Included in "Streets" Chapter

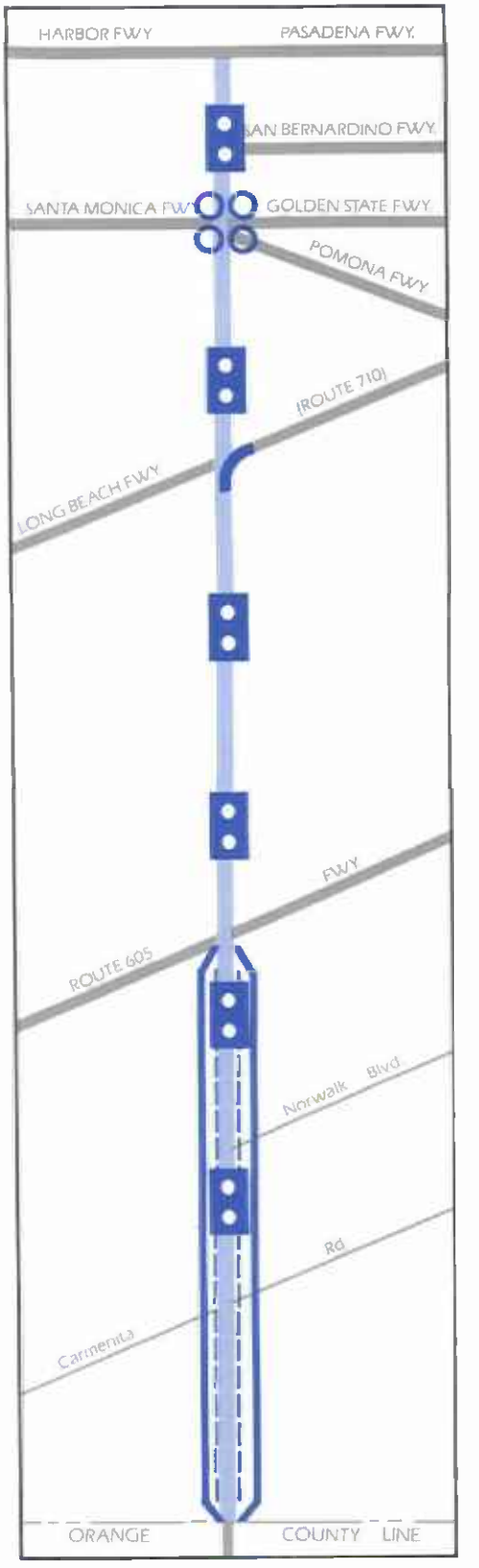
Total cost: $92.6 million plus unknown

New funds required: $91.8 million plus unknown

Long-Term

Solutions to congestion on the Santa Ana Freeway need to be evaluated in light of the Proposition A plan to extend Metro Rail along the Santa Ana Freeway corridor.

SANTA ANA FREEWAY (ROUTES 101 & 5)



SANTA MONICA FREEWAY (ROUTE 10)

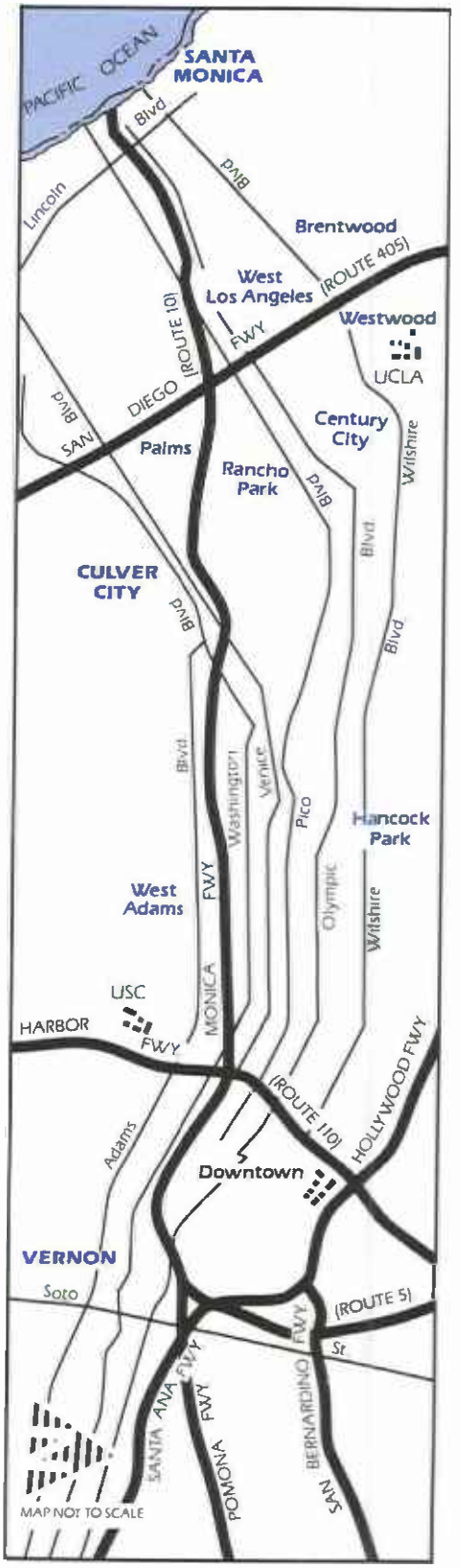
EXISTING CONDITIONS

Commuters on the Santa Monica Freeway face six and a half hours of congestion each workday with speeds ranging from 40 miles per hour in Santa Monica to 24 miles per hour in Downtown Los Angeles. Due to continued urban development, the congestion on the Santa Monica Freeway is expected to increase and the peak hour to last longer.

The Santa Monica Freeway begins in the City of Santa Monica at Lincoln Boulevard. There is typically a long waiting period to get on the freeway at Lincoln Boulevard. Between Lincoln Boulevard and the San Diego Freeway, the Santa Monica Freeway is eight lanes wide. The Santa Monica Freeway also provides freeway access to residents of Venice and West Los Angeles.

Between the San Diego Freeway and the Harbor Freeway, the Santa Monica Freeway is congested because it serves many residential and employment areas. Large employment centers include Downtown, Westwood, Wilshire Corridor, and Century City. Rapid commercial growth is expected to occur near the freeway's intersections with the Harbor and the San Diego Freeways. Residential areas served include, Beverly Hills, Culver City, West Hollywood, and the Los Angeles City communities of Westwood, Palms, West Adams, Hancock Park, and University Park.

There is peak hour congestion both east and westbound on the Santa Monica Freeway between the San Diego and Harbor Freeways. The morning peak period lasts from 7:15 to 10:00 a.m., and the evening peak lasts from 3:15 to 7:00 p.m. between the San Diego and Harbor Freeways. Average peak period speeds both east and westbound are between 27 and 37 miles an hour. Loss of the eastbound auxiliary lane between Crenshaw and Western creates congestion between Crenshaw and Arlington. About 4,000 people



a day ride on buses which travel on the Santa Monica Freeway.

Traffic backs up on the left lanes of the Santa Monica Freeway before the transition to the northbound Harbor Freeway. In Downtown Los Angeles, between the Harbor and Santa Ana Freeways, peak period speeds average 24 miles per hour between 6:45 and 9:15 a.m. and 3:30 to 6:15 p.m. Congestion is heavy both east and westbound. The Santa Monica Freeway connects at the East Los Angeles Interchange to the Golden State, Santa Monica, Santa Ana, and Pomona Freeways.

RECOMMENDATIONS

Short-Term

- Add an eastbound on-ramp at Fourth Street in Santa Monica to relieve congestion at the Lincoln Boulevard on-ramp. Cost: $6.3 million. **Federal and state funds committed**

- Improve westbound off-ramp at Cloverfield/26th. Cost: $0.8 million

- Low cost improvements to improve the transition from the eastbound Santa Monica to the northbound Harbor Freeway should be examined. Cost: Unknown.

- Test the "Smart" Street concept by computer coordinating traffic signals and freeway ramps on Olympic, Pico, Venice, Washington and Adams Boulevards, and other appropriate streets. Cost: $25.0 million **Partial federal, state and local funds expected to be committed soon.**

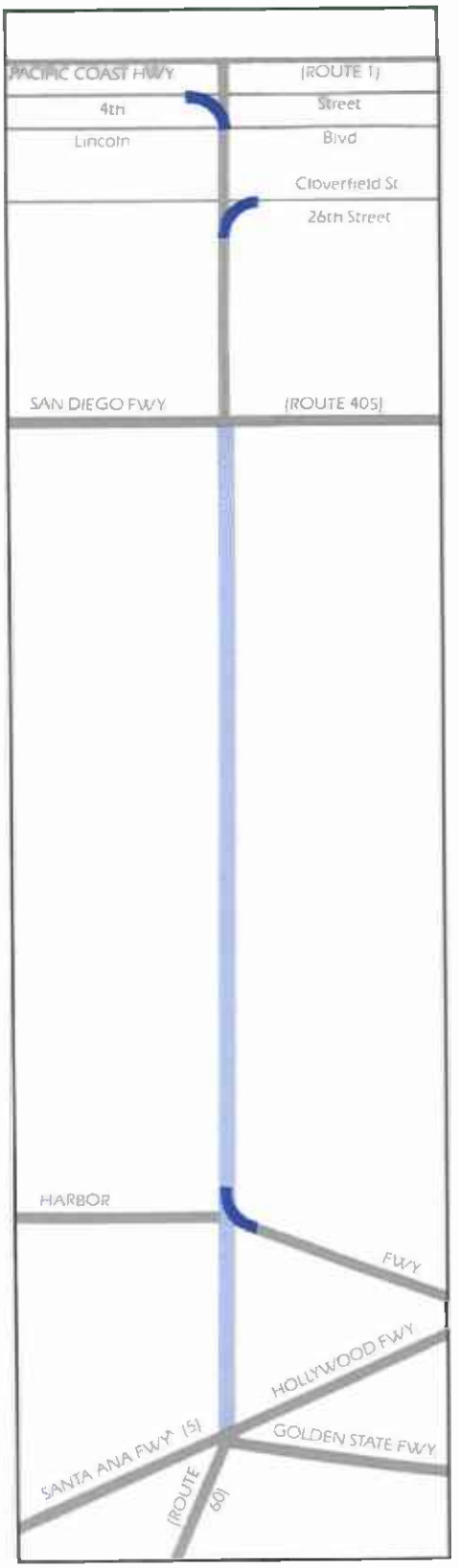
Total cost: $32.1 million plus unknown

New funds required: up to $25.8 million plus unknown

Long-Term

A long-range congestion solution for the Santa Monica Freeway should be studied in light of the planned extension of Metro Rail to Westwood.

SANTA MONICA FREEWAY (ROUTE 10)



SANTA MONICA BOULEVARD (ROUTE 2)

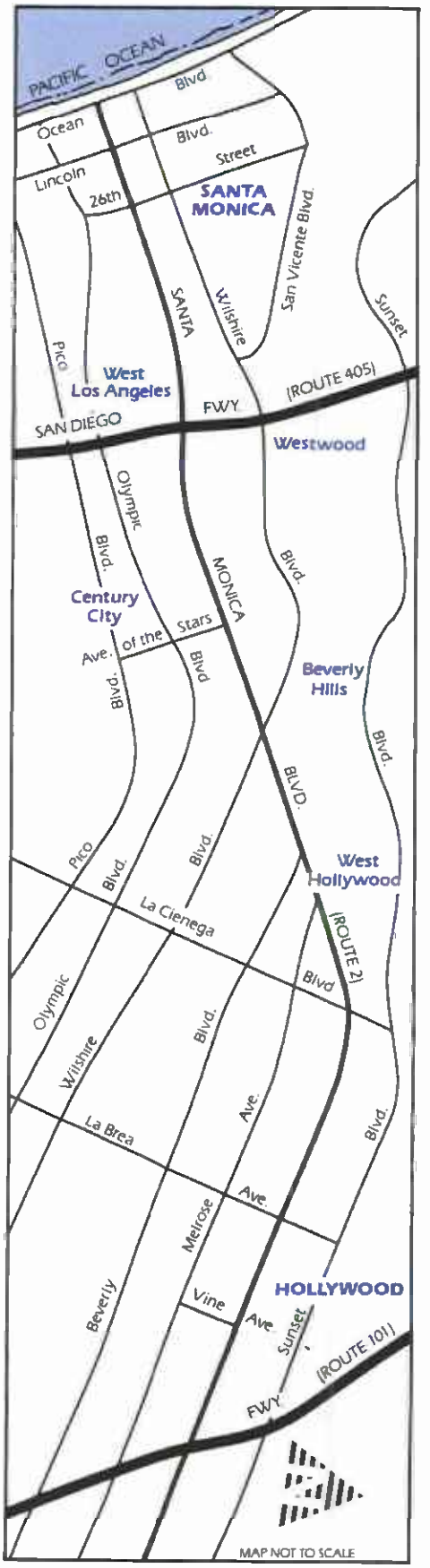
EXISTING CONDITIONS

Santa Monica Boulevard is a severely congested east-west major street extending almost 13 miles from Santa Monica to Hollywood. Highway traffic in this very urbanized area is expected to increase by 40 percent over the next 20 years.

There is a historical reason for Santa Monica Boulevard's congestion problem. Until 1975 it was believed that the Route 2 Freeway would eventually be built to carry "through" traffic. Since the freeway was never built, all the "through" traffic travels on Santa Monica Boulevard and nearby streets such as Olympic. Exacerbating the problem is the dense development abutting the right-of-way for Santa Monica Boulevard, which limits the opportunities to widen the street.

Nearby streets include Wilshire, Olympic and Sunset Boulevards, however they also experience severe congestion. Santa Monica Boulevard traverses a dense residential and employment area between Downtown and Santa Monica. Large employment areas, such as Westwood, Century City, Beverly Hills and University of California at Los Angeles, generate heavy commuter traffic loads for Santa Monica Boulevard.

While the short-term recommendations included in the plan will be beneficial, they will not completely resolve traffic problems on the Santa Monica Boulevard corridor. Given the highly developed nature of land use in the corridor, the historical opposition of the Cities of Beverly Hills and West Hollywood to major widenings, and the difficulty of acquiring rights-of-way in the Hollywood segment of the corridor, a long-term, environmentally acceptable capacity improvement is needed.



RECOMMENDATIONS

Short-Term

Complete four signal and signal interconnection projects: Wilshire to Rexford, Doheny to Croft Street, Kings Road to La Brea, and Orange Drive to Hollywood Freeway (Route 101). Cost: $5.5 Million. **Federal, state and local funds committed**

Upon completion of Caltrans' Environmental Study, widen portions of Santa Monica Boulevard between the San Diego Freeway and Heath Avenue (Beverly Hills City limits). Cost: $28.0 million. **$7.7 million of Federal and state funds committed**

Interconnect signals and restrict peak hour parking between Highland Avenue and the Hollywood Freeway. Cost: Unknown.

If the "Smart" corridor demonstration project is successful, add Santa Monica, Wilshire, Olympic and Sunset boulevards or other appropriate streets to the "Smart" street system by computer coordinating the traffic signals. Cost: Included in "Streets" Chapter

Total cost: $33.5 million plus unknown

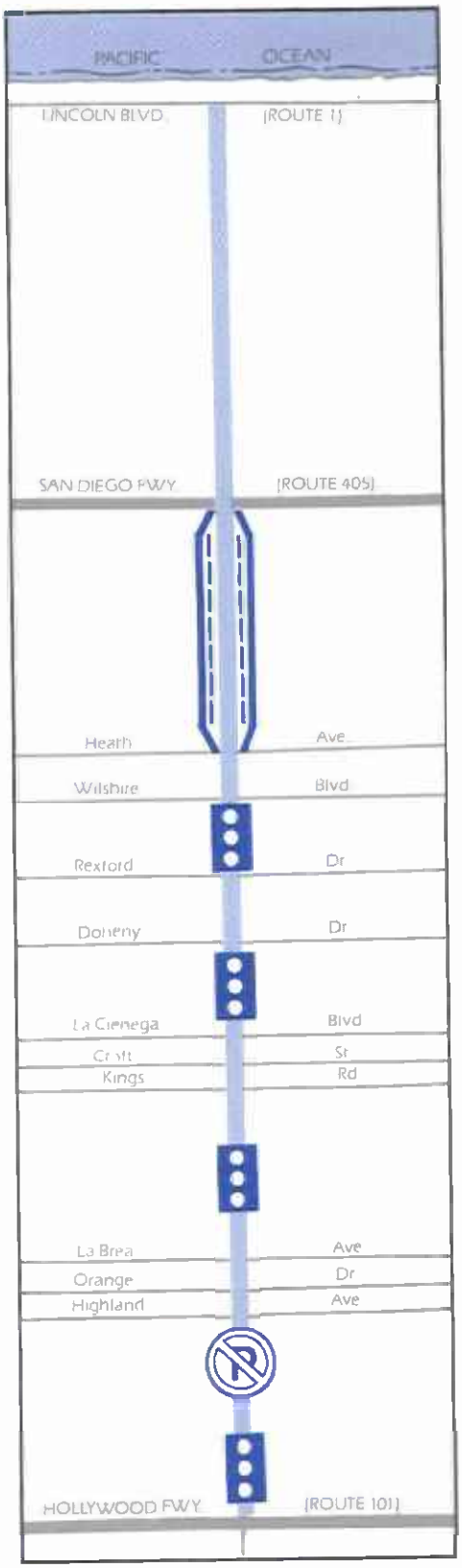
New funds required: $20.3 million plus unknown

Long-Term

LACTC should work with SCAG, Caltrans, and local jurisdictions to study and develop long-range environmentally-acceptable capacity improvement projects on the Santa Monica Boulevard Corridor.

Construct the Metro Rail line and extend it west to Westwood to relieve congestion on Santa Monica Boulevard and other streets.

SANTA MONICA BOULEVARD (ROUTE 2)



SIMI VALLEY FREEWAY (ROUTE 118)

EXISTING CONDITIONS

The Simi Valley Freeway is located in the northern portion of the San Fernando Valley, and extends 15 miles from the Ventura County border at the peak of the Santa Susana Mountains to the Foothill Freeway (Route 210).

Although the freeway is relatively new, it was obsolete when it opened in 1969. It should have been built eight lanes wide, instead of six, to accommodate the planned growth and traffic demand. The Simi Valley Freeway serves the still developing the communities of Moorpark, Simi Valley, Chatsworth, Granada Hills, Northridge, and Porter Ranch. Ongoing development in this area could cause traffic levels to increase by 50 to 80 percent by the year 2000. Most of the freeway users are commuting east in the morning to jobs in the San Fernando Valley and Los Angeles, while returning west at night.

Evening traffic slows down climbing the Santa Susana Mountains between De Soto Avenue and the Ventura County Line due to the steep grade (over 5 percent) and the large number of slow moving trucks using this freeway. The only alternate route through the Santa Susana Mountains is the Santa Susana Pass Road, a narrow, winding mountain road. Peak period speeds average about 32 miles an hour.

In the evening, there is almost always a wait to enter the westbound freeway at Topanga Canyon Boulevard. Traffic signals have maximized the number of vehicles able to enter the freeway here, but still demand exceeds capacity.

In the morning, traffic slows in Mission Hills at the entrance to the southbound Golden State Freeway (Route 5), which is severely congested. In the evening traffic slows on the transition road from the Golden State Freeway to the Simi Valley Freeway. Peak period speeds average about 24 miles per hour.

Between the Golden State Freeway and the Foothill Freeway, the Simi Valley Freeway serves the communities of San Fernando and Pacoima. The Simi Valley Freeway ends at the Foothill Freeway.

RECOMMENDATIONS

Short-Term

Add a westbound truck climbing lane between Topanga Canyon Boulevard and the Ventura County Line by restriping the shoulder. Cost: $1.6 million **Federal, state and local funds committed.**

Widen to 8 lanes by restriping and new construction between the Ventura County Line and San Diego Freeway. Cost: $25 million

Restripe the transition road from the northbound Golden State to the eastbound Simi Freeway to add an extra lane. Cost: $0.05 million

Improve the transition ramp between the eastbound Simi Valley and southbound Golden State Freeway. Cost: $5 million

Add Devonshire and Rinaldi Streets, San Fernando Mission Road and Van Nuys Boulevard, or other appropriate streets to the "Smart" street system by computer coordinating traffic signals and freeway ramps. Cost: Included in "Streets" Chapter

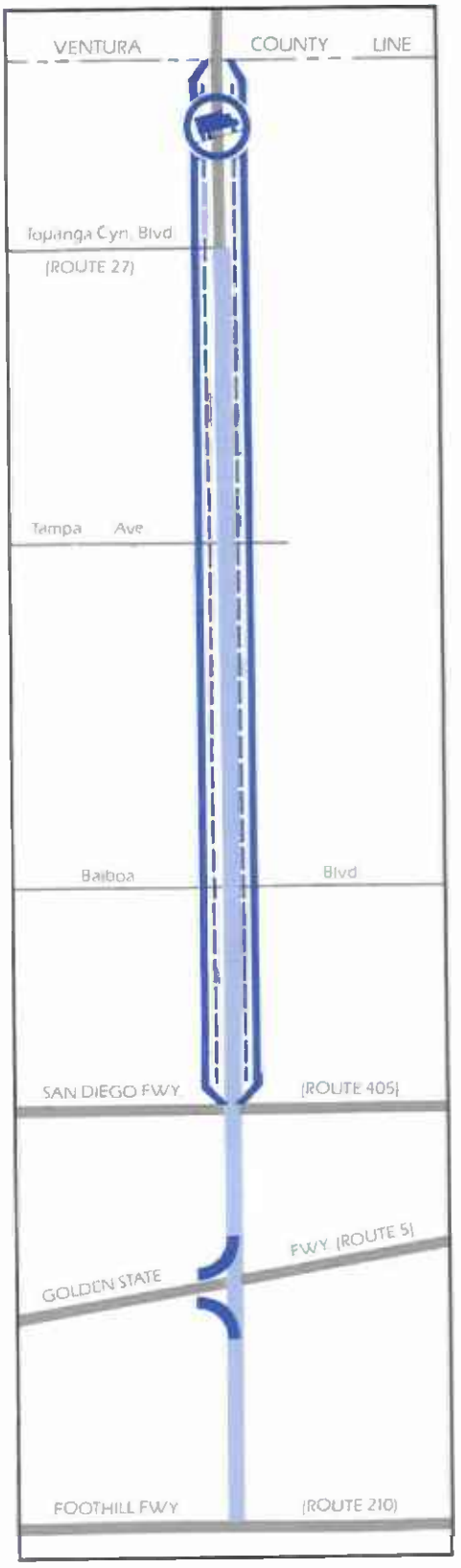
Total Cost: $31.7 million

New funds required: $30.1 million

Long-Term

No long-term improvements are recommended.

SIMI VALLEY FREEWAY (ROUTE 118)



TERMINAL ISLAND FREEWAY & PORTS HIGHWAYS (ROUTES 47 & 103)

EXISTING CONDITIONS

The Terminal Island Freeway was built to connect the bustling ports of Los Angeles and Long Beach with freeways further north. Because the freeway was never finished, it exists today as two short freeway segments which feed traffic onto Terminal Island. One segment runs east-west between the southern end of the Harbor Freeway and the Port of Los Angeles. The other segment runs north-south between Willow Avenue in Long Beach and the Port of Long Beach.

Ports area planners recognized that the incomplete freeway could stunt continued economic growth because of paralyzing congestion. The existing freeway has a high volume of truck traffic -- between 6,000 and 7,000 daily trips. Truck traffic is projected to increase over 100 percent over the next 20 years due to the growth of the ports and the newly constructed Intermodal Container Transfer Facility near the freeway. (An Intermodal Container is a large box, about the size of a truck trailer, which can be transferred directly from ships to either railroad flatbed cars or to trailer trucks.)

Accidents are a problem on the Terminal Island Freeway. The freeway's accident rates are 80 percent above the statewide average for similar facilities.

Improving the major streets in the Ports area is a more cost effective way to reduce congestion than finishing the freeway. The Federal government has funded a $58 million package of major street improvements for the area. Three of these ports highway improvement projects have been completed. Once the remainder of these improvements are made, these streets, such as Alameda Street and Seaside Avenue, will become part of the state highway system.

Sixteen additional major street improvements, totaling $155 million, have also been identified to improve future Ports traffic.

