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EXECUTIVE  
SUMMARY OF

TRANSIT  
ALTERNATIVES  
IN THE  
LOS ANGELES  
REGIONAL CORE

**For** Not To Be Taken  
reference From the Room

Executive Summary of  
the Alternatives Analysis/  
Environmental Impact  
Statement/Report  
on Transit Improvement  
Alternatives in the Los  
Angeles Regional Core.

SOUTHERN CALIFORNIA RAPID  
TRANSIT DISTRICT

NOTE: THE PREPARATION OF THE  
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PART THROUGH A GRANT FROM THE  
UNITED STATES DEPARTMENT  
OF TRANSPORTATION, URBAN MASS  
TRANSPORTATION ADMINISTRATION,  
UNDER THE URBAN MASS  
TRANSPORTATION ACT OF 1964 AS  
AMENDED.



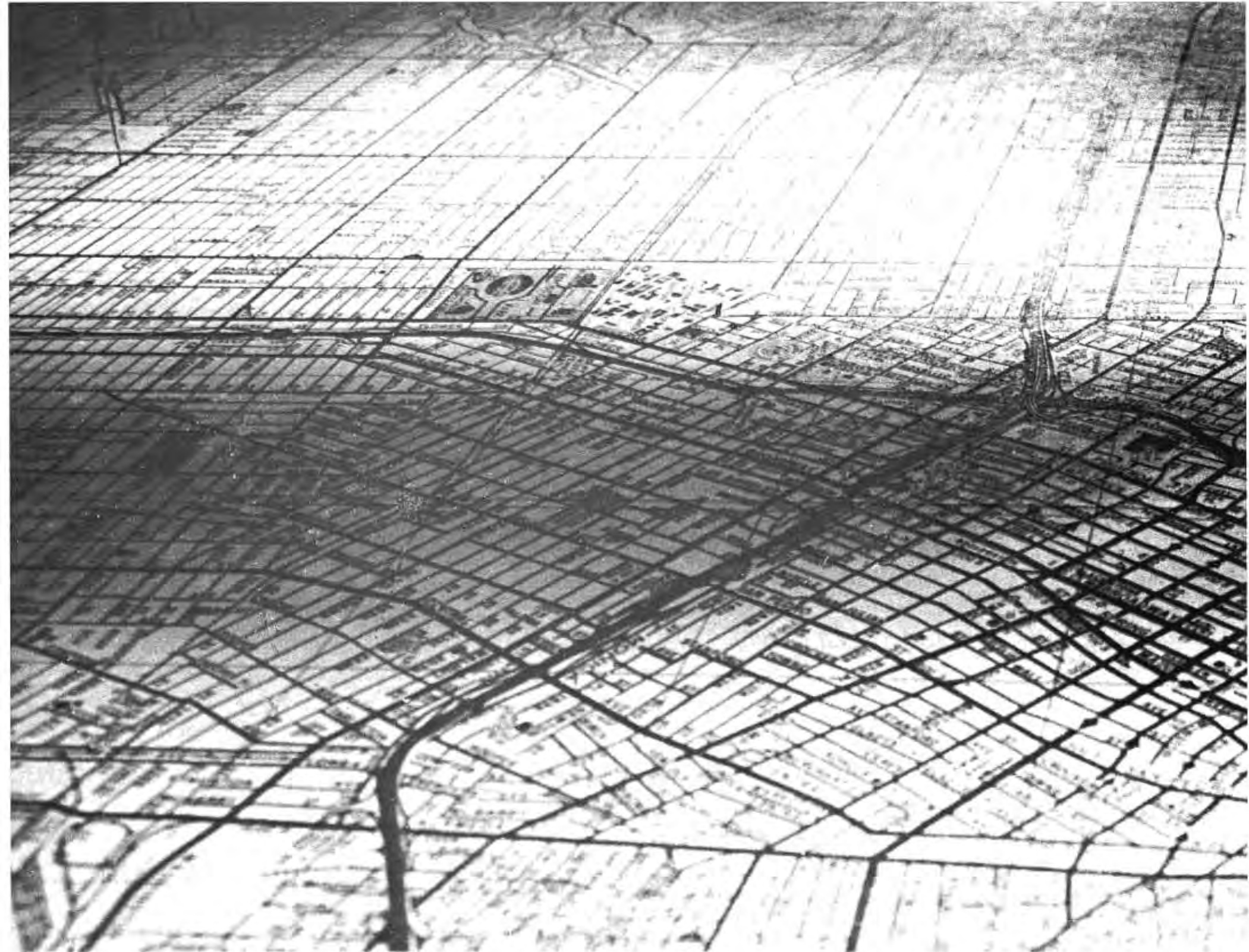
A triangular, 55-square-mile piece of the metropolitan center of Los Angeles may hold the key to a brighter future for the entire region.

