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TRANSPORTATION IMPROVEMENT

PROGRAM

24087904

INTRODUCTION TO THE PROPOSED NEAR AND LONG TERM OPERATIONAL IMPROVEMENT PROGRAM

The District's enabling legislation obligates the District to provide bus services and to plan and build a rapid transit system for its service area. Pursuant to this charge, the District Board of Directors, on July 2, 1974, adopted both long and short term improvement plans to address the near and long term transit needs of its service area. This plan was, in turn, adopted by the Executive Committee of the Southern California Association of Governments on July 11, 1974. Consequently, the District's short and long range plans now comprise the sub-regional element of the Regional Transportation Plan.

The near term plan calls for a net addition of 1,060 buses by June 30, 1977, plus an additional yearly net increase of 100 buses through 1980.

A. Policy Statements by District Board

On June 22, 1974, the Board resolved that provisions for the elderly and handicapped must be addressed in all future bus

acquisition efforts. In response to this direction, the staff, working with a consultant on handicapped affairs, prepared specifications for modifying all new buses so that they will meet the needs of handicapped persons. These specifications have been forwarded to UMTA for its approval. It is, of course, necessary that such approval be received before the District can go to bid with them.

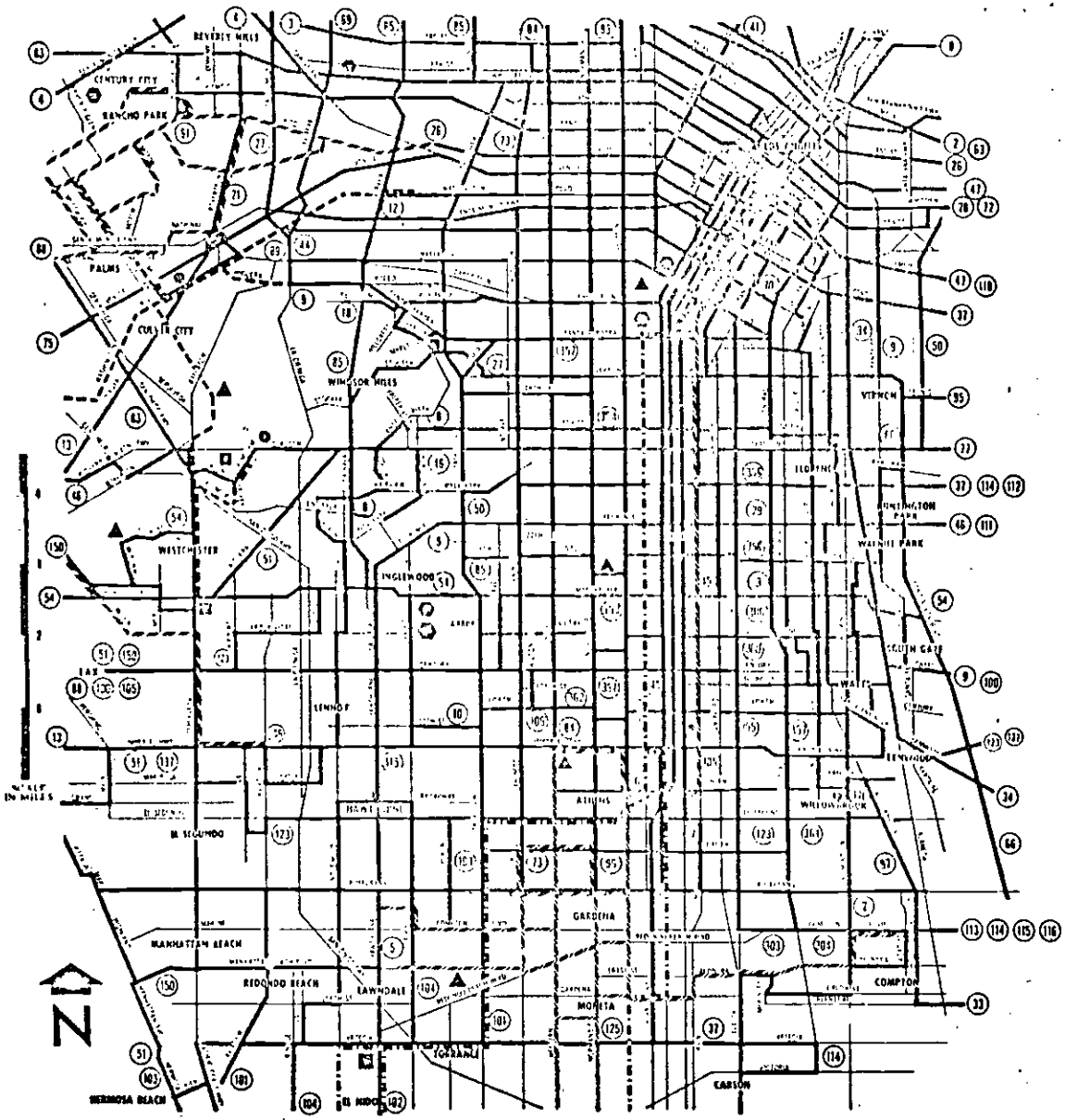
Since the District is the first major transit operator in the nation to propose including such specifications in its bus acquisition program, it is not yet possible to predict the UMTA response.

The foregoing policy pronouncements set the stage for the explanation of the bus operations improvement and capital and equipment acquisitions programs which are described below.

B. Near Term Bus Operational Improvements

1. Grid Bus Systems

The District recently inaugurated grid bus services in the South Central Los Angeles and San Fernando Valley areas. The extent and location of each of these is shown on Exhibits 1



South Central Los Angeles Grid Service System

LEGEND

- District Lines
- Santa Monica Municipal Bus Lines
- Culver City Bus Lines
- Torrance Transit System
- Gardena Municipal Bus Lines
- Hospitals
- Colleges and Universities
- Regional Shopping Centers
- Major Points of Interest (Sports and Entertainment Centers, Museums)

EXHIBIT 1

Grid Bus Service

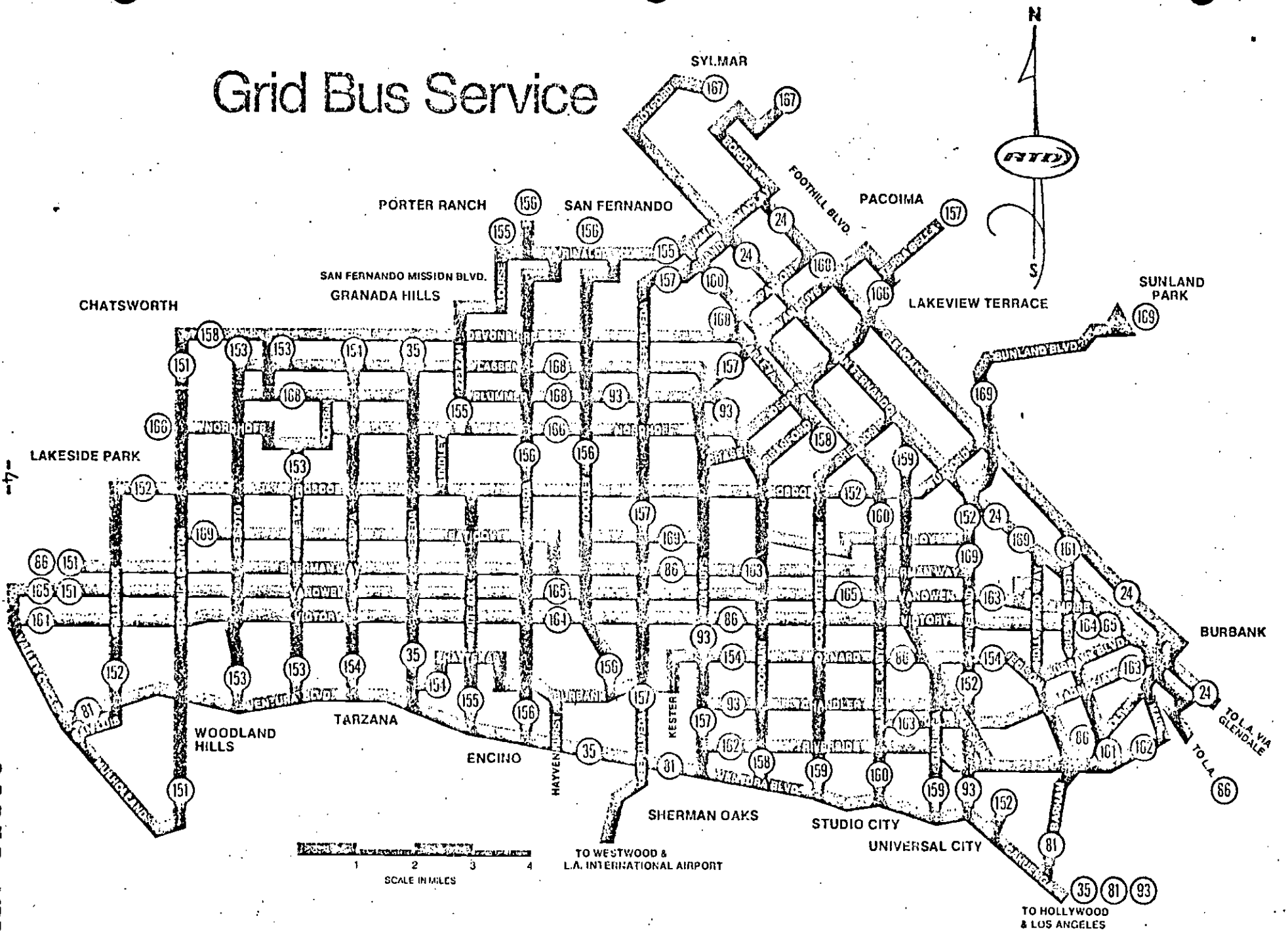


EXHIBIT 2

and 2. The two grids are based on 20-minute headways with parallel bus lines being spaced about one-half mile apart.

2. Preferential Lanes on Freeways Complemented by Park and Ride Lots

The District has filed a demonstration grant application with UMTA to support a preferential lane for buses and high-occupancy autos on the Santa Monica Freeway. Assuming UMTA approves the grant application, this facility will be jointly used with buses from the Santa Monica Municipal Bus Lines. Caltrans will provide and maintain the physical facility.

This is but one of a series of preferential lane arrangements, shown on Exhibit 3, some of which are contra-flow and others of which are "with flow." As of this date, the implementation schedule for such facilities is as follows:

1.	Santa Monica Freeway	June, 1975
2.	Hollywood Freeway	November, 1975
3.	Harbor Freeway	February, 1976
4.	Golden State Freeway	September, 1976
5.	San Diego Freeway	April, 1977
6.	Artesia-Long Beach Freeway	July, 1977

(It is important to observe that the possibility exists that an insufficient number of buses will be available to provide some of these preferential lane services.)

