

A STUDY OF
PUBLIC TRANSPORTATION NEEDS
IN THE AREA SERVED BY
THE LOS ANGELES METROPOLITAN TRANSIT AUTHORITY

DETERMINATION OF POTENTIAL MASS RAPID TRANSIT ROUTES

May 5, 1959

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May 5, 1959

Mr. Ralph P. Merritt
Executive Director
Los Angeles Metropolitan Transit Authority
1060 South Broadway
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Dear Mr. Merritt:

Pursuant to the proposal contained in our letter to you of April 16, 1958, we have undertaken a study for development of the transportation system in the Los Angeles area, including a program for the provision of mass rapid transit facilities.

The initial item in this study was a determination of the transportation needs to be served, i.e., an estimate of the number of potential patrons of the system classified by natural routes of travel. These data have been developed and are presented in the accompanying Report.

The fundamental requirement for an estimate of potential patrons must be a study of the origin and destination of passenger trips as disclosed by surveys of the present movement of such individuals by the means of travel now being employed. The work under this item included for the most part the conduct and analysis of three field origin and destination surveys designed to provide information on the travel habits of individuals in the area of metropolitan Los Angeles. These three field surveys are described as follows:

- A. A survey of transit riders currently using the
Metropolitan Transit Authority system.

- B. A survey of travel patterns of motorists parking in the Central Business District of Los Angeles.
- C. A survey of home-to-work travel, using information furnished by employers as to the home addresses of their employees, and questionnaire cards completed by employees themselves.

The travel measured by these three surveys comprises the main source of potential rapid transit patronage. In addition, a significant volume of origin and destination information regarding other trips not included in the above was developed by a method referred to in the accompanying Report.

By means of analysis of the origin and destination data and related material collected during the course of our engagement, we have completed our studies to the point where it is possible for us to estimate total potential traffic on principal routes and recommend to the Authority for further engineering studies those particular routes which might justify the installation of mass rapid transit facilities. After the Authority has determined which routes justify, in its opinion, such further studies, and has appointed engineers to estimate the construction cost of rapid transit facilities, we would cooperate with such engineers in determining final type and location of such facilities. Reports on the feasibility of each line including estimates of potential revenues and expenses of maintenance and operation would be made as succeeding parts of our complete Report.

Recommendations

Our survey of the Los Angeles Metropolitan Area has been directed primarily toward determination of the extent of need for mass rapid transit. In the course of our work, we have accumulated a great deal of information with respect to the requirements of the area for mass transportation in all its aspects. We consider it appropriate, therefore, to submit to the Authority recommendations which are applicable to the entire scope of MTA operation.

First

Our origin and destination studies have indicated a sizeable volume of local movements, i.e., movements of short length and only moderately concentrated as to volume and route, which constitute a potential for bus service. We recommend continued analysis of these origin and destination data for the purpose of revision of existing routes and schedules and establishment of new routes with a view toward optimum matching of supply of service with demand for service.

Second

Our surveys have indicated various medium or long haul movements where the volume of traffic, while not sufficiently concentrated to warrant consideration for mass transit, does appear worthy of exploration for possible express bus operation. We recommend that the Authority continue to explore fully all movements which appear to justify express bus routes and exploit to the maximum freeway system for such express operations.

Third

With respect to the four corridors designated in the succeeding text as being the most promising routes for rapid transit, namely:

San Bernardino Corridor

Long Beach Corridor

Wilshire Corridor

Reseda Corridor via Cahuenga and Wilshire

we recommend that the Authority proceed at this time with engineering studies to determine in each case appropriate location of line and station, type of facilities and equipment to be provided, and estimates of construction cost sufficient, in comparison with estimates of revenues and expenses, to indicate the feasibility of the lines. Estimates of revenues and expenses will be prepared which will apply to the location and type of facility finally chosen.

Acknowledgments

We acknowledge, with sincere appreciation, the cooperation extended to us in the preparation of this Report by many organizations and individuals. Particularly, we wish to express our gratitude to the following:

Los Angeles Metropolitan Transit Authority personnel
at all levels
Administrative Officials of the State of California,
the County of Los Angeles, the City of Los Angeles,
and other cities in Los Angeles County
State Department of Public Works, Division of Highways
State Department of Employment
Department of Traffic, City of Los Angeles
Police Department, City of Los Angeles
Los Angeles Chamber of Commerce
Downtown Business Men's Association
Wilshire Chamber of Commerce
Automobile Club of Southern California
Owners and operators of parking facilities in the Los
Angeles Central Business District who cooperated
in the conduct of the Central Business District
Origin-Destination Survey
Employers who participated in the Home-to-Work Origin-
Destination Survey
The various organizations and institutions which have
furnished us statistical data.

Our Report follows.

Respectfully submitted,

Coverdale & Colpitts

Consulting Engineers

SCOPE OF REPORT

This Report contains a summary of the results of our origin and destination studies. It sets forth the results of distillation of basic data developed from these studies, from which it was possible to produce a reasonably complete pattern of 1958 weekday travel of persons in the Los Angeles Metropolitan Area. To convert this mass of data into manageable form, we adopted a method involving determination of corridors in which the relatively heaviest inter-zonal movements are concentrated, and which, therefore, appear to be the most appropriate areas for analysis as possible locations of rapid transit routes. A description of these corridors is set forth in this Report, as well as pertinent data to provide a basis for comparison of the corridors. We have included also a brief discussion of public transportation in the Los Angeles Metropolitan Area. Finally, there are contained herein our recommendations as to those corridors of which we consider further engineering study to be justified at this time.

SUMMARY OF ORIGIN-DESTINATION STUDIES

LAMTA Passenger Origin-Destination Survey

In order to obtain information on the riding habits of MTA passengers, we analyzed the responses contained in 226,025 questionnaires completed by passengers using the Authority's vehicles on a weekday, a Saturday, and a Sunday in July and August 1958.

The estimated number of MTA revenue passengers on an average weekday in 1958 was 561,450, on an average Saturday 342,950, and on an average Sunday 191,450. Analysis of the questionnaires indicated that in the case of weekday passengers, 305,188 or 54.4 per cent used transit for the purpose of getting to work, 50,562 or 9.0 per cent for business purposes, 52,204 or 9.3 per cent

for shopping, and 139,888 or 24.9 per cent for other purposes. No information was available as to the trip purpose of the remaining 13,608 or 2.4 per cent.

The system-wide distribution between trips classified as peak period travel, i.e., journeys performed between 7:00 and 9:00 A.M. or between 4:00 and 6:00 P.M., and all other trips indicated that 43.9 per cent of the trips were made during peak hours, and 56.1 per cent in off-peak periods.

Trips into or out of the Los Angeles Central Business District on an average weekday in 1958 accounted for 38.3 per cent of all weekday revenue passenger trips. 85.8 per cent of these trips originated or terminated within a radius of 10 miles of the intersection of Broadway and Seventh Street. Weekday trips to or from the Central Business District were divided almost equally between peak and off-peak travel. 62.7 per cent of such trips were made for the purpose of getting to or from work, 9.9 per cent for business purposes, 12.7 per cent for shopping, and 13.2 per cent for other purposes, with 1.5 per cent being made for undetermined purposes.

Approximately 87 per cent of MTA riders walked to reach transit. The average distance walked to reach transit was less than a quarter of a mile. Approximately five per cent used automobile, and eight per cent used other transit lines, for an average of about two miles in each case.

Origin-Destination Survey of Motorists Parking in Los Angeles Central Business District

Data were obtained from actual interviews with 57,653 motorists representing approximately 196,000 trips into and out of the Central Business District by persons traveling by automobile.

Approximately 37 per cent of the motorists interviewed gave "work" and 35 per cent indicated "business", as their trip purpose. Only 12

per cent of the motorists parked in the survey area for the purpose of shopping.

The average time parked by all drivers of passenger cars was shown to be 4.1 hours. Parking time for shopping and service-sales purposes amounted to 1.9 hours, while parking time for the purpose of going to work averaged 6.8 hours.

The average distances walked by passenger car drivers ranged from a low average of 510 feet for "other" trip purposes to a high average of 770 feet for drivers going to work. The over-all average was 640 feet.

The average distance traveled from origin to the center of the city is 8.5 miles for all passenger cars. The average distance for purposes of work is 9.2 miles.

The average number of people in all vehicles at the time they were parked within the Central Business District is 1.2. Similarly, the average occupancy of passenger vehicles at the time they were parked is 1.3

The major movements of people via passenger vehicles are from the areas west of and immediately adjacent to the Central Business District.

Home-To-Work Origin-Destination Survey

In order to obtain information concerning the geographical locations between which home-to-work travel took place and the volume of such travel, we examined data as to location of residence and place of work in the case of 218,649 persons employed in various occupations in the Los Angeles Metropolitan Area. A total of 1,829,000 persons are estimated to have been employed in the study area in July, 1958.

In order to obtain further data concerning the mode of transportation used between home and place of work, the time of day such travel took place,

and related information, we examined the responses to questionnaires received from 153,297 persons employed in the study area.

The predominant means of travel between home and work in the Los Angeles Metropolitan Area is the automobile. Responses to questionnaires indicated that 86.7 per cent of all home-to-work movements were made thereby. The average number of persons per automobile used for driving to work was 1.2. The questionnaire responses also indicated that 7.5 per cent of all persons traveling to work used transit and that 5.2 per cent used some means other than automobile or transit, with 0.6 per cent not furnishing applicable information.

Of the 1,586,000 persons traveling to and from work by automobile, the questionnaire responses indicated that 1,311,000 persons or 82.7 per cent drove their own car, and 275,000 or 17.3 per cent rode with some one else.

The completed questionnaires indicated that 1,566,000 or 85.1 per cent of all persons employed in the study area traveled to work during the morning peak period, i.e., between 7:00 and 9:00 A.M. and ostensibly returned home during the peak period in the evening between 4:00 and 6:00 P.M.

Combination of Trip Data Recorded by
Field Origin-Destination Surveys

The three field surveys developed information on the following volume of 1958 weekday trips by individual persons within the study area:

LAMTA Passenger Origin-Destination Survey (After elimination of trips between home and work also covered by the Home-to-Work Origin-Destination Survey)	-	408,000
Origin-Destination Survey of Motorists Parking in the Los Angeles Central Business District	-	196,000
Home-to-Work Origin-Destination Survey	-	<u>3,658,000</u>
Total		4,262,000

Method of Estimating Total Volume of
1958 Weekday Trips in Study Area

Based upon the data available from comprehensive surveys in other large cities, such as Detroit and Washington, we have estimated the total number of individual person weekday trips made in the Los Angeles Metropolitan Area, by all modes of travel and for all purposes, to be approximately 11,000,000.

Our three field origin and destination surveys recorded trip information for 4,262,000 of this total of 11,000,000. The field origin and destination surveys did not include trips made by automobile for purposes other than home-to-work travel, except in the case of trips to and from the Los Angeles Central Business District, in which case trips by automobile for all purposes were recorded. In other words, automobile trips for neighborhood shopping, to and from church or educational institutions, or for any of the numerous social or recreational purposes for which people use their cars, were not recorded by our field surveys (unless the trips happened to be to or from the Los Angeles Central Business District). This travel, the volume of which is estimated to be in the order of 6,750,000 weekday trips of persons, is generally of such length or nature as to render it unlikely that a significant volume of the persons involved would utilize a rapid transit system if such were available. Nevertheless, in order to obtain as complete as possible a pattern of travel in the study area, we considered it essential to develop trip data for all movements therein.

This necessitated consideration of a method by which to synthesize trip data. It is possible for zone-to-zone travel to be estimated within certain limits of accuracy, by application of empirical formulas developed after observation of traffic in various other cities, given various data with respect to the zones involved. These data were available to us from our previous work in

connection with the field surveys. Accordingly, we proceeded with a synthesis which produced the requisite information respecting inter-zonal volume of the 6,750,000 trips which our field surveys had not included.

DEVELOPMENT OF PUBLIC TRANSPORTATION IN
METROPOLITAN LOS ANGELES

History of Transit in Area

The development of public transportation in the area served by the Los Angeles Metropolitan Transit Authority is closely tied to the development of the area in terms of population and of commercial and industrial activity. Local transportation first appeared in Los Angeles in the 1870's and the beginnings were very modest because the city at that time had fewer than 10,000 residents.

As the city grew, many small local and inter-urban transportation companies were formed. Numerous consolidations of competitive interests took place until 1910 when two large companies were formed, the Los Angeles Railway which had as its function the local transportation in the Los Angeles area, and the Pacific Electric Railway which had a primary interest in inter-urban transportation. These two companies and their subsidiaries dominated the development of transportation in the Los Angeles area through World War II. In recent years the properties passed to the Los Angeles Transit Lines and the Metropolitan Coach Lines and were finally consolidated under the Los Angeles Metropolitan Transit Authority on March 3, 1958.

As local communities developed outside the area served by the Los Angeles Railway other local systems were developed, some by Pacific Electric and some independently. With a few exceptions the local operations did not provide through service to downtown Los Angeles. The properties acquired by the Authority included the principal independent operation having routes entering downtown Los Angeles, namely, the Asbury Rapid Transit System. In addition to the Los Angeles Metropolitan Transit Authority there are now 21 privately owned bus companies, and five municipally sponsored bus systems in

Los Angeles County. Of these, only two of the municipal systems have routes into downtown Los Angeles.

Trends in the Use of Public Transportation

The Los Angeles Metropolitan Transit Authority staff has developed the following estimates of the total number of revenue passengers carried on routes making up its present system for each year from 1939 to date. Duplications resulting from differences in accounting for transfer passengers by the several predecessor companies have been eliminated:

Year	Passengers	Year	Passengers
1939	235,000,000	1949	367,000,000
1940	232,000,000	1950	315,000,000 (*)
1941	249,000,000	1951	285,000,000
1942	297,000,000	1952	260,000,000
1943	368,000,000	1953	248,000,000
1944	415,000,000	1954	223,000,000
1945	430,000,000	1955	194,000,000 (*)
1946	437,000,000 (*)	1956	199,000,000
1947	468,000,000	1957	193,000,000 (*)
1948	417,000,000	1958	182,000,000 (*)

(*) Riding affected by strike of operators

In addition to passengers carried on routes of the Metropolitan Transit Authority, approximately 60 million passengers are carried annually on smaller private and municipal bus operations in Los Angeles County. Figures for the Authority's routes show the recent peak use of transportation during and immediately after World War II and the declining use in succeeding years, which is typical of transportation in other cities. One of the important reasons for this decline is the shift from a six-day to a five-day work week which took place in the post-World War II period. Other reasons for the decline have been due to changes in the habits of the persons living in the areas served by these lines. The introduction of television and the dispersal

of retail activity to neighborhood shopping centers, for instance, have reduced the off-peak riding. In some instances the services now offered are slower than comparable services in the mid- and late thirties.

Rapid Transit

Los Angeles has never had a rapid transit line in the sense of having a completely grade-separated facility with limited stops and high average speeds. The Pacific Electric system initially included many sections outside the Los Angeles Central Business District on private rights of way where grade crossings were kept to a minimum and high speed service was offered. As years went by parts of these rights of way were lost as streets were widened and paved. Where rail service continued it had to compete with other street traffic resulting in slower travel times. In developing the Pacific Electric system the ultimate need for improved connections to the Central Business District was recognized and plans were developed for these connections. Only a short section of subway and a short elevated section at the Sixth and Main Street Terminal were ever built, however. In neither case was the improvement of sufficient length to materially change travel times.

A modified form of rapid transit is now offered by the Authority's Freeway Flyer services using buses on the present freeway system. The trend of patronage on these services has been steadily upward as compared to a general downward trend in transit riding. Since these services connect downtown Los Angeles with points also well served by freeway, the indication is that where travel time by transit is competitive with that by automobile, additional patronage can be attracted. The apparent benefits of extension of freeway express bus service are considerably offset, however, by the necessity of allowing additional running time to compensate for peak-hour congestion on the freeways.

By making this allowance it has been possible to regularly adhere to schedules on routes using the Hollywood, Harbor, and Santa Ana Freeways, but even with such allowance the on-time performance of the Flyer service using the San Bernardino Freeway has been poor, with wide variations from day to day. As might be anticipated, this latter route has not enjoyed the growth in patronage typical of the other routes.

Rapid Transit Plans and Studies

Public interest in improved transportation has been expressed by the many studies of the subject which have been made by public agencies and civic groups. In earlier studies attempts were made to connect the various parts of the Pacific Electric system and parts of the Los Angeles Railway system through the Los Angeles Central Business District. In more recent years the studies have been more concerned with coordinating transit improvements with freeway construction. Few of the groups studying the transportation problem had the power to act and it was not until the Los Angeles Metropolitan Transit Authority was created in its present form under the 1957 Act that a single agency existed which could both operate the present transit facilities and plan, develop, and finance needed improvements.

CHARACTERISTICS OF THE LOS ANGELES AREA

Population

The Los Angeles Metropolitan Area is unique among the large metropolitan areas of the United States in that substantially all of its development took place after reliable private automobiles became generally available. The rapid rate of growth of the area does not apply to all facets of the economy, however. Certain key characteristics which affect the need for public transportation and the form such transportation should take are

discussed in the following sections.

One of the most outstanding characteristics of the Los Angeles area has been the rapid population increase. As recently as 1880, Los Angeles County had a population of only 33,381. At that time Orange County was a part of Los Angeles County. These two counties now make up the Standard Metropolitan Area of Los Angeles County. By 1910 this Area had a population of 538,567 and ranked fourteenth in the United States. The unusually rapid growth continued over the intervening years as shown in the following table based on U.S. Census figures and current estimates of the Los Angeles Chamber of Commerce:

Year	Metropolitan Los Angeles	Los Angeles	
		County	City
1850	3,530	3,530	1,610
1860	11,333	11,333	4,385
1870	15,309	15,309	5,728
1880	33,381	33,381	11,183
1890	115,043	101,454	50,395
1900	189,994	170,298	102,479
1910	538,567	504,131	319,198
1920	997,830	936,455	576,673
1930	2,327,166	2,208,492	1,238,048
1940	2,916,403	2,785,643	1,504,277
1950	4,367,911	4,151,687	1,970,358
1959 (est.)	6,450,000	5,818,257	2,421,859

Current estimates for the Los Angeles Metropolitan Area are approximately equal to or slightly larger than the Chicago Metropolitan Area and second to the New York Metropolitan Area.

Rapid growth is expected to continue and estimates for 1975 prepared recently by the Population Sub-Committee of the Los Angeles Chamber of Commerce show a population of 10,600,000 for the Metropolitan Area, and 9,000,000 for Los Angeles County.

Two other counties are served by the present routes of the Los Angeles Metropolitan Transit Authority. They are San Bernardino and Riverside

Counties and while they represent a separate metropolitan area much smaller in size, they are dependent upon the Los Angeles Metropolitan Area for many services. They too have experienced unusually rapid growth. The current population estimates prepared by the same Chamber of Commerce Sub-Committee show 459,000 in San Bernardino County and 262,000 in Riverside County. Future growth is reflected in estimates for 1975 of 1,040,000 for San Bernardino County and 570,000 for Riverside County.

Development of Residential Areas

Historically, the Los Angeles Metropolitan Area has had a low density of population because of its great size, 4,866 square miles. The 1959 population density was 1,325 persons per square mile. A higher density is shown for the City of Los Angeles at 5,300 persons per square mile. Population densities in zones along the corridors under study in this Report range as high as 20,700 persons per square mile and densities in excess of 10,000 per square mile are common.

Additions to the population of the area in the past have generally resulted in development of new housing in open areas in preference to building multiple-unit housing in older areas. At the present time, however, there is a trend toward increased concentration of multiple-unit housing. This is most pronounced in the area immediately west of the Los Angeles Central Business District.

Industrial Development

Many factors have influenced industrial development in Los Angeles, not the least of which is the long distance from other large industrial centers. Industrially, the Los Angeles area is broadly diversified. There is distinct emphasis, however, on aircraft, missiles and component parts

including electronic control systems, and over 23 per cent of the persons employed in manufacturing are in this category.

Many of the industrial plants are of recent construction and large space requirements for both plant functions and parking were major consideration in the selection of plant sites. These plants have not been built either largely or exclusively in any one area but are distributed over the many available sites throughout the Los Angeles Metropolitan Area along the principal freight transportation routes.

Commercial Development

Commercial development has kept pace with the needs of the immediate Los Angeles area and the surrounding region. Los Angeles serves as the wholesale center. It is also a highly developed retail center; the trend in the retail activity has been away from the immediate downtown area, however, and the dollar volume of retail business reported in this downtown area dropped 3.7 per cent from 1954 to 1957, while rising substantially in outlying areas.

Downtown Los Angeles as a Business and Governmental Center

Except for the loss in retail activity the principal change in the Central Business District in recent years has been the rapid development of a governmental center including Federal, State, County, and City activities. It is expected that when the present construction program is completed, 32,000 persons will be employed in this Civic Center. Other new building development, however, has been at a minimum due in part to the inability to erect an economic structure on the high-cost land near the center of the business district, while still staying within the old building height limits. The full effect of increasing the height limit in late 1957 is not apparent. When the activity within the Central Business District is measured in terms of

maximum accumulation of people within the area during the business day, a downward trend is noted. Cordon counts have been made in sufficient detail to calculate the maximum accumulation of people in 1941, 1955, and 1957. This maximum accumulation has dropped from 175,000 in 1941 to 149,000 in 1955 and 141,000 in 1957. In the 1957 count, 52 1/2 per cent of the persons in the Central Business District at the time of peak accumulation were brought in on transit vehicles.

Growth of Use of Private Automobiles

The wide dispersal of activities and an adequate network of good highways have encouraged use of the private automobile in the Los Angeles Metropolitan Area. The total number of passenger automobiles in the area has grown at a faster rate than the population, as shown in the following table:

Year	Passenger Motor Vehicle Registration	Persons Per Vehicle
1920	175,896	5.7
1930	853,422	2.7
1940	1,147,926	2.5
1950	1,805,651	2.4
1955	2,483,004	2.3
1958	2,766,594	2.2

To meet the needs of this large fleet of motor vehicles a comprehensive network of freeways has been planned and 122 miles are already in operation in Los Angeles County alone. Present plans call for over one thousand additional miles by 1980.

USE OF PUBLIC TRANSPORTATION IN OTHER LARGE METROPOLITAN AREAS

In order to more closely define the role of public transportation in our modern cities we have accumulated data on population, use of public transportation and indices of commercial activity in the various large metropolitan areas in the United States. The twelve largest are of particular

interest since this group includes all of the areas now having extensive suburban railroad service and rail rapid transit service. In addition, each area has been the subject of a recent survey looking towards future needs for transportation in the area.

The use of public transportation in the core city of each of the twelve largest metropolitan areas in 1957 is as follows, listed in descending order of population:

Metropolitan Area	Total Revenue Passengers on Local Surface and Rapid Transit Routes (millions of passengers)	Total Passengers (including transfer) using Rapid Transit (millions of passengers)
New York (B)	2,100 (E)	1,339
Chicago	470	150 (E)
Los Angeles	193	-
Philadelphia	359	140
Detroit	180	-
Boston	212	127 (E)
San Francisco	141	-
Pittsburgh	95-100 (A)	-
St. Louis	115	-
Cleveland	145 (E)	22
Washington, D.C.	127	-
Baltimore	117	-

(A) Adjusted for strike

(B) Excluding Borough of Richmond

(E) Estimated

These figures do not include the large numbers of commuters brought into the Central Business District of other metropolitan areas by railroads and bus lines but substantially all commuters into Los Angeles are included. From the figures on the preceding page it can be seen that Los Angeles, while at that time ranking third in terms of population both of the metropolitan area and of the city itself, has a pattern of transit use more like the smaller areas.

Recent Transit Developments

Because of the concentration of activity that has grown up over the years in centers like New York, Chicago, Philadelphia, and Boston, these areas are continuing to expand rapid transit facilities now in existence and are fighting against reductions in commuter railroad service which supplement these local transit systems. The overall downward trends in transit riding frequently obscure a counter-trend of increased use of transit facilities in peak-hour periods.

