SOUTHERN CALIFORNIA RAPID TRANSIT DISTRICT

APPLICATION FOR ADVANCE FOR PUBLIC WORKS PLANNING FOR A RAPID TRANSIT SYSTEM TO SERVE THE GREATER LOS ANGELES REGION

PREPARED FOR:
UNITED STATES OF AMERICA
HOUSING & HOME FINANCE AGENCY
COMMUNITY FACILITIES ADMINISTRATION

CFA-401
(12-60)

Form approved
Budget Bureau No. 63-R874.2

HOUSING AND HOME FINANCE AGENCY

COMMUNITY FACILITIES ADMINISTRATION

FOR GOVERNMENT USE ONLY
APPLICATION NO.
DATE RECEIVED
CITY OR COUNTY
TYPE OF PROJECT

PROGRAM OF ADVANCES FOR PUBLIC WORKS PLANNING

APPLICATION FOR ADVANCE FOR PUBLIC WORKS PLANNING

(Detailed instructions for preparation of this application appear in HHFA Form CFA-402.)

The applicant requests the United States of America to advance $ 1,015,000 (See Item 5e below) under Public Law 560, 83rd Congress, as amended by P.L. 345, 84th Congress, to aid in financing the cost of plan preparation for the public work project described in Item 4. Because of the magnitude and duration of the planning project, it is requested that provision be made for interim payments of the advance monthly as the work progresses.

The applicant represents that it will make every possible effort to have available, when needed, sufficient funds to defray the cost of constructing such public works; that the data in support of this application for an advance are true, correct, and complete; that the filing of this application has been duly authorized by its governing body; that the undersigned officer has been duly authorized by formal action of said governing body to file this application for and in behalf of the applicant, to provide to the United States such additional information and documents as may be required and otherwise to act as the authorized representative of the applicant in connection with this application; and that a certified copy of the instrument evidencing such authorization is hereby made a part of this application.

IN WITNESS WHEREOF the applicant has caused this application to be duly executed in its name by its undersigned officer and its official seal (if applicant has seal) to be hereunto affixed and attested by its proper officer on

December 3, 1965, at Los Angeles, County of Los Angeles,

State of California

(SEAL)

ATTEST:

Virginia L. Rees
(Signature of Attesting Officer)
Virginia L. Rees

Secretary
(Title of Attesting Officer)

Southern California Rapid Transit District
(Legal Corporate Name of Applicant)

By Cone T. Bass
(Signature of Authorized Representative)
Cone T. Bass

Acting General Manager
(Officer's Title)

APPLICATION DATA

1. Applicant's Authorized Representative *(Name, Title, Address, Office Phone)* Cone T. Bass, Acting General Manager Southern California Rapid Transit District, 1060 South Broadway, Los Angeles, California 90015, Phone: 749-6977 Extension 411

2. Applicant's Architect or Engineer, if Selected *(Name, Address, and State License No.)*

Not as yet selected.

3. Legal Information

(a) Full and exact legal name of applicant agency:

Southern California Rapid Transit District (City, Town or Township) Los Angeles (County) California (State)

Public Rapid Transit District Refer to "Exhibit A" for Boundary

(b) Cite the applicant's basic legal authority for the following actions with respect to proposed planning and public work. Give specific statutory citation on each line. Southern California Rapid Transit District Law, Sections 30000 - 31520, California Public Utilities Code.

(1) To plan..... Section 30636, California Public Utilities Code

(2) To finance..... Sections 30700-30703, 30800-30812, 30900-31005, California Public

(3) To construct ..... Sections 30630-30636, California Public Utilities Code

Utilities Code

(c) Attach a copy of any special charter. (_____ Attached ___X___ Not applicable)

(d) Name and address of applicant's attorney Milton McKay, General Counsel

4. Proposed Public Work

(a) Description of public work.

Rail rapid transit system to serve the Los Angeles region. Initial construction phase to include four lines totaling approximately 64 route miles of system. Refer to "Exhibit B".

APPLICATION DATA *(Continued)*

4. Proposed Public Work *(Continued)*

(b) Location *(city, town, township, county, State)*

Southern portion of Los Angeles County including the cities of:

Alhambra, Beverly Hills, Compton, El Monte, Huntington Park, Long Beach, Los Angeles, Lynwood, Rosemead, Vernon and South Gate.

If applicant is a district not coextensive with a political unit, attach map showing boundaries and project location. Refer to "Exhibits A & B"

Has site been selected? ☒ Yes ☐ No (specific alignment to be determined) (Generally)

Under option? ☐ Yes ☒ No Title obtained? ☐ Yes ☒ No

(c) Applicant's population:* 1960 Census 6,042,700 1950 Census 4,151,687 Present estimate 6,885,794 (7/1/65)

*County of Los Angeles Population to be served by public work Approximately 2,200,000 residents within service area of 64 mile first phase routes plus undetermined number of daytime working and visiting population.

(d) Description of public need for proposed public work.
(Attach a copy of any available planning or survey report on the need for the project.)
Refer to "Exhibit C"

(e) Estimated cost of public work

(1) Land and rights-of-way	$ 40,820,000
(2) Construction	484,800,000
(3) Equipment	97,740,000
(4) Plan preparation - preliminary	3,115,000 (Refer "Exh. D"
(5) Plan preparation - final	20,820,000
(6) Supervision of construction	4,000,000
(7) All other costs (legal, administrative, contingencies, etc.)	107,130,000
(8) Total	758,425,000

(f) Maximum cost which applicant will set for the public work: $ 800,000,000*
*Fourth Quarter 1965 estimate.

5. Proposed Planning Work

(a) Description of planning to be done.
Attach statement describing in some detail the services to be performed by the architect/engineer and/or other consultant. Refer to "Exhibit D"

List all planning data and documents to be prepared.
Refer to "Exhibit D"

(b) Also describe briefly any such work already performed, noting whether done by consultant or applicant's forces, when done, and whether costs have been paid.
Refer to "Exhibit E"

(c) Cost of proposed planning work to be done: (Applicant contribution shown will be in the form of force account of applicant as part of planning).

	Preliminary Planning	Final Planning	Total
(1) Federal advance requested	$ 1,015,000	$	$
(2) Applicant contribution	100,000		
Total estimated cost	$ 1,115,000*	$	$

*Refer to "Exhibit D"

(d) Conformance to area plans

(1) All proposed public works must conform to any applicable overall State, local or regional plan. Is there such a plan for the applicant's area?

☐ Yes, a statement of clearance from the applicable planning agency is attached.

☒ No, a letter from applicant's chief executive officer is attached as prescribed in Form CFA-400.
Letter attached, "Exhibit F"

(2) If the proposed public work is included in an existing public works capital budget or comparable device approved by the applicant's governing body, a copy should be attached. If a public works plan and program has been filed with HHFA as part of the applicant's workable program, show date of filing _____; another copy need not be supplied. Not applicable

(3) If proposed public work is a school, health, water, or sanitary sewer facility, attach a letter from the State Department of Education or Health commenting on the proposed planning and public work. Not applicable

(4) Attach letter of comment or clearance from any other non-Federal agency having authority over planning or construction of public works of the type proposed. Not applicable

APPLICATION DATA *(Continued)*

5. Proposed Planning Work *(Continued)*

(e) Use of Federal planning funds (*See Section VIII of Form CFA-400.*)

(1) Does the requested advance include funds to reimburse the applicant for disbursements made, or to defray any costs incurred prior to the date borne by the Federal offer?

☐ Yes ☒ No

(2) Does the requested advance include funds to defray the cost of any contract entered into or to be entered into by the applicant prior to approval of the application, if in such contract the applicant is obligated to finance the plan preparation from other funds?

☐ Yes ☒ No

(3) Attach a copy of any architectural or engineering contract that has been executed for all or part of the planning described above.

(4) Does the requested advance contain any funds to cover costs of planning work which will be performed by applicant's own forces?

☒ No ☐ Yes; such costs are estimated at $_____.

(f) Plan completion

Plan preparation will begin within 60 calendar days after applicant's execution of the Federal agreement for public works plan preparation, and the completed plans will be submitted within 18 months ~~calendar days~~. This estimate includes enough time to obtain all required State or local approvals.

(g) Target date for start of construction January 1969

6. Anticipated Method for Financing Construction

(a) Indicate sources of funds and amount from each source to finance the proposed public work.

See attached Exhibit "G"

(1) General obligation bonds - authorized	$
- to be authorized	800,000,000
(2) Revenue bonds - authorized	
- to be authorized	
(3) Assessment or improvement bonds - authorized	
- to be authorized	
(4) Other sources *(specify)*	
(5) Total ...Estimated maximum (Item 4(f))	$ 800,000,000*

*Fourth Quarter 1965 estimate.

(b) Attach a copy of applicant's latest annual financial statement and complete the following items: Refer to Exh. "H"

(1) Total assessed valuation ..... $13,000,000,000 approx.

(2) Valuation is 25 % of actual valuation (approximate)

(3) Tax rate per $100 ..... District - none at present

(4) Current legal tax limit per $100 ..... District indebtedness limit 15% of Assessed Valuation

(c) If general obligation bonds will be issued, show unused general obligation debt capacity: $1,950,000,000

If an increase in present unused debt capacity is necessary, how will this be effected?

(d) If bonds payable from project revenues will be issued, attach a statement showing the estimated number of connections or users, estimated gross yearly revenue and yearly maintenance and operation expense. If the public work consists of extensions or additions to a presently owned revenue-producing facility, include number of present connections and rates for service, and attach a copy of the latest operating statement of the revenue-producing facilities.

Refer to Exhibit "J"

(e) If assessment or improvement bonds will be issued, attach description of method of assessment, i.e., front foot or other basis, and of determination of benefits, the anticipated number of parties to be assessed, gross annual income from assessments, and the anticipated annual maintenance and operation expenses.

CERTIFICATE OF RECORDING OFFICER

(To be used unless contrary to local law)

I, the undersigned, the duly qualified and acting Secretary *(Title of Officer)* of the Southern California Rapid Transit District *(Applicant)* being called the "Applicant") and the keeper of the records of the applicant, including the journal of proceedings of the Board of Directors *(Governing Body of the Applicant)* (herein called the "governing body"), do hereby certify:

CERTIFICATE OF RECORDING OFFICER *(Continued)*

1. That the attached resolution is a true and correct copy of the resolution as finally adopted at a meeting of the governing body held on the 1st day of December, 1965, and duly recorded in my office;

2. That such meeting was duly convened and held in all respects in accordance with law and to the extent required by law, due and proper notice of such meeting was given; and a legal quorum was present throughout the meeting, and a legally sufficient number of members of the governing body voted in the proper manner and for the adoption of said resolution; and that all other requirements and proceedings under the law incident to the proper adoption or passage of said resolution, including publication, if required, have been duly fulfilled, carried out, and otherwise observed; and that I am authorized to execute this certificate;

3. That if an impression of a seal has been affixed below, it constitutes the official seal of the applicant and this certificate is hereby executed under such official seal; but if no seal has been affixed, the applicant does not have an official seal;

IN-WITNESS WHEREOF, I have hereunto set my hand this 3rd day of December, 1965.

Virginia L. Rees
(Signature of Officer)

Virginia L. Rees
(Type or print name of officer)

If applicant has an official seal, impress here.

(SEAL)

RESOLUTION

(To be used unless contrary to local law)

Authorizing filing of application with the United States of America for an advance to provide for the planning of public works under the terms of Public Law 560, 83rd Congress of the United States, as amended.

WHEREAS, Southern California Rapid Transit District *(herein called the "Applicant")* after
(Legal name of applicant)
thorough consideration of the various aspects of the problem and study of available data has hereby determined that the construction of certain public works, generally described as Mass Rapid Transit System - Phase I

is desirable and in the public interest and to that end it is necessary that action preliminary to the construction of said works be taken immediately; and

WHEREAS, under the terms of Public Law 560, 83rd Congress, as amended, the United States of America has authorized the making of advances to public bodies to aid in financing the cost of engineering and architectural surveys, designs, plans, working drawings, specifications or other action preliminary to and in preparation for the construction of public works; and

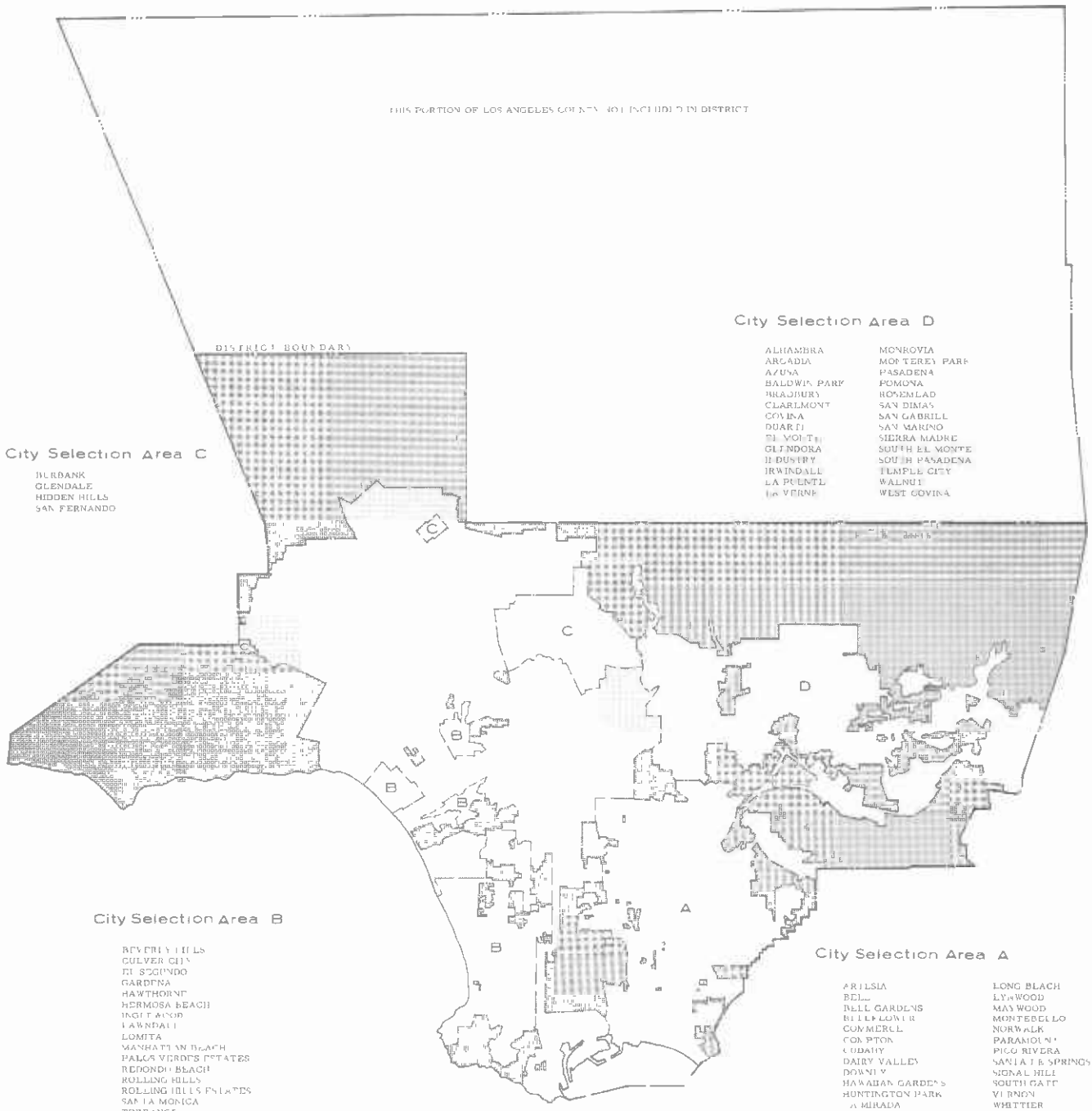
WHEREAS, the applicant has examined and duly considered such act and the applicant considers it to be in the public interest and to its benefit to file an application under said act and to authorize other action in connection therewith;

NOW, THEREFORE, BE IT RESOLVED BY the Board of Directors, the governing body of said applicant, as follows:

1. That the construction of said public works is essential to and is to the best interests of the applicant, and to the end that such public works may be provided as promptly as practicable it is desirable that action preliminary to the construction thereof be undertaken immediately;
2. That the Acting General Manager be hereby authorized to file in behalf of the applicant an application (in form required by the United States and in conformity with said act) for an advance to be made by the United States to the applicant to aid in defraying the cost of plan preparation for the above described public works, which shall consist generally of preliminary engineering, route location surveys and estimates of cost.
3. That if such advance be made, the applicant shall provide or make necessary arrangements to provide such funds, in addition to the advance, as may be required to defray the cost of the plan preparation of such public works;
4. The said Acting General Manager is hereby authorized to furnish such information and take such action as may be necessary to enable the applicant to qualify for the advance;
5. That the officer designated in the preceding paragraph is hereby designated as the authorized representative of the applicant for the purpose of furnishing to the United States such information, data, and documents pertaining to the application for an advance as may be required; and otherwise to act as the authorized representative of the applicant in connection with this application.
6. That certified copies of this resolution be included as part of the application for an advance to be submitted to the United States.

☆ U.S. GOVERNMENT PRINTING OFFICE: 1962—O-656741

"EXHIBIT A"



SOUTHERN CALIFORNIA RAPID TRANSIT DISTRICT

Board of Directors' Areas of representation

LEGEND

- UNINCORPORATED AREAS OF LOS ANGELES COUNTY WITHIN SCRTD
- C — INCORPORATED AREAS OF LOS ANGELES COUNTY WITHIN SCRTD
- CITY OF LOS ANGELES

DISTRICT DIRECTORS

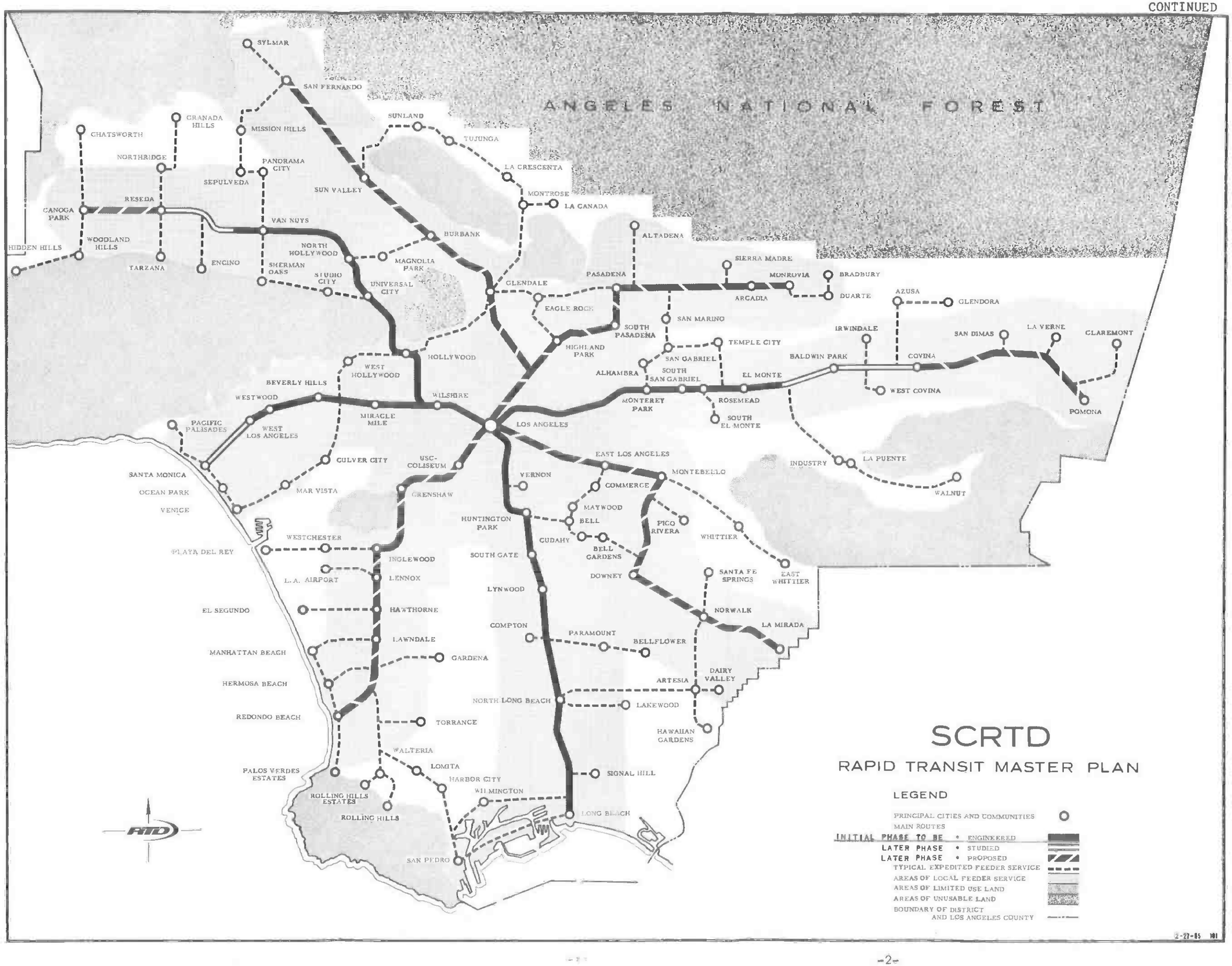
COUNTY OF LOS ANGELES	5
CITY SELECTION AREAS (one each)	4
CITY OF LOS ANGELES	2
	11

2-19-85 110

Proposed Public Work (Refer to Item 4(a) of Form CFA-401)

The Southern California Rapid Transit District has adopted a Master Plan for rapid transit which will serve the Los Angeles region from eight corridors which total approximately 160 route miles. It has also been determined that the initial construction should include approximately 64 route miles of system in four of the eight Master Plan corridors as designated on Drawing 1-C.

A brief description of all items included in the project is given in "Exhibit D" - Project Cost Estimate.


