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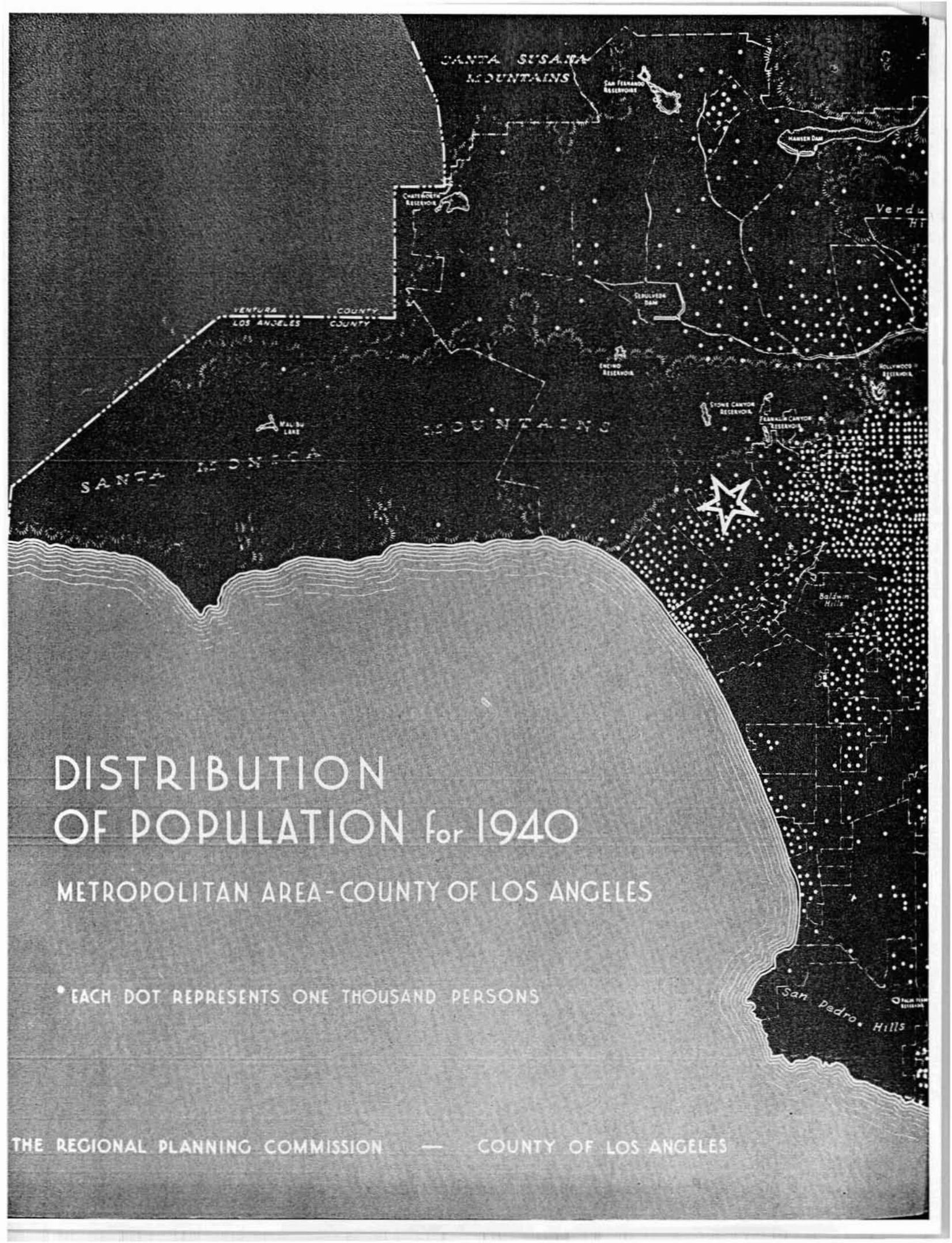
*Business districts, Central
- Population movement
15-10*

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Business Districts

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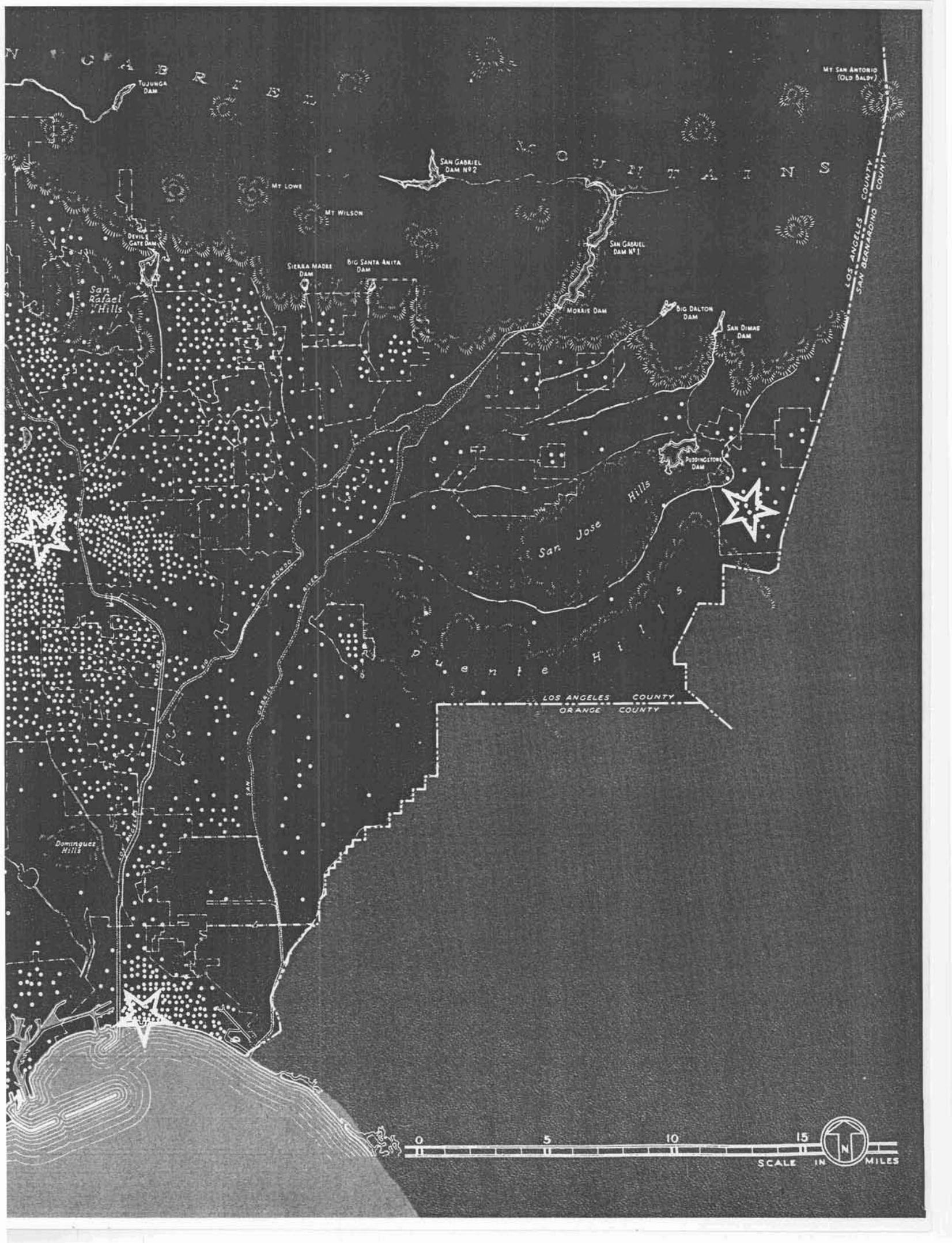
BUILDING USE ONLY



DISTRIBUTION OF POPULATION for 1940

METROPOLITAN AREA-COUNTY OF LOS ANGELES

• EACH DOT REPRESENTS ONE THOUSAND PERSONS



TOJUNGA DAM

MT SAN ANTONIO (OLD BALBY)

SAN GABRIEL DAM NO 2

MT LOWE

MT WILSON

SAN GABRIEL DAM NO 1

DEVIL'S GATE DAM

SIERRA MADRE DAM

BIG SANTA ANITA DAM

MORRIE DAM

BIG DALTON DAM

SAN DIMAS DAM

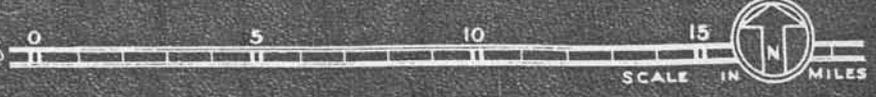
San Rafael Hills

San Jose Hills

Buente Hills

LOS ANGELES COUNTY
ORANGE COUNTY

Dominquez Hill



COUNTY OF LOS ANGELES

BOARD OF SUPERVISORS

ROGER JESSUP, CHAIRMAN
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SPENCE D. TURNER, FORESTER AND FIRE WARDEN

CHIEF ENGINEER

WILLIAM J. FOX, COLONEL, UNITED STATES MARINE CORPS
Absent on military leave since October 1, 1940

ACTING CHIEF ENGINEER

ARTHUR H. ADAMS

WHOSE BUSINESS?

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You who read this book—business men, property owners, taxpayers, shoppers—have all been greatly concerned during the past few years with the changing character of central and outlying business districts. Some of you have merely regarded this change as an interesting phenomenon; others of you have seen it as a dilemma approaching the magnitude of a disaster. To all of you, however, whether you realize it or not, it is a problem, to be solved not by any one group alone, but only by concerted action from all quarters. For when business districts are allowed to deteriorate and to be replaced by new districts, which in turn become obsolete, the economic health of the community as a whole is bound to suffer.

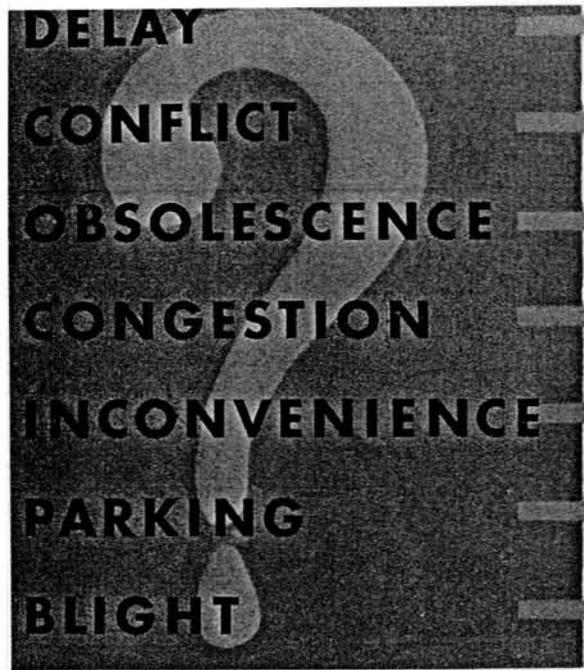
Why do business districts grow up, apparently in response to real need, and then wither and die even in the face of rising population within the trading area? Is this an inevitable development, or can these ills be cured?

The Regional Planning Commission sought to find some of the answers to these and other questions when it undertook the Transportation-Planning Survey in 1940-41 with the assistance of the Work Projects Administration. The movement of people by various modes of transportation was measured throughout the Metropolitan Area generally, and in greater detail in four selected business districts. Some of the more important findings regarding the latter are here presented for your convenience. Detailed tabulations, analyses, maps and charts are available in our office to those of you who are concerned with more specific problems or locations.

You must constantly keep in mind the fact that the material contained in this book was collected in the period **immediately preceding the war**; thus, while many of the facts quoted are not now applicable, they do **provide a sounder basis for planning and for organization of resources in the postwar period than would similar data collected while war-time restrictions on travel are in effect.**

Public and private forces alike agree that postwar planning must be done now. Here are some of the facts necessary for us, representing public agencies, to make our share of the plans. Here also, Mr. Business-Man, are some of the facts that you need to make YOUR POSTWAR PLANS.

A. H. Adams



The Problem

In the Los Angeles Metropolitan Area you have seen many business districts including the Los Angeles Central Business District grow and then become static or decline, not necessarily in line with general economic conditions. You have only to drive along some of the "business streets" to see the weather-beaten, deserted shells of what were once the fond hopes of property owners for a productive business section.

This condition is vitally important to every resident of the area whether or not he owns business property. It is, of course, extremely important to you business-men and business property owners, since **your investments** are affected. It is important, though not as directly, to everyone of you citizens, for you are all customers of these business enterprises, and **you pay all the bills in the end.**

Every taxpayer, large or small, has paid for the losses in business property value since a large portion of the tax base of the community consists of such properties. When a central district loses volume of sales and decentralizes in an effort to recapture lost patronage, the decline in values is not offset by rising values in outlying areas.

For example, when the assessed valuation in the Los Angeles Central Business District declined by \$25,000,000 from 1934 to 1939, taxes that would have been collected on this amount had to be spread over the remainder of the county. But since the assessed valuation in outlying business districts did not increase by this amount other classes of property had to help carry the burden. The final result was a higher tax-rate on everybody's property than would have sufficed if this downtown loss had not occurred. It is therefore clear that all of you, customers and taxpayers throughout the county, will benefit by preventing further losses in business districts.

One of the strongest factors in maintaining the city and its subsequent growth is local transportation. The past quarter century has witnessed a decline in the use of mass transportation, as the automobile came into more common use. This change in riding habits has been most pronounced in areas such as Los Angeles and Detroit where the rapid growth of population occurred **after** automobile prices came within reach of the average family. The availability of individual transportation caused urban growth to spread outward rather than upward.

In 1938 when this office made a land use survey of the Metropolitan Area, it was found that 71% of the population lived in single family or duplex residences. This type of residential development resulting from automobile use has had a profound influence on the com-

merical and industrial development of the area. The automobile origin portion of this study (p. 16) shows that **distance** to a business center **is not a main factor in shopping**. In 1942, a special survey of 222,000 industrial workers revealed that only 8% used public or mass transportation in going to and from their work.