In the four cities named above there have been many extensions and modifications of the rapid transit system since World War II and more are planned. In Cleveland a new rapid transit route was opened making use of a right of way paralleling a railroad and set aside in the mid 1920's for this purpose. The general trend in planning additional rapid transit facilities has been toward making use of rights of way of abandoned railroads or little-used branches, and in the case of Chicago making use of a right of way in the center of an expressway, in order to reduce to a minimum the cost of constructing these new facilities. Subways have been used only in highly congested areas where no other right of way was available.

The City of Toronto, Ontario, is another location where a rapid transit route was added in the post-war period. Here again subway construction was employed in the congested business area for a distance of two miles and the remainder of the 4.6 mile route was in a grade-separated right of way adjoining a principal street. This improvement is also unique in that it was constructed primarily to take care of short-haul riders which were previously carried by surface routes. This subway is now carrying over 140,000 passengers per day past its peak load point as compared with 78,000 on the surface car route which formerly operated along that street. Ten additional miles of route have been planned and construction is expected to begin this summer.

In areas which do not have rapid transit facilities, survey recommendations generally include a network of improved transit routes centered on the Central Business District. Recommendations have ranged from simple systems which would provide better access to the Central Business District for express buses to area-wide networks of inter-urban rail lines costing over a billion dollars.

WHAT MAKES THE LOS ANGELES PROBLEM UNIQUE

Perhaps the most important single characteristic of the Los Angeles area is the large number of people who have gathered together in one geographic location without a correspondingly large concentration of financial activities and corporate headquarters such as characterizes the center of many of the other large metropolitan areas. The dispersal of commercial and industrial activities and of residences results in a pattern of travel characterized by movements in many directions. Traffic which is focused on the Central Business District is largely the result of this area

being a crossroads in a network of streets and highways rather than the attraction of the activity within the district itself. The cordon count of May, 1957 shows that over a 16-hour period 372,000 vehicles moved into or through the Central Business District. The maximum accumulation within the district was approximately 48,000 vehicles. Our survey showed a total of 82,600 cars parked during the period from 8 A.M. to 6 P.M. The high volume of movements through the Central Business District is also apparent on the maps presented subsequently in this Report showing principal deisre lines.

The Chicago and Los Angeles Metropolitan Areas are frequently compared as to population. Los Angeles is now estimated to be slightly larger. If the activity in the business center of Los Angeles were equivalent to that in Chicago and, in addition, the streets and freeways in this area carried their present high volume of through-traffic movements, the resulting congestion on streets and freeways would be so great that additional off-street transit facilities would be required to permit the area to function. The rate at which these facilities will be needed in Los Angeles is proportionate to the growth and development of Los Angeles as a financial center, as a location for corporate headquarters, and as a governmental center. Current indications are that these functions will expand. The rate of growth is dependent, however, upon the growth and expansion not only of the present Los Angeles Metropolitan Area but of the larger surrounding areas of which Los Angeles is the center. As this development takes place Los Angeles will probably lose some of its unique characteristics and become more like the other large metropolitan areas as we know them today.

DEVELOPMENT OF RESULTS OF ORIGIN-DESTINATION STUDIES

Recapitulation of Trip Data

As stated previously herein, the three field surveys and the method used to obtain origin and destination information on movements not covered by the three field surveys provided us with a reasonably complete 1958 weekday pattern of movements of individuals in the study area. This pattern involved a very large number of individual zone-to-zone trips. We considered that the most practical means for initial analysis thereof would be desire line maps. Accordingly, for all movements having a significant volume, lines or bars connecting the zones of origin and destination were drawn on maps of the study area, their width being proportionate to the volume of the movements represented. These desire line maps are shown on the following pages. They illustrate the inter-zonal trips of significant volume recorded by our three field surveys, and by the theoretical study of "other trips".

Selection of Corridors from Desire Line Maps

The three field origin and destination surveys were planned to provide information on the types of travel from which a rapid transit system would be most likely to attract the preponderance of its patronage, namely:

- (1) Travel between home and work, most of which is performed during the congested peak hours
- (2) Travel to and from the Los Angeles Central Business District, the most congested single portion of the metropolitan area.
- (3) Travel by persons currently using the Metropolitan Transit Authority system.



TRIP DESIRE LINES

BASED ON THREE ORIGIN-DESTINATION SURVEYS
AVERAGE 1958 WEEKDAY

ZONE-TO-ZONE VOLUME
3000 TRIPS AND ABOVE

SCALE IN TRIPS PER DAY



MAP OF METROPOLITAN LOS ANGELES 1958

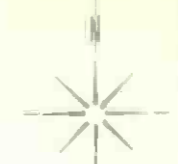


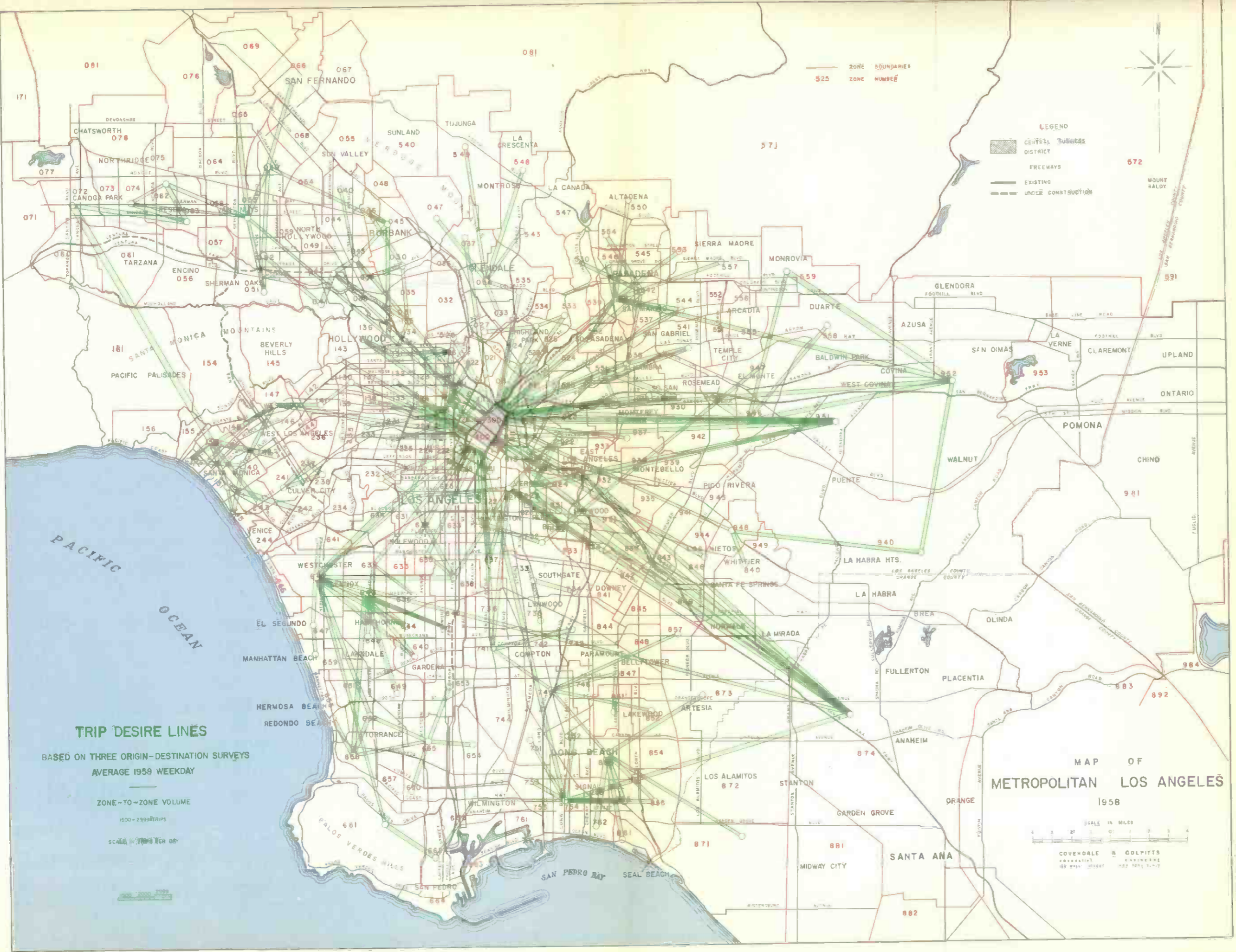
COVERDALE & COLPIETS
CARTOGRAPHERS
250 S. GILBERT ST. LOS ANGELES 12, CALIF.

LEGEND

- CENTRAL BUSINESS DISTRICT
- FREEWAYS
- EXISTING
- UNDER CONSTRUCTION

— ZONE BOUNDARIES
525 ZONE NUMBER





— ZONE BOUNDARIES
 525 ZONE NUMBER

LEGEND
 CENTRAL BUSINESS DISTRICT
 FREEWAYS
 EXISTING
 UNDER CONSTRUCTION



TRIP DESIRE LINES

BASED ON THREE ORIGIN-DESTINATION SURVEYS
 AVERAGE 1958 WEEKDAY

ZONE-TO-ZONE VOLUME

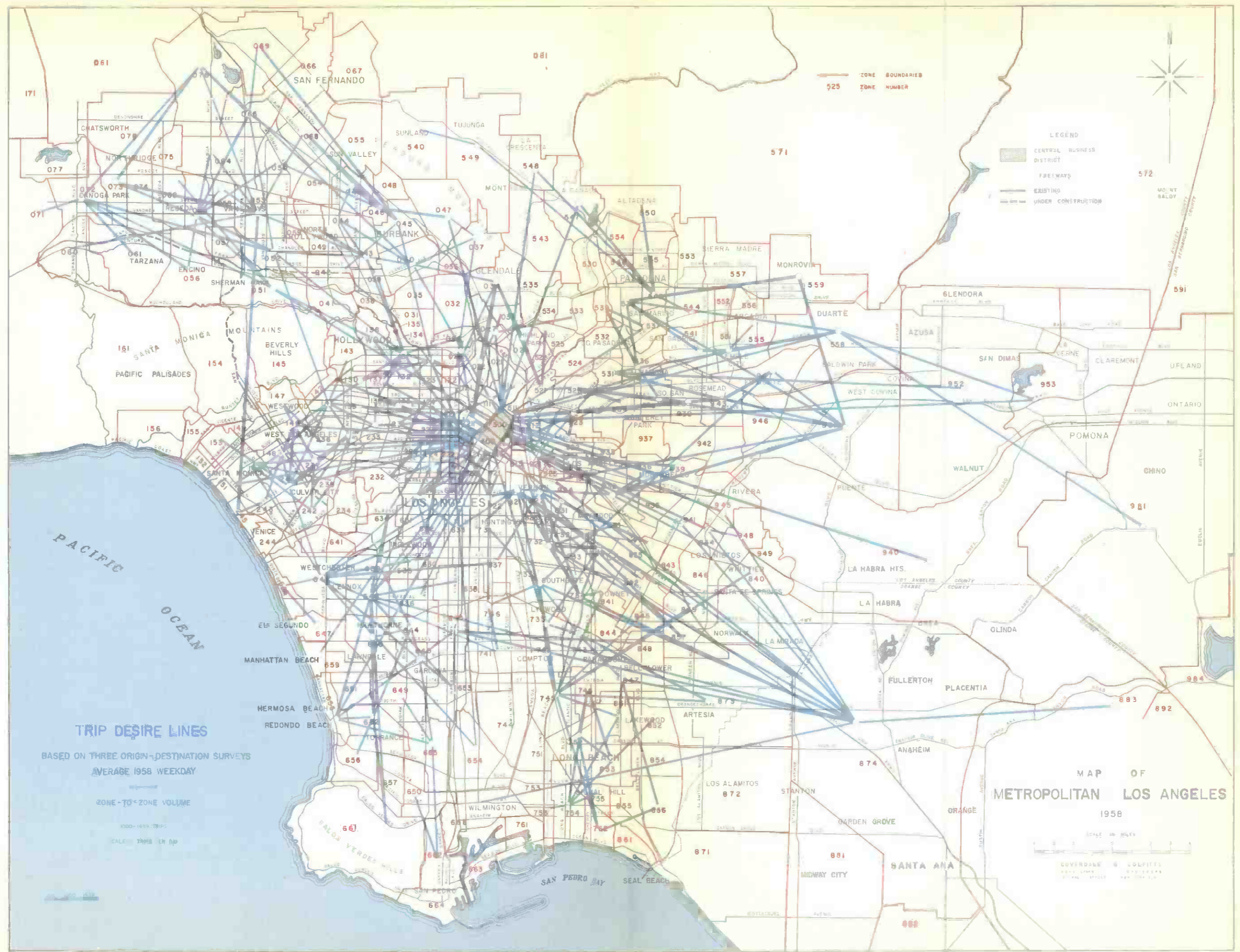
1000 = 2399 TRIPS

SCALE 1/4" = 1 MILE

MAP OF
METROPOLITAN LOS ANGELES
 1958



COVERDILE & GOLPITTS
 CONSULTING ENGINEERS
 600 W. 10TH ST. LOS ANGELES, CALIF.



TRIP DESIRE LINES

BASED ON THREE ORIGIN-DESTINATION SURVEYS
AVERAGE 1958 WEEKDAY

ZONE-TO-ZONE VOLUME

1000-1499 TRIPS
SCALE 1/8" = 1 MILE

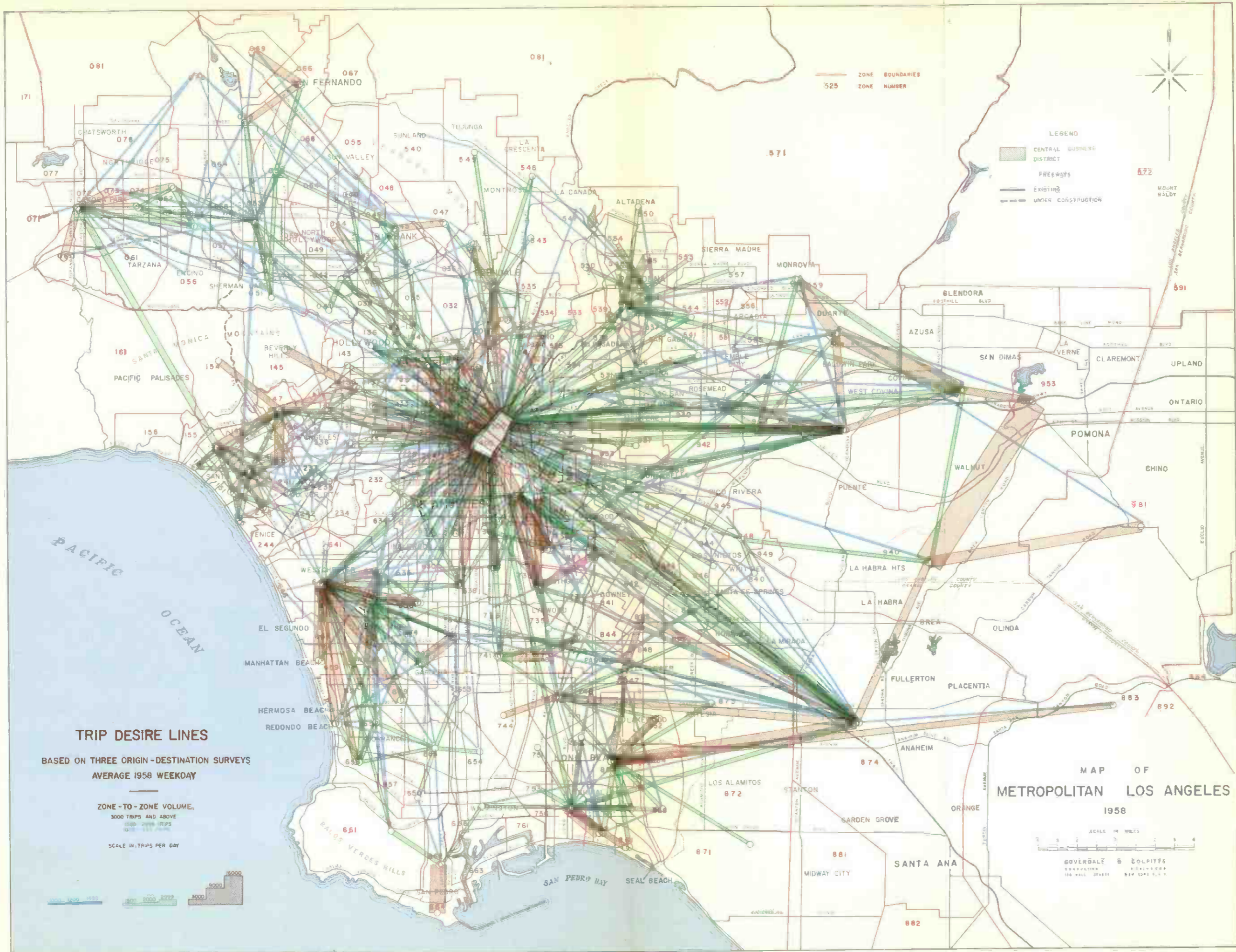
— ZONE BOUNDARIES
525 ZONE NUMBER

LEGEND
CENTRAL BUSINESS DISTRICT
FREEWAYS
EXISTING
UNDER CONSTRUCTION

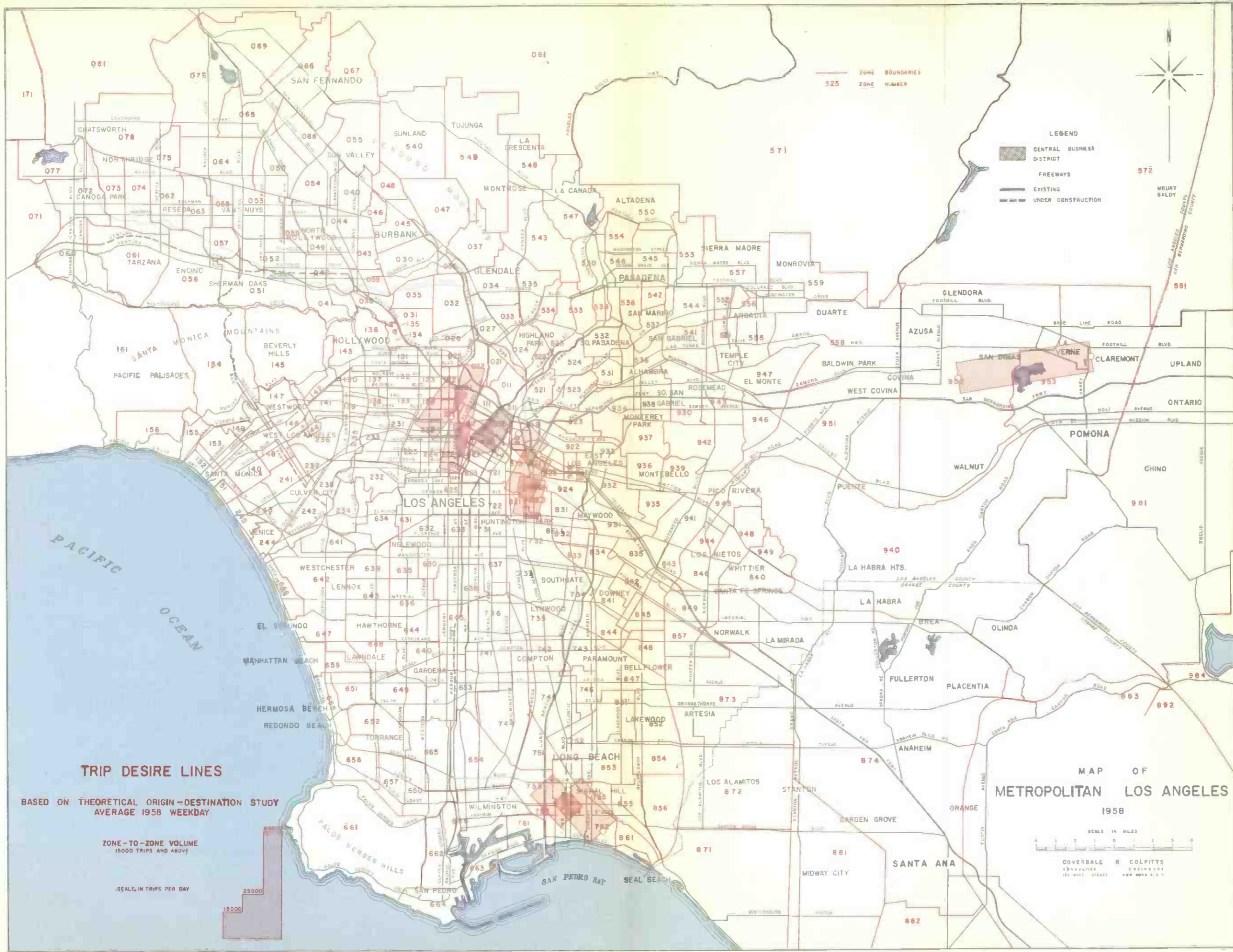
MAP OF
METROPOLITAN LOS ANGELES

1958

SCALE IN MILES
COVERDALE & COLPITTS
SAN ANTONIO, TEXAS



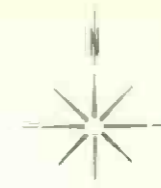
081 067 066 068 069 070 071 072 073 074 075 076 077 078 079 080 081 082 083 084 085 086 087 088 089 090 091 092 093 094 095 096 097 098 099 100 101 102 103 104 105 106 107 108 109 110 111 112 113 114 115 116 117 118 119 120 121 122 123 124 125 126 127 128 129 130 131 132 133 134 135 136 137 138 139 140 141 142 143 144 145 146 147 148 149 150 151 152 153 154 155 156 157 158 159 160 161 162 163 164 165 166 167 168 169 170 171 172 173 174 175 176 177 178 179 180 181 182 183 184 185 186 187 188 189 190 191 192 193 194 195 196 197 198 199 200 201 202 203 204 205 206 207 208 209 210 211 212 213 214 215 216 217 218 219 220 221 222 223 224 225 226 227 228 229 230 231 232 233 234 235 236 237 238 239 240 241 242 243 244 245 246 247 248 249 250 251 252 253 254 255 256 257 258 259 260 261 262 263 264 265 266 267 268 269 270 271 272 273 274 275 276 277 278 279 280 281 282 283 284 285 286 287 288 289 290 291 292 293 294 295 296 297 298 299 300 301 302 303 304 305 306 307 308 309 310 311 312 313 314 315 316 317 318 319 320 321 322 323 324 325 326 327 328 329 330 331 332 333 334 335 336 337 338 339 340 341 342 343 344 345 346 347 348 349 350 351 352 353 354 355 356 357 358 359 360 361 362 363 364 365 366 367 368 369 370 371 372 373 374 375 376 377 378 379 380 381 382 383 384 385 386 387 388 389 390 391 392 393 394 395 396 397 398 399 400 401 402 403 404 405 406 407 408 409 410 411 412 413 414 415 416 417 418 419 420 421 422 423 424 425 426 427 428 429 430 431 432 433 434 435 436 437 438 439 440 441 442 443 444 445 446 447 448 449 450 451 452 453 454 455 456 457 458 459 460 461 462 463 464 465 466 467 468 469 470 471 472 473 474 475 476 477 478 479 480 481 482 483 484 485 486 487 488 489 490 491 492 493 494 495 496 497 498 499 500 501 502 503 504 505 506 507 508 509 510 511 512 513 514 515 516 517 518 519 520 521 522 523 524 525 526 527 528 529 530 531 532 533 534 535 536 537 538 539 540 541 542 543 544 545 546 547 548 549 550 551 552 553 554 555 556 557 558 559 560 561 562 563 564 565 566 567 568 569 570 571 572 573 574 575 576 577 578 579 580 581 582 583 584 585 586 587 588 589 590 591 592 593 594 595 596 597 598 599 600 601 602 603 604 605 606 607 608 609 610 611 612 613 614 615 616 617 618 619 620 621 622 623 624 625 626 627 628 629 630 631 632 633 634 635 636 637 638 639 640 641 642 643 644 645 646 647 648 649 650 651 652 653 654 655 656 657 658 659 660 661 662 663 664 665 666 667 668 669 670 671 672 673 674 675 676 677 678 679 680 681 682 683 684 685 686 687 688 689 690 691 692 693 694 695 696 697 698 699 700 701 702 703 704 705 706 707 708 709 710 711 712 713 714 715 716 717 718 719 720 721 722 723 724 725 726 727 728 729 730 731 732 733 734 735 736 737 738 739 740 741 742 743 744 745 746 747 748 749 750 751 752 753 754 755 756 757 758 759 760 761 762 763 764 765 766 767 768 769 770 771 772 773 774 775 776 777 778 779 780 781 782 783 784 785 786 787 788 789 790 791 792 793 794 795 796 797 798 799 800 801 802 803 804 805 806 807 808 809 810 811 812 813 814 815 816 817 818 819 820 821 822 823 824 825 826 827 828 829 830 831 832 833 834 835 836 837 838 839 840 841 842 843 844 845 846 847 848 849 850 851 852 853 854 855 856 857 858 859 860 861 862 863 864 865 866 867 868 869 870 871 872 873 874 875 876 877 878 879 880 881 882 883 884 885 886 887 888 889 890 891 892 893 894 895 896 897 898 899 900 901 902 903 904 905 906 907 908 909 910 911 912 913 914 915 916 917 918 919 920 921 922 923 924 925 926 927 928 929 930 931 932 933 934 935 936 937 938 939 940 941 942 943 944 945 946 947 948 949 950 951 952 953 954 955 956 957 958 959 960 961 962 963 964 965 966 967 968 969 970 971 972 973 974 975 976 977 978 979 980 981 982 983 984 985 986 987 988 989 990 991 992 993 994 995 996 997 998 999 1000



— ZONE BOUNDARIES
525 ZONE NUMBER

LEGEND

-  CENTRAL BUSINESS DISTRICT
-  FREeways
-  EXISTING
-  UNDER CONSTRUCTION



TRIP DESIRE LINES

BASED ON THEORETICAL ORIGIN-DESTINATION STUDY
AVERAGE 1958 WEEKDAY

ZONE-TO-ZONE VOLUME
15000 TRIPS AND ABOVE

SCALE, IN TRIPS PER DAY



MAP OF METROPOLITAN LOS ANGELES

1958

SCALE IN MILES

COVERDALE & COLPITTS
150 WEST STREET NEW YORK, N. Y.