ANGELES NATIONAL FOREST
SYLMAR
SAN FERNANDO
GRANADA HILLS
MISSION HILLS
SUNLAND
TUJUNGA
CHATSWORTH
NORTHRIDGE
PANORAMA CITY
SEPULVEDA
LA CRESCENTA
SUN VALLEY
MONTROSE
LA CANADA
RESEDA
CANOGA PARK
VAN NUYS
BURBANK
ALTADENA
HIDDEN HILLS
WOODLAND HILLS
NORTH HOLLYWOOD
SIERRA MADRE
TARZANA
ENCINO
SHERMAN OAKS
MAGNOLIA PARK
PASADENA
MONROVIA
BRADBURY
STUDIO CITY
UNIVERSAL CITY
GLENDALE
ARCADIA
DUARTE
AZUSA
GLENDORA
EAGLE ROCK
SAN MARINO
SOUTH PASADENA
IRWINDALE
SAN DIMAS
LA VERNE
CLAREMONT
HIGHLAND PARK
TEMPLE CITY
HOLLYWOOD
SAN GABRIEL
BALDWIN PARK
COVINA
WEST HOLLYWOOD
ALHAMBRA
SOUTH SAN GABRIEL
EL MONTE
BEVERLY HILLS
WESTWOOD
WILSHIRE
MONTEREY PARK
ROSEMEAD
WEST COVINA
MIRACLE MILE
POMONA
PACIFIC PALISADES
WEST LOS ANGELES
LOS ANGELES
SOUTH EL MONTE
EAST LOS ANGELES
CULVER CITY
USC-COLISEUM
INDUSTRY
LA PUENTE
SANTA MONICA
VERNON
MONTEBELLO
OCEAN PARK
MAR VISTA
GRENSHAW
COMMERCE
WALNUT
MAYWOOD
VENICE
HUNTINGTON PARK
BELL
PICO RIVERA
WESTCHESTER
CUDAHY
WHITTIER
BELL GARDENS
PLAYA DEL REY
INGLEWOOD
SOUTH GATE
DOWNEY
SANTA FE SPRINGS
EAST WHITTIER
L.A. AIRPORT
LENNOX
LYNWOOD
EL SEGUNDO
HAWTHORNE
NORWALK
COMPTON
PARAMOUNT
LA MIRADA
MANHATTAN BEACH
LAWNDALE
BELLFLOWER
GARDENA
DAIRY VALLEY
HERMOSA BEACH
ARTESIA
NORTH LONG BEACH
LAKEWOOD
REDONDO BEACH
TORRANCE
HAWAIIAN GARDENS
WALTERIA
LOMITA
PALOS VERDES ESTATES
HARBOR CITY
SIGNAL HILL
WILMINGTON
ROLLING HILLS ESTATES
LONG BEACH
ROLLING HILLS
SAN PEDRO
SCRTD
RAPID TRANSIT MASTER PLAN
LEGEND
PRINCIPAL CITIES AND COMMUNITIES
MAIN ROUTES
INITIAL PHASE TO BE • ENGINEERED
LATER PHASE • STUDIED
LATER PHASE • PROPOSED
TYPICAL EXPEDITED FEEDER SERVICE
AREAS OF LOCAL FEEDER SERVICE
AREAS OF LIMITED USE LAND
AREAS OF UNUSABLE LAND
BOUNDARY OF DISTRICT AND LOS ANGELES COUNTY
2-27-85 101

WILSHIRE CORRIDOR

WILSHIRE TERMINAL TO EAST PORTAL

STATION	
W - 1	UNION
W - 2	CIVIC CENTER
W - 3	6TH AND BROADWAY
W - 4	7TH AND HOPE
W - 5	LUCAS
W - 6	ALVARADO
W - 7	VERMONT
W - 8	NORMANDIE
W - 9	WESTERN
W - 10	CRENSHAW
W - 11	LA BREA
W - 12	MASSELIN
W - 13	FAIRFAX
W - 14	ROBERTSON
W - 15	BEVERLY
W - 16	CENTURY CITY
W - 17	WESTHOLME
W - 18	WESTWOOD
W - 19	WILSHIRE TERMINAL

SAN BERNARDINO CORRIDOR

EAST PORTAL TO EL MONTE TERMINAL

STATION	
SB - 1	STATE
SB - 2	EASTERN
SB - 3	FREMONT
SB - 4	GARFIELD
SB - 5	DEL MAR
SB - 6	ROSEMEAD
SB - 7	TYLER
SB - 8	EL MONTE TERMINAL

SAN FERNANDO VALLEY CORRIDOR

WESTERN TO WEST VALLEY TERMINAL

STATION	
SF - 1	BEVERLY
SF - 2	SANTA MONICA
SF - 3	VINE
SF - 4	HOLLYWOOD BLVD.
SF - 5	HOLLYWOOD BOWL
SF - 6	UNIVERAL CITY
SF - 7	CAMARILLO
SF - 8	NORTH HOLLYWOOD
SF - 9	VALLEY PLAZA
SF - 10	COLDWATER CANYON
SF - 11	WOODMAN
SF - 12	VAN NUYS
SF - 13	SEPULVEDA
SF - 14	WEST VALLEY TERMINAL

LONG BEACH CORRIDOR

7TH & HOPE TO BEACH TERMINAL

STATION	
LB - 1	7TH AND MAIN
LB - 2	CENTRAL
LB - 3	WASHINGTON
LB - 4	VERNON
LB - 5	SLAUSON
LB - 6	HUNTINGTON PARK
LB - 7	FLORENCE
LB - 8	FIRESTONE
LB - 9	TWEEDY
LB - 10	IMPERIAL HWY.
LB - 11	BURTON
LB - 12	COMPTON
LB - 13	ARTESIA
LB - 14	MARKET
LB - 15	WARDLOW
LB - 16	WILLOW
LB - 17	PACIFIC COAST HWY.
LB - 18	7TH STREET
LB - 19	BEACH TERMINAL

NO.	DATE	REVISION	BY	KE APP.	MTA APP

SEPTEMBER 1963

KAISER ENGINEERS
DIVISION OF HENRY J. KAISER COMPANY
ARCHITECT - ENGINEER
OAKLAND, CALIFORNIA

LOS ANGELES METROPOLITAN TRANSIT AUTHORITY
LOS ANGELES, CALIFORNIA

APPROVALS

KE	L.A.M.T.A.
A.J.B	
CHECKED BY	
APPROVED BY	
Chief Design Engr. Civil Work	Chief Engineer
P.J. Town	
Engineering Manager	Date
Project Manager	Date

LOCATION MAP

AS NOTED	6338	I - C	R-
SCALE	JOB NO.	DRAWING NO.	REVISION

"EXHIBIT C"

"REPORT ON PLANNING AND ECONOMIC CONSIDERATIONS AFFECTING TRANSPORTATION IN THE LOS ANGELES REGION" - Daniel, Mann, Johnson & Mendenhall.

Particular attention is directed to the statements on Pages I-3, I-6, I-10 and II-16.

PLANNING AND ECONOMIC CONSIDERATIONS AFFECTING TRANSPORTATION IN THE LOS ANGELES REGION

DMJM

prepared by

DANIEL, MANN, JOHNSON, & MENDENHALL

PLANNING § ARCHITECTURE § ENGINEERING § SYSTEMS

for SOUTHERN CALIFORNIA RAPID TRANSIT DISTRICT

RTD

SOUTHERN CALIFORNIA RAPID TRANSIT DISTRICT

PLANNING AND ECONOMIC CONSIDERATIONS AFFECTING TRANSPORTATION IN THE LOS ANGELES REGION

May 1965

by

DANIEL, MANN, JOHNSON, & MENDENHALL
Planning . Architecture . Engineering . Systems

TABLE OF CONTENTS

		Page
SECTION I.	FINDINGS AND CONCLUSIONS	
A.	What are the discernible development trends of the region?	I-2
B.	What is the appropriate future pattern of community form?	I-4
C.	What degree of mobility will the community likely require in the future?	I-6
D.	How can rapid transit assist in providing this required mobility?	I-8
E.	What are the benefits to the community of rapid transit?	I-9
SECTION II.	SUMMARY	
A.	The Trends	II-1
B.	The Patterns	II-9
C.	The Mobility	II-13
D.	The Role of Transit	II-17
E.	The Benefits	II-20

SECTION I

FINDINGS AND CONCLUSIONS

SECTION I

FINDINGS AND CONCLUSIONS

		Page
PART A.	What are the discernible development trends of the region?	I-2
PART B.	What is the appropriate future pattern of community form?	I-4
PART C.	What degree of mobility will the community likely require in the future?	I-6
PART D.	How can rapid transit assist in providing this required mobility?	I-8
PART E.	What are the benefits to the community of rapid transit?	I-9

SECTION I

FINDINGS AND CONCLUSIONS

The Southern California Rapid Transit District asked DMJM to analyze the following questions concerning Rapid Transit in the Los Angeles Metropolitan Region:

A. What are the discernible development trends of the Region?

B. What is the appropriate future pattern of community form?

C. What degree of mobility will the community likely require in the future?

D. How can Rapid Transit assist in providing this mobility?

E. What are the benefits to the community of Rapid Transit?

An analysis of each of these questions generates subquestions which in turn are the basis of the findings and conclusions of each primary question. These questions are presented here with answers as developed by the DMJM staff.

PART A. WHAT ARE THE DISCERNIBLE DEVELOPMENT TRENDS OF THE REGION?

Q. What has been a primary factor in establishing locational trends in the Region?

A. The expenditure of vast sums of capital, both public and private, in facilities to accommodate growth and development. The initial locations were along natural transportation routes which were improved and expanded to accommodate the growth. Subsequent transportation developments have followed basically the same routes and further promoted the locational trends.

Q. What is the effect of the predominant reliance upon the private automobile for mobility?

A. An apparent trend toward a loose-knit, equal intensity community development attempting to equalize access from all directions.

Q. Is this apparent trend confirmed by analysis?

A. Yes and no. General population dispersion is evident in the great suburban growth. However, in terms of high value and intensity of residential capital formation, a centralizing trend is apparent as evidenced by the absorption rate per thousand new residents of various housing types. In the suburban areas, this rate for multiple housing is only 40.8% of that for single family, while in the Regional Core it is 387%. This results in an intensification of residential capital formation in the Regional Core nearly 8 times that of the suburbs. This is taking place through land reuse and intensification in the Regional Core.

Q. What are the industrial trends of the Region?

A. Clearly one of centralizing economic activity. By dividing the entire Region into 11 economic units for study purposes, only one - the Regional Core - showed a high concentration of industry. (Industry here is used in its broad interpretation to include all forms of employment.) Only four others - Santa Monica, Pasadena, Pomona and Glendale - showed normal concentrations, and even these were below the Regional average. In addition, the Regional Core actually increased its concentration from 1956 to 1964.

Q. Since many new industries are being developed in suburban locations, what form of industry is centering in the Regional Core?

A. This growth of industry in the suburbs is a natural shift of those industries requiring large holdings of land moving to suburban locations as the land values in the Regional Core become more suitable for other more intense uses. The high value service industries, such as financial, institutional, and business service, requiring central locations and a large labor market are concentrating in the Regional Core.

Q. Are there indications that this trend will continue?

A. Yes. An analysis of existing office space in 1964 shows that, of the 60,000,000+ square feet contained in Los Angeles County, over 50% is contained in the Regional Core, a land area of only 4% of the total Los Angeles County. Approximately 77% of all the new office space constructed between 1962 and 1964 located in the Regional Core, which indicates a strong current continuation of this trend.

Q. What then is the primary discernible trend of development in the Region?

A. A trend toward the centralization of higher value economic activity and a corresponding increase in employment. Even with higher residential densities expected in the Regional Core, this will generate an added demand for import of labor from areas outside the Regional Core.

PART B. WHAT IS THE APPROPRIATE FUTURE PATTERN OF COMMUNITY FORM?

Q. What has been the general pattern of development in the past?

A. In general, one of horizontal expansion into relatively flat, easily developed land areas, close to transportation arteries, with subsequent filling in of the intervening space. The initial termini of these arteries developed into substantial urban centers.

Q. As the population increased, what has been the effect upon this pattern?

A. The horizontal expansion has, in general, caused these various sub-centers to overlap with the resulting loss of at least visual identity. This has been followed by substantial conversion to multiple dwelling units which in many cases has again overlapped. The net effect is that of applying a second layer of dwellings over the entire Region.

Q. What are current overall densities?

A. Based upon approximately 1000 square miles of readily developable land within the Los Angeles Metropolitan Region, average densities reached 7000 persons per square mile in 1964. Allowing for other uses, only some 30% of this area is available for residential development, which results in nearly 36 persons per acre, or an average nearly 3 times normal single-family development.

Q. Can this current pattern be perpetuated?

A. Not if we want to maintain any reasonable opportunity for choice and preference in residence type. Population increase will only contribute to rebuilding residential areas to 3 or 4 story density levels. The net effect would be to make single-family residences so expensive as to be out of reach of the average family. Another limiting factor is the inability of the current transportation system to accommodate densities at this level. The net effect will be to reduce the potential growth of the region.

Q. Is there an acceptable alternative?

A. Not only an acceptable one, but a much more appropriate one in which high densities and high levels of economic concentration are developed in an organized manner. This would permit

substantial economies in time as well as services such as utilities, police, and fire protection, etc., and could easily be accomplished by overlaying the current "spread city" pattern with very high capacity travel arteries in the form of rapid transit. In this manner high densities would be encouraged along the transit routes, and the Regional Core as well as the suburban centers could develop to full potential. The densities in this pattern could be much greater than could be serviced by the automobile using streets and freeways which would permit the space between transit routes to remain single family and preserve choice and preference of residence. The money saved by economies in utility service and automobile facilities could be redirected to other community needs such as parks and recreation, and space would be available to provide them.

PART C. WHAT DEGREE OF MOBILITY WILL THE COMMUNITY LIKELY REQUIRE IN THE FUTURE?

Q. What is the primary cause of congestion on our streets and freeways?

A. The peak-hour traffic occasioned by the commuter moving from residence to work and return. Approximately 1/3 of the total daily traffic is a direct result of this commuter movement which occurs during approximately a 4-hour period (7 to 9 a.m. and 4 to 6 p.m.) or about 16% of the total day.

Q. Are the freeways aiding in reducing traffic congestion?

A. Certainly freeways are the main stream of transportation in Los Angeles today and without them traffic would be at a virtual standstill. However, while the opening of a new freeway reduces travel times between points served by the route, traffic buildup soon offsets the gains. Travel-Time studies conducted by the Auto Club of Southern California would seem to bear this out. Their studies indicated that of 14 point-to-point comparisons, 8 showed increased travel times from 1962 to 1963. Also, the net area enclosed by a travel time of 30 minutes showed a reduction of 7% over the same period. This would indicate that the freeways are, at best, maintaining the "status quo."

Q. How much land area is being devoted to automobile facilities?

A. Currently 55% of all land in the C.B.D. area of Los Angeles City is devoted to streets, freeways and parking. Projections in the Centropolis Report indicate a future demand for four new 8-lane freeways and 9 1/2 four-lane streets in the 2 1/2 mile square central city if sole reliance upon the automobile is maintained. Removing this amount of land from productive use is in conflict with the other plans and projections and would have a disastrous effect on the area. Similar situations prevail in many urban centers throughout the Region.

Q. What will be the effect of continued reliance upon a single transport mode?

A. Currently, there are 315,000 more jobs in the Regional Core than there are employed persons living in the area. By 1980 this excess employment could range from 537,000 to 665,000, an increase of between 222,000 and 350,000 net import of labor. To accommodate

this amount of added commuter traffic during the peak commute hours would require at least doubling the number of new freeways planned or contemplated to serve the Regional Core by 1980. Without this accessibility, from 95,000 to 225,000 of the potential new jobs in the Regional Core would not be filled, with the result of reduced income potential in both Regional Core and suburban locations.

Q. How does reduced employment in the Regional Core affect the suburbs?

A. This import of labor into the Regional Core represents suburban residents who buy homes and products in suburban areas. In addition, each employee in the "basic" industries generates about 1.5 service employees. This means that at least 35-40% of the total suburban income is currently dependent upon this import of labor to the Regional Core. Therefore, any restriction upon the core development has a multiplicative effect in the suburbs.

Q. How much mobility is required?

A. The ability to move goods and services, the employment opportunities, and the ability of people to move with relative speed between home and work have been the essence of developing our urban society. The day may come when the necessity for mobility will be reduced through revolutionary changes in technology. However, this is not apparent in the foreseeable future. Today, the total transportation capability in the Los Angeles Region is a little less than adequate. In order to promote the Regional development, a balanced system is required where the traveling public has a choice of mode as well as route. In order to provide this choice, the capability of all the systems must be just a little more than adequate.

PART D. HOW CAN RAPID TRANSIT ASSIST IN PROVIDING THIS REQUIRED MOBILITY?

Q. Mass transportation seems to be losing patronage everywhere in the U.S. How then can we assume a Rapid Transit System in Los Angeles would be used?

A. Mass transportation is losing patronage, but the losses are almost entirely on surface systems, buses and streetcars. Where a true Rapid Transit system exists, operating on completely grade separated, exclusive rights-of-way, patronage has remained virtually constant and in several instances has shown substantial increases. Further, every area which has rapid transit is expanding the system and most major metropolitan areas are actively planning or constructing systems.

Q. Who would use the system?

A. There are basically two categories of transit riders: Those who ride through necessity and those who ride by choice. In 1964, the Los Angeles Metropolitan Region contained approximately 2 1/2 million people 15 years old and older who did not have drivers licenses. These people do not have independent personal transportation capability and are in the first category. Many others who do not need their autos during the day use them because there is no other satisfactory mode of travel. A fast, convenient, comfortable and economical rapid transit system would provide the choice necessary to attract these people.

Q. Is the potential use significant?

A. Yes. Travel studies conducted by Coverdale & Colpitts in 1958 showed that over 52% of the total travel in the Los Angeles region is within the eight corridors proposed to be served by the Transit District. The system will thus be able to offer service to a substantial portion of the traveling public, linking the important community centers throughout the area and providing greatly enhanced capacity for movement of people, particularly in areas where rush-hour congestion is most acute.

PART E. WHAT ARE THE BENEFITS TO THE COMMUNITY OF RAPID TRANSIT?

Q. Are there other benefits beyond reduced traffic and congestion?

A. Reduced traffic is, in fact, only a secondary benefit. The primary benefits are financial, economic and social in nature.

Q. What are the financial benefits attributable to the system?

A. The immediate financial benefits would result from the expenditure in the region of nearly $2 billion for material, service, and labor to construct the 8-corridor system. This money will be spent primarily in the Region while, for the most part, it will originate from outside sources in the form of bond sales. This "new" money in circulation in the Los Angeles Region will have immediate effects by producing income, sales and general business activity.

Q. What are the economic benefits?

A. There are many economic benefits, only one of which has been quantified to illustrate the potential. It has been estimated that inadequate freeway capacity during peak hours will reduce potential employment in the Regional Core by from 95,000 to 225,000 employees. The proposed transit system has a capacity to accommodate these people with ease, thereby removing the mobility restraint. These employees represent an increase in Regional gross income of from $665,000,000 to $1,575,000,000 annually with derived effects to suburban communities between $1.7 and $4.0 million annual sales tax and $35 and $115 million in added real estate tax. Therefore, this one factor alone represents a potential economic benefit, when capitalized over 40 years, of between $2 and $7 billion.

Q. Are there other benefits which have not been quantified?

A. There are many social and real benefits which will accrue to the community, as well as the direct user benefits. These can be quantified by a more comprehensive study to determine benefit cost ratios. However, in subjective terms, these benefits will include the following:

Provide transportation framework on which regional form could be planned.

Accommodate a population of 20 million or more and serve the increased population more efficiently.

Permit land to be retained on the tax rolls which otherwise would be required for freeways and parking.

Increase tax return through higher intensity development.

Reduce tax burden on single-family residential areas.

Contribute to furthering community identity by:

a. The greater variety and diversity of community form and residential type.

b. Making unnecessary the further severing of neighborhoods by more streets and freeways.

Allow greater suburban expansion within one hour from Regional Core.

Q. What is the overall conclusion to be reached from the study?

A. That the community cannot afford continued reliance upon a single mode of transportation and that the benefits to be derived from developing a rapid transit system far exceed the monetary costs. The thought has been expressed that the Los Angeles Region is already large enough and that added growth should be discouraged. However, the growth of this region in a free society cannot readily be stopped. This Region is already one of the largest markets in the Nation and therefore a prime target for industry of all types. Industry moves in and provides more jobs for the constant flow of in-migrants which further expands the market, and the cycle starts over. Even without industry moving to the area, the much publicized amenities of Southern California represent a powerful drawing force. To discourage this natural influx of people would require conditions which would be intolerable for those already residing in the Region.

SECTION II

SUMMARY

SECTION II

SUMMARY

		Page
A.	THE TRENDS	II-1
1.	The Background	II-1
2.	Centralization or Decentralization	II-1
3.	The Residential Factor	II-2
4.	Population Densities	II-2
5.	Dwelling Units Analyzed	II-4
6.	The Industrial/Commercial Factor	II-4
7.	Location of Office Space	II-6
B.	THE PATTERNS	II-9
1.	Transportation Influence	II-9
2.	Present Patterns and Their Effects	II-9
3.	Restraints to Horizontal Development	II-10
4.	The Basis for Future Patterns	II-10
5.	Perpetuating the Current Pattern Cannot Accommodate the Future	II-11
6.	The Alternative	II-11
C.	THE MOBILITY	II-13
1.	The Demand for Mobility	II-13
2.	The Commuter Movement	II-13
3.	The Peak Hour and Congestion	II-13
4.	Travel Time in the Region	II-14
5.	The Amount of Land Devoted to the Automobile	II-14
6.	Conflicting Use of the Surface Streets	II-14
7.	Regional Core Employment and Import of Labor	II-15
8.	Future Freeways Alone Cannot Meet the Demand	II-15
D.	THE ROLE OF TRANSIT	II-17
1.	Present Use	II-17
2.	Alternate Transportation Links	II-17
3.	The Potential Rapid Transit Riders	II-17
E.	THE BENEFITS	II-19
1.	Benefits Defined	II-19
2.	Financial Benefits	II-19
3.	Economic Benefits	II-19
4.	Social and Real Benefits	II-20

SECTION II

SUMMARY

A. THE TRENDS

1. The Background

In order to define the discernible trends upon which the future Los Angeles Metropolitan Region will build, it is necessary to compare past and current development of the area. The large expenditures of public and private capital on facilities to accommodate the growth and development of the Region have established definite locational trends. These trends are not likely to be materially altered except by severe artificial restraint and then only over long periods of time.

The transportation system which originally permitted these trends to be established has since been developed to accommodate and thereby promote them. The trends of locational preference of both industrial (used in the broad sense to include all employment sources) and residential development coupled with the rising population and expanding market provide an excellent indication of the future development potential of the Region. The transportation system in the future will play an even more important role in shaping the community, as well as in the level of activity which can be attained.

The primary trend in transportation mode has been toward an ever increasing dependency upon the private automobile for mobility within the Region. In 1964 private passenger automobile registration (excluding government and public ownership) reached 3,220,849, equal to one automobile for each 2.12 persons of the total Los Angeles County population. The demand upon facilities to accommodate this auto population has resulted in the most comprehensive system of urban highways, existing and projected, of any in the world. The resulting trend has been toward a loose-knit, equal intensity community development, attempting to equalize accessibility from all directions.

2. Centralization or Decentralization

While on the surface this would tend to indicate a complete decentralization of Regional activity, a critical analysis of the economic factors provides additional insight into the development trends. The economic analysis examines two primary factors of the region to determine whether the trends are toward centralization or decentralization. This is

the critical trend in terms of economic development and the influence of transportation on the development. These factors are (1) residential location (loci of urban residential capital formation) and (2) employment location (loci of industrial/commercial capital formation).

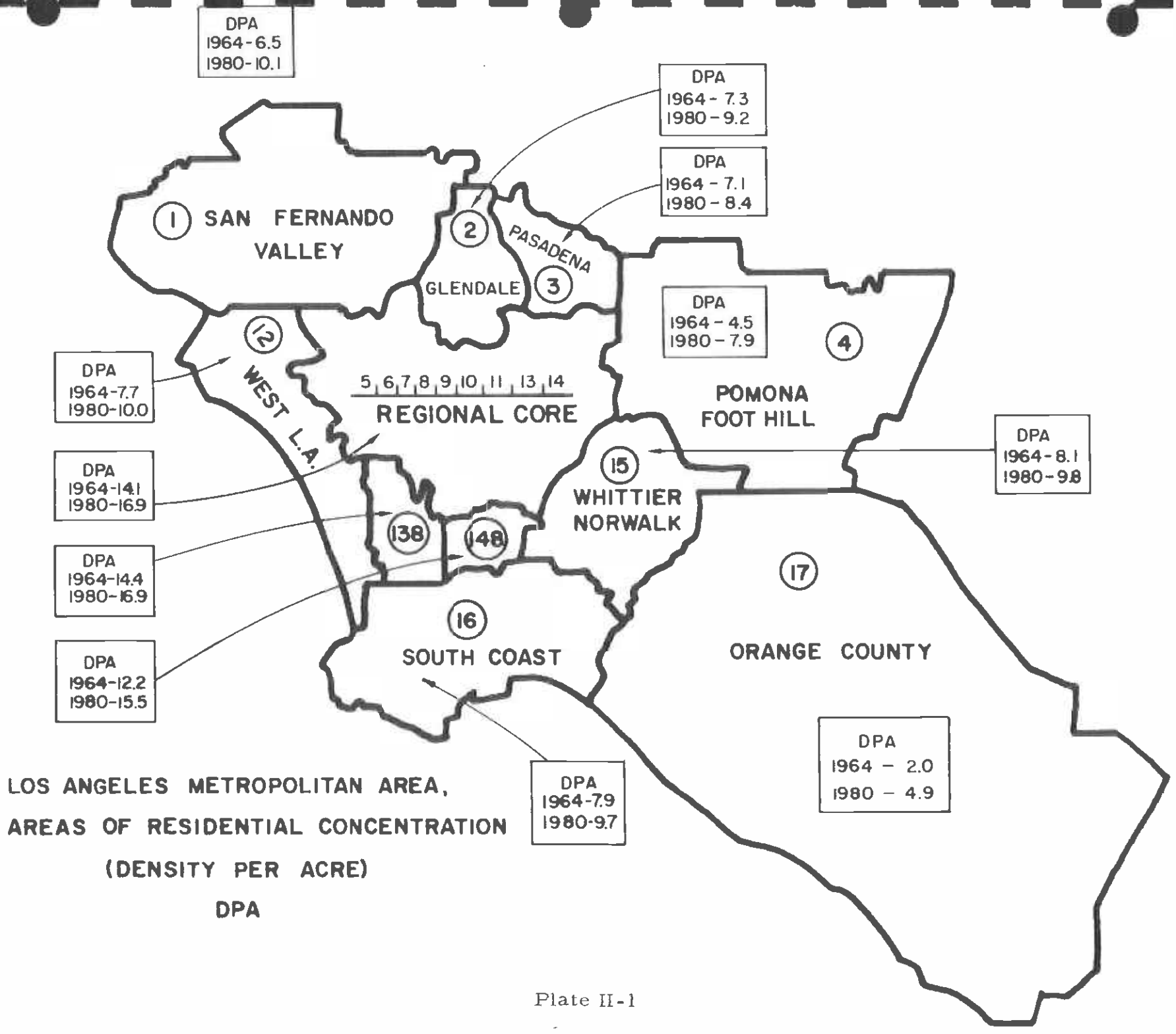
3. The Residential Factor

In analyzing the residential factor, the Region has been subdivided into subareas (see following map) which are statistically determinant and special emphasis has been placed upon subdividing these into economic entities. The critical element in this entire analysis is the Regional Core. This is the area which would correspond to the "Central City" in the classical or historic definition of a Metropolitan area. It is essential to realize that in the Los Angeles Metropolitan Region this core encompasses an area of approximately 160 square miles and includes downtown Los Angeles, the Wilshire Boulevard and Westwood Complex, the Hollywood area and the East Los Angeles industrial complexes. While at first glance this would seem a large area, it must be recognized that it is the core of a total area exceeding 4000 square miles, of which it comprises approximately 4%.

