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A Report Upon

MAJOR STREETS AND PARKING

WEST PALM BEACH, FLORIDA

Prepared for

CITY COMMISSION

and the

CITY PLANNING BOARD

By

HARLAND BARTHOLOMEW & ASSOCIATES

CITY PLANNERS

SAINT LOUIS, MISSOURI

A Report Upon

MAJOR STREETS AND PARKING IN THE CENTRAL BUSINESS DISTRICT

WEST PALM BEACH, FLORIDA

Prepared For

THE CITY COMMISSION
and the
CITY PLANNING BOARD

By
HARLAND BARTHOLOMEW & ASSOCIATES
CITY PLANNERS
St. Louis, Missouri

March, 1952

HARLAND BARTHOLOMEW AND ASSOCIATES
CITY PLANNERS - CIVIL ENGINEERS - LANDSCAPE ARCHITECTS
317 NORTH ELEVENTH STREET
SAINT LOUIS 1, MISSOURI

HARLAND BARTHOLOMEW
RUSSELL H. RILEY
HARRY W. ALEXANDER
ELDRIDGE LOVELACE

DONALD W. HUTTON
DONALD W. McGLASHON
DONALD WOLBRINK

March, 1952

City Commission
City Planning Board

Gentlemen:

In accordance with our agreement, we are pleased to submit herewith another report which is a part of your comprehensive city plan.

The accompanying report is concerned with Major Streets and Parking Facilities. The moving and parking of vehicles now presents some of the most difficult problems confronting urban communities. These problems are particularly difficult in West Palm Beach because of its shape and character. The report indicates the extent of these local problems and proposes long-range plans whereby they can gradually be corrected.

During the preparation of this report, we have received the most helpful assistance and cooperation from various officials, organizations and individuals all of which is gratefully acknowledged.

Respectfully submitted,

HARLAND BARTHOLOMEW & ASSOCIATES

By Russell H. Riley

TABLE OF CONTENTS

Page

PART I - MAJOR STREETS

INTRODUCTION 1

PRINCIPLES AND STANDARDS OF A MAJOR STREET SYSTEM 4

Types of Major Streets 4
General Standards 6

EXISTING CONDITIONS. 9

Width of Right-of-Way 9
Width of Pavements 11
Volume of Vehicular Movement. 12

THE PROPOSED MAJOR STREET SYSTEM 16

By-Pass Route 16
North-South Major Streets 17
East-West Major Streets 21
Summary 25
Suggested Street Cross Sections 26
Widening of Chase Avenue and Extension Southward 26
General Traffic Problems 28
Street Names 29
Control of New Subdivisions 30

PART II - PARKING IN THE CENTRAL BUSINESS DISTRICT

INTRODUCTION 32

Principles and Standards 33

EXISTING CONDITIONS 37

Existing Land Use 37
Existing Parking Facilities 39
Use of Curb Parking Spaces 41

TABLE OF CONTENTS (Contd)

	Page
PROPOSED PARKING FACILITIES	45
Responsibility for the Plan	47
Improvement and Administration	48
APPENDIX - PROPOSED ORDINANCE REGULATING THE SUBDIVISION OF LAND	

INDEX TO PLATES

Plate No.	Title	Page No.
1	Existing Street Right-of-Way Widths	9
2	Existing Pavement Widths	11
3	Volume of Vehicular Movement	12
4	Major Street Plan	16
5	Suggested Street Cross-Sections	26
6	Detail of Widening and Extension of Chase Avenue	27
7	Principle of Land Subdivision	31
8	Existing Land Use - Central Business District	37
9	Existing Parking Facilities - Central Business District	39
10	Use of Curb Parking Spaces	41
11	Suggested Off-Street Parking Facilities	45

INDEX TO TABLES

Table		
1	Existing Parking Facilities - Central Business District	40
2	Number of Existing Parking Facilities Per 1,000 Persons - West Palm Beach and Typical Cities	40

PART I

MAJOR STREETS

INTRODUCTION

The convenient movement and storage of vehicles is essential for the satisfactory funtioning of the modern urban community. Without autos, trucks and busses, industry and business would be severely handicapped and the normal activities of every-day life would be seriously limited. The providing of the necessary facilities to accommodate these movements now presents one of the most difficult problems confronting urban areas.