— ZONE BOUNDARIES
 525 ZONE NUMBER

LEGEND
 CENTRAL BUSINESS DISTRICT
 FREEWAYS
 EXISTING
 UNDER CONSTRUCTION

TRIP DESIRE LINES

BASED ON THEORETICAL ORIGIN-DESTINATION STUDY
 AVERAGE 1958 WEEKDAY

ZONE-TO-ZONE VOLUME
 3000-14999 TRIPS

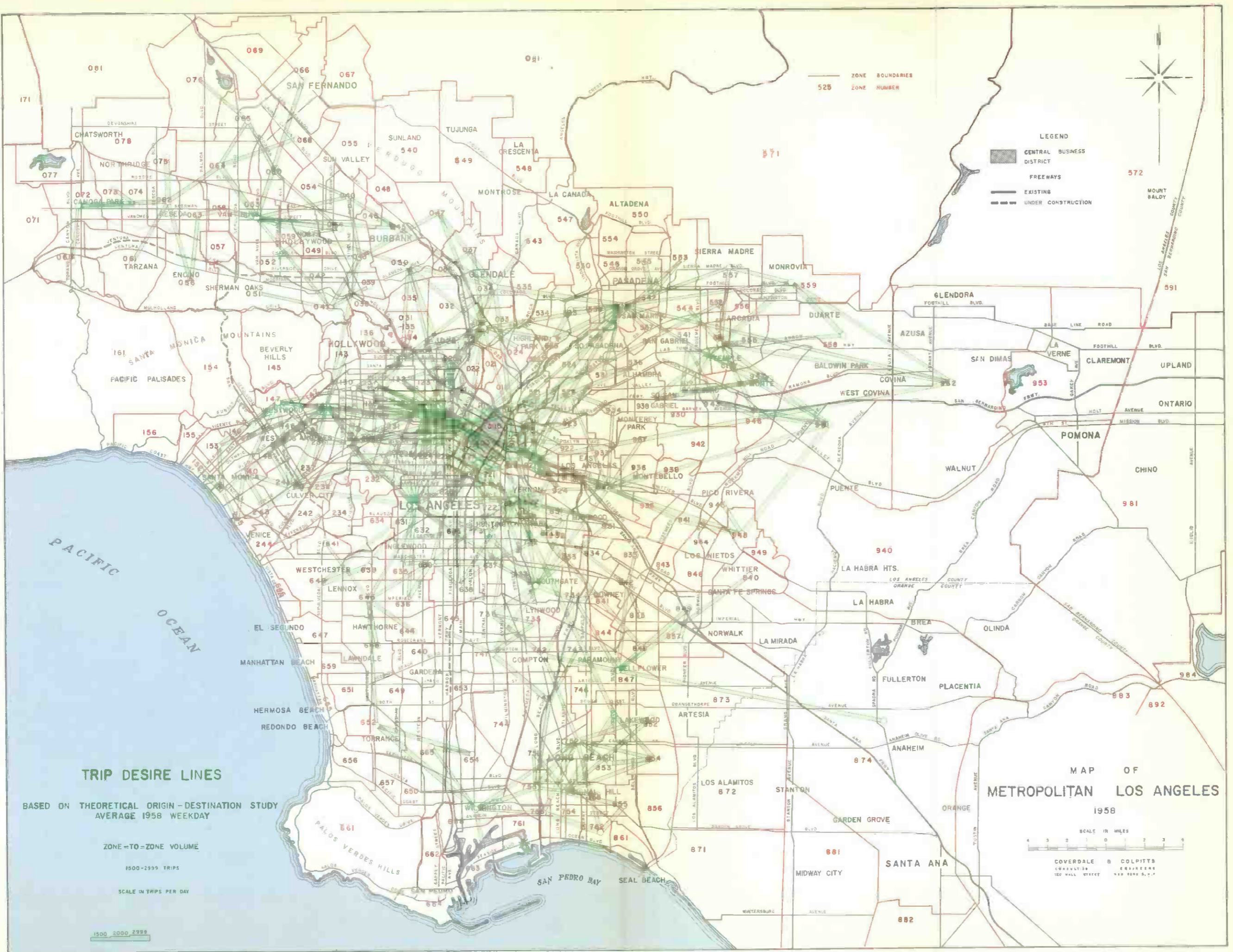
SCALE IN TRIPS PER DAY



MAP OF
METROPOLITAN LOS ANGELES
 1958



COVERDALE 6 COLPITTS
 1958



TRIP DESIRE LINES

BASED ON THEORETICAL ORIGIN-DESTINATION STUDY
AVERAGE 1958 WEEKDAY

ZONE TO-ZONE VOLUME

1500-2999 TRIPS

SCALE IN TRIPS PER DAY

1500 2000 2999

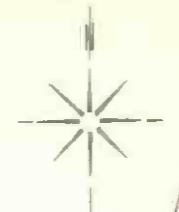
MAP OF
METROPOLITAN LOS ANGELES
1958

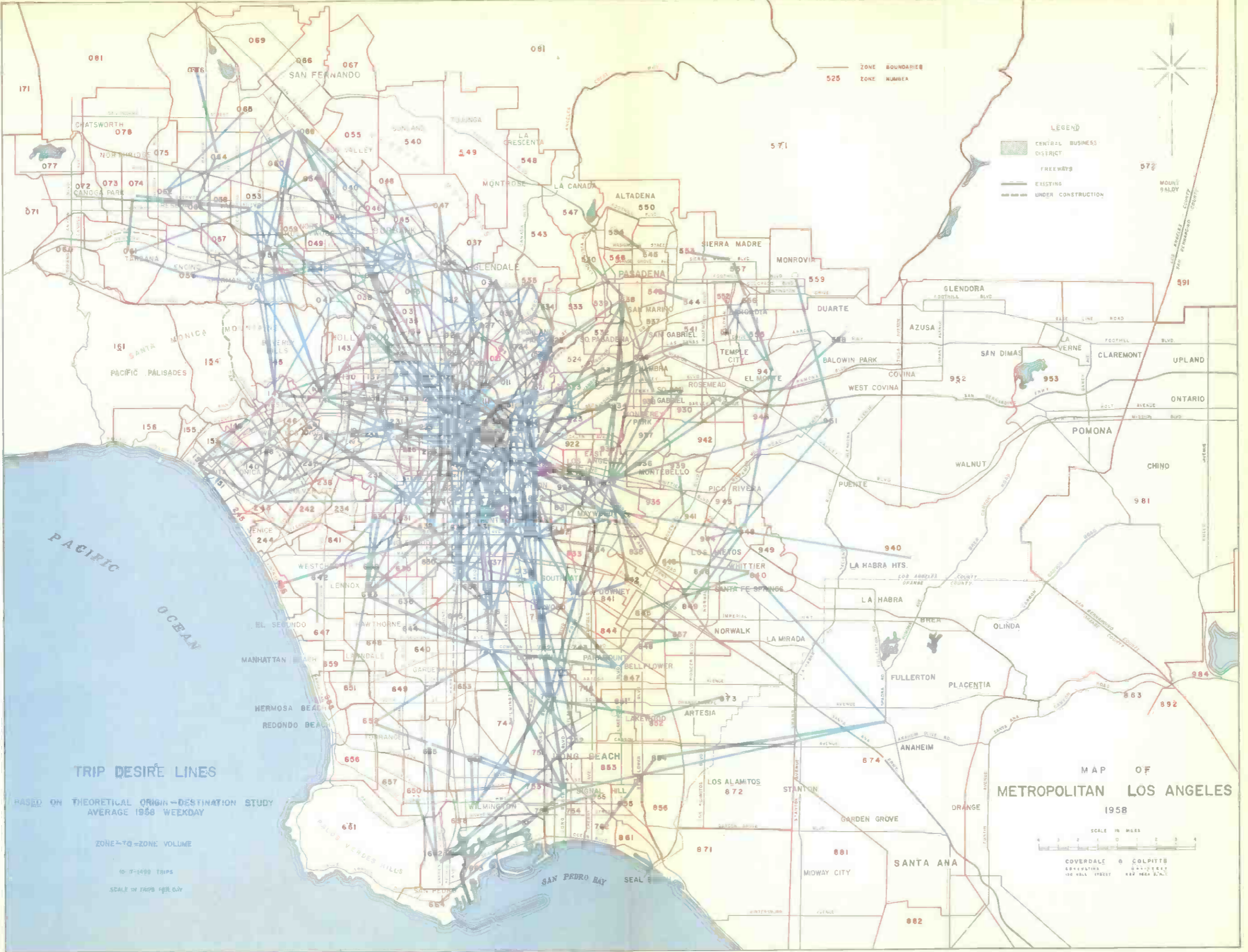
SCALE IN MILES
4 3 2 1 0 1 2 3 4

COVERDALE B COLPITTS
CONSULTING ENGINEERS
100 WALL STREET NEW YORK 5, N.Y.

LEGEND
CENTRAL BUSINESS DISTRICT
FREEWAYS
EXISTING
UNDER CONSTRUCTION

525 ZONE BOUNDARIES
526 ZONE NUMBER





TRIP DESIRE LINES

BASED ON THEORETICAL ORIGIN-DESTINATION STUDY
AVERAGE 1958 WEEKDAY

ZONE-TO-ZONE VOLUME

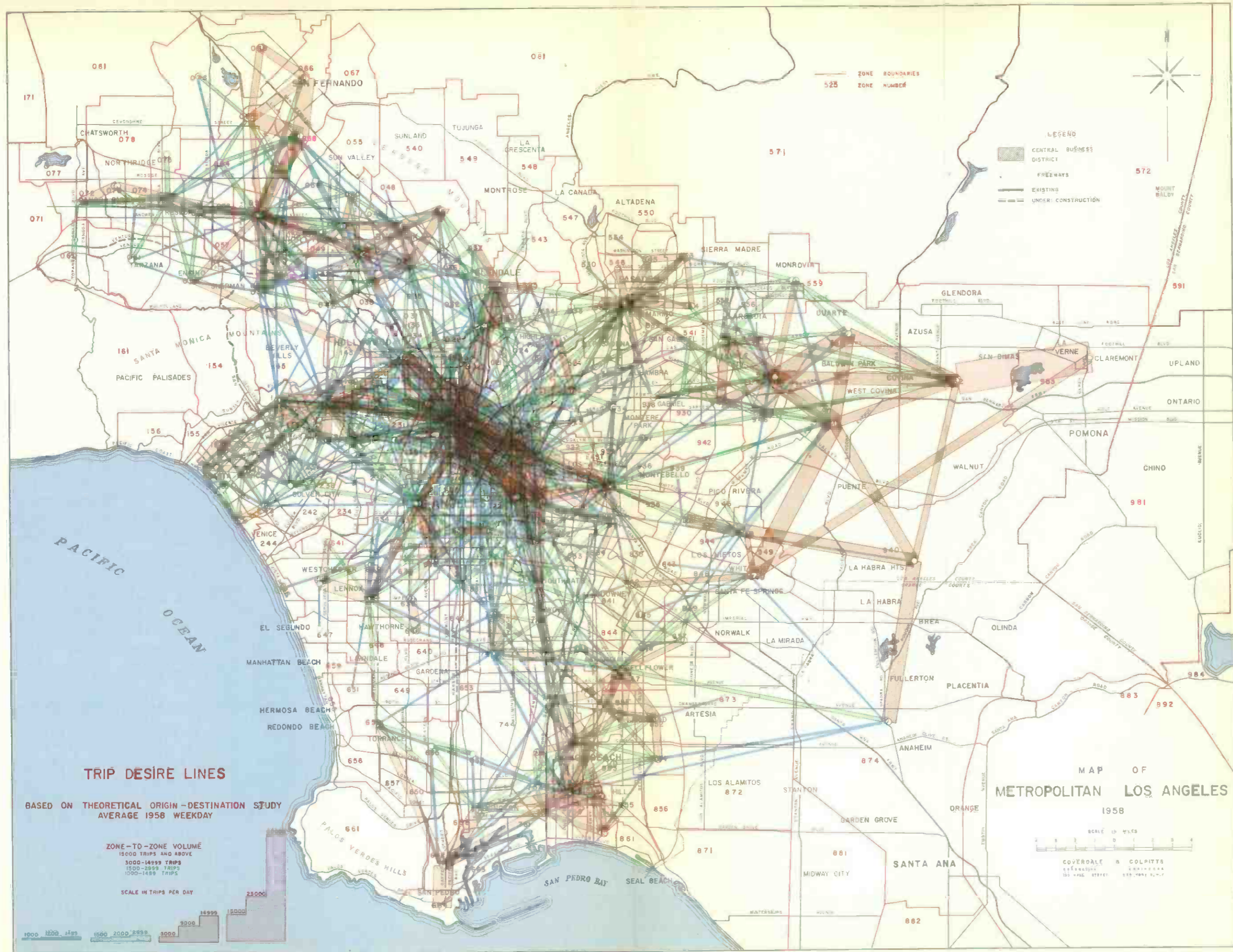
10:00-1400 TRIPS

SCALE IN TRIPS PER HOUR

**MAP OF
METROPOLITAN LOS ANGELES
1958**

SCALE IN MILES
0 1 2 3 4

COVERDALE & COLPITTS
CORPORATION
140 WALL STREET NEW YORK 39, N.Y.



TRIP DESIRE LINES

BASED ON THEORETICAL ORIGIN-DESTINATION STUDY
AVERAGE 1958 WEEKDAY

ZONE-TO-ZONE VOLUME
15000 TRIPS AND ABOVE
3000-14999 TRIPS
1500-2999 TRIPS
1000-1499 TRIPS

SCALE IN TRIPS PER DAY



MAP OF METROPOLITAN LOS ANGELES

1958

SCALE IN MILES
0 1 2 3 4

COVERDALE & COLPITTS
ENGINEERS
155 WALK STREET
LOS ANGELES 2, CALIF.

On the other hand, the travel represented by the origin and destination study of "other trips" is, in general, of such length or nature as to render it unlikely that a significant number of the trips involved would be made by means of a rapid transit system if such were available. Therefore, in determination of the corridors to be studied as possible rapid transit routes, we were governed by the travel patterns derived from the three field origin and destination surveys.

To the extent that travel measured by our study of "other trips" falls within the corridors, the volume of such travel has been added to the volume of travel in the corridors derived from the three field surveys, to arrive at the total number of persons who are traveling within the corridors, and, accordingly, are potential rapid transit patrons.

CORRIDORS SELECTED FOR INITIAL STUDY

The corridors within which the heaviest relative volumes of travel were recorded by the three field origin and destination surveys and which were selected for initial study are illustrated on the map on the following page. This map indicates each corridor to be approximately two miles in width. The corridors extend in a general radial pattern from the Los Angeles Central Business District to the furthest point in each case which appeared reasonable considering the apparent intensity of movements along the axis of the corridor.

The selection of the Los Angeles Central Business District as the hub of a radial system of corridors resulted from the concentration therein of one end of each of many zone-to-zone movements having relatively heavy volume. As a result of the dispersion of commercial activity, a considerable number of sub-centers of business have been created in the Los Angeles Metropolitan Area. The desire line map illustrates, however, that none of

RAPID TRANSIT STUDY CORRIDORS

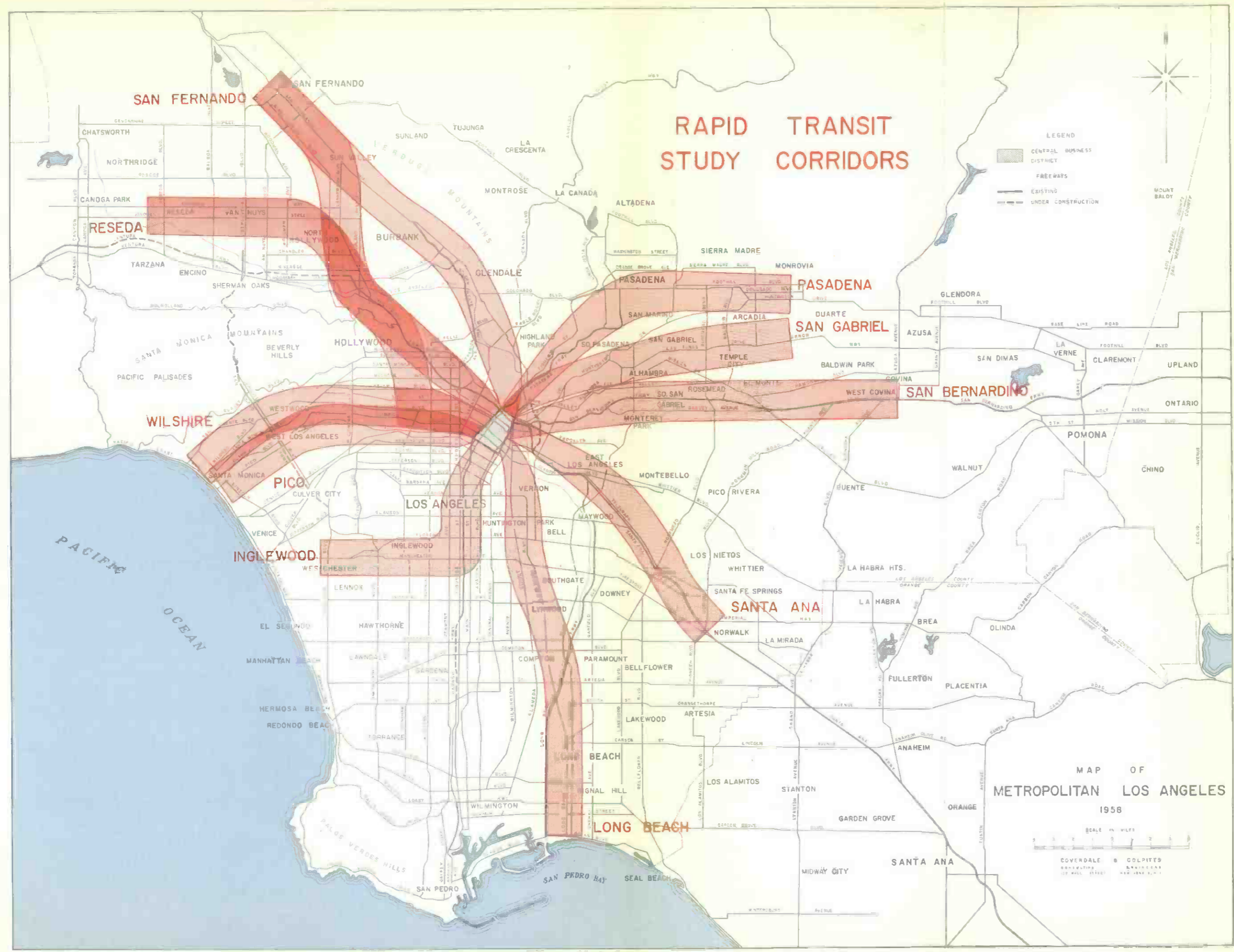
LEGEND

- CENTRAL BUSINESS DISTRICT
- FREEWAYS
- EXISTING
- UNDER CONSTRUCTION



MAP OF METROPOLITAN LOS ANGELES 1958

SCALE IN MILES
COVERDALE COLPITTS
ENGINEERS ARCHITECTS
100 WALL STREET NEW YORK 38, N.Y.



these sub-centers have individually attained the importance of the Los Angeles Central Business District as areas of trip origin or destination. Various relatively heavy peripheral movements appear on the desire line map. There are no instances, however, wherein the desire lines are sufficiently concentrated to impel consideration of peripheral rapid transit routes.

Each corridor has been assigned a descriptive name, as follows:

Pasadena

San Gabriel

San Bernardino

Santa Ana

Long Beach

Inglewood

Pico

Wilshire

Reseda via Cahuenga and Sunset

Reseda via Cahuenga and Wilshire

San Fernando via Cahuenga and Sunset

San Fernando via Glendale

Considering the study area to be divided into quadrants by a north-south line and an east-west line intersecting in the Central Business District of Los Angeles, three of the corridors, namely, Pasadena, San Gabriel, and San Bernardino penetrate the northeastern quadrant of the area. Two lie in the southeastern quadrant, namely, the Santa Ana and Long Beach Corridors. The Long Beach Corridor follows in general the line of the southern division of the monorail route discussed in our Report to the Authority dated January 15, 1954.

The Inglewood Corridor penetrates the southwestern quadrant of the study area. The Wilshire and Pico Corridors overlap one another, in the area between the Los Angeles Central Business District and Santa Monica.

Four corridors, which to a certain extent are alternates for each other, have been selected to penetrate the San Fernando Valley. These are the Reseda via Cahuenga and Sunset, Reseda via Cahuenga and Wilshire, San Fernando via Cahuenga and Sunset, and the San Fernando via Glendale Corridors. The San Fernando Corridor via Cahuenga and Sunset follows very closely the line of the northern division of the monorail route referred to above.

DETAILS OF THE CORRIDORS

General

In the following sections of the Report each corridor will be described, a map indicating the important features of the corridor will be included, and estimates of volume within the corridor will be furnished.

Volume of Travel

The volume of inter-zonal movements derived from our field surveys was combined with the volume of such movements derived from our study of "other trips" not covered by those surveys, to arrive at the total volume of each zone-to-zone movement. From this information we estimated the volume of travel between each of the zones which the corridors actually traversed and other zones, in all cases whereby such travel could reasonably be expected to flow through the corridors. Similarly, we selected those zones adjacent to each corridor which it was reasonable to assume could be served by bus feeder lines connecting with a rapid transit line were such to exist in the corridor, and the volume of movements to and from those zones which it was reasonable to expect would flow through the corridor also was tabulated. From the above data,

it was possible to arrive at an estimate of the total volume of individual weekday movements traveling in a direction parallel to the axis of the corridor.

All of the corridors have a common junction point, the Los Angeles Central Business District. In making estimates of potential traffic volume, we have assumed the existence of a rapid transit system radiating from the Central Business District, and accordingly, we have included in those estimates logical movements through the Central Business District from one corridor to another. For example, traffic volume estimates for the San Bernardino Corridor include movements between zones in that corridor and zones in the San Fernando, Reseda, Wilshire, Pico, Inglewood, and Long Beach Corridors. San Bernardino Corridor estimates do not include movements between zones in that corridor and zones in the Pasadena, San Gabriel, or Santa Ana Corridors, since such movements would not logically follow the direction of the San Bernardino Corridor. It is pertinent to note that our surveys indicated that movements crossing the Los Angeles Central Business District exceed those terminating therein.