4. Population Densities

In terms of population, the Los Angeles Metropolitan Region has experienced the highest growth rate of any of the large Metropolitan Areas in the Nation. Los Angeles County alone has grown from about 500,000 in 1910 to nearly 7 million in 1964. Projections indicate that the Metropolitan Area will exceed 12 million by 1980 and that Los Angeles Region population could reach at least 15 million by the year 2000. In terms of 1964 population density, there were 7 square miles in Los Angeles County with densities over 20,000 per square mile (31 per gross acre). These are entirely contained within the Regional Core. In addition, there were 140 square miles having densities between 10,000 and 20,000 per square mile (15 to 31 per gross acre), again predominantly in or adjacent to the Regional Core. With the projected population growth, it is safe to predict a much greater area with these and higher densities in the future. The residential densities for 1964 and projected for 1980 in the analytical subdivisions are shown on the following plate.

A significant fact is shown by density comparisons between 1940, 1950, and 1960 in that increased density patterns have, in fact, followed the historic classical pattern of expansion around the Regional Core area. This expansion has not been in a homogeneous manner, but has taken place in established centers of activity such as Santa Monica, Van Nuys, Glendale, Long Beach, etc. While this expansion has been accompanied by a normal expansion of retail and industrial activity, these areas have remained predominantly suburban residential.



LOS ANGELES METROPOLITAN AREA,
AREAS OF RESIDENTIAL CONCENTRATION
(DENSITY PER ACRE)
DPA

Plate II-1

5. Dwelling Units Analyzed

An analysis of dwelling units (homes and apartments) throughout the Los Angeles Metropolitan Region shows that increases in absolute numbers in suburban areas has substantially exceeded the increase in the Regional Core, particularly since 1950. This is to be expected since the increase in the Core area, which had relatively much higher densities to begin with, must be accomplished through rebuilding existing areas. However, the absorption rate per 1000 population (number of new housing units by type constructed per 1000 new residents in the area) indicates a strong intensification of residential capital formation in the Regional Core. In terms of multiple dwelling units constructed, the absorption rate in the suburban area was 40.8% (less than 1/2) that of single family, while in the Regional Core it was 387% (nearly 4 times) single family units. This indicates the transformation of the Regional Core into an area of even higher residential density and provides a real indication of a trend toward centralized economic activity.

6. The Industrial/Commercial Factor

For the industrial/commercial analysis, the Region was again divided into subareas (see following map) which could be defined from available data. In this division, the areas are established to approximate as closely as possible those used in the residential analysis to provide a comparable basis. Again, the physical size of the central area or Regional Core prevents overstatement of its importance by any individual small unit or area of extreme concentration.

On the basis of employment and population, a series of employment concentration and specialization coefficients were developed which permit each area to be compared to the Region as a whole, as well as to every other area. In this coefficient, the employment per 1000 population for various industrial categories is developed for the Region as a whole and set equal to 1.00 in each category. This enables each area to be compared directly. The following breakdown of comparative indices indicates relative concentrations:

.00 to .50	Substantial lack of concentration
.51 to .80	Relatively unconcentrated
.81 to 1.20	Normal concentration
1.21 to 1.50	Relatively concentrated
1.51 plus	Highly concentrated


EMPLOYMENT AREAS
AT LOS ANGELES METROPOLITAN AREA
SAN FERNANDO
1
VAN NUYS
NORTH HOLLYWOOD
8
GLENDALE
PASADENA
7
MONROVIA
HOLLYWOOD
6
SANTA MONICA
ALHAMBRA
EL MONTE
POMONA
9
CULVER CITY
CENTRAL
EAST L.A.
10
2
FLORENCE
WHITTIER
INGLEWOOD
5
NORWALK
COMPTON
FULLERTON
3
TORRANCE
LONG BEACH
4
11
SANTA ANA

Plate II-2

On this direct comparison basis, only the Regional Core showed a highly concentrated activity with a coefficient of 1.68. Of the remaining 10 areas, only 4 - Santa Monica (.95), Glendale (.84), Pasadena (.93), and Pomona (.88) - indicated even normal concentration and then in the lower ranges and below the region as a whole. These results for 1964 are comparable to the results of a similar analysis for 1956 and in fact indicate that the Regional Core has increased its employment concentration (see following tables).

This analysis clearly indicates that even with a substantial industrial development in suburban areas, there is a strong and continuing trend toward a centralized economic activity.

These specialization coefficients also indicate the types of industry in the various areas. It is significant to note that the shift by type is normal in terms of economic pressures occasioned by land value, land scarcity, and market locations. Retail and local service industry follows population expansion, industries such as aircraft, etc., requiring large land areas shift to suburban locations where land is relatively inexpensive, while high value, labor intense industries such as business service and financial institutions concentrate in the Core area.

7. Location of Office Space

An analysis of office space substantiates this trend of concentration of high value industry in the Regional Core. In 1964, an estimate of total office space in Los Angeles County was 60,230,000 square feet. Of this, 14,607,000 square feet was contained in the Central Business District of Los Angeles, 9,855,000 in the Wilshire Boulevard extension westward to the San Diego Freeway, plus an estimated 16,000,000 in the balance of the Regional Core including Hollywood. This represents over 50% of the total office space in the entire Los Angeles County contained in approximately 4% of the County area. Even more significant is the fact that of all office space constructed in the County from 1962 to 1964, approximately 77% was constructed in this Regional Core area.

This would certainly confirm the trend toward centralization of high value, labor intense industry into the Regional Core.

TABLE II-1

INDUSTRY SPECIALIZATION AND CONCENTRATION
LOS ANGELES METROPOLITAN AREA AND SUB-AREAS
1964

	1	2	3	4	5	6	7	8	9	10	11*
Total Emp./1000	.79	.95	.62	.78	.66	.55	.93	.84	1.68	.88	---
Contr. Const./1000	1.53	1.04	1.79	1.05	.86	1.66	.78	.98	.75	1.38	---
Mfg./1000	.94	1.08	1.26	.84	1.20	1.16	.67	1.38	.81	1.22	---
P & F Metals/1000	.61	.40	---	.48	---	1.08	---	.68	1.48	---	---
Trans. eq. & ord./1000	1.92	1.11	---	3.44	---	.96	---	---	.48	---	---
Other mfg./1000	.72	1.70	---	.83	---	1.83	---	---	1.27	---	---
T.C. & U./1000	.55	.66	.43	1.42	.97	.58	.53	.66	1.30	.63	---
W. & R./1000	1.04	.86	.88	1.03	1.00	.98	1.08	1.00	1.06	.77	---
W/1000	.61	.60	.24	.69	.59	.51	.41	.77	1.63	.40	---
R/1000	1.50	1.09	1.30	1.31	1.32	1.30	1.51	1.23	.93	1.03	---
F.I. & R.E./1000	1.00	.48	.30	.54	.46	.35	.90	.59	1.52	.35	---
Service/1000	.71	1.14	.65	.80	.67	.89	1.61	.96	1.09	.93	---
Government/1000	1.02	1.36	1.00	1.71	1.16	1.18	1.04	.67	.86	1.26	---
Pop. as % of Total	11.3	8.3	8.2	9.7	9.2	10.5	4.4	9.0	27.3	2.2	---

Source: Derived from data contained in Community Labor Market Survey, California Dept. of Employment

* 1962 change in S.M.S.A. omitting Orange County changes the employment base in Orange County and does not permit comparison with 1956 data.

TABLE II-2

INDUSTRY SPECIALIZATION AND CONCENTRATION
LOS ANGELES METROPOLITAN AREA AND SUB-AREAS
1956

	1	2	3	4	5	6	7	8	9	10	11
Total Emp./1000	.63	.99	.59	.96	.49	.68	1.04	1.04	1.62	.87	.69
Contr. Const./1000	1.57	.97	1.10	.94	1.46	2.20	.96	.81	.57	1.04	1.99
Mfg./1000	.84	1.10	1.36	.85	.50	.75	.54	1.32	1.12	1.05	.39
P & F/1000	.28	---	2.64	---	.75	.97	.43	.53	2.80	---	---
Trans. eq. & ord./1000	2.37	---	---	2.72	---	---	---	---	1.36	---	---
Other mfg./1000	.52	---	1.54	.50	.61	.90	.68	1.75	.49	---	---
T.C. & U./1000	.67	.86	.80	1.53	1.08	1.10	.81	.92	.81	.96	1.06
W. & R./1000	1.06	.84	.68	1.10	1.24	1.04	1.23	.83	1.06	.70	1.28
W./1000	.44	.81	---	.83	---	---	1.08	.47	2.00	---	1.56
R./1000	1.32	1.12	---	1.46	---	---	.89	.76	1.14	---	1.64
F.I. & R.E./1000	.87	.68	.45	1.05	1.56	.71	1.69	.66	1.16	1.10	1.37
Service/1000	1.13	1.24	.82	.83	1.06	.99	1.32	.91	1.03	.65	.82
Government/1000	.97	.62	.76	.67	1.29	.88	1.76	.80	.62	.97	2.65
Pop. as % of Total	14.3	12.0	6.4	14.5	6.6	4.4	5.8	9.5	16.6	5.5	4.4

Source: Derived from data contained in the Community Labor Market Surveys, 1956, California Department of Employment

B. THE PATTERNS

1. Transportation Influence

The pattern and form of the future Metropolis must recognize the interdependency of the Core and Suburbs. In the interest of economy, it must permit coordination of public service such as water, sewer and transportation. It must also preserve the diversity and variety of opportunity in the sub-areas of the Metropolis.

The Los Angeles Metropolitan Region does not have a single planning agency with power to implement an area-wide Regional Plan. In this circumstance, it should be recognized that transportation is probably the major instrument through which form and extent of land use may be influenced. This is evident from the patterns produced in the past. The historical development of the Region has been along transportation routes, first the Pacific Electric and other railways and currently the freeway system.

2. Present Patterns and Their Effects

The general pattern of development in the past has been in easily developed, relatively flat areas. The initial developments were adjacent to the transportation arteries with subsequent filling in of population in the interstices. The terminal points of these transportation arteries have generally developed into substantial urban centers.

The growth pressures have generally caused these centers to overlap with the resulting loss of visual community identity. As population increased, substantial conversion to multiple dwelling units occurred, often in a haphazard manner and into areas wherein community services and facilities were more appropriately suited for single family development. The result is often congestion, overtaxed service capabilities and loss of residential choice. The effect on the urban form is that of applying a second layer of dwellings over the entire region.

This is apparent in terms of average overall densities. Based upon approximately 1000 square miles of readily developable land in the Los Angeles Metropolitan Region, residential densities reached approximately 7000 persons per gross square mile in 1964. Allowing for streets, schools, parks, commercial/industrial, etc., results in approximately 30% net residential area or an average of nearly 36 people per net acre of readily developable land. This density is approximately three times the normal single family development.

3. Restraints to Horizontal Development

There are obvious restraints to horizontal development in the Los Angeles Metropolitan Region. The natural or physical barriers are the mountains and the ocean which surround the Los Angeles Basin. An artificial restraint is the transportation capacity of the traffic arteries. In addition, there are economic restraints to horizontal development which are related to the mobility phenomenon of acceptable travel times within the region.

To date, the freeway system has offered the means of opening up large areas of inexpensive, easily developed lands in the outlying areas of the Region. This has made single family residences with open space and privacy of suburban living available at much lower cost than a comparable style of living in close-in areas such as Beverly Hills, Pacific Palisades, Sherman Oaks-Encino, Mt. Washington, etc. The cost of these outlying suburban homes is then within the budget capability of the younger families which make up the majority of new residents in the Region.

4. The Basis for Future Patterns

The future development pattern of the Region must accommodate the immense population growth within the topographic limits of the Region and within reasonable time-distances from employment sources. Since the average density is already at a multiple residence level, it is essential to develop a pattern which will permit high density areas and still preserve the remaining low density single family areas. The alternative would be a gradual rebuilding of residential areas to a constant three to four story density level.

The selection of a development pattern should be made on the basis of that which will achieve the apparent goals and potential of the Region. It is clearly evident from the economic analysis that this potential is dependent upon the ability of the Regional Core area to realize its potential as the center of finance, industry, government and culture. Thus, it is essential that the large number of employees in this area be able to travel to, from and through the Core in reasonable time periods.

In establishing goals and objectives for the Region, Hans Blumenfield in "The Urban Patterns" from the Annuls of the Academy of Political and Social Science specifies the following objectives:

> "Minimize need and maximize opportunity for commuting to work . . ."

"Access to Center and to periphery . . ."

"Separation and integration of functions . . ."

"Identification with a part and identification with the whole . . ."

"Continuity and change . . ."

"Finally, whatever demands may be derived from these or other criteria, they must be satisfied at the least possible cost."

Kevin Lynch in his "The Pattern of the Metropolis" emphasizes:

"The individual should have maximum choice of goods, services and facilities available to him, including housing types and habitats."

"The individual should have the greatest number of social contacts and social isolation should be minimized."

"Linked open spaces are provided."

"Minimum first cost and operating cost."

5. Perpetuating the Current Pattern Cannot Accommodate the Future

It seems apparent that we are already beyond considering perpetuating the current pattern which encourages continued uniform expansion, since the present average density is on a multi-level basis. It is suggested that continuing this pattern cannot be achieved within the framework of the previous criteria and, more importantly, it would seriously limit the potential economic development of the entire region.

6. The Alternative

It is further suggested that the more logical alternative development pattern would utilize rapid transit lines overlaying the existing spread city to provide high capacity, high speed travel arteries. In this manner, high residential density could be developed in station areas and along the transit routes since transportation capacity would exist to accommodate it. The net result would be to permit the intervening areas to remain at relatively low density and preserve the pattern of choice and preference which characterizes this Region. The advantages are obvious and manifold.

The addition of a Rapid Transit system would permit a vast increase in passenger capacity with virtually no loss of income-producing land area. It would substantially increase the area within acceptable commuting time of the major employment centers in the Regional Core. It would encourage concentration of specialized functions within the Regional Core needed to support the entire community. It would reduce the demands upon highway funds to build urban freeways and parking facilities in areas of high development at $10 to $20 million per mile and would permit the construction of more routes in outer areas at less cost, which in turn would benefit the recreation-oriented weekend traffic and improve circulation in those areas. It would permit monies saved by the community through reduced demands for parking to be spent on other public needs, such as parks and education. And, most importantly, it would permit the Los Angeles Region to grow and develop its full potential.

C. THE MOBILITY

1. The Demand for Mobility

It is often asked, "How much mobility is required?" Historically, mobility is the essence of our urban society and industrialized nation. In light of the discernible economic trends, this question should be rephrased to ask, "To what extent are we willing to retard growth and development through restraints on mobility?"

The Los Angeles Regional Transportation Study (LARTS) in the recently published 1960 Base Year Report analyzes the travel characteristics of the Region. They determined that the average 1960 weekday traffic of over 12,000,000 trips could be broken down by types as follows:

Home	-	Other	-	30.3%
Other	-	Other	-	21.5%
Work	-	Other	-	11.3%
Home	-	Shopping	-	15.2%
Home	-	Work	-	21.7%

2. The Commuter Movement

Since the home-work or commuter trip is the primary source of freeway congestion, it is important to relate these trips to the peak hour. Comparison of these percentages to other data reveals that, in fact, the actual commute move represents a larger portion that the 21.7% indicated as home-work. Employment in the 1960 Los Angeles Standard Metropolitan Statistical Area (only part of the LARTS Area) was 2,352,800, which represents 4,705,600 person trips (assuming one round trip per day). On the basis of 1.2 persons per car, this is equal to 3,921,350 vehicle trips or about 32% of the total LARTS Area trips. On this basis, it is apparent that the work-other trips are actually a part of the commute move (with intermediate stops) and therefore occur during peak hours. Therefore, it can be seen that at least 1/3 of the total daily traffic occurs during a four-hour period, or about 16% of the total day.

3. The Peak Hour and Congestion

This commuter movement is significant in light of freeway capacity which cannot economically be provided to meet the peak-hour demands. The resulting extreme congestion during these peak hours is evident to anyone driving the freeways. It can safely be stated that congested conditions will occur on every freeway serving the Regional Core on virtually any working day during the year. Seasonal variations only complicate and compound this condition.

The reasons for this congestion are apparent. The necessity of merging traffic lanes at on-off ramps and interchanges, lane changing, and reasonable following distances are the key factors. Inclement weather conditions and the most minor incidents on the freeway further compound the problems.

4. Travel Time in the Region

The latest travel time studies conducted by the Southern California Automobile Club in 1963 revealed that of 14 point-to-point comparisons with 1962 times, travel times increased in 8 instances, decreased in 5 and remained constant in 1. In addition, the area within 30 minutes travel time of their offices on Figueroa Street decreased by 7% from 1962 to 1963. This would seem to indicate that the freeway system is unable to keep pace with increasing demands.

While travel times from a given point may improve markedly with the opening of a new freeway, experience indicates that the increase in traffic, both diverted and induced, soon negates the gain. While it is often stated that the situation will be much better when the freeways are all complete and operating as a "system," it is significant to note that in the area of severest congestion (in and adjacent to the Regional Core) the "system" is virtually complete.

5. The Amount of Land Devoted to the Automobile

That the land area required by this vast system of highways and street systems combined with automobile terminal facilities is reaching monumental proportions is evident from the fact that, in the Los Angeles C.B.D., 55% of the total land area is primarily devoted to the automobile.

If the projections for this Region are realized, this is only the beginning of spatial demands of the automobile. The demands for lane capacity projected by the Centropolis Report, Volume 3, are equivalent to four new 8-lane freeways and 9 1/2 new four-lane streets within a 2 1/2-mile square Central City in an area already served by a complete street system and three freeways. The amount of additional land area lost to these facilities, coupled with the projected requirement to double parking capacity in the Central City, is impractical of fulfillment without imposing serious development restraints on the area.

6. Conflicting Use of the Surface Streets

The Central City area is typical of similar conditions in other urban centers in the Region in that existing arteries are over-capacity and increasing through traffic will ultimately stifle the function of these urban centers as regional trade centers.

Additionally, the requirements of the movement of goods will most certainly increase in future years. Regardless of the method employed in long-haul freight movement, distribution and collection of goods within the Metropolitan Region will continue to utilize trucks on urban streets and freeways. The LARTS report indicates that 12.8% of the total 1960 vehicle trips were made by trucks. With the increasing demands of a growing Region, the overlap of truck and passenger automobile traffic will materially affect the ability of the freeway network to adequately serve either group.

7. Regional Core Employment and Import of Labor

Employment analysis indicates a concentration of employment in the Regional Core. In 1964, the net import of labor (excess of jobs over resident employed persons) into this area was 315,000 employees. With the exception of a very slight import (1840 employees) into the Pomona-Fullerton area, this is the only area where jobs exceeded resident labor potential. This deficit is made up by commuters from the surrounding suburbs. On the basis of very conservative estimates this import could increase by 350,000 additional employees by 1980. It must be pointed out that this is net import only and does not reflect total inter-area transfer of labor.

The importance to the entire Region of this import of labor into the Regional Core cannot be overlooked. Suburban employment is in most cases largely local service such as retail trade, local finance and business service and basic real estate. Based upon a "normal" rate of 1.5 service oriented employees for each basic industry employer results in 472,500 suburban jobs in 1960 dependent upon the 315,000 employment import into the Regional Core. On this basis, it is apparent that at least 30% of the total suburban employment is a direct result of suburban export of labor to the Regional Core. From an income standpoint, this could result in 35 to 40% of suburban income derived from Regional Core employment. It is clear, therefore, that any restraint to development in the Regional Core will have multiplicative adverse effects upon the suburban areas also.

8. Future Freeways Alone Cannot Meet the Demand

At least one such restraint will result from failure to provide additional transportation capability. The 1980 freeway system as planned will result in a total of 13 freeways serving the Regional Core. Of these, 8 are currently in service and operating at and above capacity during peak hours. In addition to the five future freeways currently in the plan, one additional is under consideration in the vicinity of Western Avenue for a total of six new freeways.

Assuming 8-lane freeways, the four inbound lanes per freeway result in a total count of 24 lanes to accommodate added traffic.

Assuming only 80% auto usage (extremely conservative by Los Angeles standards), 80% peak-hour movement assumed as employees, 1.2 persons per car, 2000 vehicles per hour per lane for a two-hour peak period, and 12% truck and commercial vehicle traffic, the potential increase of between 222,000 and 350,000 commuters into the Regional Core results in a demand for a minimum of 42 lanes and as many as 67 lanes to accommodate only the net added commuter traffic during the peak hour. This indicates that between 95,000 and 225,000 potential jobs in the Regional Core will not be filled due to lack of mobility.

The obvious conclusion to be reached from these mobility considerations is that the private automobile, together with bus operating competing for the same street and freeway space, simply cannot cope with the magnitude of the future mobility demands.

D. THE ROLE OF TRANSIT

1. Present Use

Even in auto-dominant Los Angeles, the role of public transit is not insignificant. A report by Coverdale & Colpitts in 1958 showed that on the average weekday, an equivalent of 209,000 vehicle trips were accommodated by public transit during the peak traffic hours. The 1964 "Beverly Hills Freeway and Traffic Study" by Wilbur Smith & Associates states that transit carried 30% of the total peak hour passenger traffic on Wilshire Boulevard in Beverly Hills, thus clearly demonstrating the important contribution of public transit to current mobility.

The present trend in transportation planning is predicated on the Freeway System. While the importance of this system to the Region is recognized by every responsible planning agency, it must also be recognized that any one system acting alone cannot satisfy the needs of the future.

2. Alternate Transportation Links

There have been many possible links to an overall transportation system suggested. Included in these are double-decked freeways, express buses operating in exclusive freeway lanes, miniature cars hauled between central pick-up locations by truck and/or rail. Aside from the anticipated higher costs for any such systems, the inherent operational problems present insuperable obstacles to fulfillment. Except in the outlying and circumferential portion of a transportation system, where buses could be used to extend the service area of a transit system, freeway buses do not offer an effective solution to the problem.

The need for Rapid Transit, operating on completely grade separated, exclusive rights of way, seems clear. On the commuter type of trip, time spent in travel plus reliable on-time performance are major considerations. Buses competing for lane space on surface streets or freeways cannot satisfy these considerations.

3. The Potential Rapid Transit Riders

Two types of users make up the potential transit patronage: the necessity riders who cannot drive or do not have access to an automobile, and those who prefer to ride transit.

In the Los Angeles Metropolitan Region in 1964, there were approximately 2,500,000 people 15 years old or more who did not have a drivers license and were therefore dependent upon some transportation other than their own automobile. These people make up the first group.

The second group is made up of people who currently drive because of habit, convenience or necessity. The automobile is not required in the performance of their daily work. The level of service offered by the transit system must be directed at this group since, with competitive comfort, convenience and cost, many of them would divert to a transit system. In the case of a suburban resident who maintains a second automobile primarily as a commute means (a common necessity in the Region), the individual can realize a substantial cost saving and also enjoy his trip reading the morning paper rather than combating freeway traffic.