With a motor vehicle registration of approximately 1 1/3 million and total vehicle mileage in excess of 10 billion miles in 1941, it is not surprising that traffic congestion occurs in many places throughout the county. Streets within the business district are just as crowded as the approach highways and prevent efficient circulation of vehicles and shoppers after their arrival. Finally, the inadequacy of parking space either on the streets or in off-street parking areas, results in additional delay and crowding.

But congestion is not the only factor contributing to the blight of business districts. Incompatible business enterprises are found close to each other, their operations, deliveries and processes conflicting with each other's trade. The retail merchant's customers avoid his doors and show-windows if the sidewalks next door are cluttered by deliveries. Obsolete, dingy and ill-maintained buildings, with stores catering to trade in cheap, inferior merchandise, further discourage the patron of the better stores.

Analysis of the data brought together in this survey leads to the conclusion that a successful business district prospers because it continually meets the standard of the five elements discussed in detail in the next few pages. The aims then, in improving or saving a business center must be: (1) to make it easily accessible from all parts of its legitimate trade area; (2) to maintain free circulation within the area for vehicles and shoppers; (3) to provide sufficient and convenient terminals for private or mass transportation vehicles; (4) to create and sustain an attractive appearance which is in part the result of orderly, consistent arrangement of uses; and (5) to develop the most truly effective merchandising practices.

Public authorities can take some of the steps indicated in reaching these objectives, but it is up to you—merchants and property owners in the business districts—to take the initiative, to provide the spark that will set governmental machinery in motion.



"There are four main elements of the **traffic problem** in the central areas of the city. Each of these requires a different type of solution, which cannot, however, be effective unless it is properly coordinated with a plan for the others. These elements are: (1) Vehicles moving to, from, or through the area; (2) Vehicles loading and unloading within the area; (3) Parking and storage of vehicles; (4) Facilities for pedestrian movement." *Traffic and Parking Study*, Regional Plan Association, Inc., New York, December, 1942.

- ACCESSIBILITY
- CIRCULATION
- TERMINALS
- APPEARANCE
- MERCHANDISING

● Accessibility

All business areas, of course, have streets or highways leading to them, but this alone does not mean that they are "easily accessible." When heavy traffic is borne by narrow streets, frequently intersected by cross streets also carrying a heavy traffic load, travel to a business area becomes so difficult that many people change their shopping destination. Then the area which can be reached more easily (by private automobile) benefits. **Travel convenience and ease** are more potent factors than travel distance or time.

Passenger transportation systems here have made only minor extensions in rail service since 1920; in fact, rail abandonments have greatly exceeded additions. In some cases motor coach service has been substituted, but in many instances no substitute service has been offered. Extensions of service to new areas have been by bus. These changes have been caused by the decrease in demand for transit facilities as use of the private automobile increased.

In many of our smaller business areas, there was not sufficient demand, just before the war, to make public transportation, either rail or bus, self-supporting. There were only eight areas (Central Los Angeles, Hollywood, Wilshire, Santa Monica, Burbank, Glendale, Pasadena and Long Beach) where public transportation facilities covered the supporting residential area. Even in these instances, the facilities did not **serve** the demand to the extent that the business districts might be properly termed accessible. In all other sections of the region local transit was available in only a few directions from the business district.

With the widespread use of the private automobile as a means of transportation, the low population density and the lack of correlation between residence location and employment or shopping destination, it is doubtful if public transportation lines can be operated economically or efficiently over the entire urban area.

Transportation facilities in this region will perhaps settle into a combination of private automobile and public carrier, with bus lines predominating over railways. Under this system the problem of accessibility will be largely that of providing for the movement of automobiles and buses. The highway and freeway system must be so integrated that business, industrial and residential areas will be readily accessible.

This program does not imply that our existing highway system is to be discarded in favor of an entirely new system of freeways. The freeway system is designed to serve those vehicles whose origin and destination are so located that a definite saving in time or distance can be made by using freeways for a portion of the trip. Surface highways, being relieved of this through traffic, will then be available to merchant, employee and shopper for easier movement into and within the business district.

● Circulation

While most people going to a business district arrive as passengers, they change their roles and become pedestrians for the majority of their movements within the area. The resulting conflict between vehicular and pedestrian traffic is one of the major vexations in business districts.

Most of our older business districts were located on the assumption that passing traffic produced business. But this survey indicates that from **35% to 50%** of the vehicles entering the district under study **are actually destined for some point beyond the area** and go through it solely because it lies in their line of direct movement between origin and destination. When such traffic is by-passed, as is now being done in some cases, the internal streets are relieved, and provide better circulation. A business district does not need to be **crossed** by through traffic streets in order to be successful. In fact, heavy through traffic is apt to cause depreciation rather than increase in business volume and property values. The ideal business district would be so located that it is **accessible from**, but not quite **on** major traffic ways, which then serve to by-pass the through traffic with little interruption.

Improvement of circulation within a business district is therefore seen to consist of two principal elements: elimination of traffic not essential to the area, and careful provision for movement of pedestrians and such traffic as is essential.

Wider streets are not the sole answer, since the pedestrian hazard is increased on a wide street. A central planted strip serves to reduce this hazard, but can not easily be developed in old districts. It is possible that in some extremely congested areas pedestrians should move on an elevated sidewalk. This device would unquestionably be safer for the pedestrian, but the cost and building problems limit its use.

Rail or bus lines commonly operate over one or more of the main business streets, bringing passengers closer to their destination, but increasing congestion. As long as pedestrians, motorists and mass transportation units attempt to use the same space, serious difficulty will remain. It may prove feasible to restrict use of certain streets to mass transportation, and allow motorists to use intervening streets. The one-way street and the adjustable center line system will assist in relieving congestion.

These extreme remedies may not be necessary if provision is made for diverting through traffic. It should be emphasized, however, that our objectives will not be fully reached unless we prevent the development of new business along the new, by-pass routes.

Careful application of these suggestions to the individual business district will make it easier for employees and shoppers to **circulate** within the area, whether as motorists, public carrier riders or pedestrians.

● Terminals

Business districts in the early part of the century depended almost entirely on mass transportation and pedestrian patronage, with a very small proportion of "carriage trade" which parked at the curb. Under these conditions the entire space of each block could be devoted to buildings, leaving only enough alley space for loading and unloading. The streets were used almost exclusively for the movement of pedestrians, street-cars and hacks.

In the '20's, when the automobile transported only one of three customers, the curb space became overloaded and a few vacant properties were developed as parking space. Soon the automobile equaled the transit system in number of people brought into the district; and by the '30's two people came in by automobile to one by public carrier. Parking lots multiplied rapidly, but the supply of parking space has always lagged behind the demand.

Where the use of the street for parking interferes with the movement of traffic, parking should undoubtedly be prohibited. In some cities existing legal restrictions have reduced the actual number of car spaces at the curb by as much as 50%. Diagonal parking is still sometimes used to increase the number of car stalls at the curb. It increases congestion and the accident hazard, however, and has no real part in a modern business district. But in any event, whether curb parking is permitted or not, additional off-street parking is always necessary.

The report *Interregional Highways** comments that "private initiative has contributed a measure of relief by the provision of off-street parking places. In their simplest and earliest forms these took the form of lots, usually created by razing obsolete and run-down buildings. Located by the chance availability of such property, these lots have not always been suitably placed to meet the parking need. They are also prepared usually at the least possible cost. Their accommodations for entrance, exit, and sorting are commonly inadequate, and so they often gain an evil reputation for fender smashing and other car damage. Often unsightly in the extreme and irresponsible in ownership, the manifold defects of many of these places make it impossible to consider them as more than temporary expedients useful until a better and more seemly solution of the parking problem can be provided."

Off-street parking facilities convenient to the center of the retail section of downtown Los Angeles are insufficient to meet the demand. Some of the more recently constructed office buildings have provided one or two basement levels for parking. Use of these facilities, which are usually inadequate, is generally restricted to tenants and their customers.

*House Document No. 379; U. S. Government Printing Office; Washington, 1944.

Some merchants have met the demand for customer parking by moving into outlying areas where lower site costs permit the acquisition of sufficient parking space. Even under these developments the space provided is frequently inadequate.

While the parking requirements of particular stores or office buildings will vary, there seems to be an irreducible minimum requirement of parking space equal in area to the retail floor or business area. In certain specialized types of stores, it will be necessary to increase this figure. One food market operator gets sites where parking space is at least one and one-half times the store area. A large branch department store has parking area equal to floor area. Studies of the shopping and parking habits in the four districts indicate that the one to one ratio of parking space to floor area should be held as a minimum in the Los Angeles Metropolitan Area.

In order that parking lots and garages can fully serve their purpose, all such facilities in a business area should be under a single control. Legal means for putting this idea into practice now exist in California. Unified control does not imply a single operator since a parking authority may lease to one or more operators. Such unified control would have the advantage of:

1. Maintenance of uniform operation standards;
2. Universal validation;
3. Regulation of parking fees;
4. Control of employee parking;
5. Proper placement of facilities; and
6. Assurance of continued existence.

The existing individually operated parking lots often result in customer complaints regarding overcrowding, abuse of cars, discourtesy, distance from the stores, varying validations and uncertain fees. In the larger business districts many of the convenient, close-in facilities are occupied early in the day by employees of the businesses and are thus not available for customers. Where the business man controls the use of his parking facilities such difficulties can be eliminated or controlled.

Terminals must also be provided for mass transportation units. Some of the rail facilities now used pass **through** the district. There is no clearly apparent reason why many bus lines that bring customers and employees into the shopping center should not likewise continue through, and thus eliminate the necessity for the terminal type of bus station and the large amount of parking space occupied by the large vehicles. Some lines, however, will probably always be terminated within the district, and any storage or loading space required for this purpose should be off the street and so designed as to cause a minimum of interference with normal street traffic. The business street should not be used even for short lay-overs between runs, as is now the practice in many cities.

● Appearance

Appearance depends upon more than a single pleasing building facade or a certain design for street lights. Architectural harmony, cleanliness and upkeep, the use of plant material, a certain amount of regularity in story height, and above all, design for permanence, in which the logical use of stepped back upper stories insures adequate light and air and eliminates the depressing, bare, rear and side walls that result from our shirt-front concept of business architecture: all these are factors which can be handled only by cooperation between building owners and the public.

Architectural design of buildings need not be standardized, nor limited to a single style, in order to achieve harmony, but it should be in keeping with the surroundings. A relic of the '90's looks sadly out of place in the midst of modern structures. Equally, a single, sleek, modern first story surrounded by grimy ornament of the jig-saw period only emphasizes the general shoddiness. Modernization of single store fronts has had some beneficial results, but, if adjoining properties are not rehabilitated, maximum benefit will not be realized.

More space could be devoted to planted areas such as center strips in wide streets. Parking lots can be simply landscaped to end their ugliness. The parking lot can be substituted for an existing eyesore, but it should not be allowed to become one. In a few instances buildings can be set back from the sidewalk sufficiently to allow for planting; in other cases roofs of lower sections can be developed as garden terraces with many useful functions and strong sales appeal. These green spots in a business district can serve as resting places for the shopper, combining social and business functions, and emphasizing good design in buildings.

● Merchandising

In spite of the variety of service now offered by merchants and professional men, many things can still be done to attract the potential customer into any particular business district. Most of these new practices will have to be developed by individual merchants studying their own particular clientele and needs; the public can contribute only indirectly. For example, unified control of parking space nearer the stores might make it practical to deliver packages to the parked car, a service already given at neighborhood markets.

The same elements needed for a successful business **district** are equally necessary for **each store**. Accessibility is essential to bring shoppers into the store; aisles, escalators and elevators provide circulation; terminal facilities are exemplified by loading and delivery platforms and in a sense by the areas before the counters where the sales take place; appearance and smart sales promotion methods here are of paramount importance; and all of these elements add up to determine the success of merchandising. If any one of them is missing or becomes inadequate the merchant gets busy and does something about it.

LET US DO SOMETHING THEN ABOUT OUR BUSINESS DISTRICTS

PUBLIC

PRIVATE

ACCESSIBILITY



Transportation facilities to the Business District must be made convenient, comfortable, economical, easy to travel and reasonably rapid. It is the responsibility of the public agencies to see that highways, freeways and mass transportation systems are so designed, developed and operated that these conditions will be met.

CIRCULATION



Movement of pedestrians and vehicles within the Business District must be confined to that traffic which has business in the area, and all through traffic must be routed around the district. This may be accomplished by so routing new highways, by zoning, and by so locating new business districts, off the main routes of travel yet accessible to them. Responsibility for this action lies mainly with the public agencies but demands the closest cooperation of private individuals generally in order to make public policies work.

TERMINALS



Terminals for private automobiles and mass transportation units must be so situated that the potential shopper will be able to reach his ultimate destination with a minimum of walking and a minimum of interference with other traffic. While public agencies will have to operate the legal machinery for developing facilities adequate for the district as a whole, it is still necessary for private individuals to take the initiative in the activation of such a program, and, as has been pointed out, private enterprise might well continue to operate the necessary facilities.

APPEARANCE



Public agencies can design and lay out the broad outlines of a business district which will present an inviting appearance but they cannot carry out the improvement. The full benefit of an overall plan will be achieved only if each property owner undertakes the development of his property in harmony with the design of the business community.