RECOMMENDATIONS

Short-Term

Identify improvements to make the freeway safer. Cost: Unknown

Construct the following seventeen Ports Highway Improvements:

Widen Ocean Boulevard to six lanes between the Terminal Island Freeway and the Gerald Desmond Bridge **Federal funds committed**

Improve the Gerald Desmond Bridge **Federal funds committed**

Widen Ocean Boulevard to six lanes from the Gerald Desmond Bridge to Harbor Scenic Drive **Federal funds committed**

Widen Ocean Boulevard from the Long Beach City limits to the Terminal Island Freeway **Federal funds committed**

Improve the Ocean Boulevard/Harbor Scenic Drive Interchange **Federal funds committed**

Widen Harbor Scenic Drive from Ocean Boulevard to the Pacific Coast Highway **Federal funds committed**

Widen Alameda Street to six lanes from Pacific Coast Highway to Henry Ford Avenue **Federal funds committed**

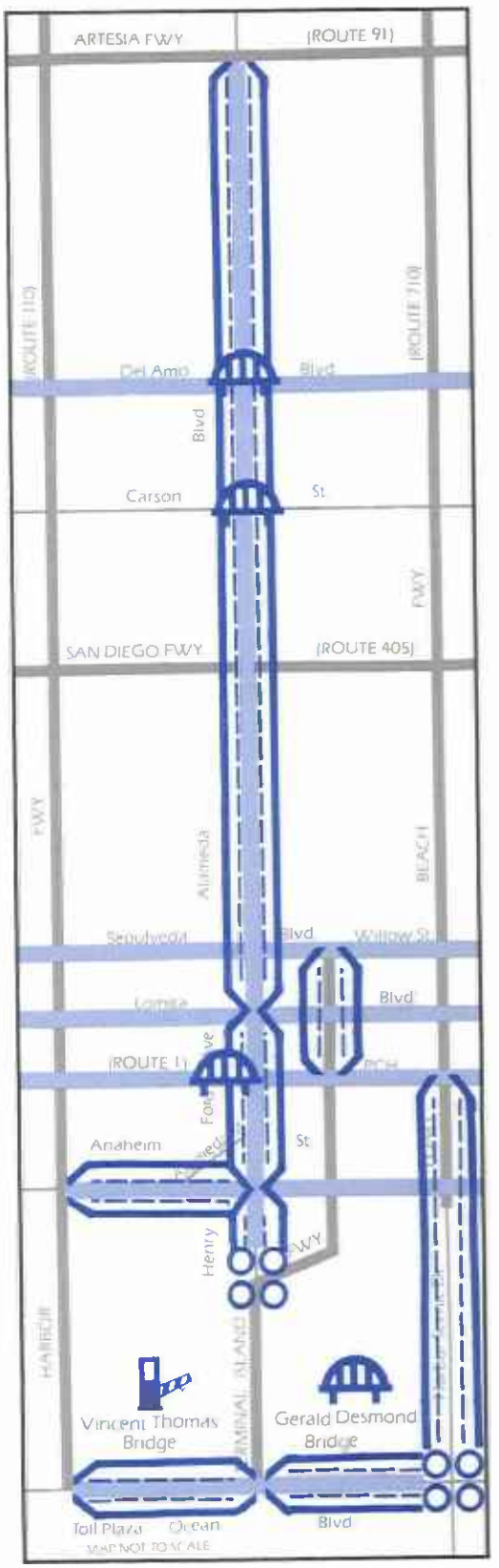
Widen Henry Ford Avenue from Alameda Street to Anaheim Street **Federal funds committed**

Widen Henry Ford Avenue from Anaheim Street to the Terminal Island Freeway **Federal funds committed**

Widen Alameda Street from Pacific Coast Highway to Lomita Boulevard **Federal funds committed**

Widen Seaside Avenue from the Toll Plaza to the Los Angeles City limits **Federal funds committed**

TERMINAL ISLAND FREEWAY
& PORTS HIGHWAYS (ROUTES 47 & 103)



Improve the Henry Ford Avenue/Terminal Island Freeway Interchange **Federal funds committed**

Improve the Toll Plaza **Federal funds committed**

Improve the Terminal Island Freeway from Pacific Coast Highway to Willow Street **Federal funds committed**

Widen Alameda to six lanes between Lomita and the San Diego Freeway **Federal funds committed**

Widen Alameda Street to six lanes between the San Diego Freeway and Del Amo Boulevard **Federal funds committed**

Widen Alameda street between Del Amo Boulevard and the Artesia Freeway **Federal funds committed**

Cost: $55.4 million

Construct grade separation at Carson and Alameda

Construct grade separation at Del Amo and Alameda

Widen Alameda between Del Amo and Route 91

Widen Alamdeda Railroad bridge near Pacific Coast Highway.

Widen Gerald Desmond Bridge to 5 lanes.

Construct connectors for Harbor Scenic Drive and Ocean Boulevard.

Improve Seaside Toll Plaza and/or other ports highway improvements

Cost: $74 million **Federal, state and local funds can be committed**

NOT SHOWN Construct other Ports Highway Improvements Cost: $76 million

If the "Smart" corridor demonstration project is successful, add Alameda Street, Seaside Avenue, Henry Ford Avenue, Ocean Boulevard or other appropriate streets to the "Smart" street system by computer coordinating traffic signals and freeway ramps. Cost: Included in "Streets" Chapter

Total Cost: $205.4 million plus unknown

New funds required: $150.0 million plus unknown

Long-term

The need for long-term improvements to Ports Highways should be evaluated after all of the short-term ports highway improvements are made.

VENTURA FREEWAY (ROUTES 101 & 134)

EXISTING CONDITIONS

The Ventura Freeway begins as Route 101 at the Ventura County line and continues east as Route 134 past the Hollywood Freeway Interchange (Route 170/101). The freeway ends at the Foothill Freeway.

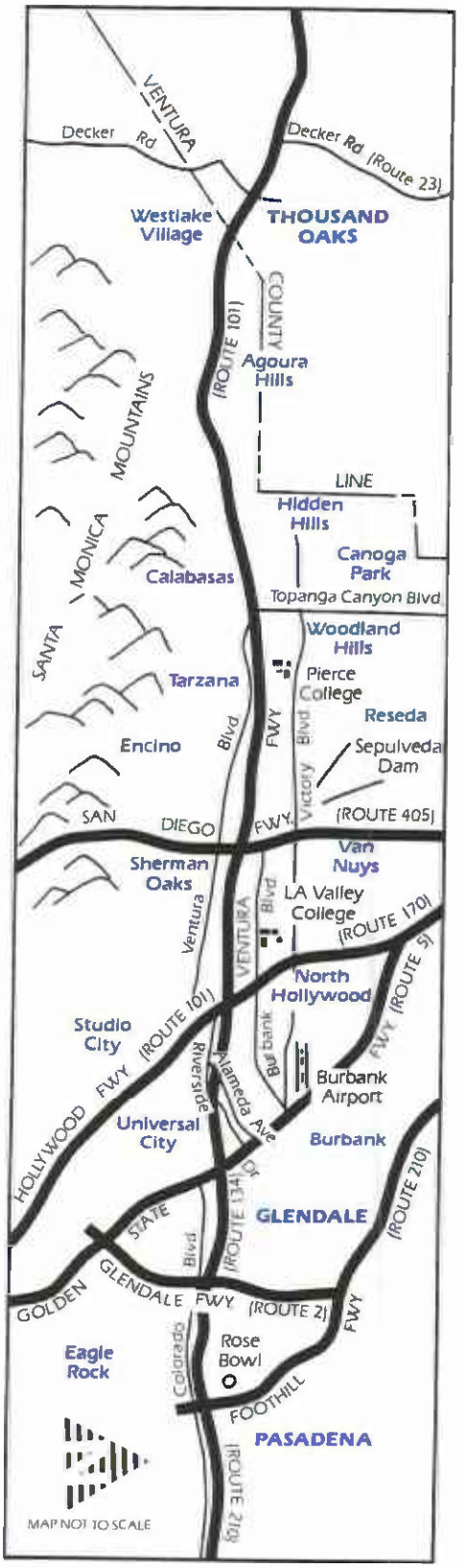
Congestion occurs in both directions. The worst congestion occurs in the morning with traffic trying to exit the freeway onto other severely congested routes, notably, the San Diego and Hollywood freeways. The Ventura Freeway also frequently has heavy weekend congestion caused by vacation traffic to and from northerly coastal areas.

Between the Ventura County line and the San Diego Freeway, the Ventura Freeway is used by residents of the Ventura County communities of Thousand Oaks and Newbury Park, and the Los Angeles communities of Agoura Hills, Westlake Village, Woodland Hills, Canoga Park, Reseda, Tarzana and Encino. The Ventura Freeway's Interchange with the San Diego Freeway is usually congested, even in the middle of the day.

Between the San Diego and the Hollywood freeways, the Ventura Freeway passes through the communities of Van Nuys, Sherman Oaks and Studio City. Congested speeds of 36 to 27 miles an hour last almost eight hours a day. The Ventura Freeway is the busiest freeway in the nation here -- on an average day, over 237,000 vehicles use the freeway here.

After the Ventura Freeway crosses the Hollywood Freeway, it changes route numbers from 101 to 134. Because many eastbound, morning Ventura Freeway commuters exit onto the Hollywood Freeway, traffic on the Ventura Freeway is reduced by 30 percent. Residents of Burbank, North Hollywood, and Universal City have convenient freeway access to the Burbank-Glendale-Pasadena Airport.

Next, the Ventura Freeway crosses the Golden State Freeway through the City of Glendale. Eastbound evening peak period travel



lasts for three hours, but over the year, speeds average 53 miles an hour.

After the Glendale Freeway the six-lane Ventura freeway passes by Eagle Rock to the freeway's terminus at the Foothill Freeway.

RECOMMENDATIONS

Short-Term

Modify interchange at Kanan Road. Cost: $2.9 million **Local Funds committed**

Modify interchange at Mulholland Drive/ Valley Circle Boulevard Cost: $27.4 million. **Federal, State, and Local funds committed**

Modify Parkway Calabasas Road Interchange Cost: $4.7 million **Local funds committed**

Restripe to add a southbound (towards Downtown) lane between Topanga Canyon Boulevard and the San Diego Freeway. Cost: $2.7 million. **Federal and State funds committed**

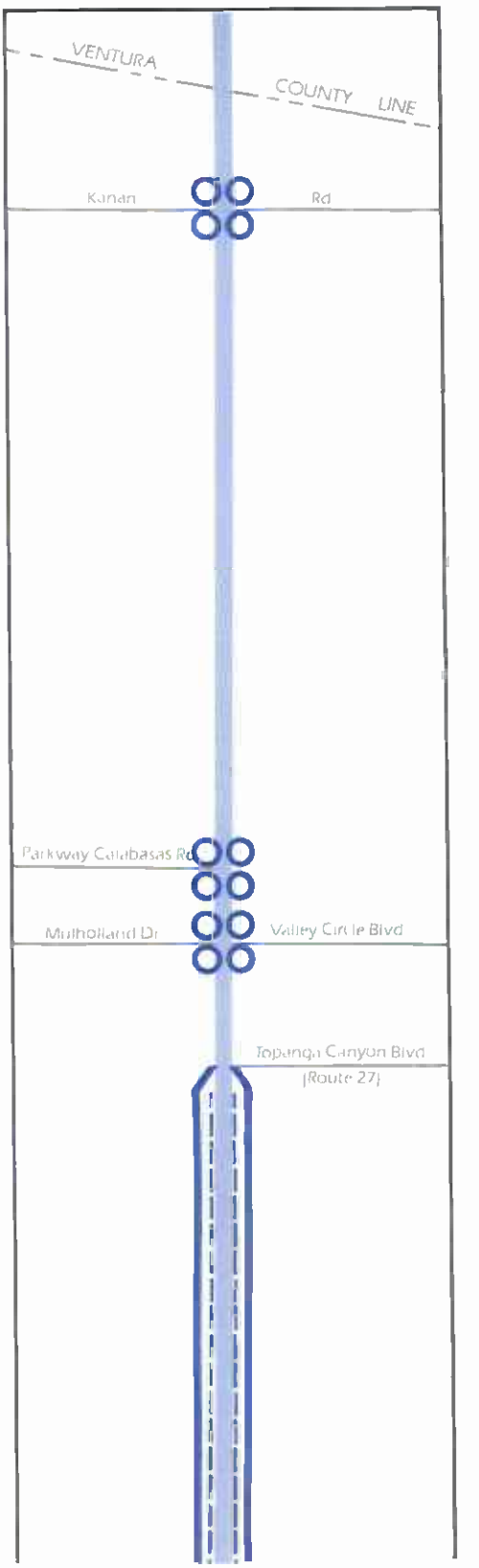
Restripe to add a lane in each direction between the Hollywood Freeway and the San Diego Freeway. Cost: $4.6 million. **Federal and State Funds committed**

Improve the San Diego/Ventura Freeway Interchange Cost: $2.0 million

Widen the southbound Glendale Freeway connector to the westbound Ventura freeway connector to two lanes. Cost: Included in Glendale Freeway description

Erect a sign before the Hollywood Freeway (Route 101) turnoff indicating that the Burbank-Glendale-Pasadena

VENTURA FREEWAY (ROUTES 101 & 134)



Airport is located off of the Ventura Freeway (Route 134). Cost: Unknown but minimal

Widen both the transition ramp and bridge to 2 lanes on Ventura/Hollywood Freeway Interchange. Cost: $2.0 million

Modify interchange at Forest Lawn Drive. Cost: $1.1 million **Local funds committed**

Restripe and construct to add a lane in each direction from the Hollywood Freeway to the Foothill Freeway. This lane should be considered for exclusive use by buses and carpools. Cost: $4.0 million

Construct the San Fernando Valley Proposition A Light Rail Line, which extends to Canoga Park. Cost: Unknown

If the "Smart" corridor demonstration project is successful, add Colorado, Burbank, Victory,and Ventura Boulevards or other appropriate streets to the "Smart" street system by computer coordinating traffic signals and freeway ramps. Cost: Included in "Streets" Chapter

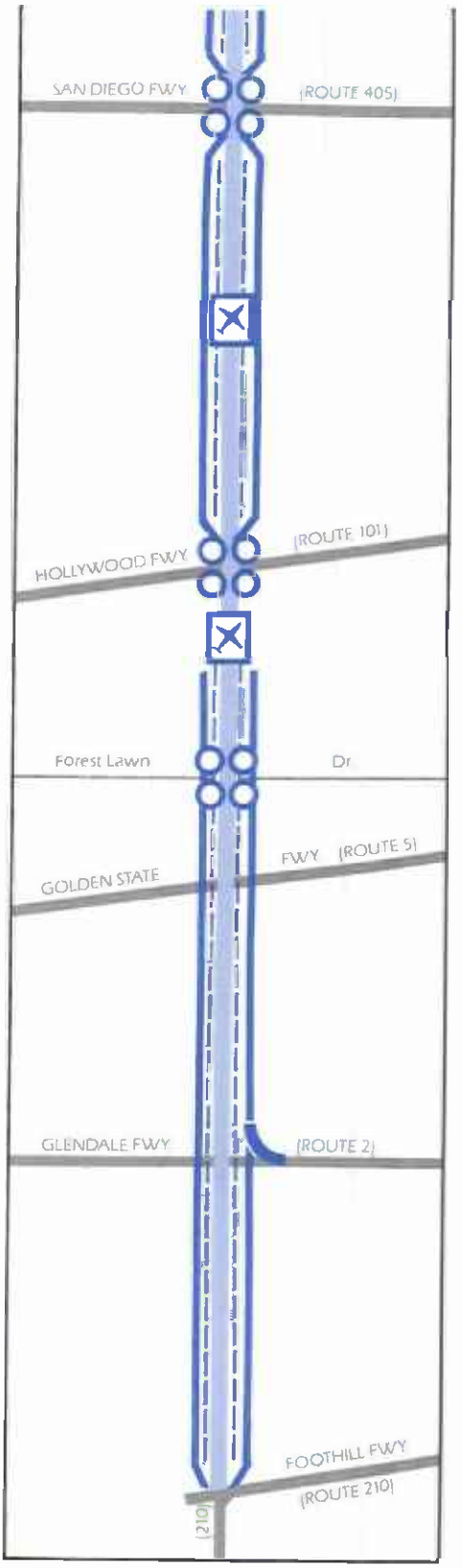
Total cost: $51.4 million plus unknown

New funding required: $8.0 million plus unknown

Long-Term

A long range congestion solution for the Ventura Freeway should be studied in light of the planned San Fernando Valley Proposition A Light Rail Line.

VENTURA FREEWAY (ROUTES 101 & 134)




FINANCES

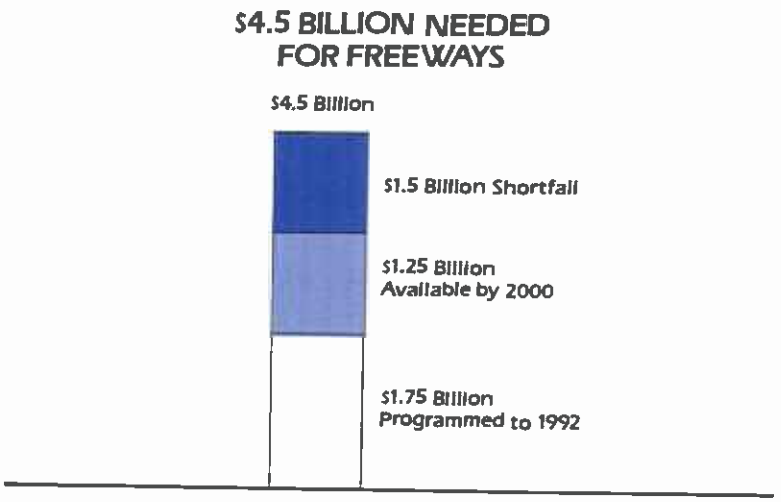
F I N A N C E S

It is clear that Los Angeles urgently needs approximately $4.5 billion for short-term freeway improvements and $234 million each year to properly repair and coordinate signal timing on our streets.

About $1.75 billion of the needed freeway projects are scheduled for construction in the State Transportation Improvement Program (STIP) during the next five years. It is reasonable to assume that additional state and federal money will be available to Los Angeles in the subsequent five years. We can cautiously expect to receive an additional $250 million in years six through ten, for a combined total of $1.25 billion in new state and federal revenue. Together with the funds already programmed, $3 billion will be available in the next decade.

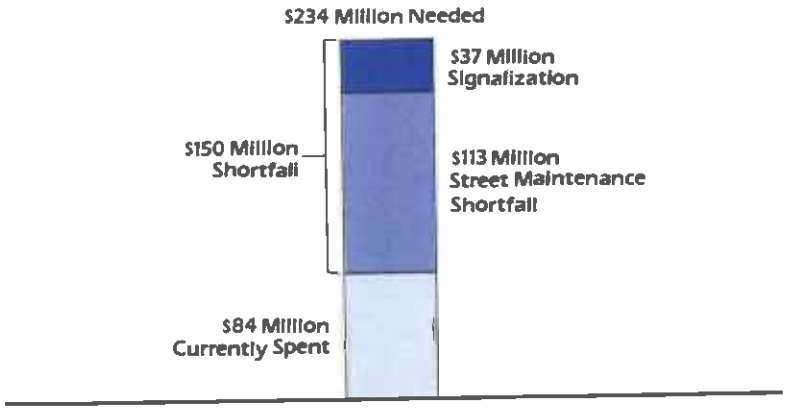
Shortfall

Our short-term freeway need is $4.5 billion. So, we are faced with a **$1.5 billion deficit** to construct needed freeway improvements.



The cities and the County of Los Angeles are currently spending $84 million annually to maintain the streets, but, since **$150 million per year remains unfunded,** overall, our streets are continuing to deteriorate.

ANNUAL STREET NEEDS



In total, then, Los Angeles must obtain an additional $1.5 billion for freeway improvement, plus $150 million per year for street maintenance. Otherwise, our streets and freeways will continue to deteriorate and congestion will compound at a staggering rate. This will have severe economic consequences to Los Angeles, as well as a negative impact on our lifestyles.

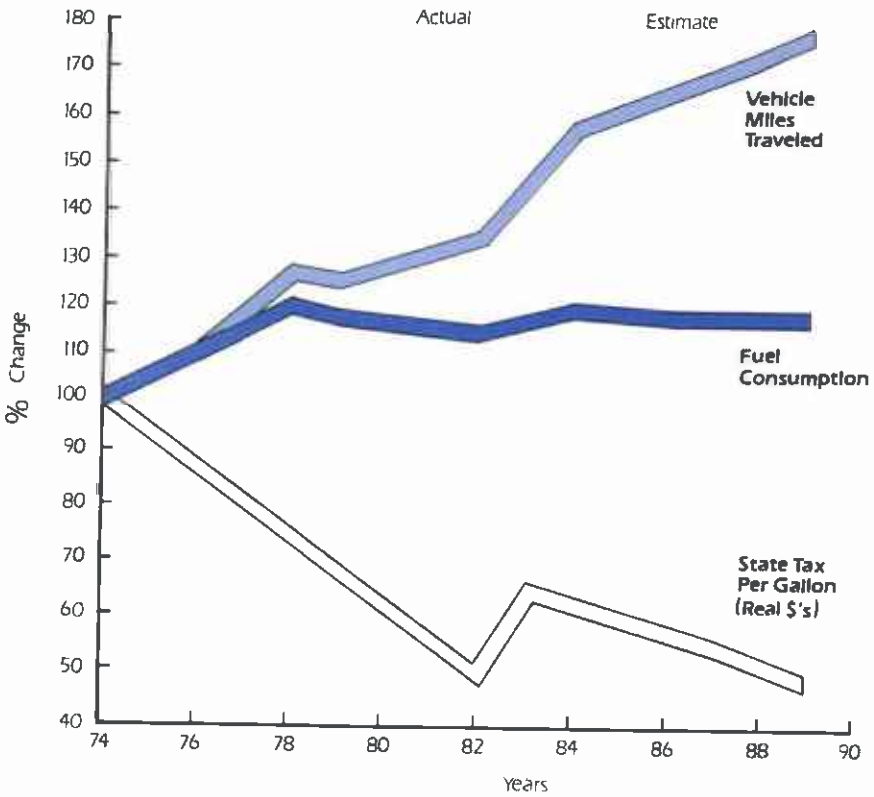
This chapter explains how most street and freeway improvements are funded, how much street and freeway money is generated in Los Angeles, where that money goes and why we aren't building as many streets and freeways with it as we used to. The chapter will also explore possible sources for additional funds.

Traditional Road Funding

Most road improvements are funded by "user fees", specifically, the gas tax and truck weight fees. Through these fees the motorist directly pays for the road improvements.

Neither the federal nor state gas tax has kept pace with freeway construction costs. There are two significant reasons for this decline: first, cars are much more fuel efficient today than ten years ago, requiring less gas to go further; and, second, the gas tax is a flat rate on each gallon sold that does not adjust to inflation.

CALIFORNIA HIGHWAY TRENDS



To illustrate this point, let's compare the growth in the gas tax with the growth in the cost of a highly competitive, cost-effective consumer product. In 1955, when McDonald's opened, a plain hamburger cost ten cents and the combined state and federal gas tax was eight cents. Today, the same hamburger costs 55 cents, an increase of 550 percent, while the gas tax has only grown by 225 percent to 18 cents. Obviously, we cannot build as much with our gas tax dollars, today, as we have in past years. Yet, we now have at least three times the traffic.

Raising the gas tax requires congressional or legislative action which is politically difficult and unpopular with the public. Increases, therefore, occur infrequently, even though our needs continue to grow.

Federal Highway Funds

In recent years, the federal government has not spent all of the gas tax collected in the Federal Highway Trust Fund. The federal gas tax, though not a part of the general fund, has become embroiled in federal deficit discussions.

State Highway Funds

The situation in the State of California is also a problem. Our state spending has come close to its "Gann Expenditure Limitation", which was passed by the voters some years ago. Unless changes are made in the Gann law, it is doubtful that the state legislature will be able to spend new revenues generated by an increased state gas tax.

State Priorities

All revenues earmarked for freeways are allocated by the California Transportation Commission (CTC) through the "State Transportation Improvement Program" or STIP.