On the basis of the Coverdale & Colpitts 1958 estimated travel within the eight corridors proposed for transit, it is shown that 52.16% of the total regional travel occurred along these corridors. Considering that commuter travel makes up approximately 1/3 of all trips in the region, it follows that <u>at least</u> a proportionate amount of this travel is within these primary commuter routes. Therefore, at least 16% of the <u>total</u> Regional travel of over 12 million trips represents a prime transit potential. Of even greater significance is the fact that in the corridor areas, the <u>full</u> commuter traffic, or nearly 1/3, represents a potential market. The impact of this potential upon the freeway congestion is obvious.

It is also important to realize that the location of a transit line will also foster a change in community form along the routes to higher density. This fact alone will create added potential transit patronage and preclude necessity of these people using the freeways daily.

E. THE BENEFITS

1. Benefits Defined

The benefits to be derived from the transit system will accrue to the general public (community benefits) and to private individuals (user benefits). This discussion does not consider the user benefits but deals only with the major community benefits and then only in exemplary terms. A benefit cost ratio cannot be determined since a much more comprehensive study would be required.

The basic form of the benefits to be discussed is as follows:

Financial Benefits: The direct contributions in dollar terms to the community or private beneficiary.

Economic Benefits: The direct or indirect contributions to the resource base of the community or the individual.

Social Benefits: The direct, indirect, tangible or intangible values added to the social, economic or physical base of the community at large.

Real Benefits: The total of direct, indirect, tangible or intangible benefits whether financial, economic or social.

2. Financial Benefits

The benefits which will accrue to the Region result from the fact that, while the expenditure (estimated at nearly $2 billion) of money for the eight-corridor system will be spent primarily within the Region for labor and material, the primary source of funds will be outside the Region. The immediate expenditure is transformed into new income and new sales from new capital.

3. Economic Benefits

These benefits to be derived from rapid transit in Los Angeles arise largely due to increased mobility. For example, it has been estimated that inadequate peak-hour freeway capacity will result in a reduction of potential employment between 95,000 and 225,000, depending upon the future distribution of labor within the Region. The proposed rapid transit system can readily accommodate these commuters, thereby removing the capacity restraint. These employees reaching jobs in the Regional Core represent an increase in Regional income of from

$665,000,000 to $1,575,000,000 annually. The derived effect upon suburban communities would be from $1,700,000 to $4,000,000 in added sales tax and $35,000,000 to $115,000,000 additional real estate taxes. Therefore, the potential economic benefit attributable to rapid transit over a 40-year period results in an average capitalized value between $2 billion and $7 billion.

4. Social and Real Benefits

These benefits include many that cannot readily be assigned a dollar value. One great social benefit to be derived from Rapid Transit is a continued and expanded variety and diversity of community form which avoids monotony and expands residential choice. Rapid transit supplementing the other modes of transport will provide the only apparent means of efficiently accommodating the projected 20-million population in this Region in future years. It can aid in the preservation of urban and suburban areas by permitting concentration of specialized areas which in turn will attract business and industry of all types. It will expand both the labor market for the employer and the job opportunity for the employee. It will have a stabilizing effect upon tax costs to single family residential areas through higher tax returns from high density, high value properties served by the transit system. It will permit many acres of prime land area to remain in productive use rather than being devoted to parking and thoroughfares. It would also enhance the accessibility of cultural and recreational areas by non-drivers and also afford a reasonable choice to a great many people who would prefer a relaxing trip to and from work rather than driving an automobile in congested traffic.

APPENDIX A

DEFINITIONS

APPENDIX A

DEFINITIONS

The following list of definitions of terms and geographic areas used in this report is provided to give a common base of understanding.

AREAS:

The Los Angeles Metropolitan Region is that portion of Los Angeles County south of the San Gabriel Mountains and including the northern portion of Orange County.

The Southern California Rapid Transit District is slightly smaller than the Los Angeles Metropolitan Area, having the same general boundaries but excluding any portion of Orange County.

The Regional Core is that area generally bounded by the Santa Monica Mountains - Hollywood Hills - Golden State Freeway on the north; the Long Beach Freeway on the east; Slauson Avenue on the south; and the San Diego Freeway on the west.

The Central Area is defined as an egg-shaped area between the Hollywood Freeway on the north and the Santa Monica Freeway on the south and extending from the Santa Ana Freeway on the east and including Beverly Hills on the west.

The Civic Center is defined as that 320-acre area extending from Sunset Boulevard to 2nd Street and between Figueroa and Alameda Streets as defined in the Centropolis Report.

The Central Business District is defined as that 470-acre area extending from 2nd Street on the north to Olympic Boulevard on the south and between Los Angeles and Figueroa Street and does not include the area of Bunker Hill, which is contained in the area between Hill Street on the east, the Harbor Freeway on the west, First Street on the north and generally Fifth Street on the south.

TERMS:

Transportation System is defined as an integrated complex of all modes of transportation, facilities and vehicles.

Roadway Network is defined as the total complex of facilities for the movement of rubber-tired vehicles from minor streets to freeways.

Freeway System is defined as those freeways currently in existence and proposed by State Division of Highways for construction by 1980.

Transit System is defined as the network(s) of routes, facilities, and equipment, publically or privately owned, intended for the mass movement of passengers.

Rapid Transit is defined as high speed, high capacity fixed facility transit operating on exclusive right of way and completely grade separated.

APPENDIX B

BIBLIOGRAPHY AND REFERENCE LIST

APPENDIX B

BIBLIOGRAPHY AND REFERENCE LIST

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Form 99

"EXHIBIT C"
CONTINUED

CITY OF LOS ANGELES

RESOLUTION

WHEREAS, there exists a crisis situation in traffic and transportation today which without correction will have a catastrophic effect on the continuing healthy economic growth of our community; and

WHEREAS, highway and transit experts alike agree that only modern rapid transit, together with highways and freeways, comprising a balanced transportation system, can meet that problem; and

WHEREAS, the Legislature gave to the new locally selected Board of the Southern California Rapid Transit District the responsibility to finance and to build rapid transit; and

WHEREAS, public officials, community leaders and citizen groups have made it clear that a project of this size and importance should be approved by a vote of the people; and

WHEREAS, the Los Angeles City Council has a vital stake in what is done in the program to develop mass rapid transit for this area; and

WHEREAS, the Legislature has been asked to permit a vote of the people on a proposal to levy a one per cent motor vehicle license fee (in lieu) tax to finance a rapid transit system; and

WHEREAS, the Los Angeles County Board of Supervisors did resolve on May 25, 1965 that if and when the California Legislature approves such legislation, with a 60% majority vote requirement, the Board of Supervisors will levy as soon as legally possible a 1/2 of 1% motor vehicle license fee (in lieu) tax for the purpose of rapid transit engineering, implementation of existing bus service, and public information so as to be able to properly place the urgent rapid transit financing question before the voters;

NOW, THEREFORE, BE IT RESOLVED that the Los Angeles City Council does endorse the action of the Board of Supervisors.

RESOLVED FURTHER, that the Los Angeles City Council strongly urges the Legislature to ~~[illegible]~~ approve ~~[illegible]~~, in this legislative session, a measure permitting a county-wide election on a proposition to finance a rapid transit system through the levy of a one per cent motor vehicle license fee (in lieu) tax upon the approval of 60% of those voting on the proposition.

Presented by James P. Potter, Jr.
James B. Potter, Jr.
Councilman, 2nd District

Seconded by John P. Cassidy
John P. Cassidy
Councilman, 12th District

6-3-65

Proposed Planning Work (Refer to Item 5(a) of Form CFA-401)

The proposed planning work is for the purpose of documenting the proposed project in a report which defines the scope, cost and function in sufficient detail to permit submitting a proposition to the electorate for approval of a bond issue of stipulated amount.

The scope of activities necessary for such report are in conformance with the outline of "Basic Services, The Preliminary Phase" as defined in Section II of ASCE-Manuals and Reports of Engineering Practice - No. 45, and are as follows:

1. Review and updating operating system concept design criteria. Design criteria is the "Basis for design" and establishes quality of service and facilities standards to which the system must adhere, in addition to defining passenger volumes and similar capacity requirements for individual portions of the system.
2. Preliminary survey and development of alternative alignments in each of the several corridors including cost/revenue estimates for each alternate. Although the general location of routes is known, specific alignment has not been determined. A large portion of the system may be located in public rights of way presently devoted to street use and hence will require extensive inter-agency coordination to plan for satisfactory joint occupancy. It will also be necessary to coordinate station facilities designs and land acquisition requirements with existing and planned adjacent community development.
3. Preliminary design of way structures, stations and facilities. Typical preliminary architectural and structural designs of

all facilities including subway, at grade and elevated structures will be developed for evaluation in the several alternative alignments and for cost estimating. Existing soils investigation data will be used where available and additional soils exploration made only where mandatory for proper evaluation of foundation conditions.

4. Preliminary design of operation and control equipment. Preliminary engineering of rolling stock, train operations control system, fare collection equipment and electrical power system will be developed in sufficient detail to insure conformance with the overall system design criteria and accuracy of cost estimates.

Utilization of Available Data

Engineering studies performed by the District's predecessor, the Los Angeles Metropolitan Transit Authority, through 1962 were based on the principle of financing solely from operating revenues. Proposed transit system facilities and equipment were therefore designed on the basis of maximizing revenue rather than numbers of individuals served. Subsequent formation of the Transit District with its powers of obtaining public funding of capital investment requires the basis of design be changed to maximize service.

Approximately $2,000,000 has been expended in development engineering work as outlined in "Exhibit E". The extensive investigations of area-wide travel patterns and suitability of various means of meeting the public transportation requirements furnished basic data upon which the District's Master Plan was developed and integrated with highway programs through the work of the LARTS.

Only that which was accomplished in 1962 was of such nature as to be affected by the change in philosophy of operation. The "Report on Estimated Traffic and Revenue of the Backbone Route" by Coverdale & Colpitts which was performed for a fee of $140,162 is to a large degree recoverable at nominal cost. On the other hand, the 1962 "Engineering Report-Rapid Transit System Backbone Route" by Kaiser Engineers will require considerable re-engineering due to an anticipated doubling of initial system capacity. Way structures such as tunnel designs, not affected by system capacity, have been given full value in the proposed planning work. Another task performed under this contract at a cost of $125,800 out of a total fee of $713,160 was a soils investigation program which made 128 exploratory borings to tunnel construction depths. Laboratory test data and soils samples have been preserved by the District and may be classed as "of permanent value" for the 12.1 miles of projected subway in the Wilshire Corridor.

The staff, with the aid of two of its consultants, Kaiser Engineers and Daniel, Mann, Johnson & Mendenhall, in 1963, in order to gain a more accurate projection of project cost, defined the first phase of construction as shown on the following Drawings 2-C through 13-C. The estimates of project cost based thereon are also attached. These estimates were prepared using a base date of Second Quarter 1963. Project costs defined in Section 4(e) of Form CFA-401 are escalated from this estimate to Fourth Quarter 1965.

Location of facilities shown on the drawings are in the nature of a recommendation by the District to local governmental jurisdictions and cannot be considered as having been approved by communities in which the route is proposed to be located. The District, however, does have the legal authority to make the final route selection and has the general concurrence of local officials to locate that portion of the system which is defined as "subway" in the Wilshire Corridor lying between Century City on the west and

the east portal in the region of the San Bernardino Freeway and Mission Road.

The preliminary engineering funds requested in this application represent only the amount necessary to complete the project using all currently available data.

The organization which will carry out the preliminary engineering program will be primarily District consultants aided by District staff as indicated in the attached Table of Organization. The District Project Director will direct and coordinate consultants and staff activities to insure compliance with outlined objectives and complete and satisfactory performance of the contract.

Based on the scope of work and the organization outlined, the estimated cost of preliminary engineering will total $1,115,000. Of this total, it is estimated the District will contribute $100,000 in the form of staff services. The remaining $1,015,000 requested in this application represents solely cost of outside services.

All work performed to date has been paid for in full and no part of this cost is included in the amount of this application.

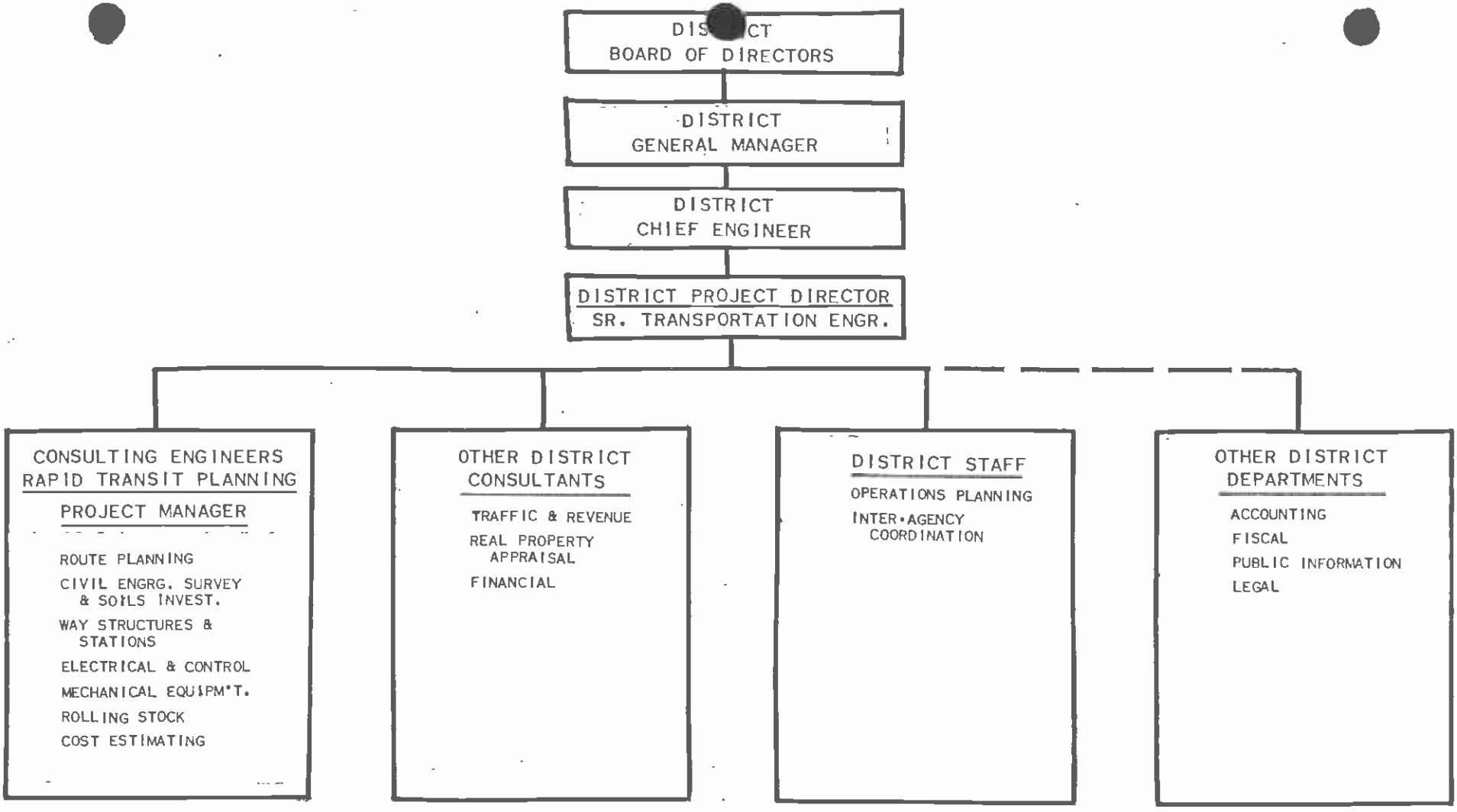
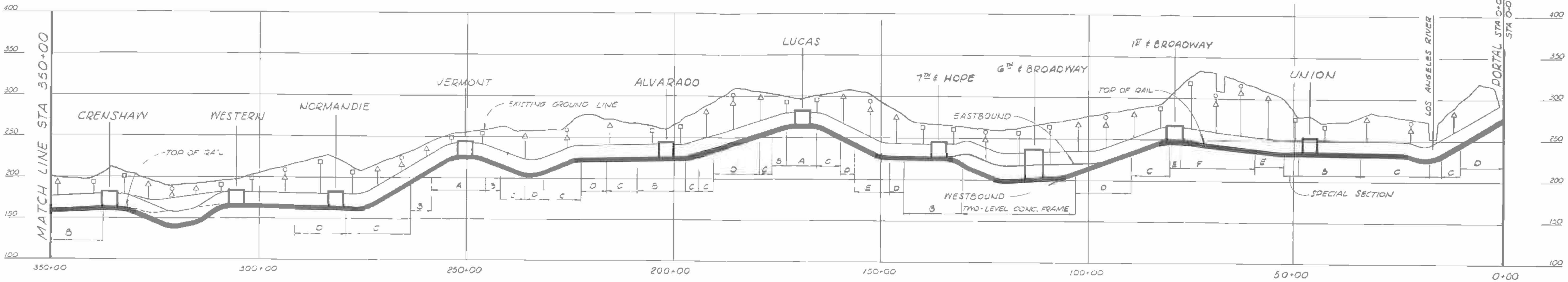


TABLE OF ORGANIZATION
RAPID TRANSIT PRELIMINARY ENGINEERING

"EXHIBIT D"
Continued



PROFILE
SCALE 1"=50' VERT 1"=1000' HORIZ

PLAN
SCALE 1"=1000'

NOTE
FOR LEGEND SEE DWG 4-C

GRAPHIC SCALES

1"=1000' 1000 0 1000 2000

1"=50' 50 0 50 100

SEPTEMBER 1963

NO.	DATE	REVISION	BY	KE APP	MTA APP

KAISER ENGINEERS
DIVISION OF HENRY J. KAISER COMPANY
ARCHITECT - ENGINEER
OAKLAND, CALIFORNIA

APPROVALS — K.E. — L.A.M.T.A.

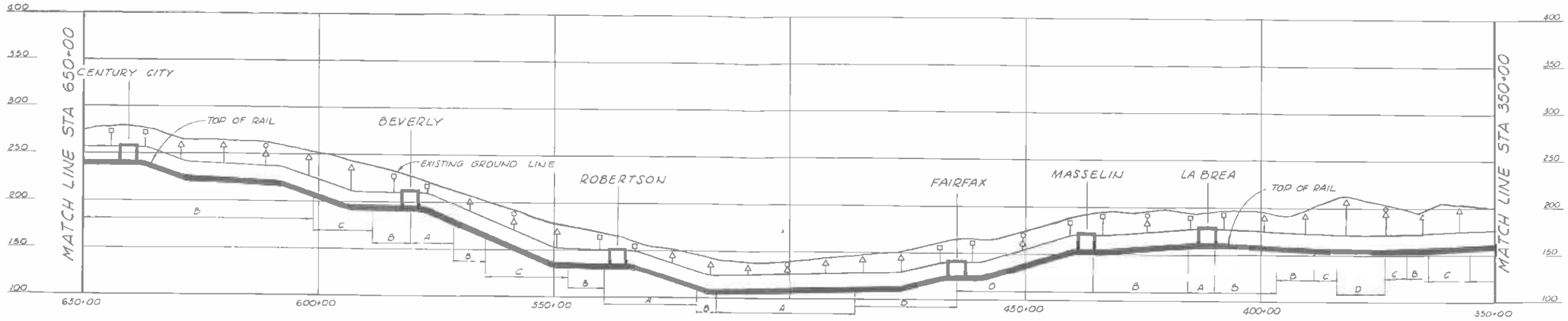
LOS ANGELES METROPOLITAN TRANSIT AUTHORITY
LOS ANGELES, CALIFORNIA

RAPID TRANSIT ROUTE ALIGNMENT

WILSHIRE CORRIDOR

PLAN & PROFILE

SCALE	JOB NO	DRAWING NO.	REVISION
AS NOTED	6338	2-C	R-



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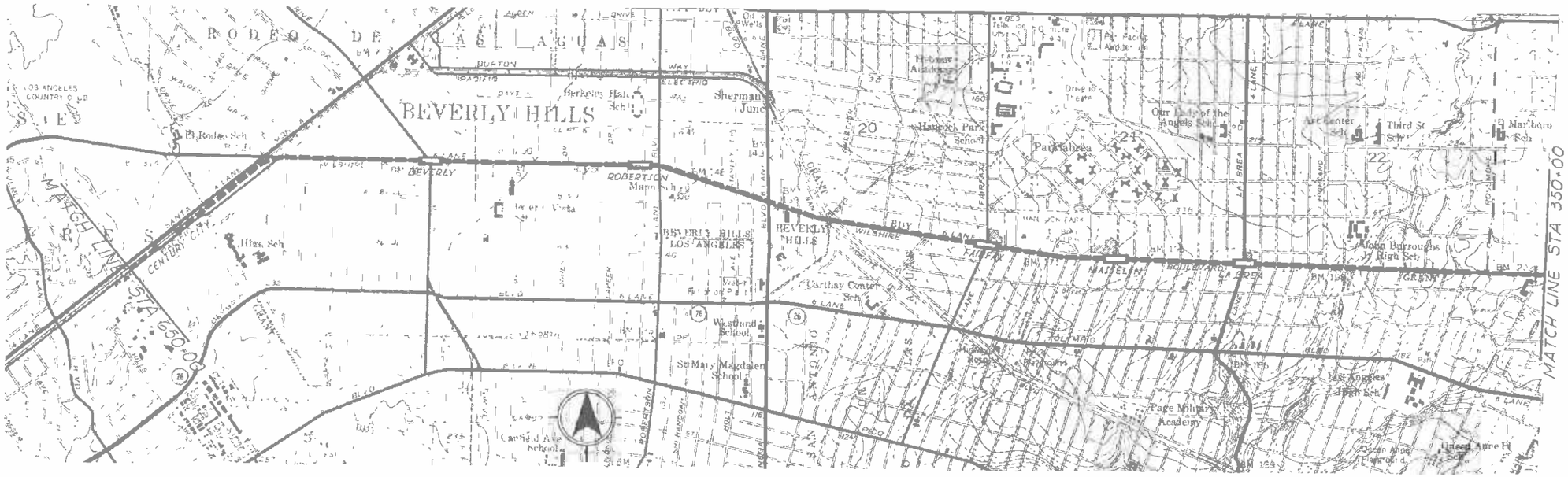

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SEPTEMBER 1963

NO.	DATE	REVISION	BY	K.E. APP	MTA APP

KAISER ENGINEERS
DIVISION OF HENRY J. KAISER COMPANY
ARCHITECT - ENGINEER
OAKLAND, CALIFORNIA

APPROVALS

K.E.	L.A.M.T.A.
A.J.B. DRAWN BY	
CHECKED BY	
APPROVED BY	
Chief Design Engr. Date	Chief Engineer Date
P.J. Lavin Engineering Manager Date	
Project Manager Date	

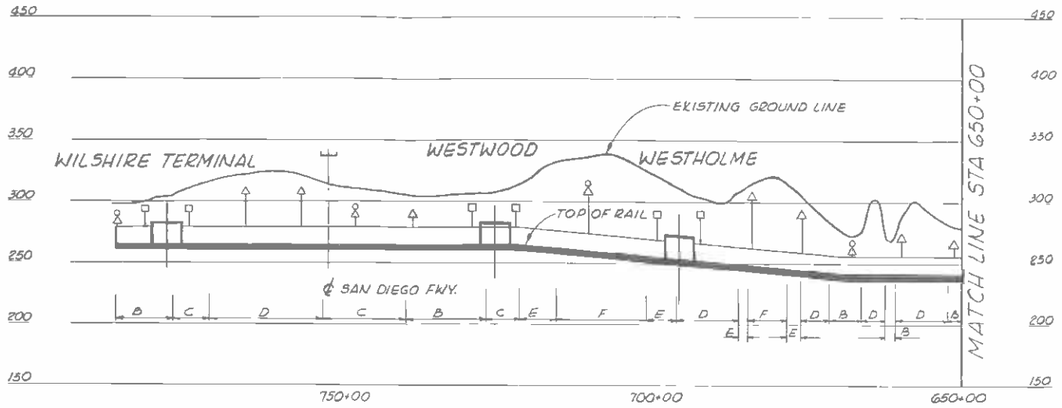
LOS ANGELES METROPOLITAN TRANSIT AUTHORITY
LOS ANGELES, CALIFORNIA

RAPID TRANSIT ROUTE ALIGNMENT

WILSHIRE CORRIDOR

PLAN & PROFILE

SCALE	JOB NO	DRAWING NO.	REVISION
AS NOTED	6338	3-C	R-



PROFILE

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PLAN

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LEGEND

A,B TUNNEL LINING TYPE
2 BLAST SHAFTS (1 EACH TUNNEL)
2 VENT SHAFTS (1 EACH TUNNEL)
2 VENT SHAFTS/FANS (1 EACH TUNNEL)
SUBWAY
SURFACE
STATION