In many instances the areas which would be served by a rapid transit line in one corridor overlap those which would be served by a line in the adjacent corridor. In such instances, we have treated the corridors individually, and made estimates of potential traffic volume disregarding the existence of the adjacent corridors.

In the case of the Reseda Corridor via Cahuenga and Wilshire, the route is an exact duplication of the Wilshire Corridor between the Los Angeles Central Business District and the junction of the two corridors in the vicinity of Wilshire Boulevard and Rossmore Avenue. In that instance the estimated potential traffic volume in the joint section has not been duplicated.

In the case of each corridor a "profile" diagram is included. Each diagram indicates the estimated 1958 weekday volume of potential individual person movements in the general direction of the axis of the corridor at the points specified in the diagram.

Freeways and Highways Available

The map accompanying the descriptive data for each corridor shows the principal freeways and arterial streets or highways now serving the corridor in the general direction of its axis.

At intervals within each corridor we have established transverse lines, at each of which we have recorded the average weekday traffic volume data for the freeways and arterial streets or highways serving the corridor longitudinally at that point. We have also estimated the capacity of each of these freeways and arterial roads at the same point.

The map on the following page illustrates these data, for all corridors. This map indicates the limited extent to which current highway capacity in each corridor remains available to accommodate future growth of motor vehicle traffic.

At this time the situation with respect to the timing of the availability of federal highway funds is not sufficiently certain to permit a positive prediction as to possible freeway construction within the period preceding commencement of rapid transit operations. If funds were to continue to be available to the California State Division of Highways in amounts comparable to those contained in the 1959-1960 budget, it is reasonable to suppose that the following additions to the freeway system would be completed or under construction by 1963:

PRESENT TRAFFIC AND ESTIMATED STREET AND FREEWAY CAPACITY

ALONG RAPID TRANSIT STUDY CORRIDORS

LEGEND

-  CENTRAL BUSINESS DISTRICT
-  FREEWAYS
-  EXISTING
-  UNDER CONSTRUCTION

LEGEND

-  1959 AVERAGE DAILY TRAFFIC
-  ESTIMATED AVERAGE DAILY TRAFFIC CAPACITY



MAP OF METROPOLITAN LOS ANGELES 1958



COVERDALE & COLPITTS
CORPORATION
125 HILL STREET
LOS ANGELES 4, CALIF.



(a) The now uncompleted sections of the San Diego Freeway, between its intersection with the Golden State Freeway in the San Fernando Valley and Harbor Boulevard in Orange County.

(b) The uncompleted sections of the Golden State Freeway, from the Tunnel Station to its intersection with the Santa Ana Freeway.

(c) The Santa Monica Freeway, from its intersection with the Santa Ana Freeway to its intersection with the San Diego Freeway.

(d) A portion of the northerly end of the San Gabriel River Freeway.

(e) The Ventura Freeway between its intersection with the Hollywood Freeway and its intersection with the Golden State Freeway.

(f) A short extension of the Hollywood Freeway northward from its intersection with the Ventura Freeway.

We consider that the freeway construction program set forth above will have only a negligible effect upon speeds attainable on the existing freeways, in the light of the increase in the number of vehicles using the system taking place during the period of construction. Past history of freeway usage indicates that they are heavily laden within a very short time after completion.

PASADENA CORRIDOR

This corridor, which is approximately 19 miles long, has its easterly end at a point in Monrovia near the intersection of Huntington Drive and Myrtle Avenue. It passes westward through Arcadia into Pasadena. It includes the entire business district of Pasadena, and at the westerly boundary of that city it turns generally southwesterly and follows the line of the Arroyo Seco, Figueroa Street, and the Pasadena Freeway. It traverses the portion of Los Angeles known as Highland Park, passes to the southeast of Elysian Park and connects with the northerly boundary of the Los Angeles Central Business District at Sunset Boulevard.

A rapid transit line located in this corridor would serve, in addition to the cities and districts mentioned in the preceding paragraph, the cities of Duarte, Sierra Madre, San Marino, and South Pasadena, and the districts of Los Angeles known as Mt. Washington and Lincoln Heights, by bus connections.

Certain points of interest from a traffic standpoint are located in or near the Pasadena Corridor. In Arcadia, there is Santa Anita Park, an important horse racing establishment. The season is from December 26th of each year to April 9th of the following year, involving 75 days of racing with an average daily attendance of approximately 9,000. During the period December 26th - March 11th, chartered buses bring in approximately 1,000 persons on weekdays and 1,800 on Saturdays.

Within the corridor, in Pasadena, there is Pasadena City College, located on East Colorado Boulevard. The current enrollment in this institution is 5,100 students, all of whom live off campus. Also in Pasadena is the California Institute of Technology, located on California Street, and having approximately 1,200 students registered, of whom one-half live off campus.

Immediately to the south of Pasadena, in San Marino, is the Huntington Library and Art Gallery, which draws large numbers of visitors throughout the year.

The corridor includes the Central Business District of Pasadena. Just north of the corridor is the Rose Bowl, with a seating capacity of 100,000, in which athletic events are held which attract heavy patronage.

The corridor is served by the Pasadena Freeway, eight miles in length, between the "Four Level Interchange" in downtown Los Angeles and Arroyo Parkway, Pasadena. This freeway is the principal connection between all cities in the corridor and Los Angeles. Colorado Boulevard connects Monrovia, Arcadia, and Pasadena, intersecting Arroyo Parkway and thereby connected to the Pasadena Freeway. In Pasadena, Colorado Boulevard is the principal commercial artery. Foothill Boulevard connects Monrovia, Arcadia, and Pasadena, north of and parallel to Colorado Boulevard. California Street is parallel to and south of Colorado Boulevard in Pasadena, intersecting Arroyo Parkway and thereby connected to the Pasadena Freeway. Huntington Drive connects Monrovia and Arcadia with Los Angeles via San Marino and South Pasadena. Leading into Mission Road and North Broadway in Los Angeles, it affords an alternative route to the Pasadena Freeway. Figueroa Street connects Highland Park with downtown Los Angeles, affording an alternative to the Pasadena Freeway, to the point at which the two join at the Los Angeles River.

The estimated 1959 population of the area penetrated by this corridor is 356,000.

The corridor is served by eight MTA lines, as well as by various routes of the Pasadena City Lines bus system.

MAP OF PASADENA CORRIDOR

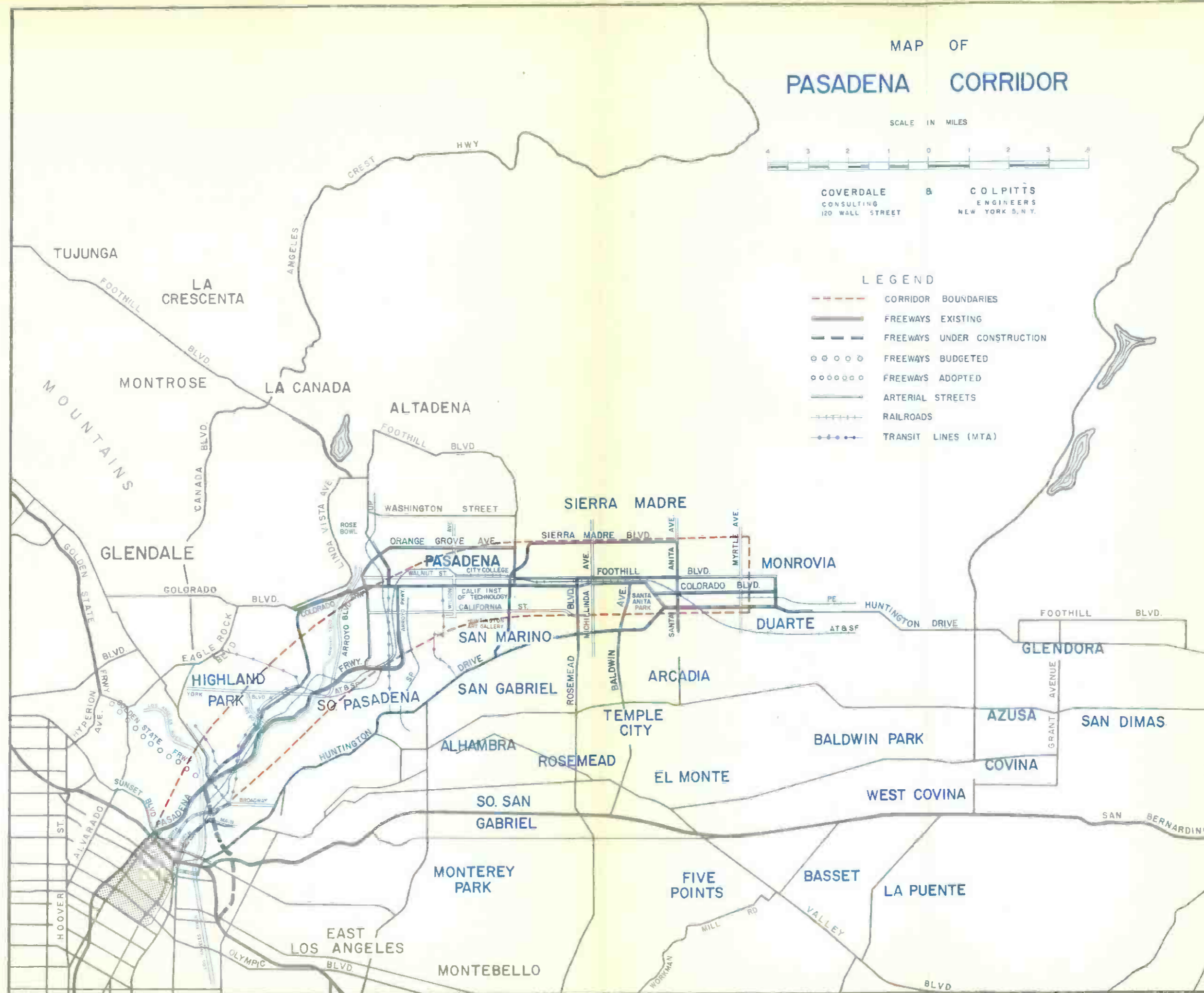
SCALE IN MILES



COVERDALE CONSULTING 120 WALL STREET
 COLPITTS ENGINEERS NEW YORK N.Y.

LEGEND

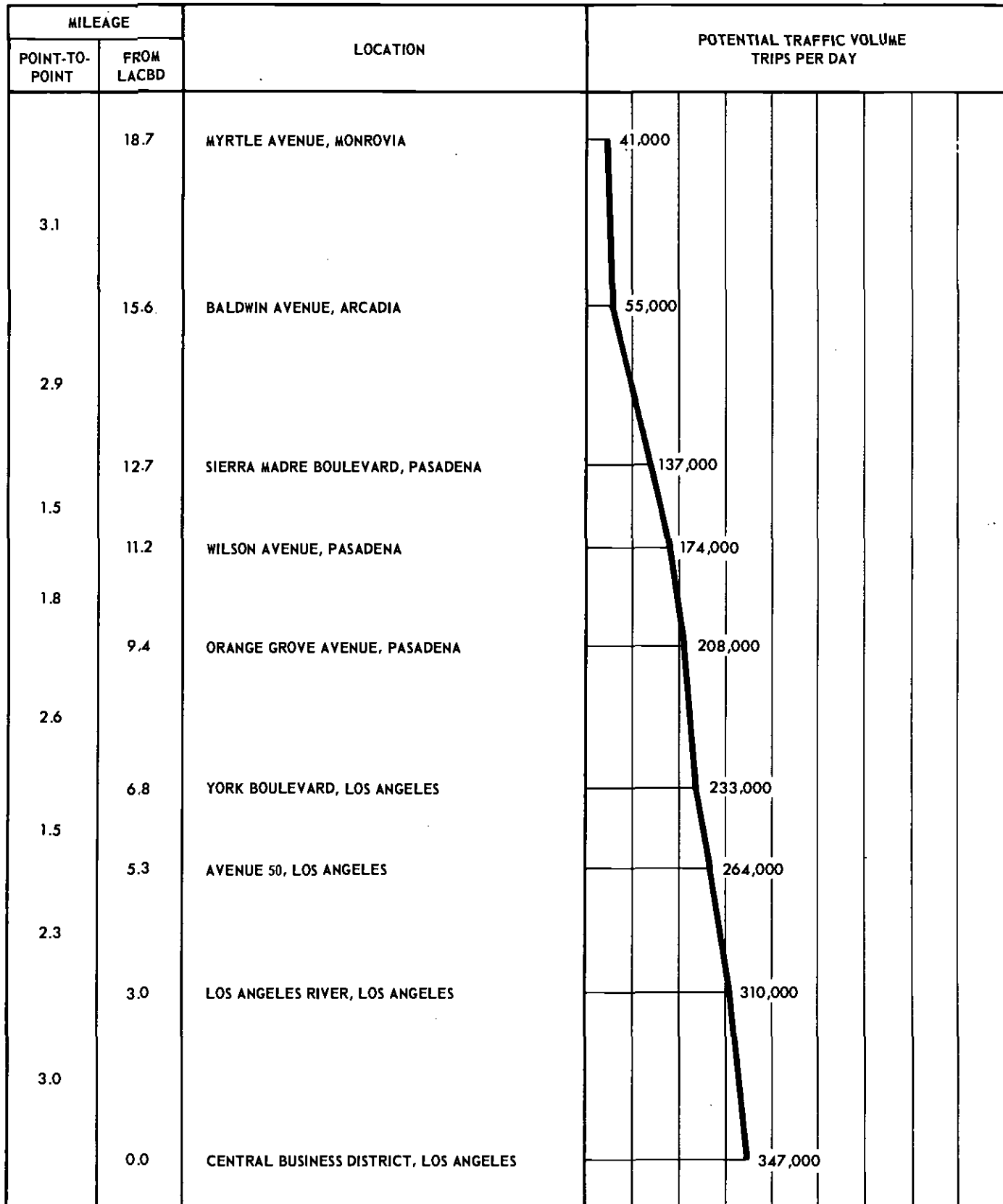
- CORRIDOR BOUNDARIES
- FREEWAYS EXISTING
- FREEWAYS UNDER CONSTRUCTION
- FREEWAYS BUDGETED
- FREEWAYS ADOPTED
- ARTERIAL STREETS
- RAILROADS
- TRANSIT LINES (MTA)



COVERDALE & COLPITTS

PASADENA CORRIDOR

ESTIMATED VOLUME OF 1958 WEEKDAY POTENTIAL TRAFFIC



SAN GABRIEL CORRIDOR

This corridor has its easterly terminus in Arcadia at a point near the intersection of Live Oak Avenue and Peck Road. From that point the direction of the corridor is westerly, through Arcadia along a line generally parallel to Las Tunas Drive, through the unincorporated areas known as Temple City and Rosemead, the cities of San Gabriel and Alhambra, and the El Sereno and Lincoln Heights districts of Los Angeles, then in a generally southwesterly direction, until it reaches the Los Angeles Central Business District in the vicinity of Union Station. The corridor is approximately 16 miles long.

A rapid transit line located in the corridor would serve, in addition to the cities and districts mentioned above, the cities of Monrovia, Duarte, San Marino, and South Pasadena, by bus connections.

The Los Angeles County Hospital lies in the corridor on Mission Road, Los Angeles, between Valley Boulevard and the San Bernardino Freeway. This hospital has approximately 2,800 in-patients, 2,000 out-patients, and is visited by an average of 1,000 people on a normal weekday. Los Angeles State College is situated between Valley Boulevard and the San Bernardino Freeway, just east of Eastern Avenue. This institution has an enrollment which is expected to exceed 13,000 students in 1959, all living off campus.

Just to the south of and generally paralleling the corridor for its entire length is the San Bernardino Freeway. Numerous north and south arterial roads traverse the corridor and afford access to this freeway, which leads directly to the Los Angeles Central Business District and the other elements of the metropolitan freeway system. Between the southerly boundary of the corridor and the San Bernardino Freeway is Valley Boulevard, another principal east-west highway. Valley Boulevard is approximately parallel to the axis of

the corridor for virtually its entire length and leads into Mission Road and North Main Street in Los Angeles. The principal east-west artery within the corridor is provided by the route of Live Oak Avenue, Las Tunas Drive, Main Street (Alhambra), Huntington Drive, Mission Road (Los Angeles), and North Broadway. Mission Road in San Gabriel serves as an important connector between the center of that city and Valley Boulevard for traffic between San Gabriel and Los Angeles. It is pertinent to note that the Long Beach Freeway is currently under construction from its northerly terminus at the Santa Ana Freeway to the San Bernardino Freeway at a point near Atlantic Boulevard in Alhambra. The completion of this section of the Long Beach Freeway will provide a fast route to the southerly and southwesterly parts of the Los Angeles Metropolitan Area.

The estimated 1959 population of the area penetrated by this corridor is 309,000.

The corridor is served by ten MTA lines. Portions of it are served also by Foster Transportation, Inc. and Valley Transit Lines.

MAP OF SAN GABRIEL CORRIDOR

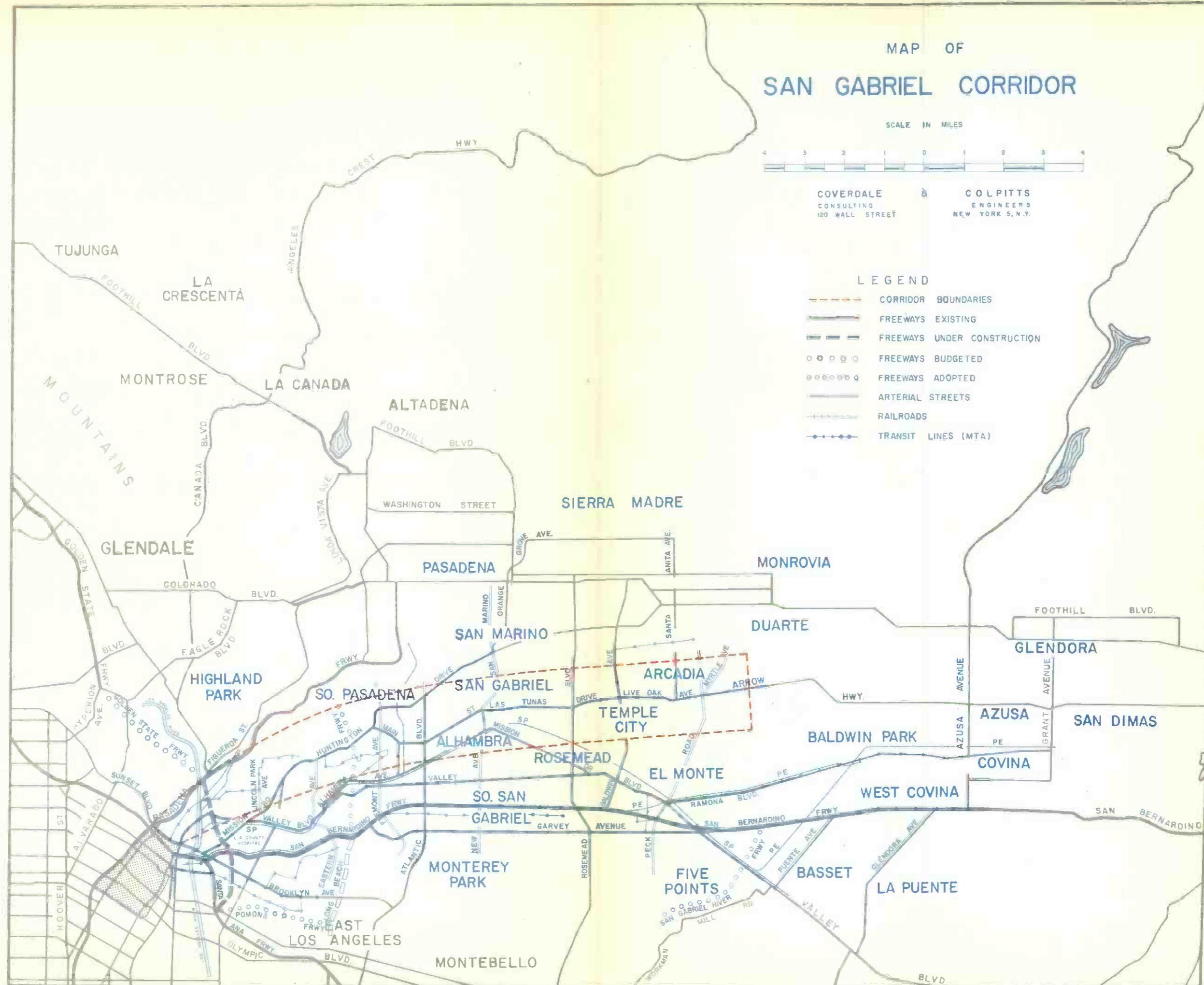
SCALE IN MILES



COVERDALE CONSULTING 120 WALL STREET
COLPITTS ENGINEERS NEW YORK 5, N.Y.

LEGEND

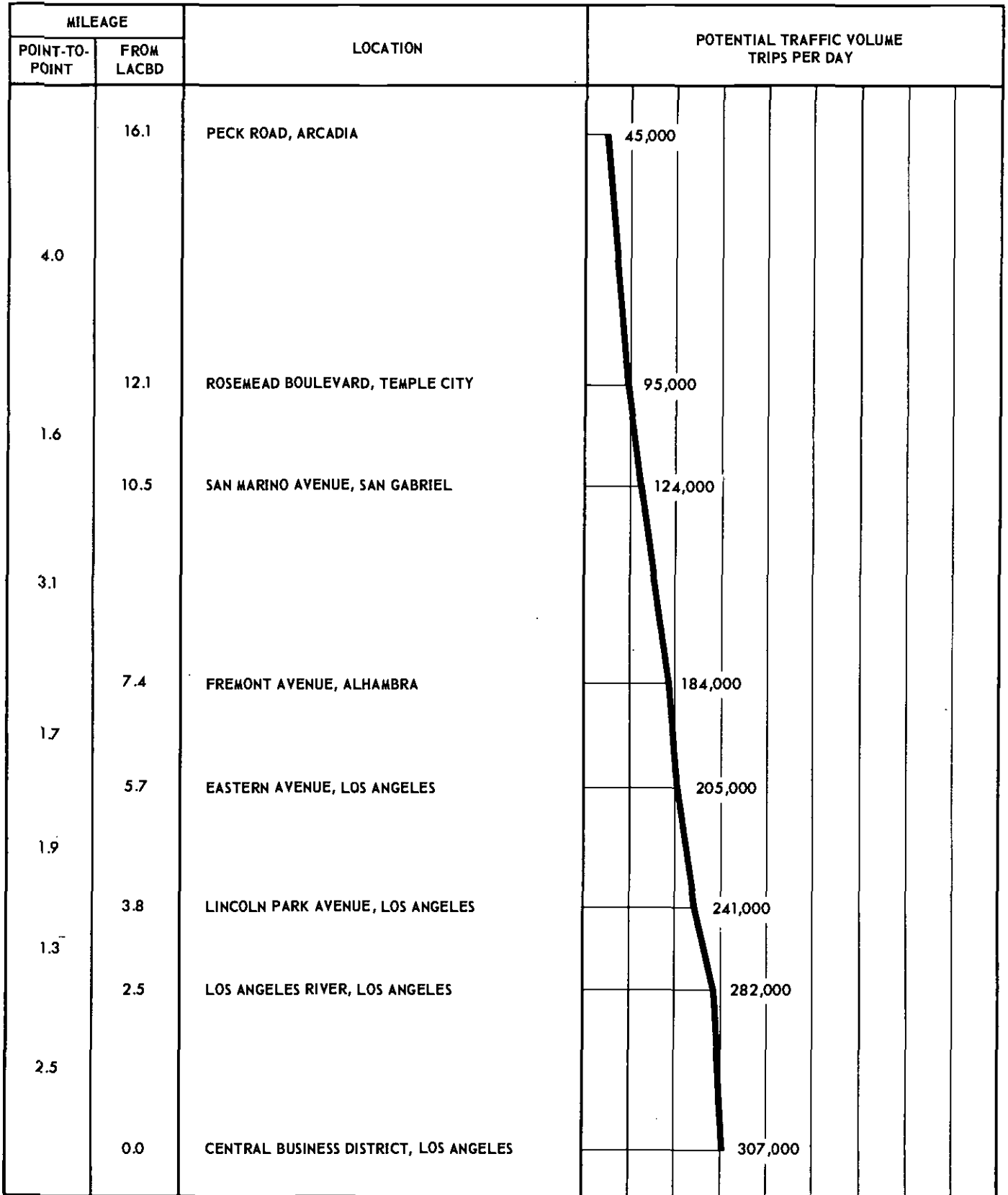
- CORRIDOR BOUNDARIES
- FREEWAYS EXISTING
- FREEWAYS UNDER CONSTRUCTION
- FREEWAYS BUDGETED
- FREEWAYS ADOPTED
- ARTERIAL STREETS
- RAILROADS
- TRANSIT LINES (MTA)



COVERDALE & COLPITTS

SAN GABRIEL CORRIDOR

ESTIMATED VOLUME OF 1958 WEEKDAY POTENTIAL TRAFFIC



SAN BERNARDINO CORRIDOR

The easterly end of the San Bernardino Corridor is located near the intersection of Azusa Avenue and the San Bernardino Freeway in the City of West Covina. The axis of the corridor lies east and west and follows generally the line of the San Bernardino Freeway through the cities of West Covina, Baldwin Park, El Monte, and Alhambra, the unincorporated areas of South San Gabriel and City Terrace, and the district of Los Angeles known as Boyle Heights. The corridor terminates at the Los Angeles Central Business District at its northeast corner. The corridor is approximately 21 miles long.