The difficulties encountered in accommodating vehicular movement has been becoming increasingly acute during the past few decades. This is partially due to the rapid and unexpected increase in the number of autos and trucks as well as to the increase use of these facilities. Another cause is that most cities were not designed to handle the large volume of traffic that now uses local streets. The streets are narrow and were primarily intended to accommodate pedestrians and horse drawn vehicles. On the early streets, the type of pavement made little difference; and, likewise, jogs and dead end caused no serious inconvenience. Entirely different requirements are encountered today.

It is expected that the volume of local vehicular movement will continue to increase in the future. This will not only result from anticipated population growth, but also from the larger number of vehicles owned by business and individuals and from an increased use of these facilities. Thus, while many improvements are now needed

to alleviate the traffic congestion and delays, more extensive improvements will be necessary in the future. Early and thorough plans to provide for same are imperative.

The provision of adequate major street and parking facilities is more than a convenience to the owners or drivers of the vehicles. It is an economic necessity from the standpoint of the entire city. Without such improvements, the cost of conducting business and industry is increased. Stores and offices tend to move from the central business district with a resulting decrease in commercial property values accompanied by a loss of public taxes. Further, residential values and amenities are impaired because of the adverse effects from the large volumes of autos and trucks that use the residential streets. Families move from the older portions of the city to avoid these conditions and in turn impose other difficult problems in the outlying areas.

In planning the major street system, careful consideration must be given to other phases of the comprehensive city plan. The several dominant types of land uses - industry, business and residence - require different types of street facilities. The major streets also have an influence upon the location of schools, and recreational facilities. Thus all phases of the city plan must be related to and influenced by the major street system.

This report contains an analysis of the existing street and parking facilities within and near West Palm Beach and of the current and probable future needs. It also contains recommendations regarding these facilities that should serve the future urban area. The

proposed street system must necessarily be related to facilities beyond the corporate limits since West Palm Beach area is an integral portion of an urban area extending north and south of the city.

It will be difficult to make extensive improvements on some of the existing major streets because of the intensive development fronting thereon. However, certain readjustment and changes will materially improve the movement of vehicles. Further, recommendations will be made regarding the possibility of a more efficient use of the existing facilities. Fortunately a considerable amount of the future urban area is now entirely vacant - for example, the Westward Expansion Area - and here a completely modern major street system can be provided at a minimum cost.

PART I

MAJOR STREETS

PRINCIPLES AND STANDARDS OF A MAJOR STREET SYSTEM

The large majority of the current vehicular movement could be accommodated on a few, wide, direct and well improved thoroughfares. These are the routes that are commonly known as major streets. The remaining streets should be comparatively narrow and should have an inexpensive type of pavement, and should be designed so as to discourage their use by through and fast moving vehicles. Past experience has revealed that approximately only 20% of the total street mileage within the city need be used as major thoroughfares.

Following is a discussion of the more important types of traffic movements and of the major streets that are needed to accommodate them.

Types of Major Streets

Radial Streets

The dominant traffic movement within urban areas is between residential sections and places of employment - primarily industrial and business districts. In West Palm Beach the major shopping center is the primary objective of traffic movement. It is thus essential that adequate major streets be provided to accommodate this type of traffic movement.

These streets are usually known as radial thoroughfares. They should extend directly from the business district to all major residential

sections of the city and several will extend beyond the corporate limits, as County, State or Federal highways, thus, accommodating through traffic as well as traffic entering the city from adjacent urban areas. Because of its long narrow shape, many of the north and south streets within West Palm Beach now serve as radial routes. However, with the development of the Westward Expansion Area, some east-west radial routes can be provided that will conform to modern standards.

Cross-town Streets

Another important type of vehicular movement within urban areas is from one residential section to another or from a residential area to an educational or recreational development. Belvedere Road and Southern Boulevard are local examples of this type of street. While the city's shape is such that it now requires fewer cross-town routes than normal, there will be a substantial need for them under the proposed pattern of population and land uses.