GRAPHIC SCALES

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NO.	DATE	REVISION	BY	RE APP.	MTA APP

SEPTEMBER 1963

KAISER ENGINEERS
DIVISION OF HENRY J. KAISER COMPANY
ARCHITECT - ENGINEER
OAKLAND CALIFORNIA

LOS ANGELES METROPOLITAN TRANSIT AUTHORITY
LOS ANGELES, CALIFORNIA

APPROVALS	K.E.	L.A.M.T.A.
DESIGNED BY	A.J.B	
CHECKED BY		
APPROVED BY	Chief Design Engr. Date	Chief Engineer Date

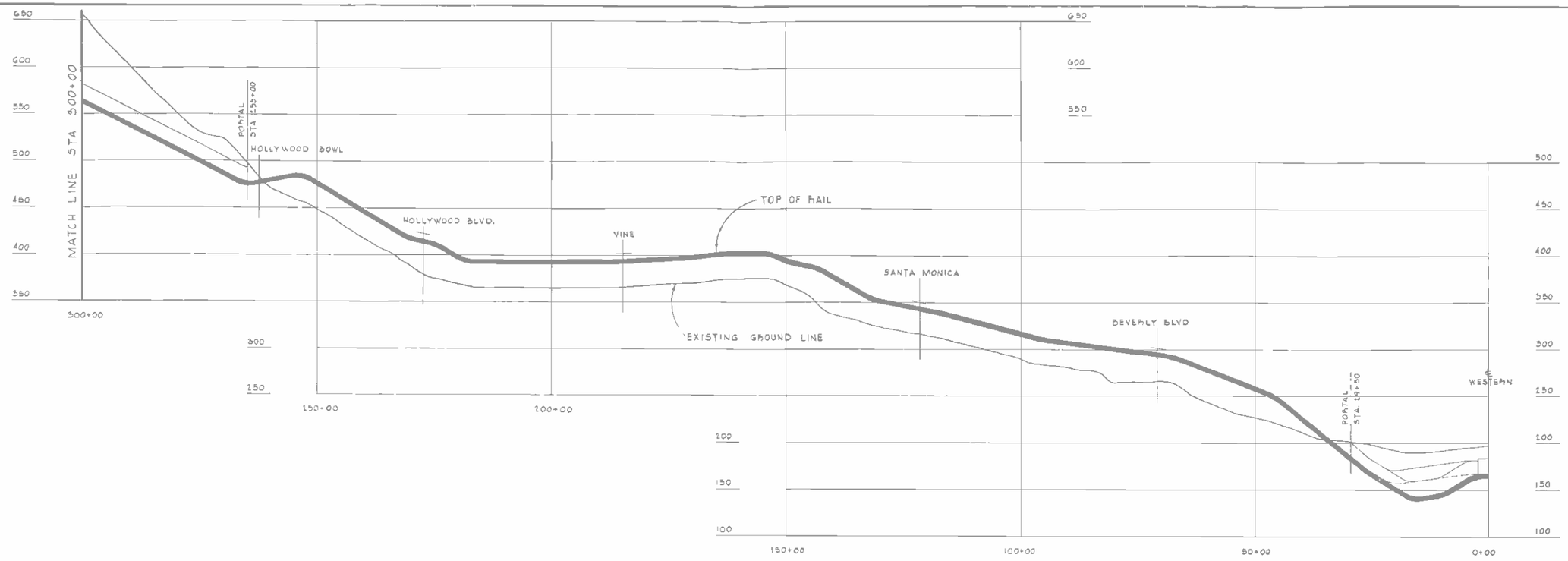
Engineering Manager Date
Project Manager Date

RAPID TRANSIT ROUTE ALIGNMENT

WILSHIRE CORRIDOR

PLAN & PROFILE

AS NOTED SCALE	6338 JOB NO.	4-C DRAWING NO.	R- REVISION



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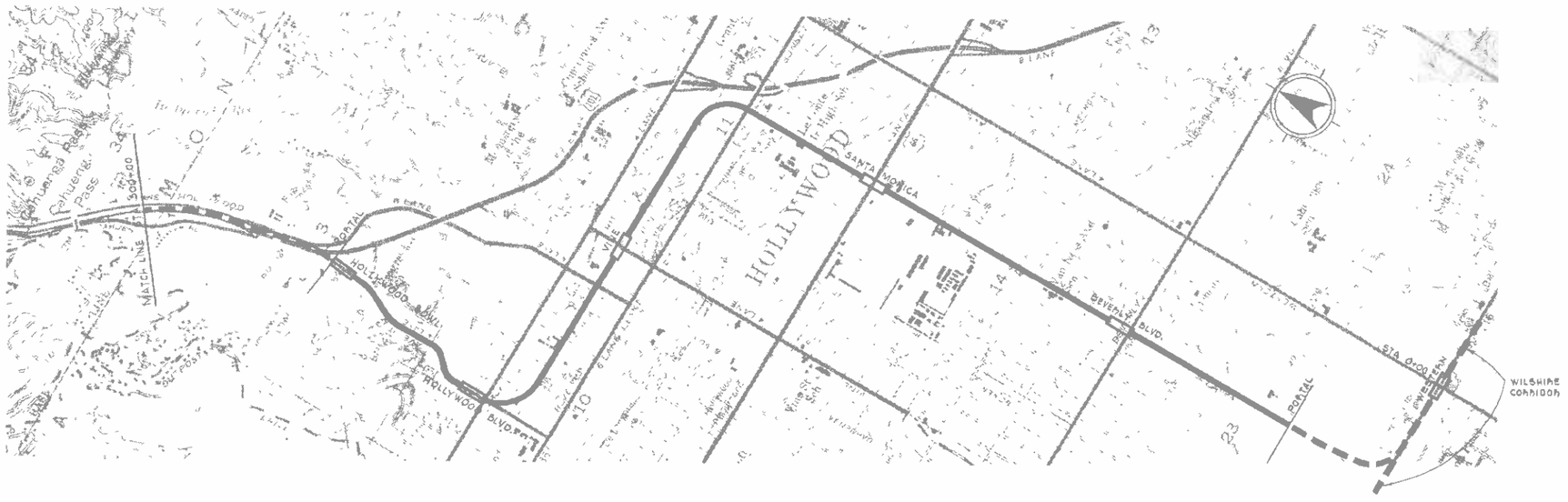

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NOTE /
FOR LEGEND SEE DWG 4-C

NO.	DATE	REVISION	BY	R.E. APP	MTA APP

SEPTEMBER 1963

KAISER ENGINEERS
DIVISION OF HENRY J. KAISER COMPANY
ARCHITECT - ENGINEER
OAKLAND CALIFORNIA

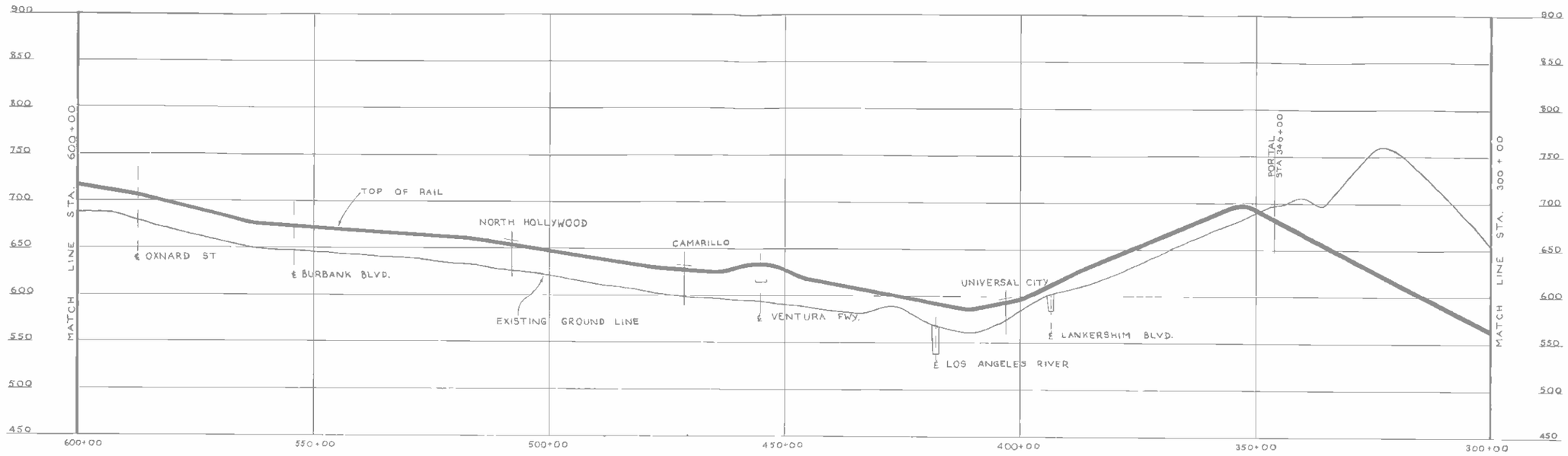
APPROVALS

R.E.	L.A.M.T.A.
A.J.B. DRAWN BY	
CHECKED BY	
APPROVED BY	Wm. D. McElwain Date
Chief Design Engr. Date	Chief Engineer Date
R.S. Town Engineering Manager Date	
Project Manager Date	

LOS ANGELES METROPOLITAN TRANSIT AUTHORITY
LOS ANGELES, CALIFORNIA

RAPID TRANSIT ROUTE ALIGNMENT
SAN FERNANDO VALLEY
CORRIDOR
PLAN & PROFILE

AS NOTED	6338	5-C	R-
SCALE	JOB NO.	DRAWING NO.	REVISION



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NO.	DATE	REVISION	BY	KE APP	MTA APP

SEPTEMBER 1963

KAISER ENGINEERS
DIVISION OF HENRY J. KAISER COMPANY
ARCHITECT - ENGINEER
OAKLAND CALIFORNIA

APPROVALS

K.E.	L.A.M.T.A.
A.J.B. DRAWN BY	
CHECKED BY	Lloyd M. Brown Date
APPROVED BY	Chester R. Lobdell Date
Chief Design Engr. Date	
P.J. Lorin Engineering Manager Date	
Project Manager Date	

LOS ANGELES METROPOLITAN TRANSIT AUTHORITY
LOS ANGELES, CALIFORNIA

RAPID TRANSIT ROUTE ALIGNMENT
SAN FERNANDO VALLEY CORRIDOR
PLAN & PROFILE

AS NOTED	6338	6-C	R-
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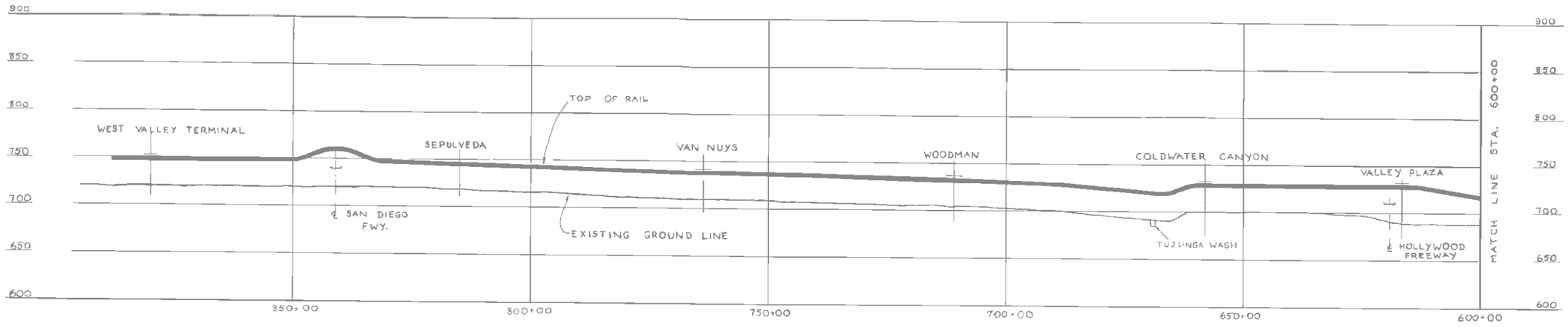

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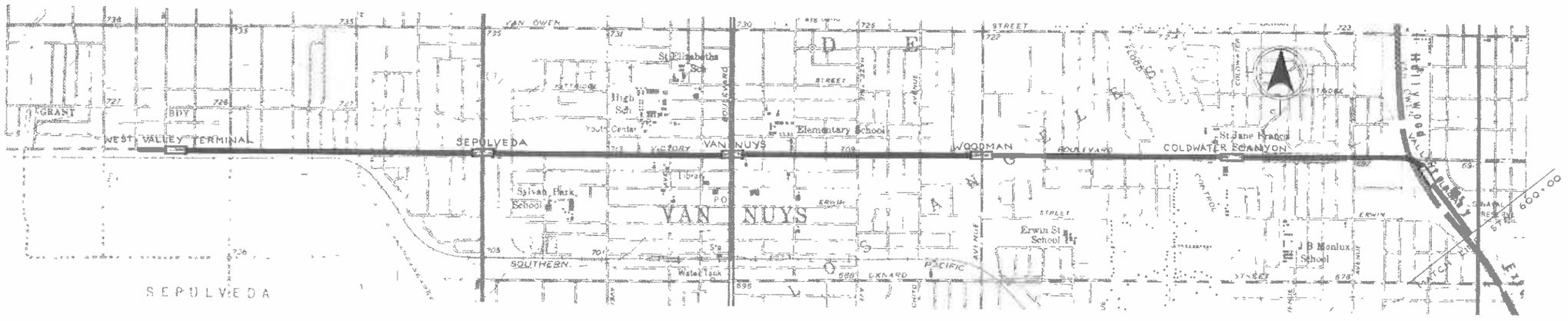

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SEPTEMBER 1963

KAISER ENGINEERS
DIVISION OF HENRY J. KAISER COMPANY
ARCHITECT - ENGINEER
OAKLAND CALIFORNIA

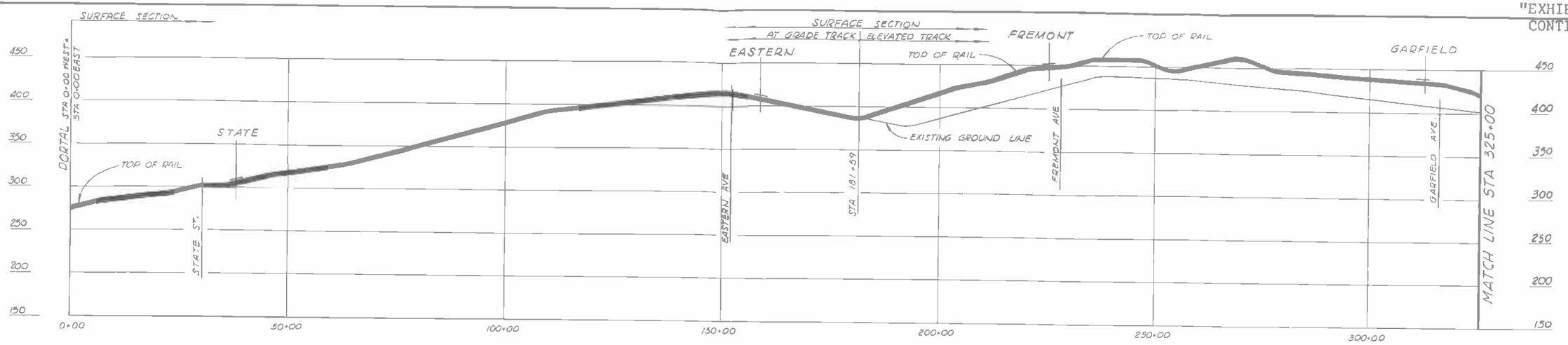
APPROVALS

K.E	L.A.M.T.A.
A.J.B. DRAWN BY	
DIRECTED BY	Project Manager Date
APPROVED BY	Chief Design Engr Date
Chief Design Engr Date	Chief Engineer Date
P.J. Iovin Engineering Manager Date	
Project Manager Date	

LOS ANGELES METROPOLITAN TRANSIT AUTHORITY
LOS ANGELES CALIFORNIA

RAPID TRANSIT ROUTE ALIGNMENT
SAN FERNANDO VALLEY CORRIDOR
PLAN & PROFILE

AS NOTED SCALE	6338 JOB NO.	7 - C DRAWING NO.	R- REVISION



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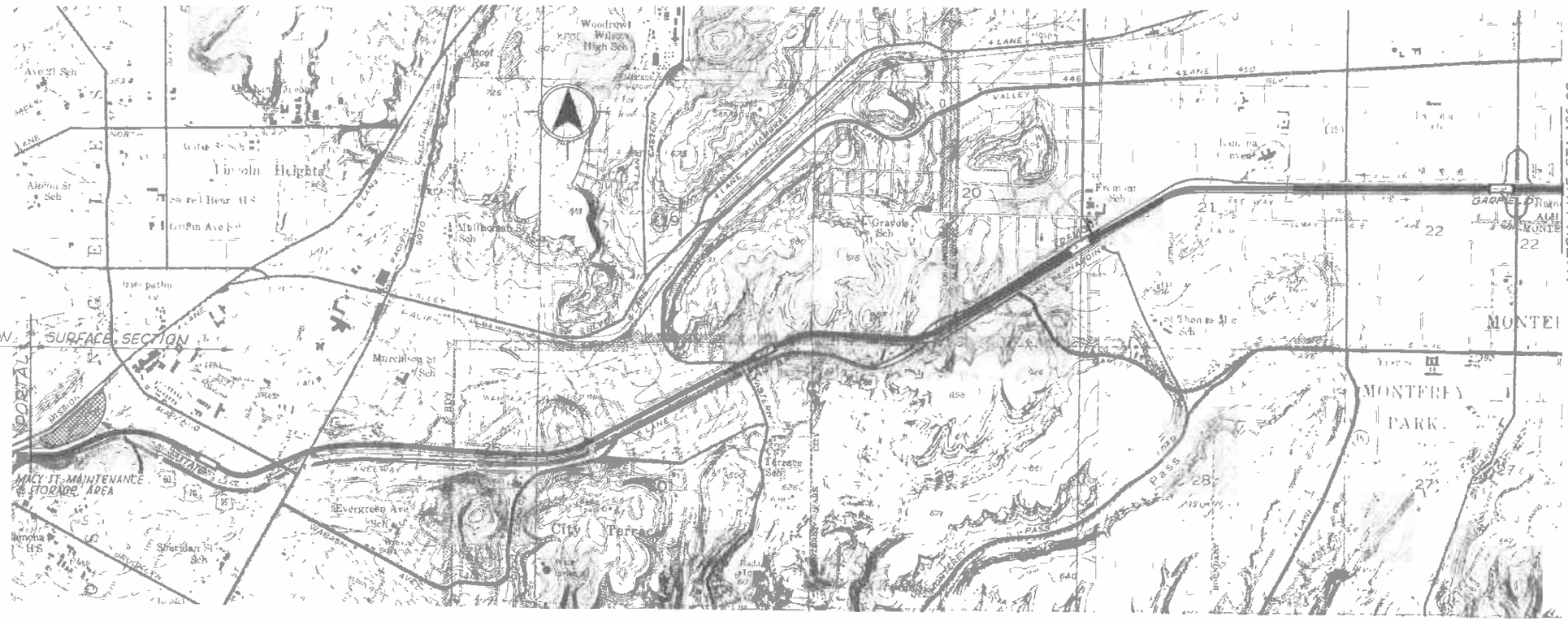

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NOTE:
FOR LEGEND SEE DWG 4-C

GRAPHIC SCALES

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SEPTEMBER 1963

NO.	DATE	REVISION	BY	T.E. L.P.?	MTA APP.

KAISER ENGINEERS
DIVISION OF HENRY J. KAISER COMPANY
ARCHITECT - ENGINEER
OAKLAND CALIFORNIA

APPROVALS

K.E.	L.A.M.T.A.
DESIGNED BY R.J.B.	
CHECKED BY	
ENGINEER IN CHARGE	
Chief Design Engr. Date	Chief Engineer Date
P.J. Iorio Engineering Manager Date	
Project Manager Date	

LOS ANGELES METROPOLITAN TRANSIT AUTHORITY
LOS ANGELES, CALIFORNIA

RAPID TRANSIT ROUTE ALIGNMENT

SAN BERNARDINO CORRIDOR

PLAN & PROFILE

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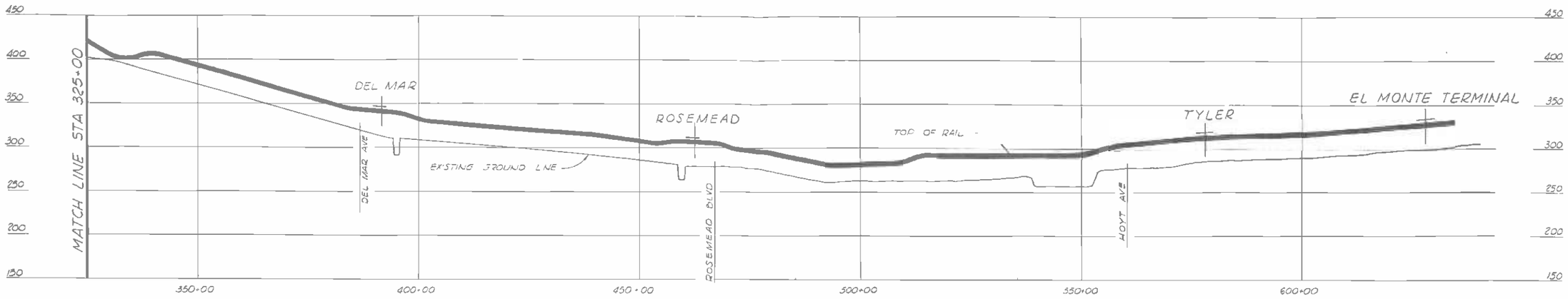

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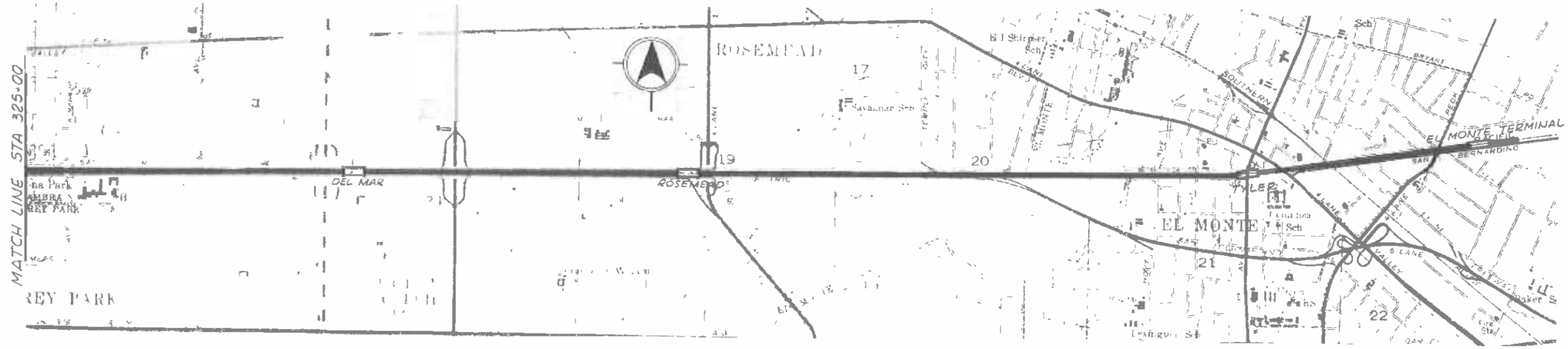

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NOTE:
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SEPTEMBER 1963

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NO.	DATE	REVISION	BY	KE APP	LMTA APP

KAISER ENGINEERS
DIVISION OF HENRY J. KAISER COMPANY
ARCHITECT - ENGINEER
OAKLAND CALIFORNIA

APPROVALS

	K.E.	LMTA
DRAWN BY	R.J.B.	
CHECKED BY		
APPROVED BY - Chief Design Engr.		
Engineering Manager	P.J. Town	
Project Manager		