Although projects are programmed at the discretion of the California Transportation Commission, state law requires that a "minimum", of seventy percent of funds generated from each county be spent in that county. It has been impossible to meet "county minimums" for most counties since most of the freeway funds available in the state have been used to match federal funds in the construction of a few major "Interstate" freeways. Los Angeles, on the other hand, has received in excess of its minimum, largely due to the court mandated construction of the Century Freeway, one of the last "Interstate" projects.

It is assumed that once the federal "Interstate" program is completed in 1992, county minimums will be easier to achieve and Los Angeles will receive **no more** than its "minimum" share. Los Angeles is entitled to receive 17.5 percent of the state capital outlay for freeways, based on the existing county minimum formula. **If Los Angeles receives only its county minimum share we will only get back about one-half of what we contribute in federal gas tax and 71 percent of our state gas tax.**

Financing the Shortfall

Los Angeles has several alternative ways to secure the money necessary to maintain and improve our street and freeway system. Following is a brief description of all the federal, state and local funding options which could be used to meet both our street and freeway needs. The advantages and disadvantages of each strategy, timing and steps necessary are shown in the table at

the end of this chapter, for comparison purposes.

All funding alternatives assume that Los Angeles will receive no more than its "county minimum" share of funds after existing "Interstate" freeway commitments have been fulfilled. Unless otherwise noted, the amount to the shortfall is based on the assumption that ongoing street maintenance will have first call, with the remaining funds going to freeways.

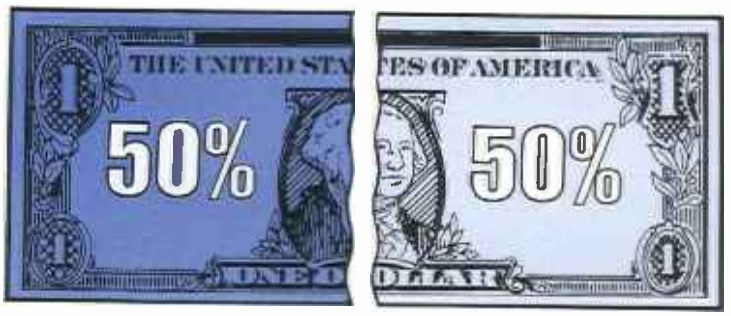
FEDERAL REVENUE SOURCES

Federal Gas Tax

The federal government levies a nine cent per gallon gas tax which can be increased by federal legislation. One cent of this tax is earmarked for transit, 1.16 cents has been traditionally used for streets and 6.84 cents is primarily for freeways. Through current federal law, California is assured that it will receive 85 percent of what it contributes to this fund.

LOS ANGELES COUNTY

FEDERAL
Gas Taxes Paid



Subsidy To Others

Returned To County *

*Assumes County Minimum Formulas apply

A one-cent increase in the federal gas tax would raise $42 million annually for Los Angeles. **However, under current state county minimum policy, and federal 85 percent return to State policy, the county would receive back only half of what it contributes: $16.5 million for freeways, and $4.5 million for local streets.** Under the existing formulas, an increase in the federal tax of nine cents per gallon would be needed to fund the county's $1.5 billion freeway shortfall over ten years. This nine

cent increase could not come close to meeting the $150 million annual local streets shortfall; for that, a 33 cent increase would be required.

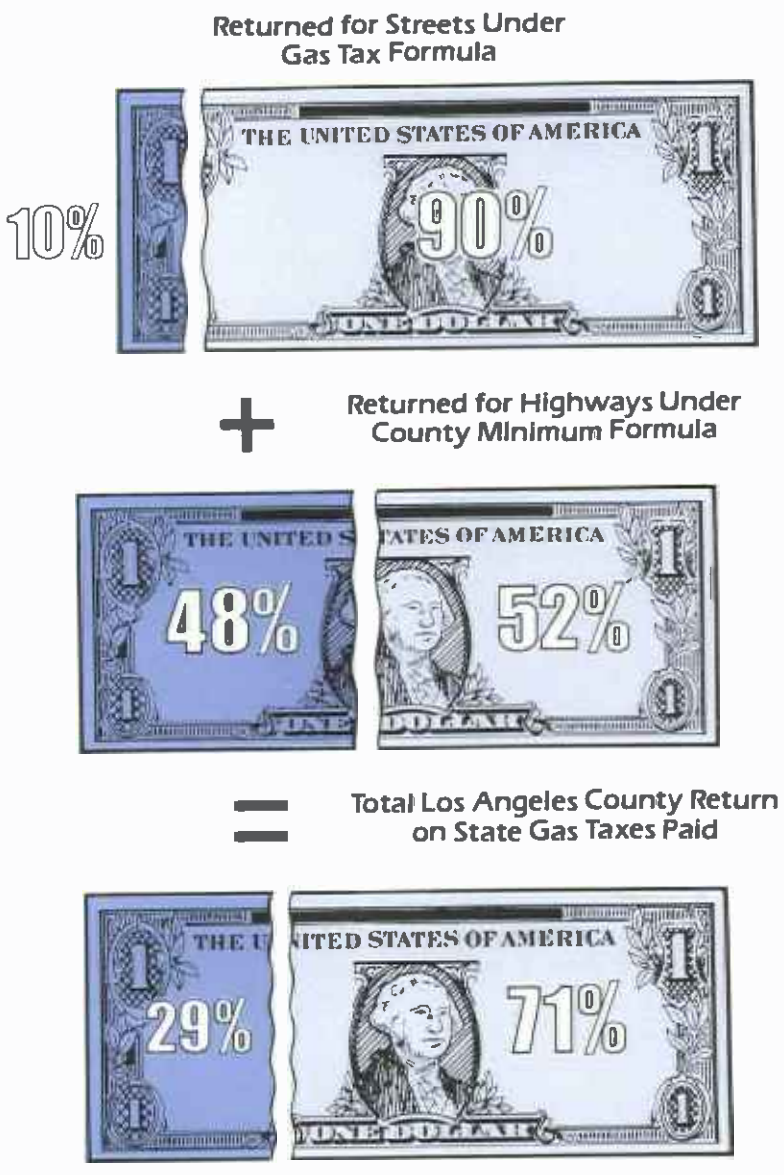
Neither the state nor federal gasoline taxes—the traditional funding source for highways—has kept pace with freeway construction costs

STATE REVENUE SOURCES

Gas Tax

The state gas tax is also currently nine cents per gallon. Los Angeles generates 30 percent of the gas tax revenues in the state. One penny of the gas tax currently raises $42 million in Los Angeles. The State Highway Account receives 48.9 percent of those revenues, while the remaining 51.1 percent is allocated to local governments by formula for maintaining and improving streets.

LOS ANGELES COUNTY'S RETURN ON STATE GAS TAXES PAID



Under existing formulas, Los Angeles would receive 71 percent, or $30 million, for each penny of state gas tax used for street and highway construction: $19 million would be available for streets and $11 million for the State Highway Account. If Los Angeles received only its county minimum (17.5 percent) share of the state highway program, only 52 percent of the state highway gas tax revenues generated in the county would be returned to Los Angeles. We would fare better under the local street formula, receiving 90 percent of what we generate.

In order to meet the shortfall of dollars needed for streets and freeways, it would require an eight cent raise in the state gas tax.

Weight Fees

Since heavy vehicles cause a much greater amount of pavement damage than light vehicles, the state requires trucks and trailers to pay an annual fee based on vehicle weight. The present weight fee (average of $70 per truck) could be raised through state legislation, with a two-thirds majority required in the legislature.

If the weight fee were increased ten percent (an average of seven dollars annually per truck), $30 million would be raised statewide. Seven million of this amount would be paid by Los Angeles, but we can only count on five million dollars (70 percent) actually being allocated to the county under the county minimum policy. A fee increase of $200 annually per truck would be needed to fund the anticipated $1.5 billion freeway shortfall.

Under current state law this money could not be used for streets.

Registration Fees

The Department of Motor Vehicles (DMV) currently charges an annual registration fee of $22 per vehicle. (As part of the same annual bill, vehicle owners also pay a license fee equal to two percent of the vehicle's value. This license fee is a major source of city revenue.) Most of these funds are used to fund the DMV and California Highway Patrol, but the state could approve a special fee increase earmarked for freeways and streets.

A one dollar increase per registered vehicle would raise six million dollars annually within Los Angeles, but the actual benefit to the county would depend on how the state allocates the money. A two-thirds vote of the legislature would be required to enact the fee, and legislation would also be needed to specify how the funds from the increase would be distributed.

If current gas tax formulas are followed, Los Angeles would receive five million dollars, per one dollar increase, or 85 percent of its contribution. An annual increase of $50 in registration fees would cover the shortfall in 16 years.

Sales Tax

California has a six percent statewide sales tax, which can be raised through state legislation with a two-thirds vote of the state legislature required. Most of this tax goes to the State General Fund, however, 1/4 percent is dedicated to local transportation and allocated back to each county according to its sales tax generated. If the state sales tax were raised 1/2 percent, and the legislature distributed the additional revenue under the current formula, Los Angeles would receive $325 million per year, enough to cover both the $150 million annual streets shortfall and the $1.5 billion freeway shortfall.

Tolls

Under existing federal law, tolls may only be collected on bridges, tunnels, and roads that receive no federal subsidy. When federal money was plentiful, this federal law provided a strong disincentive against toll roads. However, with fewer federal funds available, the idea of constructing toll roads without federal participation has become more attractive. In addition, the federal toll road law may be changed in the near future. The Administration is proposing legislation which would allow tolls on new federally-funded roads such as the Foothill, Corona, and Long Beach gap closures in Los Angeles County. Furthermore, other proposed federal legislation would allow toll collection on existing federally-funded roads.

If the proposed Foothill, Corona, and Long Beach Freeways were constructed as toll roads, with tolls of five cents per mile, annual revenue would be approximately $24 million, sufficient to allow issuance of roughly $220 million in 30-year bonds.

Airspace Leasing

Caltrans currently earns between six and seven million dollars per year by leasing rights-of-way over and under the freeways. Under the state's allocation policy, $1.1 million of airspace earnings must currently be spent annually on freeways within Los Angeles, which means about $11 million over ten years. It is unlikely that such leases will ever generate significant amounts of money to fund major improvements.

A small amount of funds comes from leasing space under or above freeways

LOCAL REVENUE SOURCES

County Gas Tax

State law allows a countywide gas tax, in increments of one cent. The tax increase must be approved by the Board of Supervisors, a majority of the cities having a majority of the population, and by the voters. Funds raised by the tax must be allocated to local agencies according to an agreement adopted by the agencies approving the measure. Individual jurisdictions cannot levy this type of tax.

A one cent countywide gas tax would raise an estimated $42 million (current dollars) annually. A countywide tax, rather than a statewide tax, would make 40 percent more money available to the county for each penny of tax collected because all the money collected would remain here. It would be possible to use the additional funds on freeways as well as streets. A seven cent increase in the county gas tax would cover the shortfall on our streets and freeways.

County Vehicle Registration Fee

If state enabling legislation were passed, and a countywide ordinance adopted, an annual vehicle registration surcharge earmarked for streets and freeways could be imposed.

A one dollar countywide registration surcharge would raise about six million dollars annually. (The current fee is $22, in addition to a vehicle license fee equal to two percent of the vehicle's value.) The allocation of funds would depend upon state enabling legislation and the county ordinance approving the fee. If the entire fee were allocated to cities, an additional countywide surcharge of $25 would be necessary to cover the $150 million shortfall on streets. If the fee were also used for freeways within the county, another $25 surcharge ($50 in total) would add $1.5 billion over ten years to the freeway program.

Currently, legislation exists to permit counties to collect such a fee, up to one dollar, to improve and install call boxes. Under this law, a county Service Authority for Freeway Emergencies (SAFE) is responsible for the funds collected.

A local half-cent sales tax could be dedicated to streets and freeways.

County Sales Tax

If state enabling legislation were approved, a new countywide sales tax could be enacted by the voters, similar to Proposition A (the 1/2 percent transit sales tax). A 1/2 percent county sales tax would generate $325 million to the county each year. The revenue generated would be enough to fund our street shortfall and add $1.75 billion to the freeway program for the county over ten years.

Business Tax

The New York Metropolitan Transit Authority presently collects a business tax equal to 17 percent of each corporation's state income tax liability. If enabling legislation were adopted, a similar tax could be implemented countywide, or by local agencies, with each firm paying a fixed percentage of its income tax liability attributed to the taxing agency's jurisdiction.

Los Angeles business and manufacturing interests generate $4 billion of the state's $8.6 billion corporate taxable income. A county tax equal to 25 percent of the corporate income tax liability would raise $300 million annually. This would be enough to cover the annual street deficit of $150 million and provide $1.5 billion, over ten years, for the freeway program.

Payroll Tax

Local jurisdictions have authority to levy payroll taxes. Enactment of such a tax, earmarked for transportation, would require city council approval, and a two-thirds vote in a local election. If enabling legislation were approved, a countywide payroll tax would also be possible.

The tax could either be a fixed percentage of employee income, or a flat fee per employee. It could be paid by the employer, or deducted from the employee's paycheck. A tax of 0.19 percent of each firm's payroll, or $38 per employee, would raise $150 million annually in the county, enough to cover the street shortfall. Another 0.19 percent, for a total of $76 per employee, would add the needed $1.5 billion over ten years for the freeways in Los Angeles.

Property Tax Reallocation

Proposition 13 prohibits local agencies from raising property taxes above current levels. However, a vote of the state legislature or a popular election could set up a special district for streets and/or freeways, funded with property taxes reallocated from other agencies. Since property tax receipts are gradually increasing, no other agency would actually lose money; the new agency would simply obtain a portion of the increase in tax revenues. This approach has been proposed in Orange County.

The revenue available under this approach would depend on the amount reallocated. A reallocation of 2.5 percent of property tax revenue, approximately the current rate of inflation, would equal about $75 million annually. A reallocation of 10 percent would be needed to cover the $150 million annual street shortfall and the $1.5 billion ten-year freeway shortfall.

Local Truck Weight Fee

If enabling legislation were approved, a local truck weight fee could be implemented. A fee increase averaging $150 annually per truck would be necessary just to eliminate the shortfall in street funding. Another $150 yearly per truck would be needed to generate $1.5 billion for the freeway program over ten years.

Traffic fine revenues could be allocated to highway uses.

Traffic Fines

Since vehicle code violations often result in congestion and pavement damage, the violators could pay a portion of those costs through a traffic fine surcharge. Currently, traffic fines are divided between a variety of uses. These uses are often not highway related. Typical uses include courthouse construction, driver training, and city and county traffic purposes. It would take a surcharge of four times each traffic fine to cover the funding shortfall.

Local Benefit Assessment

Cities have the authority to establish districts which tax all property owners in return for a specified improvement. Normally, benefit assessment districts are used to fund local improvements, but they can also be used for freeway projects, including soundwalls and interchanges.

Benefit assessment district revenue is determined by specific characteristics of individual projects. Bonds can be issued to expedite the improvements sought. For example, it has been estimated that $6.8 million could be raised through benefit assessments to pay for the Foothill Freeway gap closure in Los Angeles and San Bernardino Counties.

Community Facilities District

Under the Mello-Roos Act, one or more local agencies may form a community facilities district and levy a special tax for specified purposes. Unlike benefit assessment districts, a community facilities district may tax non-property owners, and need not apportion taxes according to benefit.

As with benefit assessments, the amount of transportation revenue raised through this mechanism will depend on characteristics of individual projects.

Delay Bypass Fee

The Action Plan chapter recommends that certain segments of the freeway system be closed to truck traffic during rush hours. If such a restriction were implemented, a policy could be adopted in which trucking firms that paid a fee would be permitted to operate a few trucks on the restricted freeway. This fee would allow the trucks to bypass the wait they would otherwise encounter to avoid rush hour use of the freeway. The amount of potential revenue from this source is unknown.

Parking Taxes And Fees

Cities have authority to charge parking fees on city-owned parking spaces, and to levy surcharges on parking fees paid in private lots. (Los Angeles has parking fees, while San Francisco has both fees and surcharges.) It might also be feasible to levy an annual fee on the owner of every free parking space. Countywide parking taxes or fees could only be enacted if state enabling legislation were approved.

In Los Angeles, parking fees on public spaces raise $9 million per year, which is spent on operation and expansion of the city's system of parking lots and parking meters. The amount of revenue available from countywide parking fees and taxes is unknown.

Hotel Room Tax

Cities also have authority to levy a surcharge on hotel room bills. For example, the City of Los Angeles charges an 11 percent tax which brings in $39 million per year. (A portion of this tax is earmarked for the Visitor and Convention Bureau, and the remainder goes to the General Fund.) Cities could levy an additional hotel room tax earmarked to streets and roads. A 47 percent countywide hotel room tax would be needed to cover the street and freeway shortfall. Enabling legislation and a two-thirds popular vote would be required for a countywide hotel room tax.

Parking lots and spaces could be a source of revenue for transportation.

Countywide Benefit Assessment

If state enabling legislation were adopted, a countywide assessment could be adopted to fund freeway construction or street maintenance. An assessment averaging 0.6 cents per square foot could cover the entire shortfall. The actual assessment would vary according to land use.

Countywide Utility Tax

Most cities levy surcharges on gas, electricity, phone and water bills. If enabling legislation were approved by the state, a countywide surcharge, earmarked for transportation, could be approved. A 3.9 percent surcharge on phone, electricity and gas bills would raise $300 million annually, enough to cover the entire shortfall in the county.

One-Time Income Tax Surcharge

Since the freeway shortfall consists of $1.5 billion to fund capital projects, this deficit could be covered by a one-time income tax surcharge. Enabling legislation and an election would be required before such a tax could be collected. A one-time payment of 1.9 percent of annual income would cover the entire county freeway shortfall in one year. However, this strategy could not be used to fund on-going maintenance.

Developer Fees

Cities may require payment of transportation fees as a condition for approving building permits. Normally these fees are based on the number of residential units or the square-footage of new non-residential development. These fees are in addition to the usual requirement that developers construct the road improvements which provide access to new development.

The mechanism is presently used in two forms: Transportation Impact Fees (developed areas); Bridge and Major Thoroughfare Districts (undeveloped areas).

The total revenue to be derived from these fees will depend on the extent to which they are used. Assuming 1984 construction rates, a countywide fee of $1,900 per residential unit (2.3 percent of value) would raise $69

million per year, while a fee of 2.3 percent of value on non-residential construction would raise $83 million, for a total of $150 million if both fees were implemented, sufficient to cover the freeway shortfall. It would be inappropriate to use these funds for maintenance.

Redevelopment Finance

Redevelopment agencies receive funding from the increase in property tax receipts ("increment") which occurs as assessed valuations in the redevelopment area increase. In many cases, a redevelopment agency will fund a project by issuing bonds based on the future tax increment revenues that will be generated by the project. Redevelopment funds must be spent on projects which benefit the redevelopment area, including transportation projects such as improvements to major streets.

The annual tax increment revenue in the county is approximately $200 million. All decisions to allocate this money or sell redevelopment bonds are made by the redevelopment agencies, without voter approval being required. Since redevelopment agencies only operate within the boundaries of a single jurisdiction, they would not normally fund multi-jurisdictional transportation facilities.

Joint Development

Through joint development, a private party could agree to fund a portion of a transportation project, in return for enhanced access, or, in some cases, permission to develop their property. The amount of revenue earned in a county through joint development will depend on the specific characteristics of the projects being built. For example, it has been estimated that land dedications for the Foothill Freeway gap closure in Los Angeles and San Bernardino Counties could equal $8 million.

Private Transportation Corporations

In some cases, a freeway expansion project could involve a private corporation which would fund at least part of the project, and possibly even own or operate it. Possible forms the corporation could take include: A public utility to fund a toll road using toll revenues; or an association formed by landowners who, prior to development, levy an annual fee on themselves to fund a transportation project.

In both cases, special state legislation would establish procedures for forming the corporations and issuing bonds.

Debt Finance

In many cases, government agencies may sell bonds to expedite the completion of transportation improvements which are being funded by specified revenues. Bonds are commonly used for improvements funded with benefit assessments, tolls, and redevelopment funds. Their use is less common with special taxes such as gas tax.

An increase in the issuance of transportation revenue bonds would bring a short-range improvement to the street and freeway finance picture. However, if debt finance were used without increasing revenue, over the long-term the sale of bonds would exacerbate the revenue shortage. Therefore, debt finance should only be used in conjunction with a new revenue source, or to fund large projects which cannot easily be constructed in phases.

RECOMMENDATIONS

Los Angeles citizens will need to make a number of hard choices if they want to provide for their future mobility needs. Steps must be taken to ensure that highway funds are spent as efficiently as possible. We

must also consider implementing new sources of revenue.

Although it is important to ensure the effectiveness of expenditures, it is obvious that government efficiency alone will not preserve our street and freeway system. Los Angeles does not have a major local source of street and freeway funding, but relies heavily upon state and federal revenues to maintain and expand its system. As we have seen, these revenues have not kept pace with inflation and do not return to the county all of the funds generated. As a result, they are no longer sufficient to meet the county's street and freeway needs. **The county will require an additional $1.5 billion over the next ten years to fund needed freeway improvements, along with an additional $150 million per year to adequately maintain the streets.**

The problem is compounded by state and federal policies which result in Los Angeles County receiving less highway funding than it contributes. Thus, the county ends up subsidizing transportation improvements in other counties and states. Although the LACTC could attempt to cover the funding shortfall by lobbying for a large federal or state gas tax increase, it would be more beneficial to Los Angeles to obtain additional revenues from a locally controlled source. Then, taxpayers would be guaranteed that 100 percent of the money they pay will be used for needed street and freeway projects in this county.

Clearly, steps must be taken to increase the amount of revenues earmarked for streets and freeways. In order to accomplish this objective in a manner most beneficial to Los Angeles, the following strategies are recommended:

1. Take steps to develop a stable source of additional locally-generated revenue earmarked for streets and freeways.

By having a local source of revenue, Los Angeles can be sure its funds stay within Los Angeles. Voters in other counties (Alameda, Fresno and Santa Clara) have already approved transportation sales taxes

and the success of these measures indicates that voters will support this type of tax if they perceive a clear benefit. A 1/2 percent sales tax would be sufficient to cover the shortfall in Los Angeles.

2. Continue to encourage adoption of a state gas tax increase sufficient to cover current state commitments; support exemption of the state gas tax from the Gann limit or other appropriate measures.

Even if a local revenue source is implemented in the county, the state will continue to have difficulty meeting its obligation to maintain the highway system and provide matching funds for federal transportation dollars. If the gas tax (the traditional source of state highway revenue) were increased, however, it would be virtually impossible to expend these new monies, due to the Gann limit. Furthermore, the Gann limit will soon interfere with expenditure of revenues from the **existing** gas tax. The LACTC and other jurisdictions should therefore support an increase in the gas tax, while encouraging the removal of this tax from the Gann limit on grounds that it is a user fee (user fees are exempted from the Gann limit).

3. Establish a Service Authority for Freeway Emergencies (SAFE) funded with a $1 vehicle registration surcharge to improve call box response time; seek legislation to allow use of these funds for a up-to-the-minute traffic communications system.

The Los Angeles County Board of Supervisors and cities in Los Angeles should create the SAFE which would implement the one dollar surcharge to raise six million dollars per year and provide improved response to freeway emergencies. Under current legislation, this one dollar fee may only be used for call-box system construction, expansion and improvements.

Because Los Angeles has an existing system, if additional legislation were approved, a portion of the one dollar fee could be used

to construct a up-to-the-minute traffic communication system, in addition to completing the gaps in the existing system and improving the response time on our existing call-box network. For one dollar, county motorists could buy dramatically improved traffic information and emergency assistance.

4. The LACTC should develop a "cost/mobility measurement", which can be used to prioritize proposed freeway improvements.

The limited street and freeway dollars available must be spent to provide the highest benefit to the taxpayer. Mobility should be measured in terms of persons moved, not in terms of vehicles moved. This way, a carpool lane, a ramp bypass lane, or a transitway could receive higher priority than than other freeway projects. The cost/mobility measurement would give LACTC a tool to evaluate the relative priority of all new construction projects.

LACTC will need to take specific actions in order to implement the strategies listed above. These steps are described in the Action Plan Chapter.