Near Term Bus Improvement Program

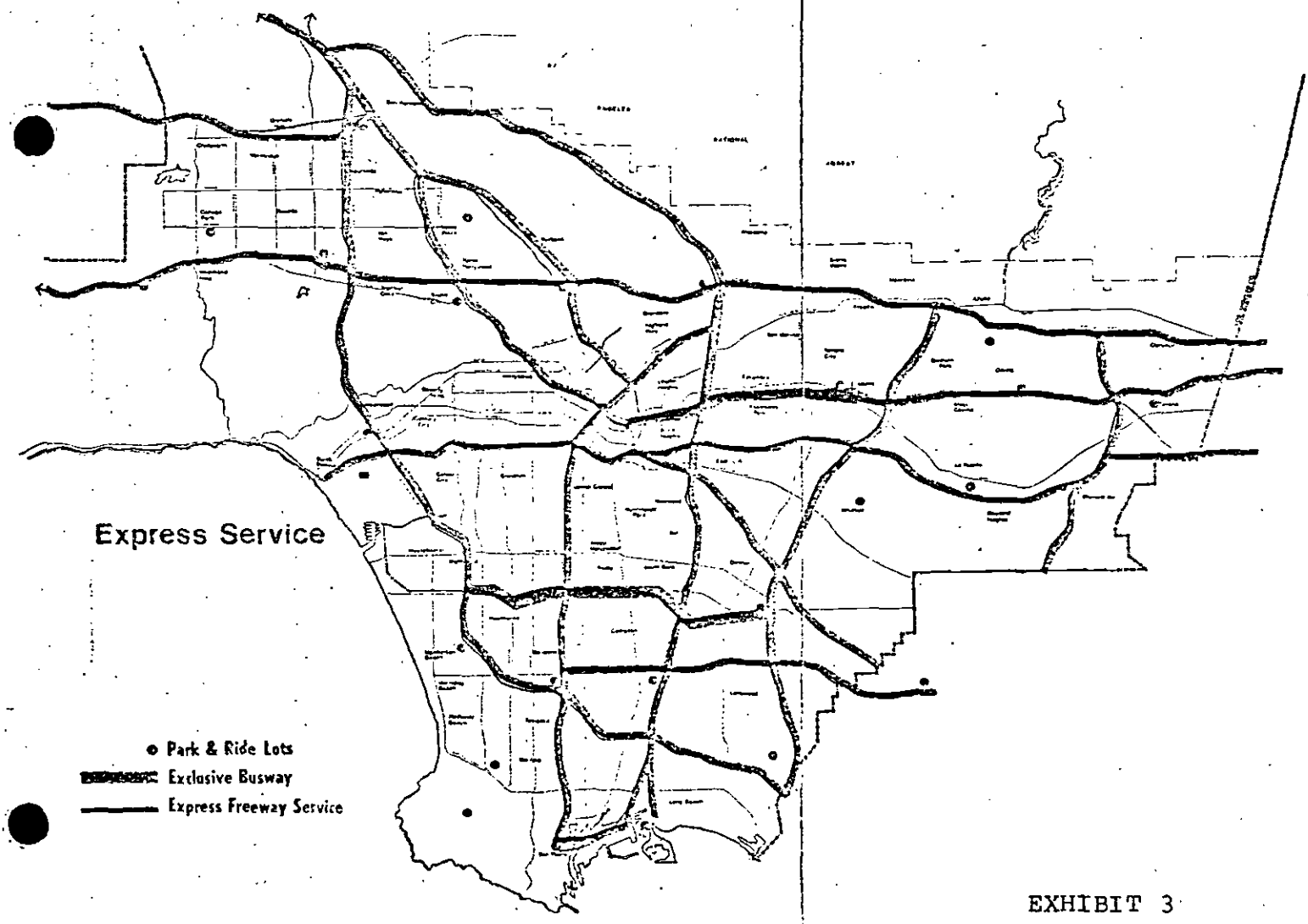


EXHIBIT 3

These improvements will be tied in with a series of park and ride lots, which are also shown on Exhibit 3. Our expectation is that the parking facilities will be funded by federal aid urban monies as needed. The Los Angeles County Joint Cooperative FAU Committee has recently recommended a 3-year acquisition-construction program. Thereafter, the County of Los Angeles formally submitted that transit recommendation to SCAG for its approval. The recommendation also includes certain highway projects as well.

It is expected that, over time, buses using these lanes will have the benefit of certain preferential lanes over selected arterial streets as well. The list of County submitted projects is detailed in Table 1.

3. Commuter Rail Lines

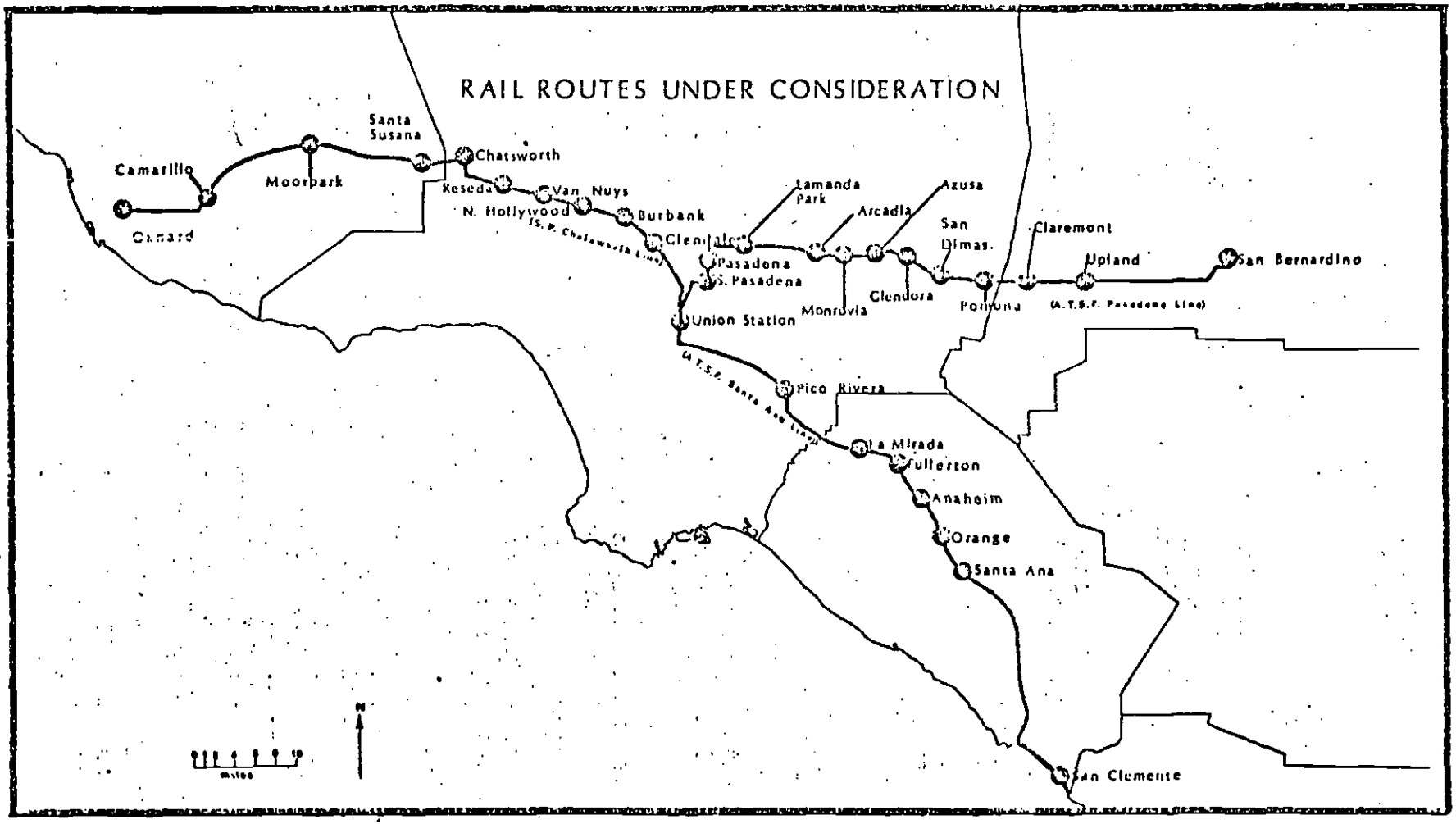
The District contemplates inaugurating, in cooperation with the County of Los Angeles, a commuter rail service from the City of Santa Ana to downtown Los Angeles. This proposed facility is depicted on Exhibit 4, along with other rail facilities which are being considered for similar treatment.

TABLE 1

REGIONAL PROJECTS -- SOUTHERN CALIFORNIA RAPID TRANSIT DISTRICT

	FAU FUNDS	STATE FUNDS	LOCAL FUNDS	TOTAL
Pomona Valley Park/Ride and Transportation Ctr. (Garvey Ave. & S.B. Fwy)	$ 808,560	- -	$ 166,440	$ 975,000
Diamond Bar Park/Ride Facility (Intersection Orange and Pomona Fwys. Interchange)	808,560	- -	166,440	975,000
Duarte Park/Ride Facility (Foothill and San Gabriel River Freeways)	870,870	- -	179,130	1,050,000
Santa Monica Park/Ride Facility (Cloverfield Blvd. and Santa Monica Freeway)	2,280,850	- -	469,150	2,750,000
Southern California Rapid Transit Dist. LAX transportation Ctr.	414,700	- -	88,300	500,000
Vineland Ave. Park/Ride Project	374,000	- -	76,000	450,000
	$ 5,557,540	- -	$ 1,142,460	$ 6,700,000

EXHIBIT 4


RAIL ROUTES UNDER CONSIDERATION
Santa Susana
Camarillo
Moorpark
Chatsworth
Oxnard
Keseda
Van Nuys
N. Hollywood
Burbank
Glendale
Lamanda Park
Arcadia
Azusa
San Dimas
Claremont
Pasadena
S. Pasadena
Monrovia
Glendora
Pomona
Upland
San Bernardino
(A.T.S.F. Pasadena Line)
Union Station
Pico Rivera
La Mirada
Fullerton
Anaheim
Orange
Santa Ana
San Clemente
N

As presently conceived, L.A. County will own the rolling stock, which would be operated by AMTRAK. The District will supply buses to distribute the train passengers at either end of the trip.

Initially, this suggests the need for 6 to 10 additional buses. This requirement will increase when commuter train service is commenced on the lines serving the San Fernando Valley.

4. Minibus Service for Downtown Los Angeles

Since 1971, the District has provided a minibus operation in downtown Los Angeles. The original route, which has a north-south orientation, was, in 1973, extended northward to include the North Broadway area. It was designed to offer a highly specialized low fare service within the congested downtown business center.

The District expects to supplement the existing minibus line with another which has an east-west orientation as shown on Exhibit 5. Forty of the minibuses which appear in the capital budget will be required to serve this expansion of service.

C. Sector Studies to Identify New Markets

The District is keenly aware of its statutory responsibilities regarding the provisions of new bus services. This includes both conventional line-haul service and other services designed to meet the trip requirements of persons to move about in the communities in which they reside. To identify new markets, the District has recently undertaken a series of sector studies. These are carried out by District consultants in collaboration with the technical personnel and elected officials of individual cities.

The areas currently under study are shown on Exhibit 6. The dates of completion of some of these studies is shown below.

Area	Date
San Gabriel Valley	June, 1975
South Bay Cities	May, 1975
Downtown Los Angeles	May, 1975
West Los Angeles	June, 1975