In addition to the above-named communities, a rapid transit line operating in the San Bernardino Corridor would serve by means of bus feeder lines the cities of Glendora, Azusa, San Dimas, Walnut, Industry, La Puente and Monterey Park, and the unincorporated areas known as Five Points, Rosemead, and Bassett.

The corridor is principally served by the San Bernardino Freeway which extends from one end of the corridor to the other. An alternative route, approximately one mile to the north of the freeway, is provided throughout the length of the corridor by Ramona Boulevard, Valley Boulevard, and Mission Road or North Main Street in Los Angeles. Valley Boulevard also serves the southerly portion of the corridor in West Covina and Bassett. Another through route is provided by Garvey Avenue which parallels the freeway through El Monte, South San Gabriel, and Monterey Park. The comment in the section covering the San Gabriel Corridor, with respect to the completion of the northerly section of the Long Beach Freeway, is equally applicable to the San Bernardino Corridor.

The estimated 1959 population of the area penetrated by this corridor is 570,000.

The corridor is served by five MTA lines. Portions of it are served also by Foster Transportation, Inc. and Valley Transit Lines.

MAP OF SAN BERNARDINO CORRIDOR

SCALE IN MILES

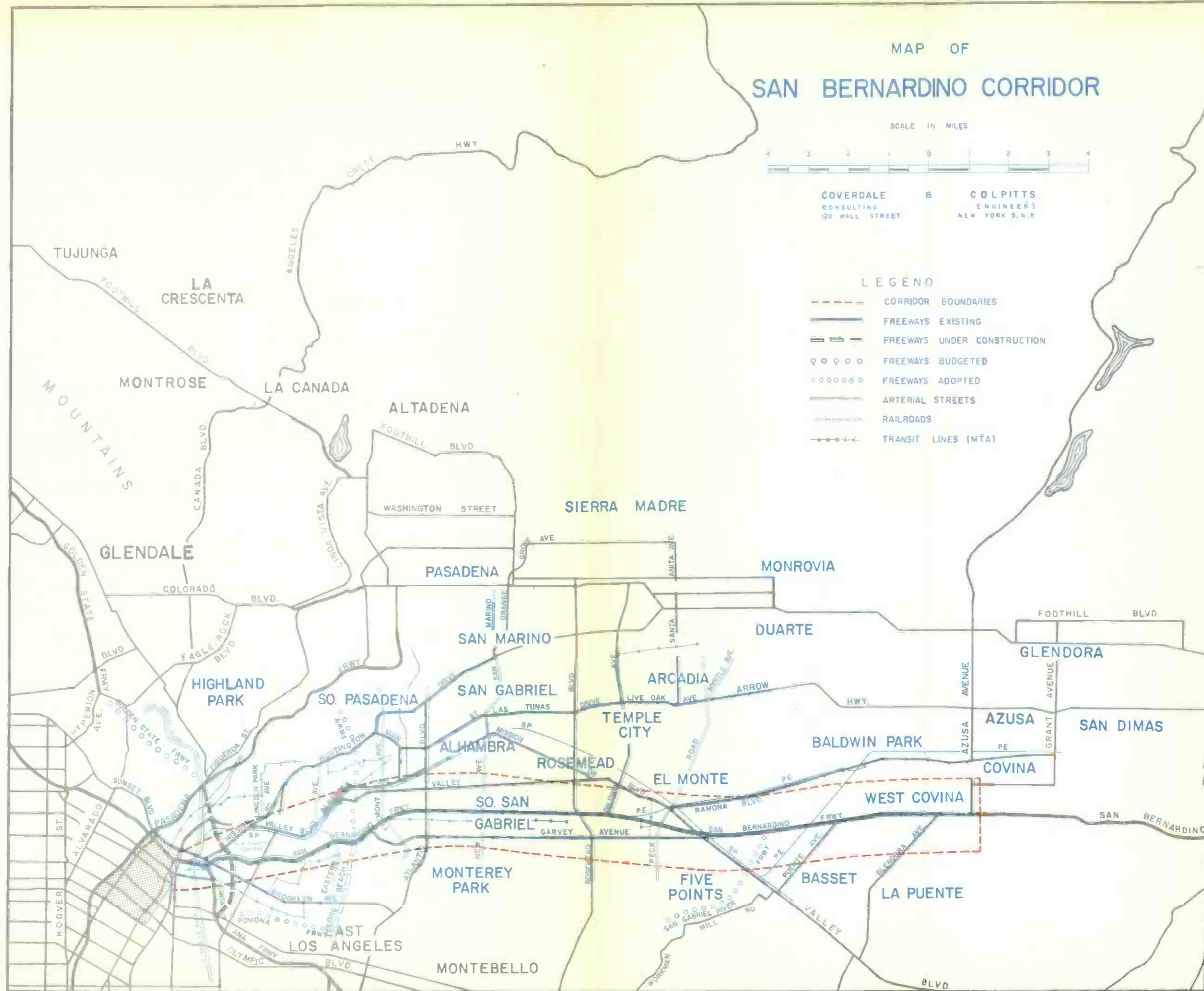


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120 WALL STREET

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ENGINEERS
NEW YORK 5, N.Y.

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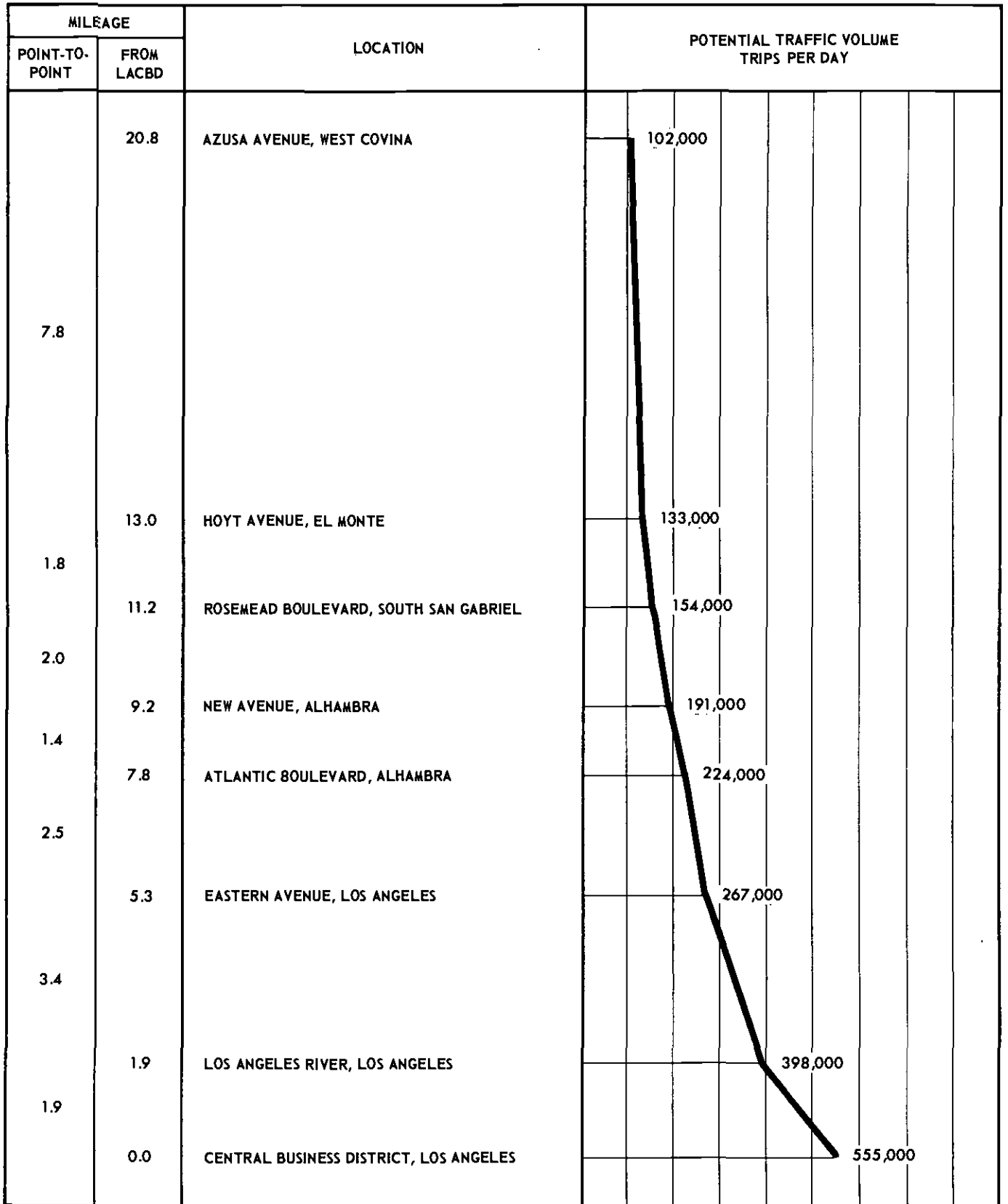
- CORRIDOR BOUNDARIES
- FREEWAYS EXISTING
- FREEWAYS UNDER CONSTRUCTION
- FREEWAYS BUDGETED
- FREEWAYS ADOPTED
- ARTERIAL STREETS
- RAILROADS
- TRANSIT LINES (MTA)



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SAN BERNARDINO CORRIDOR

ESTIMATED VOLUME OF 1958 WEEKDAY POTENTIAL TRAFFIC



SANTA ANA CORRIDOR

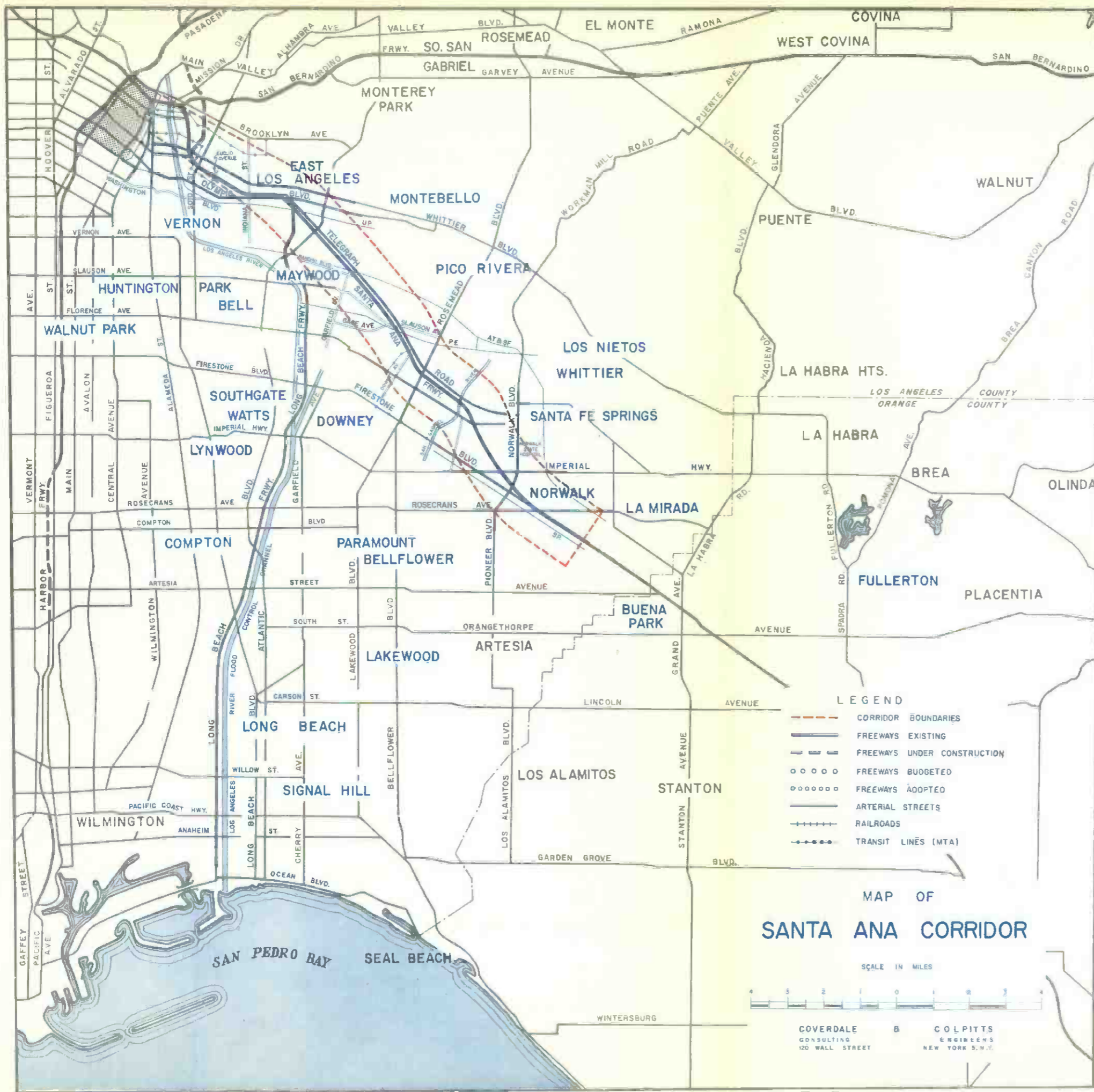
This corridor is approximately 14 1/2 miles long with its southeasterly end at a point in Norwalk, in the vicinity of the intersection of the Santa Ana Freeway and Imperial Highway. From that point the corridor runs in a northwesterly direction, following in general the line of the Santa Ana Freeway, passing through the cities of Santa Fe Springs, Pico Rivera, and Montebello, the district known as East Los Angeles, and the Wholesale Industrial District of Los Angeles, reaching the Central Business District at its southeasterly side. In addition to the cities and areas mentioned, a rapid transit system operating in this corridor could serve La Mirada, Buena Park, Anaheim, Fullerton, Whittier, Los Nietos, Downey, South Gate, Bell, Vernon and Maywood, and the Boyle Heights and Central districts of Los Angeles, by means of bus feeder routes.

There is extensive industrial development throughout the length of this corridor. There is a large State hospital located at the Norwalk end of the corridor, with a capacity of approximately 4,000 beds, and having 750 visitors on an average weekday.

The Santa Ana Freeway serves the corridor throughout its length, leading into the Los Angeles Central Business District. The freeway is paralleled by another route comprising Telegraph Road in conjunction with either Olympic Boulevard or Whittier Boulevard, also leading into downtown Los Angeles. The interchange of the Long Beach Freeway and the Santa Ana Freeway lies within the corridor, in East Los Angeles. It is pertinent to note that the Long Beach Freeway is under construction from this point to the San Bernardino Freeway.

The estimated 1959 population of the area penetrated by this corridor is 544,000.

The corridor is served by six MTA lines. Portions of it are served also by Montebello Municipal Lines, Eastern Cities Lines, and Southern Cities Transit, Inc.



- LEGEND**
- CORRIDOR BOUNDARIES
 - == FREEWAYS EXISTING
 - == FREEWAYS UNDER CONSTRUCTION
 - o o o o FREEWAYS BUDGETED
 - o o o o o o FREEWAYS ADOPTED
 - ARTERIAL STREETS
 - ++++ RAILROADS
 - TRANSIT LINES (MTA)

MAP OF
SANTA ANA CORRIDOR



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CONSULTING ENGINEERS
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LONG BEACH CORRIDOR

This corridor is approximately 20 1/2 miles long with its southerly end located in the City of Long Beach, near the intersection of Long Beach and Ocean Boulevards. The axis of the corridor lies roughly north and south. From its southerly end it passes through the City of Long Beach, following generally the line of Long Beach Boulevard through the west side of the City of Signal Hill, the area known as North Long Beach, the cities of Compton, Lynwood, and South Gate, the area known as Walnut Park, the cities of Huntington Park and Vernon, the districts of Los Angeles known as Watts and Avalon, then to the southeasterly side of the Central Business District of Los Angeles. In addition to the cities and areas mentioned, a rapid transit line located in this corridor would also serve the unincorporated area known as Dominguez, and portions of the cities of Lakewood, Bellflower, Paramount, and Bell.

The City of Long Beach with an estimated population as of January 1, 1959, of 315,924 is, after Los Angeles, by far the largest city in the County. This corridor directly connects the business districts of Long Beach and Los Angeles. Approximately two miles to the east of the axis of the corridor is the Long Beach Municipal Airport, in the vicinity of which there is considerable industrial development. The corridor also includes the highly industrialized areas of Vernon and Huntington Park.

The portion of the corridor between Long Beach and Compton is principally served by the Long Beach Freeway, which extends from Long Beach Harbor to an interchange with the Santa Ana Freeway in East Los Angeles. In conjunction with the Santa Ana Freeway it forms a continuous route from Long Beach to downtown Los Angeles and the other elements of the metropolitan freeway system. An extension of the freeway northward from its interchange

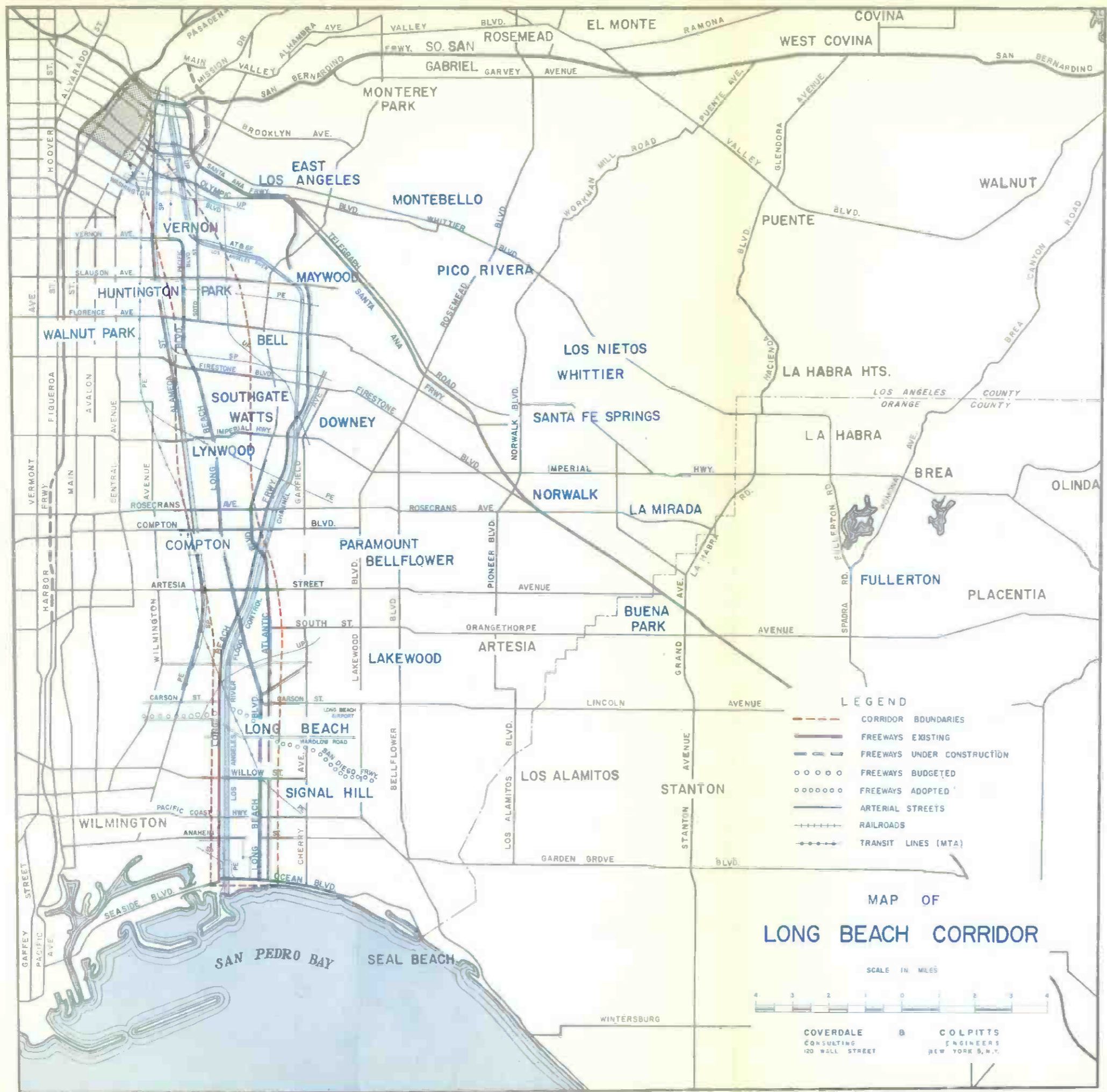
with the Santa Ana Freeway to an interchange with the San Bernardino Freeway is now under construction.

Two other arterial streets run north and south in Long Beach and Compton, approximately parallel to the axis of the corridor and to the Long Beach Freeway, namely, Long Beach Boulevard and Atlantic Avenue. From Compton northward the corridor is served by Alameda Street, and by a combination of Long Beach Boulevard, Pacific Boulevard and Santa Fe Avenue.

Parallel to the axis of the corridor and approximately two miles to the westward is the line of the Harbor Freeway, which is currently completed to a point due west of Lynwood. This important north-south artery is connected to points in the Long Beach Corridor by a number of east-west arterial streets, such as Vernon Avenue, Slauson Avenue, Florence Avenue, and Firestone Boulevard, and travel between Compton or intervening points and downtown Los Angeles is thereby facilitated.

The estimated 1959 population of the entire area penetrated by this corridor is 1,050,000.