POTENTIAL OPTIONS FOR ADDITIONAL FUNDING

Local Street Shortfall = $150 million per year
Freeway Shortfall = $1.5 billion

FUNDING SOURCE[1]	ADDITIONAL REVENUE TO LOS ANGELES[2]	PROS
Countywide Sales Tax	$325 million per year for 1/2 % increase, sufficient to cover shortfall in 9 years	Ease of admininstration Responsive to inflation No Gann limit
State Sales Tax	$325 million per year for 1/2% increase, sufficient to cover shortfall in 9 years	Ease of administration Responsive to inflation
Unrestricted Developer Fees	$66 million annually per 1% of value fee[3] 2.3% fee to cover freeway shortfall in 10 years[4]	Payment by developers who benefit Not limited by Gann

[1]Except where noted, each option involves an increase in revenue so no funding will be taken from local jurisdictions.

[2]Assumptions described in text.

CONS	STEPS	YEAR
No direct relationship between taxpayer and user May divert economic activity from Los Angeles	1. Conduct public opinion research	1
	2. Develop legislation for sales tax increase	2
	3. Obtain legislative authority	2
	4. Develop public and private support	2-3
	5. Develop campaign and ballot language	3
	6. Hold election	3
No direct relationship between taxpayer and user Requires change to Gann limit	1. Adjust Gann to allow expenditure of increased revenues	1
	2. Develop statewide support for sales tax for transportation use	2-3
	3. Co-sponsor/support legislation	3
	4. Obtain passage	3-4
Revenue fluctuates with construction cycles Does not charge development for maintenance costs of new facilities Depending on how levied, charge might not be in proportion to benefit received Current lack of uniformity between local jurisdictions	1. Conduct public opinion research	1
	2. Develop legislation to permit countywide assessment	2
	3. Obtain legislative authority	2
	4. Develop public and private sector support	2-3
	5. Develop campaign and ballot language	3
	6. Hold election	3

FUNDING SOURCE	ADDITIONAL REVENUE TO LOS ANGELES	PROS
Countywide Benefit Assessment	$48.5 million per 0.1 cent per square foot assessment Assessment averaging 0.6 cent per square foot to cover shortfall in 10 years	Ease of administration Not limited by Gann Payment by property owners who benefit from transportation
Countywide Gas Tax	$42 million annually per 1 cent increase 7 cent increase to cover shortfall in 10 years	User pay concept
State Gas Tax	$30 million annually for 1 cent increase 8 cent increase to cover shortfall in 16 years	User pay concept Ease of administration

[3]Based on 1984 development.

[4]Not appropriate for ongoing maintenance.

CONS	STEPS	YEAR
May divert economic activity from Los Angeles Traditional city fund source		
May divert economic activity from Los Angeles Might not tax property owners in proportion to benefit received	1. Conduct public opinion research	1
	2. Develop legislation to permit countywide assessment	2
	3. Obtain legislative authority	2
	4. Develop public and private sector support	2-3
	5. Develop campaign/ballot language	3
	6. Hold election	3
Not inflation responsive Requires change to Gann May divert economic activity from Los Angeles	1. Conduct public opinion research	1
	2. Adjust Gann to allow expenditure of increased revenues	2
	3. Negotiate with local agencies on distribution of tax	3-4
	4. Develop ballot language for approval by Board of Supervisors and majority of cities	4
	5. Seek public and private sector support	4-5
	6. Develop campaign and request county to place on ballot	5
	7. Hold election	6
Not inflation responsive Requires change to Gann Los Angeles receives only 71% of contribution	1. Adjust Gann to allow expenditure of increased revenues	1
	2. Develop statewide support	2
	3. Co-sponsor/support legislation	3
	4. Obtain passage	3-4

FUNDING SOURCE	ADDITIONAL REVENUE TO LOS ANGELES	PROS
Federal Gas Tax	$21 million annually per 1 cent increase 9 cent increase to cover freeway shortfall only in 10 years 33 cent increase, under current split, to cover both street and freeway shortfalls in 10 years	User pay concept
Countywide Utility Tax	$76 million per 1% surcharge on gas, electricity, phone bills 3.9% surcharge to cover shortfall in 10 years	Ease of administration Might be used to charge utilities for damage due to utility work
Countywide Business Tax	$12 million annually per 1% surcharge on tax liability 25% surcharge to cover shortfall in 10 years	Payment by those who generate work trips Inflation responsive Credit possible to encourage ridesharing

CONS	STEPS	YEAR
Not inflation responsive Los Angeles receives only 50% of contribution Unreliable due to federal policy of holding back funds Subject to deficit reduction provisions Only small amount for local streets	1. Develop proposal to increase federal gas tax	1
	2. Remove highway trust fund from unified budget process	1
	3. Seek Congressional support for tax	1-2
	4. Co-sponsor/support federal gas tax legislation	2
	5. Obtain approval	2-3
No direct relationship between payment and benefit Traditional city fund source	1. Conduct public opinion research	1
	2. Develop legislation to permit countywide assessment	2
	3. Obtain legislative authority	2
	4. Develop public and private sector support	2
	5. Develop campaign/ballot language	3
	6. Hold election	3
Requires new collection mechanism Cities often use business license fees for the General Fund May divert economic activity from Los Angeles	1. Conduct public opinion research	1
	2. Develop legislation to permit countywide assessment	2
	3. Obtain legislative authority	2
	4. Develop public and private sector support	2-3
	5. Develop campaign/ballot language	3
	6. Hold election	3

FUNDING SOURCE	ADDITIONAL REVENUE TO LOS ANGELES	PROS
Property Tax Reallocation	$30 million per year for 1% reallocation 10% reallocation to cover shortfall in 10 years	No increased taxes Ease of administration
Local Payroll Tax	$8 million annually per .01% of payroll .38% increase (average $76 per employee annually) to cover shortfall in 10 years	Payment by employers or employees who benefit from work trips Inflation responsive Possible credit to encourage ridesharing
One-time Income Tax Surcharge	$8 million per 0.01% charge on income One-time payment of 1.9% of income to cover freeway shortfall in one year	Voters not required to make permanent commitment Requires new taxing mechanism Charge might not be in proportion to benefits received Payment by employees or employers who benefit from work trips

CONS	STEPS	YEAR
May harm other agencies by lowering their revenue increase Limited by Gann Difficult to establish relationship between payment and benefit	1. Develop proposal 2. Submit proposal to Local Agency Formation Commission 3. Obtain Board of Supervisors approval for election to establish transportation district 4. Hold election 5. Negotiate reallocation with local jurisdictions	1 1 2 2 3-4
Requires new taxing mechanism Depending on how levied, charge might not be in proportion to benefit received May divert economic activity from Los Angeles	1. Conduct public opinion research 2. Develop legislation to permit countywide payroll tax assessment 3. Obtain legislative authority 4. Develop public and private sector support 5. Develop campaign/ballot language 6. Hold election	1 2 2 2-3 3 3
Not practical for ongoing needs such as maintenance	1. Conduct public opinion research 2. Develop legislation to permit countywide assessment 3. Obtain legislative authority 4. Develop public and private sector support 5. Develop campaign/ballot language 6. Hold election	1 2 2 2-3 3 3

FUNDING SOURCE	ADDITIONAL REVENUE TO LOS ANGELES	PROS
Tolls (On new roads)	5 cents annually per mile toll over 3 gap closures could bring $24 million per year, enough for a $220 million 30-year bond issue[5] A toll of 15 cents per mile would fund the gap closures	User pay concept Not limited by Gann
Local Truck Weight Fee	$7 million annually per 10% increase $300 increase per truck to cover shortfall in 10 years	User pay concept Not limited by Gann
State Truck Weight Fee	$5 million annually per 10% increase $200 increase per truck to cover freeway shortfall in 10 years	User pay concept

[5]Does not account for reduced usage due to high toll.

CONS	STEPS	YEAR
Limited application Possibly congestion-causing Possibly subject to county minimums Expensive to install Requires additional right-of-way Not permitted on federally funded highways	1. Identify highways where applicable 2. Seek federal legislation to permit toll 3. Obtain passage of federal legislation 4. Issue bonds 5. Begin construction of toll facilities 6. Begin toll collection	1-2 2 2-3 3 4-8 9
Not inflation responsive Depending on how levied, may reduce truck registration in Los Angeles	1. Determine methodology for assessing local truck weight fees 2. Seek state legislation to use truck weight fees for local projects 3. Obtain approval of state legislation 4. Begin fee assessment	1 2 2 3
Not inflation responsive The user pays, but not in relation to benefit Los Angeles receives only 85% of contribution Limited by Gann	1. Develop statewide support 2. Co-sponsor/support legislation 3. Obtain passage	1-2 2 2-3

FUNDING SOURCE	ADDITIONAL REVENUE TO LOS ANGELES	PROS
Countywide Vehicle Registration Fee	$6 million annually per $1 increase $50 increase to cover shortfall in 10 years	Not limited by Gann Good for limited application such as emergency response program
State Vehicle Registration Fee	$5 million yearly per $1 increase $50 increase to cover shortfall in 16 years	
Parking Taxes and Fees	Small	Not limited by Gann Encourages ridesharing User pay concept

CONS	STEPS	YEAR
Not inflation responsive The user pays, but not in relation to benefit May divert economic activity from Los Angeles Not traditionally used for general street and freeway maintenance and construction	1. Develop legislation 2. Obtain legislative authority 3. Obtain approval of Board of Supervisors and majority of cities	1 1 2
Not inflation responsive The user pays, but not in relation to benefit Los Angeles receives only 85% of contribution Limited by Gann	1. Develop statewide support 2. Co-sponsor/support legislation 3. Obtain passage	1-2 2 2-3
New collection mechanism needed Often used for city General Fund purposes Could inhibit development areas	1. Conduct public opinion research 2. Develop legislation to permit countywide assessment 3. Obtain legislative authority 4. Develop public and private sector support 5. Develop campaign/ballot language 6. Hold election	1 2 2 2-3 3 3

FUNDING SOURCE	ADDITIONAL REVENUE TO LOS ANGELES	PROS
Countywide Hotel Room Tax	$6.4 million per 1% of hotel room tax 47% tax to cover shortfall	Charges visitors to the area, but not necessarily in relation to benefit received
Traffic Fines	$760,000 per year for 1% across-the-board traffic fine increase 395% increase to cover shortfall in 10 years	May be designated to penalize trucks for congestion and pavement damage due to violations Not limited by Gann
Local Benefit Assessment/ Community Facilities Districts	Small - associated with specific projects	Not limited by Gann Payment by property owners who benefit
Redevelopment Finance	Depends on redevelopment agency priorities Total available in Los Angeles = $200 million per year, insufficient to cover shortfall	Payment by developers who benefit

CONS	STEPS	YEAR
Often used for city General Fund and tourism purposes May divert hotel business from Los Angeles	1. Conduct public opinion research 2. Develop legislation to permit countywide assessment 3. Obtain legislative authority 4. Develop public and private sector support 5. Develop campaign/ballot language 6. Hold election	1 2 2 2-3 3 3
Not inflation responsive Does not necessarily charge motorists in relation to benefit received A fine sufficient to meet needs will encourage compliance, thus reducing revenues	1. Develop legislative proposal 2. Co-sponsor legislation to increase penalty assessments and earmark increased assessment for transportation purposes	1 1-2
Some benefit obtained by those outside of district who do not pay Not applicable for regionwide shortfall - must be tied to specific property owner benefit	1. Circulate petition to property owners 2. Obtain City Council resolution of intention 3. Conduct city engineering study/hold protest hearing or election 4. Obtain City Council approval	1 1 1-2 2
Other competing uses of funds Traditionally used for a number of local uses	1. Seek redevelopment agency expenditure decisions for transportation purposes	Ongoing

FUNDING SOURCE	ADDITIONAL REVENUE TO LOS ANGELES	PROS
Joint Development	Small - associated with specific projects	Not limited by Gann Payment by developers who benefit
Delay Bypass Fee	Unknown	Not limited by Gann Payment by trucking firms who benefit from using freeway during truck closure
Private Transportation Corporations	Unknown	Not limited by Gann
Airspace Leasing	Small	Not limited by Gann Payment by developers who benefit State highway leases restricted to highway account
Debt Finance	N/A	Facilitates large projects May reduce project cost if bond costs are less than inflation increase

CONS	STEPS	YEAR
Not used for maintenance May delay higher priority projects requiring public funds Not applicable for regionwide shortfall	Implementation process and time frame varies according to project characteristics	Ongoing
Cost to install vehicle identification equipment and billing system	1. Develop proposal 2. Submit for Caltrans/ FHWA approval 3. Install system	1 2 3-4
Feasibility not demonstrated	Implementation process and time frame vary according to project characteristics	Ongoing
Application limited to state highways Return to county limited by county minimums policy	Implementation process and time frame vary according to site characteristics	Ongoing
May increase project cost if bond costs are greater than inflation increase	1. Hold election authorizing bonds (not required in all cases) 2. Issue bonds	1 2

ACTION PLAN

The action plan elements highlighted below comprise a broad range of small, yet interrelated measures aimed at reducing congestion. Our successful battle against gridlock requires concerted, coordinated efforts by all segments of the public and private sectors to reduce travel demand, better manage our streets and freeways, and construct as many improvements as possible through minor widenings or use of existing rights-of-way.

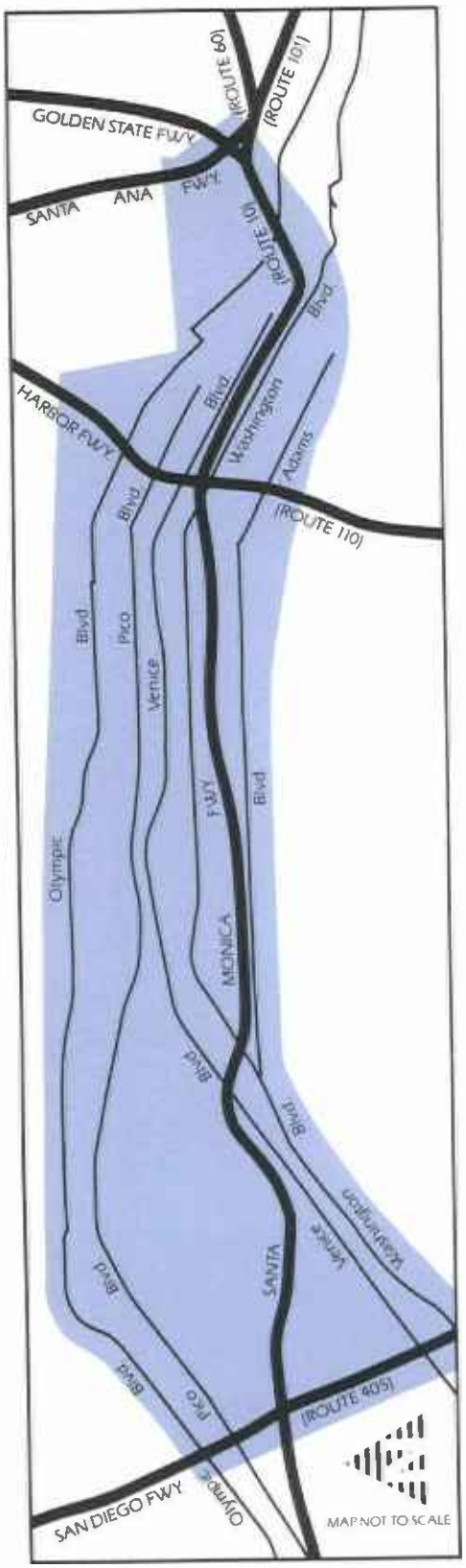
IMPROVE CONGESTION MANAGEMENT

We must provide the motorist with the broadest possible range of effective routes between home and work. This will require coordinated development and aggressive management of time-saving alternatives to the freeway, on rights-of-way that currently exist and on major streets that parallel the existing freeways. Not only must we improve the travel speeds on these streets, but we also must overcome the jurisdictional "turf" barriers that currently prevent the freeways and major parallel streets from being operated together as an integrated commute corridor.

Provide Up-to-the-Minute Traffic Information

All available traffic condition information should be consolidated in one automated data base and the information made directly available to the motorists and commercial carriers, shippers and receivers.

Every available communications medium must be used to instantly transmit vital information. Examples of technology currently available today to relay traffic information include: automated telephone information, cellular phones in cars, public access computer files, Silent Radio in parking garages, changeable message signs, roadside radio and FM sideband transmission channels. The traffic information should be easily accessible from home, in the office, and on the road so that the motorist can choose where, when and how to travel through Los Angeles.



Caltrans and the California Highway Patrol must expand the state-of-the-art computerized up-to-the-minute traffic surveillance system that is capable of monitoring and responding to emergencies as they occur. This equipment should include closed circuit television, direct feed aerial surveillance, traffic monitoring loops in every freeway lane and on-ramp, and an interconnected system of "smart" on-ramp and major street signals.

Create Traffic Management Teams

It's time to coordinate and manage the freeways and streets as one regional transportation system. Technology already exists to computer-link the surveillance and signalization systems on the freeway and in the street. Using this technology, traffic management teams of engineers from state, city, and county agencies would act as "ground traffic controllers" to reduce congestion delays by changing traffic signal and freeway ramp meter timing. With interactive "smart" streets, traffic management teams could broaden their choices and better help the commuter avoid congestion delays.

Test "Smart" Freeway Corridor Concept

A demonstration project which combines improved surveillance, management and communications is recommended for implementation on the Santa Monica Freeway and its parallell major streets including: Olympic, Pico, Venice, Washington and Adams. The project would test the effectiveness of a wide range of strategies and equipment improvements. If the Santa Monica Freeway "Smart" Corridor demonstration project is successful, the project should be continued on a permanent basis and a "Smart" Corridor plan developed for implementation throughout the Los Angeles.

Create Technical Task Force

A countywide technical task force should convene to develop the "Smart" Corridor plan. Participants should include: Los Angeles County Transportation Commission, Caltrans, California Highway Patrol, Los Angeles Department Of Transportation, Los Angeles Police Department, public works directors, law enforcement agencies and affected emergency service representatives from throughout the county.

Improve Enforcement and Driver Education

It is also evident that the frustration of driving bumper-to-bumper on busy downtown streets has caused many motorists to give up on the idea of conforming to the motor vehicle code. Blocked intersections, creating gridlock, and parking in "no parking" zones are commonplace. Through better public education and strict enforcement of all relevant traffic laws, we must make drivers understand that they are contributing to congestion.

Reduce Accident Congestion

Major accidents could be cleared faster if the Caltrans emergency response team were increased to four and geographically spread throughout the county. These teams need to be assigned full-time to this vital task.

Other urban areas have successfully implemented a program of contracting with service trucks to patrol short segments of the freeway and provide immediate assistance. In addition to pushing stalled cars out of traffic lanes, the service trucks carry fan belts, gasoline and trained service technicians capable of making minor repairs and speeding the stranded motorist on the way. Private and public agencies currently responsible for providing emergency service on the freeways should develop funding alternatives to implement a model program of roving road service trucks. These same agencies should also evaluate the effectiveness of the roving road service trucks and develop statistics on the need for permanent countywide service.

Improve Call Boxes

State law currently allows counties to increase the state vehicle registration fee by one dollar each year to pay for installing call boxes. As other counties have already done, Los Angeles should adopt this program known as a Service Authority for Freeway Emergencies (SAFE).

In addition to completing and maintaining the call box network on all freeways in Los Angeles, we need to improve the equipment and increase the California Highway Patrol's staffing of this vital emergency communications link. State law should be modified to permit these funds to also be used to improve motorist traffic and congestion information, through a computer

Call boxes are the motorist's lifeline to help.

system, as discussed in the Action Plan's Up-to-the-Minute Traffic Information section.

Reduce "Spectator Slowing"

"Spectator slowing" can be controlled. New operating policies are needed to reduce distractions during rush hour. Routine law enforcement should be performed off of the freeway whenever possible.

Motorists need to be reminded that they are helping to create congestion every time they slow to see what is happening. Motorists also need to be reminded that improving their car maintenance will reduce freeway breakdowns and resulting congestion.

Provide Lane Closure Information

All construction that temporarily eliminates a travel lane should be scheduled to avoid the rush hours. Furthermore, seven days a week traffic lane-closure information should be published in newspapers and broadcast on radio and television and up-to-date changes made available through the improved consolidated communications systems.

Divert Peak Hour Trucks

We must discourage trucks from using busy freeways during peak hours by providing alternative freeway routes. A demonstration project is recommended to prohibit trucks from using the Santa Ana and Golden State Freeways during rush hours. To lessen the impact on businesses, truck delivery zones in nonresidential areas should be exempted from the existing noise ordinances which restrict truck delivery hours.

REDUCE TRAVEL DEMAND

INCREASE RIDESHARING

An average car in Los Angeles has room for four people but only carries one commuter. Since a car takes up the same amount of room on the freeway whether it has one person in it or four, we must persuade people that it is in their interest to share a ride with their neighbor in order to reduce the number of cars on the freeway. And that doesn't mean every day. If everyone took the bus or shared a ride just once

every two weeks, each of the freeways would have a 10 percent increase in freeway capacity, which is equivalent to an extra lane in one direction on every freeway.

Build Carpool Lanes

One ridesharing incentive is the time savings provided by the creation of a linked-network of carpool lanes on freeways. With a linked network, ridesharing commuters would bypass congestion and would save time and the frustration of bumper-to-bumper traffic.

It is important to adopt a carpool lane network map immediately and develop and implement a plan for how and when the new interconnected system of carpool lanes can be built. Without such a plan, future freeway widenings may not include a necessary carpool lane which could endanger the entire network.

Promote Ridesharing

The public and private sectors must work together to promote greater public awareness of the benefits of ridesharing. Commuter Computer should be given the responsibility for coordinating this effort to implement a unified public/private ridesharing marketing program.

Create Emergency Ridesharing Back-up System

An emergency backup system must be developed for those who would regularly rideshare and have an immediate need for a ride to or from work.

ESTABLISH CONGESTION MITIGATION MEASURES

Local ordinances are needed to require that major employers and businesses in large employment centers provide ridesharing incentives. Incentives might include free parking only for those who rideshare, flexible hours, and subsidized employee commuter vans or buses. In major employment centers, transportation management associations should be formed to promote ridesharing, to coordinate individual employer efforts, and to advocate for local transportation improvements.

The El Monte Busway moves more people than any one of the adjacent freeway lanes.

Implement Flex-Time

All government agencies should consider developing a strategy for significantly staggering their work hours. In addition to improving rush hour traffic conditions, citizens would be better served by extended government hours.

Expand Telecommuting

Establishment of a model program for the "smart" worksite is recommended. Information developed from the model could be used to implement and market "smart" neighborhood work-sites throughout the county.

INCREASE CONSTRUCTION

Repair Streets

The streets in Los Angeles are falling apart due to the lack of systematic maintenance. Proper maintenance will save scarce public funds in the long run, but will cost an additional $150 million per year and will require adoption of comprehensive pavement management systems in every city.

Construction of the Century Freeway in progress.

Construct Freeway Improvements

Los Angeles vitally needs approximately $4.5 billion in new construction projects for the freeway system by the year 2000. The specific recommended improvements to our freeway system are identified in the Freeway Chapter. These improvements do not address the long-term need for new freeways. The recommended improvements are conservative -- they emphasize improving capacity of existing freeways or completing gaps in the freeway system.

Revise Construction Funding Priorities

With very limited funding available for new freeway construction, LACTC must give highest priority to projects which provide the maximum increase in capacity for each dollar spent. Capacity must be defined as the ability to move people rather than vehicles. For example, a carpool lane, a ramp bypass lane, or a transitway could receive a higher funding priority than other freeway projects. However, reconstruction of a particularly constricted interchange or another project that would improve the overall freeway system might also warrant

high priority. LACTC must develop a cost-mobility measurement to evaluate the relative priority of all new construction projects.

INCREASE REVENUES

New sources of revenue are needed to implement the action plan.

Establish New Local Revenue Source

The most important revenue source should be new locally generated funds dedicated exclusively to Los Angeles freeways and streets. A 1/2 percent county sales tax would generate $325 million each year and would be sufficient to meet our short-term needs on streets and freeways. A county sales tax would also ensure that all proceeds would be spent on roads in Los Angeles. Steps should be taken to develop the specifics of such a proposal, assess its public acceptability and prepare for decisions and actions necessary to implement it.

Increase State Gas Tax

Even if a new local revenue source is implemented in Los Angeles, the state will continue to have difficulty in meeting its obligation to properly maintain the freeway system and provide matching funds for available federal transportation dollars. State gas taxes are the traditional source of funding for freeway and street construction and maintenance. An increase in the state gas tax is necessary and the gas tax must be exempted from Gann Initiative limitations.