EXPANDED MINIBUS SERVICE

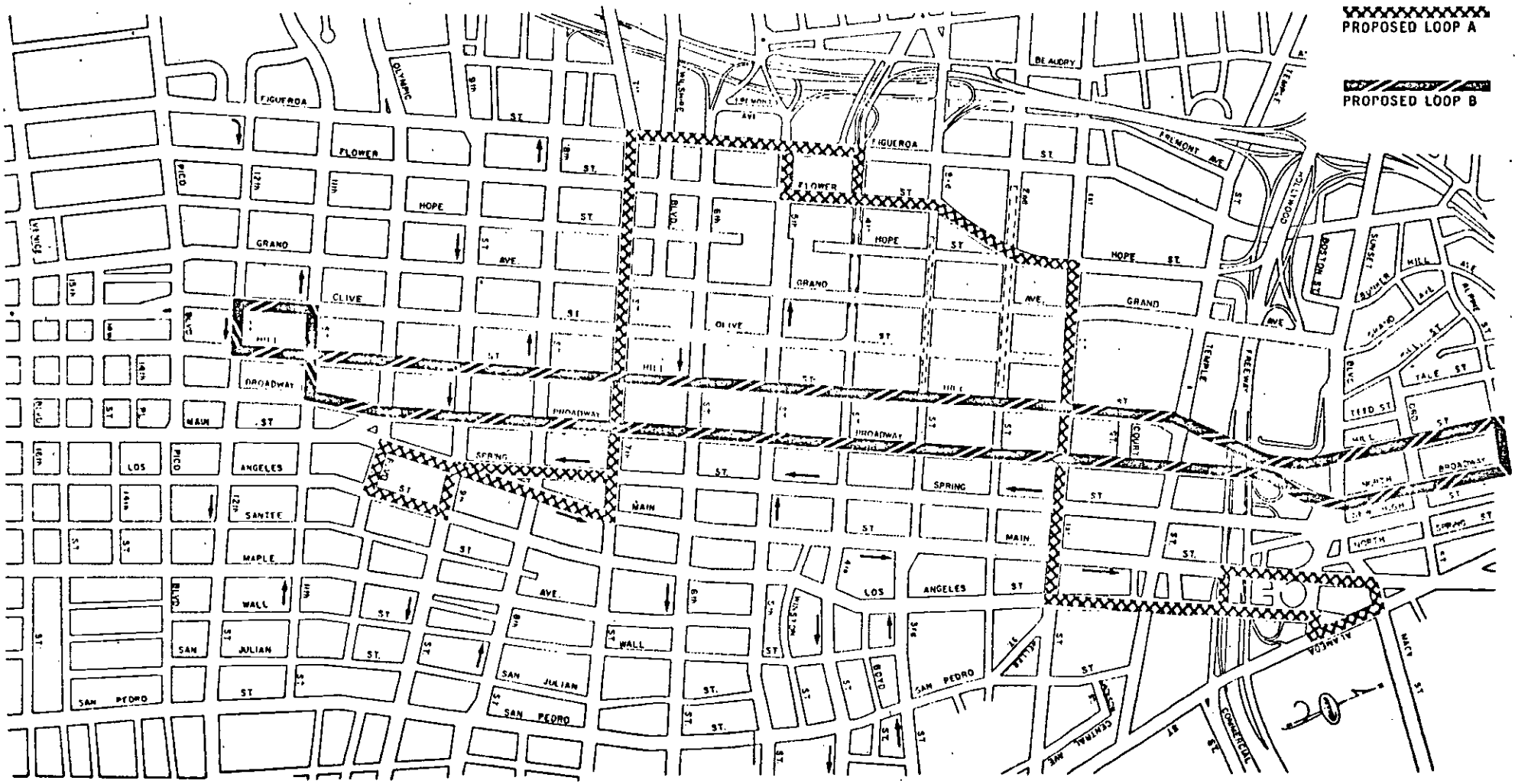


EXHIBIT 5

Service Improvement Study Areas

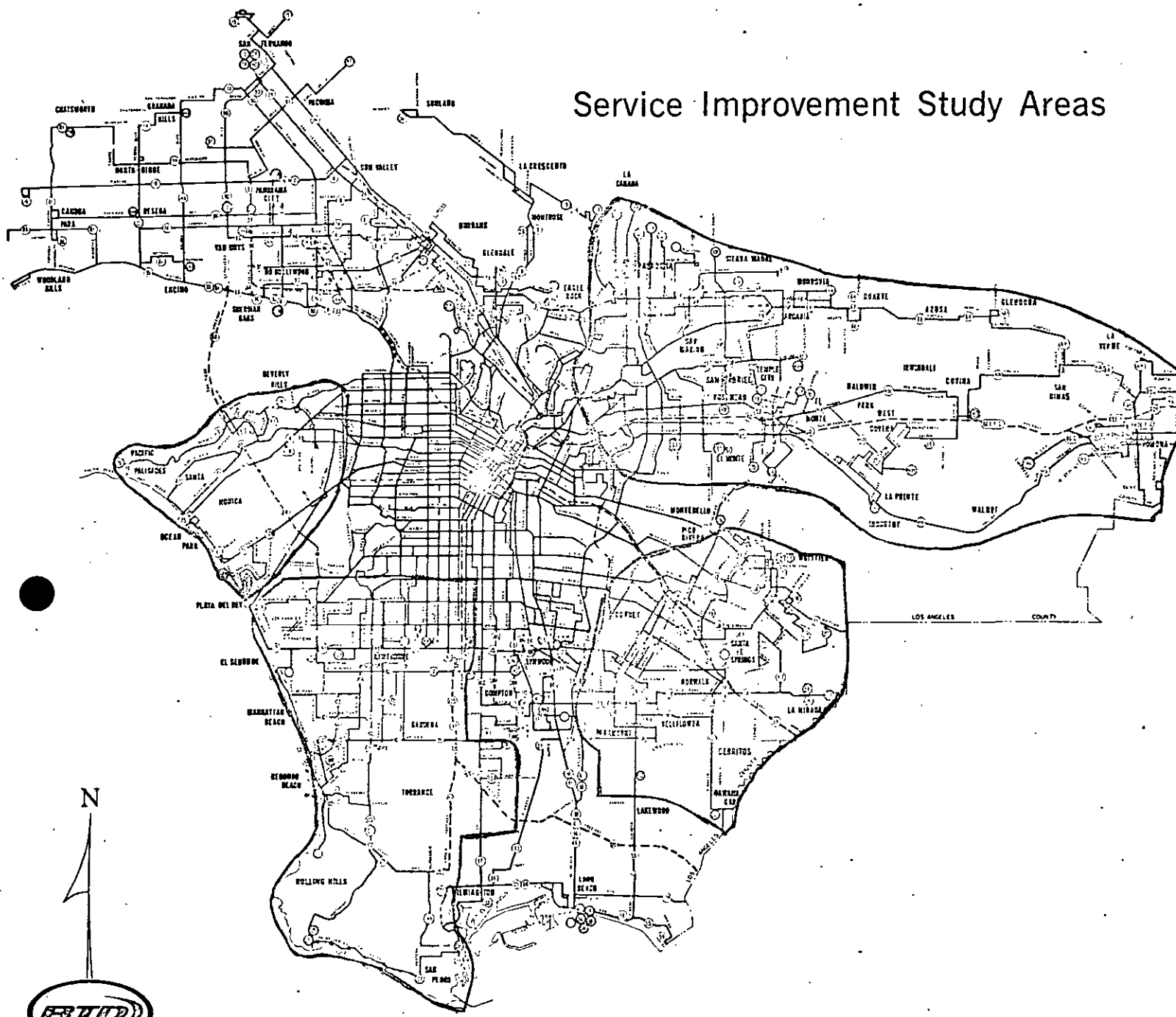


EXHIBIT 6

On the basis of preliminary findings, it is anticipated that 150 to 200 additional buses will be needed to serve needs demonstrated by such studies.

The operational improvements described above are directed toward serving three separate categories of trips. One is the line-haul trip which will move over preferential lanes on freeways. Bus lines serving such line-haul trips will often be linked with new park and ride lots which permit a convenient automobile transit transfer. This represents a relatively new type of service.

A second category of trip is that which moves intercity and, hopefully, over preferential lanes and with signal pre-emption devices on arterial and local streets. This represents an improvement upon the existing suburban bus service.

The last category is expanded intra-city transportation, of which the two grid services are good examples. Within this category it is entirely possible that some communities may require a premium service. This implies a demand responsive system utilizing non-standard rolling equipment tailored to the needs of individual communities. In the event of an election to obtain premium service it is expected that the electing community will identify funds with which to cover the incremental costs involved.

D. Long Range Transit Improvement

As noted above, the District Board of Directors has formally identified a series of corridors having greatest transit demand within Los Angeles County. The Board took no position on mode, but postponed that decision to a subsequent and more appropriate date. In November, 1974, the electorate rejected the funding plan designed to finance the building and operation of an entire rapid transit system to operate over these corridors.

This fact probably implies that the rapid transit system within L.A. County will be constructed incrementally, one leg at a time. Just which of the corridors will be built first will be left to future determination. Cooperative work is proceeding on the subject among the staffs of the City and County of L.A., SCAG, and the League of Cities under the leadership of District personnel. Accordingly, the capital budget includes funds to provide for the design, equipment, right-of-way and construction of a starter line for rapid transit.

E. Explanatory Note Concerning Contents of Capital Budget

The capital budget includes a number of items which may be somewhat unfamiliar to one not engaged in full-time transit operations.

Consequently, it is deemed useful to include a brief explanatory note in this section on at least those whose names do not convey some definite meaning to the reader.

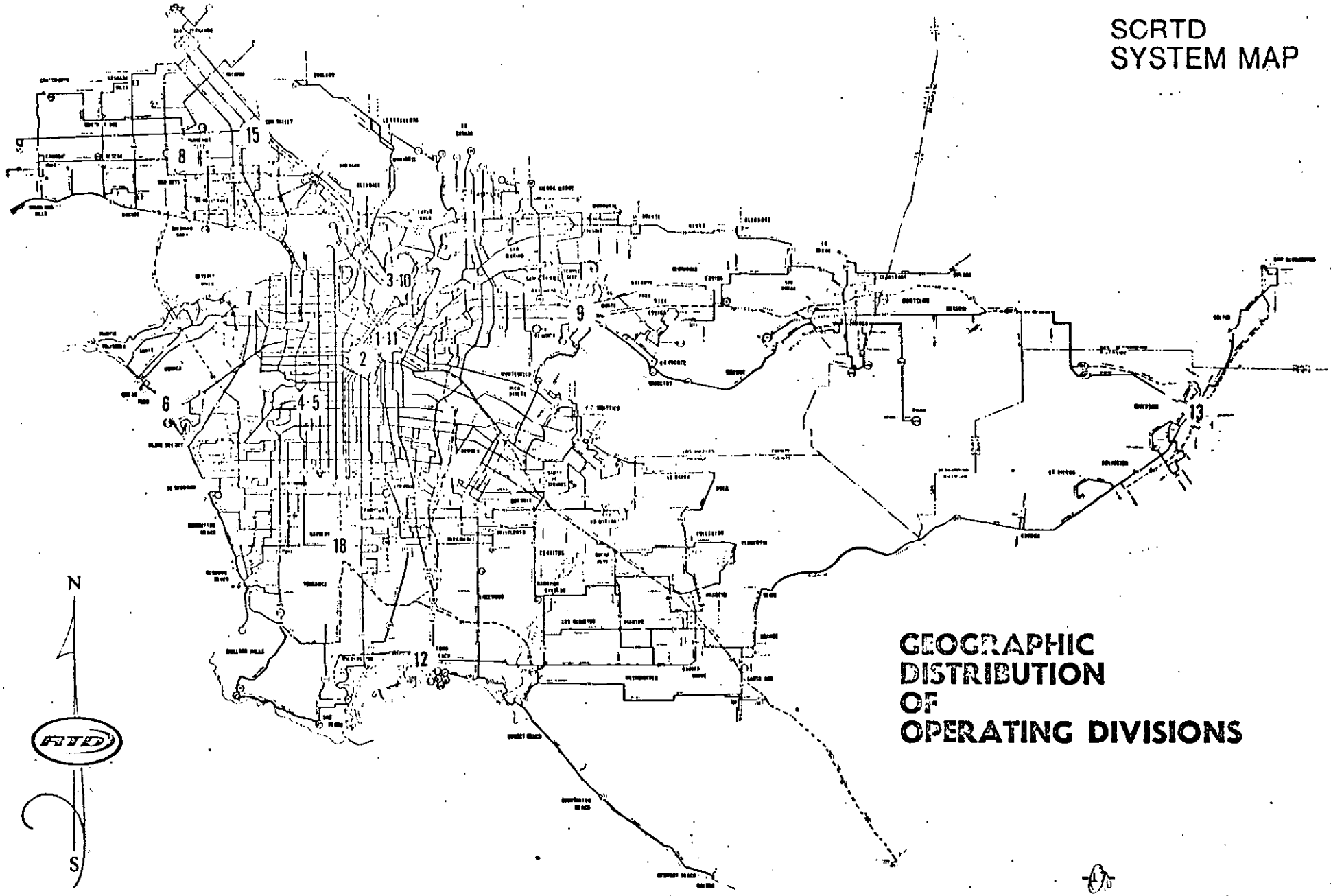
Each day, buses must be cleaned and fueled. On some regular basis, buses must be maintained. This work is done in what is known in the local transit industry as operating divisions. Large numbers on Exhibit 7 indicate the locations of each of the existing operating divisions.

Each of the existing divisions is scheduled to receive substantial improvements over the next four years. Additionally, as the fleet size increases, new divisions must be built. Consequently, the capital budget proposes the acquisition of land for and the erection of facilities upon six new divisions.

A number of data processing items having unusual names also appear in the budget. One of these is identified in the capital budget as "RUCUS." This is a software package, developed by UMTA, aimed at improving run cutting and scheduling activities.

EDP is another name which appears in the budget. It refers to certain start-up costs in connection with the installation of a management information system on the District's new UNIVAC 1106 system.

SCRTD
SYSTEM MAP



GEOGRAPHIC
DISTRIBUTION
OF
OPERATING DIVISIONS

EXHIBIT 7

Still another unfamiliar term is "Computerized Customer Information System." When installed, a customer will be able to telephone the District about travel information and the computer will provide optimum route and schedule information in minimum time.

The last of this group is that of "SIMS." This word is an abbreviation for service inventory maintenance systems. It is a software package which has been developed to automate and upgrade inventory methodologies for transit operators.

F. Limitations on the District's Capabilities

Unlike many industries, the transit industry is not a profit making enterprise. It is, instead, a public service institution which can no longer meet its costs through fare box revenues.

The public must be made aware that some of the undertakings included within this document cannot be fulfilled unless new sources of revenues are made available to the providers of transit services.

Another limitation on the District's commitments is the effect of the requirement that all new buses be equipped to handle

handicapped persons. As of this date, no one can determine how this requirement may delay delivery dates on new buses.