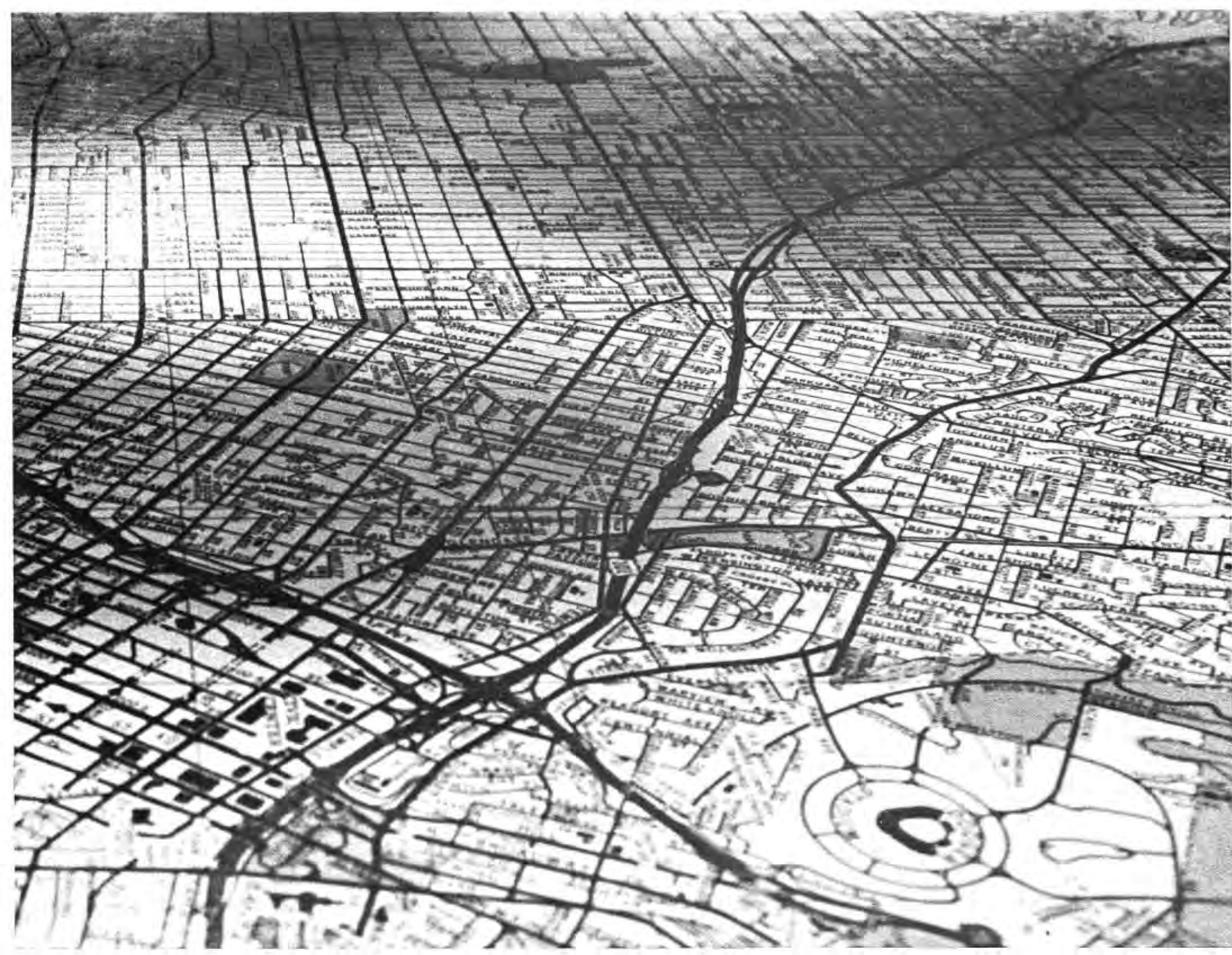
The transportation corridor through this area is the most densely populated and busiest on the West Coast. No freeways exist in and none are planned to serve this corridor. It suffers from severe traffic congestion. The local bus system is operating under overcrowded conditions and this situation is steadily worsening.