Establish SAFE Funding

The third new revenue source recommended is the imposition of a one dollar fee on vehicle registrations in Los Angeles County to improve the call box system in the county. Call boxes are a vital communications link for all emergencies on the freeway. We need to finish the system and improve call-box response times.

STEPS REQUIRED

The following pages contain a table of the specific strategies discussed above and a listing of the steps necessary to implement them.

STEPS REQUIRED ON THE ROAD TO THE YEAR 2000

OBJECTIVES	STRATEGIES	ACTION REQUIRED
IMPROVE CONGESTION MANAGEMENT		
Improve emergency related communication programs	Improve both call box response time and the timeliness, availability and accuracy of emergency traffic information by creating a Service Authority for Freeway Emergencies (SAFE)	1. LACTC seeks state legislation to expand the scope and bonding authority for the use of SAFE in Los Angeles. 2. LACTC obtains resolutions from the County Board of Supervisors, the City of Los Angeles, and a majority of the cities in Los Angeles. 3. LACTC is designated as the SAFE, per state law. 4. LACTC/SAFE negotiates services and reimbursement costs with DMV and CHP. 5. DMV collects $1.00 fee. 6. SAFE funds improvements.
	Develop and install a linked network of up-to-the-minute traffic/congestion information systems including: silent radio systems in parking garages, public information telephone, changeable message signs, mobile highway advisory radio, and commercial radio announcements	1. LACTC/SAFE programs money for installation of linked computer network on freeway in STIP. 2. LACTC/SAFE funds installation and maintenance of network on freeways and at central control center. 3. LACTC/SAFE funds installation and maintenance of equipment on major streets, parking garages and other high-volume traffic locations. 4. LACTC/SAFE funds operation of centralized control functions, including roadside radio and Caltrans/California Highway Patrol, and the Los Angeles City operations staff.

		5. SAFE implements and markets public access traffic information services by telephone/computer.
	Provide lane closure information	1. LACTC requests Caltrans/CHP to create an improved consolidated communications system to inform the public of planned lane closures. The information would be available to radio and TV stations, and accessible by phone or computer.
Increase surveillance of freeway system operation	Install state-of-the-art interactive equipment in freeway (i.e., closed circuit television, direct feed aerial surveillance, fiber-optic loops, "Smart" signals and interactive ramp meters	1. LACTC, Caltrans, and California Highway Patrol determine state-of-the-art interactive equipment necessary to properly operate and efficiently manage the freeway system. 2. LACTC programs capital expenditures in the STIP. 3. LACTC/SAFE identifies and programs funds for ongoing operations.
	Implement roving emergency road service trucks	1. Caltrans, California Highway Patrol, and Southern California Automobile Club prepare an evaluation of the cost-effectiveness of roving emergency road service trucks. 2. LACTC establishes financial plan and recommends program structure, roles and responsibilities. 3. Responsible agency implements program, if cost-effective.
Demonstrate effectiveness of implementing computer-linked freeway/street corridors	Create a cooperative and coordinated traffic management team comprised of Caltrans, CHP, L.A. City DOT, and other local agencies.	1. LACTC/Caltrans/Los Angeles County Department of Transportation, and the California Highway Patrol implement "Smart" corridor demonstration project on Santa Monica Freeway and adjacent streets.

OBJECTIVES	STRATEGIES	ACTION REQUIRED
Create an interactive system of computer-linked freeway/street corridors	LACTC creates a countywide Technical Task Force. The Task Force should include Caltrans, CHP, L.A. City DOT, LAPD, LACTC, representative public works directors, law-enforcement and emergency agencies potentially affected by the system	1. Task Force evaluates cost-effectiveness and efficiency of "Smart" street demonstration project. 2. Task Force develops "Smart" street system implementation plan, including capital and operating costs. 3. LACTC seeks approval of system plan by local jurisdictions, and adopts plan.
Increase peak hour capacity of all major streets	Establish and enforce parking restrictions on designated major streets during peak hours	1. "Smart" Street Countywide Technical Task Force identifies major streets on which on-street parking should be prohibited. 2. As a condition of receipt of streets and roads subsidies, LACTC requires recipients to adopt and enforce "no-parking" ordinances on streets identified by the task force.
Reduce Spectator Slowing	Request responsible agency to develop operating policies to minimize the impact of routine traffic enforcement activities, roadway maintenance and construction on rush hour freeway traffic flow	1. LACTC requests that Caltrans and the California Highway Patrol develop and implement appropriate operating policies.
Reduce Driver-Caused Congestion	Improve traffic regulation, enforcement and driver education	1. DMV publishes a booklet, to be endorsed in annual registration notices, explaining how breaking traffic laws increases congestion. 2. The booklet becomes required reading in driver education courses. 3. DMV/CHP encourage media coverage of the booklet's content and availability.

Reduce Congestion from Major Freeway accidents	Increase Emergency Response Traffic Teams	1. LACTC asks Caltrans/CHP to increase the number of emergency response teams from one to four, place them at strategic geographic locations throughout the county, and have full-time staff assigned.
Reroute or prohibit truck traffic on selected freeways during peak hours	Test prohibition/rerouting of trucks to reduce peak hour accident related congestion in a demonstration project on the Golden State/Santa Ana Freeway corridor	1. LACTC uses the SCAG Truck Delivery Task Force to help develop a coalition with the trucking industry. 2. LACTC and the trucking industry coalition identify truck delivery zones in non-residential areas which would warrant exemption from the existing noise ordinance to permit deliveries before the a.m. peak hours and after p.m. peak hours. 3. LACTC formally requests, through Caltrans and FHWA, a.m. and p.m. peak hour truck restrictions on Route 5 by designating Routes 210 and 57 as commensurate alternate routes. 4. LACTC seeks state legislation if required. 5. In concert with the peak hour truck restrictions, LACTC requests exemption from noise ordinances in truck delivery zones along the Route 5 corridor. 6. Evaluate effectiveness of demonstration project. LACTC seeks expansion of program, if warranted.

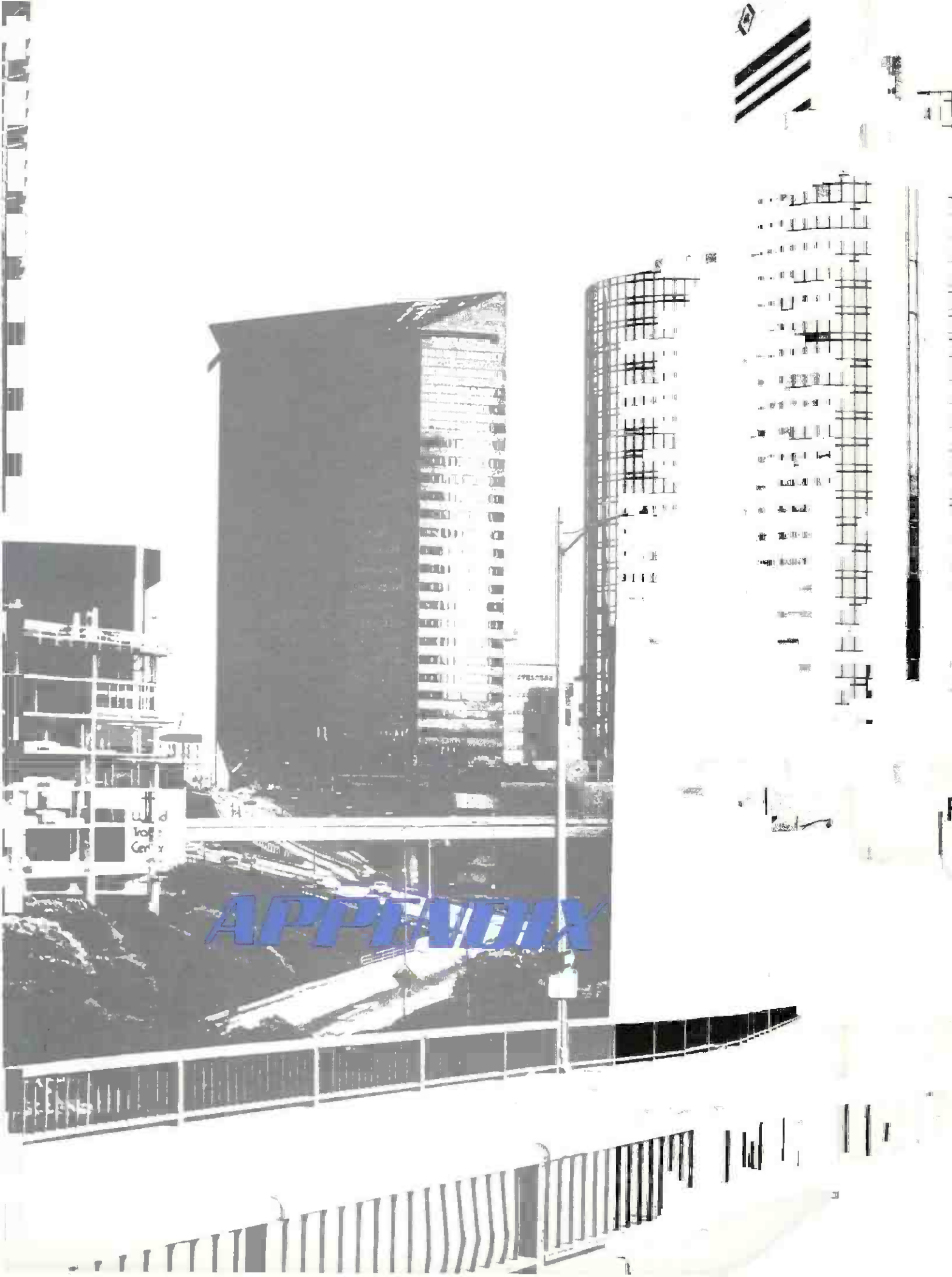
OBJECTIVES	STRATEGIES	ACTION REQUIRED
REDUCE DEMAND		
Increase Ride-sharing	Develop a linked system of carpool lanes and a strategy for implementation	1. LACTC holds public workshops and a public hearing on carpool lane map and implementation strategy. 2. LACTC adopts carpool lane map and plan. 3. Caltrans and SCAG adopt the same plan. 4. LACTC and CTC program funds in STIP for individual carpool lanes. 5. LACTC monitors delivery of the projects as programmed in the STIP and monitors project implementation.
	Expand public/private ride-sharing marketing	1. Commuter Computer designs and coordinates implementation of a unified public/private ridesharing.
	Design and implement an emergency ridesharing back-up system	1. SCAG implements study as a element of its Overall Work Program. 2. LACTC implements a demonstration project, if warranted.
Promote Other Demand Management Strategies	Establish Transportation Management Associations (TMA) in all traffic impact areas in Los Angeles	1. Local agencies and Commuter Computer identify traffic impact areas. 2. LACTC assists Commuter Computer and responsible local jurisdictions in establishing TMAs. 3. Local agencies, Commuter Computer and LACTC identify funding sources for candidate TMAs, such as Prop. A Local Return, Incentive Program Funds, or local sales tax revenues.

	4. TMA's and local agencies develop work plans which include ridesharing, telecommuting, flex time, signalization and other Transportation System Management measures. 5. LACTC and local agencies evaluate effectiveness of TMAs and expand program, if warranted.
Encourage cities to adopt Transportation Impact Mitigation Ordinances for new industrial and commercial developments to offset congestion they cause	1. LACTC establishes suggested guidelines for ordinances. 2. Local jurisdictions adopt and enforce ordinances.
Support adoption of local ordinances requiring large firms to implement incentives to encourage their employees to rideshare	1. LACTC establishes suggested guidelines for ordinances. 2. Local jurisdictions adopt and enforce ordinances.
Encourage City, County, State and Federal governments located downtown to significantly stagger their work hours	1. Government agencies identify services that could be better performed early in the morning or in the evening. 2. LACTC and other governmental agencies implement staggered work hour program.
Assist developers/employers to establish "Smart" neighborhood worksites	1. SCAG develops a demonstration program for "Smart" worksite concept. 2. SCAG and private sector construct a demonstration worksite. 3. SCAG and Commuter Computer evaluate and promote "Smart" neighborhood worksites to the private and public sector.

OBJECTIVES	STRATEGIES	ACTION REQUIRED
INCREASE CONSTRUCTION		
Encourage Establishment of Pavement Management Systems in cities throughout Los Angeles County	Educate local jurisdictions on the cost-effectiveness of pavement management systems	1. LACTC conducts workshop for staff from the cities and the county which explain the advantages of pavement management. 2. LACTC assists local staff in developing a pavement management program. 3. LACTC, with city and county staff, seek approval from city councils and county supervisors for pavement management programs.
Maximize the use of existing resources	Program funds that will become available to Los Angeles to provide maximum increase in capacity for each dollar spent LACTC assures that Caltrans constructs freeway projects on schedule and within budget LACTC advocates receiving additional freeway projects in Los Angeles at the State and Federal level LACTC seeks private financial participation in public transportation projects such as soundwalls and interchanges LACTC takes an active role in new federal legislation to assure that Los Angeles annually receives its appropriate share of taxes	1. LACTC develops a cost-mobility table to evaluate the priority of all new construction projects. 2. LACTC uses the new cost-mobility table to effectively allocate existing sources of funds.

INCREASE FUNDING

Provide additional locally generated revenue to properly maintain our streets and construct necessary improvements on the freeway system throughout Los Angeles	Take steps to develop a specific proposal to locally generate funds dedicated to streets and freeways, assess its public acceptability and prepare for decisions and actions necessary to implement it	1. LACTC conducts public opinion research. 2. LACTC develops public and private support for a locally generated funding proposal. 3. LACTC develops legislation for locally generated revenue dedicated to freeways and streets, if warranted by steps 1 and 2. 4. LACTC obtains legislative authority for proposal. 5. LACTC develops campaign and ballot language. 6. Voters approve locally-generated revenue increase. 7. LACTC allocates funds for freeway improvements and improved city street maintenance.
Encourage the state to meet its obligations to the state highway system	Raise the state gas tax	1. LACTC works with other transportation agencies, the business community, and the public to gain support for an increase to the state gas tax.
	Advocate for change to the Gann expenditure limitation at the state level	1. LACTC works with other transportation agencies, the city and Los Angeles to remove the Gann expenditure limitation from gas tax funds.
Improve call box and emergency response/information systems	Take steps to establish a Service Authority for Freeway Emergencies (SAFE)	1. LACTC takes steps 1-6 described under the "improve emergency related communications program objectives".


APPENDIX

CURRENT AND FUTURE PEAK CONGESTION

Perhaps you are wondering whether you are just losing patience or whether congestion really is getting much worse. And you may have wondered how much worse it will get within the next twenty years.

The following charts describe the current and future conditions on all freeway segments if no changes are made. Current information includes the number of lanes for each freeway in Los Angeles County, current volume of vehicular traffic, the duration of the AM and PM peak hours, the current speed during rush hour and the accident rate compared to other similar freeways in the State.

Traffic congestion in the year 2005 is also projected with most of the recommendations in this report assumed to have been implemented. The projections illustrate that traffic volumes will increase beyond capacity on nearly all segments of our freeways. As a result, rush hour speeds with dramatically reduce. In example, rush hour traffic on the Ventura Freeway is expected to slow from its current 24 miles per hour to an expected 7 miles per hour.

While the following charts provide little comfort, they illustrate why we need to increase the capacity of our freeway system through better operation, reduced demand and short term construction projects.

KEY TO FREEWAY CONGESTION CHART

The purpose of the freeway congestion chart is to show the current and future operating conditions of each freeway. Listed below are definitions which explain the terms used in the chart and the sources of this information:

 # OF LANES - This is the total number of lanes on a freeway for a particular segment. If the number of lanes on the chart was listed as eight lanes there would be

four lanes in each direction. Source: California State Department of Transportation, Route Segment Report, Volume 2, 1985.

ANNUAL AVERAGE DAILY TRAFFIC - The average number of vehicles (in 1000's of vehicles) that traveled daily, in both directions, on a particular segment of the freeway. Source: Current - California State Department of Transportation, Route Segment Report, Volume 2, 1985. Future - Southern California Association of Governments, Regional Transportation Plan model runs, 1985

CURRENT ACCIDENT RATE - The accident rate of a particular segment of the freeway, expressed as a percentage of the statewide average accident rate, for freeways of comparable terrain. An accident rate of 100% for a particular segment of a freeway means that this segment of the freeway has an accident rate which is equal to the statewide average accident rate for freeways of similar terrain. An accident rate of 80% means that the accident rate is 20% below the statewide average accident rate. Source: California State Department of Transportation, Route Segment Report, Volume 2, 1985.

CURRENT SPEED - The average speed, in miles per hour, during peak hours on accident-free days. Accident-free days are those in which operating conditions are not influenced by accidents, disabled vehicles, lane closures, etc. Accident-free days are estimated to exist about 50% of the time. Current speed samplings were taken throughout the 1983 or 1986 calendar years. Source: Caltrans Speed Map, 1983 and 1986.

FUTURE SPEED - The average estimated speed at which traffic will be flowing during the peak hour in the year 2005. This estimate is based on the projected number of people who will want to use the freeway as compared to how many vehicles the freeway can carry. These future speeds are just estimates and do not account for inadequate geometric design, steep grades, sunglare,

and other factors. These future speeds reflect the influence of the Proposition A Rail System construction. Source: Southern California Association of Governments

PEAK PERIOD DURATION - The time each day which has the greatest level of congestion. This congestion occurs both in the morning and in the evening. The peak direction of travel is indicated by the following abbreviations: **EB** - Eastbound. **NB** - Northbound. **SB** - Southbound. **WB** - Westbound. Source: Caltrans Speed Map, 1983 and 1986.

VOLUME-CAPACITY RATIO - Ratio of volume to capacity. Volume represents the number of vehicles that want to use the freeway. Capacity represents the maximum number of vehicles per hour the freeway can carry. A volume capacity of 1.0 means that the freeway is at its maximum carrying capacity. A volume-capacity ratio of 2.0 means that the freeway is two times above its theoretical carrying load. The maximum load is theoretically 2,000 vehicles per lane. Source: Current - California State Department of Transportation, Route Segment Report, Volume 2, 1985. Future - Southern California Association of Governments Regional Transportation Plan model runs, 1985,

EAST LOS ANGELES INTERCHANGE - The Intersection of five freeways near downtown Los Angeles. The freeways are: Santa Monica, Santa Ana, Pomona, Golden State (Routes 10, 101 & 5, 60, and 5).

CURRENT AND FUTURE PEAK CONGESTION

ROUTE NUMBER	LIMITS	CURRENT* # OF LANES	AVERAGE ANNUAL DAILY TRAFF	VOL/ CPCTY.	PEAK PERIOD DURATION AM
	ANTELOPE VALLEY FREEWAY				
14	Kern Co. Line to Palmdale Blvd.	4-6	16.5	0.4	NB-- SB--
14	Palmdale Blvd to Soledad Cyn Rd	4-5	29.4	0.8	NB-- SB--
14	Soledad Canyon Road to Route 5	4-10	51.0	0.5	NB-- SB--
	ARTESIA FREEWAY				
91	Route 110 to Route 710	9-12	99.2	0.6	EB -- WB 6:00 TO 8:00
91	Route 710 to Route 605	8-10	180.9	1.0	EB -- WB 5:45 to 8:30
91	Rte 605 to Orange Co. Line	8	157.8	1.0	EB -- WB 6:00 to 8:30
	CORONA FREEWAY				
71	Route 10 to Holt Avenue	4	31.1	0.5	EB -- WB --
	FOOTHILL FREEWAY				
210	Route 5 to Route 118	6	39.6	0.5	EB -- WB --
210	Route 118 to Route 2	8	53.9	0.4	EB -- WB --
210	Route 2 to Route 134	8-10	66.0	0.5	EB -- WB --
210	Route 134 to Route 605	8-10	150.4	0.9	EB -- WB 6:30 to 8:15
210	Route 605 to Route 30	8-10	122.0	0.7	EB -- WB 6:30 to 8:15

						FUTURE***	
PEAK PERIOD SPEED AM	PEAK PERIOD DURATION PM	PEAK PERIOD SPEED PM	SEGMNT ACCDNT RATE	AVERAGE ANNUAL DAILY TRAFF	VOL/ CPCTY.	PEAK PERIOD SPEED** AM	PM
--	NB--	--	50%	15.1	0.2	--	55
--	SB--	--				55	--
--	NB--	--	70%	16.1	0.2	--	55
--	SB--	--				55	--
--	NB--	--	50%	53.0	0.5	--	55
--	SB--	--				55	--
--	EB 3:00 TO 6:45	35	90%	118.7	0.7	52	--
42	WB --	--				--	52
--	EB 3:00 to 7:00	23	60%	197.1	1.3	--	38
28	WB --	--				38	--
--	EB 4:15 to 5:30	49	30%	216.2	1.5	--	33
42	WB --	--				33	--
--	EB --	--	40%	35.4	0.5	--	54
--	WB --	--				54	--
--	EB --	--	20%	40.7	0.4	55	--
--	WB --	--				--	55
--	EB --	--	50%	60.1	0.5	55	--
--	WB --	--				--	55
--	EB --	--	110%	57.4	0.4	55	--
--	WB --	--				--	55
--	EB 3:45 to 6:30	27	40%	170.3	1.3	--	27
39	WB --	--				39	--
--	EB 4:15 to 6:30	46	40%	133.8	0.8	--	46
39	WB --	--				39	--

ROUTE NUMBER	LIMITS	CURRENT* # OF LANES	AVERAGE ANNUAL DAILY TRAFF	VOL/ CPCTY.	PEAK PERIOD DURATION AM
210	Route 30 to Route 10	8	94.7	0.8	NB -- SB --
30	Route 210 to Route 66	8	25.9	0.2	EB -- WB --
	GLENDALE FREEWAY				
2	Route 210 to Route 134	9	57.0	0.6	NB -- SB --
2	Route 134 to Route 5	8	87.3	0.9	NB -- SB --
2	Route 5 to Terminus	8	65.0	0.6	NB -- SB 7:15 to 8:00
	GOLDEN STATE FREEWAY				
5	Kern County Line to Route 118	6-12	69.4	0.8	NB -- SB --
5	Route 118 to Route 170	9	94.7	0.8	NB -- SB 6:45 to 8:15
5	Route 170 to Route 134	8	90.1	0.6	NB -- SB --
5	Route 134 to Route 2	8	145.6	0.9	NB -- SB 7:15 to 8:15
5	Route 2 to Route 110	10	188.3	0.8	NB -- SB 6:45 to 9:30
5	Rte 110 to East LA Interchange	8	177.2	1.0	NB -- SB 7:15 to 9:15
	HARBOR FREEWAY				
110	Route 101 to Route 10	12	227.4	0.8	NB 7:00 to 9:00 SB 6:45 to 9:30
110	Route 10 to Route 91	8	193.7	1.0	NB 6:30 to 10:0 SB --

						FUTURE***	
PEAK PERIOD SPEED AM	PEAK PERIOD DURATION PM	PEAK PERIOD SPEED PM	SEGMNT ACCDNT RATE	AVERAGE ANNUAL DAILY TRAFF	VOL/ CPCTY.	PEAK PERIOD SPEED** AM	PM
--	NB --	--	50%	109.9	0.8	--	51
--	SB --	--				51	--
--	EB --	--	100%	43.2	0.3	55	--
--	WB--	--				--	55
--	NB --	--	40%	56.6	0.4	--	55
--	SB --	--				55	--
--	NB --	--	40%	100.3	0.8	--	52
--	SB --	--				52	--
--	NB --	--	60%	40.0	0.3	--	--
27	SB --	--				27	--
--	NB --	--	90%	112.6	1.0	--	51
--	SB --	--				51	--
--	NB 4:45 to 6:30	36	70%	129.3	1.0	--	36
26	SB --	--				26	--
--	NB 4:30 to 5:00	53	50%	151.2	1.2	--	--
--	SB --	--				43	--
--	NB --	--	40%	242.0	2.9	--	--
40	SB --	--				32	--
--	NB --	--	40%	262.7	1.6	--	--
25	SB --	--				25	--
--	NB 3:15 to 5:45	36	70%	206.5	1.3	--	36
28	SB --	--				28	--
46	NB 2:30 to 7:00	15	290%	260.9	1.6	28	28
46	SB 3:00 to 5:00	17				28	28
30	NB 3:00 to 6:30	33	40%	223.6	1.7	25	25
--	SB 2:45 to 7:00	30				--	25