G. Rationale to Justify the Foregoing Operational and Capital Improvements

1. Operational Improvements

The grid bus services and county-wide flat fare program are being provided in response to specific requests to do so by the County of Los Angeles. They represent meaningful transit experiments designed to test the reaction of the public to a combination of reduced fares and greatly increased service. The significance of the experiment becomes obvious when one considers that the San Fernando Valley (the site of one of the grid services) has a greater population than does Cleveland, Ohio, the nation's tenth largest city.

The South Central grid can be justified on the basis that it represents the greatest single concentration of transit-dependent persons in the County. Out of a total of 650,000 residents in 1970, approximately 527,000 were members of minority groups and approximately 86,000 were over 65 years of age. The minority and senior citizen groups are

traditionally the most dependent on transit for their mobility. A sizeable number of minority persons -- over 41,000 -- reside in the San Fernando Valley.

Preferential lanes on freeways, coupled with remote park and ride lots, also represent another interesting transit experiment aimed at testing the operational feasibility of buses and high-occupancy autos sharing a preferential lane on a freeway. One useful product will, of course, be a measure of the diversion of passengers from single occupancy autos to both buses and high occupancy autos in an area noted for its proclivity for high auto usage. Another useful output of the study will be a determination of which traffic control techniques are most helpful in implementing this highly innovative use of freeway lanes.

The commuter rail proposal, if implemented, will be within one of the corridors designated for rapid transit on Page A-18 of the Draft RTP. Additional justification for the commuter rail lines is that they have been requested by the County of Los Angeles. Last, they represent still another important test of the capability of rail facilities to attract auto users against a backdrop of the nation's approaching energy crisis.

Recently completed sector studies point to the need for augmented bus services in the Cerritos--Mid-Cities areas to make possible increased intra-community trips. The strong possibility exists that similar needs will be demonstrated in the near future in the San Gabriel Valley, Glendale-Eagle Rock, and still other areas.

The sector studies are consistent with the District's statutory mandate to plan both short and long range transit within most of Los Angeles County. They represent an attempt to ascertain how travel patterns have changed and where new bus services are needed.

The present minibus service in downtown L.A. has a north-south orientation. The proposed addition adds an east-west dimension to this service. The extension has been requested by, and will be paid for by, the City and County of Los Angeles.

2. Capital Improvements Projects

The items below are treated in the same manner in which they appear in the capital budget.

The bus facilities improvements and the new bus operating divisions (yards) are needed to provide the greatly increased bus services which are contemplated by the TIP. For the past 30 years, the transit industry has desperately needed to renew its plant and equipment, but, because of its declining financial capability, has been unable to do so. In general

the bus facilities improvements can be justified on this basis. Several, like those at Divisions 15 and 18, are new and are needed to service the units used in the two grid services

Two new bus operating yards are proposed for acquisition by 1976. These are needed to minimize dead head time in areas now receiving increased bus service.

Work will commence on a new central maintenance facility. The present facility dates back to the streatcar era and, due to its vintage, much of its equipment is badly in need of replacement.

The FAU facilities will be used in connection with buses using preferential lanes on freeways; thus, they can be justified on the basis that they are part of an experiment aimed at finding out how many travelers will be diverted to them from autos.

The bus staging areas are to be located in downtown Los Angeles. It is presently necessary to store buses on downtown streets, which is undesirable from the standpoint of street traffic control.

Each of the buses will be used to provide the new services described above or as replacements for existing equipment.

The two-way radios and radio dispatch equipment will be used to alert repair, health and security personnel of problems arising on the buses. They will serve to minimize the delays to bus patrons resulting from such conditions.

New bus signs will be part of a program to provide more information to users concerning schedules and bus routes.

The emergency generators are needed in the event of loss of power from local utilities.

The maintenance improvements will be required to maintain and support the increased number of vehicles in the fleet. One item in this group - the brake maintenance program - is aimed at reducing down time for buses. Another - the low emission project - involves retrofitting certain improvements to the engines of existing buses to reduce atmospheric emissions. Still another - the diagnostic equipment - will reduce the time needed for routine maintenance checks on all buses.

Under the heading of Administration Support Projects are a number of computer software programs. One is aimed at improving the District's run cutting capability; another concerns inventory control improvements; and still another will reduce the time needed to give the public travel information.

Also included in this category is the acquisition of a new, third-generation computer. It replaces an IBM 1401 model which was of the first generation variety. It will give the District the capacity to put many additional routine tasks on the computer, thereby increasing the efficiency of the operation.

A new passenger counting system is intended to cut costs on the counting of passengers.

Appendix B contains detailed descriptions of each of the elements in the 5-year capital budget.

Table 1 depicts the funds required over the next three years to meet operational costs discussed in this section and the capital costs discussed in the section which follows.

TABLE 1

SOUTHERN CALIFORNIA RAPID TRANSIT DISTRICT
PRELIMINARY FINANCIAL PLAN
Dollars in Thousands

	FY 76	FY 77	FY 78
Fund Requirements			
For bus operations	153,500	189,000	217,000
For bus debt service	3,000	3,000	3,000
For bus capital plan	61,500	65,000	65,000
S/T	218,000	257,000	285,000
For commuter rail	750	800	1,000
For rapid transit	59,000	209,000	295,000
TOTAL	277,750	466,800	581,000
Sources of Funds			
Passenger revenue	43,800	48,000	53,000
Other operating revenue	7,435	7,800	8,000
Sales tax (SB-325)	61,175	61,500	65,000
UMTA	120,330	254,000	329,000
Los Angeles County	31,350	800	1,000
Federal aid, urban systems	2,660	2,000	2,000
Gasoline tax (Proposition 5)	11,000	34,000	55,000
Deficit	- -	58,700	68,000
TOTAL	277,750	466,800	581,000

II. Capital Improvements Needed to Support the Operations Program

On March 19, 1975, the District Board formally approved the Capital Budget which follows. In the interests of brevity, only two brief comments are made concerning it.

One of these comments is that a detailed description of each item included in the capital budget is contained in Appendix B. The other comment concerns the fact that the bus transit portion of the capital budget indicates a greater requirement for funds than can now be identified as being available. This suggests the need for a subsequent prioritization among the items and movement of any items which cannot be funded into fiscal year 1977.

The approved capital budget is reflected in Table 2 which follows.

Table 2
SCRTD Five-Year Capital Improvement
Program Bus Transit

BUS FACILITIES IMPROVEMENTS	FUNDED PROJECTS	FY 1976	FY 1977	FY 1978	FY 1979	FY 1980
Division 1	Cal 90	1,392,000				
Division 2	Future			1,200,000	1,000,000	
Division 3	Cal 49	3,000,000	2,450,000			
Division 5	Cal 106	1,020,000	4,430,000			
Division 6	Future		500,000	500,000		
Division 7	Cal 90	3,532,000	3,261,000			
Division 8	Future		500,000			
Division 9 (Busway Project)	Cal 34	740,000				
Division 12	Future		750,000	430,000		
Division 13	Future			120,000		
Division 14 (South Park Shops)	Cal 106	600,000				
Macy Street Yard	Cal 90	1,025,000	1,660,000			
Division 15	None	250,000				
Division 18	None	250,000				
SUB-TOTAL		11,809,000	13,551,000	2,250,000	1,000,000	- 0 -
NEW BUS OPERATING YARDS						
South-East Los Angeles	Future	2,062,000	3,547,000	3,341,000		
Pomona - Operating Division & Passenger Terminal	"	926,000	1,342,000	6,682,000		
West Los Angeles	"		2,062,000	3,547,000	3,341,000	
West San Fernando Valley	"		926,000	1,342,000	6,682,000	
East San Fernando Valley	"			2,062,000	3,547,000	3,341,000
South-West Los Angeles	"			926,000	1,342,000	6,682,000
SUB-TOTAL		2,988,000	7,877,000	17,900,000	14,912,000	10,023,000
NEW CENTRAL MAINTENANCE FACILITY		13,000	392,000	5,075,000	1,670,000	- 0 -
FAU FUNDED FACILITIES						
LAX Passenger Transfer Center	FAU	500,000				
Santa Monica Park/Ride Facility	"	2,750,000				
Canoga Park Park/Ride Facility	"		1,375,000			
Harbor City Park/Ride Facility	"		1,375,000			
South Bay Park/Ride Facility	"			1,375,000		
Pomona Valley Park/Ride Facility	"			975,000		
Diamond Bar Park/Ride Facility	"			975,000		
Duarte Park/Ride Facility	"			1,050,000		
SUB-TOTAL		3,250,000	2,750,000	4,375,000	- 0 -	- 0 -
TRANSPORTATION FACILITIES IMPROVEMENTS						
Bus Staging Areas	Future	750,000	750,000			
El Monte Terminal Complex	"		750,000	750,000		
		750,000	1,500,000	750,000	-0-	-0-

SOUTHERN CALIFORNIA RAPID TRANSIT DISTRICT
FIVE YEAR CAPITAL IMPROVEMENT PROGRAM
BUS TRANSIT

OPERATIONAL IMPROVEMENTS	FUNDED PROJECTS	FY 1976	FY 1977	FY 1978	FY 1979	FY 1980
300 New Buses	Cal 90	17,706,000				
80 New Buses	Future	6,900,000				
30 New Articulated Buses	Cal 106	3,600,000				
210 New Buses	Future		20,800,000			
100 New Buses	"			11,500,000		
100 New Buses	"				13,100,000	
100 New Buses	"					15,000,000
240 New Replacement Buses	"	19,900,000				
240 New Replacement Buses	"		22,800,000			
150 New Replacement Buses	"			16,500,000		
200 New Replacement Buses	"				25,200,000	
200 New Replacement Buses	"					29,000,000
20 Replacement Minibuses	"				1,000,000	
Refurbish 19 Minibuses	Cal 90	184,000				
Two-Way Radios	Various	1,321,972				
Radio Dispatch Equipment	Cal 106	204,000				
Bus Stop Signs	Cal 106	865,000				
Bus Stop Signs	Future		1,000,000	1,150,000		
Bus Stop Shelters	"		600,000	300,000	343,000	395,000
Emergency Generators	Cal 90	390,000				
SUB-TOTAL		51,070,972	45,200,000	29,450,000	39,643,000	44,395,000

SOUTHERN CALIFORNIA RAPID TRANSIT DISTRICT
FIVE YEAR CAPITAL IMPROVEMENT PROGRAM
BUS TRANSIT

	FUNDED PROJECTS	FY 1976	FY 1977	FY 1978	FY 1979	FY 1980
MAINTENANCE IMPROVEMENTS						
Brake Service Relocation	Cal 49	225,000	215,000			
Bus Cleaning Equipment	Cal 40	300,000				
Low Emission Project	Cal 49	318,000				
Radio Maintenance Equipment	Cal 106	165,000				
Paint Shop Modernization	Future		300,000			
Miscellaneous Garage Equipment	"	145,000	115,000	132,000	152,000	175,000
Bus Diagnostic Equipment	"	150,000	172,000			
SUB-TOTAL		1,303,000	802,000	132,000	152,000	175,000
ADMINISTRATION SUPPORT PROJECTS						
RUCUS	Cal 087	225,000				
EDP	Cal 49	294,000				
Computerized Customer Information System	F	1,000,000	1,000,000			
SIMS	Cal 106	600,000	400,000			
Automobiles & Trucks	Various	393,000	700,000	805,000	925,000	1,065,000
Print Shop Equipment	1975 0090					
Cash Vaults	1975 0024					
Passenger Counting System	Cal 49	641,000				
Passenger Counting System	Future		970,000	1,220,000	1,400,000	150,000
Vehicle Monitoring System	Future		970,000	1,220,000	1,400,000	150,000
Miscellaneous Minor Items	--	100,000	100,000	100,000	100,000	100,000
Training Aids	Future		50,000			
Furniture & Office Equipment (4th & Main)	1975 0090					
SUB-TOTAL		3,253,000	4,190,000	3,345,000	3,825,000	1,465,000
PROGRAM TOTAL		74,436,972	76,262,000	63,277,000	61,202,000	56,058,000
FUNDING SUMMARY (5-Year)						
Funds from Available Sources		61,500,000	65,000,000	65,000,000	- 0 -	- 0 -
Funds from Undetermined Sources		12,936,972	11,262,000	- 0 -	- 0 -	- 0 -
TOTAL ANTICIPATED FUNDS		74,436,972	76,262,000	65,000,000	- 0 -	- 0 -

SOUTHERN CALIFORNIA RAPID TRANSIT DISTRICT
PRELIMINARY THREE YEAR CAPITAL IMPROVEMENT PROGRAM
RAPID TRANSIT

	FY 1976	FY 1977	FY 1978
TEMPORARY RAIL SERVICE			
Foothill Corridor	8,000,000		
San Fernando Corridor	2,000,000	3,000,000	
Santa Monica/So. Central Corridor			6,000,000
SUB-TOTAL	10,000,000	3,000,000	6,000,000
REGIONAL TRANSIT STARTER LINE			
Design	20,000,000	30,000,000	15,000,000
Equipment		40,000,000	17,000,000
Right-of-Way	30,000,000	35,000,000	21,000,000
Construction		101,000,000	236,000,000
SUB-TOTAL	50,000,000	206,000,000	289,000,000
TOTAL RAPID TRANSIT PROGRAM	60,000,000	206,000,000	295,000,000

III. Abbreviated Version Program of Projects

The Program of Projects for the first annual element consists of three parts. One part is the whole range of existing bus services now offered by our existing fleet of 2,086 buses.