By-Pass Streets

Two general types of by-pass routes should normally be provided in a major street system. One is the by-pass route that will enable through traffic to go around the local urban area. The other is a by-pass route around the heavily congested central business district. This latter type of by-pass is needed in West Palm Beach where so much traffic moving between the northern and southern sections of the city is forced to pass through the business center.

It is the by-pass route carrying through traffic completely around the urban area that particularly benefits the modern community. Much

of this traffic is heavy, fast moving trucks that seriously interfere with the local movement and also causes damage to local pavements. A by-pass route around Palm Beach will be of particular benefit to the local area because of the large movement of through trucks and autos of tourists.

Express Highways

A new type of highway is now being provided to accommodate heavy traffic movements within and near large urban areas. This is an express highway. Its major advantage is that no streets intersect the expressway at grade and no adjoining property has access to the roadways so that they can be safely used for large volumes of fast-moving vehicles. An expressway, generally paralleling U. S. 1, is proposed along the east coast of Florida that will afford service to the West Palm Beach area.

General Standards

Certain standards regarding widths and locations for major streets are now widely accepted. It is not always feasible because of fixed local conditions to completely meet these standards, but they should be approached as closely as possible. Desirable cross sections for the several types of major streets needed in West Palm Beach are shown on the proposed major street plan which is included in a later section of this report.

A basic requirement for all major thoroughfares is that they have a wide, smooth pavement, easy grades and long curves. A minimum

number of intersecting streets is desirable and any intersection should be properly controlled by signs or traffic signals. Further, such signals should be timed so that they will permit continuous movement rather than a series of starts and stops.

A few of the more important and strategically located radial streets should have a right-of-way width of at least 100 feet and a paving width of not less than 76 feet. This will enable the accommodation of three moving lanes of traffic in each direction and one lane of parking along each curb. On major thoroughfares accommodating large volumes of trucks, a width of 11, rather than 10, feet of pavement for each moving lane is desirable, and the right-of-way should be 120 feet. A desirable minimum right-of-way width for the balance of the radial routes is 80 feet, which can accommodate two moving lanes of traffic in each direction together with parking along each curb.

A desirable width for the more important cross-town routes is 80 feet; but in many instances, and particularly in West Palm Beach, a width of 66 to 70 feet will be entirely adequate for these routes.

By-pass routes should be quite wide; and since much of the by-pass route would be initially located in vacant or unimproved property, the minimum right-of-way width should be 100 feet; and in many instances, a width of 200 feet or more would be logical. This width is desirable, though a two lane pavement may be entirely adequate in the initial improvement, for it will tend to discourage the development of intersecting driveways which causes so much interference with the through traffic. The express highways require a right-of-way of from 200 to 300 feet in width.

These desirable right-of-way widths can be easily secured whenever a major street is provided in vacant and unimproved property. However, it is extremely costly and difficult to widen rights-of-way on existing major routes. In such instances, every consideration must be given to the possibilities of widening the pavement only and to insure more efficient use of this pavement, such as prohibiting parking at least in the direction of major travel during the peak hour periods. These and other similar methods can be of particular assistance in reducing costs and yet expedite vehicular movement.