ROUTE NUMBER	LIMITS	CURRENT* # OF LANES	AVERAGE ANNUAL DAILY TRAFF	VOL/ CPCTY.	PEAK PERIOD DURATION AM
110	Route 91 to Route 405	8	176.0	1.0	NB 7:00 to 8:30 SB --
110	Route 405 to 9th Street	5-8	81.8	0.9	NB 7:00 to 8:15 SB --
	HOLLYWOOD FREEWAY				
170	Route 5 to Route 101	8	85.0	0.7	NB -- SB 7:15 to 8:15
101	Rte 134/170 Interchange to Rte 110	8	217.2	1.0	NB 8:15 to 8:45 SB 6:30 to 10:0
	LONG BEACH FREEWAY				
710	Route 10 to Route 60	6	70.7	0.7	NB -- SB --
710	Route 60 to Route 5	8	132.3	0.9	NB -- SB --
710	Route 5 to Route 91	8-10	153.8	0.7	NB 6:30 to 9:30 SB --
710	Route 91 to Route 405	8	148.8	0.7	NB -- SB --
710	Route 405 to Route 1	6	119.2	1.0	NB -- SB --
	MARINA FREEWAY				
90	Route 1 to 405	6-8	46.7	0.6	EB -- WB --
90	Route 405 to Slauson	6	34.0	0.4	EB -- WB --
	PASADENA FREEWAY				
110	Terminus to Route 5	6	59.5	0.7	NB -- SB 6:45 to 9:15
110	Route 5 to Route 101	6-8	129.9	0.9	NB -- SB 6:45 to 9:30

						FUTURE***	
PEAK PERIOD SPEED AM	PEAK PERIOD DURATION PM	PEAK PERIOD SPEED PM	SEGMNT ACCDNT RATE	AVERAGE ANNUAL DAILY TRAFF	VOL/ CPCTY.	PEAK PERIOD SPEED** AM	PM
33	NB --	--	70%	182.2	1.4	35	--
--	SB --	--				--	--
33	NB --	--	40%	129.4	1.1	33	--
--	SB --	--				--	--
--	NB 3:45 to 6:30	44	50%	143.2	1.1	--	45
52	SB --	--				45	--
50	NB 3:30 to 6:45	38	50%	262.0	1.9	20	20
33	SB 4:45 to 7:00	35				20	20
--	NB --	--	70%	115.2	1.2	43	--
--	SB 4:00 to 4:45	37				--	43
--	NB --	--	70%	151.6	1.2	43	--
--	SB 4:00 to 4:45	25				--	43
46	NB 3:45 to 5:45	48	50%	200.7	1.4	36	36
--	SB --	--				--	36
--	NB --	--	50%	197.0	1.5	31	--
--	SB --	--				--	31
--	NB --	--	50%	142.6	1.5	--	33
--	SB --	--				33	33
--	EB --	--	10%	55.4	0.7	54	--
--	WB --	--				--	54
--	EB --	--	220%	44.2	0.5	--	55
--	WB --	--				55	--
--	NB --	--	130%	65.2	0.7	--	--
31	SB --	--				31	--
--	NB 2:45 to 7:15	20	70%	137.0	1.4	--	20
30	SB --	--				30	--

ROUTE NUMBER	LIMITS	CURRENT* # OF LANES	AVERAGE ANNUAL DAILY TRAFF	VOL/ CPCTY.	PEAK PERIOD DURATION AM
	POMONA FREEWAY				
60	Route 10 to Route 710	8-9	136.7	1.0	EB -- WB 6:00 to 9:30
60	Route 710 to Route 605	8	145.0	1.0	EB -- WB 5:45 to 8:00
60	Route 605 to Route 57 NB	8-12	134.9	0.8	EB -- WB 5:30 to 8:30
60	Rte 57 NB to San Berdo.Co. Line	6-8	100.0	1.0	EB -- WB --
	ROUTE 57 FREEWAY				
57	Route 210 & 10 to Route 60	8-10	88.1	0.7	NB -- SB --
57	Route 60 to Orange County Line	8-10	140.0	1.0	NB 7:30 to 8:15 SB 7:00 to 9:00
	ROUTE 605 FREEWAY				
605	Route 210 to Route 10	8-10	95.3	0.8	NB -- SB --
605	Route 10 to Route 60	8	137.2	1.0	NB -- SB 6:15 to 8:15
605	Route 60 to Route 5	8	137.2	1.0	NB -- SB 6:15 to 8:15
605	Route 5 to Route 91	8	171.7	1.0	NB 6:45 to 7:45 SB --
605	Route 91 to Orange County Line	8	171.7	1.0	NB 7:30 to 8:00 SB --
	SAN BERNARDINO FREEWAY				
10	Route 101 to Route 710	8-12	146.0	0.6	EB -- WB 6:30 to 9:30
10	Route 710 to Route 605	8	187.0	1.0	EB -- WB 6:00 to 8:45

						FUTURE***	
PEAK PERIOD SPEED AM	PEAK PERIOD DURATION PM	PEAK PERIOD SPEED PM	SEGMNT ACCDNT RATE	AVERAGE ANNUAL DAILY TRAFF	VOL/ CPCTY.	PEAK PERIOD SPEED** AM	PM
--	EB 3:45 to 5:30	35	80%	144.5	1.3	--	35
19	WB --	--				19	--
--	EB 3:30 to 6:45	28	50%	141.4	0.9	--	36
30	WB --	--				30	--
--	EB 3:45 to 6:00	40	100%	198.9	1.2	--	43
30	WB --	--				43	--
--	EB 3:30 to 5:30	35	140%	125.8	1.1	--	43
--	WB --	--				43	--
--	NB --	--	40%	113.5	0.8	--	52
--	SB --	--				52	--
55	NB 3:45 to 6:30	53	40%	128.2	0.9	50	50
42	SB --	--				50	--
--	NB --	--	60%	130.1	0.9	--	50
--	SB --	--				50	--
--	NB 3:30 to 5:30	42	50%	181.2	1.4	--	36
34	SB --	--				36	--
--	NB 3:30 to 5:30	36	50%	181.2	1.8	--	22
47	SB --	--				22	--
42	NB --	--	40%	215.1	1.8	23	--
--	SB 4:30 to 6:00	39				--	23
38	NB --	--	40%	215.1	1.6	28	--
--	SB 4:00 to 5:00	52				--	28
--	EB 3:30 to 5:15	36	440%	221.8	0.9	--	36
30	WB --	--				30	--
--	EB 3:15 to 6:15	28	60%	193.5	1.5	--	33
27	WB --	--				33	--

ROUTE NUMBER	LIMITS	CURRENT* # OF LANES	AVERAGE ANNUAL DAILY TRAFF	VOL/ CPCTY.	PEAK PERIOD DURATION AM
10	Rte 210 to San Berdo. Co. Line	8	159.6	1.0	EB -- WB --
10	Route 605 to Route 210	10	137.6	0.7	EB -- WB 6:00 to 7:45
	SAN DIEGO FREEWAY				
405	Route 118 to Route 101	8-12	115.4	0.7	NB -- SB 6:00 to 8:45
405	Route 101 to Route 10	8-9	220.2	1.0	NB 7:15 to 8:00 SB 6:00 to 8:30
405	Route 10 to Route 90	8	232.5	1.0	NB 7:30 to 8:45 SB 7:00 to 7:30
405	Route 90 to Route 110	8	218.6	1.0	NB 6:00 to 9:30 SB --
405	Route 110 to Route 710	8-10	205.5	1.0	NB 6:00 to 9:00 SB --
405	Route 710 to Orange County Line	8-10	218.9	1.0	NB 6:15 to 9:00 SB --
	SANTA ANA FREEWAY				
101	Rte 110 to Rte 10 (Macy Street)	8	212.9	1.0	NB 6:30 to 9:15 SB --
101	Route 10 to East LA Interchange	6	120.0	0.9	NB 7:00 to 8:30 SB --
5	East LA Interchange to Route 710	8	220.3	0.9	NB 6:45 to 8:30 SB --
5	Route 710 to Route 605	8	154.0	1.0	NB 6:15 to 9:15 SB --
5	Route 605 to Orange County Line	6-8	163.0	1.0	NB 6:00 to 8:00 SB --

						FUTURE***	
PEAK PERIOD SPEED AM	PEAK PERIOD DURATION PM	PEAK PERIOD SPEED PM	SEGMNT ACCDNT RATE	AVERAGE ANNUAL DAILY TRAFF	VOL/ CPCTY.	PEAK PERIOD SPEED** AM	PM
--	EB 3:45 to 6:15	48	70%	174.0	1.2	--	44
24	WB --	--				44	--
--	EB 3:45 to 6:15	39	50%	185.9	1.4	--	34
--	WB --	--				--	--
--	NB 4:15 to 6:15	44	50%	219.4	1.5	--	32
32	SB --	--				32	--
54	NB 3:30 to 6:45	33	40%	266.9	2.0	--	15
35	SB --	--				15	--
31	NB 3:45 to 7:00	24	70%	312.0	2.1	14	14
53	SB --	--				14	--
31	NB 3:45 to 6:30	46	30%	253.0	2.0	19	19
--	SB 3:00 to 7:00	30				--	19
41	NB --	--	40%	245.4	1.9	17	--
--	SB 3:15 to 6:00	33				--	17
31	NB --	--	30%	268.0	1.6	27	--
--	SB 4:00 to 7:00	33				--	27
20	NB 3:45 to 6:15	24	100%	234.6	1.8	21	21
--	SB 3:15 to 6:15	19				--	21
16	NB --	--	40%		1.8	21	--
--	SB --	--				--	--
26	NB --	--	90%	280.3	2.1	13	--
--	SB 3:00 to 6:30	20				--	13
38	NB --	--	100%	217.0	2.0	19	--
--	SB 2:30 to 6:30	32				--	19
34	NB 4:00 to 5:00	36	50%	224.3	2.3	11	11
--	SB 2:15 to 6:00	46				--	11

ROUTE NUMBER	LIMITS	CURRENT* # OF LANES	AVERAGE ANNUAL DAILY TRAFF	VOL/ CPCTY.	PEAK PERIOD DURATION AM
	SANTA MONICA FREEWAY				
10	Route 1 to Route 405	8	154.3	1.0	EB -- WB --
10	Route 405 to Manning Avenue	8-10	201.0	1.0	EB 7:15 to 10:0 WB 7:15 to 9:00
10	Manning Avenue to Route 5	10	204.5	1.0	EB -- WB 6:45 to 9:15
	SIMI VALLEY FREEWAY				
118	Ventura Co. Line to Route 27	6-8	71.6	0.9	EB 7:15 to 7:45 WB --
118	Route 27 to Route 405	6-12	82.5	0.6	EB 6:30 to 7:45 WB --
118	Route 405 to Route 5	7-12	53.9	0.4	EB 7:30 to 8:00 WB --
118	Route 5 to Route 210	7	49.1	0.5	EB -- WB --
	TERMINAL ISLAND FREEWAY				
47	Beginning of Freeway to Willow St	4-6	25.5	0.5	NB -- SB --
103	Route 47 to Route 1	4-6	27.0	0.4	NB -- SB --

						FUTURE***	
PEAK PERIOD SPEED AM	PEAK PERIOD DURATION PM	PEAK PERIOD SPEED PM	SEGMNT ACCDNT RATE	AVERAGE ANNUAL DAILY TRAFF	VOL/ CPCTY.	PEAK PERIOD SPEED** AM	PM
--	EB --	--	40%	166.5	1.3	--	40
--	WB --	--				40	--
33	EB 3:15 to 6:45	43	50%	258.0	1.7	26	26
33	WB 3:45 to 7:00	40				26	26
--	EB 3:45 to 6:15	24	70%	254.6	1.5	--	31
27	WB 3:30 to 5:30	27				31	31
45	EB --	--	40%	105.7	1.1	45	--
--	WB 4:45 to 6:00	32				--	32
44	EB --	--	50%	62.5	0.5	44	--
--	WB 4:45 to 6:00	46				--	46
24	EB --	--	40%	72.7	0.4	24	--
--	WB --	--				--	--
--	EB --	--	40%	38.7	0.2	55	--
--	WB --	--				--	55
--	NB --	--	180%	31.0	0.3	--	55
--	SB --	--				55	--
--	NB --	--	90%	--	--	--	--
--	SB --	--				--	--

ROUTE NUMBER	LIMITS	CURRENT* # OF LANES	AVERAGE ANNUAL DAILY TRAFF	VOL/ CPCTY.	PEAK PERIOD DURATION AM	PEAK PERIOD SPEED AM
	VENTURA FREEWAY					
101	Ventura Co. Line to Mulholland Dr.	8-10	116.4	0.7	EB 7:15 to 8:15 WB --	46 -
101	Mulholland Drive to Route 405	6-8	175.3	1.0	EB 6:15 to 10:0 WB 7:00 to 8:00	26 51
101	Rte 405 to Rte 170/134 Interchange	8	237.8	1.0	EB 6:30 to 9:15 WB --	2. 47
134	Rte 170/134 Interchange to Rte 5	6	123.8	1.0	EB -- WB --	- --
134	Route 5 to Route 2	6	123.8	1.0	EB -- WB --	- --
134	Route 2 to Route 210	6	123.8	1.0	EB -- WB --	- -

* Current speeds are from actual samplings taken during 1983 or 1986.

** Future speeds are estimates which do not account for inadequate geometric design, steep grades, sunglare, and other factors.

*** Future freeway speeds are based on a model which did not take into account the effect of the Proposition A Rail System.

								FUTURE***	
PEAK PERIOD SPEED AM		PEAK PERIOD DURATION PM	PEAK PERIOD SPEED PM	SEGMNT ACCDNT RATE	AVERAGE ANNUAL DAILY TRAFF	VOL/ CPCTY.	PEAK PERIOD SPEED** AM	PM
46	EB	--	--	30%	168.8	1.2	42	--
--	WB	--	--				--	42
26	EB	3:30 to 6:15	37	50%	293.5	2.6	7	7
51	WB	3:45 to 7:00	36				7	7
24	EB	3:30 to 6:30	28	40%	285.1	2.6	7	7
47	WB	3:00 to 7:00	27				7	7
--	EB	5:00 to 5:45	45	30%	174.1	1.6	--	29
--	WB	3:30 to 6:30	53				--	29
--	EB	5:15 to 5:45	36	30%	174.1	1.3	--	39
--	WB	--	--				--	--
--	EB	--	--	30%	174.1	1.1	--	43
--	WB	--	--				43	--

APPENDIX TO STREETS CHAPTER

PREFERRED MAINTENANCE TECHNIQUES

About 95 percent of the streets in Los Angeles are asphalt which ages due to the effects of our Southern California sun, rain and traffic. The resulting pavement cracks and loss of surface gravel leads to deeper cracks, potholes and the eventual erosion of the pavement.

There are two categories of road repair work: maintenance and rehabilitation. In Los Angeles, the preferred maintenance for local streets is called slurry seal and the preferred maintenance for major streets is called thin resurfacing.

A **slurry seal** is an unheated mixture of small gravel and asphalt that is spread over the surface of pavement. It is applied to asphalt which is still smooth and has only weathered enough to lose its surface layers and show small cracks. In Los Angeles, slurry seals are needed about once every six years. Application costs average around 60 cents per square yard of pavement, including engineering, construction administration, patching and crack sealing.

A **thin resurface** is a one inch thick layer of hot asphalt and gravel. It must be heated and mixed at an asphalt plant and transported hot to the street for application. The average cost for thin resurfacing is about $3.75 per square yard including engineering, construction administration, patching and crack sealing, raising manhole frames and covers, and replacement of traffic signal loops and pavement markings.* Although thin resurfacing is

*The County of Los Angeles and Caltrans have recently indicated that a two inch overlay is preferable to a one inch overlay. If this approach is used, an additional $23 million will be needed each year for street maintenance. Variations in the amount of individual cities' maintenance shortfall may occur because of differing conditins and procedures. Factors which may affect the amount of maintenance need include current street condition, the age of the street, the frequency and cost of maintenance, and the need for total street reconstruction.

about six times more costly than a slurry seal, a thin resurface can last about two and a half times as long between applications. Most County engineers prefer a thin resurfacing on major streets which carry a heavy load of traffic because it does not disrupt traffic as frequently.

Once every 40 to 50 years streets need major **rehabilitation.** Rehabilitating a road requires the removal and replacement of pavement (reconstruction) or the strengthening of existing pavement by overlaying a new two-inch thick layer of asphalt and gravel (resurfacing).

Reconstruction costs about $28 per square yard while resurfacing costs* about $14.65 per square yard. Local streets cost less than major streets to rehabilitate. They are generally in better condition because they do not have to bear the load of heavy trucks and continuous traffic.*

Two estimates of average rehabilitation costs are used in this report; $6.30 per square yard for local streets, and, $14.65 per square yard for major streets. These costs assume that slurry seals and thin resurfaces have been applied earlier in the street's life. To find how much is needed for maintenance in Los Angeles, the following assumptions are made:

- During every forty years local streets should receive six slurry seals and one rehabilitation application for a total cost of $9.90 per square yard of pavement.
- Major streets should receive two thin resurface applications and one rehabilitation application in forty years for a total cost of $22.15 per square yard of pavement.
- If adequate funds are made available to properly maintain city streets, a city can eventually achieve good pavement quality throughout the entire city.

*The $14.65 estimate for major street resurfacing costs includes an estimate for patching and other work.

CALCULATING MAINTENANCE NEEDS

The preferred maintenance techniques described in the previous section are used to calculate average maintenance needs for each city in Los Angeles. Maintenance needs have been estimated through the following four steps:

1. Determine pavement area in square yards.
2. Calculate maintenance needs for local and major streets.
3. Calculate rehabilitation needs for local and major streets.
4. Total needs and compare to expenditures.

These four steps correspond to the chart numbers showing individual calculations for each city.

Chart 1 (Pavement Area)

The purpose of Chart 1 is to calculate the pavement area that each city is responsible for maintaining. The amount of local and major street pavement area is found separately because these figures are needed on other charts.

The numbers listed in columns 1, 2, 3, 5 and 6 were obtained from several sources. Wherever possible, numbers were obtained directly from the city by survey or by interviewing city engineers, either in person or over the phone. In some cases it was necessary to convert city data to a consistent format.

When city data was unavailable, the total length of a city's street was used from Caltrans' "Assembly of Statistical Reports - 1984". Averaging techniques were used in combination with the total street length to obtain numbers for columns 2,3, 5 and 6. These averaging techniques are described below. Each city engineer had the opportunity to review and change the estimated numbers.

Column 1 lists the length of each city's streets in maintained centerline miles. (If you travel one mile in your car in one direction down a street, you have measured a centerline mile.) To determine pavement area, the width of the street is also needed. We assumed that each city has two sizes of street width: local streets and major streets.

Column 2 lists local street length in miles. The local street length of non-reporting cities was assumed to be 65.6 percent of the city's streets. The 65.6 percent was determined to be the average percent of local street centerline miles for reporting cities.

Column 3 shows average local street width in feet. Non-reporting cities were assumed to have local streets that were 40.55 feet wide, the countywide average for 59 reporting cities.

Column 4 shows the local street pavement area. It is calculated by multiplying local street length (Column 2) by local street width (column 3) by .587. The .587 converts street length in miles and width in feet into - thousands of square yards.

Column 5 is major street length in miles. Non-reporting cities were assumed to have arterial lengths equaling 34.4 percent of their centerline miles, based on the countywide average for reporting cities.

Column 6 is average major street width in feet. Non-reporting cities were assumed to have an average major street width of 63.40 feet based on the countywide average of 59 reporting cities.

Column 7 is major street pavement area. It is calculated by multiplying the major street length by major street width by .587 (column 5 times column 6 times .587). The .587 is needed to convert the results in the correct units - thousands of square yards.

Total pavement area, Column 8, is the sum of column 4, local street pavement area, and column 7, major street pavement area.

Chart 2 (Maintenance Needs)

Chart 2 is divided into two sections: local streets (2A) and major streets (2B) because the maintenance costs are different for each type of street. The first column on each of the charts is the pavement area calculated in Chart 1.

Column 2 shows the average cost of each maintenance application per square yard of pavement -- $0.60 for each slurry seal for local streets and $3.75 for a thin overlay for major streets.

Column 3 shows the cost per application. It is calculated by multiplying column one by column two.

Column 4 shows the total maintenance cost in forty years. It is calculated by multiplying column 3 by the frequency of application. For local streets, slurry seals are applied six times in 40 years, so column 3 is multiplied by 6. For major streets, thin resurfacing applications are applied twice in 40 years, so column 3 is multiplied by 2.

Column 5 is the annual maintenance cost. The annual cost is calculated by dividing column 4, the 40 year cost, by 40.

Chart 3 (Rehabilitation Needs)

Chart 3 is divided into two sections: local streets (3A) and major streets (3B) because the rehabilitation costs are different for each type of street. The first column on each of the charts is the pavement area calculated in Chart 1.

Column 2 shows the average cost of rehabilitating a square yard of pavement -- $6.30 for local streets and $14.65 for major highways.

Column 3 shows the cost of rehabilitation for all streets in a city over their 40 year lifetime. It is calculated by multiplying column one by column two.

Column 4 shows the **annual** cost of rehabilitation. It is calculated by dividing column 3 by 40.

Column 5 is copied from the last column in Chart 2A or 2B, annual maintenance costs for either local or major streets.

Column 6 is the sum of columns 4 and 5. It shows the annual cost needed for maintenance and rehabilitation in each city. An average of $127,287,000 is needed to maintain all of our streets each year.

Chart 4 (Summary of Needs and Shortfall)

Chart 4 is also shown in the streets chapter, since it contains the most important point of these calculations -- we are not spending enough to maintain our streets.

Chart 4 has 5 columns. The first column, major streets, is copied from the last column of Chart 3B. The second column, local streets is copied from the last column of Chart 3A. The third column is the total of columns one and two. Column 4 shows pavement maintenance expenditures reported by cities.

In many cases the expenditures shown in column 4 are the average of audited expenditures for Fiscal Years 1981-82; 1982-83, and 1983-84 from the State Controller's Report titled "Annual Report Financial Transactions Concerning Streets and Roads of Cities and Counties in California".

Each city engineer was given the opportunity to review the average expenditures extracted from the State Controller's report. Many engineer's asked that the reported expenditures be revised to conform with either the City's Senate Bill 300 reported maintenance expenditures, or with the city's current estimate of expenditures.

Column 5, the maintenance shortfall, is calculated by subtracting column 4, expenditures, from column 3, total maintenance needs. The countywide shortfall is $112,914,000 annually. Only six cities do not show a maintenance shortfall.