It assumes that the 25 cent flat fare will be continued as would special lower fares for senior citizens, handicapped persons and students. This also implies that the two grid systems, and existing park and ride lots would be continued.

TABLE 3

RECAPITULATION OF COSTS ASSOCIATED WITH
FIRST ANNUAL ELEMENT
Dollars in Thousands

I. TO BE FUNDED FROM FAREBOX, SB 325 L.A. COUNTY REVENUE SHARING AND UMTA CAPITAL GRANT AND OPERATING FUNDS

A.	Continuation of existing services	
B.	Santa Monica Freeway Preference	(50)
C.	New Park and Ride Services from Canoga Park, San Pedro, Torrance, Pomona, Puente Hills, Duarte and West Covina	(28)
D.	Increased minibus service in downtown L.A.	(21)
E.	Improved local services in Cerritos Mid-Cities Area, San Gabriel Valley and South Bay	(150)
F.	Preferential Freeway Projects on Hollywood, Harbor, and Golden State Freeways	(75)
G.	Augmented Local Services in Central Los Angeles, West Los Angeles, Glendale-Eagle Rock, Cerritos-Mid-Cities area and in the San Gabriel Valley	(35)

2231 bus years at 68.8 per bus year	$ 153,500
Debt service	$ 3,000

Note: Numbers in parentheses represent the number of buses required for the designated service.

II. TO BE FUNDED FROM FUNDS UMTA CAPITAL GRANT FUNDS

Bus capital plan (Table 2)	$ 61,500

III. TO BE FUNDED FROM L.A. COUNTY FUNDS AND PROPOSITION 5 FUNDS

Commuter Rail	750
Rapid Transit	59,000
	$ 277,750

The second part of the first annual element covers the operational improvements described in Section I of this report and recapitulated below.

The third and last part includes the capital equipment and facilities to support existing services and to provide new ones.

For the reader's convenience, the costs of these are spelled out in Table 3.

A formal lengthier version of the Program of Projects contains certain matter which is duplicated in earlier chapters of this paper. For this reason, the author has elected to include here only an abbreviated version of the Program. The more formal version will be submitted as a separate document.

A perusal of Table 2 (the capital budget) will reveal that the funds required to implement the program ($74,436,972) will exceed the funds ($61,500,000) likely to be available. This condition will necessitate a prioritization of projects as some subsequent date.

IV. PROGRAM TO CONSERVE ENERGY AND TO IMPROVE THE EFFICIENCY OF TRANSIT SERVICE

A. Introduction

The original objective in the public funding of transit was largely of an emergency nature; a vital element in the transportation system was in danger of going out of existence entirely. Now that mere survival seems more assured, the growth of transit must be guided by efficiency considerations if public funds are to be a major financial source.

RTD has for some time been concerned with a variety of efficiency issues. Anticipating that public funding would bring ever more stringent requirements of this sort, we have recently been taking a more comprehensive and systematic view. This document is intended to reflect an efficiency emphasis that is dispersed throughout the agency, yet well coordinated for greatest overall gain.

In the most elementary sense, efficiency is just the comparison of output with input. But in dealing with a complex transportation system, many definitions are necessary. For each potential

betterment of efficiency there is a corresponding payoff. A systematic overview will enable RTD to allocate its available human energies to those projects that really count.

This discussion begins with the development of a logical framework for the discussion of efficiency. Descriptions of specific programs and projects will be given. Last, a tentative timetable for carrying out the projects will be proposed. (See Table 3)

B. A Hierarchy of Efficiences

In lieu of a universal definition of efficiency, a good alternative is to treat it at several levels. At the lowest, or most detailed level, the concern could be with vehicle performance. The other end of the scale would have to do with questions of the basic need for travel, and how that need could be met. Somewhere in the middle would be the concern with the effectiveness of the transit mode in moving people under specified conditions.

C. Definition of Hierarchy of Efficiencies

1. The Vehicle

Vehicle performance; fuel efficiency, useful life relative to initial investment and maintenance. Effectiveness of

TABLE 3

PROGRAM ELEMENT	FISCAL YEAR 1976	LATER
Vehicle		
Fuel Saving	A continuing program.	
High capacity vehicles	30 Volvo articulated units expected to be ordered by August 1975.	Further use depends on initial experience.
Line		
Measurement and evaluation	Detailed ridership and cost profiles of all lines to be completed during FY 76. Some adjustments expected based on results. Also marketing efforts.	Refinement of profiles on a continuing basis. Determination of service distribution on an area-by-area basis.
Operating speed	Analyses should show where greatest fains to be made from improved operating speeds. Work toward more preferential facilities.	
Interval maintenance	Analysis.	
Transit System		
Management Information System	Computer installed and acceptance tests should be completed prior to FY 76. Conversion of software. Bring RUCUS and SIMS on line. Work toward data links with all divisions.	Automated customer information. Continuation of type of projects begun in FY 1976.

TABLE 3 (CONTINUED)

PROGRAM ELEMENT	FISCAL YEAR 1976	LATER
Transit System (Continued)		
Passenger Monitoring	Several passenger counting devices to be installed for experimentation.	Full passenger and fare counting system to be developed.
Communications	Continue to equip fleet with 2-way radios.	
Maintenance Facilities		
Criteria Study	Study should be 2/3 complete by end of FY 76.	
Transportation System		
Line-Haul Facilities	Open special lanes on Santa Monica freeway for buses and carpools.	Contraflow lane for buses only on Hollywood freeway. Other facilities as experience indicates.
Surface street preference	Planning phase	
Fare structure	Current flat fare structure may be altered.	
Roadway modification and parking management	No major specific actions foreseen, other than continued installation of preferential ramp lanes on freeways, in conjunction with ramp metering.	

seating configuration on loading times and capacity.

2. The Line

For fixed route operation at least, this is really the basic unit of service. The basic inputs of vehicles and drivers are distributed in space and time so as to accommodate and encourage riders, without having a glut of unutilized capacity. Efficiency is described here in terms of the cost to serve an average rider.

3. Transit System

This is the level most closely related to the transit agency management function, and the highest level that is largely under transit management control. The prime question of efficiency here is how to allocate available resources among services to produce the greatest aggregate transit riding benefit per unit cost.

4. Transportation System

With all modes of travel considered as a single system, the question of relative modal efficiency arises. Steps to encourage modal shifts should be evaluated at this level.

5. Travel

The most fundamental level of efficiency is the arrangement of activities in space and time so as to minimize the need for travel, or to shift to travel patterns that are more easily served. One example is the staggering of work hours.

Each of these five (5) levels of efficiency is represented by programs in the Los Angeles area. They tend to be most advanced at the lowest levels. For example, fuel efficiency has long been an important concern in the transit industry, and extensive records on performance are maintained. At the other end of the spectrum, little has been done to alter primary arrangements, most particularly land use.

D. Approach

In its drive for efficiency, RTD is balancing two thrusts; attempting to move on programs as rapidly as possible, yet making a careful analysis of the probable payoffs of a wide variety of existing and potential programs. As analysis and evaluation proceed, significant shifts in emphasis could be indicated.

The analysis process begins with the definition of objectives. What is transit supposed to accomplish? Who should it serve, and what kinds of travel should it emphasize? Having a better idea of what is wanted from transit, we will look toward defining appropriate measures of success. RTD intends to coordinate with other operating agencies and with UMTA in developing common criteria and standards, to allow valid intra-industry comparisons of efficiency.

The next step is to make a thorough search for candidate actions which could be added to existing projects to round out the overall efficiency program. Following an analysis of each potential action pilot programs would be undertaken to allow experimenting prior to full-scale implementation.

E. Programs

Existing and planned programs are listed here, according to the five (5) levels of the postulated hierarchy. The list is not exhaustive, intended only to be indicative of efficiency efforts in the Los Angeles area.

F. Vehicle

1. Fuel Saving

A comprehensive program of fuel record keeping and engine maintenance for maximum fuel economy has been the practice at RTD for many years. Ideally, concern for fuel saving would be an integral part of the effort to minimize operating costs. Until the true social cost of fuel is reflected in the price paid by the consumer, it will have to be tracked through the accounting system as a separate item.

2. High Capacity Vehicles

For some service applications, vehicles with greater capacity than the present 40-foot buses will give higher productivity. RTD is planning the purchase of 30 Volvo articulated buses, capable of seating 66 passengers compared with the standard of 47 to 51. The expectation is that these buses will actually obtain better fuel mileage than realized from present equipment.

G. Line

1. Measurement and Evaluation

RTD has recently begun to build up its internal analysis

capability, as well as trebling the size of its checking personnel. The initial work of these personnel will be to gain a vastly improved knowledge of line-by-line performance. This knowledge will be used to form readjustments of lines. Where excessive peaking of demand is found, promotional efforts will be directed at filling capacity that is unavoidably maintained. Adequate data will allow marketing programs to orient to the greatest potential payoffs.

2. Operating Speed

Improvements in operating speed benefit both rider and system operator. Efforts here will likely focus on local trouble spots, since operating speeds in the Los Angeles area are already among the highest in the nation. Lines will be analyzed to discover where speeds cannot be reliably maintained, and RTD will work with those responsible for street traffic to effect appropriate changes. Several bus priority measures are underway in Los Angeles, and more are planned. To fully realize these opportunities, transit lines are rerouted and rescheduled to gain full advantage.

3. Interval Maintenance

Related to the problem of maintaining consistent operating speeds is the traditional problem of bunching that occurs on

high volume bus lines. This can seriously diminish the capacity realized from the equipment allotted to a line. RTD will be looking into the causes of bunching in order to determine a range of possible corrective actions. Traffic measures and improved communications are likely to be emphasized.

H. Transit System

In general, programs of this category are intended ultimately to adjust the allocation of available resources to the most needed and useful services. An increasing emphasis on marketing should lead toward further differentiation of services, as well as more refined fare structure.

1. Management Information System

A new Univac 1106 computer, purchased under an UMTA capital grant and now being installed, will be the basic hardware on which to build a comprehensive data system. Existing programs used in payroll and scheduling will be converted and improved and new programs added. Most notable among the new software will be RUCUS and SIMS.

2. Passenger Monitoring

In the near-term, several means of getting better information on ridership patterns are planned. These include better methods of manual counting and the use of sampling methods based on fare counts. Within a few years we expect to automate the passenger counting process, and to that end the Board has authorized purchase and installation of several counters on a pilot basis.

3. Communications

Inefficiencies can often be traced to slow response times. Reduction of the time required to meet unforeseen incidents will depend on improvements in the communications system.

4. Maintenance Facilities

As RTD expands its bus fleet, it is building increased efficiency into its physical plant. New clearing and servicing equipment and methods are anticipated that should significantly increase productivity of the work force.

5. Criteria Study

This study, an in-depth investigation of criteria for capital grants, was undertaken by RTD for UMTA. While intended to

determine the relevance and reasonableness of the many factors required for consideration of capital grant requests, this study will inevitably produce information and insights that will have value for many aspects of transit improvement.

I. Transportation System

Only by taking a comprehensive view of all modes of transportation can the greatest potential gains in transportation efficiency be realized. Although RTD cannot by itself take steps to control traffic, pre-empt lanes, create auto-free zones, etc., it has been participating in a number of joint efforts with other local agencies. The number of cooperative programs can be expected to multiply.