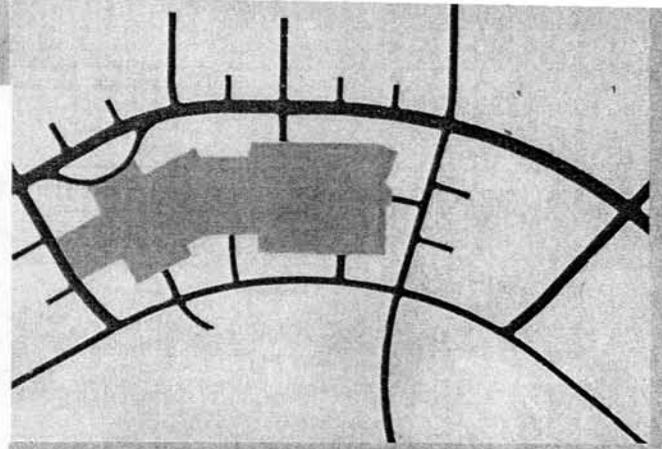
MERCHANDISING



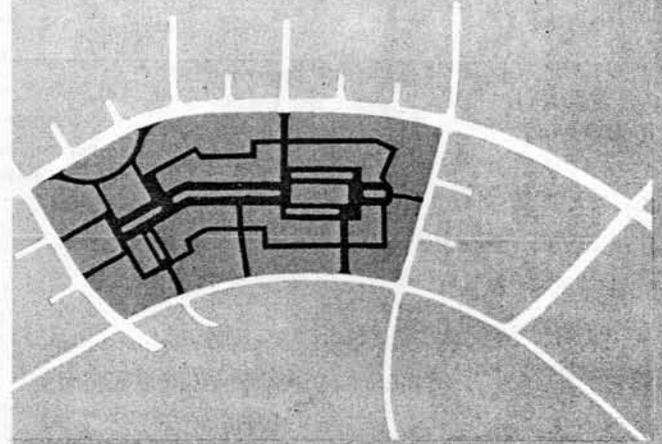
Responsibility for this phase of the problem rests entirely with the merchants and professional men who make up the business life of the community. Quality and variety of merchandise or service, prices, effective advertising display, and skilled personnel, are factors which will determine the success or failure of a business district even though the four preceding elements of physical design have been perfectly developed.

These five phases are equally essential to the economic health of a business community. If any one is missing, the business district will not be completely successful. While public agencies are responsible, at least in part, for four of these elements, it is necessary that the business men of a particular community agree on the needs and plans for a district and then express their desires to the responsible public agencies in order to secure their cooperation.

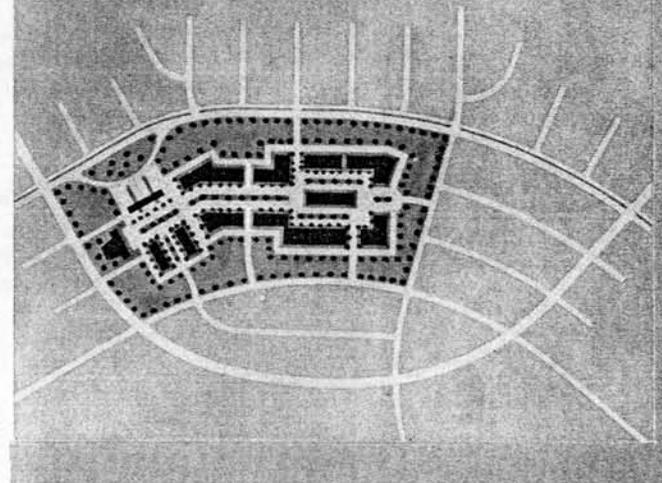
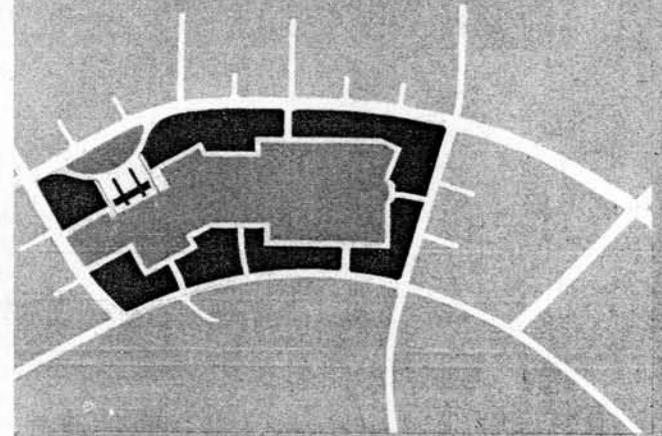
In the series of sketches on this page are illustrated some of the principles set forth in the preceding pages. The sketch at the right shows how a business center may be so located as to be **accessible** from the main highways and still not interfere with the use of the highways for the movement of traffic. An off-street bus terminal adjoins the main highway in the upper left corner, and driveways to the other terminal facilities are provided at various points on the circumferential streets.

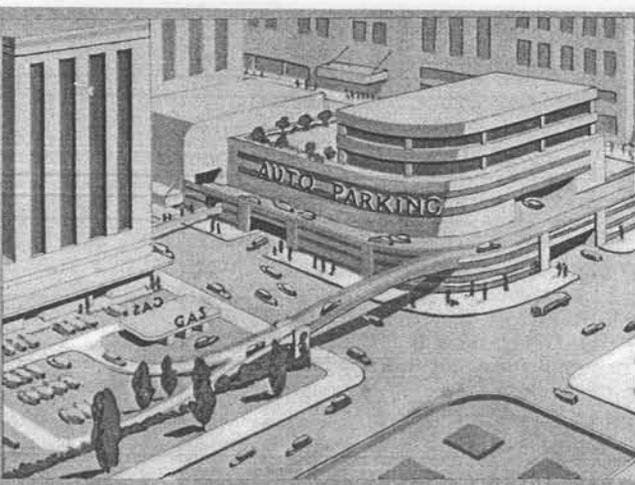


Within the district, driveways leading into the parking areas, and sidewalks throughout the business area, provide adequate **circulation**. Where some of the adjoining residential area is within easy walking distance, proper pedestrian ways can be provided with separations from the heavier traveled highways. The bus terminal is close enough to make bus travel convenient for shoppers. The movement inside the business block is mostly on foot with only slight interference from vehicles. Provision is made for **terminal** facilities for buses as well as private automobiles. The parking areas are evenly distributed on the periphery of the district but still close to the stores, and are easily accessible from adjoining streets. Normal delivery of merchandise by trucks should be limited to hours when the stores are not open, thus permitting the use of the circulatory ways for this operation.

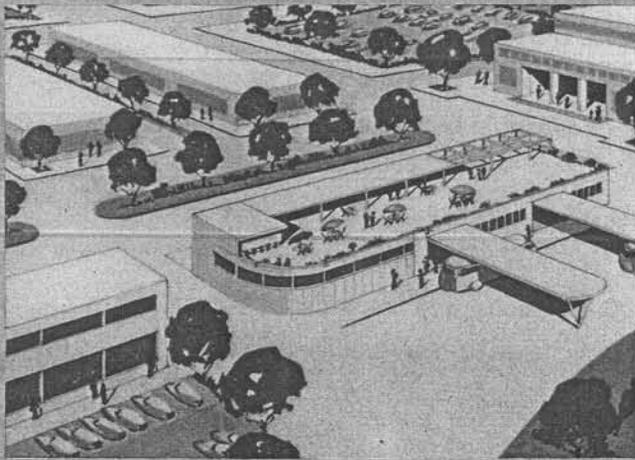


The sketch at the bottom shows the complete design for the business center. The parking areas are screened by planted strips, both from the stores and the streets surrounding the business district. The area between the stores is also appropriately landscaped, contributing to a pleasing **appearance** for the entire area.





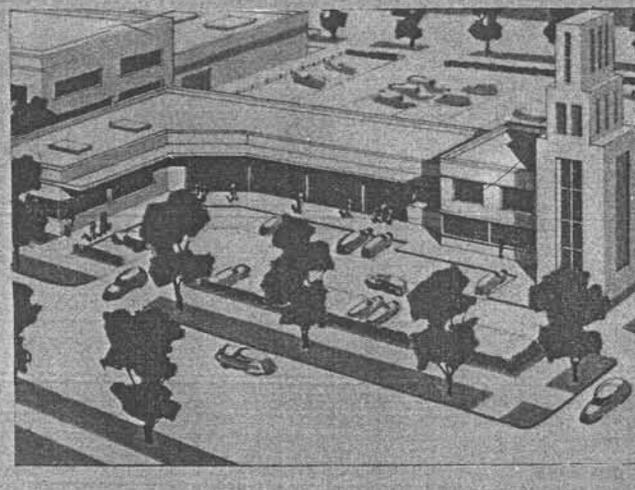
In larger business districts where it is necessary to use parking buildings as a part of **terminal** facilities, they can be designed so as to present a pleasing appearance and to fit into the surroundings. Upper and lower stories can be used for business; the intermediate floors, used for parking, need not be entirely enclosed as in this example. The elevated roadway, while not a freeway, illustrates a method for distribution of heavy traffic from a freeway by-passing a built-up business area. A pedestrian overpass connects the parking building to the opposite side of the street.



Mass transportation **terminals** should be located off the street so that the free movement of other vehicles will not be disturbed. These terminals can be designed to harmonize with their surroundings and at the same time maintain a higher efficiency in operation. In larger units it will be possible to include small stores handling convenience merchandise or service establishments as a part of the terminal structure; outlying terminals may require automobile parking lots for commuter patrons of the bus lines. Emphasis should be placed on the planting necessary to screen the service area from the adjoining areas.



The five specifications for good development are equally applicable to a large metropolitan business center or to a single business establishment such as the market pictured here. This market is **accessible** to the passing traffic, yet does not interfere with the movement of that traffic; ample **circulation** is provided; **terminal** or parking facilities are adequate and screened from the sidewalk; the overall impression is a pleasing **appearance** that stimulates the good **merchandising** evident in the attracting power of the arrangements. The modern store in the lower sketch illustrates another way of drawing the customer to the interior.



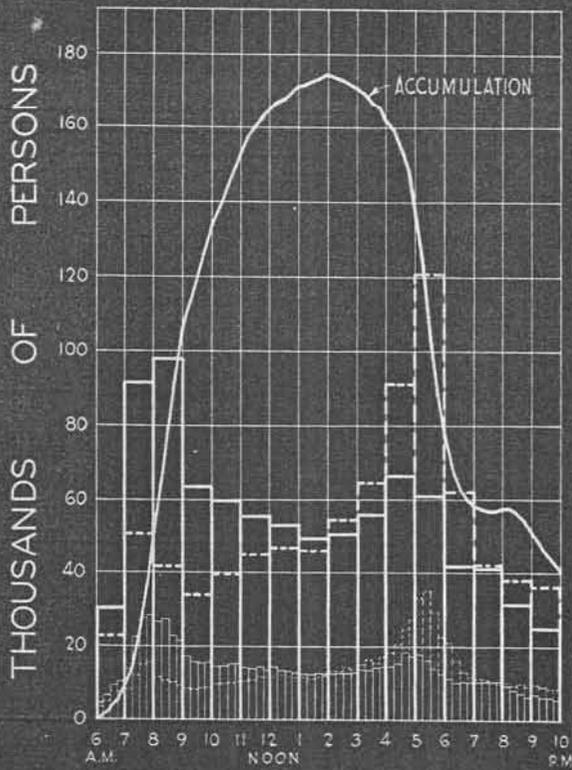
Counts were made of people entering and leaving each study area by all means of transportation. These studies were all made on typical week-days (Monday to Friday) with care to avoid special sale days or events which might distort the picture. The graphs opposite show the movement in and out, and an accumulation curve of people within each district.

Peculiarities of the individual district are clearly shown. The large number of people who worked in the **Los Angeles** Central Business District is shown by the accumulation of over 100,000 people by 9:00 A.M. Since the principal stores did not open until 9:30, the main movement of shoppers had not yet started. The movement of workers destined for other areas who passed through the district was particularly noticeable between 6:00 and 9:00 A.M. The peak movement was the outbound flow between 5:00 and 6:00 P.M., part of which consisted of the reverse through movement of these workers. Generally the afternoon peak will be found higher, since there is a nearly common quitting time even though starting hours vary. The accumulation curve after 6:00 P.M. does not show a definite peak in Los Angeles as in the other districts. This was caused in large part by continuance in the district of many daytime arrivals, and it should be noted that the barely discernible after-dinner peak amounts to nearly 60,000 people, actually four times greater than the peak that shows so clearly in Long Beach.

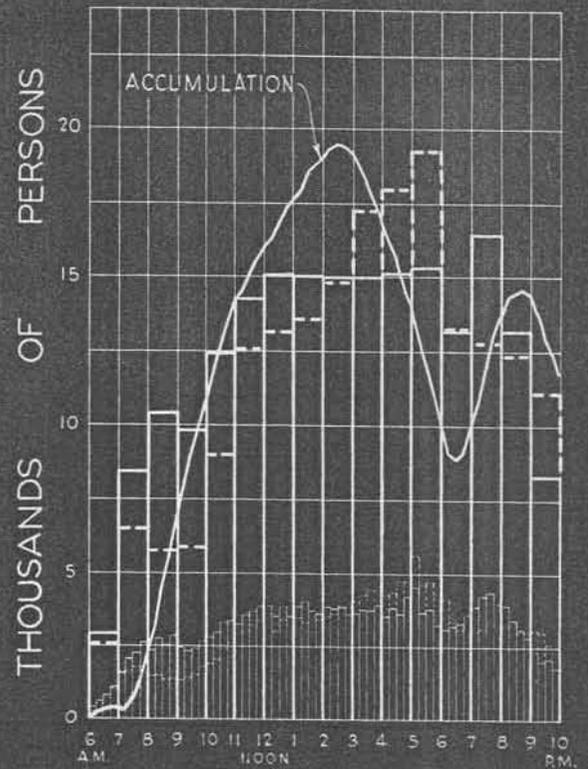
In **Long Beach** is found an accumulation curve very similar to that for Los Angeles except for this evening peak. Through movement in the early morning hours is noticeable here also.