LOS ANGELES METROPOLITAN TRANSIT AUTHORITY
LOS ANGELES, CALIFORNIA

RAPID TRANSIT ROUTE ALIGNMENT

SAN BERNARDINO CORRIDOR

PLAN & PROFILE

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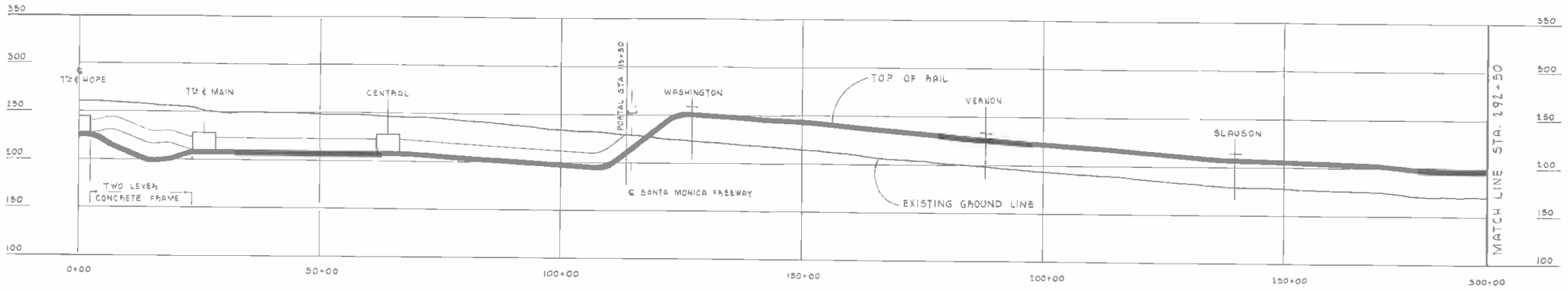

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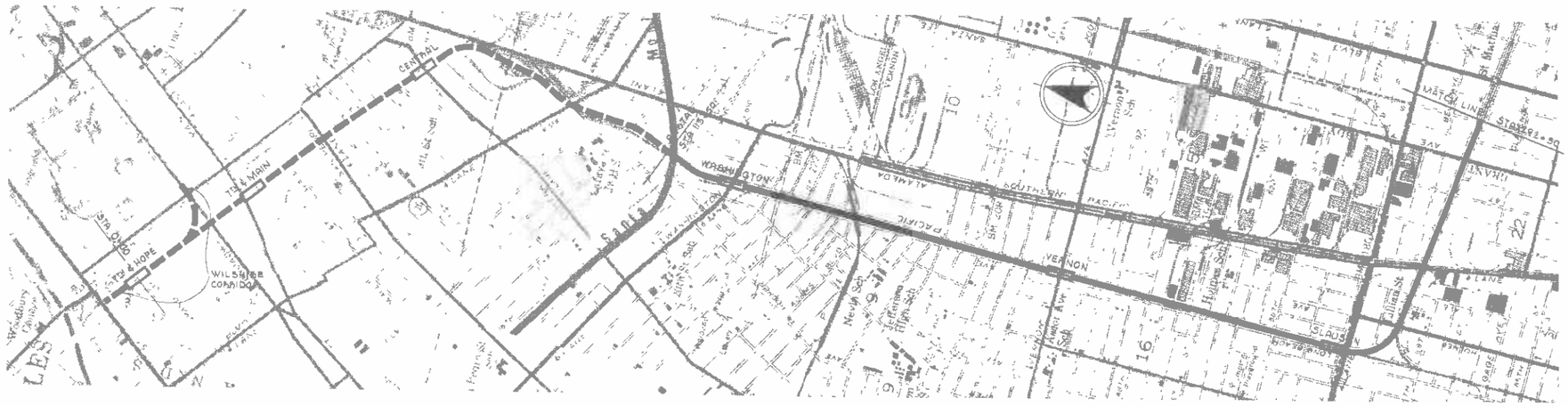

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GRAPHIC SCALES

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NOTE: FOR LEGEND SEE DWG 4-C

NO.	DATE	REVISION	BY	K.E. APP.	MTA APP.

SEPTEMBER 1963

KAISER ENGINEERS
DIVISION OF HENRY J. KAISER COMPANY
ARCHITECT - ENGINEER
OAKLAND CALIFORNIA

LOS ANGELES METROPOLITAN TRANSIT AUTHORITY
LOS ANGELES, CALIFORNIA

APPROVALS

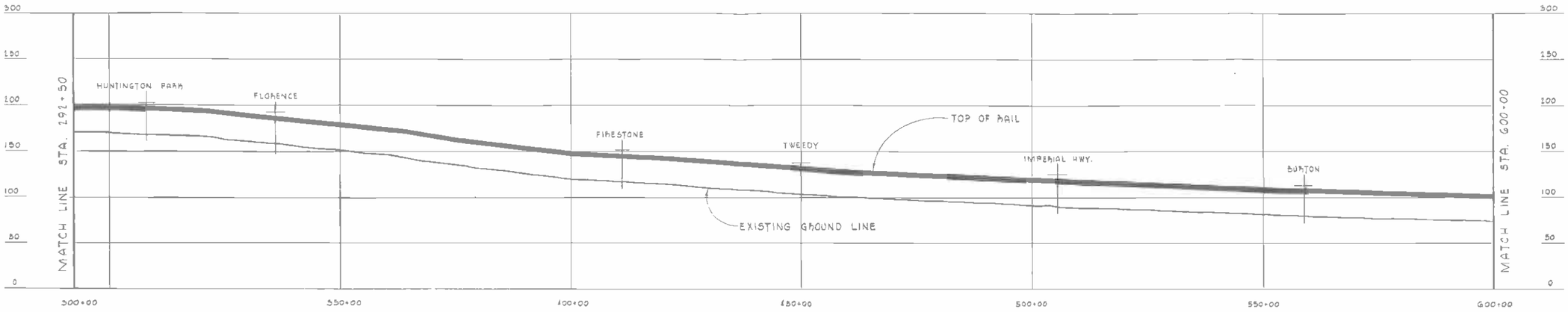
K.E.	L.A.M.T.A.
A.J.B. DRAWN BY	
CHECKED BY	
APPROVED BY	
Chief Design Engr. Date	Chief Engineer Date
P.J. Town Engineering Manager Date	
Project Manager Date	

RAPID TRANSIT ROUTE ALIGNMENT

LONG BEACH CORRIDOR

PLAN & PROFILE

AS NOTED	6338	10-C	R-
SCALE	JOB NO.	DRAWING NO.	REVISION



PROFILE

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GRAPHIC SCALES

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NOTE
FOR LEGEND. SEE DWG. 4-C

NO.	DATE	REVISION	BY	KE APP	MTA APP

SEPTEMBER 1963

KAISER ENGINEERS
DIVISION OF HENRY J. KAISER COMPANY
ARCHITECT - ENGINEER
OAKLAND CALIFORNIA

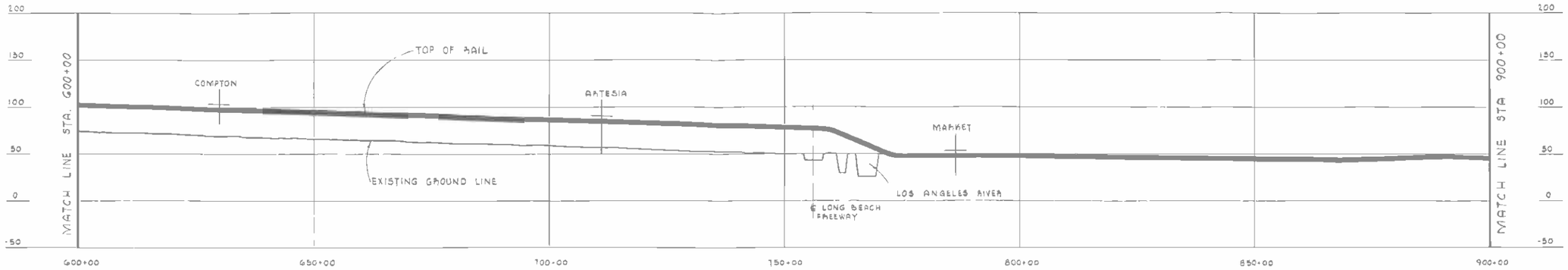
LOS ANGELES METROPOLITAN TRANSIT AUTHORITY
LOS ANGELES, CALIFORNIA

APPROVALS

	K.E	L.A.M.T.A.
DESIGN BY	A. J. B.	
CHECKED BY		
APPROVED BY		
Chief Design Engr. Date		Chief Engineer Date
Engineering Manager Date	P. J. Iovin	
Project Manager Date		

RAPID TRANSIT ROUTE ALIGNMENT
LONG BEACH CORRIDOR
PLAN & PROFILE

AS NOTED	6338	11-C	R-
SCALE	JOB NO.	DRAWING NO.	REVISION



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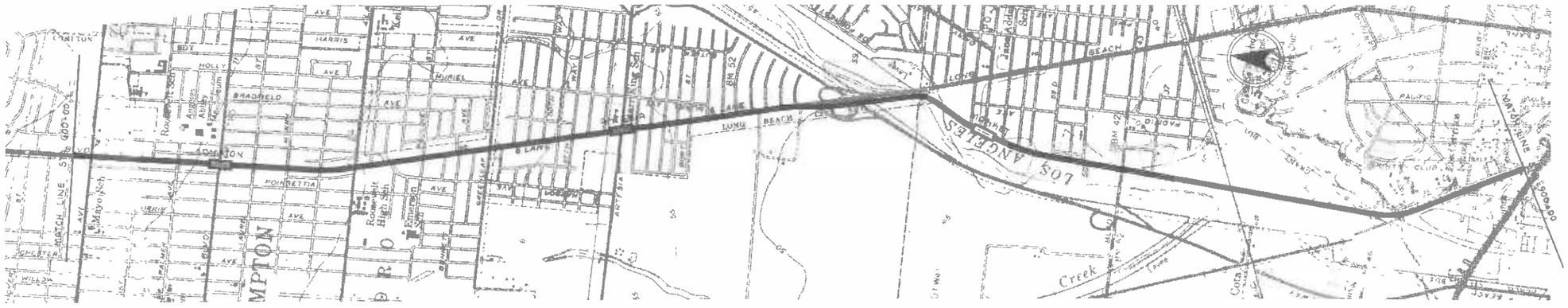

PLAN
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GRAPHIC SCALES
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NOTE:
FOR LEGEND SEE DWG. 4-C

NO.	DATE	REVISION	BY	KE APP	MTA APP

SEPTEMBER 1963

KAISER ENGINEERS
DIVISION OF HENRY J. KAISER COMPANY
ARCHITECT - ENGINEER
OAKLAND CALIFORNIA

APPROVALS

K.E.	L.A.M.T.A.
A. J. B. DESIGNED BY	
CHECKED BY	Manager of Engineering — Date
APPROVED BY	Chief Engineer — Date
Chief Design Engr. — Date	
P. J. Horin Engineering Manager — Date	
Project Manager — Date	

LOS ANGELES METROPOLITAN TRANSIT AUTHORITY
LOS ANGELES CALIFORNIA

RAPID TRANSIT ROUTE ALIGNMENT
LONG BEACH CORRIDOR
PLAN & PROFILE

AS NOTED	6338	12 - C	R-
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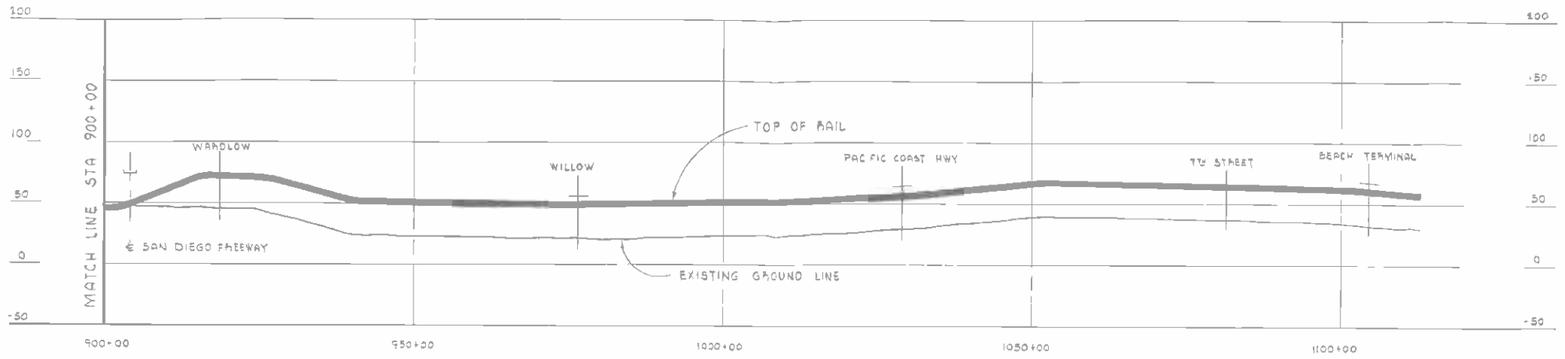

PROFILE
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GRAPHIC SCALES
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NOTE! FOR LEGEND SEE DWG 4-C

NO.	DATE	REVISION	BY	K.E APP.	MTA APP.

KAISER ENGINEERS
DIVISION OF HENRY J. KAISER COMPANY
ARCHITECT - ENGINEER
OAKLAND CALIFORNIA

APPROVALS

K.E	L.A.M.T.A.
DRAWN BY A.J.B	
CHECKED BY	
APPROVED BY	
Chief Design Engr. Date	Chief Engineer Date
P.J. Iovino Engineering Manager Date	
Project Manager Date	

SEPTEMBER 1963

LOS ANGELES METROPOLITAN TRANSIT AUTHORITY
LOS ANGELES CALIFORNIA

RAPID TRANSIT ROUTE ALIGNMENT

LONG BEACH CORRIDOR

PLAN & PROFILE

AS NOTED SCALE	6338 JOB NO.	13 - C DRAWING NO.	R- REVISION

III PROJECT COST ESTIMATE AND CONSTRUCTION SCHEDULE

The estimate of cost of the 64 mile rapid transit system is divided into major items in the following summary table. The procedure in preparing this estimate was to update labor and materials contained in the Backbone estimate to mid-1963. This was done by contacting suppliers and manufacturers of materials and equipment who had furnished cost quotations for the Backbone Systems. Kaiser Engineers requested current prices consistent with the revised quantities required for the 64 mile system. The major items covered by these inquires are as follows:

Rolling Stock
Rectification Equipment
Transformers
Control and Communication Equipment
Escalators
Steel Running Rails
Power Rail
Structural Steel
Reinforcing Steel

The program has been based on the start of Engineering by January 1, 1965, and the start of construction on January 1, 1966. The project completion date has been established as December, 1971. The construction schedule shown on the following pages indicates the construction by corridors. Escalation has been based on historical trends and extrapolated through 1971 in accordance with the construction program.

Following is a brief resume of the items included in the last accounts.

Structures and Roadbeds

Includes costs to construct the rapid transit system between stations, including all related costs, such as tunnels; track and track structures, site preparation and grade separation structures.

Stations

Includes costs of all at-grade and underground station construction, fare collection system and parking.

Electrification

Includes cost of the complete electrical system to provide power

for train propulsion and control and includes substations, power distribution, third rail for train power, lighting and incidental electrical facilities.

Control and Communications

Includes all costs for automatic train control and protection system.

Utility Relocation

Includes cost of relocating existing utilities both underground and above ground, including electrical, gas, water and sanitary and storm drains.

Underpinning

Includes all necessary underpinning and support of existing structures adjacent to the tunnels and stations.

Yards and Shops

Includes costs for transit yard facilities including central control building, service and maintenance buildings, track-work within yard limits.

Transit Vehicles

Includes all costs for the initial complement of transit vehicles.

Project Management and Engineering

Includes cost of project management including engineering and construction supervision.

CONSTRUCTION COST ESTIMATE

1.	Structures and Roadbeds	$205,416.000
2.	Stations	78,745,000
3.	Electrification	33,042,000
4.	Control and Communication	30,353,000
5.	Utility Relocation	7,434,000
6.	Underpinning	9,470,000
7.	Yards and Shops	4,279,000
8.	Rolling Stock	63,020,000
	Sub total	431,759,000
9.	Project Management, Construction Supervision and Engineering	39,470,000
	Sub total	471,229,000
	Escalation	64,335,000
	Contingency	83,774,000
	Total Project Construction Cost	$619,338,000

Note: The above costs do not include: land acquisition, retirement of existing bonds, interest during construction or additional contingency allowances over and above construction contingencies included above.

III-3

LAMTA 64.36 MILE RAPID TRANSIT SYSTEM
PROPOSED OCTOBER 1963
SUMMARY OF PROJECT COST ESTIMATE

Item No.	Item	Wilshire Corridor	San Bernardino Corridor	San Fernando Corridor	Long Beach Corridor	Sub-Total	Engineering	Rolling Stock	Total Project Cost
1	Structures & Roadbeds	91.170	18.650	42.848	52.748	205.416			
2	Stations	50.308	3.508	9.073	15.856	78.745			
3	Electrification	9.436	6.054	7.943	9.609	33.042			
4	Control & Communication	7.560	5.782	7.665	9.346	30.353			
5	Utility Relocation	2.158	0.751	1.633	2.892	7.434			
6	Underpinning	7.420	-	0.288	1.762	9.470			
7	Yards & Shops	-	2.233	1.029	1.017	4.279			
	Total Construction Cost	168.052	36.978	70.479	93.230	368.739	39.470	63.020	471.229
	Escalation	29.153	5.355	10.273	8.441	53.222	5.273	5.840	64.335
	Contingency	29.580	6.350	16.150	20.334	72.414	4.474	6.886	83.774
	TOTAL PROJECT COST	226.785	48.683	96.902	122.005	494.375	49.217	75.746	619.338

(Figures are in millions of dollars)

"EXHIBIT D" CONTINUED

Planning Work Done to Date (Refer to Item 5(b) of Form CFA-401)

During the past eleven years the District and its predecessor organization, the Los Angeles Metropolitan Transit Authority, have expended approximately $2,000,000 for feasibility and preliminary engineering studies and investigations.

A summary of these reports is as follows:

1954 "Report on a Monorail Rapid Transit Line for Los Angeles" for Los Angeles Metropolitan Transit Authority by Consulting Engineers Coverdale & Colpitts, Ruscardon Engineers and Gibbs and Hill.

Report evaluated feasibility of a monorail line between San Fernando and Long Beach. Concluded that financing of line would require changes in legislation, and that other designs of system should be investigated as alternatives to suspended monorail.

1955 "A Study of Bus Transportation as a Means of Rapid Transit for Los Angeles" for Los Angeles Metropolitan Transit Authority by Coverdale & Colpitts.

Study examined the feasibility of relying upon buses for the provision of a "complete and satisfactory" mass transit system in the Los Angeles area. Freeway and street operations and terminal problems were analyzed. The most significant conclusion is quoted:

"Buses are an essential part of mass transportation in Los Angeles. In our opinion they cannot be considered as a 'complete and satisfactory' answer to the mass rapid transit problem, because on certain routes they cannot compete in speed or convenience with the private automobile sufficiently to cause the automobile riders

to use the mass transit facility. On the other hand, on certain routes where the density of travel justifies it, rail rapid transit provides a service superior even to the private automobile."

1959 "A Study of Public Transportation Needs in the Area Served by the Los Angeles Metropolitan Transit Authority" by Coverdale & Colpitts, Consulting Engineers.

Part I - Origin-Destination Surveys
Part II - Determination of Potential Mass Rapid Transit Routes
Part III - Preliminary Determination of Passengers

This study was based upon the first broad-scale examination of travel patterns made in the Los Angeles area in some twenty years. Three origin-destination surveys reported in Part I provided the basis for determination of corridors of travel which represented the greatest need for rapid transit services. The analysis of the data in Part II produced a recommendation for priority consideration of rapid transit in four corridors: Wilshire, San Bernardino, Long Beach and Reseda. Part III developed preliminary estimates of travel times and passenger volumes, and station location recommendations for an economic analysis of projected rapid transit services in the recommended four corridors.

1960 "A Comparative Analysis of Rapid Transit System Equipment and Routes", a report for Los Angeles Metropolitan Transit Authority by Daniel, Mann, Johnson & Mendenhall, Engineers.

This report evaluated various rapid transit system concepts as they might be applied to the provision of service in the corridors recommended for initial investigation by

the 1959 study of transportation needs. The capital cost of a minimum-cost elevated system of rapid transit was estimated after tentative route alignments were selected on the basis of field investigation and analysis of engineering feasibility.

1960 "Preliminary Estimate of Traffic and Revenue for Los Angeles Metropolitan Transit Authority Rapid Transit System", by Coverdale & Colpitts, Consulting Engineers.

This report set forth the findings of a study to estimate financial results of operation of the four-corridor system defined in the 1960 report by Daniel, Mann, Johnson & Mendenhall. Although the study indicated potential traffic of over 64 million revenue passengers in the first year of complete system operation, estimated net revenues were below the level required to meet the debt service on the capital required to construct the system.

1962 "Report on 'Backbone' Rapid Transit Route for Los Angeles", by Los Angeles Metropolitan Transit Authority.

Evaluation of the data developed in previous studies indicated that that portion of the four-corridor system extending between Beverly Hills and El Monte was capable of producing maximum traffic and net revenue. This report suggested that if financing at a favorable interest rate could be secured this portion of the system might be feasible as a self-liquidating project.

1962 "Report on Estimated Traffic and Revenue of the Backbone Route" for Los Angeles Metropolitan Transit Authority by Coverdale & Colpitts.

This report was developed as the basis for seeking

financing for a first stage of system construction through a Federal loan or guarantee. Travel studies were updated and the economic feasibility of the 23-mile Backbone Route between Beverly Hills and El Monte was evaluated. It was concluded that the line could produce sufficient net income to carry debt service on a 50-year construction loan at an interest rate of 3-3/4%. The Authority was unable, however, to secure financing on these terms.

1962 "Engineering Report - Rapid Transit System Backbone Route" for Los Angeles Metropolitan Transit Authority by Kaiser Engineers.

Developed concurrently with the Coverdale & Colpitts' report, preliminary engineering performed under this contract defined facilities and equipment necessary for a rapid transit system 23 miles in length and projected to serve 146,000 passengers daily. Volume I - Engineering Report and Volume II - Drawings are attached.

1963 "Base Year Report-1960" by Los Angeles Regional Transportation Study.

A report summarizing base year data and describing the study methods adopted by the Los Angeles Regional Transportation Study, a cooperative undertaking by the State Division of Highways, the Counties of Los Angeles, Orange, Ventura, San Bernardino and Riverside, the cities in those counties, and the Los Angeles Metropolitan Transit Authority. The LARTS is a comprehensive, coordinated transportation study of the area designed to forecast the total transportation requirements to be served by all travel

modes. Projections of travel demand are currently being developed cooperatively based on estimates of future population, employment, land use and other relevant factors.

SOUTHERN CALIFORNIA RAPID TRANSIT DISTRICT 1060 SOUTH BROADWAY, LOS ANGELES, CALIFORNIA 90015
CONE T. BASS, ACT. GENERAL MANAGER • TELEPHONE (213) 749-6977

October 18, 1965

"EXHIBIT F"

Housing and Home Finance Agency
Community Facilities Administration
450 Golden Gate Avenue
San Francisco, California 94102

Gentlemen:

RE: Item 5 (d)(1) Application for Advance for Public Works Planning, Rapid Transit System.

The Southern California Rapid Transit District is a public corporation created by the State of California. The statement of purpose in the Act creating the District is as follows:

30001. The Legislature hereby finds and declares:

(a) There is an imperative need for a mass rapid transit system in the Southern California area, and particularly in Los Angeles County.

(b) In view of the limited powers of the Los Angeles Metropolitan Transit Authority (herein sometimes referred to as "authority") it has become apparent that the authority is unable to solve the transit problems of the Southern California area and provide the needed mass rapid transit system.

(c) It is, therefore, necessary to provide a successor corporation to the authority, to wit: a transit district, and to establish such transit district governed by representatives of the governmental agencies in the Southern California area so that there will be sufficient power and authority to solve the transportation problems in the Southern California area and to provide the needed mass rapid transit system.

The District is empowered by law to plan, finance and construct a rapid transit system.