As examples of past cooperation, special left turning privileges for RTD buses are provided wherever prohibitions against auto left turns have been used to speed rush hour traffic. The stringent enforcement of bus stop zones in Los Angeles may be the best in the nation.

1. Line-Haul Facilities

The El Monte Busway, a joint project between RTD and Caltrans, has attracted ridership at a rate that continues to grow.

RTD will continue to modify its services to utilize the busway. The next such project will test the effectiveness of converting an existing freeway lane to high occupancy vehicles. These and other pilot programs will be compared, and preferential treatment for transit will eventually be extended to most other freeways.

2. Surface Street Preference

In cooperation with the Los Angeles City Traffic Department, RTD has established a bus-only lane through the downtown area.

3. Countywide Flat Fare

In April, 1974, a 25¢ flat fare was instituted to replace the earlier complicated zone system. This action can be regarded as an experiment to test the demand for long distance transit travel unconstrained by fare level, since 25¢ is virtually negligible for long distances. Long distance trips have increased markedly, especially where expedited service has been provided. The 25¢ flat fare has been justified on the basis of encouraging a shift from auto to transit.

4. Roadway Modification

Over the years, most roadways were built without cognizance of the needs of transit travelers, and thus have inhibited transit use. Special corrective projects can be expected in the future, such as special transit ramps or ramp lanes for transit, loading areas, etc. Of course, the RTD role in roadway projects would be primarily on a consultative basis.

5. Parking Management

Although there has not been great enthusiasm for any measures that would curtail parking, this may be the most cost-effective single action to encourage a shift from private autos to transit. A range of measures are possible, but could be as simple as a relaxation in praking requirements for new developments. RTD will continue to advocate better parking management.

J. Travel

An infinite variety of public and private decisions combine over the years to determine land use and the resultant demand for travel. Obviously, RTD cannot have significant control over

such a vast array of activity, but will act as advisor, consultant and advocate for transit, providing information as required so that decision makers will at least be aware of how land use can become more compatible with efficient transportation.

K. Timetable

At this time, a specific list of dates for accomplishment of the above mentioned program elements is scarcely possible. This discussion should be regarded only as a rough indication of status or timing.

V. Estimates of Future Ridership

Time constraints under which this document was produced made it impossible to provide precise estimates of ridership resulting from the proposed improvements. Therefore, the most that can be advanced on this subject is an informed judgement.

Our bus system is presently carrying about 635,000 passengers per day. Assuming that all of the buildings, facilities and equipment outlined above were made available to the District, ridership could increase by up to 100,000 to 150,000 trips per day.

VI. Measures Which Are Directed Toward Better Coordination of Area's Transit Services

The measure which will do most to achieve improved coordination of the area's transit services is the County's continuing its subsidy of the County-wide flat fare. One feature that the program includes is a transfer interchange arrangement among the District and each of the eight municipal carriers within the County. This arrangement allows any user to transfer to the lines of any publicly-owned carrier from the lines of any other at a cost of only ten cents.

For all practical purposes, there is little or no duplication of services within Los Angeles County. In the limited number of cases where municipally-owned and District buses move along the same street, no real competition exists. By long-standing tradition, the municipal operators handle local trips and the District moves long distance intercity trips. In most cases, the public has become aware of this distinction and there is no effort on the part of any carrier to attempt to solicit passengers of the other. Indeed, there is no particular financial incentive to do so, since the County pays for most costs anyway.

Regarding duplication within Orange County, the two transit districts are presently discussing the problems associated with SCRTD relinquishing certain lines within Orange County to OCTD.

Several other examples of coordination of the area's transit services have been discussed in some detail elsewhere in this paper. For this reason, they are simply listed here to refresh the reader's memory on this subject. This group includes the following:

Joint use by Santa Monica Municipal Buslines and the District of the preferential lane on the Santa Monica Freeway;

joint use by the District of the OCTD parking facility at the intersection of Santa Ana and Riverside Freeways;

an arrangement to accept transfers from the La Mirada Dial-a-Ride and from private carriers operating in Simi Valley (in Ventura County) at the Los Angeles County line and with a private carrier operating in Manhattan Beach;

joint use of the El Monte Busway by buses of Western Greyhound and Continental Trailways, Inc.;

and sharing the benefits of the software programs dealing with run cutting and scheduling, management information system customer information and inventories.

The District will include within its new systems map -- which is widely distributed to the public -- the lines of each of the municipally operated carriers within Los Angeles County.

Proposed Management Efforts to Decrease Costs and Increase the Efficiency of System Operations

For several years, the District has offered a tuition refund arrangement to its employees who take after-hours courses at UCLA Extension leading to a certificate from UCLA in Transportation. One interesting feature of this endeavor is that elementary conversational Spanish is one of the courses within the curriculum. A large fraction of the District's patronage is comprised of Spanish-speaking persons. It is expected that all this educational effort will result in operational efficiencies.

Another interesting efficiency measure is the RUCUS software package which was developed by UMTA and is being implemented by the District. It deals with run cutting, an area in which it may be possible to achieve some significant economies.

Another software package is going to be utilized to provide constant monitoring capability as to inventories.

Still another matter, not mentioned in the capital budget, but dealing nevertheless with achieving operational efficiencies, is the Criteria Study. Since UMTA has ample detail of the subject matter, none is included here.

Consideration Being Given to Meet the Needs of Those Who are Totally Transit Dependent

As stated elsewhere, the South Central grid program is directed at the County's most concentrated transit-dependent group. To a lesser extent, the San Fernando Valley grid will service another large segment of transit dependent persons.

It is also significant that the 25¢ flat county-wide fare program considerably reduces the cost of bus travel for such persons.

The transfer interchange arrangements with each of the municipally operated systems and with OCTD and with other systems in Simi Valley, La Mirada and Manhatten Beach tends to increase the extent of the geographical area in which transit-dependent persons may travel by bus.

Description of How Proposed Improvement Will Deliver Maximum Practical Service to the Area

When combined with existing facilities and services, it is expected that the operational and capital programs outlined above will deliver maximum practicable service to the area. This conclusion is reached on the basis that these programs coincide with the adopted Regional Transportation Plan.

Appendix A
Statistical Data On Operations

Net Operating Income

Operating revenue minus (-) operating expense.

Net Operating Income/Mile

The result of the above subtraction per mile.

The information can be summarized in chart form:

SUMMARY OF OPERATIONAL CHARACTERISTICS

*(000)

ITEM		FY 73-74	FY 74-75	FY 75-76
1. ROUTE MILES		3300	4000	4700
2. NUMBER OF BUSES		1859	2170	2362
3. AVERAGE FLEET AGE (YEARS)		8.5	9.9	10.5
4. NUMBER OF EMPLOYEES		4586	5291	5750
5. ANNUAL BUS HOURS		* 5,326	6,512	7,000
6. ANNUAL BUS MILES		* 67,225	80,665	101,000
7. ANNUAL REVENUE PASSENGERS		*197,870	195,000	225,000
8. ANNUAL REVENUE PASSENGERS/MILE		2.94	2.42	2.22
9. PASSENGER REVENUE		* 48,100	44,128	43,800
10. TOTAL OPERATING REVENUE		49,516	46,650	45,216
11. OPERATING REVENUE/MILE		.74	.58	.45
12. TOTAL OPERATING EXPENSE		* 93,337	128,200	163,250
13. OPERATING EXPENSE/MILE		1.39	1.59	1.62
14. NET OPERATING INCOME OR (DEFICIT)		*(43,821)	(81,550)	(118,034)
15. OPERATING INCOME OR (DEFICIT)/ MILE		(.65)	(1.01)	(1.17)
16. CASH BASE FARE		25¢	25¢	25¢
17. CASH ZONE FARE		none	none	none
18. SENIOR CITIZEN CASH FARE		10¢	10¢	10¢
19. STUDENT CASH FARE		15¢	15¢	15¢
20. TOKEN PRICE		30¢	--	--

To the extent practicable, a brief narrative should outline how well the existing system serves present needs (especially those groups identified as being totally transit dependent) by describing current service areas, user characteristics, trip characteristics,etc

A complete description of capital facilities and equipment should be given when appropriate to include:

1. Transit Buses(Purchase cost, size, and passenger capacity) (See Ap. A, P. 3)
2. Bus Terminals (2)
3. Bus Shelters (Privately Maintained)
4. Bus Stop Markers (28,000)
5. Bus Benches (Privately Maintained)
6. Signal and Communication Equipment (16 base stations, 632 bus radios, 95 supervisor auto radios - See Ap. A, Pp. 3-4)
7. Supervisory and Security Cars (See Ap. A, Pp 5 et seq.)
8. Automated Fare Collection Equipment (none)
9. Fare Collection Equipment (none)
10. Administratic Fixtures and Equipment
11. Shops, Garages, Service Equipment
12. Improvements to Existing Buses
13. Miscellaneous Transit Bus System Improvements
14. Fleet inventory description: (See Ap. A, Pp. 3-4)
    a. Bus number (or series) assigned by operator
    b. Quantity
    c. Size of Buses in passenger capacity
    d. Type of manufacturer and model number
    e. Year of manufacture
    f. Price of purchase (if known)
    g. Type of fuel used - diesel

DESCRIPTION OF BUSES OWNED
AS OF JANUARY 1st, 1972

ACTIVE BUSES

BUS SERIES FROM	TO	NO. OF BUSES	MAKE AND MODEL NUMBER		TYPE ENGINE	LENGTH	WIDTH	NO. OF SEATS	APPROXIMATE YR. PURCHASED
1000	1087*	88	GMC	T8H5307A	GMC-V8	40'	102"	47	1973
1089	*	1	GMC	T8H5307A	GMC-V8	40'	102"	47	1973
1090	1099*$	10	GMC	T8H5307A	GMC-V8	40'	102"	47	1973
1100	1118	19	Mini-Bus	MB-159-2D	Dodge-V8	24'	96"	20	1971
1200	1201	2	GMC	TDH-3301	GMC-V6	29'3"	95-3/4"	33	1969
1202	1205	4	GMC	TDH-3301	GMC-V6	29'3"	95-3/4"	33	1970
1300		1	GMC	TGH-3101	GMC-6	29'3"	96"	31	1952
1301	1304	4	GMC	TGH-3102	GMC-6	29'3"	96"	31	1956
1305	1306	2	GMC	TGH-3102	GMC-6	29'3"	96"	31	1958
1400	1401	2	GMC	TDH-3501	GMC-V6	29'	96"	35	1965
1402		1	GMC	TDH-3501	GMC-V6	29'	96"	35	1966
1403		1	GMC	TDH-3501	GMC-V6	29'	96"	35	1967
1404		1	GMC	TDH-3501	GMC-V6	29'	96"	35	1966
1405		1	GMC	TDH-3501	GMC-V6	29'	96"	35	1964
1406		1	GMC	TDH-3501	GMC-V6	29'	96"	35	1966
1407		1	GMC	TDH-3501	GMC-V6	29'	96"	35	1964
2025	2029	5	GMC	TDM-4515	GMC-6	35'	96"	45	1959
2031	2044	14	GMC	TDM-4515	GMC-6	35'	96"	45	1959
2101	2118	18	GMC	TDH-4801	GMC-6	37'9"	102"	48	1955
2120	2183	64	GMC	TDH-4801	GMC-6	37'9"	102"	48	1955
2200	2219	20	GMC	TDH-4801	GMC-6	37'9"	102"	48	1956
2220	2221	2	GMC	TDH-4512	GMC-6	37'9"	96"	45	1956
2222	2223	2	GMC	TDH-4512	GMC-6	37'9"	96"	45	1959
2224	2239	16	GMC	TDH-4512	GMC-6	35'	96"	45	1955
[illegible]	2254	15	GMC	TDH-4512	GMC-6	35'	96"	45	1955
2255	2259	5	GMC	TDH-4512	GMC-6	35'	96"	45	1955
2260	2263	4	GMC	TDH-4512	GMC-6	35'	96"	45	1953
2264	2280	17	GMC	TDH-4512	GMC-6	35'	96"	45	1957
2281	2282	2	GMC	TDH-4512	GMC-6	35'	96"	45	1953
2300	2303	4	GMC	TDH-4801	GMC-6	37'9"	102"	48	1954
2305	2355	51	GMC	TDH-4801	GMC-6	37'9"	102"	48	1954
2357	2368	12	GMC	TDH-4801	GMC-6	37'9"	102"	48	1954
2370	2399	30	GMC	TDH-4801	GMC-6	37'9"	102"	48	1954
2400	2404	5	GMC	TDH-4517	GMC-V6	35'	96"	45	1960
2500	2501	2	GMC	TDH-3714	GMC-4	30'8"	96"	37	1956
2502		1	GMC	TDH-3714	GMC-4	30'8"	96"	29	1956
2503	2504	2	GMC	TDH-3714	GMC-4	30'8"	96"	37	1956
2505	2506	2	GMC	TDH-3714	GMC-6	30'8"	96"	37	1953
2507	2508	2	GMC	TDH-3714	GMC-6	30'8"	96"	37	1956
2509	2510	2	GMC	TDH-3714	GMC-6	30'8"	96"	37	1953
2600	2602	3	GMC	TDH-4519	GMC-V6	35'	96"	45	1967
2603	2604*	2	GMC	TDH-4519	GMC-V6	35'	96"	45	1967
3000	3014*	15	GMC	S8M-5303A	GMC-V8	40'	96"	49	1966
3100	3199*	100	GMC	T8H-5307A	GMC-V8	40'	102"	51	1974
3200	3299*	100	GMC	T8H-5307A	GMC-V8	40'	102"	51	1974
4000	4054	55	Flxible	411-GD-C2	CUM-V8	30'6"	96"	35	1966
4055	4058*	4	Flxible	411-GD-C2	CUM-V8	30'6"	96"	35	1966
4200	4228*	29	Flxible	111-DD-D51	GMC-V6	35'	96"	45	1968
4300	4341*	42	Flxible	111-DD-D061	GMC-V8	35'	96"	45	1973
[illegible]0	5049	50	GMC	TDH-5303	GMC-V6	40'	102"	51	1963
[illegible]0	5099#	50	GMC	TDH-5303	GMC-V6	40'	102"	51	1963
5100	5199	100	GMC	TDH-4801	GMC-6	37'9"	102"	48	1958