The accumulation curve for **Pomona** shows a definite dip during the noon hour, probably because many employees went home for lunch, while many rural shoppers limited their shopping time to either morning or afternoon. The peak daytime accumulation was later than elsewhere, due in part to the practice of combining the daily household shopping with a trip late in the day to bring the children home from school or husband home from work. This peculiar characteristic is not found in larger districts where the proportion of housewives' shopping is much lower. The evening peak in Pomona also was very definite as in Long Beach and Westwood Village.

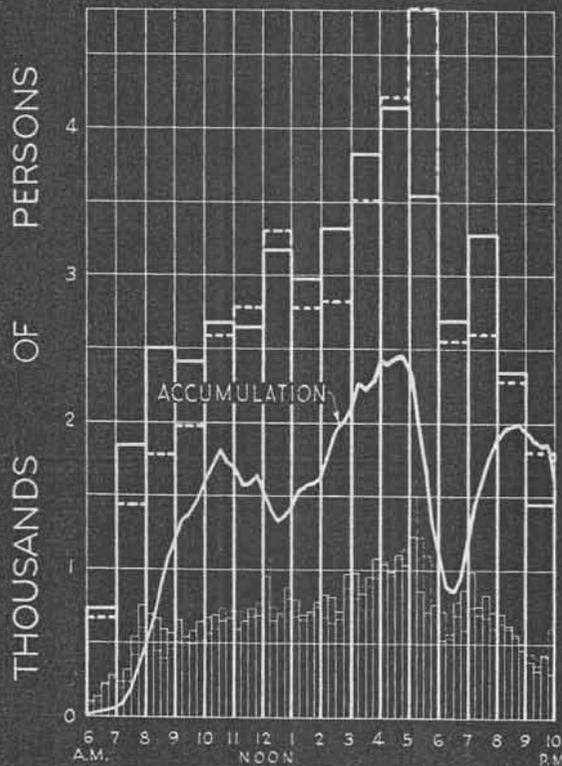
In **Westwood Village** a heavy through movement of students to the adjoining University of California campus, made the daytime accumulation very even; the accumulation of shoppers alone probably would have shown a definite peak. The evening peak was actually higher than the daytime accumulation, pointing to the conclusion that the theatre crowd is generally larger in proportion in the smaller business districts.



LOS ANGELES

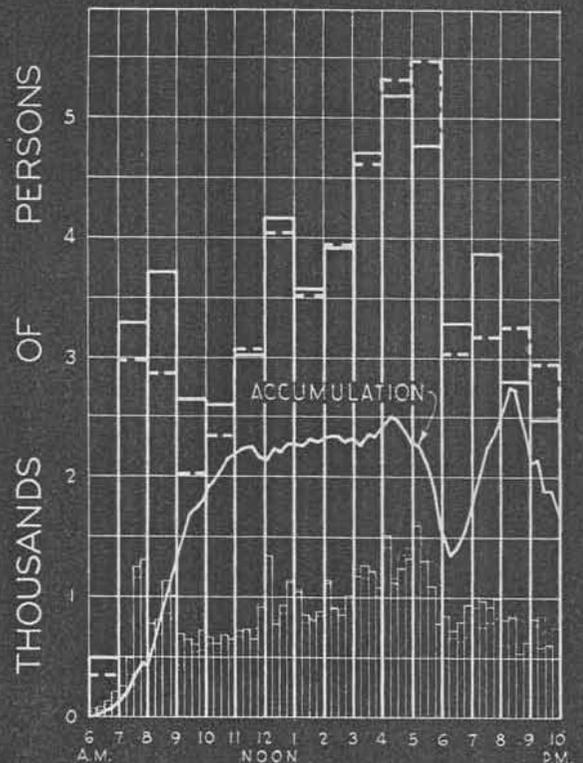
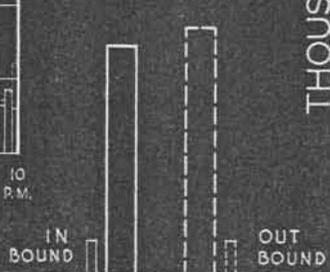


LONG BEACH



POMONA

LEGEND



WESTWOOD VILLAGE

CORDON CHARACTERISTICS
 MOVEMENT OF PEOPLE IN AND OUT
 TYPICAL BUSINESS DISTRICTS

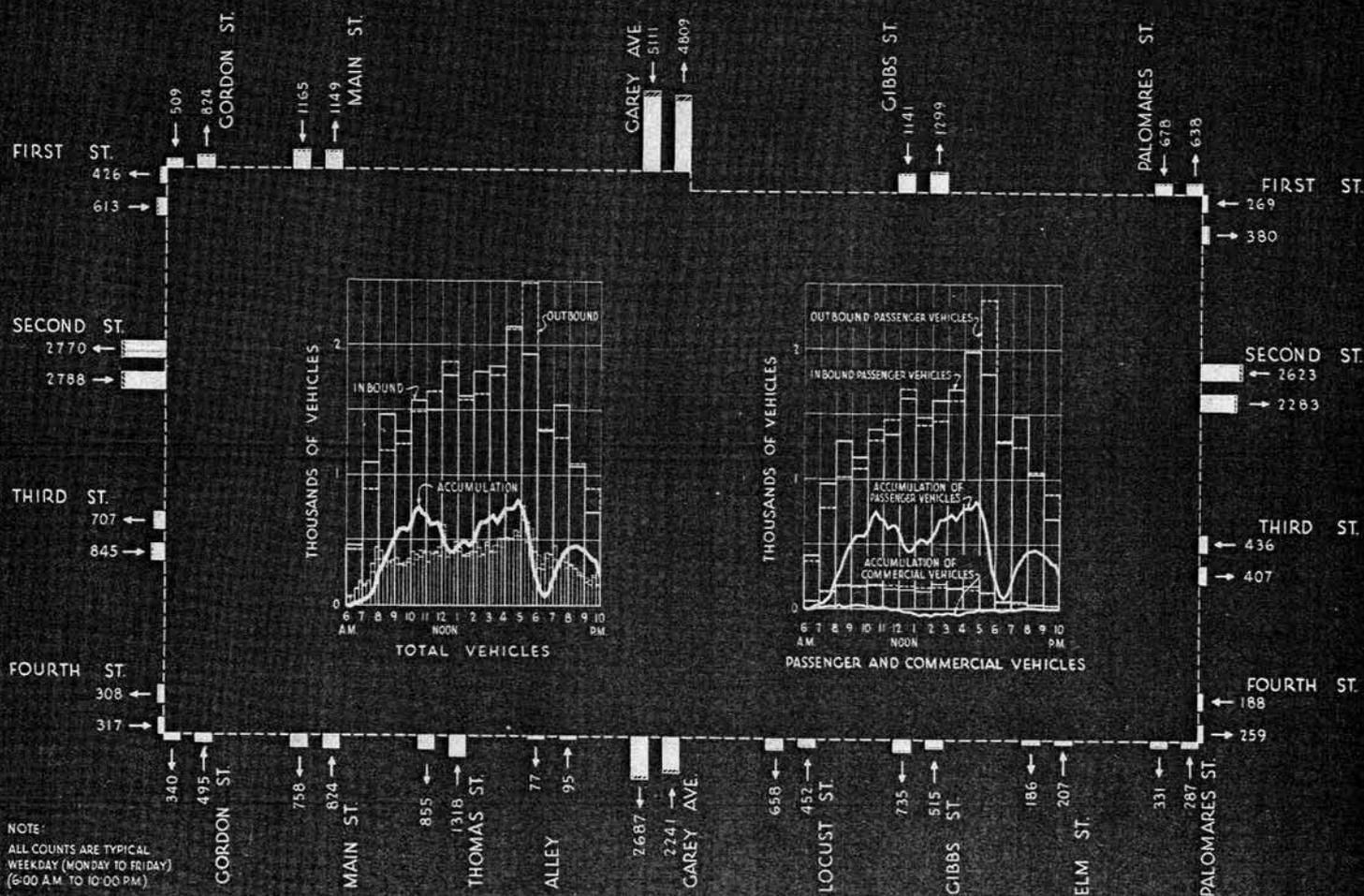
THE REGIONAL PLANNING COMMISSION
 TRANSPORTATION PLANNING PROJECT
 METROPOLITAN AREA 1941
 COUNTY OF LOS ANGELES, CALIFORNIA

movement of vehicles

The results of the cordon count of vehicles in the four study areas are shown in the tables on the opposite page. The chart of the data for the Pomona Central Business District shows the detailed results on each street together with an accumulation curve showing vehicles within the area based on an assumed zero at 6:00 A.M. The following table shows the relationship of passenger and commercial automobiles to the total entering.

Entering 6:00 A.M.—10:00 P.M.	LOS ANGELES		LONG BEACH		POMONA		WESTWOOD VILLAGE	
	Number	%	Number	%	Number	%	Number	%
Passenger Vehicles	287,988	89.7	72,498	94.4	21,168	91.5	28,503	94.7
Commercial Vehicles	33,071	10.3	4,341	5.6	1,952	8.5	1,586	5.3
Total	321,059		76,839		23,120		30,089	
Persons Per Automobile . . .	1.50		1.65		1.57		1.57	

The low rate of car occupancy was typical of the use throughout the Los Angeles Metropolitan Area. In April, 1942, a study of 126,000 industrial workers for whom complete transportation data were available, showed an average occupancy of 1.45 persons per automobile.



NOTE:
ALL COUNTS ARE TYPICAL
WEEKDAY (MONDAY TO FRIDAY)
(6:00 A.M. TO 10:00 P.M.)

MOVEMENT OF VEHICLES INBOUND AND OUTBOUND POMONA CENTRAL BUSINESS DISTRICT



LEGEND
 [Solid bar] PASSENGER VEHICLES
 [Hatched bar] COMMERCIAL VEHICLES



THE REGIONAL PLANNING COMMISSION
 TRANSPORTATION PLANNING PROJECT
 METROPOLITAN AREA
 COUNTY OF LOS ANGELES, CALIFORNIA
 PREPARED BY WORK PROJECTS ADMINISTRATION
 O.P. No. 143-11-07-746

MOVEMENT OF VEHICLES

LOS ANGELES CENTRAL BUSINESS DISTRICT

Count made November 6 and 7, 1941

Hour Ending	INBOUND					OUTBOUND					Accumulation
	North	East	South	West	Total	North	East	South	West	Total	
7:00 A.M.	1,917	2,217	2,078	4,404	10,616	1,628	3,363	1,249	2,282	8,522	2,094
8:00 A.M.	5,760	5,172	5,941	12,620	29,493	2,721	8,940	3,259	4,535	19,455	12,132
9:00 A.M.	5,766	5,981	6,099	14,912	32,758	2,168	7,503	3,419	5,678	18,768	26,122
10:00 A.M.	3,631	5,857	4,642	9,579	23,709	2,262	5,378	3,676	5,185	16,501	33,330
11:00 A.M.	3,233	5,861	4,719	8,244	22,057	2,563	5,501	3,978	6,043	18,085	37,302
12:00 noon	2,913	5,554	4,334	7,618	20,419	2,667	5,350	3,849	6,510	18,376	39,345
1:00 P.M.	2,560	5,068	3,974	6,997	18,599	2,556	4,659	3,544	6,076	16,835	41,109
2:00 P.M.	2,861	5,409	4,033	7,147	19,450	2,612	4,839	3,736	6,437	17,624	42,935
3:00 P.M.	3,172	5,564	4,172	7,593	20,501	3,064	5,433	4,190	7,840	20,527	42,909
4:00 P.M.	3,276	6,390	4,304	7,973	21,943	3,441	6,103	4,446	9,302	23,292	41,560
5:00 P.M.	3,339	8,707	4,507	8,216	24,769	4,985	6,390	5,778	13,524	30,677	35,652
6:00 P.M.	2,956	8,663	4,473	7,382	23,474	6,509	5,725	6,243	17,816	36,293	22,833
7:00 P.M.	2,773	4,596	3,043	5,841	16,253	3,555	3,383	3,631	9,051	19,620	19,466
8:00 P.M.	3,221	3,423	3,114	5,822	15,580	2,529	2,979	3,273	5,652	14,433	20,613
9:00 P.M.	2,354	2,791	2,295	4,513	11,953	2,237	2,288	3,293	5,250	13,068	19,498
10:00 P.M.	1,549	2,372	2,054	3,510	9,485	2,458	2,180	2,429	5,311	12,378	16,605
Total	51,281	83,625	63,782	122,371	321,059	47,955	80,014	59,993	116,492	304,454	

LONG BEACH CENTRAL BUSINESS DISTRICT

Count made February 20 and 27, 1942

Hour Ending	INBOUND				OUTBOUND				Accumulation
	North	East	West	Total	North	East	West	Total	
7:00 A.M....	300	863	343	1,506	322	328	614	1,264	242
8:00 A.M....	895	2,260	641	3,796	673	612	1,840	3,125	913
9:00 A.M....	1,321	2,107	925	4,353	868	1,032	950	2,850	2,416
10:00 A.M....	1,338	1,782	962	4,082	970	1,097	952	3,019	3,479
11:00 A.M....	1,616	1,882	1,187	4,685	1,199	1,321	1,312	3,832	4,332
12:00 noon...	1,893	1,953	1,418	5,264	1,506	1,795	1,566	4,867	4,729
1:00 P.M....	1,790	1,937	1,544	5,271	1,643	1,852	1,543	5,038	4,962
2:00 P.M....	1,839	2,165	1,517	5,521	1,734	1,944	1,448	5,126	5,357
3:00 P.M....	1,772	2,199	1,530	5,501	1,817	2,091	1,704	5,612	5,246
4:00 P.M....	1,590	2,251	1,575	5,416	1,925	2,199	1,819	5,943	4,719
5:00 P.M....	1,743	2,090	2,235	6,068	1,966	2,914	1,503	6,383	4,404
6:00 P.M....	1,834	2,200	2,483	6,517	2,093	3,841	1,374	7,308	3,613
7:00 P.M....	1,588	2,154	1,507	5,249	1,502	2,303	1,239	5,044	3,818
8:00 P.M....	1,942	2,695	1,411	6,048	1,309	2,051	1,483	4,843	5,023
9:00 P.M....	1,517	1,916	1,178	4,611	1,275	1,601	1,382	4,258	5,376
10:00 P.M....	865	1,222	864	2,951	1,193	1,473	1,027	3,693	4,634
Total	23,843	31,676	21,320	76,839	21,995	28,454	21,756	72,205	

Note: Pacific Ocean is South Boundary of Cordon Area.