The area, termed the Regional Core, was chosen for study as one element of the four-point Regional Transportation Development Program designed

to solve the increasing transportation problems of the Los Angeles Metropolitan area. Officially called a Transit Alternatives Analysis and Environmental Impact Evaluation, it has produced some alternative solutions to the city's approaching transportation crisis, and which would benefit its citizens with a better way of life.

All directly concerned state and local governmental agencies have been involved in the development of this report. Procedures and results have been reported to and discussed with them every step of the way. It has been a cooperative effort.





## rail rapid transit / bus alternatives

**defining the alternatives** A total of 11 alternative routes and systems were evaluated in the study. Five of them are “Rail Rapid Transit/Bus” systems. Each is made up of a primary rail rapid transit line and facilities supplemented by a network of local and feeder buses.

Five others are “All-Bus” alternatives. They consist of express and local bus lines operating under several different conditions.

An eleventh — called the “Status Quo” alternative — represents no improvement to the present transit system. It is used as a base for comparative evaluations.

The alternatives described are conceptual in nature and the exact locations of lines and stations for whichever alternative is selected may be subject to refinement.



### I. CENTRAL BUSINESS DISTRICT-WILSHIRE-LA BREA-HOLLYWOOD-NORTH HOLLYWOOD

A 16-mile route providing a high level of service between the major centers of the Regional Core.



### II. CENTRAL BUSINESS DISTRICT-WILSHIRE-FAIRFAX-HOLLYWOOD-NORTH HOLLYWOOD

An 18-mile variation of Alternative I, with the north-south segment farther west along Fairfax Avenue.



**III. CENTRAL BUSINESS DISTRICT-  
WILSHIRE-VERMONT-HOLLYWOOD-  
NORTH HOLLYWOOD**

A 15-mile alternative serving the eastern part of the Regional Core to a much greater extent than I and II, but serving the Wilshire District less.



**IV. CENTRAL BUSINESS DISTRICT-  
WILSHIRE-LA BREA (OR FAIRFAX)-  
HOLLYWOOD**

An 11-mile-long, truncated version of Alternative I.



**V. CENTRAL BUSINESS DISTRICT-  
WILSHIRE-FAIRFAX**

An 8-mile alternative serving the Wilshire Corridor only.

## all-bus alternatives



### VI. AERIAL BUSWAY, CENTRAL BUSINESS DISTRICT-WILSHIRE-HOLLYWOOD-NORTH HOLLYWOOD

This alternative most closely approximates rail rapid transit in terms of investment and service level using only buses. Same route as Alternative I.



### VII. RESERVATION OF THE CENTER LANES ON WILSHIRE AND ON LA BREA FOR BUSES ONLY

A medium-level transit system, 11 miles long, representing the highest service level possible with buses in the Regional Core corridor without high investment in facilities.



### VIII. ONE REVERSIBLE MEDIAN PEAK PERIOD EXPRESS BUS LANE ON 8TH AND OLYMPIC

In this low-level, 8-mile alternative, express buses would operate non-stop from specific activity centers on Wilshire, using the express bus lane for access to downtown Los Angeles. Hollywood and North Hollywood service would use the Hollywood Freeway.





**IX. TWO EXCLUSIVE CURB BUS LANES ON WILSHIRE AND LA BREA**

This low-level alternative would improve transit service on Wilshire Boulevard and La Brea Avenue with less disruption than the median lanes of Alternative VII.

**X. TRANSPORTATION SYSTEMS MANAGEMENT (TSM) BUS IMPROVEMENT**

Improvements in this alternative would consist of adding high capacity buses and providing service increases on existing bus routes in the Regional Core.