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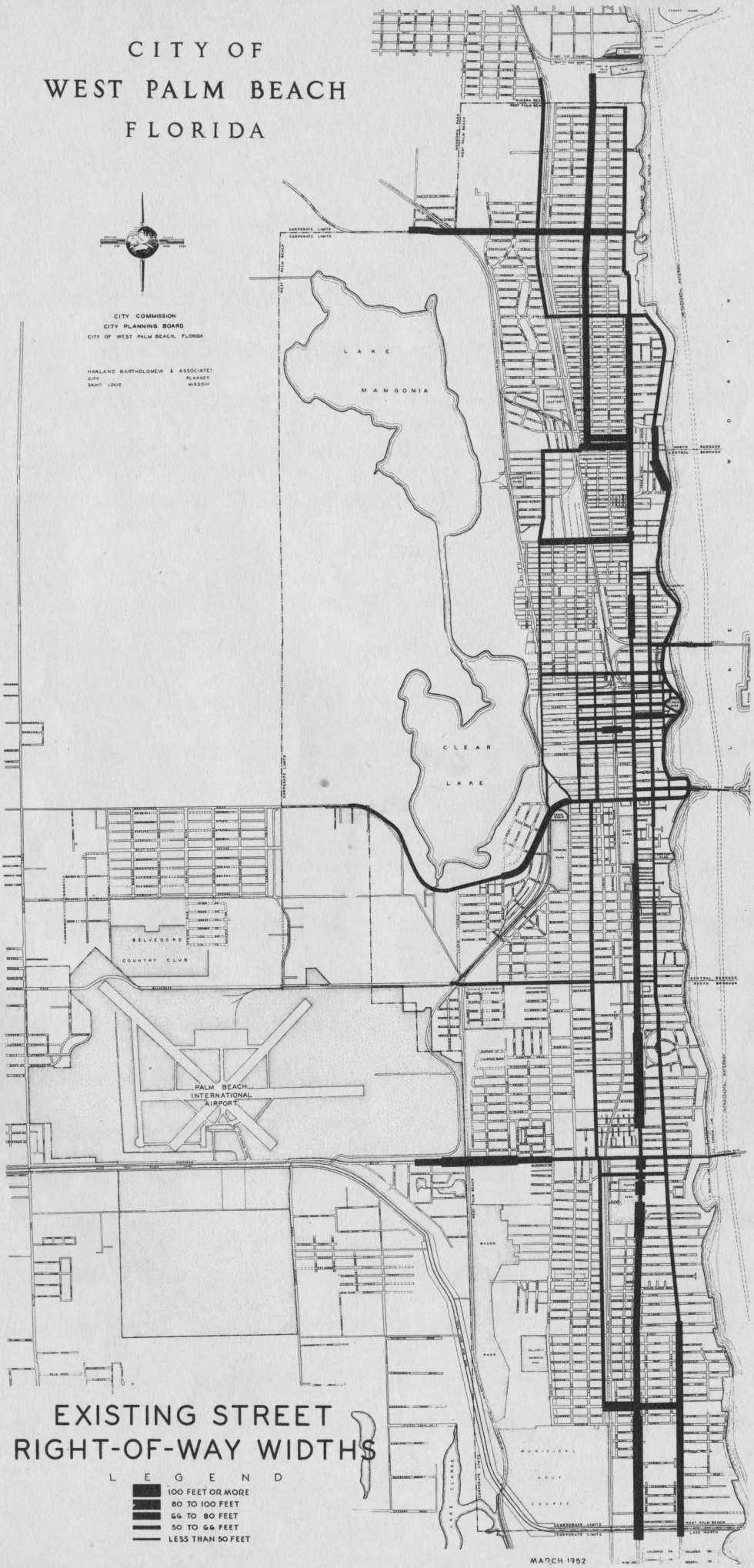

EXISTING STREET RIGHT-OF-WAY WIDTHS

L E G E N D

- 100 FEET OR MORE
- 80 TO 100 FEET
- 66 TO 80 FEET
- 50 TO 66 FEET
- LESS THAN 50 FEET

MARCH 1952

PLATE I

EXISTING CONDITIONS

Preceding sections of the city plan revealed that substantial portions of West Palm Beach are now compactly developed. Here the street pattern is fixed, and any changes or readjustments will involve extensive expenditures because of the abutting development. It is essential that these existing conditions be carefully studied to determine their adequacy and the changes that are possible.

In the more outlying areas, particularly in the westward expansion area, there are comparatively few existing streets and here it will be possible to develop new major streets that conform to modern standards. Further, through subdivision control, these necessary rights-of-way can be secured at little or no public cost.

Width of Rights-of-Way

The ability of a street to carry large volumes of traffic is primarily determined by the width of its right-of-way width - the distance between abutting property lines. If the right-of-way is from 80 to 100 feet, a wide pavement can be provided with only nominal expenditures. However, the widening of a 50 foot street, where the abutting property is intensively developed, involves large expenditures and frequently is financially impossible.