POMONA CENTRAL BUSINESS DISTRICT

Count made October 14, 1941

Hour Ending	INBOUND					OUTBOUND					Accumulation
	North	East	South	West	Total	North	East	South	West	Total	
7:00 A.M....	146	83	136	92	457	175	55	111	75	416	41
8:00 A.M....	384	199	320	193	1,096	301	161	246	181	889	248
9:00 A.M....	596	214	392	261	1,463	465	142	370	211	1,188	523
10:00 A.M....	510	205	365	251	1,331	439	168	395	242	1,244	610
11:00 A.M....	592	212	481	281	1,566	576	186	476	241	1,479	697
12:00 noon...	580	220	405	289	1,494	684	230	449	268	1,631	560
1:00 P.M....	665	294	461	339	1,759	743	281	519	324	1,867	452
2:00 P.M....	608	245	415	334	1,602	598	214	461	295	1,568	486
3:00 P.M....	680	277	493	343	1,793	623	225	498	267	1,613	666
4:00 P.M....	675	271	530	361	1,837	659	286	543	271	1,759	744
5:00 P.M....	783	360	577	424	2,144	838	344	647	288	2,117	771
6:00 P.M....	715	259	599	354	1,927	1,033	354	652	454	2,493	205
7:00 P.M....	424	214	421	288	1,347	437	201	349	362	1,349	203
8:00 P.M....	611	218	361	344	1,534	473	177	365	276	1,291	446
9:00 P.M....	388	156	267	248	1,059	339	165	305	270	1,079	426
10:00 P.M....	247	89	214	161	711	327	140	241	186	894	243
Total	8,604	3,516	6,437	4,563	23,120	8,710	3,329	6,627	4,211	22,877	

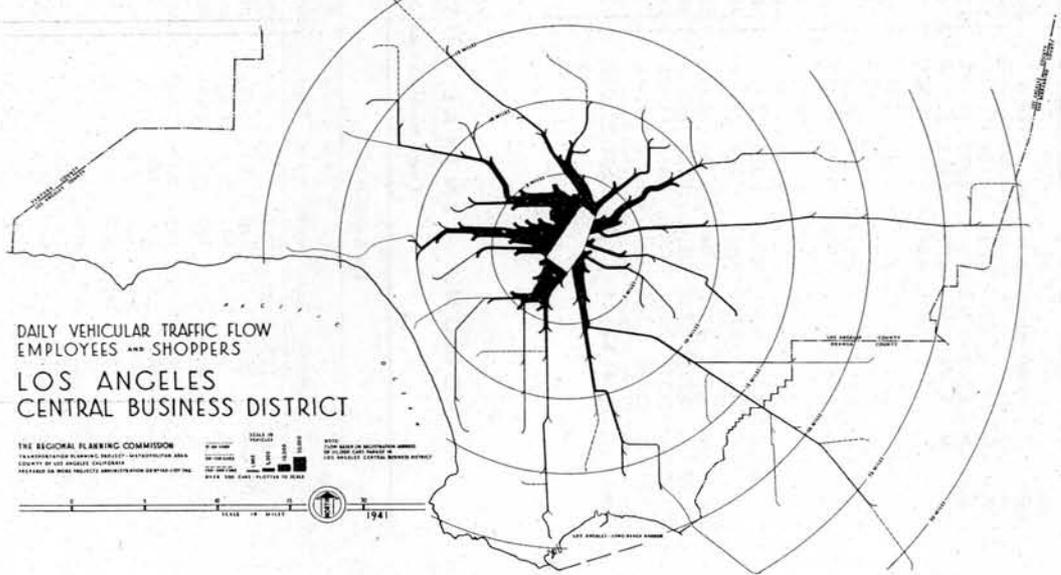
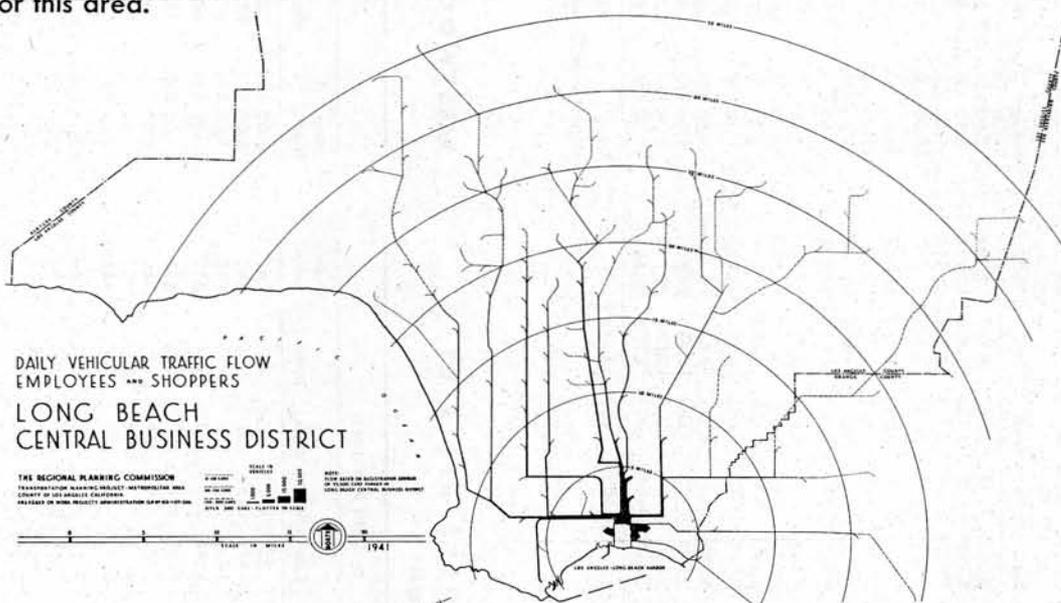
WESTWOOD VILLAGE CENTRAL BUSINESS DISTRICT

Count made November 5, 1941

Hour Ending	INBOUND					OUTBOUND					Accumulation
	North	East	South	West	Total	North	East	South	West	Total	
7:00 A.M....	53	34	216	9	312	109	47	65	13	234	78
8:00 A.M....	279	172	987	28	1,466	697	303	316	37	1,353	191
9:00 A.M....	413	299	1,306	58	2,076	663	385	563	37	1,648	619
10:00 A.M....	348	255	962	47	1,612	381	317	625	47	1,370	861
11:00 A.M....	387	299	950	19	1,655	372	332	832	21	1,557	959
12:00 noon...	530	392	885	60	1,867	478	381	1,091	39	1,989	837
1:00 P.M....	762	552	1,122	53	2,489	642	514	1,196	34	2,386	940
2:00 P.M....	632	443	1,026	39	2,140	543	410	1,133	37	2,123	957
3:00 P.M....	636	455	1,137	40	2,268	551	414	1,257	48	2,270	955
4:00 P.M....	735	494	1,203	45	2,477	613	484	1,331	55	2,483	949
5:00 P.M....	849	593	1,255	55	2,752	605	511	1,618	37	2,771	930
6:00 P.M....	798	496	1,204	58	2,556	646	526	1,678	58	2,908	578
7:00 P.M....	374	246	1,123	49	1,792	440	263	863	59	1,625	745
8:00 P.M....	401	284	1,243	34	1,962	406	385	720	47	1,558	1,149
9:00 P.M....	285	239	853	21	1,398	282	261	832	69	1,444	1,103
10:00 P.M....	338	390	506	33	1,267	309	202	1,008	28	1,547	823
Total	7,820	5,643	15,978	648	30,089	7,737	5,735	15,128	666	29,266	

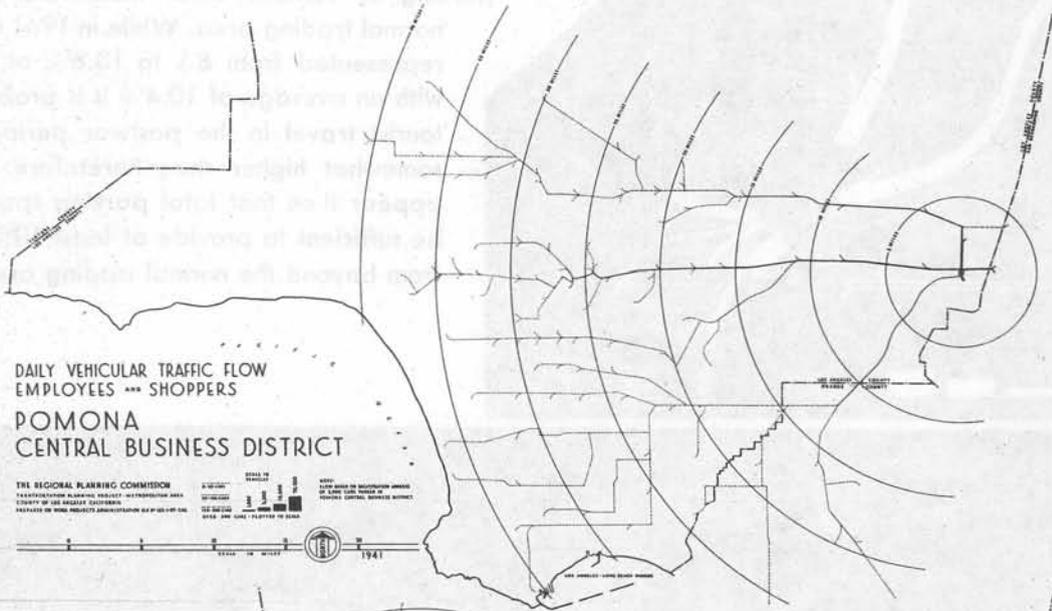
License numbers of all parked vehicles were recorded and registration addresses of California vehicles were obtained from records of the Motor Vehicle Department. These were then tabulated into 116 sub-areas in the Metropolitan Area with the registration address assumed as the origin. Maps showing theoretical traffic flows prepared from this record for each study area are shown here.

The table on the next page shows the number of cars originating in successive distance zones. These data show that at least 80% of the cars came from within a 10-mile radius. In Los Angeles there was one parked car for every 21 people residing in this circle of 10-mile radius; in Long Beach one car for every 16 people; in Pomona one car for every 21 people and in Westwood Village one for every 130 people. While four study areas are a very limited sample, it is believed that these data may serve as guides in determining the parking area required to accommodate the population of a given trade area. Since Los Angeles, Long Beach and Pomona are complete business districts while Westwood Village is a more specialized shopping center, the similarity between results in the first three districts may be very significant for this area.



VEHICLES FROM METROPOLITAN AREA ONLY

Origin in Miles from Study Area	LOS ANGELES			LONG BEACH			POMONA			WESTWOOD VILLAGE		
	Number of Cars	Percentage of Total	Percentage Cumulative	Number of Cars	Percentage of Total	Percentage Cumulative	Number of Cars	Percentage of Total	Percentage Cumulative	Number of Cars	Percentage of Total	Percentage Cumulative
0- 5...	66,519	60.0	60.0	15,720	61.8	61.8	3,174	62.4	62.4	6,216	65.5	65.5
5-10...	29,827	26.9	86.9	4,426	17.4	79.2	1,007	19.8	82.2	1,872	19.7	85.2
10-15...	9,326	8.4	95.3	1,609	6.3	85.5	60	1.2	83.4	965	10.2	95.4
15-20...	3,760	3.4	98.7	2,134	8.4	93.9	120	2.4	85.8	232	2.4	97.8
20-30...	1,153	1.0	99.7	1,398	5.5	99.4	501	9.8	95.6	161	1.7	99.5
Over 30.	342	0.3	100.0	153	0.6	100.0	226	4.4	100.0	48	0.5	100.0
Total...	110,927			25,440			5,088			9,494		