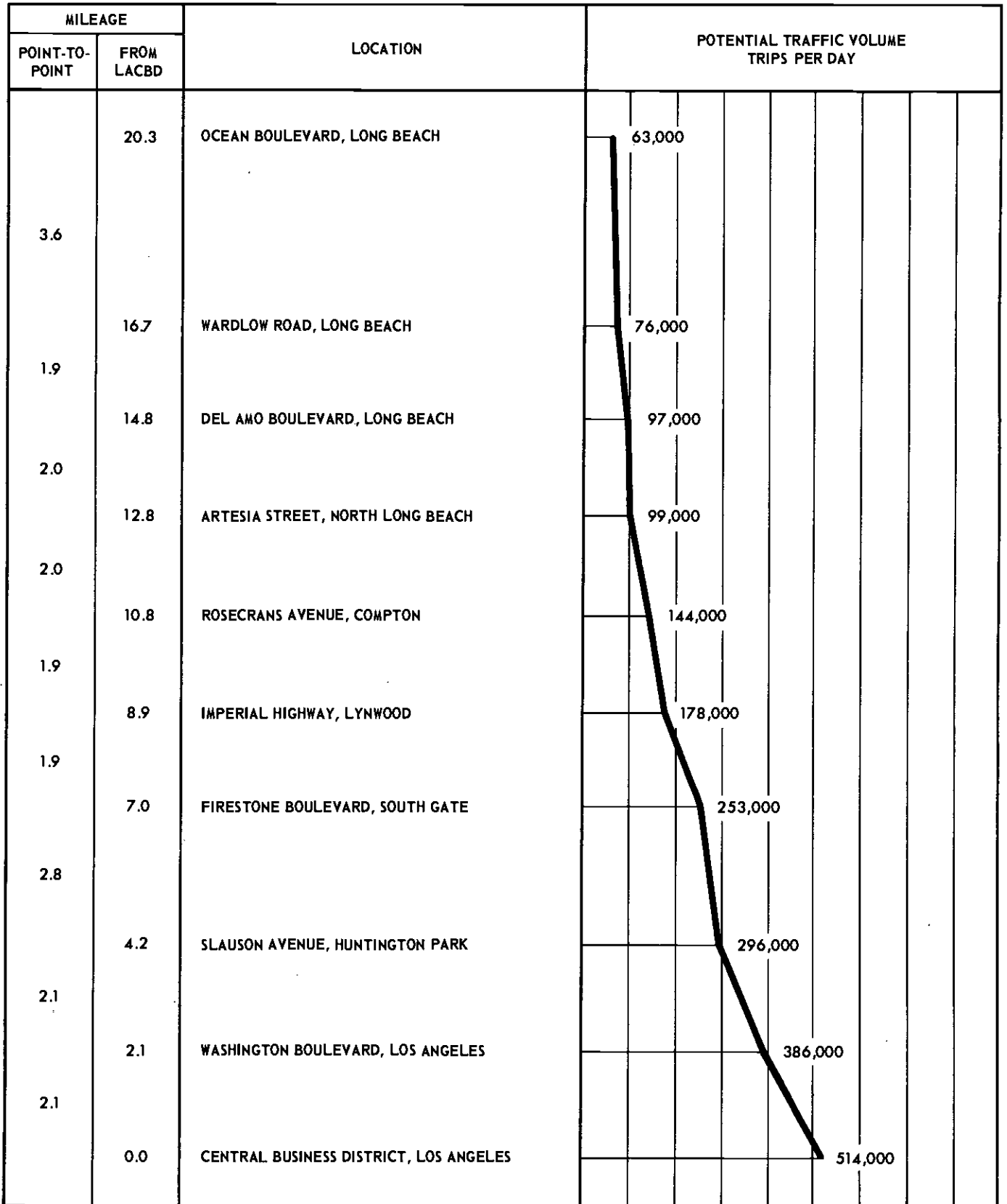
The corridor is served by nine MTA lines, including the standard-gauge rail line between Long Beach and Sixth and Main Streets, Los Angeles. Portions of the corridor are served also by Long Beach City Lines, and Southern Cities Transit, Inc.



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LONG BEACH CORRIDOR

ESTIMATED VOLUME OF 1958 WEEKDAY POTENTIAL TRAFFIC



INGLEWOOD CORRIDOR

This corridor is L-shaped with its southwesterly terminus located at a point near the intersection of Manchester Avenue and Sepulveda Boulevard, in the district of Los Angeles known as Westchester. The axis of the corridor runs east and west from that point, following the general line of Manchester Avenue as far as the vicinity of Figueroa Street and the Harbor Freeway. At that point the corridor turns northward and proceeds to the Los Angeles Central Business District, following the general line of Figueroa Street. The corridor is approximately 13 1/2 miles long. It passes through the City of Inglewood, and the districts of Los Angeles known as Leimert, South Vermont, Exposition, Avalon, University, and Central.

A short distance to the south of the southwesterly terminus of the corridor is the Los Angeles International Airport, the principal air traffic terminal in the metropolitan area. The Airport is surrounded by numerous plants, principally connected with the aircraft industry. Also near the southwesterly end of the corridor is Loyola University. Between Manchester Boulevard and Century Boulevard, in Inglewood, is Hollywood Park, an extensively patronized horse-racing establishment. Its season between May 8th and July 2nd 1958 drew an average daily attendance of over 30,000, while the meeting between October 3rd and November 19th 1958 drew almost 10,000 persons per day. The corridor includes Exposition Park, which includes the Memorial Coliseum, which during the 1958 season had an attendance of just under three and one-half million persons for all events, and, in addition, a large indoor arena with a seating capacity of approximately 18,650 is just being completed. Just north of Exposition Park is the campus of the University of Southern California. This institution has 16,000 students living off campus with an additional 1,000 in residential halls. On Jefferson

Boulevard, just west of Figueroa Street, is the Shrine Auditorium, at which numerous musical and other events are held.

Motor travel within this corridor follows the general pattern of a grid system of north-south, east-west arterial streets. In the east-west leg of the corridor the principal arteries are Florence Avenue, Manchester Avenue, and Century Boulevard. These intersect numerous important north-south arteries also serving the corridor, namely, La Brea Avenue, Crenshaw Boulevard, Western Avenue, and Vermont Avenue. The north-south leg of the corridor is served principally by the Harbor Freeway. In addition, Figueroa Street, Broadway, and Main Street serve as principal arteries.

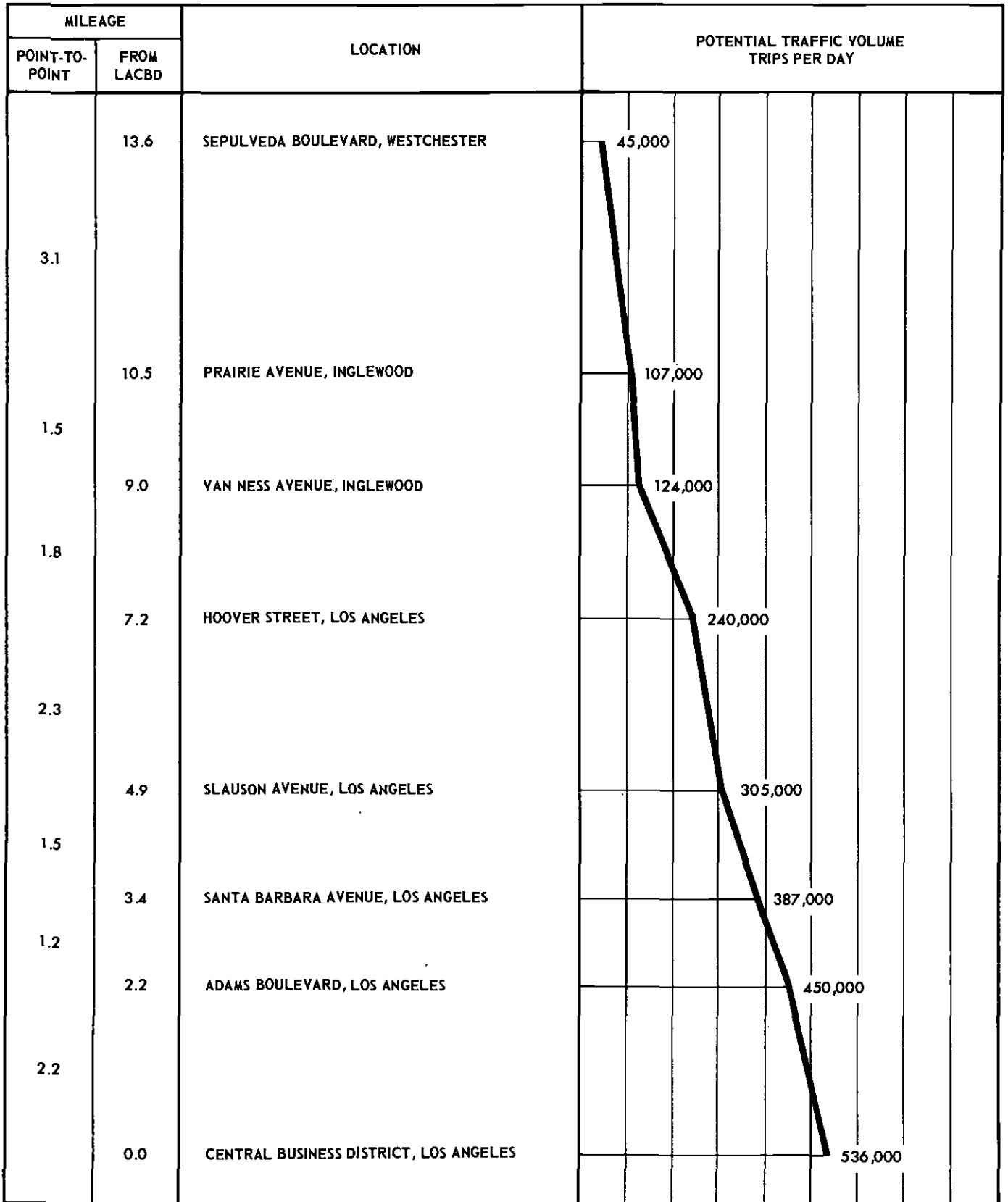
The estimated 1959 population of the area penetrated by this corridor is 595,000.

The corridor is served by eight MTA lines. Portions of it are served also by Inglewood City Lines.

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INGLEWOOD CORRIDOR

ESTIMATED VOLUME OF 1958 WEEKDAY POTENTIAL TRAFFIC



PICO CORRIDOR

The westerly end of the corridor lies in the City of Santa Monica at a point near the intersection of Main Street and Pico Boulevard. The corridor is approximately 15 miles in length, following, in general, the line of Pico Boulevard. It includes the district of Los Angeles known as West Los Angeles, part of the City of Beverly Hills, and parts of the districts known as Mar Vista, Palms, Wilshire-Pico, Wilshire, West Adams, Santa Barbara, Westlake, and University, reaching the Los Angeles Central Business District at its southwest corner. A rapid transit line located in this corridor could serve part of the district known as Venice and Culver City. It will be noted that the northern part of this corridor overlaps the southern part of the Wilshire Corridor.

The amusement center of Pacific Ocean Park lies near this corridor, approximately one mile south of Pico Boulevard in Santa Monica. The Santa Monica Airport is located in the corridor just south of Pico Boulevard and the Twentieth Century Fox Film studios, located to the north of Pico Boulevard and just west of Beverly Hills, also is an important generator of traffic.

The present movement of traffic in the Santa Monica-West Los Angeles section of this corridor is basically via Santa Monica Boulevard, Olympic Boulevard, and Pico Boulevard. In the West Los Angeles-Los Angeles Central Business District section of the corridor, the major routes are Wilshire Boulevard, Olympic Boulevard, Pico Boulevard, and Venice Boulevard.

The ultimate completion of the Santa Monica Freeway will provide freeway travel to this corridor. This freeway will run approximately due west from its interchange with the Santa Ana Freeway on the east side of the Los Angeles River, to a point in Santa Monica near the intersection of Olympic and Lincoln Boulevards. It will have an interchange with the Harbor Freeway

near Venice Boulevard, and cross Pico Boulevard near Centinela Avenue.

The estimated 1959 population of the area penetrated by this corridor is 585,000.

The corridor is served by ten MTA lines. Portions of it are served also by Santa Monica Municipal Bus Lines and Culver City Municipal Lines.



- LEGEND**
- CORRIDOR BOUNDARIES
 - FREEWAYS EXISTING
 - FREEWAYS UNDER CONSTRUCTION
 - FREEWAYS BUDGETED
 - FREEWAYS ADOPTED
 - ARTERIAL STREETS
 - RAILROADS
 - TRANSIT LINES (MTA)

MAP OF
PICO CORRIDOR

SCALE IN MILES

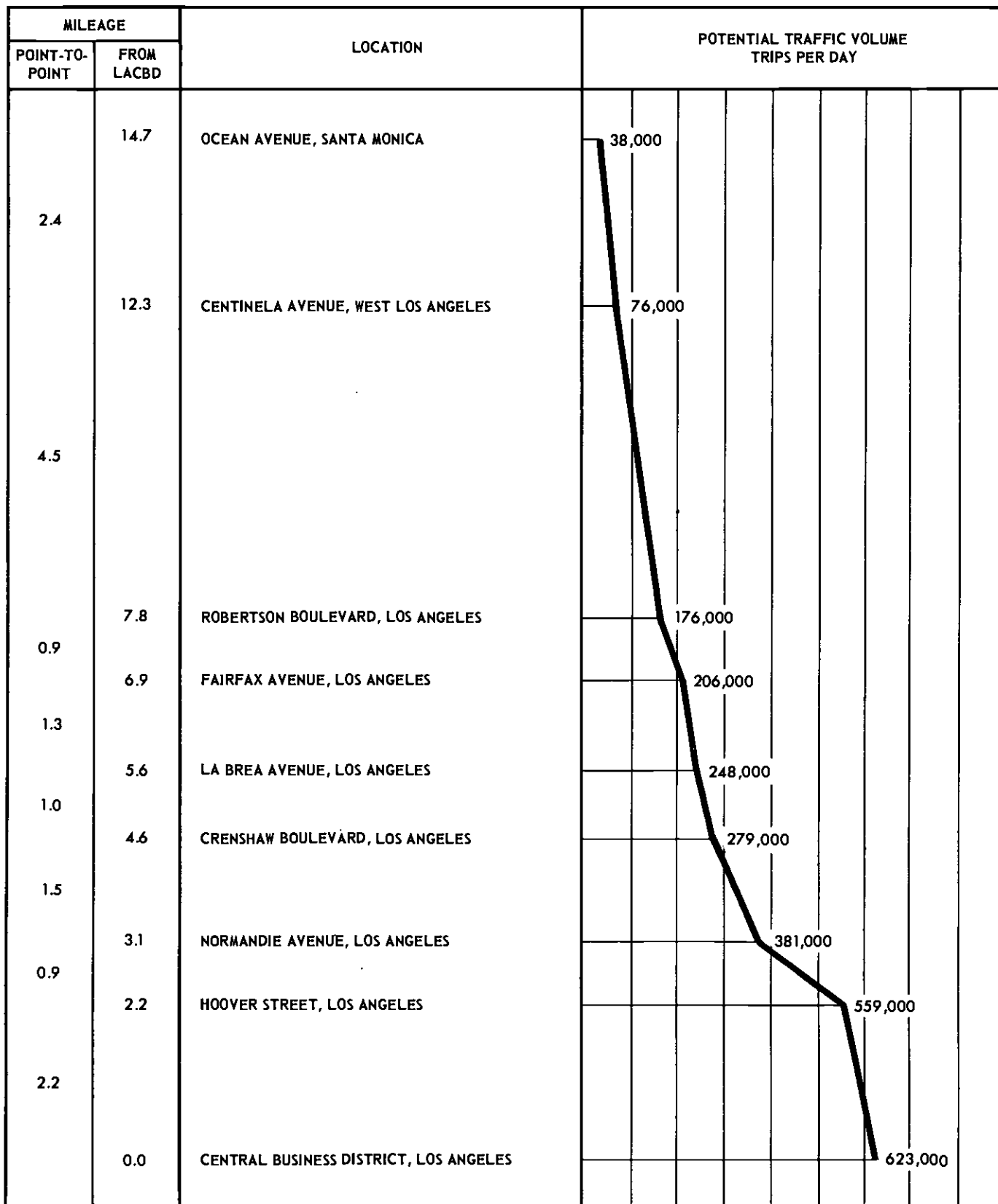


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PICO CORRIDOR

ESTIMATED VOLUME OF 1958 WEEKDAY POTENTIAL TRAFFIC



WILSHIRE CORRIDOR

The Wilshire Corridor, approximately 16 miles in length, has its westerly terminus at a point in Santa Monica near the intersection of Ocean Avenue and Wilshire Boulevard. The axis of the corridor is generally east and west following the general line of Wilshire Boulevard. From Santa Monica it passes through Brentwood, West Los Angeles, and Westwood districts of Los Angeles, the City of Beverly Hills, and the West Wilshire, Wilshire-Pico, Wilshire, and Westlake districts of Los Angeles, reaching the Central Business District on its west side. In addition to the districts and cities named above, a rapid transit line operating in the corridor could also serve the district of Los Angeles known as Pacific Palisades and the southerly part of Hollywood. It will be noted that the southern part of this corridor overlaps the northern part of the Pico corridor.

The City of Santa Monica itself had an estimated population as of January 1, 1959, of 85,545, and the City of Beverly Hills had an estimated population as of the same date of 31,289. In addition, the population of the City of Los Angeles traversed by this corridor is estimated to be 354,252, as of January 1, 1959. This corridor passes through one of the most densely populated areas of Metropolitan Los Angeles and also one of the busiest from the standpoint of office employment and retail commerce. It includes three prominent shopping centers along Wilshire Boulevard, well-known for their fine retail establishments, namely, the Central Business District of Beverly Hills, the "Miracle Mile", between Fairfax Avenue and La Brea Avenue, and the busy portion of the Boulevard between Western Avenue and Hoover Street.

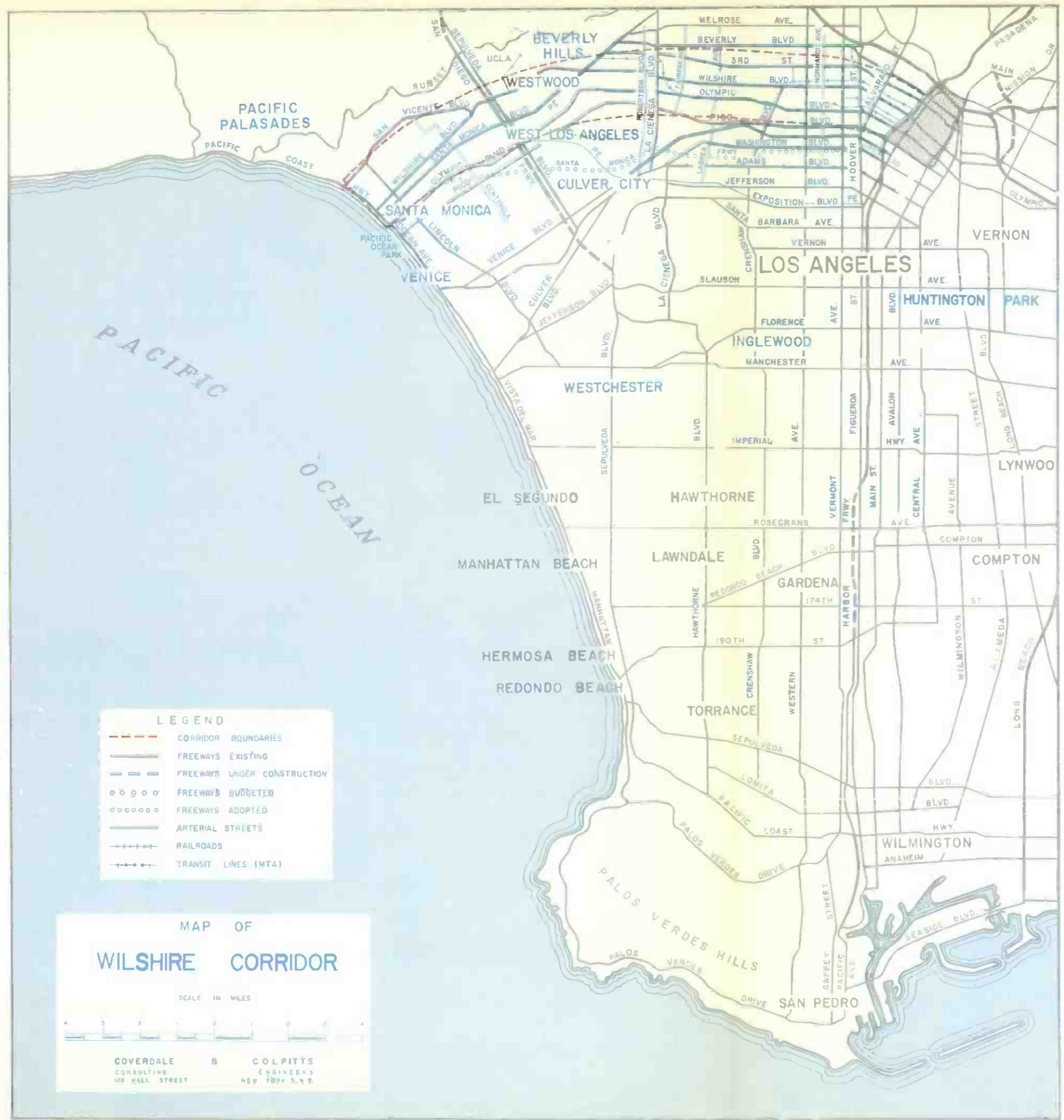
In Santa Monica there are extensive recreational areas along the ocean. In the vicinity of Sepulveda Boulevard and the San Diego Freeway is the U. S. Soldiers Home. Immediately to the north of Wilshire Boulevard,

in Westwood, is the University of California at Los Angeles. This institution has an enrollment of approximately 16,000 students, of whom less than 400 now live on campus. Of the students living off campus, 66 per cent now use private transportation, 25 per cent walk, and nine per cent use public transportation.

The well-known Mormon Temple and the Hancock Park Fossil Pits are located in this corridor. Another important attraction is the Farmer's Market, at Sixth Street and Fairfax Avenue. The extensive Park La Brea Towers residential development is in this corridor, lying just north of Sixth Street between Fairfax Avenue and Cochran Avenue. There are numerous multi-story office buildings along Wilshire Boulevard, particularly in the area between Western Avenue and Hoover Street.

The major routes carrying traffic along this corridor in the area between Santa Monica and Westwood are Wilshire Boulevard, Santa Monica Boulevard, and Olympic Boulevard. In the section of the corridor between Westwood and the Los Angeles Central Business District the major routes of travel are Beverly Boulevard, Third Street, Sixth Street, Wilshire Boulevard, and Olympic Boulevard. East of Crenshaw Boulevard Eighth Street becomes an additional important artery. The San Diego Freeway crosses the Wilshire Corridor at right angles in West Los Angeles. Ultimately, the Santa Monica Freeway referred to above in the comment regarding the Pico Corridor will make available freeway travel between Santa Monica, Westwood, and West Los Angeles and downtown Los Angeles.

The corridor is served by ten MTA lines. Portions of it are served also by Santa Monica Municipal Bus Lines.