**XI. STATUS-QUO, OR NO CHANGE FROM EXISTING SERVICE LEVELS**

A continuation of the existing Regional Core bus service, which consists of approximately 850 buses operating on 40 routes within and through this area.



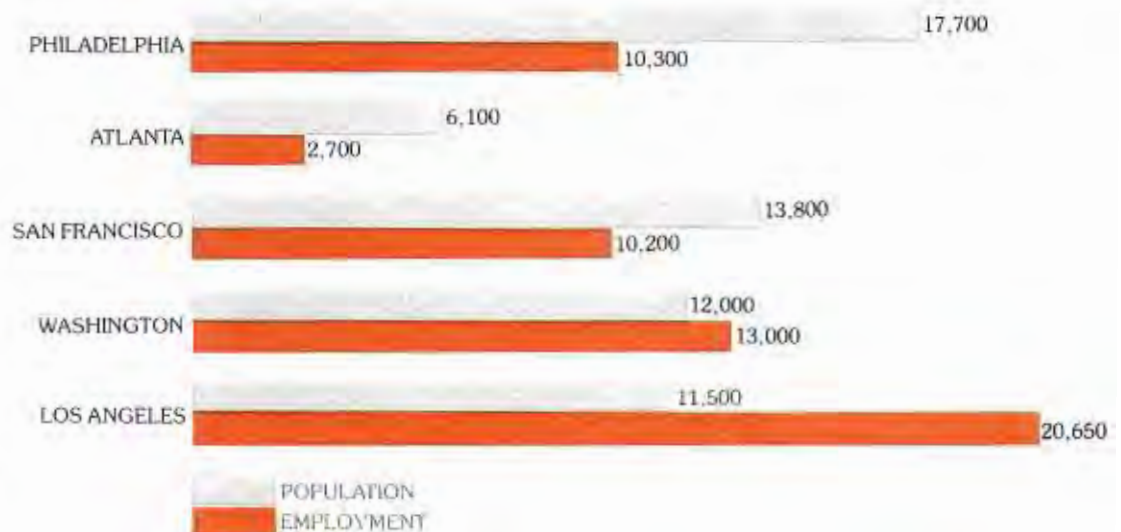


**comparing the effects** A comprehensive technical and environmental analysis was conducted to examine all possible effects of each of the 11 alternatives. These effects were grouped into four broad categories: Social, Transportation, Environmental, and Economic.

**social** Except for New York, Chicago, and Philadelphia, both population and employment densities in the Los Angeles Regional Core are higher than those in the core areas of all other cities in the nation. This would indicate that a high capacity transit system is well justified in the Metropolitan Los Angeles area.

### comparative population & employment densities

(PER SQUARE MILE IN THE CORRIDOR)



The land-use goals of the State, County, and City call for the development of regional, multi-purpose, high intensity centers linked together by improved transportation. The rail/bus alternatives, because of their high levels of service (speed and capacity) and potential for high intensity economic development around rapid transit stations are, most supportive of this "centers concept."

They would, in fact, result in long-range preservation, development, and revitalization of the communities involved. This would mean more jobs, more business, and an increase in sales tax revenues around the centers.