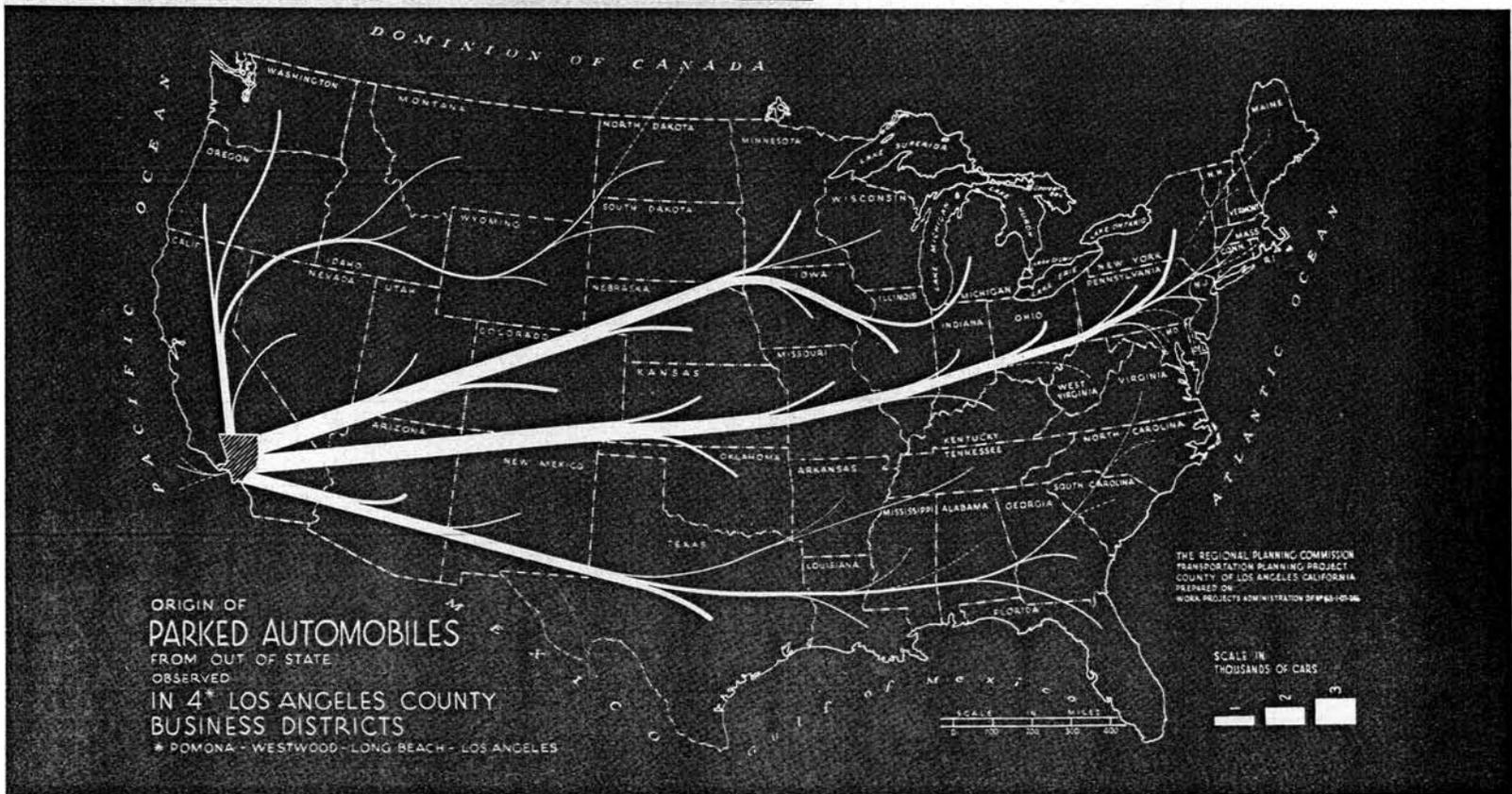


DISTRIBUTION OF ORIGIN OF ALL PARKED VEHICLES

From	LOS ANGELES		LONG BEACH		POMONA		WESTWOOD VILLAGE		TOTAL	
	Number	%	Number	%	Number	%	Number	%	Number	%
Normal Trading Area	110,927	89.5	25,440	89.2	5,088	91.3	9,494	91.9	150,949	89.6
Other California Counties	7,596	10.5	2,031	10.8	329	8.7	412	8.1	10,368	10.4
Out of State	5,431		1,058		156		426		7,071	
Total	123,954		28,529		5,573		10,332		168,388	

In addition to the cars from the normal trading area, a large number of cars from other California counties and from every state were parked in the study areas as shown in the table and diagrammatically on the maps.

These data show that provision must be made for the parking of vehicles other than those from the normal trading area. While in 1941 these cars represented from 8.1 to 10.8% of the total with an average of 10.4% it is probable that tourist travel in the postwar period will be somewhat higher than heretofore. It would appear then that total parking space should be sufficient to provide at least 10% for cars from beyond the normal trading area.



ORIGIN OF PARKED AUTOMOBILES FROM OUT OF STATE OBSERVED IN 4* LOS ANGELES COUNTY BUSINESS DISTRICTS
 * POMONA - WESTWOOD - LONG BEACH - LOS ANGELES

THE REGIONAL PLANNING COMMISSION
 TRANSPORTATION PLANNING PROJECT
 COUNTY OF LOS ANGELES CALIFORNIA
 PREPARED BY
 WORK PROJECTS ADMINISTRATION OF RP&S-10-36

SCALE IN THOUSANDS OF CARS
 1 2 3

The best available data on the changes in local riding habits are found in the series of studies quoted in the following table:

COMPARISON—PERSONS ENTERING THE LOS ANGELES CENTRAL BUSINESS DISTRICT 1924-1941

Cordon Limits: Sunset Blvd., Los Angeles St., Pico Blvd. and Figueroa St.

	6 A.M. - 7 P.M. Kelker DeLeuw Jan. 1924		7 A.M. - 7 P.M. Don Baker Dec. 16, 1931		7 A.M. - 7 P.M. L. A. City Fall, 1938		7 A.M. - 7 P.M. R. P. C. Survey Fall, 1941	
County Population	1,509,318		2,273,670		2,730,900		2,995,743	
	Number	%	Number	%	Number	%	Number	%
Pedestrian	No Count		No Count		No Count		105,185	
By Private Auto.	239,855	38.5	434,986	62.4	384,788	61.6	396,493	61.6
By Mass Transportation.	383,145	61.5	262,256	37.6	239,512	38.4	246,440	38.4
Total Auto + Mass Trans.	623,000		697,242		624,290		642,933	
Percent of County Population		41		35		23		22
Grand Total							748,118	
Autos Entering	156,636		277,947		259,080		273,339	

The ratio between mass transportation and private automobiles that reversed between 1924 and 1931 has remained fairly constant until 1942. While present conditions would doubtless show a higher proportion of mass transit riders, it is reasonable to assume that with the removal of the present restrictions on the use of private automobiles, local riders will resume the habits of 1941.

The peak use of the passenger facilities of the Pacific Electric Railway Company occurred in 1923 when slightly over 109 million passengers were carried. After falling to 59 million, patronage rose to 73 million in 1936 and 1937, and again declined after that date to 62 million until the outbreak of the war. It is indicated that in 1944 the system will handle perhaps 150 million passengers.

Pedestrians were not counted in the three earlier surveys, but it should be noted that there was very little variation in the total number of people entering in vehicles, except in the count made on December 16, 1931, at the height of the Christmas shopping season. This lack of increase in the number of people entering the area on an average business day, in the face of a population growth of nearly 100% and notable increase in traffic confirms the conclusion drawn from the decline in retail sales noted on page 29.

The results for the four study areas are shown below. Notice that this table covers a 16-hour day, while the preceding table covers only a 12-hour day.

COMPARISON OF PERSONS ENTERING FOUR BUSINESS DISTRICTS

People entering 6:00 A.M.-10:00 P.M.	LOS ANGELES		LONG BEACH		POMONA		WESTWOOD VILLAGE	
	Number	%	Number	%	Number	%	Number	%
By Automobile	482,012	54.9	127,127	63.6	36,192	83.2	47,360	86.9
By Mass Transportation.	275,108	31.4	26,766	13.4	673	1.5	4,034	7.4
Pedestrian	119,851	13.7	45,845	23.0	6,635	15.3	3,112	5.7
Total	876,971		199,738		43,500		54,506	

It should be clear that mass transportation plays a very small part at Pomona, where facilities were primarily available only for long distance service. In Westwood Village where the immediate surrounding area is not densely populated but has a relatively high density of automobiles, the number of pedestrians is low. In contrast, the Long Beach business district is surrounded by a high density apartment house area and the proportion of pedestrians is large.*

These findings lead to the conclusion that people in this area find it either expedient or necessary to use individual transportation as an habitual means of going to work or on shopping trips as well as for less routine affairs. Since this riding habit has been sustained since prior to 1931, it is reasonable to assume that it indicates the pattern for the postwar period unless some startling improvements in mass transportation are made, or unless economic conditions require continuing drastic restrictions on the use of the automobile. Plans for transit, parking facilities and mercantile development should therefore be laid on the basis of these proportions.

*In 1939 a study of the Glendale Central Business District made by the Automobile Club of Southern California, showed 83.7% of the people entering by automobile, 7% by mass transportation, and 9.3% as pedestrians, proportions roughly comparable to those in Westwood. In 1938 a study conducted in Hollywood by the Bureau of Business Research of the University of Southern California on a limited sampling basis indi-

cated that 62.7% of the shoppers came into the district by automobile, 19.3% came in as mass transportation riders and 18% were pedestrians. This survey covered only shoppers and not the total of people who entered or went through the area. Without making any adjustment for this qualification it appears that Hollywood conditions are fairly similar to those in Long Beach

Studies of the predominant use and height of buildings were made in each study area. The map on the opposite page shows in detail the results of this survey for the Long Beach Central Business District. While the height of buildings varied widely in the different districts certain characteristics of use were common to all the study areas.

In each district it was found that there was no orderly distribution of all uses. In some instances open parking lots or lower grade uses acted as barriers separating two very good sub-centers of the study area. Even in Westwood Village, which is a specialized shopping center, the parking lots were located more by chance than design, and in nearly all cases no attempt was made to screen or otherwise separate the lot from the sidewalk. In Los Angeles and Long Beach light manufacturing and other industrial uses were present, in some instances in the midst of high value shopping sections. Churches on the edge of a business district have also had the effect of barriers to the expansion of the concentrated retail sections, as is noticeable on Locust Avenue in Long Beach.

The tendency of residential areas in this region to spread horizontally rather than vertically is paralleled in the development of business districts. On the map of Long Beach, special note should be made of the large amount of area occupied by one and two-story buildings, while buildings of more than four stories are uncommon. In Westwood Village and Pomona only a few structures exceeded two stories. In Los Angeles there was a greater number of taller buildings, yet the one and two story structures occupied a sizeable proportion of the study area.

The location of parking lots in Long Beach is typical of the other areas. An individual property owner, having found that the building on his property did not yield a fair return on the investment, removed it and established a parking lot. The indiscriminate scattering of these parking facilities bears little if any relationship to destination or concentration. In Los Angeles the lots have tended to circle the retail section and many of them are so remote as to be quite inconvenient for shopper parking.

Improvement can be made by concentrating uses in buildings from three to six stories high and using the ground area thus made available for additional parking space. The use of parking buildings may be economically possible in the shopping sections where demand for space is greatest. Simple landscaping or other suitable treatment of the portion of the parking facility immediately adjacent to the sidewalk will reduce the effect of a barrier sometimes created by this use.

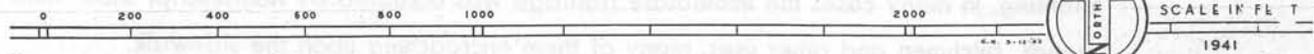


LEGEND
BUILDING HEIGHTS

- 12 STORIES AND OVER
- 9, 10 AND 11 STORIES
- 7 AND 8 STORIES
- 5 AND 6 STORIES
- 3 AND 4 STORIES
- 1 AND 2 STORIES
- PARKING LOTS
- UNIMPROVED LAND

PREDOMINANT USES

- ① UNIMPROVED LAND
- ② AUTO PARKING LOTS
- ③ LARGE RETAIL STORES
- ④ OFFICE BUILDINGS
- ⑤ PUBLIC PROPERTY
- ⑥ LARGE HOTELS & APARTMENTS
- ⑦ PARKING GARAGE
- ⑧ LOFT BUILDINGS
- ⑨ SMALL INDUSTRY & RETAIL
- ⑩ SMALL HOTELS & APARTMENTS
- ⑪ THEATRES & CHURCHES
- ⑫ MISCELLANEOUS



**BUILDING HEIGHTS -
PREDOMINANT USES**

LONG BEACH CENTRAL BUSINESS DISTRICT

THE REGIONAL PLANNING COMMISSION
TRANSPORTATION PLANNING PROJECT
METROPOLITAN AREA
COUNTY OF LOS ANGELES — CALIFORNIA
PREPARED ON WORK PROJECTS ADMINISTRATION O.P. NO. 165-1-07-246

Observations were made of the use of off-street parking facilities in each study area. The capacity of each lot or garage was determined by field investigation. In the case of attendant parking, capacity was based on the premise that it should not be necessary to move more than two cars to get any particular car out of its parking space. This resulted in some instances in a capacity figure lower than that actually attained. For self-parking facilities, capacity is naturally much lower for the same amount of ground area.

Careful analysis of the duration of parking resulted in classification of the parking as "all-day" or "short-time." For this purpose a car which parked before 9:00 A.M. and remained parked until 4:00 P.M. or later was considered to be an all-day parker, presumably belonging to the employee rather than the shopper group. This arbitrary distinction did not provide for the inclusion of employees' cars which came in after 9:00 A.M. or which may have been in the parking facility for shorter durations.

In Westwood Village the parking facilities seemed well distributed throughout the business center. In addition to the facilities shown on the map opposite, space has been provided by deed restriction, for parking approximately 430 vehicles along some of the alleys, at the rear of the buildings. This space is used for most of the loading and unloading of merchandise. The observations indicate, however, that the lots on the periphery had very little use as compared to the lots immediately adjacent to principal stores. This would indicate the need for more facilities in the center of the area. This same condition was evident in the other study areas, particularly in the Los Angeles Central Business District. In the latter case it was found that much of the parking space convenient to the shopping center was occupied by all-day parkers, thus preventing its use by shoppers who came in later. Instead of accommodating **three or more shoppers'** cars, a parking space was used by **one employee's** car. The parking lots closest to the concentrated shopping center were filled to capacity for several hours during the midday peak period, forcing shoppers to park further away from their destination.

Many of the parking lots, because of their shape and size, could not be efficiently used. In some instances so many cars were crowded on a lot that six or more cars had to be moved in order to clear one vehicle. In other instances the allowed car spaces were so small that it was difficult to walk between two lines of cars or to open car doors.

In only a few instances was any effort made to screen the parking lot from the sidewalk by planting. In many cases the immediate frontage was occupied by nondescript shoe shine stands, pitchmen and other uses, many of them encroaching upon the sidewalk.