ACTIVE BUSES - Continued

SERIES FROM	SERIES TO	NO.OF BUSES	MAKE AND MODEL NUMBER	TYPE ENGINE	LENGTH	WIDTH	NO.OF SEATS	APPROXIMATE YR.PURCHASED
5200	5224	25	GMC TDH-5301	GMC-V6	40'	102"	46	1960
5225	5254	30	GMC TDH-5301	GMC-V6	40'	102"	51	1961
5300	5374	75	GMC TDH-5301	GMC-V6	40'	102"	51	1960
5400	5479	80	GMC TDH-5301	GMC-V6	40'	102"	51	1961
5500	5529	30	GMC TDM-5301	GMC-V6	40'	102"	51	1961
5600	5609*	10	Flxible FD8V-401-7-UL-AC	CUM-V8	40'	96"	49	1965
5611	5624*	14	Flxible FD8V-401-7-UL-AC	CUM-V8	40'	96"	49	1965
5700	5734	35	Flxible F2D6V-401-1	GMC-V6	40'	102"	50	1961
5800	5899	100	Flxible F2D6V-401-1	GMC-V6	40'	102"	50	1962
5900	5999	100	Flxible F2D6V-401-1	GMC-V6	40'	102"	50	1963
6000	6081	82	Flxible F2DV8C-401-1	CUM-V8	40'	102"	50	1965
6082	#	1	Flxible F2DV8C-401-1	CUM-V8	40'	102"	50	1965
6083	6099	17	Flxible F2DV8C-401-1	CUM-V8	40'	102"	50	1965
6100	6109#	10	Flxible 111-CC-D51	GMC-V6	40'	102"	51	1968
6110	6131*	22	Flxible 111-CC-D51	GMC-V6	40'	102"	51	1968
6132	6154*#	23	Flxible 111-CC-D51	GMC-V6	40'	102"	51	1968
6155	6199*	45	Flxible 111-CC-D51	GMC-V6	40'	102"	51	1968
6201	6217*#	17	Flxible 111-CC-D51	GMC-V6	40'	102"	51	1968
6218	6274	57	Flxible 111-CC-D51	GMC-V6	40'	102"	51	1968
6500		1	GMC TDH-4517	GMC-6	37'9"	102"	45	1949
6500@		15	GMC TDH-4801	GMC-6	37'9"	102"	48	1954
6583	6598	16	GMC TDH-5105	GMC-6	39'9"	101"	51	1957
6599		1	GMC TDH-5103	GMC-6	40'	102"	51	1951
7000	7099*	100	Flxible 111-CC-D61	GMC-V8	40'	102"	51	1971
7100	7199*	100	Flxible 111-CC-C31	CUM-V8	40'	102"	51	1971
7200	7276*	77	Flxible 111-CC-D061	GMC-V8	40'	102"	51	1973
9900	*	2	Neoplan N-122/3	CUM-V8	40'	102"	84	1974
TOTAL OWNED 2,070								

* - Indicates Air Conditioned (Total Owned - 867)
\# - Indicates Bus-O-Rama Signs (Total Assigned - 101)
$ - Indicates Public Address System (Total Equipped - 10)
@ - Interspersed: 6501-03-04-10-16-20-21-34-38-42-44-47-52-53-70

\+ 7300 7399 100 Flxible 111-CC-D061 GMC-V8 40' 102" 47 1975

ISSUED: TRANSPORTATION STATISTICAL DIVISION
REVISED: 1-19-75

+To be added during 1975

Supervisory Security Cars
SOUTHERN CALIFORNIA RAPID TRANSIT DISTRICT
ASSIGNMENT OF AUTOMOBILES - February, 1975

Automobiles Assigned to	Number of Automobiles
Executive Staff	9
Management Staff	9
Transportation Department	
Staff	8
Instruction Department	1
Schedule Department	1
Stops & Zones Division	3
Supervisory Division	4
Maintenance and Equipment	
Department	9
Mail Cars	2
Special Agents Department	7
Personnel Department	3
Marketing Department	
Community Relations	3
Public Information	6
Planning Department	2
Purchasing and Stores Department	1
Pool Automobiles	
Executive Pool	3
Engineering Pool	3
Maintenance Pool	3
Planning Pool	2
Purchasing Pool	1
Special Agents Pool	1
Supervisory Automobiles	17
Total	98

Detailed Description of Elements in Five-Year Capital Budget
SOUTHERN CALIFORNIA RAPID TRANSIT DISTRICT
FIVE-YEAR CAPITAL IMPROVEMENT PROGRAM
BUS TRANSIT

DESCRIPTION OF PROGRAM ELEMENTS

GENERAL:

In general, the Five-Year Capital Improvement Program for the Southern California Rapid Transit District proposes improvements to the 11 maintenance and operating division yards. In addition to reactivating the Macy Street Yard and providing leasehold improvements at two interim sites, six new bus operating yards will be acquired and improved. Two of these will replace the interim facilities mentioned above, and one will be in connection with a passenger terminal and parking lot facility in Pomona. A new Central Maintenance Facility will be constructed, replacing the present South Park Shops. Seven Park 'N' Ride facilities and a Passenger Transfer Center at LAX will be constructed, along with expanded parking at the El Monte Terminal Complex. Two special bus staging areas will be acquired near the Los Angeles CBD.

Operational improvements include adding 920 buses and replacing 1030 buses during the five-year program, in addition to refurbishing and replacing a portion of the minibus fleet. Other operational improvements include radios, bus stop signs and shelters along with emergency generating equipment for the operating yards. Maintenance improvements provide equipment improvement and modernization to adequately maintain the District's bus fleet. Administrative support projects include EDP equipment

for improved management procedures, along with special equipment required to properly monitor service levels.

1. BUS FACILITIES IMPROVEMENTS

GENERAL:

None of the division yards have had any major improvements for over 30 years except the new yard and buildings constructed for the Long Beach Division (Division 12), and isolated improvements at some of the Division yards.

Most of these yards were inherited from previous transit properties primarily devoted to rail transportation, with buildings constructed prior to any earthquake code requirement. Most of the buildings presently used for the maintenance of buses were originally designed for railcar maintenance and, therefore, cannot be efficiently utilized. Most of the yards are not only limited in size, but have buildings located in areas that were efficient for rail maintenance and, therefore, are not oriented in a manner to make bus operations cost effective.

As the bus complements of each division yard are increased, a greater inefficiency of operation is experienced, as well as congestion, that often extends out into the public street area during the evening service period.

The Five-Year Capital Improvement Program provides for the reconstruction of the older yards and revisions to the newer yards in order

to provide a better facility to meet the needs of bus maintenance and operation, as well as to allow for the expansion-required service the additional buses the District is proposing to acquire.

In an attempt to be compatible with the surrounding environmental aspects of each of the division yards, the District is proposing aesthetic screening, sound attenuation and landscaping at many of the existing yards and all of the new yards. All of the operating divisions are scheduled for new fuel and bus cleaning equipment. All of the present bus washers and vacuum systems, except for Division 9, were constructed over 10 years ago. New equipment presently on the market is not only more efficient, but provides a higher level of interior and exterior cleaning which will improve the service level and acceptability of bus transit.

It is proposed to provide employee parking areas at all of the division yards. Employees working at the division yards arrive prior to the start of normal bus service and, therefore, must of necessity use private cars for their own transportation. As bus assignments have increased at the yards, employee parking on the adjacent streets has created an undesirable situation.

DIVISION 1 - 1016 E. Sixth St., Los Angeles

This division presently consists of 5.2 acres of land with an assignment of 185 buses. It is proposed to assign an additional 25 buses to this division, and in order to adequately handle the increased number of buses and provide for employee parking, it is proposed to acquire an additional 3.2 acres of land immediately south of the present yard. The proposed

acquisition would make it possible to have access from Industrial Street which would give better circulation and use of this yard. It is proposed to add 1,000 square feet to the present Transportation Building which was built in 1961 and has 5,600 square feet of floor space with 285 operators assigned to the division. Also proposed at Division 1 is grading and paving for the new property acquisition, as well as to solve serious drainage problems in the existing yard.

It is also proposed to demolish the present antiquated paint and tire shops and construct a new building of 3,000 square feet for a tire shop. All painting will be done at the New Central Maintenance Facility where improved paint shop equipment will be installed. In addition to the above improvements, a new bus washer, 3,350 feet of security fencing and improved yard lighting is proposed.

DIVISION 2 - 720 E. 15th Street, Los Angeles

This yard presently consists of 7.6 acres with an assignment of 240 buses. Future bus assignment will probably remain about the same. It is proposed to acquire .8 of an acre of land to relieve the peak storage problems presently encountered. It is also proposed to install doors, heating and improved lighting for the equipment maintenance building, and pave the area to be acquired. The present Radio Maintenance Facility is inadequate to maintain the existing radio complement, let alone new acquisitions that are planned, and will be relocated to the new Central Maintenance Facility. In addition to the above improvements, a new bus

washer, vacuum and fueling facility will be constructed, along with security fencing and improved yard lighting.

DIVISION 3 - 637 W. Avenue 27, Los Angeles

Improvements at this division are presently funded under an UMTA Grant and consists of construction of all new facilities, with the exception of the Transportation Building. It is also proposed to add a propane fueling station for servicing minibuses presently on order that will utilize propane as a fuel. In addition, new yard paving, landscaping and lighting are included in the UMTA Capital Grant.

DIVISION 5 - 2300 W. 54th Street, Los Angeles

Improvements at this facility are included in a pending UMTA Capital Grant (CA-03-0106). The present yard consists of 8 acres and services 280 buses, which is anticipated to increase to 330 buses in the future. It is proposed to acquire land immediately adjacent on the east side of the present yard for better circulation and for employee parking. The present Transportation Building was constructed in 1912 and consists of 8,300 square feet. It is proposed to remove this building and construct a new transportation building to handle approximately 450 operators. It will also be necessary to remove and reconstruct the tire shop with 2,500 square feet of modern facilities. The new property acquisition will be resurfaced and special drainage facilities installed. In addition to the above improvements, a new bus washer, vacuum cleaner, 2,500 feet of security fencing, and improved yard lighting is proposed

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DIVISION 6 - 100 Sunset Avenue. Venice

This yard is located in Venice and presently handles 100 buses. All of the facilities are adequate for this complement except for the bus cleaning equipment. It is proposed to acquire new bus washer and interior equipment.