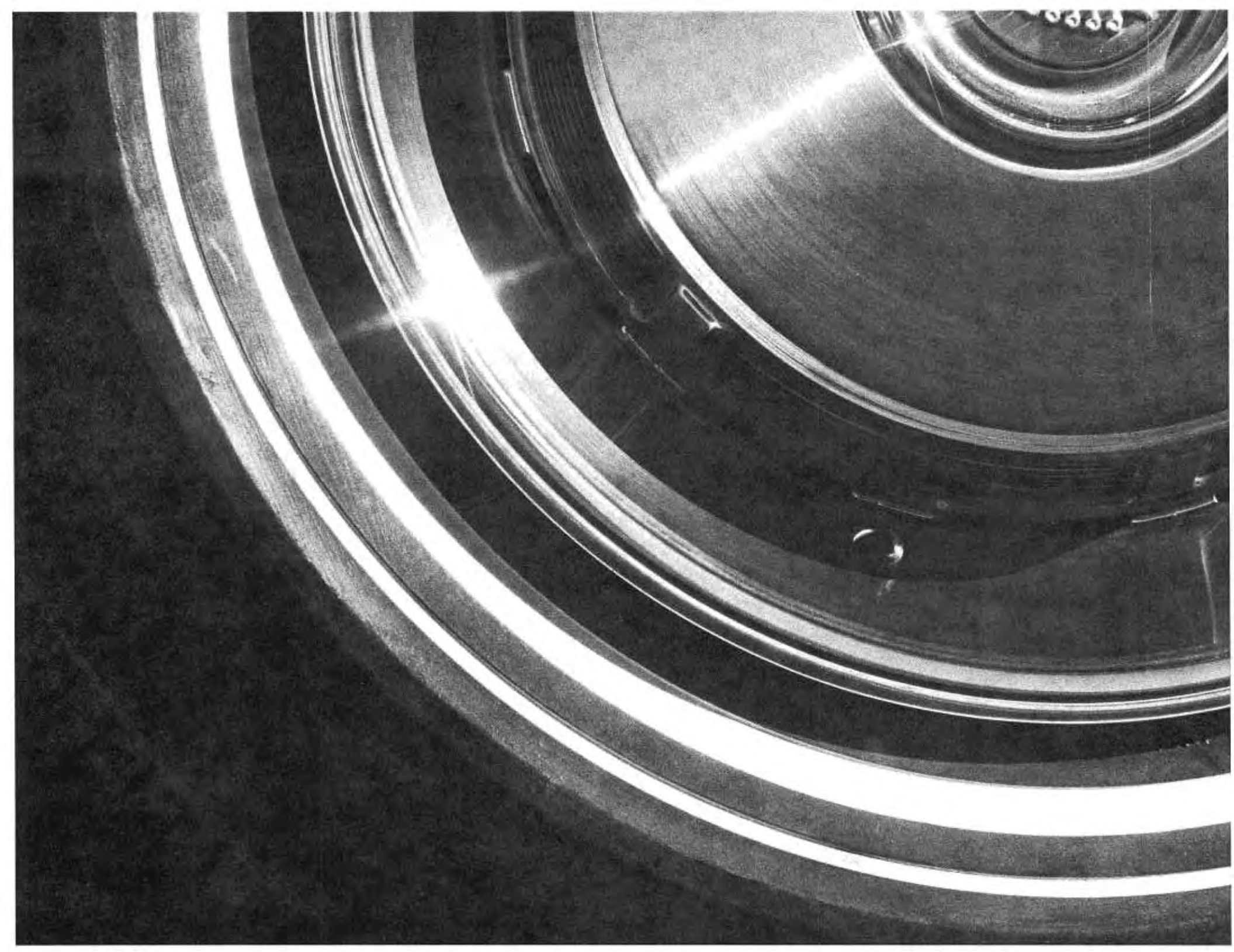
The all-bus alternatives also would improve transit service among the centers somewhat. However, they would not result in appreciable economic growth and community development.

With regard to relocation and surface disturbance, machine bored subway construction would leave streets undisturbed, except at those locations where materials and supplies are sent down into the tunnel and excavated material is taken out, and where stations have to be constructed by cut-and-cover. In the case of subways constructed by cut-and-cover, or the construction of aerial transitways, there would be considerably more disruption, in some cases

displacement of residences and commercial buildings would be necessary.

Rail rapid transit stations for Alternatives I-V would be designed with well lighted open spaces to minimize station security needs. All-bus alternatives do not anticipate the need for a significant increase in security effort.

The Department of Water and Power has determined that the electrical energy required to operate any of the rail alternatives would be an insignificant part of their total load. No major impact is expected on any other public utility service.



**transportation** Patronage analysis indicates that the rail/bus alternatives would attract as many as 640,000 total daily riders, an increase of about 59% over the existing bus ridership of 403,000. The all-bus alternatives, which average about 510,000 total daily riders would attract only half as many new riders as the rail/bus systems.