Plate 1 diagramatically shows the rights-of-way width on the more important streets now used as major thorough fares in West Palm Beach. These are grouped into five major classifications; namely, rights-of-way having a width of less than 50 feet, 50 to 65 feet, 66 to 79 feet, 80 to 99 feet and 100 feet or over.

Only two very short sections - actually less than three-quarters of a mile - in the entire system now has a right-of-way width of 100 feet or more. There are also very limited portions of the existing major streets that have a right-of-way width of 80 feet, although this is the desirable minimum width for a major street accommodating two moving lanes in each direction with parking on each side. Some portions of the system have right-of-way width of 65 to 79 feet, but the large majority of the existing streets serving as major thoroughfares have a width of only 50 to 65 feet. In the business district where the maximum concentration of the traffic occurs, the large majority of the streets are only 50 feet wide and a few of the streets in this area have a width of less than 50 feet.

It is difficult to improve a 60 foot street so as to provide a pavement more than 40 to 44 feet wide, and even this leaves an inadequate width for planting and sidewalks. A 44 foot pavement will accommodate only two moving lanes with parking on each side or four moving lanes without any parking. A 36 foot wide pavement is about the maximum that can normally be provided on a 50 foot right-of-way.

Practically all of the existing streets are so narrow that there is little or no possibility of providing a modern highway that will accommodate three moving lanes in each direction, although the traffic counts revealed that at least one such street is now needed for north and south peak movements. Some widening will be required eventually, but the major possibilities are to make the maximum use of the existing rights-of-way and to develop new streets that will accommodate through traffic.

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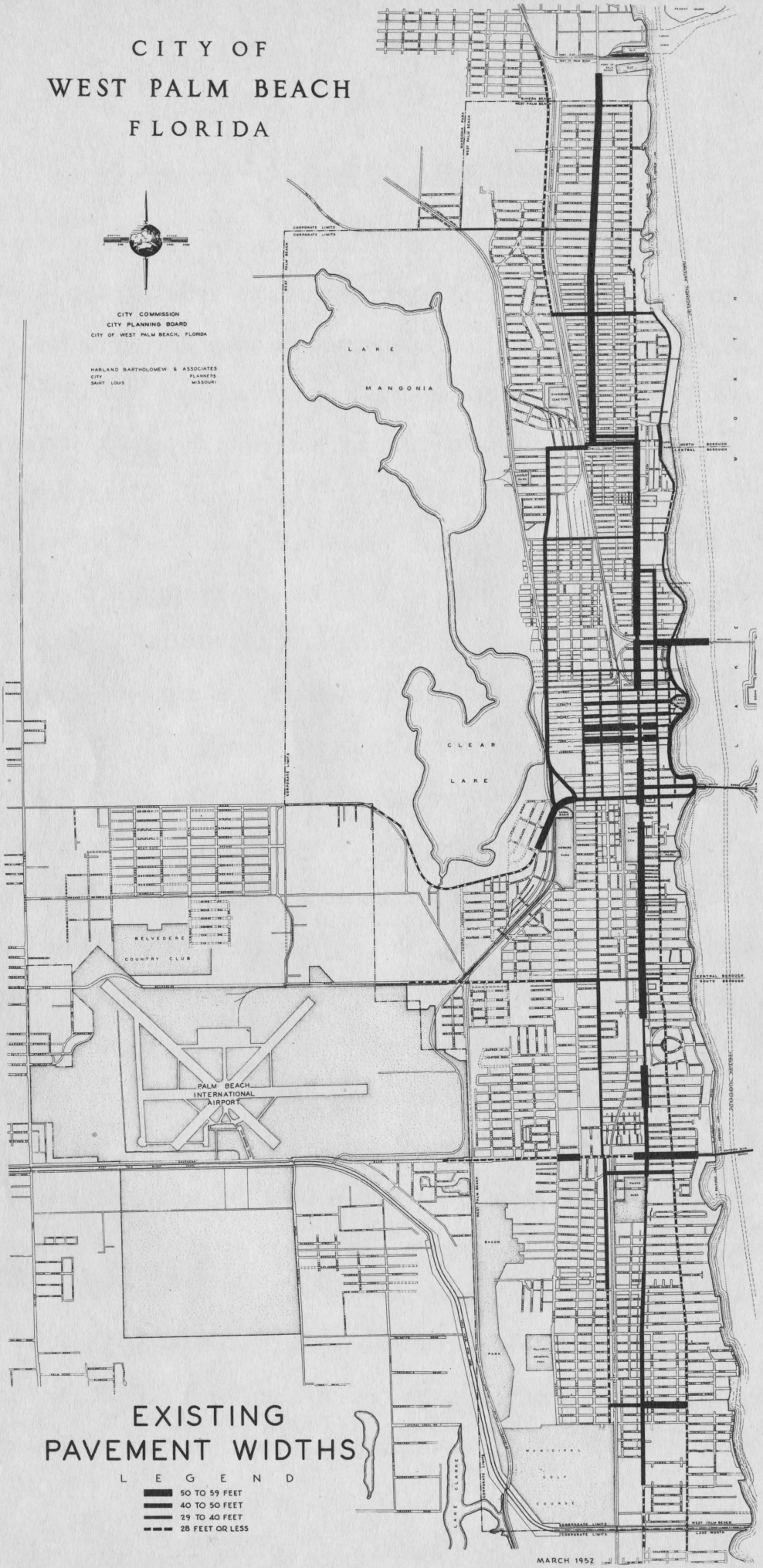