No overall State, local or regional plan exists which is applicable to rapid transit development in the area served by the Southern California Rapid Transit District.

In connection with preliminary planning of routes, capacities and locations for its system, the District will consult with appropriate local governing bodies, and will coordinate with the comprehensive transportation planning program of the Southern California Association of Governments and the Transportation Association of Southern California. Planning will take into account existing land use plans of local jurisdictions, and the impact of the planned system upon street and highway facilities existing and projected.

Very truly yours,

Cone T. Bass

CTB/db

Source of Funds (Refer to Item 6(a) of Form CFA-401)

The Southern California Rapid Transit District Act empowers the District to finance construction of a rapid transit system by the issuance of general obligation bonds upon approval of the electorate by a 60% vote. The borrowing capacity of the District is fixed at 15% of total assessed valuation of approximately $13,000,000,000, or $1,950,000,000.

A committee of the State Legislature is considering proposals to broaden the available forms of local tax support to permit revenues from other forms of taxation to be used to relieve the general property tax of a portion or all of the debt service costs of the District's rapid transit financing.


SOUTHERN
CALIFORNIA
RAPID
TRANSIT
DISTRICT
ANNUAL
REPORT
1964

BOARD MEMBERS AND OFFICERS

Harry A. Faull
President, Board of Directors

Don C. McMillan
Vice Pres., Board of Directors

Howard P. Allen
Director

Kermit M. Bill
Director

Mark Boyer
Director

Dr. Robert F. Brandon
Director

Gordon R. Hahn
Director

Leonard Horwin
Director

Douglas A. Newcomb
Director

Martin Pollard
Director

Dr. Norman Topping
Director

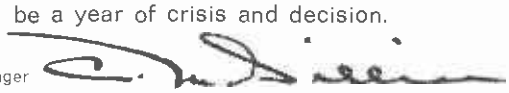
C. M. Gilliss
General Manager

Cone T. Bass
Manager of Transit Operations

TO

President Harry A. Faull and members of the Rapid Transit District Board. 1964 was a year of change and progress for Los Angeles public transportation. The M•T•A, at the direction of the Legislature, turned over to the new Southern California Rapid Transit District an inventory of rapid transit traffic, engineering, and economic information produced by a six-year research program carefully and completely done. With this information, the District knows where and what to build and what it will cost. ■ The M•T•A also turned over to the District a well-operated, self-sufficient bus system serving four Southern California counties. ■ In the creation of the new Transit District, public transportation became truly a local responsibility as the Legislature replaced the Governor-appointed M•T•A Board of Directors with a locally-constituted 11-man Rapid Transit District Directorate. ■ During the year, M•T•A/S•C•R•T•D made substantial progress within the financial limitations that govern its operation (see the statement on rapid transit elsewhere in this report). Revenue bonds valued at $1,050,000 were retired. An additional reduction of $1,298,000 in Equipment Trust Obligations was recorded. Salaries and wages amounting to $26,629,520 were paid. An additional $3,099,906 was paid for Employee Welfare. ■ Two facility expansion programs (in Riverside and in Long Beach) were undertaken to replace leased facilities. In Riverside, the District constructed new maintenance storage and operation facilities at 2450 Mulberry Street at a cost of $210,000. In Long Beach, the District and the city exchanged property to the mutual advantage of both parties. The District will build, at an estimated cost of $400,000, a modern divisional facility on the property it acquired. Both facilities have been designed to allow for a future expansion of operations. ■ Traffic accidents involving District vehicles declined 12.2% in 1964, while accidents to passengers declined 19.1% resulting in a total overall accident figure 14.1% lower than that of 1963. These accident figures equal safer service to the public and real dollar savings to the District. ■ Throughout its six years of existence, the M•T•A was required to conduct all its operations — pay its expenses and service its revenue bonds — solely from fare box revenues. The new Rapid Transit District is still limited to the fare box as its sole source of revenue. Not only is the district operating within its revenues, but it has done so without an increase in the basic fare for over four years, even though operating costs have risen an average of 5% per year. ■ The District can be proud that it is the only major transit agency in the country that so far has paid its way from the fare box without tax help. But this has not permitted all the service improvements that might have been desirable. ■ A problem is that patronage on conventional bus transportation is declining in the Los Angeles area as it is across the country. The district continually re-schedules its lines to meet changing public needs and conducts extensive advertising and public relations programs to win back former customers and to attract new ones. We have been successful in some of these efforts; for example, the 'Freeway Flyer' program has more than tripled in routes operated over the past six years. ■ But experience has shown that modern rapid transit operating at high speeds on its own right-of-way is the ultimate answer to increased use of public transportation. This has been proven in every urban center which has new rapid transit facilities, including among others, Toronto, Montreal, New York and Boston. ■ In the Los Angeles area, the future of public transportation depends upon the Rapid Transit District being provided the type of public fund assistance every other major transit operation in the country receives now. ■ Without such financial help, fares on the existing bus system must inevitably go up. When this occurs, patronage will decline critically and service will be tailored — that means service will be cut — to match the new level of patronage. ■ The Los Angeles community needs and deserves an expanded bus system today and true transit in the future, not decreases in service and higher fares. ■ However, if service is to improve and if rapid transit is to become a reality, bold efforts must be made by those of us who are responsible for the public transit operation and by every citizen who is genuinely concerned for the community's growth. ■ While 1964 was a year of change for transit — 1965 will be a year of crisis and decision.

C. M. Gilliss General Manager

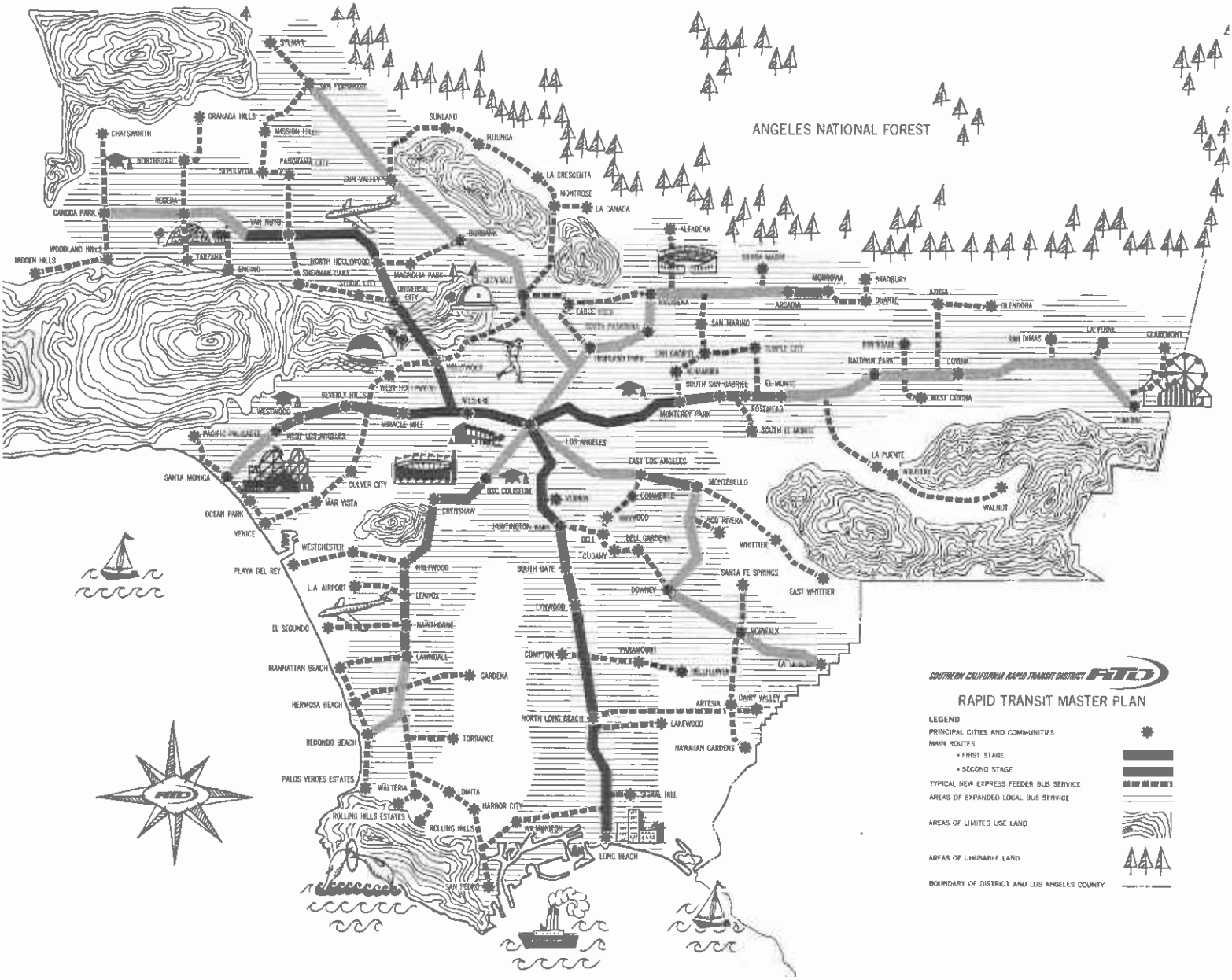


RAPID TRANSIT

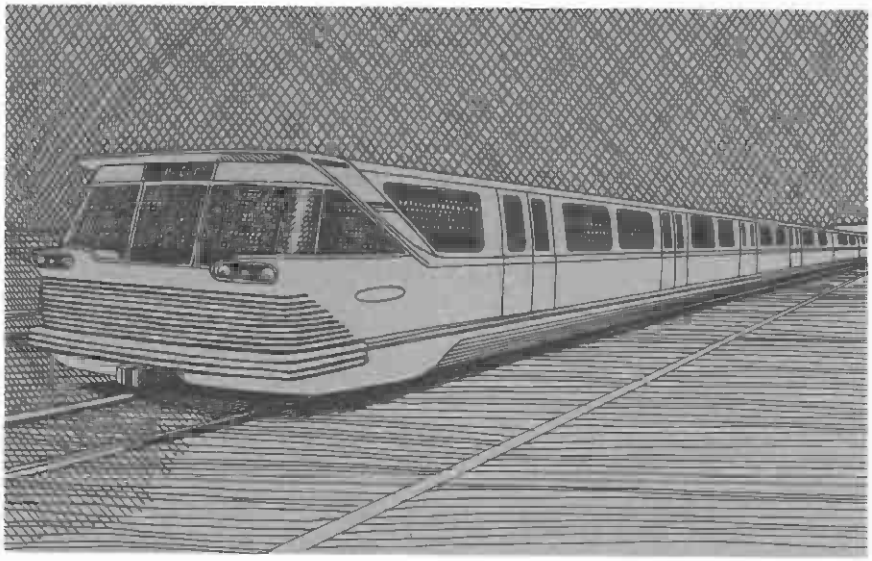
A workable program goes to the people of Los Angeles County. 1964 marked the cessation of activity by the Metropolitan Transit Authority... but not before the Authority had gone to the very limits of its powers to lay much of the foundation for one of the most comprehensive rapid transit systems ever conceived for a modern American community. ■ Major arterial routes for the system had been analyzed, engineering begun and the concept of a dual-rail transit system accepted. Each day, however, the gap between public need and accomplishment widened. ■ For this reason, the Legislature last year created the Southern California Rapid Transit District, headed by an eleven man locally-appointed Board of Directors, some of whom served on the previous M•T•A Board. The R•T•D was given the authority to carry on the M•T•A's function of maintaining and expanding the present four-county bus system, and to proceed at a greatly accelerated pace with the creation of a rapid transit system. However, the R•T•D was **not** provided with additional sources of revenue to undertake both responsibilities. The fare box was still the District's only means of income... and the fare box alone would never bring rapid transit to Los Angeles County. ■ At year's end, the R•T•D's Board devoted its activities to **(1)** reviewing and strengthening the physical details of the rapid transit system outlined below, and **(2)** preparing a legislative program to introduce the system and the means for financing it to the people of Los Angeles County for their approval.

THE PLAN FOR RAPID TRANSIT. A system of eight major arteries, totalling 160 miles in length, would link together all of the cities within the County. Grade-separated rights-of-way will connect the communities and cities of West Los Angeles, Long Beach, the San Gabriel Valley, the Central and West San Fernando Valley, the Pasadena area and the Southwest and Southeast sections of the County ■ Electrically-powered trains traveling at speeds of over 70 miles an hour will traverse the County at intervals as frequent as every 90 seconds. Subway tubes accessible by street-level stations will underline densely built-up metropolitan areas. In less dense areas, trains will travel at ground-level and on graceful aerial structures in order to take advantage of existing rights-of-way. ■ Joining these eight vital arteries of mass transit... and, indeed, tieing together the entire Los Angeles County area... will be numerous lines of "Feeder Flyer" express buses, augmented by a vast network of new and expanded local bus operations. The overall result of all these coordinated services is that rapid transit will be able to reach into every community, and, indeed, into every neighborhood within the County. ■ The benefits of such a system in terms of individual needs would fill a booklet twice the size of this one. Paramount is the fact that the R•T•D's program is for rapid transit that moves people, not automobiles. It will not add vehicles to our already-overcrowded freeways... it will take travelers off of them.

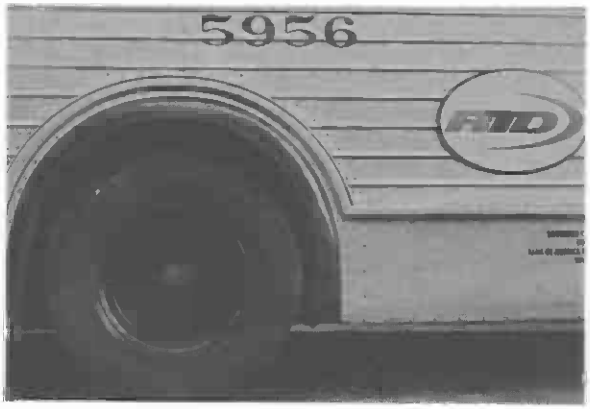
THE LEGISLATIVE PROGRAM. A second major concern of the R•T•D Board during the latter part of 1964 was the preparation of a program to bring the benefits and the costs of rapid transit to the attention of the people of Los Angeles County. ■ As an aid in preparing its legislative program, the R•T•D pursued on a more comprehensive basis the practice of the M•T•A of going to the people. Discussions with business and civic leaders were held throughout the County. Every interested person was invited to submit opinions and suggestions. The cumulative attitude of countless County residents is written into the program for legislative approval announced by the Board in the early weeks of 1965. ■ The program lists these premises: There is a need for rapid transit in Los Angeles County and a corresponding need for expanded bus service. ■ Since rapid transit is a local issue, the people have the right to vote on local taxes to support it. Therefore, the people are entitled to know precisely how rapid transit and an improved bus transportation system will benefit them and their specific communities before they are called upon to decide the financing issue at the polls. ■ Building upon these premises, the Board announced its program, the key points of which are: **1.** The California State Legislature would authorize the District to levy **for one year only** the Collier-Unruh ½% in-lieu tax (motor vehicle license fee tax) now on the books. **2.** Within two or three years, the people of the County would be asked to vote on a 1% in-lieu tax which will be levied County-wide to help finance rapid



The Master Plan for Los Angeles County Rapid Transit: Eight routes serviced by "Feeder Flyer" express buses and augmented by improved local bus service will join all of the County together, bringing rapid transit to practically every neighborhood within the County.




BUS
STOP
3
51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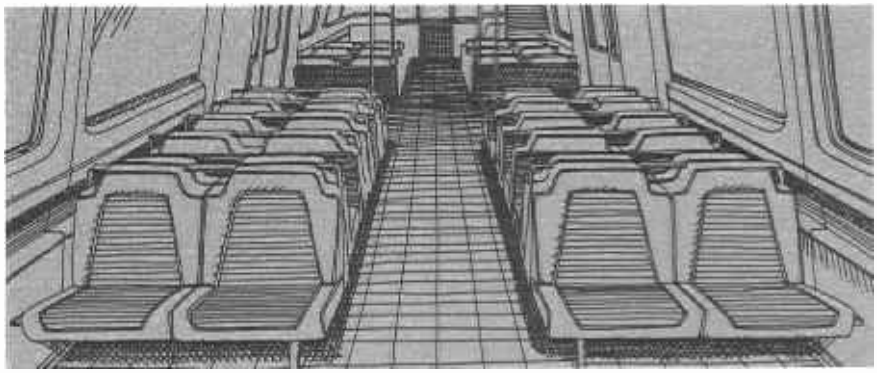
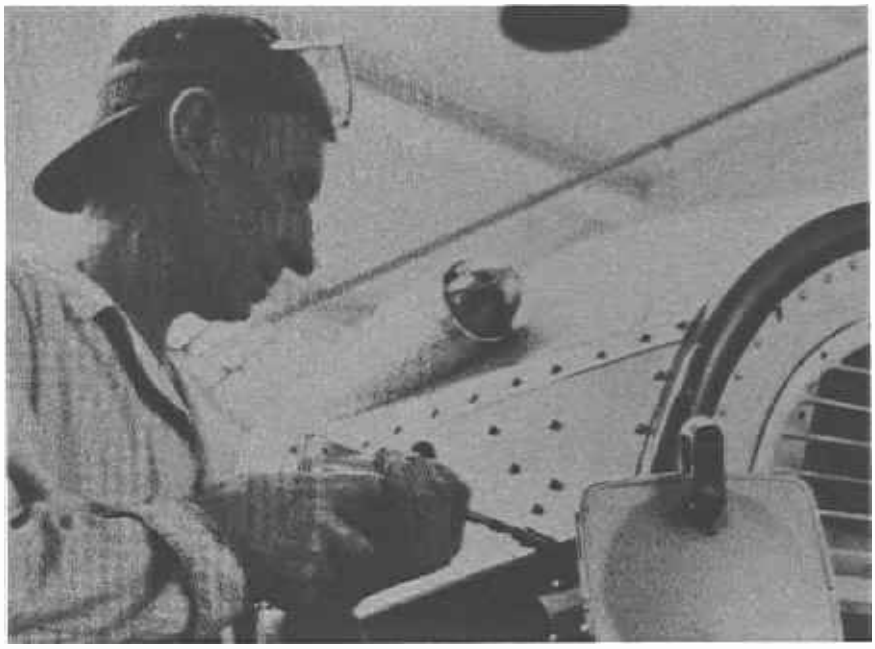


transit. Combined with District fare box revenues, the 1% in-lieu tax would support up to $850,000,000 in bonds; a figure sufficient to build rapid transit arteries linking West Los Angeles, El Monte, Long Beach and the San Fernando Valley. These funds would also provide expanded feeder bus service to connect the rest of the County. The in-lieu tax would continue to be levied only until the bonds had been retired. **3.** Prior to asking the people for a vote on the in-lieu tax, the District will utilize funds derived from the one-time-only ½% in-lieu tax levy (approximately $15 million) to insure the rapid transit system's compliance with the present and future needs of the County and its citizens. The money will be used to: **(a)** Immediately expand existing bus service; **(b)** Complete all engineering and development work for construction of the initial four rapid transit lines; **(c)** Communicate the economic and serivce benefits of expanded bus service and rapid transit to the people so that they can make an informed decision at the polls.

The logic of the in-lieu tax stems from the fact that the individual motorist stands to benefit directly from rapid transit in terms of reduced congestion, safer driving conditions and a resultant lowering of automobile insurance rates and (should the motorist decide to utilize rapid transit) reduced automobile maintenance costs. Then, too, automobile owners represent a broader tax base than do property owners. More people own cars than own property . . . and the number of car owners coming into our County to live increases every day, thus creating an even broader and more equitable tax base. ▪ This, then, is where the program for rapid transit stands to this date. The plan is a workable, practical one. Similar rapid transit systems in Toronto, Canada, and Cleveland, Ohio, have already begun to show substantial positive influences on the community-wide economic climate. San Francisco, an area with considerably smaller population projections than ours, has already begun work on its rapid transit system. ▪ Rapid transit can — and must — become a reality for Los Angeles County. The reason is implied in the startling statistic that over ten million people will reside within the County by 1985. Another statistic is equally as startling: In 20 years' time, over five million automobiles will be traveling on the County's freeways, highways and streets. ▪ The alternative to this vehicular strangulation is rapid transit. It is, in essence, a way out of the monumental traffic jam predicted for Los Angeles County by transportation authorities. The people of the County have voiced a strong argument against the inevitability of that prediction. They have called for a system of fast, safe, reliable, comfortable, economical rapid transit. The R•T•D stands ready to construct that system.



BALANCE SHEET

December 31, 1964
(With comparative amounts for the preceding year — See Note 1)

ASSETS	1964	1963
Current:		
Cash and certificates of deposit (Statement of Funds annexed)	$ 6,471,367	$ 6,460,161
U.S. Treasury bills, at cost (Statement of Funds annexed)	2,056,039	1,607,857
Accounts receivable	174,246	315,076
Interest receivable	169,530	143,335
Materials and supplies, at first-in, first-out cost	693,126	681,116
Prepaid expense	65,037	17,509
Total current assets	9,629,351	9,225,054
Special funds (Statement of Funds annexed):		
Cash and certificates of deposit	7,597,833	6,762,146
U.S. Treasury bonds and bills at cost (Note 3)	4,234,386	3,942,473
Total special funds	11,832,219	10,704,619
Properties, at cost (Note 2)	48,454,185	48,287,376
Less, accumulated depreciation	16,090,928	14,035,192
	32,452,257	34,252,184
Other assets:		
Deposits	126,710	136,625
Discount and expense of issuing Revenue Bonds, Series of 1958, less accumulated amortization (Note 4)	952,636	1,016,020
Organization expense, less accumulated amortization	98,634	104,062
	1,177,980	1,256,707
	$55,091,807	$55,438,564

LIABILITIES	1964	1963
Current:		
Current maturities on long-term debt:		
Revenue Bonds (Note 5)	$ 1,100,000	$ 1,050,000
Equipment Trust Certificates (Note 6)	1,352,000	1,298,000
	2,452,000	2,348,000
Accounts payable	811,559	757,756
Accrued compensation, vacation pay, and retirement benefits (Note 7)	2,769,397	2,248,444
Accrued payroll taxes and sales taxes payable	100,152	93,055
Employee payroll deductions	198,093	494,625
Accrued interest payable:		
Revenue Bonds	685,688	704,062
Equipment Trust Certificates	82,382	97,739
Unredeemed tickets and tokens	126,327	150,936
Total current liabilities	7,225,598	6,894,617
Contingent liabilities and commitments (Note 7)		
Long-term debt (noncurrent portion):		
Revenue Bonds, Series of 1958 (Note 5)	35,000,000	36,100,000
Equipment Trust Certificates (Note 6)	5,584,000	6,936,000
Accumulated net revenue, available for debt retirement and capital requirements (statement annexed)	7,282,209	5,507,947
Total investment in net assets	47,866,209	48,543,947
	$55,091,807	$55,438,564

STATEMENT OF ACCUMULATED NET REVENUE

For the year ended December 31, 1964
(With comparative amounts for the preceding year — See Note 1)