OFF STREET PARKING

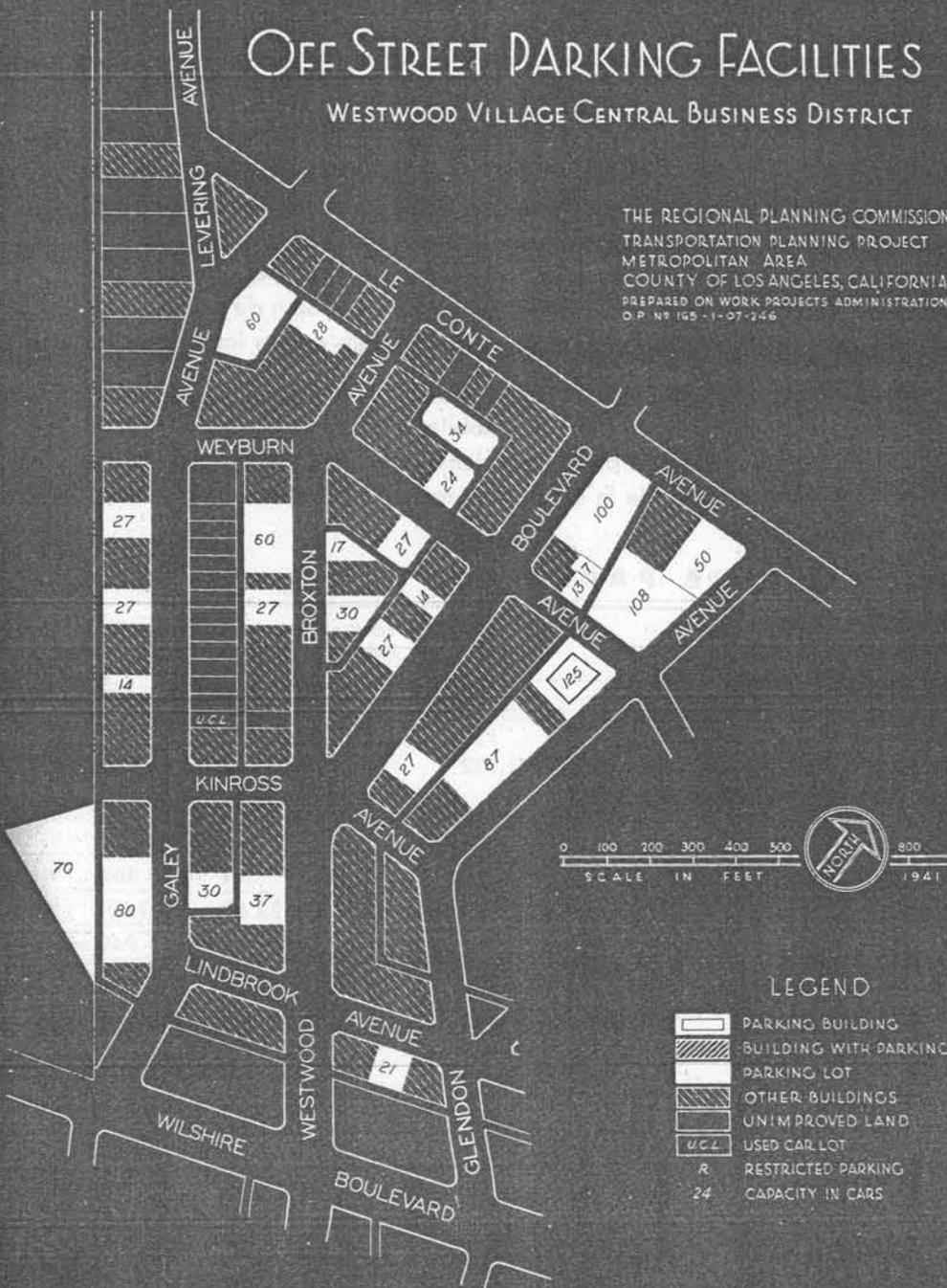
	LOS ANGELES	LONG BEACH	POMONA	WESTWOOD VILLAGE
Total number car spaces	39,460	3,359	261	1,601
Peak accumulation of vehicles	31,713	2,288	103	940
Time of peak accumulation	1:30 P.M.	2:45 P.M.	2:30 P.M.	3:15 P.M.
Number of all-day parkers*	12,271	519	18	196
Number of short-time parkers 6:00 A.M. to 6:00 P.M.	71,263	8,413	363	5,006
Total use 6:00 A.M. to 6:00 P.M. (Daytime)	83,534	8,932	381	5,202
Total use 6:00 A.M. to 10:00 P.M.	92,112	9,446	445	5,434
Turnover on spaces used by short-time parkers				
6:00 A.M. to 6:00 P.M.	3.67	4.76	4.27	6.73
Percent of Daytime to Total Use	91%	95%	86%	96%

*All-day parker is one who parked before 9:00 A.M. and left after 4:00 P.M.

OFF STREET PARKING FACILITIES

WESTWOOD VILLAGE CENTRAL BUSINESS DISTRICT

THE REGIONAL PLANNING COMMISSION
TRANSPORTATION PLANNING PROJECT
METROPOLITAN AREA
COUNTY OF LOS ANGELES, CALIFORNIA
PREPARED ON WORK PROJECTS ADMINISTRATION
O.P. NR 165 - 11-27-46



"The objectives of motor vehicle transportation are not realized by the movement of vehicles alone. Terminal facilities are a necessary and important part of any transportation system, and while the immediate aim of traffic control is to move traffic safely and expeditiously over the streets, yet it must be realized that the vehicles are on the streets for the purpose of carrying merchandise or passengers from one point to another, which involves storage of the vehicles at both ends of the trip. Provision for and control of parking is a necessary and important factor in traffic control.

"... By demanding curb parking in front of his store, the business man in some cases may be driving away potential trade because of the congestion incurred by such parking. Often the personnel of retail establishments preempt space that might be used by customers.

"Shoppers and workers prefer parking immediately adjacent to their destination. Building owners and managers desire parking facilities for their buildings, but often are reluctant to include it as part of their service operations."

Report on a City-Wide Traffic Survey and Proposed Improvements, Glendale, Calif. 1939-1940, Automobile Club of Southern California, and the Work Projects Administration, City of Glendale, 1940.

The use of all curb parking space was observed during typical business days. The charts on the opposite page show the total number of spaces occupied each 15-minute period throughout the day, in each of the four study areas.

These charts also show the total car spaces based on the gross curb length of the blocks. Deductions from this total have been made for alleys, driveways, corner clearances, street car and bus loading zones, fire plug and pedestrian protective zones. Because of these deductions, as may be seen from the "Net Car Spaces" line, 53% of the supposed total space in the Los Angeles Central Business District has already been removed from use. In Long Beach this reduction amounts to 34%, in Pomona 23% and in Westwood Village 33%.

The remaining spaces available for parking are further restricted by varying time limits or usage, and as passenger or commercial loading zones. Maps showing the various restrictions were prepared for each study area.

In Los Angeles Central Business District portions of the study area were so remote from the section of concentrated use, that it was impractical to use the available curb parking space. The portion of the study area convenient to the concentrated retail section was filled to capacity most of the day. This was generally true in Pomona and Westwood Village. Studies of shopping habits in other cities indicate that three average blocks is the maximum distance that people care to walk from their parked cars to destination.

In Pomona, diagonal parking was allowed in 29 of the 52 blocks in the study area. While this type of parking increased the number of car spaces at the curb, it seriously impeded the movement of traffic along the street. On some of the principal business streets, the street space left for moving traffic was one narrow lane in each direction, with traffic in both directions being stopped for every movement in or out of a parking space. In cases where a very long truck was parked, it was necessary for moving traffic to cross over into the opposing lane in order to pass.

In Los Angeles the cost **to the city** of parking an automobile in the concentrated business section is estimated at \$65 per month based on property values. This is greatly in excess of the cost per car space in off-street facilities. While in other business areas the cost is not so high, the relationship in costs remains.

CURB PARKING

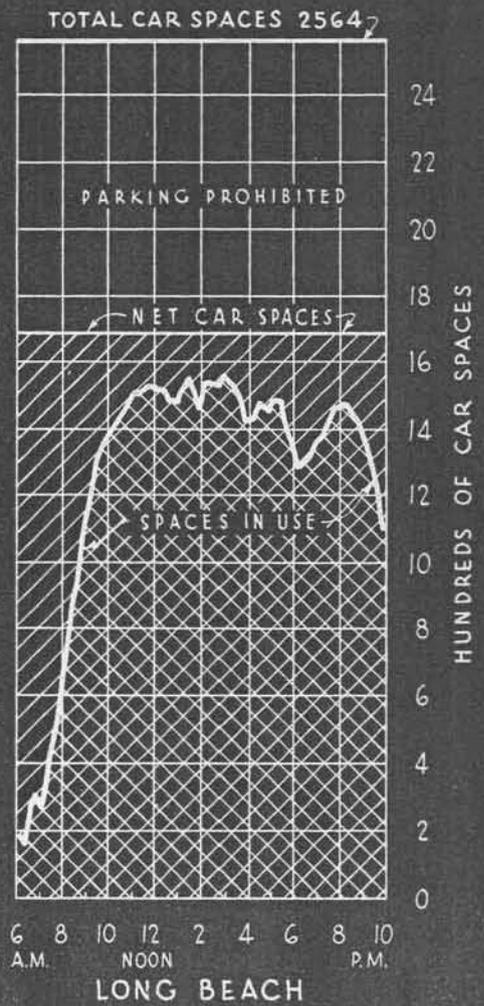
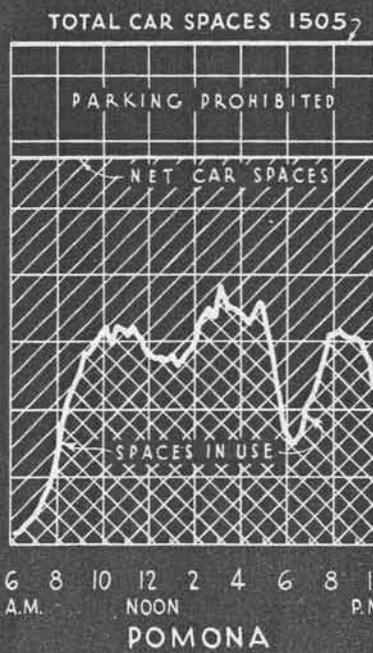
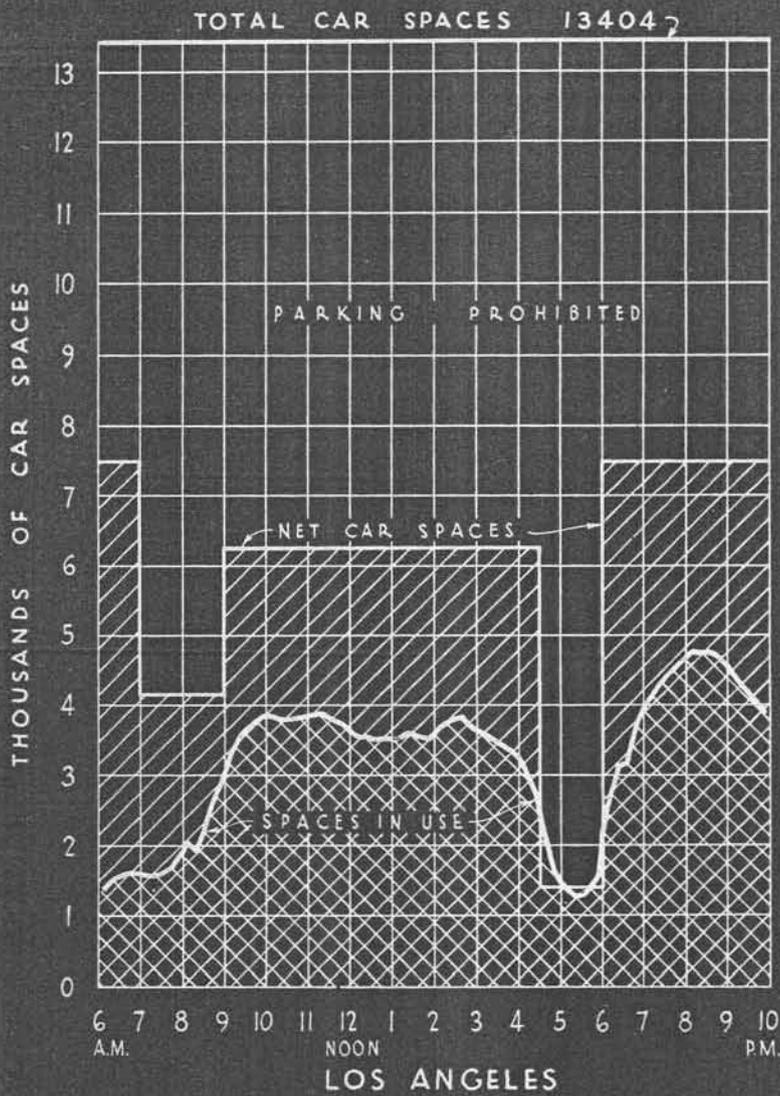
CAR SPACES	LOS ANGELES	LONG BEACH	POMONA	WESTWOOD VILLAGE
Total Potential Spaces	13,404	2,564	1,505	1,417
Alleys	123	137	55	37
Driveways	1,932	192	145	175
No Parking at any time: Corner Clearances, Fire Plug Protection, Pedestrian Cross Walks, Street Car and Bus Loading Zones	3,861	545	152	256
No Parking—7:00 A.M. to 6:00 P.M.	1,238	—	—	—
Total Spaces unavailable during business day	7,154	874	352	468
Percent unavailable during business day	53.4%	34.1%	23.4%	33.0%
Balance—Spaces Available	6,250	1,690	1,153	949
Passenger Loading Zones	217	38	8	20
Commercial Loading Zones	428	116	27	5
Time Restricted Spaces	4,943	1,536	727	892
Unrestricted Spaces	662	0	391	32

CURB PARKING CHARACTERISTICS

TYPICAL BUSINESS DISTRICTS

THE REGIONAL PLANNING COMMISSION
 TRANSPORTATION PLANNING PROJECT
 METROPOLITAN AREA
 COUNTY OF LOS ANGELES, CALIFORNIA
 PREPARED ON WORK PROJECTS
 ADMINISTRATION O.P. N° 165-1-07-246

1941



Everyone who goes to a business district to work or shop becomes a pedestrian for some portion of his stay in the area. Because of the importance of this particular movement counts were made of people using the sidewalks and entering or leaving typical stores and office buildings. The results of the sidewalk observations at midblock points in the Los Angeles Central Business District are shown on the opposite page.