EXISTING PAVEMENT WIDTHS

L E G E N D

- 50 TO 59 FEET
- 40 TO 50 FEET
- 29 TO 40 FEET
- 28 FEET OR LESS

MARCH 1952

PLATE 2

Widths of Pavements

The width of pavement now found upon the existing major streets are graphically shown, according to four major classifications, on Plate 2. Narrow pavement predominates on the existing major street system with only a few sections of pavement having a width of 50 feet or more, whereas a minimum width of 60 feet is desirable for two moving lanes in each direction and parking along each side. The following plate reveals that the heaviest volume of traffic is found on U. S. 1 and fortunately this route has some of the widest pavement in the existing system. However, along South Poinsettia a substantial amount of the pavement is less than 50 feet, but fortunately the right-of-way is comparatively wide and the pavement can be widened.

Along other important major routes, such as Olive, Flagler, and Tamarind, the pavement is entirely too narrow. On the former, much of the pavement has a width of less than 28 feet. Most of the pavement on Flagler is less than 40 feet, and in some sections it is less than 28 feet. Along Tamarind a 40 foot pavement primarily prevails, but this is still narrow for the large volume of trucks that it accommodates and especially where parking is permitted. The pavement on cross-town routes is also narrow with the large majority being less than 40 feet. The very narrow pavements, within and near the central business district, is a major reason why one-way traffic and in some instances parking prohibitions have become mandatory.

Plates 1 and 2 reveal that any extensive physical improvements of the existing major streets will be both difficult and extremely costly. Some pavement widening is essential and should be done in the comparatively