PACIFIC OCEAN

PALOS VERDES HILLS

BEVERLY HILLS
WESTWOOD
WEST LOS ANGELES
CULVER CITY
SANTA MONICA
VENICE
LOS ANGELES
HUNTINGTON PARK
INGLEWOOD
MANCHESTER
WESTCHESTER
EL SEGUNDO
HAWTHORNE
LAWDALE
GARDENA
TORRANCE
WILMINGTON
ANAHM
SAN PEDRO

PACIFIC PALASADES

VERNON

LYNWOOD

COMPTON

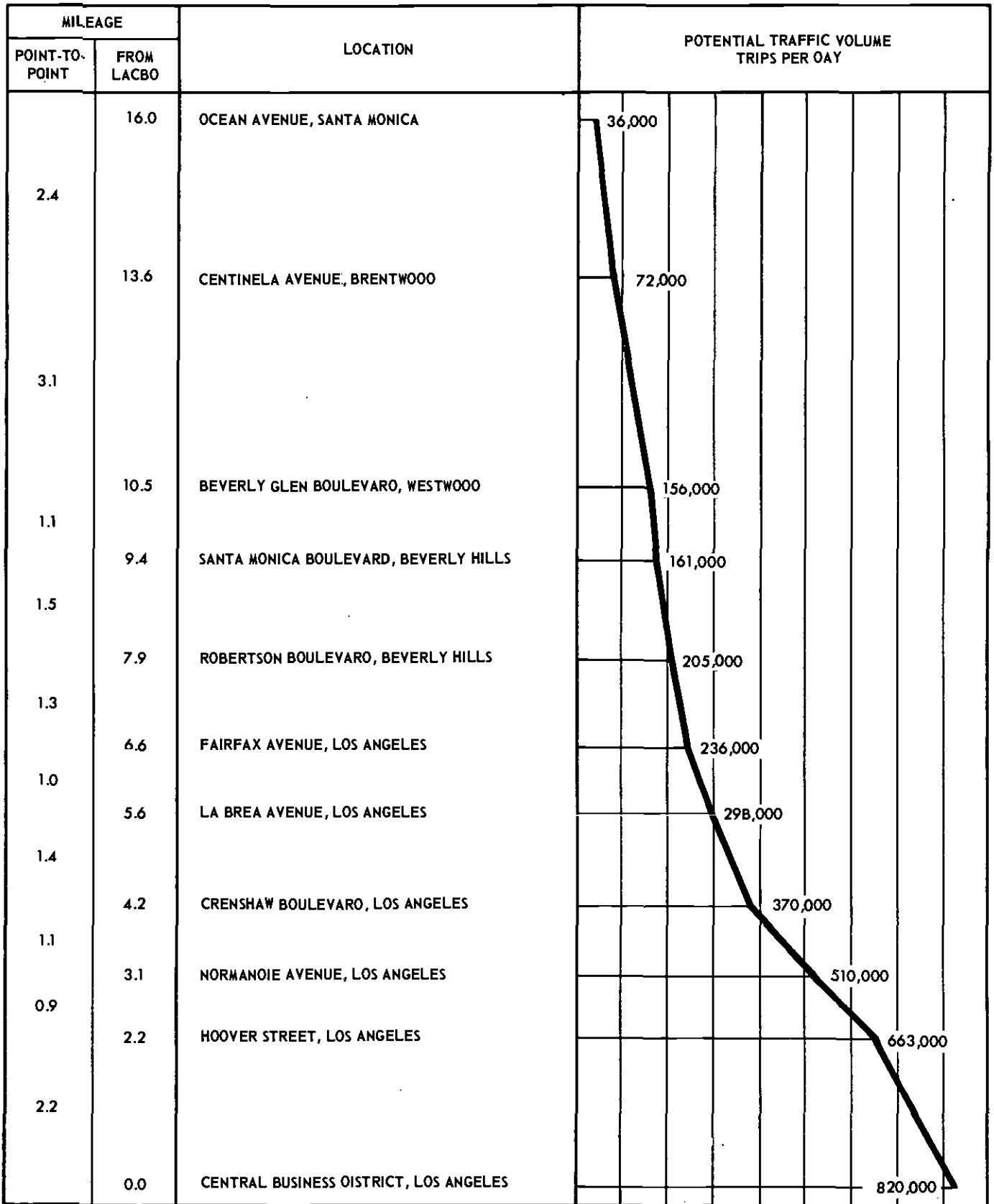
WILMINGTON

SAN PEDRO

COVERDALE & COLPITTS

WILSHIRE CORRIDOR

ESTIMATED VOLUME OF 1958 WEEKDAY POTENTIAL TRAFFIC



RESEDA CORRIDOR VIA CAHUENGA AND WILSHIRE

The northwesterly terminus of this corridor, which is approximately 24 miles long, is located in the San Fernando Valley near the intersection of Reseda Boulevard and Vanowen Street, in the district of Los Angeles known as Reseda. The corridor proceeds easterly along the general line of Vanowen Street, through the district of Van Nuys, to a point in North Hollywood in the vicinity of Lankershim Boulevard. At this point it turns southerly and runs through Studio City to the vicinity of the Hollywood Freeway. It follows the general line of the freeway through Cahuenga Pass into Hollywood, where it turns southerly again along the line of Vine Street and Rossmore Avenue until reaching Wilshire Boulevard. From that point to the west side of the Los Angeles Central Business District it follows the line of the Wilshire Corridor.

By means of bus feeder routes a rapid transit system operating in this corridor could serve the districts of Los Angeles known as Northridge, Canoga Park, Tarzana, Sherman Oaks, and Sepulveda, and the westerly part of the City of Burbank. This corridor directly connects the San Fernando Valley and the Central Business District of Hollywood with the area to the north and south of Wilshire Boulevard east of La Brea Avenue.

At the western end of the corridor is the San Fernando Valley Airport. Many private airplane flights are made each day from this facility, which is currently being expanded.

This corridor includes the principal business districts of North Hollywood and Hollywood, as well as various major motion picture studios, and other tourist attractions. The Hollywood Bowl is located within this corridor. During the season a total of 32 concerts are scheduled for the Bowl, in addition to which the Bowl is leased for approximately 20 events

each year. During 1958 the average concert attendance was approximately 11,000. The attendance at these events varies from 2,000 to 18,000. Traffic congestion is common due to the large number of patrons traveling to and from the Bowl by automobile.

The estimated 1959 population of the area penetrated by this corridor is 745,000.

The corridor is served by sixteen MTA lines.

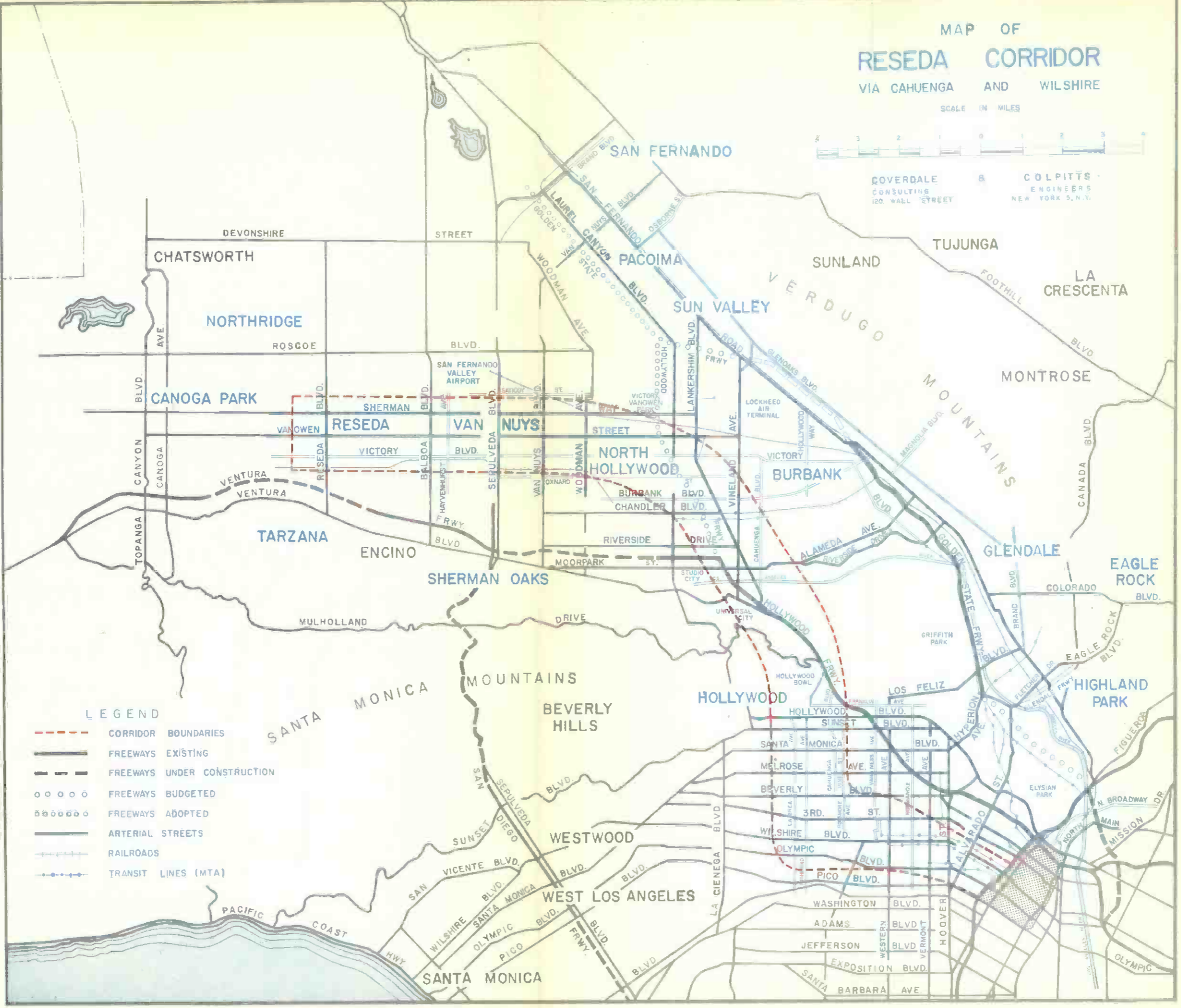
MAP OF RESEDA CORRIDOR

VIA CAHUENGA AND WILSHIRE

SCALE IN MILES



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 COLPITTS ENGINEERS NEW YORK 5, N.Y.

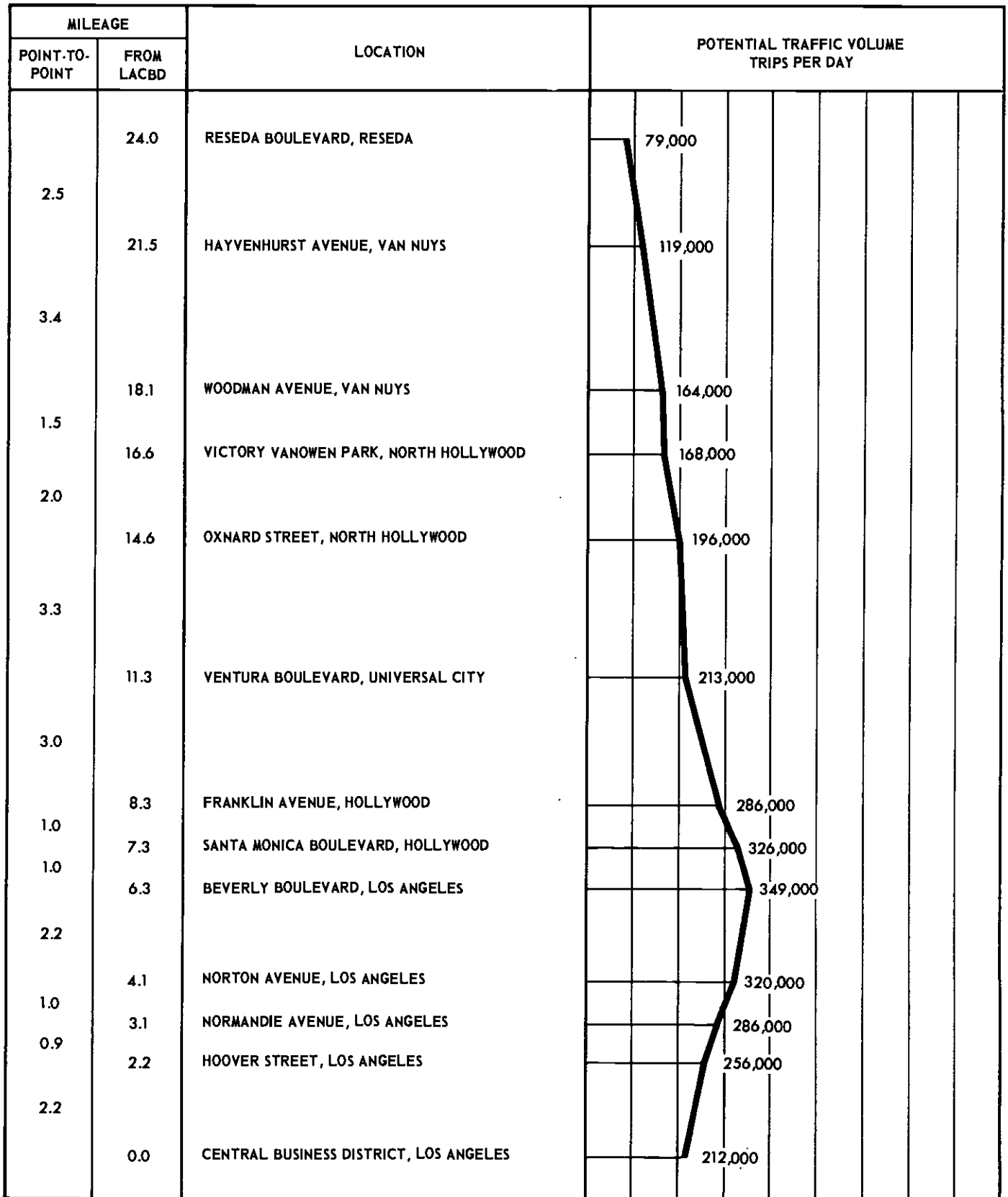


- LEGEND**
- - - - - CORRIDOR BOUNDARIES
 - — — — — FREEWAYS EXISTING
 - - - - - FREEWAYS UNDER CONSTRUCTION
 - o o o o o FREEWAYS BUDGETED
 - o o o o o FREEWAYS ADOPTED
 - — — — — ARTERIAL STREETS
 - + + + + + RAILROADS
 - - - - - TRANSIT LINES (MTA)

COVERDALE & COLPITTS

RESEDA CORRIDOR VIA CAHUENGA AND WILSHIRE

ESTIMATED VOLUME OF 1958 WEEKDAY POTENTIAL TRAFFIC



RESEDA CORRIDOR VIA CAHUENGA AND SUNSET

This corridor, which is approximately 23 miles long, is a variation of the Reseda Corridor via Cahuenga and Wilshire previously described. It follows the same route as that corridor, except that upon reaching Hollywood it turns southeasterly and follows the general line of the Hollywood Freeway through the districts of Hollywood and Silver Lake, into the northwesterly corner of the Los Angeles Central Business District.

This corridor connects the Central Business District of Hollywood and downtown Los Angeles. The principal traffic artery in this area is the Hollywood Freeway, with significant amounts of traffic also being carried by Hollywood, Beverly and Sunset Boulevards.

The estimated 1959 population of the area penetrated by this corridor is 533,000.

The corridor is served by eleven MTA lines.

MAP OF RESEDA CORRIDOR

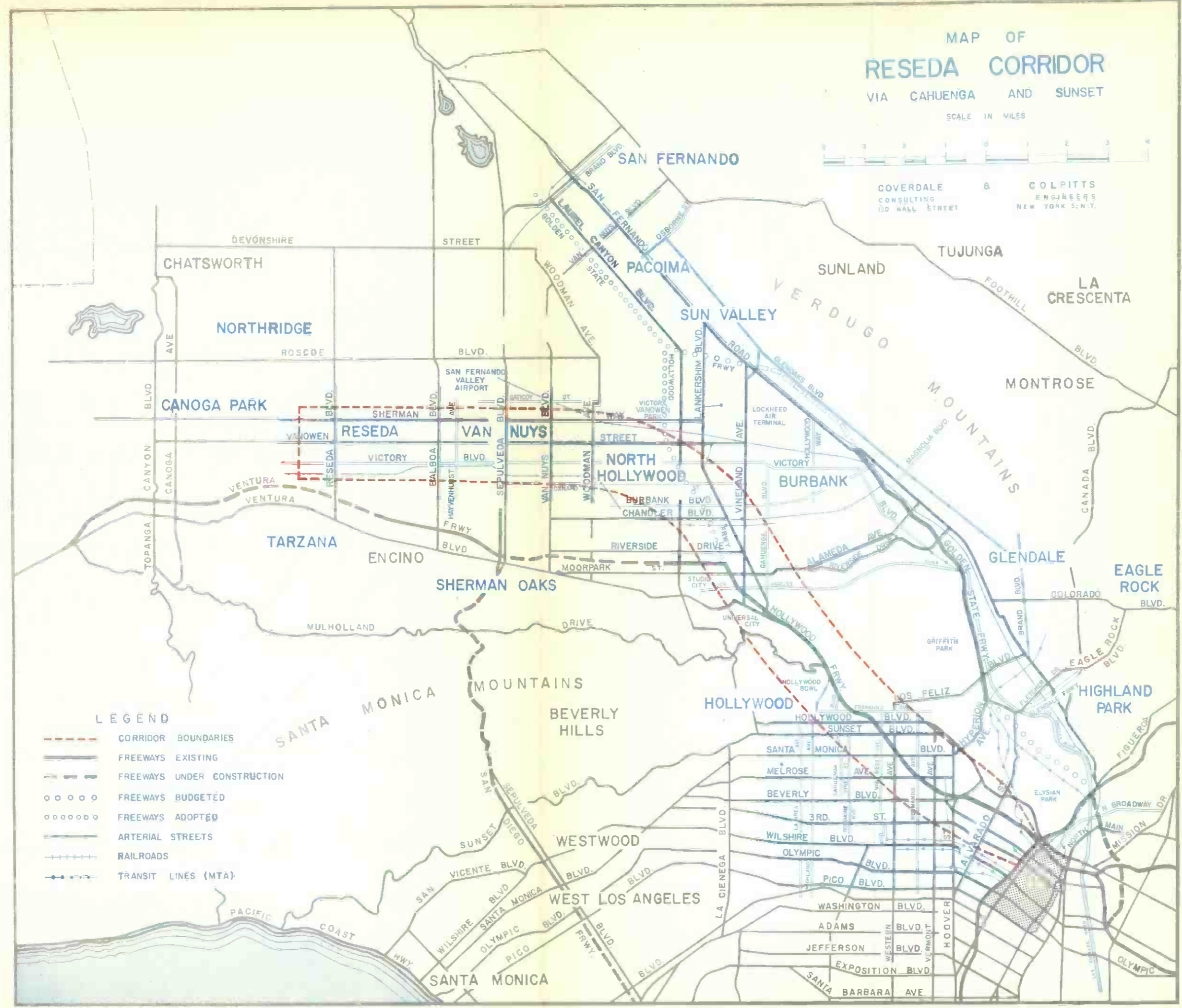
VIA CAHUENGA AND SUNSET

SCALE IN MILES



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GOLPITTS ENGINEERS
NEW YORK 5, N.Y.



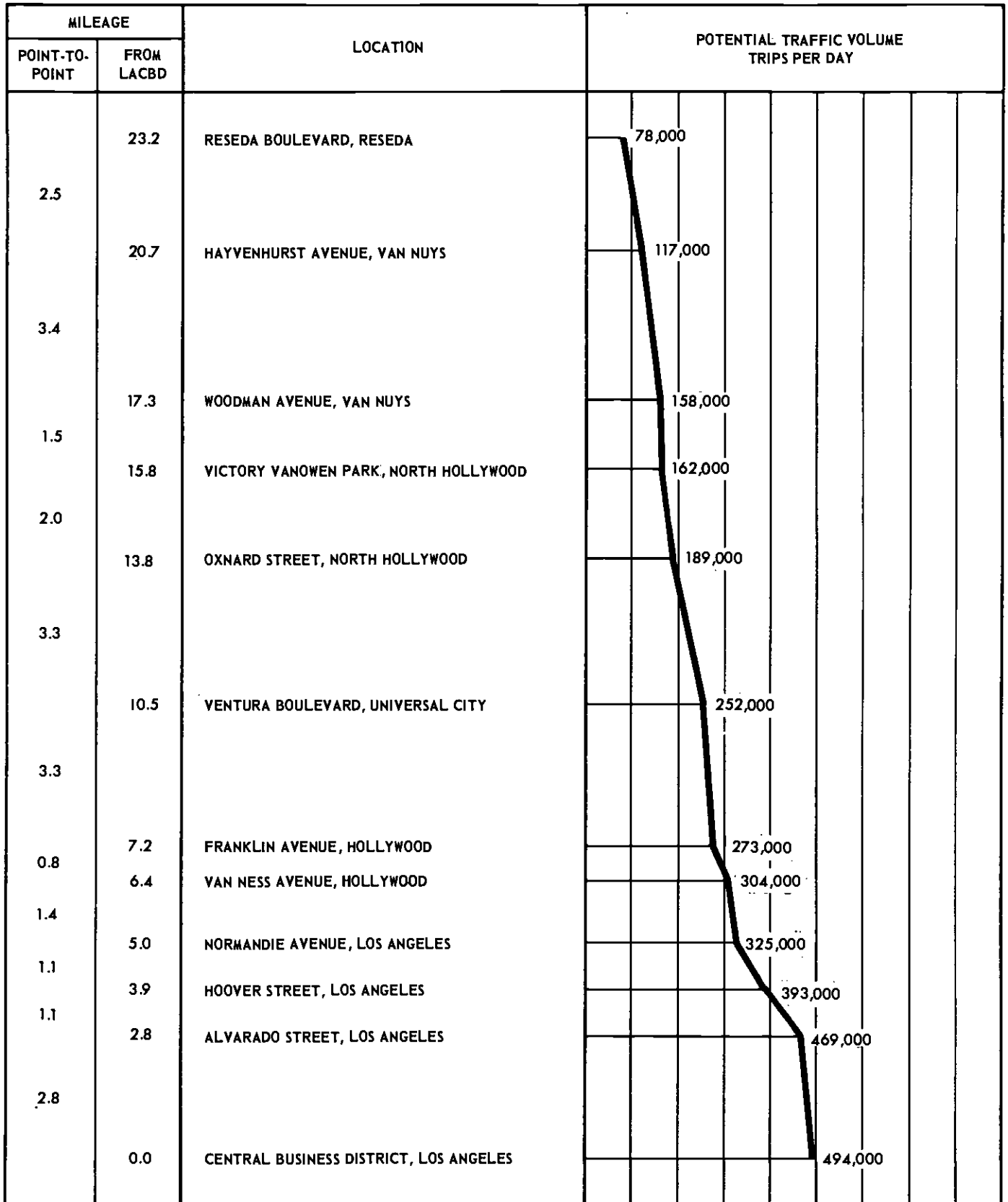
LEGEND

- - - - - CORRIDOR BOUNDARIES
- — — — — FREEWAYS EXISTING
- - - - - FREEWAYS UNDER CONSTRUCTION
- o o o o o FREEWAYS BUDGETED
- o o o o o FREEWAYS ADOPTED
- — — — — ARTERIAL STREETS
- + + + + + RAILROADS
- - - - - TRANSIT LINES (MTA)

COVERDALE & COLPITTS

RESEDA CORRIDOR VIA CAHUENGA AND SUNSET

ESTIMATED VOLUME OF 1958 WEEKDAY POTENTIAL TRAFFIC



SAN FERNANDO CORRIDOR VIA CAHUENGA AND SUNSET

The northwesterly end of this corridor lies in the vicinity of the intersection of Brand Boulevard and San Fernando Road in the City of San Fernando. The corridor is approximately 22 miles long. From its northwesterly end it proceeds southeasterly through the districts of Los Angeles known as Pacoima and Sun Valley, to the vicinity of the intersection of San Fernando Road and Lankershim Boulevard, at which point it turns in a southerly direction. In the vicinity of Vanowen Street it intersects the Reseda Corridor via Cahuenga and Sunset, and follows the line of that corridor to the Los Angeles Central Business District. In addition to the communities referred to above, by means of bus feeder routes a rapid transit system in this corridor could also serve the districts of Sepulveda and Van Nuys.

This corridor passes near the Lockheed Air Terminal in Burbank, a major terminus of commercial airline travel with approximately 150 flights per day, and which could be served by a bus connection.

Present traffic movements along the northerly end of this corridor are served by San Fernando Road, Laurel Canyon Boulevard, and Glen Oaks Boulevard. South of the district of Sun Valley approximately six major highways, from Laurel Canyon Boulevard on the west to Cahuenga Boulevard on the east, funnel the present traffic into Cahuenga Pass, which is traversed by the Hollywood Freeway and Cahuenga Boulevard. Between Cahuenga Pass and the Los Angeles Central Business District the principal artery is the Hollywood Freeway, with large amounts of traffic also being carried by Hollywood, Beverly, and Sunset Boulevards.

The estimated 1959 population of the area penetrated by this corridor is 532,000.

The corridor is served by twelve MTA lines.