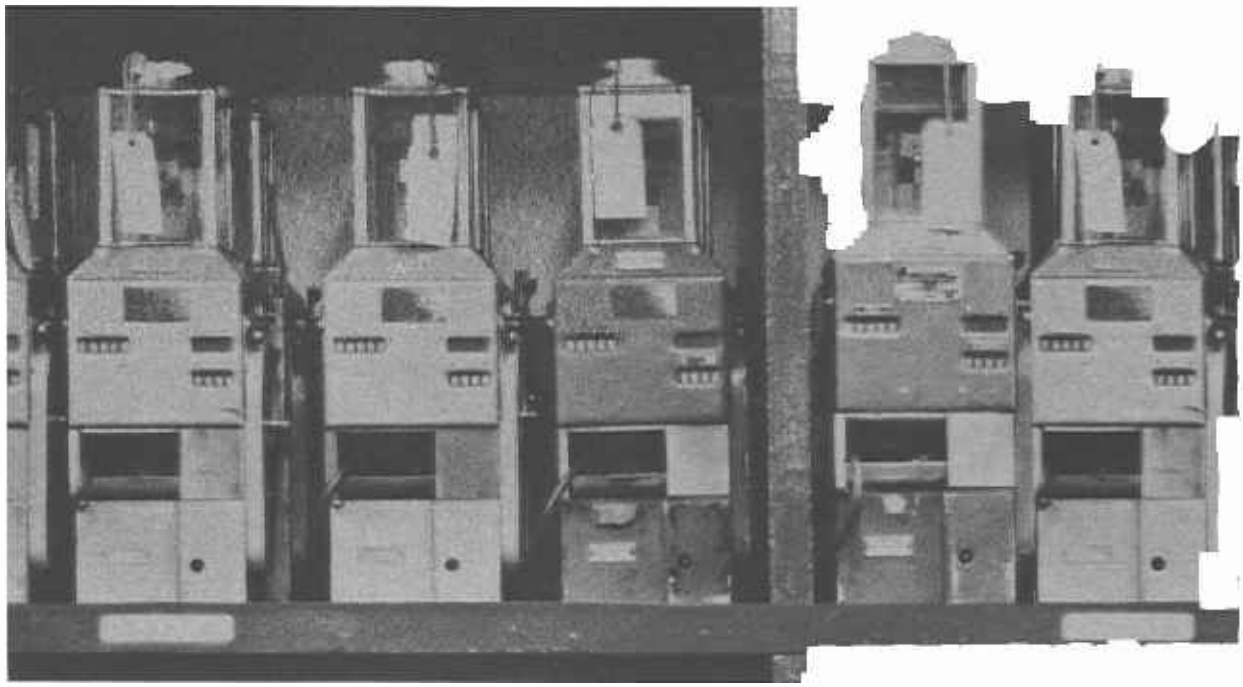
	1964	1963
Revenue	[illegible]	$46,170,081
Operating expenses, exclusive of depreciation and interest:		
Salaries and wages	[illegible]	27,285,121
Supplies, outside repairs and tickets	[illegible]	1,802,206
Fuel, power, tires, batteries, and lubricants	[illegible]	2,586,384
Employee welfare and retirement benefits	[illegible]	3,043,904
Rents, utilities, and insurance	[illegible]	3,257,393
Unclassified	[illegible]	483,403
	[illegible]	38,458,411
Net operating revenue exclusive of interest, depreciation, and amortization	[illegible]	7,711,670
Interest, depreciation, and amortization		
Interest on Revenue Bonds and Equipment Trust Certificates	2,358,245	2,457,016
Depreciation	[illegible]	3,165,220
Payments for right to abandon rail facilities	186,293	175,293
Amortization of bond discount and expense and organization expense	[illegible]	70,482
	[illegible]	5,868,011
Net operating revenue	[illegible]	1,843,659
Gain on sale of properties	[illegible]	349,517
(Loss) on abandonment of rail properties		(981,966)
Net revenue, available for debt retirement and capital requirements	[illegible]	1,211,210
Accumulated balance, January 1	[illegible]	4,296,737
Accumulated balance, December 31 net revenue, available for debt retirement and capital requirements	$ [illegible]	$ 5,507,947

[illegible]

RECONCILIATION OF REVENUE SHOWN ON STATEMENT OF ACCUMULATED NET REVENUE AND REVENUE FUND RECEIPTS SHOWN ON STATEMENT OF FUNDS

For the year ended December 31, 1964
(See Note 1)

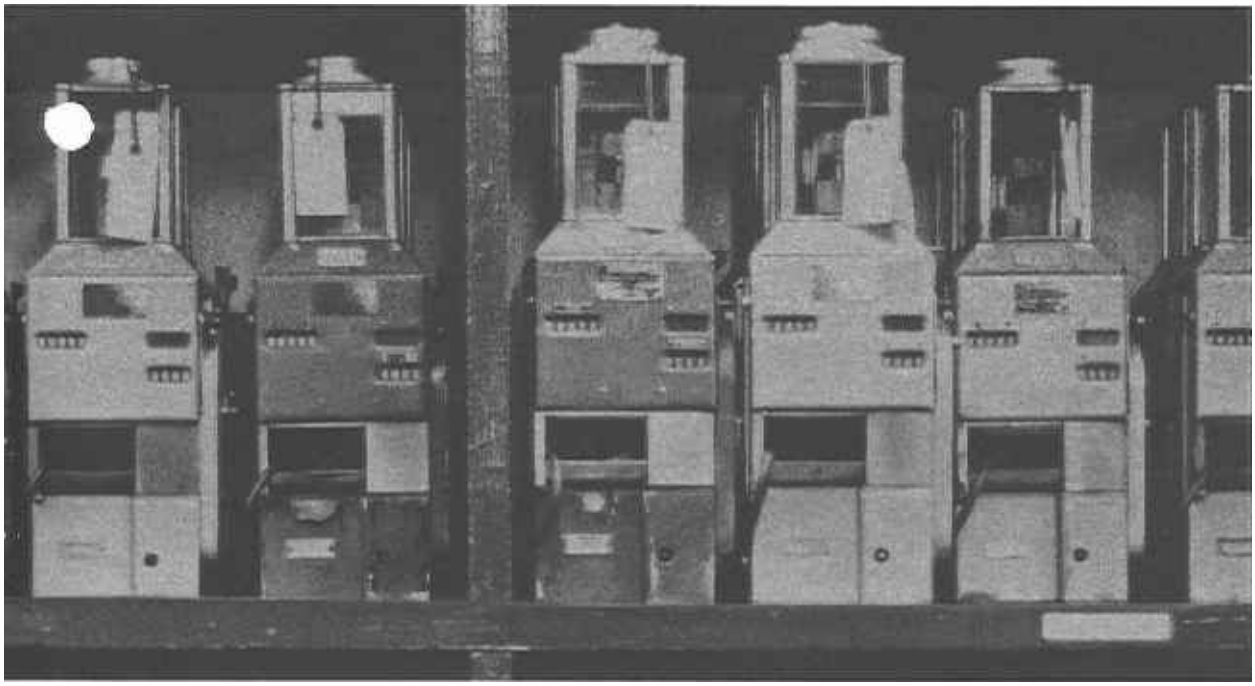
Revenue (see accompanying Statement of Accumulated Net Revenue)		$44,227,283
Add items deposited in the Revenue Fund but not recorded as revenue:		
Collection of revenue due and receivable at December 31, 1963	$234,464	
Collection of passenger revenue subsequently refunded	12,284	
Excess of receipts over revenues for sales of tokens and tickets	5,256	252,004
		44,479,287
Deduct items recorded as revenue but not deposited in the Revenue Fund:		
Revenue due and receivable at December 31, 1964	285,130	
Interest accruing to funds	28,263	
Commissions and expenses deducted by agents from revenues collected	108,047	
Other	18,170	439,610
Revenue Fund receipts (see accompanying Statement of Funds)		44,039,677
Allocated in accordance with the Trust Indenture:		
Operation Fund	37,008,586	
Interest Fund	2,066,251	
Bond Retirement Fund	1,091,666	
Depreciation Reserve Fund	3,523,174	
General Fund	350,000	$44,039,677



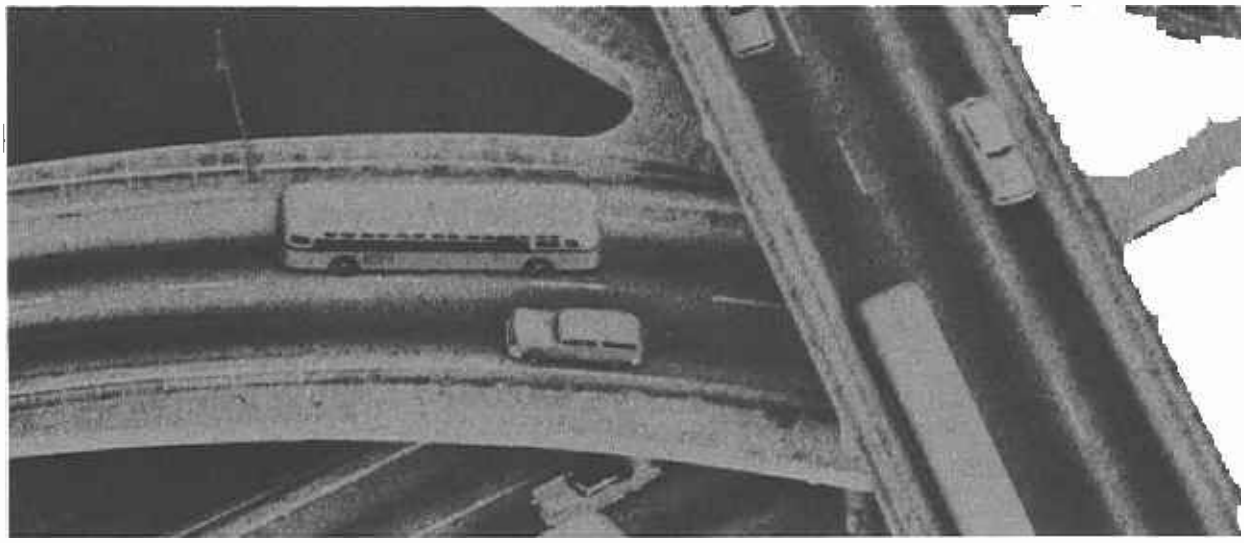
STATEMENT OF FUNDS – SUMMARY OF TRANSACTIONS

For the year ended December 31, 1964 — (See Note 1)

	Total	Construction Fund	Revenue Fund
Balances, December 31, 1963	$18,772,637	$66	
Receipts	45,228,121		$44,039,677
Allocations of revenue fund receipts			(44,039,677)
Transfers		(66)	
Total	64,000,758		
Disbursements	43,641,133		
Balances, December 31, 1964	20,359,625		
Classified in accompanying balance sheet as:			
Current assets:			
Cash on hand	26,000		
Commercial bank accounts	945,357		
Cash on deposit with trustee	2,109,010		
Time certificates of deposit	3,391,000		
	6,471,367		
U.S. Treasury bills	2,056,039		
	8,527,406		
Special funds:			
Cash on deposit with trustee	417,833		
Time certificates of deposit	7,180,000		
	7,597,833		
U S. Treasury bonds and bills	4,234,386		
	11,832,219		
Total	$20,359,625		



Funds under Control of Revenue Bond Trustee					Funds under Control of Equipment Trustees (Statement Annexed)	Other Funds	
Operation Fund	Interest Fund	Bond Retirement Fund	Bond Reserve Fund	Depreciation Reserve Fund		General Fund	Held for Others
,19,988	$704,062	$875,000	$3,187,313	$6,841,142	$1,157,951	$1,341,914	$45,201
355,139				333,099	82,205		418,001
37,008,586	2,066,251	1,091,666		3,523,174		350,000	
519,214				(2,419,348)	1,900,200		
42,502,927	2,770,313	1,966,666	3,187,313	8,278,067	3,140,356	1,691,914	463,202
37,708,523	2,084,625	1,050,000		683,409	1,608,808	95,973	409,795
4,794,404	685,688	916,666	3,187,313	7,594,658	1,531,548	1,595,941	53,407
26,000							
559,660						332,290	53,407
1,010,604	173,213	93,893			481,300	350,000	
2,500,000	342,000	549,000					
4,096,264	515,213	642,893			481,300	682,290	53,407
698,140	170,475	273,773				913,651	
4,794,404	685,688	916,666			481,300	1,595,941	53,407
			377	414,658	2,798		
				7,180,000			
			377	7,594,658	2,798		
			3,186,936		1,047,450		
			3,187,313	7,594,658	1,050,248		
$4,794,404	$685,688	$916,666	$3,187,313	$7,594,658	$1,531,548	$1,595,941	$53,407

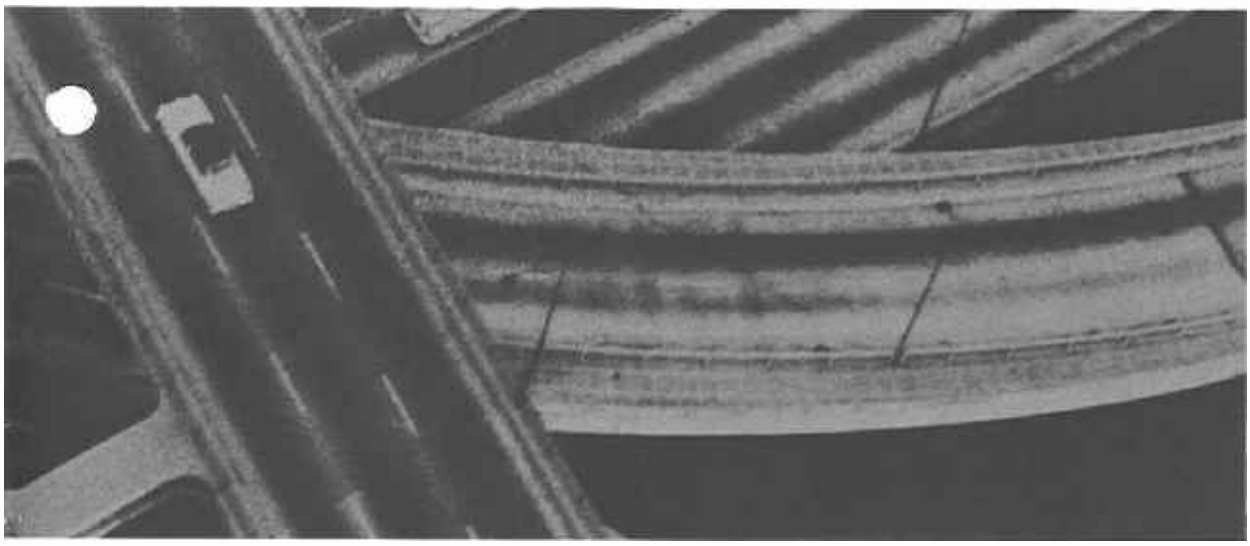


STATEMENT OF FUNDS UNDER CONTROL OF EQUIPMENT TRUSTEES

For the year ended December 31, 1964 — (See Note 1)

	Total Funds under Control of Equipment Trustees
Balance, December 31, 1963	$1,157,951
Receipts:	
Proceeds from sale of securities	2,334
Interest	25,931
Proceeds from sale of coaches	53,940
Total receipts	82,205
Transfers:	
Transfers from Revenue Bonds Depreciation Reserve Fund in accordance with the Equipment Trust Agreements	1,900,200
Allocation of the Revenue Fund in accordance with the Equipment Trust Agreements	
Total	3,140,356
Disbursements:	
Equipment Trust Certificates:	
Principal maturities	1,298,000
Dividend payments	307,348
Trustee expenses	3,460
Total disbursements	1,608,808
Balance, December 31, 1964	1,531,548
Classified in accompanying balance sheet as:	
Current assets:	
Cash on deposit with trustee	481,300
Special funds:	
Cash on deposit with trustee	2,798
U.S. Treasury bonds and bills	1,047,450
	1,050,248
Total	$1,531,548

The accompanying [illegible]



Revenue Fund	Equipment Trust Certificate Funds, Series A, B, D, E, and F				
	Expense Fund	Dividend Fund	Principal Fund	Reserve Fund	Replacement Fund
	$2,282	$97,738	$381,833	$635,643	$40,455
					2,334
				25,931	
					53,940
				25,931	56,274
$1,900,200					
(1,900,200)	3,762	291,992	1,312,501	291,945	
	6,044	389,730	1,694,334	953,519	96,729
			1,298,000		
		307,348			
	3,460				
	3,460	307,348	1,298,000		
	2,584	82,382	396,334	953,519	96,729
	2,584	82,382	396,334		
				2,178	620
				951,341	96,109
				953,519	96,729
	$2,584	$82,382	$396,334	$953,519	$96,729

NOTES TO FINANCIAL STATEMENTS

December 31, 1964

1. Organization Change: On November 5 1964, the Los Angeles Metropolitan Transit Authority was merged into the Southern California Rapid Transit District under laws of the State of California Upon the merger, the separate existence of the Authority ceased and the District acquired all rights and property of the Authority and became subject to all of the legally enforceable debts and liabilities of the Authority Statements have been prepared and presented as the operations of a continuing entity.

2. Properties: As of March 3, 1958, properties were acquired from predecessor corporations for an amount of $33,235,143, including sales tax, which amount was allocated to primary property accounts based upon reproduction cost, less accumulated depreciation at date of purchase, as determined by an independent consulting engineer Other costs connected with the acquisition of the properties have been recorded as property under the caption "Unallocated acquisition costs " ■ Unit records have been established for passenger cars, automobiles, trucks, and motor coaches with depreciation being provided for such items on a unit basis varying from 5 to 14 years The other primary property accounts are being depreciated on a composite basis over the estimated useful lives of the properties ■ Expenditures for property maintenance and repairs are charged to expense Renewals or betterments which extend the life or increase the value of the properties are capitalized When property that is being depreciated on a composite basis is sold, the net proceeds are recorded in the allowance for depreciation account. Gain or loss on sales and retirements of items being depreciated on a unit basis are taken into income.

3. United States Treasury Bonds and Bills: Special Fund-U S. Treasury bonds and bills include long-term U S Treasury bonds with a face value of $4,174,000 costing $4,044,560 The market value of these long-term bonds at December 31, 1964 was $4,044,615

4. Bond Discount and Issuance Expense: Discount and expense of $1,411,977 incurred in the issuance of the Revenue Bonds, Series of 1958 are being amortized over the life of the bonds.

5. Revenue Bonds: Under a Trust Indenture, executed March 3, 1958 and dated as of January 1 1958, Revenue Bonds aggregating $40,000 000 were issued As of December 31, 1964, the unpaid balance of these bonds aggregated $36,100,000 The bonds bear interest at rates of 5½% and 5¾% and mature in varying amounts from 1965 to 1983 The Trust Indenture requires that revenues be deposited with a Trustee and that such revenues be allocated to specified funds (which funds are included in the balance sheet) from which expenditures are to be made in accordance with the terms of the Indenture The amount of principal required to be allocated for retirement of the Revenue Bonds during 1965 is $1,141,666

6. Equipment Trust Certificates: Five separate series of Equipment Trust Certificates have been issued in connection with the purchase of 565 new motor coaches As of December 31, 1964, the unpaid balance of the Certificates aggregated $6,936,000 with semiannual maturities in specified amounts until 1971 The Certificates bear interest at the rates of 3⅝% to 5% per annum Title to the motor coaches is held by the Trustee as collateral The unpaid balance for each series is as follows:

Series A	$ 480,000
Series B	116 000
Series D	425,000
Series E	505,000
Series F	5,410,000
	$6,936,000

The Equipment Trust Certificate Indentures require that funds be allocated from the Revenue Bond Depreciation Reserve Fund for Retirement of the Equipment Trust Certificates The amount required to be allocated for principal during 1965 is $1,368,833

7. Contingent Liabilities and Commitments: An agreement was entered into with the City of Los Angeles which provides for payments to the City aggregating $1,250,000 spread over a period of seven years from 1959 to 1965 in exchange for the delivery of $400,000 in U.S securities, plus the right to abandon streetcar trackage located within the City. $1,073,932 has been paid as at December 31, 1964 ■ New pension plans were adopted during 1961, retroactive to June 1, 1960 for certain employees covered under predecessor plans On January 8, 1963, changes in pension plan benefits for noncontract employees were approved to equalize their benefits with those received by other employees The current annual amount necessary to amortize the past service liability over 30 years is estimated to be a minimum of $198,000 as determined by actuaries in the prior year, however, no additional liability has been determined for pension plan benefit changes adopted during 1964. ■ On December 19, 1961, construction of the "Backbone Rapid Transit System was approved and Coverdale & Colpitts, Consulting Engineers, and Kaiser Engineers were authorized to proceed with preliminary steps for construction of the "Backbone" System at the earliest possible date Accumulated costs to December 31, 1964 are $1 230,360. ■ Self-insurance of all workmen s compensation liability claims up to a maximum of $25,000 per any one occurrence was begun on March 1, 1964. Claims from $25,000 to $1 000,000 are covered by insurance with the State Compensation Insurance Fund ■ In Martin v Los Angeles Metropolitan Transit Authority (Los Angeles Superior Court No 755918) an action seeking recovery of approximately $4,000 000 from the former Los Angeles Transit Lines pension fund and an imposition of a requirement on the District that it establish a new $4,000,000 pension fund for the plaintiffs, judgment was rendered in the trial court in favor of the district Although the case is now on appeal to the District Court of Appeal counsel for the District does not expect that court to reach a contrary decision. ■ In accordance with terms of an insurance agreement with Transit Casualty Company, there are accumulated excess reserves to the credit of the District, a portion of which are currently subject to settlement with the remainder being subject to settlement in subsequent years

LYBRAND, ROSS BROS. & MONTGOMERY
CERTIFIED PUBLIC ACCOUNTANTS

(OPPERS & LYBRAND)

Southern California Rapid Transit District,
Los Angeles, California

We have examined the balance sheet of the Southern California Rapid Transit District as at December 31, 1964 and the related statement of accumulated net revenue and statement of funds for the year then ended for the District And its predecessor, the Los Angeles MetroPolitan Transit Authority as described in Note 1 to the financial statements Our examination was made in accordance with generally accepted auditing standards, and accordingly included such tests of the accounting records and such other auditing procedures as we considered necessary in the circumstances We previously examined and reported upon the financial statements of the Authority for the prior year

In our opinion, the accompanying balance sheets and related statements of accumulated net revenue present fairly the financial position of the Southern California Rapid Transit District and its predecessor as at December 31, 1964 and December 31, 1963 and the results of its operations for the years then ended, in conformity with generally accepted accounting principles consistently applied

It is also our opinion that the accompanying statement of Funds Presents fairly the distribution of revenues received by the Southern California Rapid Transit District and its predecessor for the year ended December 31, 1964 in accordance with the Provisions of the trust indenture securing the revenue bonds and various equipment trust agreements

Lybrand, Ross Bros. & Montgomery

Los Angeles, California
March 17, 1965

TREASURER'S REPORT

The Southern California Rapid Transit District Law provides that "the district shall succeed, ipso facto and by operation of law and without other transfer, to all the rights and property of the authority" (the predecessor), "and shall be subject to all the legally enforceable debts and liabilities of the authority, in the same manner as if the district had itself incurred them." Accordingly, the requirements of all borrowing agreements have been met. All of the cash revenues received during 1964, totalling $44,039,677, were allocated and paid into the various funds by the Trustee as required by the Revenue Bond Indenture. (See the Statement Of Funds included in the outside auditor's report for the distribution of this cash revenue.) At December 31, 1964, the District's funds were distributed as follows:

Held by Trustees:	
Operation Fund	$ 4,794,404
Interest Fund	685,688
Bond Retirement Fund	916,666
Bond Reserve Fund	3,187,313
Depreciation Reserve Fund	7,594,658
Equipment Trust Funds	1,531,548
	$18,710,277
Held by the District:	
General Fund	$ 1,595,941
Funds held for others	53,407
	$20,359,625
Invested in U.S. Government Obligations	$ 6,290,425
Invested in interest bearing certificates of deposit (secured by U.S. Government Obligations)	10,571,000
Held in cash to meet operating needs	3,498,200
As above	$20,359,625

Treasurer and Auditor

SOUTHERN CALIFORNIA RAPID TRANSIT DISTRICT
1060 So. Broadway, Los Angeles, California 90015

"EXHIBIT J"

Present Mass Transit System and Preliminary Estimates Rapid Transit Patronage (Refer to Item 6(d) of Form CFA-401)

The rapid transit system for which preliminary planning advance is requested will be an integrated expansion and improvement of the mass transit system now owned and operated by the applicant District.

Preliminary evaluations of potential patronage of the first phase rapid transit system estimated a weekday level of approximately 250,000 revenue rides. These estimates were made on a premise of revenue-secured financing and were therefore conservative. They also were based upon assumptions as to rate of fare which were designed to maximize net revenues. As a tax-aided system, the fare structure will be designed to maximize use of the system by the traveling public.

That part of the preliminary planning concerned with developing projected passenger volumes for the purpose of sizing stations and platforms and setting equipment requirements will have access to current travel data and will postulate a fare structure which will maximize passenger use. Recently developed projected land use data will facilitate the estimating of rate of future growth in patronage.

Applicant District's financial statement for the year 1964 is attached to this application as Exhibit H. As of September 12, 1965 the existing mass transit system of applicant owns 1,453 buses assigned to 100 lines totaling 2,277 one-way miles of route in Los Angeles County, extending into adjacent portions of Orange, San Bernardino and Riverside Counties. The system carried approximately 137,850,000 fare passengers during the year 1964. Fares are related to length of trip, adult rates being 25¢ base fare with successive increments in 8¢ units on longer rides. Free transfers are allowed among all local lines, and total rides including transfers were approximately 193,453,800 in the year 1964.