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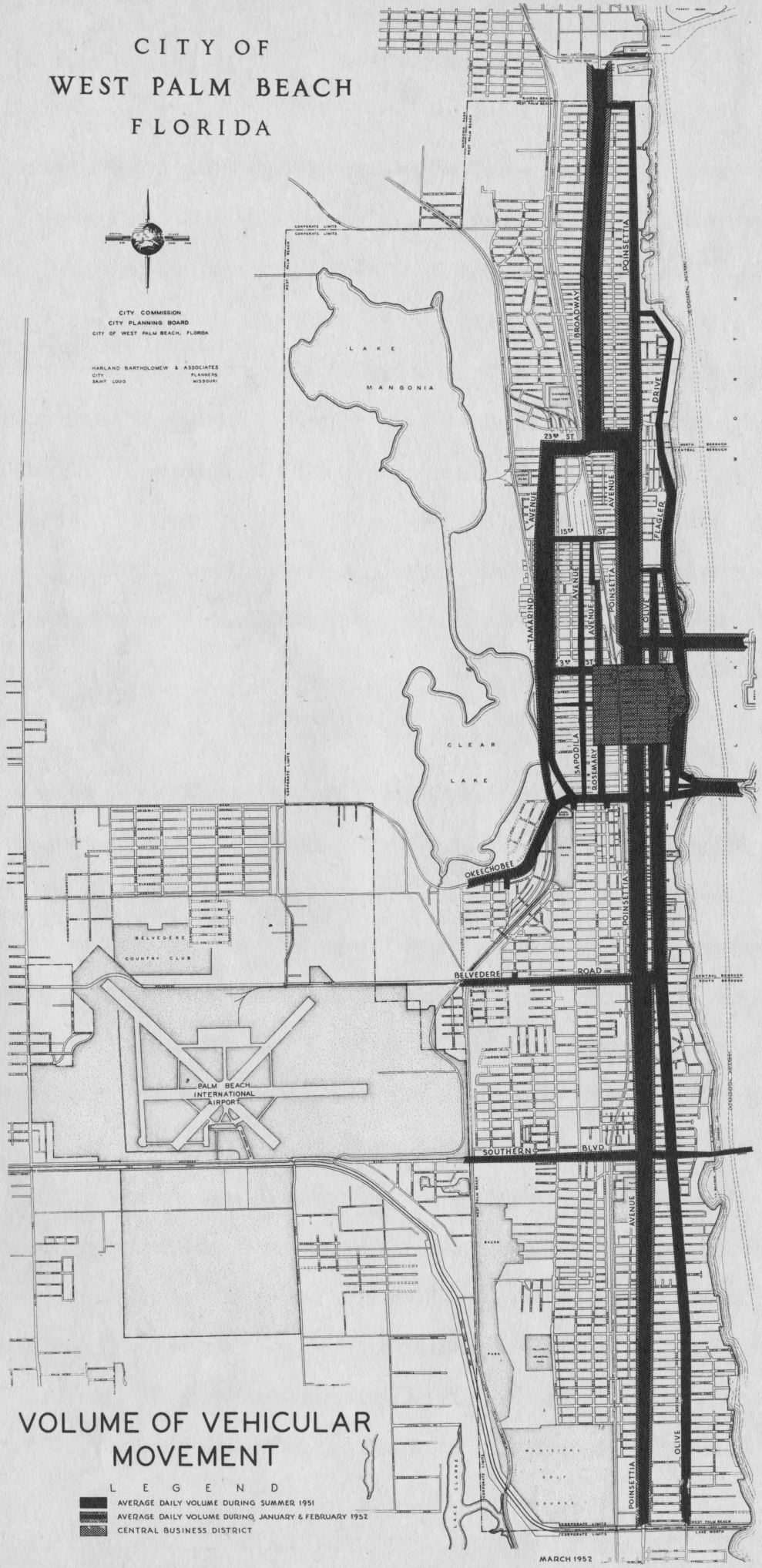

VOLUME OF VEHICULAR MOVEMENT

LEGEND

- AVERAGE DAILY VOLUME DURING SUMMER 1951
- AVERAGE DAILY VOLUME DURING JANUARY & FEBRUARY 1952
- CENTRAL BUSINESS DISTRICT

MARCH 1952

PLATE 3

near future. However, a sound method of expediting traffic movement is establishment and enforcement of regulatory measures along existing streets. This will include the eliminating of parking, especially during the morning and evening rush hours. While this practice is unpopular with the abutting property owners, particularly in shopping districts, it is absolutely essential in West Palm Beach. Further it involves very little expenditures; and if off-street parking facilities are provided to serve the adjoining stores and shops, there is no serious handicap or disadvantage to the shopping center. Actually large volumes of traffic moving through these areas are more of detriment than an advantage to the district.

Volume of Vehicular Movement

During the summer of 1951 and the current winter, counts were made of the number of vehicles moving along the more important local major streets during a 24-hour period. Such counts were made with electric traffic counters, which also enabled a determination of the peak-hour movement at each location. This 24-hour volume of vehicle movement is graphically shown on Plate 3 with the solid line indicating the volume of traffic during the summer season and the lighter delineation the additional volume during the current winter season.