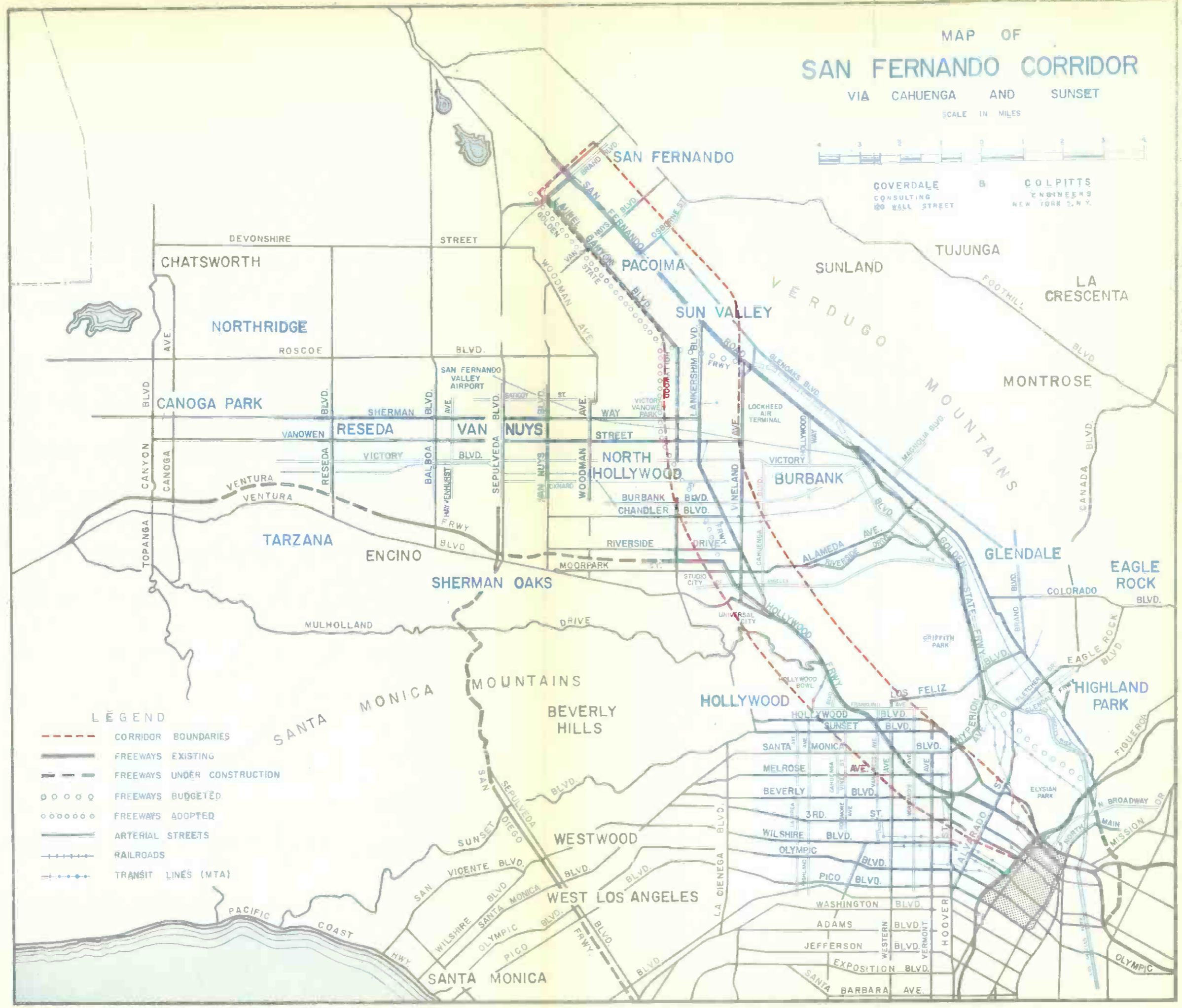
MAP OF
SAN FERNANDO CORRIDOR
 VIA CAHUENGA AND SUNSET

SCALE IN MILES



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 120 WALL STREET

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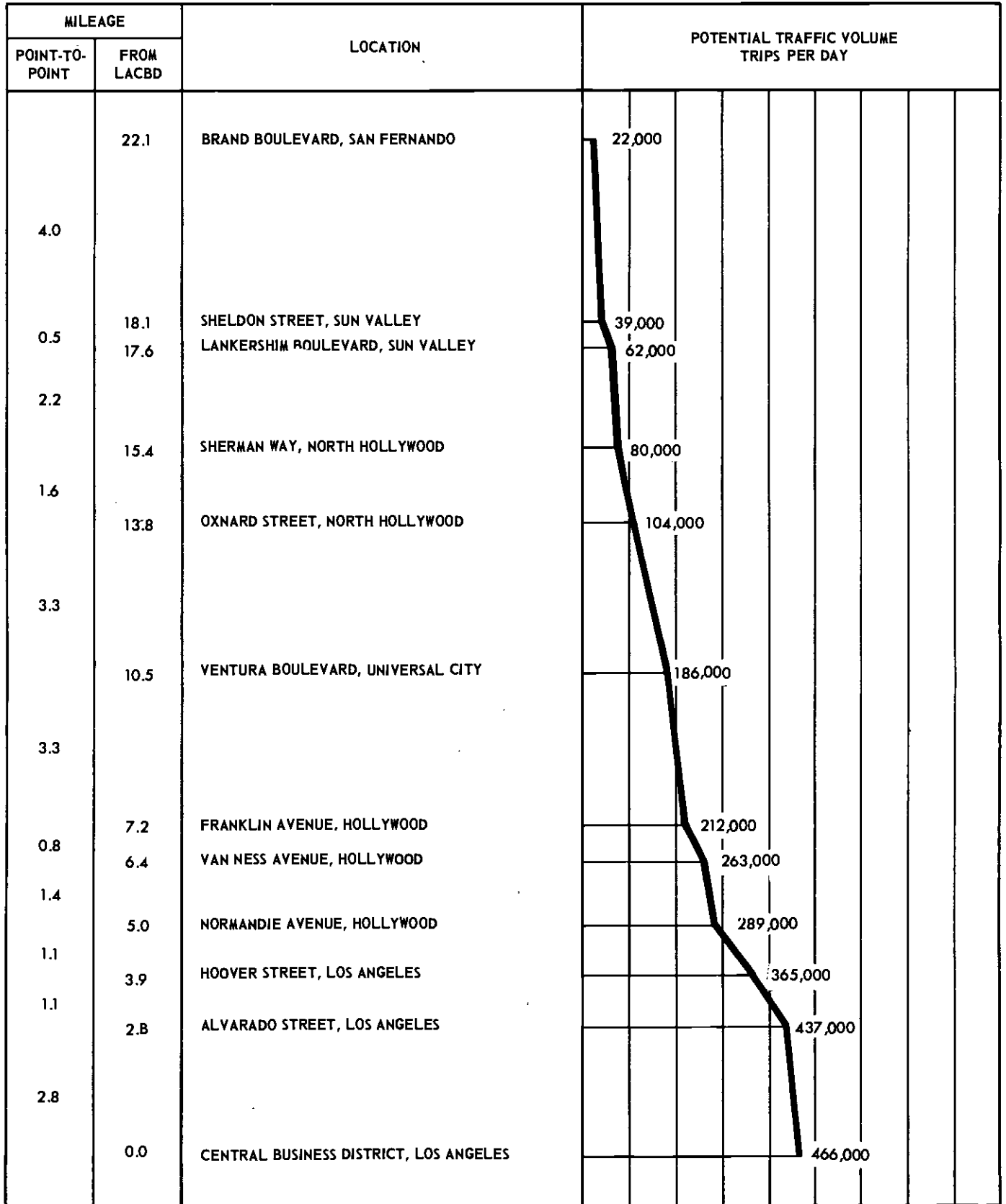


- LEGEND**
- CORRIDOR BOUNDARIES
 - FREEWAYS EXISTING
 - FREEWAYS UNDER CONSTRUCTION
 - o o o o FREEWAYS BUDGETED
 - o o o o o FREEWAYS ADOPTED
 - ARTERIAL STREETS
 - + RAILROADS
 - + TRANSIT LINES (MTA)

COVERDALE & COLPITTS

SAN FERNANDO CORRIDOR VIA CAHUENGA AND SUNSET

ESTIMATED VOLUME OF 1958 WEEKDAY POTENTIAL TRAFFIC



SAN FERNANDO CORRIDOR VIA GLENDALE

This corridor which is approximately 22 miles long, has its northwesterly terminus at the same point as the San Fernando Corridor via Cahuenga and Sunset previously described, namely, in the vicinity of the intersection of Brand Boulevard and San Fernando Road. From that point, it follows a generally southeasterly direction along the line of San Fernando Road. It passes through the districts of Pacoima and Sun Valley, the cities of Burbank and Glendale, and the districts of Los Angeles known as Classell, Mt. Washington, and Elysian Park. In addition to these communities, a rapid transit system in this corridor could also serve by means of bus feeder routes the districts of Sepulveda, Eagle Rock, and Highland Park. The corridor includes the Central Business Districts of Burbank and Glendale. This corridor also includes the extensive industrial development which parallels the Southern Pacific right of way and San Fernando Road for approximately 12 miles.

Present traffic movements along the section of the corridor between San Fernando and Burbank travel for the most part via San Fernando Road, Glen Oaks Boulevard, and Laurel Canyon Boulevard. Southeast of Burbank the principal artery is the completed portion of the Golden State Freeway. In addition, a considerable volume of traffic uses San Fernando Road, which connects with the Pasadena Freeway and North Broadway, Los Angeles.

Ultimately, the Golden State Freeway will be completed throughout the entire length of the corridor, between the Pasadena Freeway and points to the northwest of San Fernando.

The estimated 1959 population of the area penetrated by the corridor is 573,000.

The corridor is served by four MTA lines. Portions of it are served also by Glendale City Lines.

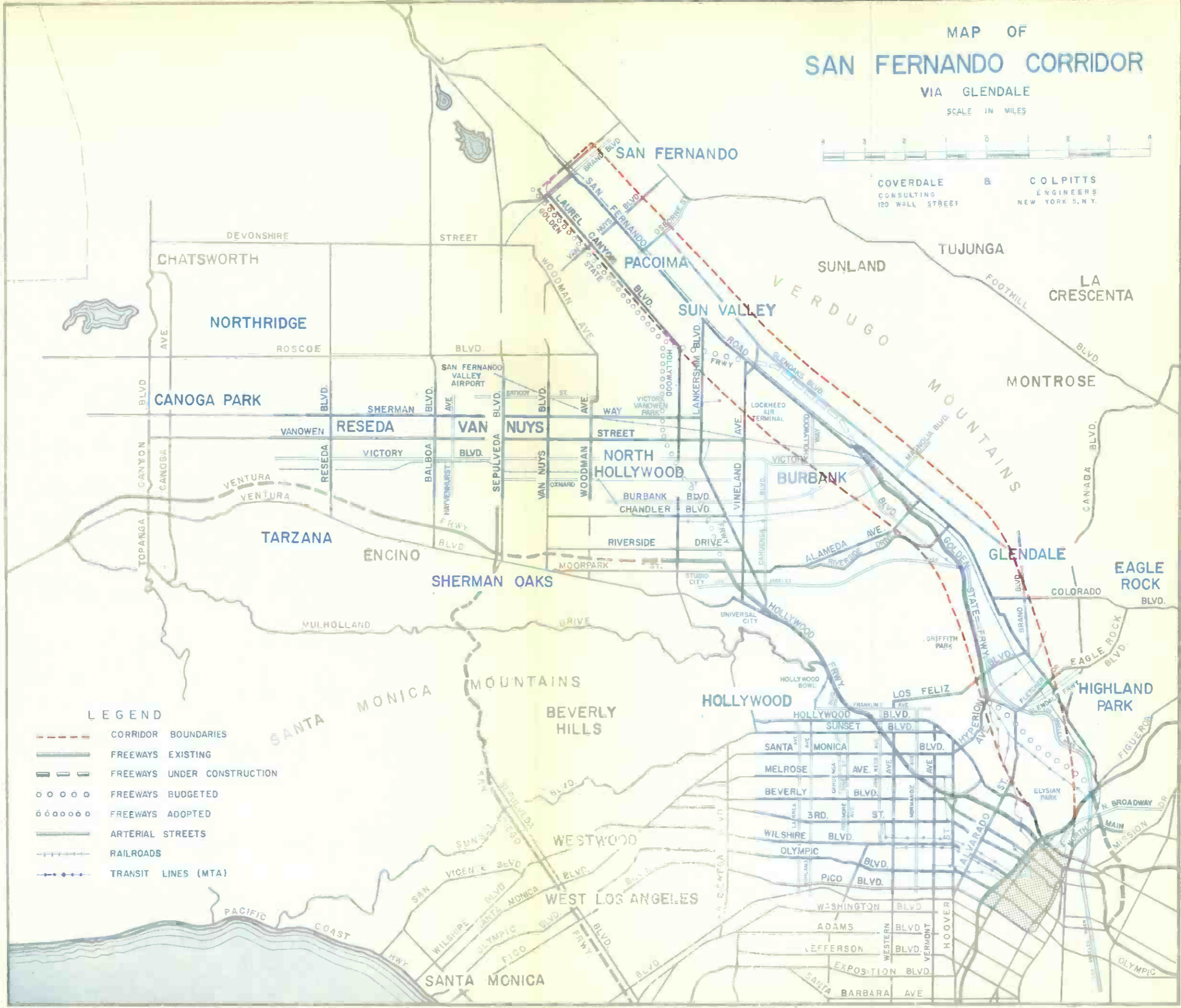
MAP OF SAN FERNANDO CORRIDOR

VIA GLENDALE

SCALE IN MILES



COVERDALE & COLPITTS
CONSULTING ENGINEERS
120 WALL STREET NEW YORK 5, N.Y.



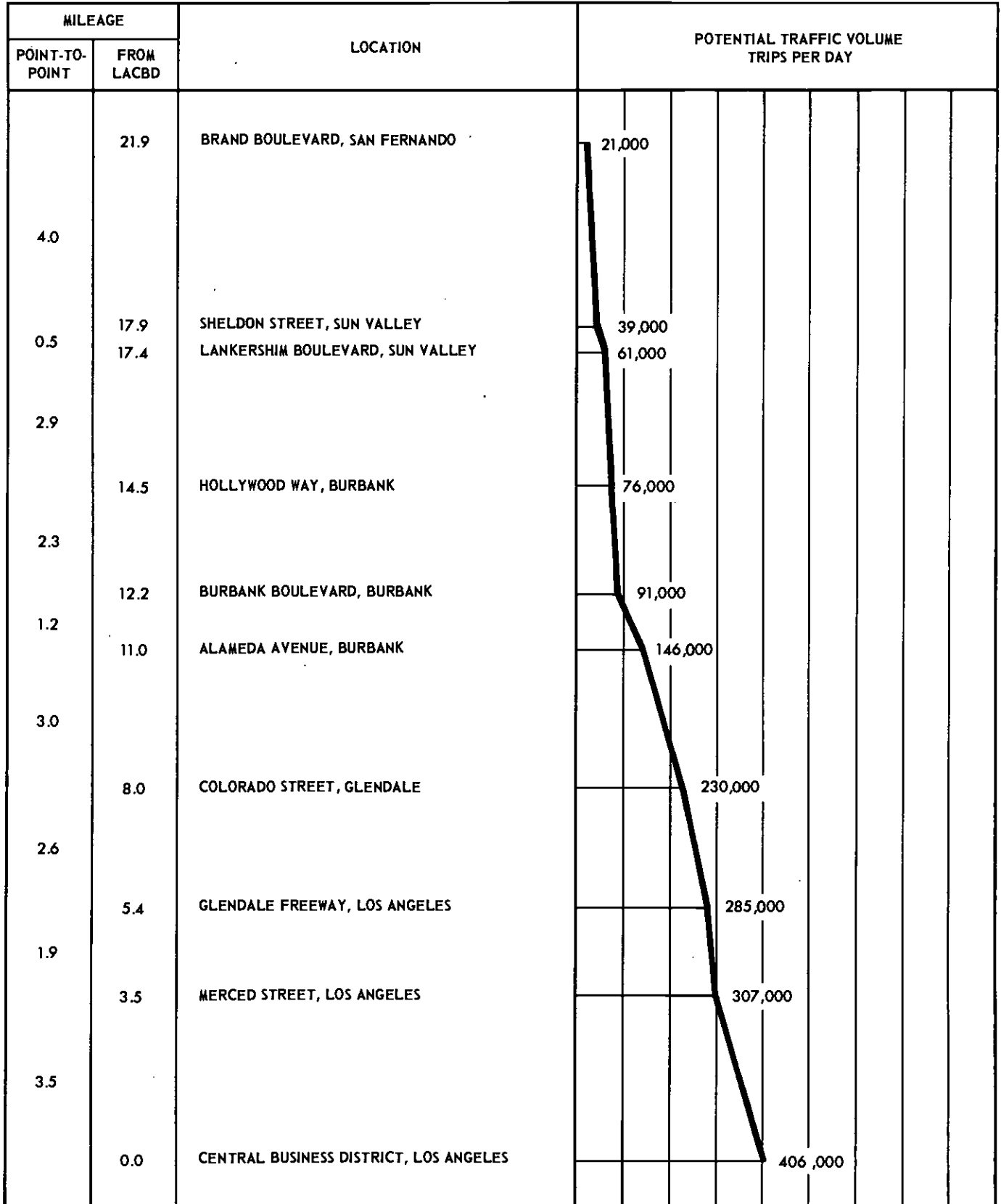
LEGEND

- CORRIDOR BOUNDARIES
- FREEWAYS EXISTING
- FREEWAYS UNDER CONSTRUCTION
- o o o o o FREEWAYS BUDGETED
- o o o o o FREEWAYS ADOPTED
- ARTERIAL STREETS
- RAILROADS
- TRANSIT LINES (MTA)

COVERDALE & COLPITTS

SAN FERNANDO CORRIDOR VIA GLENDALE

ESTIMATED VOLUME OF 1958 WEEKDAY POTENTIAL TRAFFIC



CORRIDORS RECOMMENDED FOR FURTHER INTENSIVE STUDY

Standards of Comparison

The network of corridors and the estimates of potential traffic volume therein provide information as to the location and magnitude of the heaviest transportation needs, or demand, in the study area. To establish relative priority among the corridors or sections thereof with respect to location therein of rapid transit facilities requires the adoption of certain standards of comparison.

The standards of comparison which we have applied to the corridors are described as follows:

A. Potential Traffic per Mile of Corridor.

This figure is derived from an analysis of inter-zonal movements moving through each corridor, to arrive at a total of potential traffic which is then related to the length of the corridor. The relationship of this figure to the estimated number of passengers per mile who might actually use the rapid transit facility may vary somewhat between corridors, depending upon several other factors, but for an initial approximation and comparison of corridors it is reasonable to disregard the variations.

B. Profile of Potential Traffic.

The profile data indicate the volume of potential traffic passing through the corridor at specified points, and are illustrated by the profile diagrams included in this Report. We have considered, in addition to the profile volumes themselves, the ratio of the peak profile volume to the total potential traffic in the corridor, and the point at which the median profile volume occurs.

As mentioned previously, potential traffic volume in each corridor was estimated on the basis of inclusion of movements between zones in that corridor and zones in other corridors, predicated upon a rapid transit system serving all of the corridors under study. We have given appropriate consideration to the pattern of this through traffic, in arriving at our recommendations as to those corridors which offer the most promising routes for rapid transit lines.

C. Trip Length.

The extent to which potential traffic volume will produce actual rapid transit patronage is dependent to a large measure upon the length of the trips comprising the potential volume. Accordingly, we have given due consideration to trip length data in each corridor. Movements less than one mile in length have not been regarded as potential rapid transit trips.

D. Growth.

This refers to the probable growth within each corridor, both of population and of other activities influencing transportation volume.

E. Land Use.

This item is, of course, associated with the subject of growth and development, and applies to existing and probable future land use within each corridor which will affect the generation of traffic.

F. Availability of Existing or Abandoned Rights of Way.

The extent to which existing or abandoned rights of way of various types might be adaptable for use as rapid transit rights of way was considered. The availability of suitable property for use for yards and shops was similarly considered.

G. Present Facilities Available for Travel via Automobile and Projected Increases in Highway Capacity.

The relationship of competitive facilities to rapid transit potential volume is a very important criterion, particularly as to need for rapid transit.

The table on the following page sets forth certain data for each of the corridors, including potential traffic volume, potential volume per mile of corridor length, and the estimated time savings afforded by travel by rapid transit versus travel by private automobile by existing routes and by use of anticipated new freeways between the ends of the corridors and the Los Angeles Central Business District, during peak-hour periods. We have given careful consideration to these data as well as all other available data by which to compare the corridor. We consider that the following corridors present at this time the most promising routes for rapid transit lines: the San Bernardino Corridor, the Long Beach Corridor, the Wilshire Corridor, and the Reseda via Cahuenga and Wilshire Corridor.

COMPARATIVE CORRIDOR DATA

Name of Corridor	Length of Corridor	Potential Traffic Volume	Potential Volume Per Mile of Corridor	Estimated Peak-Hour Time Savings From LACBD to End of Corridor Rapid Transit vs. Automobile	
				Existing Rtes.	Future Rtes.
	Miles	Trips/Day		Minutes	Minutes (B)
Pasadena	18.7	458,000	24,500	17	17
San Gabriel	16.1	382,000	23,700	24	24
San Bernardino	20.8	722,000	34,700	19	19
Santa Ana	14.4	832,000	57,800	15	15
Long Beach	20.3	764,000	37,600	8	8
Inglewood	13.6	635,000	46,700	8	8
Pico	14.7	888,000	60,400	19	2
Wilshire	16.0	1,197,000	74,800	17	2 (C)
Reseda via Cahuenga and Wilshire	24.0	591,000	30,600 (A)	29	13
Reseda via Cahuenga and Sunset	23.2	854,000	36,800	34	18
San Fernando via Cahuenga and Sunset	22.1	730,000	33,000	34	17
San Fernando via Glendale	21.9	562,000	25,700	34	17

Notes:

- (A) Based on 19.3 miles from Wilshire and Rossmore to Reseda.
- (B) Based on Completion of Certain Freeways now under construction and planned.
- (C) By its Location, the Santa Monica Freeway will not Provide an Alternative Route to the Areas of the Wilshire Corridor where the Highest Volume of Trips is Generated.

SUMMARY AND RECOMMENDATIONS

San Bernardino Corridor

This corridor currently has a relatively heavy volume of potential travel throughout its length. The profile diagram for the corridor shows that for over five miles from its inner end the potential volume exceeds 250,000 persons. Moreover, the corridor penetrates an area which is undergoing a very rapid rate of growth. The travel time advantage which could be achieved by the use of rapid transit in this corridor is very significant. While the corridor is served throughout its length by freeway, the congestion during peak hours in the westerly ten-mile section of the freeway demonstrates the advantages which rapid transit could provide. Additionally, there is a possibility of acquisition of right of way at relatively low cost, compared with other corridors, through usage of the median strip of the San Bernardino Freeway.

Long Beach Corridor

Potential volume through this corridor is relatively high. Its profile diagram shows a potential traffic volume of over 250,000 for a distance of over seven miles from the inner end of the corridor. Further, we believe it essential to give consideration to this corridor since it already contains an MTA rail service which deserves further study as to possibilities for adaptation to modern rapid transit.

Wilshire Corridor

This corridor offers the heaviest total potential traffic volume and the heaviest potential volume per mile of corridor, of all those studied. The density of movements along this corridor is indicated by the profile diagram which shows potential traffic volume of over 250,000 persons from

west of La Brea Avenue to Normandie Avenue, and over 500,000 persons from that point to the Los Angeles Central Business District. This renders the Wilshire Corridor an outstanding selection for further engineering study as a rapid transit route. It is reasonable to expect that this density of traffic will consistently increase and that unless rapid transit is provided, the surface street congestion will eventually preclude expeditious travel between the center of activity lying in this corridor. The time advantage which could already accrue from use of rapid transit will gradually increase.

Reseda Corridor via Cahuenga and Wilshire

A rapid transit line following this corridor would provide a link between the rapidly growing San Fernando Valley and that part of Los Angeles lying south of the Santa Monica Mountains, which appears vital to continued growth of the Valley as an integral part of the city. This corridor takes advantage of the Wilshire Corridor to provide:

- (a) A line between the San Fernando Valley and Hollywood, and downtown Los Angeles, with less route mileage overall and consequently lower capital costs than would result from a line running directly between Hollywood and downtown Los Angeles.
- (b) A direct line between the San Fernando Valley and Hollywood and the areas along Wilshire Boulevard from La Brea Avenue eastward.
- (c) A fast route between the eastern San Fernando Valley and Hollywood, which have a community of interest as demonstrated by our origin and destination studies.

The profile diagram for this corridor indicates a potential traffic density of over 250,000 as far north as Cahuenga Pass. The travel time savings which a rapid transit line would afford in this corridor are highly significant.

* * * *

As stated under the caption "Recommendations" in the letter of transmittal of this Report, the above four corridors are those which we recommend for further intensive engineering study.