Various types of pedestrian flow are readily recognized in this chart. When the major portion of the total movement was that of employees, such as on the north side of 8th and 9th Streets between Main and Los Angeles Streets, there were definite morning, noon and late afternoon peaks. In the center of the financial district on Spring Street from 5th Street to 7th Street, the flow showed a definite peak from 10:00 A.M. to 3:00 P.M., which were the banking hours. The retail uses in these particular blocks did not attract a volume of shoppers sufficient to outweigh the characteristic movement incident to a financial center.

The west side of Broadway, from 6th Street to 7th Street furnished the best example of a movement consisting almost entirely of shoppers, and forming a broad midday peak. There was some employee movement in this block but it was small in comparison to the total. Other blocks showed the same general characteristics even though total volumes were smaller.

At some of the principal intersections in the Los Angeles Central Business District as many as 20,000 pedestrians competed for the right of way with 2,000 automobiles and 300 street cars during the rush hour. Time is lost by pedestrian, motorist and street car rider due to the lack of adequate circulation facilities. The automobile traffic, at least, can be reduced by the use of by-pass facilities, making movement easier for pedestrians as well as those riders who must enter the business district.

Pedestrian movement in and out of retail stores reached its peak from 12:00 M. to 2:00 P.M. with a corresponding sidewalk traffic peak in blocks devoted to retail trades. From 11:30 A.M. to 2:30 P.M. that is, during the lunch period, the accumulation in office buildings dropped about 25% from the peak. The employee group from offices used this lunch hour to visit the stores for a few minutes shopping.

The pedestrian counts in the other study areas did not attain the volume found in Los Angeles. The maximum hourly volume for a sidewalk observed in Long Beach was 3,900; in Pomona 700; and in Westwood Village 700, as compared to 7,500 in Los Angeles. Most of these counts have characteristics of the shopper movement since the banking, office and employee functions are not so strong as in Los Angeles.



THE REGIONAL PLANNING COMMISSION
 COUNTY OF LOS ANGELES CALIFORNIA
 TRANSPORTATION PLANNING PROJECT
 METROPOLITAN AREA
 PREPARED ON WORK PROJECTS ADMINISTRATION
 O.P. Nº 165-1-07-246 1941



MID-BLOCK
 PEDESTRIAN
 VOLUMES
 TYPICAL WEEKDAY 7:00AM TO 7:00 PM
 LOS ANGELES
 CENTRAL BUSINESS DISTRICT

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LOS ANGELES COUNTY

The official Censuses of Business from 1929 to 1939 make possible some relation of the business done in the various study areas to the factors measured in our survey. The data reproduced here cover retail trade only. Retail trade includes establishments primarily engaged in selling merchandise for personal or household consumption, and rendering service incidental to the sale of goods. Establishments primarily engaged in service or wholesale trade are not included.

The severe decline in retail sales from 1929 to 1933 was followed by recovery to 1939 at a slower rate than the decline. In some small, local areas which were then developing business sections the decline was not so severe or did not occur. This is noticeable in the Wilshire Area, Huntington Park, Alhambra and Westwood.

Since the purchasing power of the 1939 dollar was different from that of the 1929 dollar, the relationship of **per capita** retail sales may be significant.

	United States	California	Los Angeles County
Per Capita Retail Sales, 1929	\$394	\$554	\$582
Per Capita Retail Sales, 1939	319	462	472
Percentage 1939/1929	81%	83%	81%

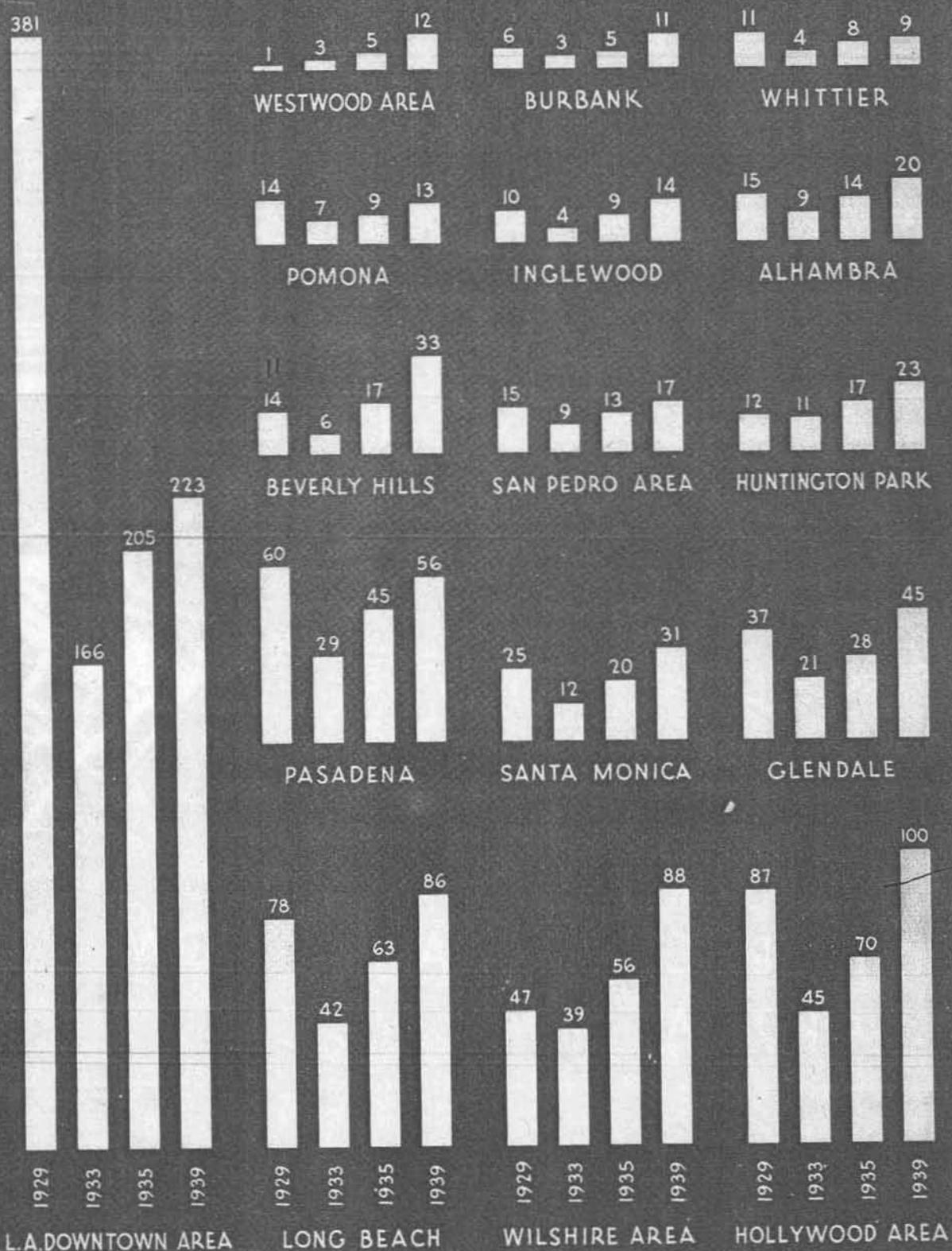
It should be noted that the ratio of 1939 **per capita** sales in Los Angeles County to those of 1929 was identical with that for the nation and only slightly different from that for the State.

The limits of the four study areas were not the same as the areas for which retail sales data were available, but each study area contained 75% or more of the retail business of the respective statistical area. These data show clearly the tendency of the Los Angeles Metropolitan Area to decentralize.

To some extent increases in particular areas may be attributed to population growth. If this were generally true then Pasadena should have experienced as much increase as Alhambra, since they are equidistant from an area which grew substantially during this decade. The same is true of other areas in Los Angeles County. Moreover, size of the district did not govern, since Pasadena had a much larger business district with larger stores than Alhambra. Possibly less convenient access routes to Pasadena, or the difference in terminal facilities, may have been controlling factors.

Purchasing power of the supporting population controlled sales volume, of course, but the healthy business districts showed a **trend** above that of the county total.

The detailed data by type of stores show that purchases of necessity goods tend to be concentrated close to place of residence. The sales of shopping goods show the greatest decentralization.



RETAIL SALES SELECTED AREAS

FIGURES
SHOW SALES
TO NEAREST
MILLION DOLLARS

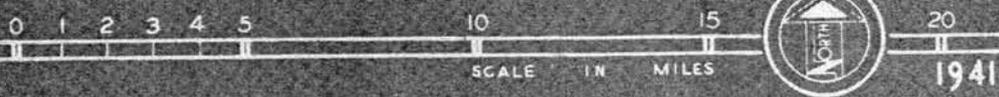
DATA FROM
CENSUS OF BUSINESS-1939
DEPARTMENT OF COMMERCE

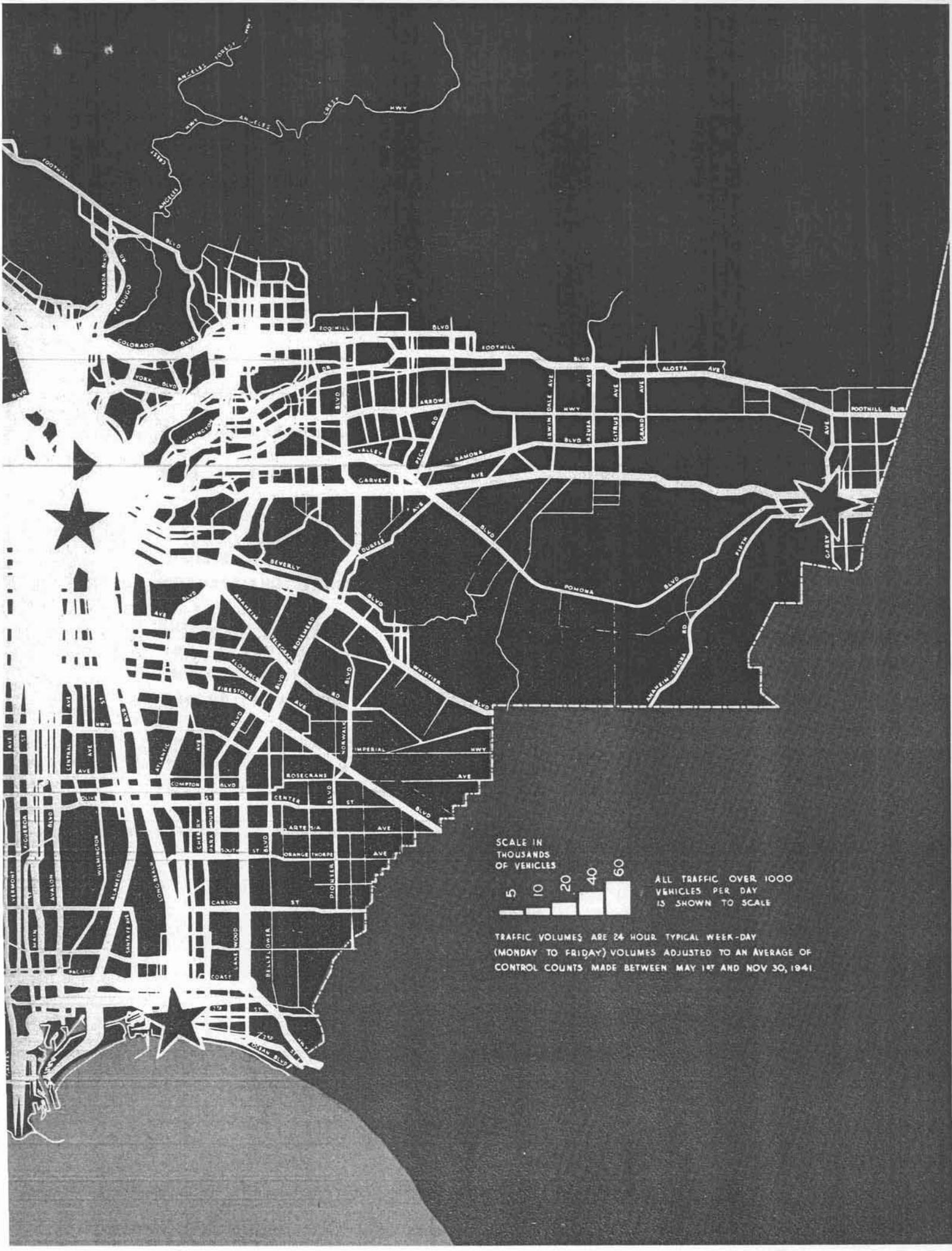
THE REGIONAL PLANNING COMMISSION COUNTY OF LOS ANGELES --- 1944



DAILY VEHICULAR TRAFFIC FLOW METROPOLITAN AREA

THE REGIONAL PLANNING COMMISSION
 TRANSPORTATION PLANNING PROJECT METROPOLITAN AREA
 COUNTY OF LOS ANGELES, CALIFORNIA
 PREPARED ON ROADS PROJECTS ADMINISTRATION O.R. NO. 165-1-07-246





SCALE IN THOUSANDS OF VEHICLES



ALL TRAFFIC OVER 1000 VEHICLES PER DAY IS SHOWN TO SCALE

TRAFFIC VOLUMES ARE 24 HOUR TYPICAL WEEK-DAY (MONDAY TO FRIDAY) VOLUMES ADJUSTED TO AN AVERAGE OF CONTROL COUNTS MADE BETWEEN MAY 1ST AND NOV 30, 1941.

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