PAVEMENT AREAS FOR THE AGENCIES

COLUMN NUMBER	(1)	(2)	(3)
AGENCY	CENTERLINE MILES	LOCAL STREET LENGTH IN MILES	LOCAL STREET WIDTH IN FEET
FORMULA (Circled #'s Refer to Column #'s)			
AGOURA HILLS	43.8	34.72	31.50
ALHAMBRA	150.7	126.87	40.00
ARCADIA	141.4	101.00	40.00
ARTESIA	31.0	20.33	40.55
AVALON	6.5	6.50	24.00
AZUSA	73.3	58.10	40.00
BALDWIN PARK	102.3	67.11	40.55
BELL	38.7	25.39	40.55
BELLFLOWER	94.1	70.00	35.00
BELL GARDENS	40.3	14.00	36.00
BEVERLY HILLS	98.9	80.50	32.00
BRADBURY	3.2	2.00	38.00
BURBANK	227.4	182.00	40.00
CARSON	204.4	170.35	40.00
CERRITOS	127.4	83.57	40.55
CLAREMONT	120.0	93.00	40.00
COMMERCE	58.4	40.00	43.90
COMPTON	169.4	111.13	36.00
COVINA	108.3	80.05	40.00
CUDAHY	13.3	12.00	40.00
CULVER CITY	83.2	50.00	36.00
DOWNEY	193.5	126.94	40.55
DUARTE	52.0	41.20	38.00
EL MONTE	151.8	136.80	36.00
EL SEGUNDO	52.7	34.57	40.55
GARDENA	85.2	55.89	40.55
GLENDALE	355.2	229.00	36.00
GLENDORA	131.5	125.00	40.00
HAWIIAN GARDENS	17.5	14.40	40.00
HAWTHORNE	88.8	72.40	32.00
HERMOSA BEACH	47.4	35.50	30.00
HIDDEN HILLS*	0	0	0
HUNTINGTON PARK	65.3	43.70	36.00
INDUSTRY	62.3	40.87	40.55
INGLEWOOD	185.8	110.00	40.00
IRWINDALE	26.9	13.50	40.00
LA CANADA FLINTRIDGE	79.8	74.00	28.00
LA HABRA HEIGHTS	41.0	32.00	40.00
LAKEWOOD	197.0	164.10	36.00
LA MIRADA	110.9	95.30	38.00
LANCASTER	248.6	129.00	40.00
LA PUENTE	63.6	50.40	40.00
LA VERNE	79.4	63.00	40.00
LAWNDALE	43.1	28.27	40.55
LOMITA	30.9	25.10	32.00
LONG BEACH	811.1	660.00	40.00
LOS ANGELES CITY	6,842.4	3,707.00	44.00

CHART 1

(4) LOCAL STREET PAVEMENT AREA IN 1,000 S.Y.	(5) MAJOR STREET LENGTH IN MILES	(6) MAJOR STREET WIDTH IN FEET	(7) MAJOR STREET PAVEMENT AREA IN 1,000 S.Y	(8) TOTAL PAVEMENT AREA 1,000 S.Y.
.587x[(2)x(3)]			.587x[(5)x(6)]	(4) + (7)
642	9.08	47.55	253	895
2,979	23.83	60.83	851	3,830
2,371	40.40	54.00	1,281	3,652
484	10.67	63.40	397	881
92	.00	.00	0	92
1,364	15.20	64.00	571	1,935
1,597	35.19	63.40	1,310	2,907
604	13.31	63.40	495	1,099
1,438	24.10	70.00	990	2,428
296	26.30	79.00	1,220	1,516
1,512	18.40	60.00	648	2,160
45	1.20	64.00	45	90
4,273	45.40	54.40	1,450	5,723
4,000	34.05	101.65	2,032	6,032
1,989	43.83	63.40	1,631	3,620
2,184	27.00	84.00	1,331	3,515
1,031	18.40	59.55	643	1,674
2,348	58.27	63.40	2,169	4,517
1,880	28.25	63.43	1,052	2,932
282	1.30	64.00	49	331
1,057	33.20	47.27	921	1,978
3,022	66.56	63.40	2,477	5,499
919	10.80	44.51	282	1,201
2,891	15.00	64.00	564	3,455
823	18.13	63.40	675	1,498
1,330	29.31	63.40	1,090	2,420
4,839	126.20	40.40	2,993	7,832
2,935	6.50	88.69	338	3,273
338	3.10	64.00	115	454
1,360	16.40	86.75	835	2,195
625	11.90	50.00	349	974
0	0	0	0	0
923	21.60	64.00	811	1,734
973	21.43	61.69	776	1,749
2,583	75.80	44.21	1,967	4,550
317	13.40	64.00	503	820
1,216	5.80	44.86	153	1,369
751	9.00	32.00	169	920
3,468	32.90	64.00	1,236	4,704
2,126	15.60	66.00	604	2,730
3,029	119.60	65.33	4,587	7,616
1,183	13.20	64.00	496	1,679
1,479	16.40	64.00	616	2,095
673	14.83	63.40	552	1,225
471	5.80	61.60	210	681
15,497	151.10	80.00	7,096	22,593
95,744	3,135.40	64.00	117,791	213,535

COLUMN NUMBER	(1)	(2)	(3)
AGENCY	CENTERLINE MILES	LOCAL STREET LENGTH IN MILES	LOCAL STREET WIDTH IN FEET
FORMULA (Circled #'s Refer to Column #'s)			
LYNWOOD	97.9	65.10	32.00
MANHATTAN BEACH	89.1	77.60	30.00
MAYWOOD	26.8	23.47	40.00
MONROVIA	87.6	78.90	38.00
MONTEBELLO	122.4	81.60	36.00
MONTEREY PARK	109.9	72.09	40.55
NORWALK	177.8	148.00	38.00
PALMDLE	124.4	64.50	40.00
PALOS VERDES ESTATES	77.9	51.10	40.55
PARAMOUNT	68.1	55.00	42.00
PASADENA	317.6	179.20	33.00
PICO RIVERA	115.3	101.50	36.00
POMONA	360.0	317.50	36.00
RANCHO PALOS VERDES	132.8	101.00	36.00
REDONDO BEACH	118.3	82.70	28.00
ROLLING HILLS*	0	0	0
ROLLING HILLS ESTATES	29.7	19.48	40.55
ROSEMEAD	75.9	49.79	40.55
SAN DIMAS	140.8	81.30	40.00
SAN FERNANDO	45.3	27.73	36.00
SAN GABRIEL	71.7	66.60	36.00
SAN MARINO	62.1	40.74	40.55
SANTA FE SPRINGS	99.3	75.00	40.00
SANTA MONICA	140.3	94.50	41.00
SIERRA MADRE	40.7	26.70	40.55
SIGNAL HILL	35.7	23.42	40.55
SOUTH EL MONTE	38.5	25.26	40.55
SOUTH GATE	127.2	112.20	36.00
SOUTH PASADENA	59.8	43.10	36.00
TEMPLE CITY	71.2	71.00	36.00
TORRANCE	328.5	255.70	40.55
VERNON	47.4	0	0
WALNUT	68.1	44.67	40.55
WEST COVINA	220.6	144.71	40.55
WEST HOLLYWOOD	41.3	27.09	40.55
WESTLAKE VILLAGE	25.9	16.99	40.55
WHITTIER	187.2	138.25	36.00
TOTAL 84 CITIES	15,946.8	10,420.05	
LOS ANGELES COUNTY UNINCORPORATED	3,576.0		
TOTAL ALL AGENCIES	19,522.8		

*The cities of Hidden Hills and Rolling Hills are not included in these calculations because they possess only private streets which are not maintained with public funds.

(4) LOCAL STREET PAVEMENT AREA IN 1,000 S.Y.	(5) MAJOR STREET LENGTH IN MILES	(6) MAJOR STREET WIDTH IN FEET	(7) MAJOR STREET PAVEMENT AREA IN 1,000 S.Y.	(8) TOTAL PAVEMENT AREA 1,000 S.Y.
.587x[(2) x (3)]			.587[(5) x (6)]	(4) + (7)
1,223	32.80	72.00	1,386	2,609
1,367	11.50	50.00	338	1,705
551	3.33	64.00	125	676
1,760	8.70	65.00	332	2,092
1,724	40.80	72.00	1,724	3,448
1,716	37.81	63.40	1,407	3,123
3,301	29.80	66.00	1,155	4,456
1,514	59.90	65.33	2,297	3,811
1,216	26.80	63.40	997	2,213
1,356	13.10	36.00	277	1,633
3,471	138.40	44.00	3,575	7,046
2,145	13.80	64.00	518	2,663
6,709	42.50	64.00	1,597	8,306
2,134	31.80	64.00	1,195	3,329
1,359	35.60	64.00	1,337	2,696
0	0	0	0	0
464	10.22	63.40	380	844
1,185	26.11	63.40	972	2,157
1,909	23.50	64.00	883	2,792
586	17.57	60.00	619	1,205
1,407	5.10	64.00	192	1,599
970	21.36	64.40	795	1,765
1,761	24.30	68.00	970	2,731
2,274	45.80	66.00	1,774	4,048
636	14.00	63.40	521	1,157
557	12.28	63.40	457	1,014
601	13.24	63.40	493	1,094
2,371	15.00	64.00	564	2,935
911	16.70	64.00	627	1,538
1,500	.20	64.00	8	1,508
6,086	72.80	63.40	2,709	8,795
0	47.40	40.00	1,113	1,113
1,063	23.43	63.40	872	1,174
3,445	75.89	63.40	2,824	6,269
645	14.21	63.40	529	1,174
404	8.91	63.40	332	736
2,921	48.95	64.49	1,853	4,774
245,225	5,526.75		204,372	449,597
36,307			25,485	61,792
281,532			229,857	511,389

LOCAL STREET MAINTENANCE

CHART 2A

COLUMN NUMBER / AGENCY	(1) LOCAL STREET PAVEMENT AREA IN 1,000 S.Y.	(2) SLURRY SEAL COST PER SQUARE YARD IN $	(3) COST PER APPLICATION IN 1,000 $	(4) TOTAL SLURRY SEAL COST IN 40 YEARS $1,000	(5) ANNUAL SLURRY SEAL MAINTENANCE COSTS IN 1,000 $
FORMULA (Circled #'s Refer to Column #'s)	FROM CHART 1		(1) x (2)	(3) x 6	(4) / 40
AGOURA HILLS	642	$0.60	$ 385	$ 2,311	$ 58
ALHAMBRA	2,979	.60	1,787	10,724	268
ARCADIA	2,371	.60	1,423	8,536	213
ARTESIA	484	.60	290	1,742	44
AVALON	92	.60	55	331	8
AZUSA	1,364	.60	818	4,910	123
BALDWIN PARK	1,597	.60	958	5,749	144
BELL	604	.60	362	2,174	54
BELLFLOWER	1,438	.60	863	5,177	129
BELL GARDENS	296	.60	178	1,066	27
BEVERLY HILLS	1,512	.60	907	5,443	136
BRADBURY	45	.60	27	162	4
BURBANK	4,273	.60	2,564	15,383	385
CARSON	4,000	.60	2,400	14,400	360
CERRITOS	1,989	.60	1,193	7,160	179
CLAREMONT	2,184	.60	1,310	7,862	197
COMMERCE	1,031	.60	619	3,712	93
COMPTON	2,348	.60	1,409	8,453	211
COVINA	1,880	.60	1,128	6,768	169
CUDAHY	282	.60	169	1,015	25
CULVER CITY	1,057	.60	634	3,805	95
DOWNEY	3,022	.60	1,813	10,879	272
DUARTE	919	.60	551	3,308	83
EL MONTE	2,891	.60	1,735	10,408	260
EL SEGUNDO	823	.60	494	2,963	74

GARDENA	1,330	.60	798	4,788	120
GLENDALE	4,839	.60	2,903	17,420	436
GLENDORA	2,935	.60	1,761	10,566	264
HAWAIIAN GARDENS	338	.60	203	1,217	30
HAWTHORNE	1,360	.60	816	4,896	122
HERMOSA BEACH	625	.60	375	2,250	56
HIDDEN HILLS	0	.60	0	0	0
HUNTINGTON PARK	923	.60	554	3,323	83
INDUSTRY	973	.60	584	3,503	88
INGLEWOOD	2,583	.60	1,550	9,299	232
IRWINDALE	317	.60	190	1,141	29
LA CANADA FLINTRIDGE	1,216	.60	730	4,378	109
LA HABRA HEIGHTS	751	.60	451	2,704	68
LAKEWOOD	3,468	.60	2,081	12,485	312
LA MIRADA	2,126	.60	1,276	7,654	191
LANCASTER	3,029	.60	1,817	10,904	273
LA PUENTE	1,183	.60	710	4,259	106
LA VERNE	1,479	.60	887	5,324	133
LAWNDALE	673	.60	404	2,423	61
LOMITA	471	.60	283	1,696	42
LONG BEACH	15,497	.60	9,298	55,789	1,395
LOS ANGELES	95,744	.60	57,446	344,678	8,617
LYNWOOD	1,223	.60	734	4,403	110
MANHATTAN BEACH	1,367	.60	820	4,921	123
MAYWOOD	551	.60	331	1,984	50
MONROVIA	1,760	.60	1,056	6,336	158
MONTEBELLO	1,724	.60	1,034	6,206	155
MONTEREY PARK	1,716	.60	1,030	6,178	154
NORWALK	3,301	.60	1,981	11,884	297
PALMDALE	1,514	.60	908	5,450	136
PALOS VERDES ESTATES	1,216	.60	730	4,378	109
PARAMOUNT	1,356	.60	814	4,882	122
PASADENA	3,471	.60	2,083	12,496	312
PICO RIVERA	2,145	.60	1,287	7,722	193
POMONA	6,709	.60	4,025	24,152	604
RANCHO PALOS VERDES	2,134	.60	1,280	7,682	192
REDONDO BEACH	1,359	.60	815	4,892	122
ROLLING HILLS	0	.60	0	0	0
ROLLING HILLS ESTATES	464	.60	278	1,670	42
ROSEMEAD	1,185	.60	711	4,266	107
SAN DIMAS	1,909	.60	1,145	6,872	172
SAN FERNANDO	586	.60	352	2,110	53

COLUMN NUMBER / AGENCY	(1) LOCAL STREET PAVEMENT AREA IN 1,000 S.Y.	(2) SLURRY SEAL COST PER SQUARE YARD IN $	(3) COST PER APPLICATION IN 1,000 $	(4) TOTAL SLURRY SEAL COST IN 40 YEARS 1,000 $	(5) ANNUAL SLURRY SEAL MAINTENANCE COSTS IN 1,000 $
FORMULA (Circled #'s Refer to Column #'s)	FROM CHART (1)		(1) x (2)	(3) x 6	(4) / 40
SAN GABRIEL	1,407	$ .60	$ 844	$ 5,065	$ 127
SAN MARINO	970	.60	582	3,492	87
SANTA FE SPRINGS	1,761	.60	1,057	6,340	158
SANTA MONICA	2,274	.60	1,364	8,186	205
SIERRA MADRE	636	.60	382	2,290	57
SIGNAL HILL	557	.60	334	2,005	50
SOUTH EL MONTE	601	.60	361	2,164	54
SOUTH GATE	2,371	.60	1,423	8,536	213
SOUTH PASADENA	911	.60	547	3,280	82
TEMPLE CITY	1,500	.60	900	5,400	135
TORRANCE	6,086	.60	3,652	21,910	548
VERNON	0	.60	0	0	0
WALNUT	1,063	.60	638	3,827	96
WEST COVINA	3,445	.60	2,067	12,402	310
WEST HOLLYWOOD	645	.60	387	2,322	58
WESTLAKE VILLAGE	404	.60	242	1,454	36
WHITTIER	2,921	.60	1,753	10,516	263
TOTAL 84 CITIES	245,225		147,135	882,810	22,070
LOS ANGELES COUNTY UNINCORPORATED	36,307	.60	21,784	130,705	3,268
TOTAL ALL AGENCIES	281,532		$168,919	$1,013,515	$25,338

MAJOR STREET MAINTENANCE

CHART 2B

COLUMN NUMBER	(1)	(2)	(3)	(4)	(5)
AGENCY	MAJOR STREET PAVEMENT AREA IN 1,000 S.Y.	THIN RESURFACE COST PER SQUARE YARD IN $	COST PER APPLICATION IN 1,000 $	TOTAL THIN RESURFACE COST IN 40 YEARS 1,000 $	ANNUAL MAJOR STREET THIN RESURFACE MAINTENANCE COSTS 1,000 $
FORMULA (Circled #'s Refer to Column #'s)	FROM CHART 1		(1) X (2)	(3) X 2	(4) / 40
AGOURA HILLS	253	$3.75	$ 949	$ 1,898	$ 47
ALHAMBRA	851	3.75	3,191	6,383	160
ARCADIA	1,281	3.75	4,804	9,608	240
ARTESIA	397	3.75	1,489	2,978	74
AVALON	0				0
AZUSA	571	3.75	2,141	4,283	107
BALDWIN PARK	1,310	3.75	4,913	9,825	246
BELL	495	3.75	1,856	3,713	93
BELLFLOWER	990	3.75	3,713	7,425	186
BELL GARDENS	1,220	3.75	4,575	9,150	229
BEVERLY HILLS	648	3.75	2,430	4,860	122
BRADBURY	45	3.75	169	338	8
BURBANK	1,450	3.75	5,438	10,875	272
CARSON	2,032	3.75	7,620	15,240	381
CERRITOS	1,631	3.75	6,116	12,233	306
CLAREMONT	1,331	3.75	4,991	9,983	250
COMMERCE	643	3.75	2,411	4,823	121
COMPTON	2,169	3.75	8,134	16,268	407
COVINA	1,052	3.75	3,945	7,890	197
CUDAHY	49	3.75	184	368	9
CULVER CITY	921	3.75	3,454	6,908	173
DOWNEY	2,477	3.75	9,289	18,578	464
DUARTE	282	3.75	1,058	2,115	53
EL MONTE	564	3.75	2,115	4,230	106
EL SEGUNDO	675	3.75	2,531	5,063	127

COLUMN NUMBER / AGENCY	(1) MAJOR STREET HIGHWAYS PAVEMENT AREA IN 1,000 S.Y.	(2) THIN RESURFACE COST PER SQUARE YARD IN $	(3) COST PER APPLICATION IN 1,000 $	(4) TOTAL THIN RESURFACE COST IN 40 YEARS 1,000 $	(5) ANNUAL MAJOR STREET THIN RESURFACE MAINTENANCE COSTS 1,000 $
FORMULA (Circled #'s Refer to Column #'s)	FROM CHART 1		(1) X (2)	(3) X 2	(4) / 40
GARDENA	$ 1,090	$ 3.75	$ 4,088	$ 8,175	$ 204
GLENDALE	2,993	3.75	11,224	22,448	561
GLENDORA	338	3.75	1,268	2,535	63
HAWAIIAN GARDENS	116	3.75	435	870	22
HAWTHORNE	835	3.75	3,131	6,263	157
HERMOSA BEACH	349	3.75	1,309	2,618	65
HIDDEN HILLS	0				0
HUNTINGTON PARK	811	3.75	3,041	6,083	152
INDUSTRY	776	3.75	2,910	5,820	146
INGLEWOOD	1,967	3.75	7,376	14,753	369
IRWINDALE	503	3.75	1,886	3,773	94
LA CANADA FLINTRIDGE	153	3.75	574	1,148	29
LA HABRA HEIGHTS	169	3.75	634	1,268	32
LAKEWOOD	1,236	3.75	4,635	9,270	232
LA MIRADA	604	3.75	2,265	4,530	113
LANCASTER	4,587	3.75	17,201	34,403	860
LA PUENTE	496	3.75	1,860	3,720	93
LA VERNE	616	3.75	2,310	4,620	116
LAWNDALE	552	3.75	2,070	4,140	104
LOMITA	210	3.75	788	1,575	39
LONG BEACH	7,096	3.75	26,610	53,220	1,331
LOS ANGELES	117,791	3.75	441,716	883,433	22,086
LYNWOOD	1,386	3.75	5,198	10,395	260
MANHATTAN BEACH	338	3.75	1,268	2,535	63
MAYWOOD	125	3.75	469	938	23
MONROVIA	332	3.75	1,245	2,490	62
MONTEBELLO	1,724	3.75	6,465	12,930	323
MONTEREY PARK	1,407	3.75	5,276	10,553	264
NORWALK	1,155	3.75	4,331	8,663	217
PALMDALE	2,297	3.75	8,614	17,228	431

PALOS VERDES ESTATES	997	3.75	3,739	7,478	187
PARAMOUNT	277	3.75	1,039	2,078	52
PASADENA	3,575	3.75	13,406	26,813	670
PICO RIVERA	518	3.75	1,943	3,885	97
POMONA	1,597	3.75	5,989	11,978	299
RANCHO PALOS VERDES	1,195	3.75	4,481	8,963	224
REDONDO BEACH	1,337	3.75	5,014	10,028	251
ROLLING HILLS					0
ROLLING HILLS ESTATES	380	3.75	1,425	2,850	71
ROSEMEAD	972	3.75	3,645	7,290	182
SAN DIMAS	883	3.75	3,311	6,623	166
SAN FERNANDO	619	3.75	2,321	4,643	116
SAN GABRIEL	192	3.75	720	1,440	36
SAN MARINO	795	3.75	2,981	5,963	149
SANTA FE SPRINGS	970	3.75	3,638	7,275	182
SANTA MONICA	1,774	3.75	6,653	13,305	333
SIERRA MADRE	521	3.75	1,954	3,908	98
SIGNAL HILL	457	3.75	1,714	3,428	86
SOUTH EL MONTE	493	3.75	1,849	3,698	92
SOUTH GATE	564	3.75	2,115	4,230	106
SOUTH PASADENA	627	3.75	2,351	4,703	118
TEMPLE CITY	8	3.75	30	60	2
TORRANCE	2,709	3.75	10,159	20,318	508
VERNON	1,113	3.75	4,174	8,348	209
WALNUT	872	3.75	3,270	6,540	164
WEST COVINA	2,824	3.75	10,590	21,180	530
WEST HOLLYWOOD	529	3.75	1,984	3,968	99
WESTLAKE VILLAGE	332	3.75	1,245	2,490	62
WHITTIER	1,853	3.75	6,949	13,898	347
TOTAL 84 CITIES	204,373		766,395	1,532,790	38,325
LOS ANGELES COUNTY UNINCORPORATED	25,485	3.75	95,569	191,138	4,778
TOTAL ALL AGENCIES	$229,858		$861,964	$1,723,928	$43,103

The cities of Hidden Hills and Rolling Hills are not included in these calculations because they possess only private streets which are not maintained with public funds.