The average speeds in the Regional Core today range between 15 and 25 mph for automobiles and 10-15 mph for buses. Reserving two median lanes

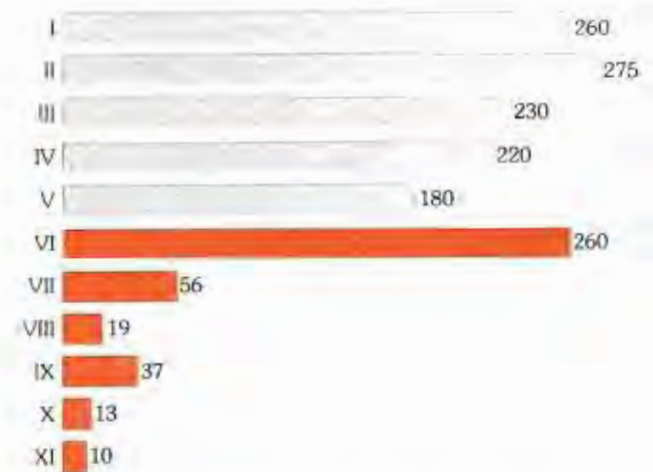
for the use of express buses only could raise the bus speed to 18-20 mph.

Rail service on a separated right-of-way would operate at a maximum speed of 70 mph, averaging 35-40 mph including station stops. A typical trip by rapid transit between North Hollywood and downtown Los Angeles during the morning rush hours would cut in half the time required to go by bus. It would cut the time required by automobile by twenty-five percent.

Rail/bus alternatives will bring about

## rail vs. express bus

(THOUSANDS OF PASSENGERS ON AN AVERAGE WEEKDAY IN 1991)



a far greater reduction in automobile trips than will the all-bus systems. Less vehicle traffic will mean cleaner air and safer streets for transit riders and auto drivers alike.

Those who would forego their cars for a rail/bus system would find commuting quicker, safer, more comfortable and reliable as well as cheaper. In addition to gas, oil, maintenance, and insurance costs they would save increasingly stiff parking fees — as high as \$7.50 per day in the Central Business District.





**environmental** From a geologic standpoint, subsurface conditions along the routes are generally favorable for machine bore tunneling. In earthquakes, deep tunnels are safer than structures at or above ground level. Because of construction problems and more severe adverse environmental effects, the cut-and-cover method of subway construction would be less suitable.

Aerial guideways would result in less surface traffic and commercial interference than cut-and-cover subways, but they would be much less acceptable

aesthetically.

The bus alternatives are not affected by geologic conditions.

Air quality in Los Angeles would be slightly improved with implementation of any of the rail/bus alternatives because of an appreciable reduction in auto trips. The all-bus alternatives would show no improvement in air quality.

Noise levels produced by transit trains on aerial structures have been found to be less than or comparable to that produced by buses. This is true despite the faster train speeds and passbys of longer duration. There would be no noise im-

pact as such from subway operations.

Through proper planning and siting, subways would minimize adverse effects, visual or otherwise, on cultural or historical sites of the city. Transit on aerial structures, however, would result in serious problems, primarily noise and visual impact.

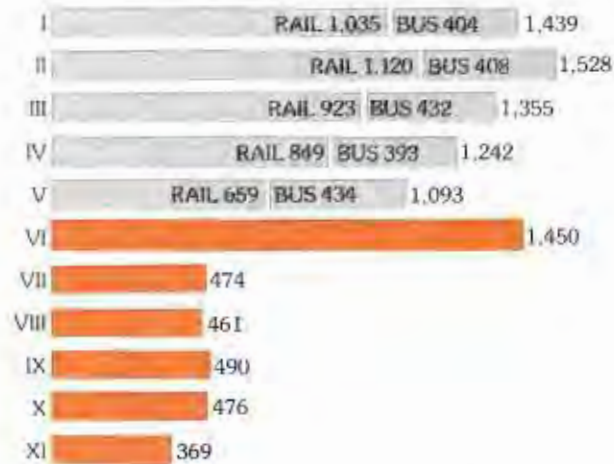
The surface bus alternatives present no potential adverse effects since they would use existing streets. Additional buses would not noticeably alter ambient noise or visual qualities.





## capital cost

(IN MILLIONS OF 1977 DOLLARS)



**economic and financial** The financial feasibility of all alternatives was compared on the basis of capital and operating costs, transit efficiency, funding, and urban economy.