DIVISION 7 - 710 San Vicente Blvd., West Hollywood

Land and improvements for this yard are included in UMTA Capital Grant CA-03-0090. The present yard consists of 4.9 acres with very limited access to existing streets. It is proposed to acquire an additional 5.7 acres immediately adjacent to the present yard which will provide adequate storage for the 273 buses proposed for service at this division. This acquisition will also provide better street access and circulation. Also proposed is the removal and construction of both the transportation building and the maintenance building. These buildings are constructed for a very limited number of buses and are inadequate for even the present operation. It is also proposed to reconstruct the service station facility and relocate the underground tanks away from a subsurface water flow. Extensive filling of the property to be acquired and surfacing is required, as well as the installation of drainage facilities in the existing yard. In addition to the above improvements, a new bus washer, vacuum cleaners, 3,400 feet of security fencing, and landscaping is proposed.

DIVISION 8 - 14557 Sherman Way, Van Nuys

The present yard consists of 5.7 acres and was developed for rail service and maintenance. It is proposed to install bus cleaning equipment in order to continue the use of this yard until replacement facilities are constructed in the San Fernando Valley. At that time, the new equipment installed, along with reusable existing equipment, will be located at one of the new operating divisions in the Valley.

DIVISION 9 - 3501 N. Santa Anita Ave., El Monte

These facilities are funded under UMTA Capital Grant CA-03-0034 and included the complete reconstruction and relocation of the existing Division 9 Facility. This Capital Improvement Program includes only the final year of construction. Most of the facilities were constructed during Fiscal Year 1975.

DIVISION 12 - 920-970 Chester Place, Long Beach

This yard was constructed in 1966 and 1967 and all facilities are designed for an economical operation under the present and future bus assignment. It is proposed to install a new vacuum cleaner and 1,900 feet of security fencing and acquire land for employee parking.

DIVISION 14 (South Park Shops) - 5414 S. Avalon Blvd.

This division functions as the major overhaul center for all of the operating equipment. The yard consists of 9.8 acres which is adequate in size for all present maintenance requirements. It is proposed to refurbish and air condition the present purchasing and stores area, and

construct a silk screen shop. After the completion of the new Central Maintenance Facilities, it is proposed this yard will be converted to an operating and maintenance facility. This conversion will occur after the five-year program and, therefore, is not described in detail; however, it is anticipated both new and existing equipment presently at this site will be relocated to the new Central Maintenance Facility.

MACY STREET YARD

The Macy Street Yard was originally purchased and designed for a rail yard by a former transit company, and is located south of Mission Road and east of Macy Street in the City of Los Angeles. The Yard consists of 16 acres and is presently owned by the SCRTD.

There are several substantial buildings that are being leased for a truck maintenance facility. The District has signed several other leases for other portions of the facility, all of which are presently on a month-to-month basis. Improvements proposed for this facility will include remodeling and refurbishing one building for a bus maintenance facility, expanding and remodeling a second building for the transportation function, and the construction of a new fuel facility, bus vacuum and washing facility. Additionally, some minor buildings will be demolished and the Yard will be graded, drained and paved.

Security fencing and lighting, underground tanks, and automotive equipment will be provided for the establishment of a major maintenance and service facility.

DIVISION 15 - 11409 Penrose, Sunland

This facility consists of 11.8 acres located at Penrose & Tujunga in Sunland. The site is presently under lease by the District and was required in order to implement the San Fernando Valley Grid System. Minimal improvements were made on this site during Fiscal Year 1975. It is now required to add to these leasehold improvements in order to provide for the additional buses required from the expanded San Fernando Valley Grid System.

The only other bus operating facility in the San Fernando Valley is Division 8, which is presently filled to capacity.

These improvements in general consist of expanding the bus maintenance area and transportation quarters, adding bus cleaning equipment and additional work on the fueling facility.

DIVISION 18 - 777 West 190th Street, Los Angeles

This facility consists of 10.5 acres located on the north side of 190th Street, west of the Harbor Freeway. The site is presently under lease with the District and was required in order to provide storage and maintenance facilities for the buses assigned to the South-Central grid system. There are no other bus maintenance and storage facilities in the vicinity and, therefore, this site was required in order to avoid unreasonable deadhead time.

Improvements were made on this site during Fiscal Year 1975 for the first stage grid system buses. Additional buses are required

for full implementation of the South-Central grid system which requires the expanded improvements at this site. In general, the proposed improvements consist of expanding the transportation building and bus maintenance facility, along with bus cleaning equipment and canopies over the fuel and steam clean areas. Additional paving for bus storage is also proposed in this project.

2. NEW BUS OPERATING YARDS

GENERAL:

Each of the following yards are being planned for a nominal complement of 250 buses. In general, they are all required in order to meet the bus expansion program contained in this Capital Improvement Program. Additionally, one in the South-Central and one in the San Fernando Valley will replace the two temporary yards that were described in the previous section. Each of the new yards will require 10 - 12 acres of land, with new improvements consisting of a bus maintenance facility with 16 - 18 work spaces along with office and storage facilities.

Other structures of each of the yards will include a transportation building to house the bus drivers and office personnel, bus fueling facilities, washing and interior cleaning equipment, underground tanks, utilities, yard paving, lighting, fencing and other appurtenant facilities required for a complete bus operating and maintenance unit.

SOUTHEAST LOS ANGELES -

This yard will provide storage and maintenance facilities for many of the new buses proposed in this Capital Improvement Program, as well as a portion of those buses located at the temporary yard identified as Division 18. The service area for this yard will include the southeastern portion of the grid system in that area, along with other local service routes in the vicinity.

POMONA -

In addition to the bus operation and maintenance facilities described in the general section above, it is proposed to provide for a passenger terminal at this site. It is also proposed to construct a Park 'N' Ride facility contiguous to the passenger station area with FAU funds described in more detail in that section. The bus operating and maintenance facility in Pomona will eliminate the need to deadhead buses from El Monte for those routes originating and terminating in the Pomona area.

In addition to the 10 - 12 acres for the maintenance facility, it will be necessary to acquire approximately 1 acre for the station area along with 10-14 acres required for the fringe parking facility funded under the FAU portion of this Capital Improvement Program.

WEST LOS ANGELES -

The only bus maintenance facility presently serving the West Los Angeles area is located in Venice and is limited to about 100 buses.

It is anticipated the Santa Monica preferential freeway lan project, along with additional local service buses in the West Los Angeles area, will require larger service facilities than are presently located at the Venice Yard (Division 6). The present planning program appears to justify the new yard location being closer to LAX. After further studies, if this conclusion appears to be valid, it may be desirable to retain the present Division 6 facility for local service in and around Santa Monica utilizing the new site for buses operating on new service routes.

WEST SAN FERNANDO VALLEY -

This facility would provide service for the westerly portion of the San Fernando Grid System in addition to commuter buses originating in West San Fernando Valley. At this time, it is anticipated a new yard in West San Fernando Valley would replace the need for continuing the operation at Division 8 located at Van Ness & Sherman Way. Division 8 is limited in size with no possibility for expansion.

EAST SAN FERNANDO VALLEY -

This facility will replace the present temporary yard described as Division 15 in the previous section. It was necessary to obtain the temporary site to institute service for the San Fernando Valley grid system prior to the time property purchase and improvements could be made on a permanent site. This new facility will provide service for the easterly portion of the San Fernando grid, along with commuter and

local service originating in the vicinity.

SOUTHWEST LOS ANGELES -

This new facility will provide service to the westerly portion of the grid system in the South-Central area, along with commuter and local service originating in the vicinity. Some of the buses presently operating from the temporary site at Division 18 will be serviced by this yard, along with additional new route services proposed for the additional buses that will be acquired by the time this yard is operational.

3. NEW CENTRAL MAINTENANCE FACILITY

This facility will serve as the main overhaul headquarters for major service and repairs of the bus fleet. No specific area has been selected for its location as yet; however, preliminary planning indicates it should be positioned in such a way that it will have as direct access as possible from all of the bus operating and maintenance facilities.

All major overhaul, body and paint work will be performed at this site. In addition, it will contain the common support elements such as radio maintenance, sign fabrication, and central storage facilities. It will serve to replace the facilities presently located at Division 14 commonly known as South Park Shops. It is anticipated that future year Capital Improvement Programs beyond the present five year plan will provide for converting South Park Shops to an operating division.

4. FAU FUNDED FACILITIES

In general, these facilities, with the exception of the LAX Transfer Center, provide for patron parking in connection with express bus service or preferential lane projects. These facilities are intended to specifically reduce the commuter congestion on the freeway system.

The location for each of the Park 'N' Ride facilities will be oriented in such a way that minimal time will be lost in the process of the mode change. The improvements in general will consist of land acquisition of 7 to 15 acres for each of the sites, along with grading, paving; landscaping, security fencing, shelter, lighting and other improvements necessary for a Park 'N' Ride facility.

The LAX Passenger Transfer Center is needed to eliminate the need for through buses to circulate in the airport complex. This facility will allow the passengers destined for the airport to transfer to a local bus circulation system within the airport. This facility will consist of approximately 1 acre for minimal bus layover along with the shelter for patrons.

5. TRANSPORTATION FACILITIES IMPROVEMENTS

BUS STAGING AREAS -

This project consists of the purchase and improvements for two bus staging areas near the central business district. It is currently necessary to store buses on the street prior to starting the run on each

route. The short headways required in the Downtown area preclude the storage of buses at nearby division yards due to the traffic conflicts between the yard and the beginning of each of the routes.

The acquisition and improvement of a bus-staging facility in the southern portion of the rapidly developing Central City area is proposed to replace a similar bus-staging area that was lost to the District when the property was acquired by the City of Los Angeles as a portion of the new Los Angeles Convention-Exhibition Center facility. This will permit improved scheduling and performance and will permit a greater utilization of buses for fluctuation in the peakload requirements.

It is also proposed to acquire and improve property on the east side of the CBD to provide staging and layover area for routes originating in the Wilshire District. Each of these staging areas will consist of about 2 acres of property and will be improved with paving, lighting and restroom facilities for the bus operators.

EL MONTE TERMINAL COMPLEX -

The El Monte Terminal Complex parking lot is presently congested due to an overdemand for patron parking. This facility consists of a 700-car parking lot and will be expanded to hold 1400 cars early in 1976. This expansion is funded under the original Busway project.

There are currently in excess of 1000 cars utilizing this 700-car parking lot, creating delays and congestion. Due to this heavy demand, it is anticipated the 1400-car facility presently funded will be filled to

capacity shortly after it is opened. Funds for this project will provide satellite parking facilities, or expansion at the El Monte Terminal Complex, depending on the results of a feasibility report which is to be prepared on this subject.

6. OPERATIONAL IMPROVEMENTS

In July 1974, the Board of Directors adopted goals to add 1,000 buses in order to provide enriched local service, as well as improved commuter and express bus service. This policy was reaffirmed in March 1975 and has been the subject of several reports to SCAG. The proposed new service buses and replacement buses to be acquired in the next five fiscal years is consistent with the adopted goals for improved bus transit.

The adopted Capital Improvement Program will provide for a bus fleet of approximately 3,000 at the end of the Five Year Capital Improvement Program. In addition, the replacement program will allow the retirement of all buses in excess of 15 years of age.

The two-way radios and radio dispatch equipment shown for Fiscal Year 1976 will be needed for the additional radios in order to equip all of the buses in the present fleet. The radios are needed to provide quick response to emergencies that occur on the bus due to vandalism or criminal acts. These radios also allow for a better control of headway and scheduling. The radios required for new buses in future years are included in the line item for the new buses.

The Capital Improvement Program proposes the replacement of all of the 23,000 bus stop signs within the District. The enriched service proposed throughout the District requires a more informative sign, in addition to identifying the bus stop location. Bus stop shelters are proposed in selected areas where they will not only be compatible with the local environment, but are needed to serve special conditions such as required for the elderly and handicapped. Emergency generators will be installed at each of the bus operating facilities in order to continue bus servicing through power outages or as a result of power curtailment due to fuel shortages.

7. MAINTENANCE IMPROVEMENTS -

These improvements are required to provide the necessary maintenance support of the present and future bus fleet. Improvements and decentralization are proposed in connection with the brake maintenance program which will reduce downtime and thereby result in a maintenance saving.

Bus cleaning equipment, radio maintenance equipment, and miscellaneous garage equipment are all required for the continued repair and servicing of the District's bus fleet. The low emission project will result in retrofit improvements to the bus engines to improve the emissions. The paint shop modernization is required to handle the greater workload as a result of additional bus acquisitions. Bus diagnostic equipment will improve the schedule for routine checks required on all buses during each of the periodic bus inspections.