LOCAL STREET REHABILITATION

CHART 3A

AGENCY	COLUMN NUMBER (1) LOCAL STREETS PAVEMENT AREA IN $1,000 SQ. YDS.	(2) LOCAL STREETS REHABILITATION UNIT COST IN $	(3) COST PER REHABILITATION EVERY 40 YEARS IN $1,000	(4) ANNUAL LOCAL STREET REHABILITATION COST IN $1,000	(5) ANNUAL LOCAL STREET SLURRY SEAL MAINTENANCE COST IN $1,000	(6) TOTAL ANNUAL LOCAL STREET MAINTENANCE COST IN $1,000
FORMULA (Circled #'s Refer to Column #'s)	FROM CHART 1		(1) X (2)	(3) /40	FROM CHART 2A	(4) + (5)
AGOURA HILLS	642	$ 6.30	$ 4,045	$ 101	$ 58	$ 159
ALHAMBRA	2,979	6.30	18,768	469	268	737
ARCADIA	2,371	6.30	14,937	373	213	586
ARTESIA	484	6.30	3,049	76	44	120
AVALON	92	6.30	580	14	8	22
AZUSA	1,364	6.30	8,593	215	123	338
BALDWIN PARK	1,597	6.30	10,061	252	144	396
BELL	604	6.30	3,805	95	54	149
BELLFLOWER	1,438	6.30	9,059	226	129	355
BELL GARDENS	296	6.30	1,865	47	27	74
BEVERLY HILLS	1,512	6.30	9,526	238	136	374
BRADBURY	45	6.30	284	7	4	11
BURBANK	4,273	6.30	26,920	673	385	1,058
CARSON	4,000	6.30	25,200	630	360	990
CERRITOS	1,989	6.30	12,531	313	179	492
CLAREMONT	2,184	6.30	13,759	344	197	541
COMMERCE	1,031	6.30	6,495	162	93	255
COMPTON	2,348	6.30	14,792	370	211	581
COVINA	1,880	6.30	11,844	296	169	465
CUDAHY	282	6.30	1,777	44	25	69
CULVER CITY	1,057	6.30	6,659	166	95	261
DOWNEY	3,022	6.30	19,039	476	272	748
DUARTE	919	6.30	5,790	145	83	228

EL MONTE	2,891	6.30	18,213	455	260	715
EL SEGUNDO	823	6.30	5,185	130	74	204
GARDENA	1,330	6.30	8,379	209	120	329
GLENDALE	4,839	6.30	30,486	762	436	1,198
GLENDORA	2,935	6.30	18,491	462	264	726
HAWAIIAN GARDENS	338	6.30	2,129	53	30	83
HAWTHORNE	1,360	6.30	8,568	214	122	336
HERMOSA BEACH	625	6.30	3,938	98	56	154
HIDDEN HILLS	0	6.30	0	0	0	0
HUNTINGTON PARK	923	6.30	5,815	145	83	228
INDUSTRY	973	6.30	6,130	153	88	241
INGLEWOOD	2,583	6.30	16,273	407	232	639
IRWINDALE	317	6.30	1,997	50	29	79
LA CANADA FLINTRIDGE	1,216	6.30	7,661	192	109	301
LA HABRA HEIGHTS	751	6.30	4,731	118	68	186
LAKEWOOD	3,468	6.30	21,848	546	312	858
LA MIRADA	2,126	6.30	13,394	335	191	526
LANCASTER	3,029	6.30	19,083	447	273	750
LA PUENTE	1,183	6.30	7,453	186	106	292
LA VERNE	1,479	6.30	9,318	233	133	366
LAWNDALE	673	6.30	4,240	106	61	167
LOMITA	471	6.30	2,967	74	42	116
LONG BEACH	15,497	6.30	97,631	2,441	1,395	3,836
LOS ANGELES	95,744	6.30	603,187	15,080	8,617	23,697
LYNWOOD	1,223	6.30	7,705	193	110	303
MANHATTAN BEACH	1,367	6.30	8,612	215	123	338
MAYWOOD	551	6.30	3,471	87	50	137
MONROVIA	1,760	6.30	11,088	277	158	435
MONTEBELLO	1,724	6.30	10,861	272	155	427
MONTEREY PARK	1,716	6.30	10,811	270	154	424
NORWALK	3,301	6.30	20,796	520	297	817
PALMDALE	1,514	6.30	9,538	238	136	374
PALOS VERDES ESTATES	1,216	6.30	7,661	192	109	301
PARAMOUNT	1,356	6.30	8,543	214	122	336
PASADENA	3,471	6.30	21,867	547	312	859
PICO RIVERA	2,145	6.30	13,514	338	193	531
POMONA	6,709	6.30	42,267	1,057	604	1,661
RANCHO PALOS VERDES	2,134	6.30	13,444	336	192	528
REDONDO BEACH	1,359	6.30	8,562	214	122	336
ROLLING HILLS	0	6.30	0	0	0	0
ROLLING HILLS ESTATES	464	6.30	2,923	73	42	115
ROSEMEAD	1,185	6.30	7,466	187	107	294
SAN DIMAS	1,909	6.30	12,027	301	172	473

COLUMN NUMBER / AGENCY	(1) LOCAL STREETS PAVEMENT AREA IN $1,000 SQ. YDS.	(2) LOCAL STREETS REHABIL-ITATION UNIT COST IN $	(3) COST PER REHABIL-ITATION EVERY 40 YEARS IN $1,000	(4) ANNUAL LOCAL STREET REHABIL-ITATION COST IN $1,000	(5) ANNUAL LOCAL STREET SLURRY SEAL MAINTENANCE COST IN $1,000	(6) TOTAL ANNUAL LOCAL STREET MAINTENANCE COST IN $1,000
FORMULA (Circled #'s Refer to Column #'s)	FROM CHART 1		(1) X (2)	(3)/40	FROM CHART 2A	(4) + (5)
SAN FERNANDO	586	$ 6.30	$ 3,692	$ 92	$ 53	$ 146
SAN GABRIEL	1,407	6.30	8,864	222	127	349
SAN MARINO	970	6.30	6,111	153	87	240
SANTA FE SPRINGS	1,761	6.30	11,094	177	158	435
SANTA MONICA	2,274	6.30	14,326	358	205	563
SIERRA MADRE	636	6.30	4,007	100	57	158
SIGNAL HILL	557	6.30	3,509	88	50	138
SOUTH EL MONTE	601	6.30	3,786	95	54	149
SOUTH GATE	2,371	6.30	14,937	373	213	586
SOUTH PASADENA	911	6.30	5,739	143	82	225
TEMPLE CITY	1,500	6.30	9,450	236	135	371
TORRANCE	6,086	6.30	38,342	959	548	1,507
VERNON	0	6.30	0	0	0	0
WALNUT	1,063	6.30	6,697	167	96	263
WEST COVINA	3,445	6.30	21,704	543	310	853
WEST HOLLYWOOD	645	6.30	4,064	102	58	160
WESTLAKE VILLAGE	404	6.30	2,545	64	36	100
WHITTIER	2,921	6.30	18,402	460	263	723
TOTAL 84 CITIES	245,225		1,544,918	38,623	22,068	60,691
LOS ANGELES COUNTY	36,307	6.30	228,734	5,718	3,268	8,986
TOTAL ALL AGENCIES	281,532		$ 1,773,652	$44,341	$25,336	$69,677

The cities of Hidden Hills and Rolling Hills are not included in these calculations because they possess only private streets which are not maintained with public funds.

MAJOR STREET REHABILITATION

CHART 3B

AGENCY	(1) MAJOR STREET PAVEMENT AREA IN $1,000 SQ. YDS.	(2) MAJOR STREET REHABILITATION UNIT COST IN $	(3) COST OF REHABILITATION IN $1,000	(4) ANNUAL MAJOR STREET REHABILITATION COSTS IN $1,000	(5) ANNUAL MAJOR STREET THIN RESURFACE MAINTENANCE COST IN $1,000	(6) TOTAL ANNUAL MAJOR STREET MAINTENANCE COST IN $1,000
FORMULA (Circled #'s Refer to Column #'s)	FROM CHART 1		(1) X (2)	(3)/40	FROM CHART 2B	(4) + (5)
AGOURA HILLS	253	$14.65	$ 3,706	$ 93	$ 47	$ 140
ALHAMBRA	851	14.65	12,467	312	160	472
ARCADIA	1,281	14.65	18,767	469	240	709
ARTESIA	397	14.65	5,816	145	74	219
AVALON	0	14.65	0	0	0	0
AZUSA	571	14.65	8,365	209	107	316
BALDWIN PARK	1,310	14.65	19,192	480	246	726
BELL	495	14.65	7,252	181	93	274
BELLFLOWER	990	14.65	14,504	363	186	549
BELL GARDENS	1,220	14.65	17,873	447	229	676
BEVERLY HILLS	648	14.65	9,493	237	122	359
BRADBURY	45	14.65	659	16	8	24
BURBANK	1,450	14.65	21,243	531	272	803
CARSON	2,032	14.65	29,769	744	381	1,125
CERRITOS	1,631	14.65	23,894	597	306	903
CLAREMONT	1,331	14.65	19,499	487	250	737
COMMERCE	643	14.65	9,420	235	121	356
COMPTON	2,169	14.65	31,776	794	407	1,201
COVINA	1,052	14.65	15,412	385	197	582
CUDAHY	49	14.65	718	18	9	27
CULVER CITY	921	14.65	13,493	337	173	510
DOWNEY	2,477	14.65	36,288	907	464	1,371
DUARTE	282	14.65	4,131	103	53	156
EL MONTE	564	14.65	8,263	207	106	313
EL SEGUNDO	675	14.65	9,889	247	127	374
GARDENA	1,090	14.65	15,969	399	205	604

COLUMN NUMBER	(1)	(2)	(3)	(4)	(5)	(6)
AGENCY	MAJOR STREET PAVEMENT AREA IN $1,000 SQ. YDS.	MAJOR STREET REHABIL-ITATION UNIT COST IN $	COST OF REHABIL-ITATION IN $1,000	ANNUAL MAJOR STREET REHABIL-ITATION COST IN $1,000	ANNUAL MAJOR STREET THIN RESURFACE MAINTENANCE COST IN $1,000	TOTAL ANNUAL MAJOR STREET MAINTENANCE COST IN $1,000
FORMULA (Circled #'s Refer to Column #'s)	FROM CHART 1		(1) X (2)	(3)/40	FROM CHART 2B	(4) + (5)
GLENDALE	2,993	$ 14.65	$ 43,847	$ 1,096	$ 561	$ 1,657
GLENDORA	338	14.65	4,952	124	63	187
HAWAIIAN GARDENS	116	14.65	1,699	42	22	64
HAWTHORNE	835	14.65	12,233	306	157	463
HERMOSA BEACH	349	14.65	5,113	128	65	193
HIDDEN HILLS	0	14.65	0	0	0	0
HUNTINGTON PARK	811	14.65	11,881	297	152	449
INDUSTRY	776	14.65	11,368	284	146	430
INGLEWOOD	1,967	14.65	28,817	720	369	1,089
IRWINDALE	503	14.65	7,369	184	94	278
LA CANADA FLINTRIDGE	153	14.65	2,241	56	29	85
LA HABRA HEIGHTS	169	14.65	2.476	62	32	94
LAKEWOOD	1,236	14.65	18,107	453	232	685
LA MIRADA	604	14.65	8,849	221	113	334
LANCASTER	4,587	14.65	67,200	1,680	860	2,540
LA PUENTE	496	14.65	7,266	182	93	275
LA VERNE	616	14.65	9,024	226	116	342
LAWNDALE	552	14.65	8,087	202	104	306
LOMITA	210	14.65	3,077	77	39	116
LONG BEACH	7,096	14.65	103,956	2,599	1,331	3,930
LOS ANGELES	117,791	14.65	1,725,638	43,141	22,086	65,227
LYNWOOD	1,386	14.65	20,305	508	260	768
MANHATTAN BEACH	338	14.65	4,952	124	63	187
MAYWOOD	125	14.65	1,831	46	23	69
MONROVIA	332	14.65	4,864	122	62	184
MONTEBELLO	1,724	14.65	25,257	631	323	954
MONTEREY PARK	1,407	14.65	20,613	515	264	779
NORWALK	1,155	14.65	16,921	423	217	640
PALMDALE	2,297	14.65	33,651	841	431	1,272
PALOS VERDES ESTATES	997	14.65	14,606	365	187	552

PARAMOUNT	277	14.65	4,058	101	52	153
PASADENA	3,575	14.65	52,374	1,309	670	1,979
PICO RIVERA	518	14.65	7,589	190	97	287
POMONA	1,597	14.65	23,396	585	299	884
RANCHO PALOS VERDES	1,195	14.65	17,507	438	224	662
REDONDO BEACH	1,337	14.65	19,587	490	251	741
ROLLING HILLS	0	14.65	0	0	0	0
ROLLING HILLS ESTATES	380	14.65	5,567	139	71	210
ROSEMEAD	972	14.65	14,240	356	182	538
SAN DIMAS	883	14.65	12,936	323	166	489
SAN FERNANDO	619	14.65	9,068	227	116	343
SAN GABRIEL	192	14.65	2,813	70	36	106
SAN MARINO	795	14.65	11,647	291	149	440
SANTA FE SPRINGS	970	14.65	14,211	355	182	537
SANTA MONICA	1,774	14.65	25,989	650	333	983
SIERRA MADRE	521	14.65	7,633	191	98	289
SIGNAL HILL	457	14.65	6,695	167	86	253
SOUTH EL MONTE	493	14.65	7,222	181	92	273
SOUTH GATE	564	14.65	8,263	207	106	313
SOUTH PASADENA	627	14.65	9,186	230	118	348
TEMPLE CITY	8	14.65	117	3	2	5
TORRANCE	2,709	14.65	39,687	992	508	1,500
VERNON	1,113	14.65	16,305	408	209	617
WALNUT	872	14.65	12,775	319	164	483
WEST COVINA	2,824	14.65	41,372	1,034	530	1,564
WEST HOLLYWOOD	529	14.65	7,750	194	99	293
WESTLAKE VILLAGE	332	14.65	4,864	122	62	184
WHITTIER	1,853	14.65	27,146	679	347	1,026
TOTAL 84 CITIES	204,373		2,994,049	74,852	38,326	113,175
LOS ANGELES COUNTY	25,485	$14.65	373,355	9,334	4,778	14,112
TOTAL ALL AGENCIES	229,858		$3,367,405	$84,183	$43,104	$127,287

The cities of Hidden Hills and Rolling Hills are not included in these calculations because they possess only private streets which are not maintained with public funds.

TOTAL MAINTENANCE NEED AND SHORTFALL

CHART 4

COLUMN NUMBER / AGENCY	(1) ANNUAL MAJOR STREET MAINTENANCE COSTS IN 1,000 $	(2) ANNUAL LOCAL STREET MAINTENANCE COSTS IN 1,000 $	(3) TOTAL ANNUAL MAINTENANCE COSTS IN 1,000 $	(4) REPORTED ANNUAL MAINTENANCE EXPENDITURES IN 1,000 $	(5) ANNUAL MAINTENANCE SHORTFALL IN 1,000 $
FORMULA (Circled #'s Refer to Column #'s)	FROM CHART 3B	FROM CHART 3A	(1) + (2)		(3) - (4)
AGOURA HILLS	$ 140	$ 159	$ 299	$ 500	$ 299
ALHAMBRA	472	737	1,209	1,209	0
ARCADIA	709	586	1,295	497	798
ARTESIA	219	120	339	156	183
AVALON	0	22	22	4	18
AZUSA	316	338	654	165	489
BALDWIN PARK	726	396	1,122	314	808
BELL	274	149	423	68	355
BELLFLOWER	549	355	904	127	777
BELL GARDENS	676	74	750	255	495
BEVERLY HILLS	359	374	733	535	198
BRADBURY	24	11	35	0	35
BURBANK	803	1,058	1,861	957	904
CARSON	1,125	990	2,115	650	1,465
CERRITOS	903	492	1,395	243	1,152
CLAREMONT	737	541	1,278	193	1,085
COMMERCE	356	255	611	315	296
COMPTON	1,201	581	1,782	829	953
COVINA	582	465	1,047	128	919
CUDAHY	27	69	96	67	29
CULVER CITY	510	261	771	771	0
DOWNEY	1,371	748	2,119	631	1,488
DUARTE	156	228	384	3	381

EL MONTE	312	715	1,027	814	213
EL SEGUNDO	374	204	578	397	181
GARDENA	604	329	933	728	205
GLENDALE	1,657	1,198	2,855	1,838	1,017
GLENDORA	187	726	913	336	577
HAWAIIAN GARDENS	64	83	147	6	141
HAWTHORNE	463	336	799	434	365
HERMOSA BEACH	193	154	347	58	289
HIDDEN HILLS*			0		
HUNTINGTON PARK	449	228	677	143	534
INDUSTRY	430	241	671	120	551
INGLEWOOD	1,089	639	1,728	715	1,013
IRWINDALE	278	79	357	260	97
LA CANADA FLINTRIDGE	85	301	386	189	197
LA HABRA HEIGHTS	94	186	280	23	257
LAKEWOOD	685	858	1,543	568	975
LA MIRADA	334	526	860	333	527
LANCASTER	2,540	750	3,290	544	2,746
LA PUENTE	275	292	567	46	521
LA VERNE	342	366	708	388	320
LAWNDALE	306	167	473	17	456
LOMITA	116	116	232	100	132
LONG BEACH	3,930	3,836	7,766	4,200	3,566
LOS ANGELES CITY	65,227	23,697	88,924	32,384	56,540
LYNWOOD	768	303	1,071	222	849
MANHATTAN BEACH	187	338	525	136	389
MAYWOOD	69	137	206	73	133
MONROVIA	184	435	619	154	465
MONTEBELLO	954	427	1,381	1,095	286
MONTEREY PARK	779	424	1,203	394	809
NORWALK	640	817	1,457	1,457	0
PALMDALE	1,272	374	1,646	96	1,550
PALOS VERDES ESTATES	552	301	853	256	597
PARAMOUNT	153	336	489	150	339
PASADENA	1,979	859	2,838	2,095	743
PICO RIVERA	287	531	818	22	796
POMONA	884	1,661	2,545	967	1,578
RANCHO PALOS VERDES	662	528	1,190	397	793
REDONDO BEACH	741	336	1,077	356	721
ROLLING HILLS*			0		0

COLUMN NUMBER	(1)	(2)	(3)	(4)	(5)
AGENCY	ANNUAL MAJOR STREET MAINTENANCE COSTS IN 1,000 $	ANNUAL LOCAL STREET MAINTENANCE COSTS IN 1,000 $	TOTAL ANNUAL MAINTENANCE COSTS IN 1,000 $	REPORTED ANNUAL MAINTENANCE EXPENDITURES IN 1,000 $	ANNUAL MAINTENANCE SHORTFALL IN 1,000 $
FORMULA (Circled #'s (Refer to Column #'s)	FROM CHART 3B	FROM CHART 3A	(1) + (2)		(3) - (4)
ROLLING HILLS ESTATES	$ 210	$ 115	$ 325	$ 74	$ 251
ROSEMEAD	538	294	832	832	0
SAN DIMAS	489	473	962	241	721
SAN FERNANDO	343	146	489	306	183
SAN GABRIEL	106	349	455	149	306
SAN MARINO	440	240	680	172	508
SANTA FE SPRINGS	537	435	972	600	372
SANTA MONICA	983	563	1,546	1,124	422
SIERRA MADRE	289	158	447	0	447
SIGNAL HILL	253	138	391	195	196
SOUTH EL MONTE	273	149	422	159	263
SOUTH GATE	313	586	899	456	443
SOUTH PASADENA	348	225	573	65	508
TEMPLE CITY	5	371	376	217	159
TORRANCE	1,500	1,507	3,007	1,603	1,404
VERNON	617	0	617	567	50
WALNUT	483	263	746	46	700
WEST COVINA	1,564	853	2,417	762	1,655
WEST HOLLYWOOD	293	160	453	470	0
WESTLAKE VILLAGE	184	100	284	384	0
WHITTIER	1,026	723	1,749	817	932

TOTAL 84 CITIES	113,174	60,691	173,865	70,367	103,816
LOS ANGELES COUNTY UNINCORPORATED AREA	14,112	8,986	23,098	14,000	9,098
TOTAL ALL AGENCIES	$129,286	$69,677	$196,963	$84,367	$112,914

*The cities of Hidden Hills and Rolling Hills are not included in these calculations because they possess only private streets which are not maintained with public funds.

**Six cities show 0 pavement maintenance shortfall for this reporting period.

GLOSSARY

GLOSSARY

Bypass Lane - One of the traffic lanes of a metered freeway on-ramp reserved for buses and carpools, to bypass the ramp stop light when entering the freeway.

California Department of Transportation (Caltrans) - The state agency responsible for construction and operation of the California state highway and freeway system.

California Transportation Commission - The state agency created in 1977 to program federal and state transportation funds.

Call Boxes - Telephones installed along the shoulder of freeways which stranded motorists may use to call for help. In Los Angeles, the phones are connected directly to a California Highway Patrol dispatching center.

Carpool - At least two people travelling in a car, van or bus.

Carpool Lanes - Lanes on a highway or freeway which are restricted for use by vehicles carrying two or more passengers.

Commuter Computer - A publicly-funded agency officially known as Commuter Transportation Services Inc. It provides matching services for people wanting to carpool (or vanpool) and consults with industry to develop transportation system management plans.

County Minimums - A provision of Senate Bill 215, enacted in 1981, that requires each county in the state to receive at least 70 percent of its proportional share of funds programmed in the TIP.

Fiber Optics - Fine glass fibers which transmit light impulses carrying information between computers or telephones.

Flex-time - Flexible work schedule, where the employee agrees to work the standard amount of time on a non-standard schedule. There are many different ways to create a flex-time system. Changing operating hours to other than 8:00 a.m. to 5:00 p.m. and working 80 hours every two weeks with one "work-day" off are among the most common methods.

FM Sideband Radio - Transmission of information on FM radio using a portion of the buffer between normal channels. Currently stock market information is transmitted using the FM sideband; it is envisioned that congestion information could be transmitted to drivers in coded form using FM sideband.

Gas tax - The nine cent per gallon tax paid on automobile and diesel fuel. Also known as the fuel tax. Of the total eighteen cent tax, nine cents is paid to the state and nine cents is paid to the Federal government. The revenues from the gas tax are used to build and maintain freeways, streets and rail transit projects.

Cars are counted by loop detectors

Local street - A street which typically serves residential areas and does not have lane markings or traffic signals.

Loop detector - Metal wire loops embedded in the concrete of a street or freeway that can sense when a vehicle is passing over it. Information from the loop detector may be used by a computer to control traffic signals.

Los Angeles - The geographic area commonly known as Los Angeles County consists of 84 cities (including the City of Los Angeles) and the unincorporated areas under the jurisdiction of the Board of Supervisors.

Los Angeles County Transportation Commission (LACTC) - The authoring agency for this report. The LACTC was created by the state legislature in 1976 to coordinate short-range transportation funding and planning. With the consent of the voters, the Commission has imposed a 1/2 percent sales tax to build a rail transit system and improve bus transit service. The LACTC is responsible for overseeing street and freeway funds in Los Angeles.

Major street - A street which typically carries high volumes of traffic, serves

commercial areas, and has lane markings and traffic signals. Engineers call major streets arterials and secondary streets. Major streets vary in width from two to eight lanes.

Mobility - The ability to move quickly from one place to another.

Park-and-Ride lot - A parking lot where commuters may park their cars and either catch a bus or rail transit line to work or share a ride with another commuter in a private automobile. Caltrans currently operates many free park-and-ride lots throughout the county.

Peak Hour or Peak Period - The time (currently up to four or five hours) in the morning and afternoon/ evening of a typical weekday during which the greatest number of people are using the freeways and streets. Peak period speeds listed in this report are the average speeds for days when there are no traffic accidents. According to Caltrans, 50 percent of all congestion is caused by traffic accidents, thus making the actual speeds slower than those projected.

Proposition A - In Los Angeles County, a 1/2 percent increase in sales tax approved by the voters in 1980 for public transit. Of the Proposition A revenues, 25 percent is returned to local jurisdictions for local transit services, 35 percent is used by LACTC for development of countywide rail transit system, and 40 percent is allocated at the discretion of the LACTC.

Real-time - Up-to-the-minute.

Regional Transportation Plan - A 20-year plan for improved transportation for the Counties of Los Angeles, Orange, Ventura, Imperial, Riverside and San Bernardino, prepared by the Southern California Association of Governments.

Ridesharing - More than one person sharing in the use of the vehicle to make a trip.

Right(s)-of-Way - Land or rights to land used or held for transit or publicly dedicated streets and roads.

Roadside Radio - Radio broadcast from an emergency vehicle for a short distance. Used to inform motorists of congestion.

SAFE (Service Authority for Freeway Emergencies) - A legislatively created authority with the power to impose a one dollar per year per vehicle registration fee. Revenues from this fee would be used to fund and improve call boxes.

Silent Radio - Changeable information visually displayed on a video monitor or screen, currently used in banks. It is proposed that similar systems be used to announce traffic conditions in parking garages, shopping centers or sporting events.

"Smart" Streets - A computerized system of traffic signals that changes the signal timing to decrease congestion. The "Smart" street system is currently being used by the City of Los Angeles in the USC-Coliseum area.

Soundwalls reduce freeway noise.

Soundwalls - A wall constructed along the edge of a freeway to reduce noise in the surrounding neighborhood.

Southern California Association of Governments - A planning agency for the Southern California region, including the counties of Ventura, Los Angeles, San Bernardino, Riverside, Orange and Imperial.

Southern California Rapid Transit District (SCRTD) - Operator of the regional public transit system with the major portion of its service in Los Angeles County, but with lines extending into other southern California counties.

Telecommuting - Working at home or a work station near home and communicating with your office via a telephone line and computer terminal.

Transportation Improvement Program (TIP) - A list of highway projects which are funded for construction over the next five years. The TIP is updated annually and must be approved by the LACTC, SCAG, Caltrans and the CTC.

Transportation Management Association - A private, non-profit organization set up by developers and large employers to provide transportation service in areas where public service is inadequate or unessential Members are assessed an annual fee.

(Continued from inside front cover)

public transit services. Therefore, the LACTC is working to make sure that adequate alternative transportation is provided in an efficient, coordinated manner to expand the transportation options of these citizens.

Bikeways

Los Angeles is developing an extensive bikeway system. When complete, the system will include 1,500 miles of on-street bike lanes and off-street bikeways linking residential areas, recreational areas, and many employment centers.

Information: The Key to Intelligent Choice

Several key recommendations in this report relate to improved information so that intelligent choices can be made.

The LACTC is also pursuing other programs to improve information flow:

- Providing people with information about how they can carpool or vanpool to work.
- Requiring that marketing programs developed by the various transit systems tell riders how they can use neighboring transit systems as well as the regional system.
- Developing a pilot telephone information project to see if in a given geographic area a person can get information about **all** local transit systems by dialing **one** number (or by getting a read-out of schedule information on their home TV screen).

LACTC's Goal: Improved Mobility

The Los Angeles County Transportation Commission's transportation program is ambitious and diverse. Each "piece" of the system is designed to serve a particular travel need. For example, this streets and highways plan assumes that the LACTC will attain its goal of having 75 miles of rail transit in operation or under construction by the year 2000. If we fail to complete the initial portions of the rail system by the Year 2000, freeway congestion will be even worse than as described in the report.

This transportation program will result in maximizing mobility and supporting the varied lifestyles that we in Southern California cherish and jealously guard.

LACTC

LOS ANGELES COUNTY TRANSPORTATION COMMISSION