Despite their higher capital costs, the rail/bus alternatives are on a par with the all-bus systems when total system annualized costs (annualized capital cost plus annual operating cost) are measured against productivity on a cost/per passenger-mile basis.

The rail/bus alternatives would gen-

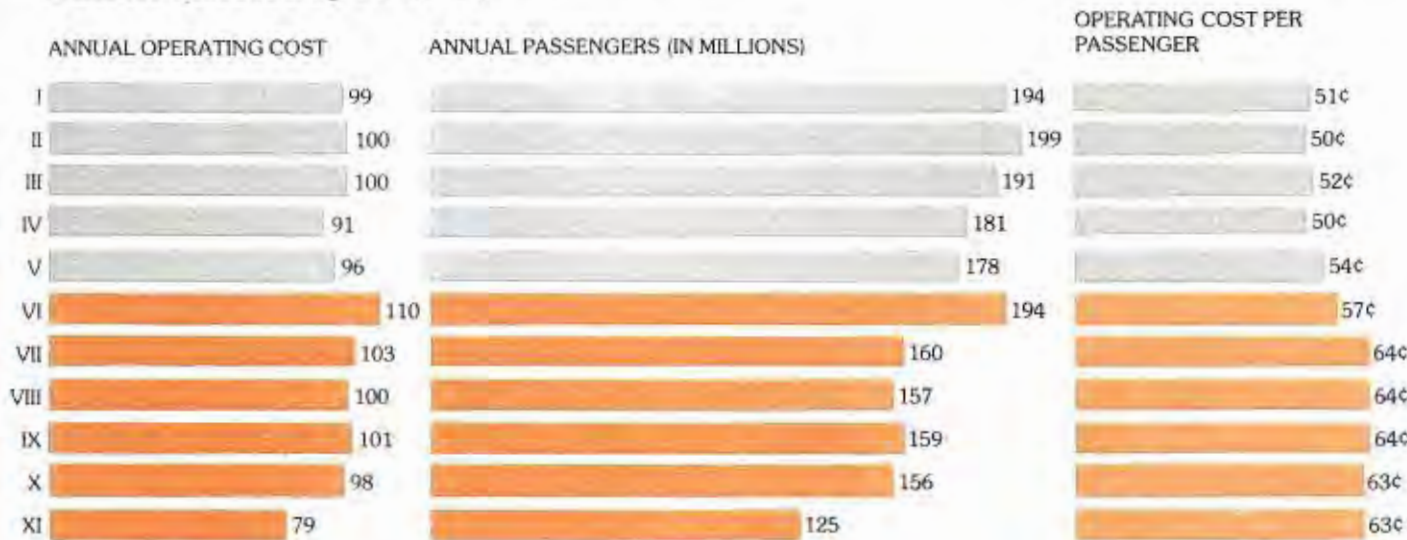
erate an estimated 20,000 to 30,000 man-years of employment during the construction period. In addition, a "multiplier effect" will create still more jobs in the material, manufacturing, and service industries. Experience elsewhere has shown that this effect on the local economy may be as much as three dollars for every one invested in the project. The all-bus alternatives, except for VI, would not involve any appreciable construction.

Permanent employment for the rail/

bus alternatives would range from 400 to 500 positions. The all-bus alternatives would require over 600 additional operators and maintenance employees.

A potential would also be created around many of the rail transit stations for attracting a considerable amount of new commercial activity, which could result in some monetary return to help offset capital costs. With the exception of the aerial busway (Alternative VI), the all-bus alternatives would have very little development potential since this

## transit efficiency in 1990



(IN MILLIONS OF 1977 DOLLARS)

is related to the amount of fixed facilities required.

In terms of operating cost per passenger carried, the rail/bus alternatives are, on the average, about 20% more efficient than the all-bus alternatives. Considering the large numbers of people carried, this translates into considerable operational cost savings.

The United States Department of Transportation has Legislative Authority to furnish 80% of the capital funding required for approved rapid transit

projects. A county-wide vote in June 1974 (Proposition 5) authorized, for fixed guideway rapid transit capital expenditures, the use of up to 25% of the state gasoline tax revenues allocated to the state for expenditure in Los Angeles County, and to the county and to the cities in the county.

The law authorizes the State Director of Transportation to exceed that amount if necessary to maximize the Federal contribution. These funds can provide a significant portion of the 20%

local share of the cost. Other means of raising funds to meet the local share from existing tax sources are also being explored. Proposition 5 funds cannot be used to finance any all-bus alternatives.

By 1990, in 1977 dollars, Alternatives I and II would show a net operating deficit of from 0.3 to 1.7 million dollars. Whereas that for the Status Quo Alternative XI would be \$16.6 million. In 1990 dollars at current inflation rates, this difference would be approximately \$40 million per year.

## annual operating subsidies required

(1990 COSTS IN MILLIONS OF 1977 DOLLARS)



ASSUMED ANNUAL INFLATION RATE OF 8% (IN MILLIONS OF 1977 DOLLARS)

A decision to hold to the Status Quo alternative is highly unlikely in the face of increasing demands for transit service.

If any of the all-bus alternatives were selected, the subsidy requirements would severely compound the existing

all-bus transit subsidy problem.

In escalated dollars the total reduction in the Regional Core operating deficit for the rail/bus alternatives relative to the TSM, over the first 10 years would amount to over \$500 million — far in excess of the local share of their capital costs.

The significant point here is that it will cost less in the long run to construct and operate a rail rapid transit/bus system than to continue with only buses.



### **in summary**

1. The need for more efficient and effective public transit service in the Regional Core is beyond question.
2. Except for New York and Philadelphia the population density of the Los Angeles urbanized area is greater than any other major U.S. city. The corridor employment density is greater than all except New York, Chicago, and the area served by the WMATA Blue Line in Washington, D.C.
3. Rail is well-established as a safe, fast,

reliable, comfortable, efficient means of travel.

4. Rail rapid transit/bus alternatives would attract significantly more riders than would the all-bus alternatives.
5. The rapid transit/bus systems would be more effective in reducing auto trips and conserving energy.
6. Any of the rail/bus alternatives in machine-bored subway would have a much less adverse effect on the natural and built environments than would

those alternatives on aerial structure or in cut-and-cover subway and any of the all-bus alternatives.

7. The rail rapid transit/bus alternatives in subways would be more supportive of local and regional land use goals and objectives than would the all-bus alternatives.
8. Any of the rail/bus alternatives would result in thousands of additional jobs during the construction period. The all-bus alternatives, however, would have

little effect on the region's economy.

9. Long-term benefits would accrue to the entire metropolitan region and its citizens as a result of increased sales tax revenues and the economic and social revitalization around the urban centers.

10. The operating cost per passenger in any of the rail/bus systems would be significantly less than any of the all-bus alternatives.

11. The capital costs of the rail/bus systems would be much greater than the

all-bus alternatives.

12. On the basis of total annualized costs (capital plus operational), the cost per passenger-mile for the rail/bus and all-bus alternatives is approximately equal.

13. Considering added revenues from greater patronage, the annual net operating deficits for the rail rapid transit/bus alternatives would be much less than for the all-bus alternatives.

14. Proposition 5 funds cannot be used

for bus transit systems.

15. The rail/bus alternatives are financially feasible with 80% Federal and 20% local funding. The local funding can be supplied by a combination of Proposition 5 funds and other local sources without any further balloting.

Draft Alternatives Analysis/Environmental Impact Statement/Environmental Impact Reports are required for major projects by State and Federal Environmental Legislation. The purpose of a Draft Report is to provide the facts on the various alternatives under consideration to enable the public and the elected and appointed officials of governmental agencies to arrive at, and present, their own conclusions verbally and/or in writing at

the Official Public Hearing, or shortly thereafter.

Concerned individuals and interested organizations are encouraged to make their comments and express their preference in writing. Please address those to the Board of Directors of the Southern California Rapid Transit District, 425 South Main Street, Los Angeles, California 90013,

If you have any questions, please call the District's Rapid Transit Department at 972-6433.



SOUTHERN CALIFORNIA RAPID TRANSIT DISTRICT  
LOS ANGELES REGIONAL CORE TRANSIT