There is a large increase in vehicular movements during the winter season. In most locations there is between 30 and 50 percent more traffic in the winter, and such increases are particularly concentrated on the Federal and State highways that carry through traffic. For example, on Broadway at the northern city limits there was some 7,122 more vehicles in the winter than in the summer. There is also

a substantial difference in the volume of cars carried by the bridges across Lake Worth during the two seasons.

The smallest difference in the volume of traffic between the two seasons are along such streets as Sapodilla, Okeechobee Road and particularly on some of the east and west streets in the central business district. The difference between the traffic during the two seasons indicates two basic requirements. One is that a by pass is most essential in order to relieve the congested business district of the large volume of through movement and the second is that the city must accommodate a larger volume than would normally be required in similar size communities because of the tourist business.

The streets carrying U. S. 1, particularly Broadway and Poinsettia north of the central business district, carry the largest volume of vehicular traffic during both periods. Further, since Broadway is the major entry, it carries a large volume of through traffic at all times. There are 16,705 cars on this street just north of 58th Street, whereas the volume increases to only 17,592 between Fourth and Fifth Streets. Normally there is a much larger increase in volume as the street approaches the business district.

The importance of Flagler is also indicated, since this street carries some 10,800 vehicles near the business district. The extension of this street to the south will be a very important factor in accommodating the large volumes of traffic that are now forced to use Clive and Poinsettia.

The map also clearly reveals the preponderance of north-south movement. Even on the most important cross-town routes, such as

Okeechobee, Belvedere and Southern Boulevard, the volume of vehicles is less than one-half of the volume on Broadway and Poinsettia.

An analysis of the peak-hour movements reveal that certain streets, particularly those in the central business district are now being used to about capacity. For example, on Poinsettia between Datura and Evernia the peak-hour movement is approximately 1,400, and this is forced to travel over only three lanes. With so many traffic signals and cross movement, the capacity of each lane is approximately 500 vehicles. Thus, this street can now carry very little additional traffic. The large peak-hour volume in the central district clearly indicates the necessity of one-way streets and of prohibiting parking during the maximum periods of movement.

The counts taken during the two seasons also revealed that there is only minor differences in the peak-hour movements during the two seasons. For example, on Clematis, the peak-hour movement was 441 in the winter and 370 in the summer, and even a smaller difference was noted between the two peak periods on both Clive and Poinsettia. This further indicates that the streets are practically used to capacity at the peak hour. While there is much more movement during the winter, many persons do not visit the business district during peak hours, or some of the drivers find other routes.

Since much additional growth is expected within or near West Palm Beach and an increased use of the auto is anticipated, it is evident that substantial street improvements, particularly those to accommodate the north-south movement, will be necessary in the future. These are especially needed to facilitate movement within and near the central

business district. If such improvements are not made, there will undoubtedly be a pronounced trend towards new commercial development in outlying sections, rather than within the central area.

PLATE 4

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GRAPHIC SCALE
0 800 1600 2400

MAJOR STREET PLAN

L E G E N D

- ROUTES ACCOMODATING 6 MOVING LANES (120' MINIMUM RIGHT OF WAY DESIRABLE)
- ROUTES ACCOMODATING 4 MOVING LANES (80' MINIMUM RIGHT OF WAY DESIRABLE)
- ROUTES ACCOMODATING 2 MOVING LANES (60' MINIMUM RIGHT OF WAY DESIRABLE)
- EXPRESSWAY & BY-PASS ROUTE
- PROPOSED ALIGNMENT OR NEW MAJOR STREET
- CENTRAL BUSINESS DISTRICT

ONE DOT REPRESENTS TEN PERSONS OF FUTURE POPULATION DISTRIBUTION

MARCH 1952

THE PROPOSED MAJOR STREET SYSTEM

The proposed major street system that should be gradually developed to serve a future population of some 85,000 persons is graphically shown on Plate 4. The system extends throughout the entire probable future urban area and the major advantages that can be obtained from the plan are in sections now vacant.

In the older developed sections of the city, the possibilities of providing a completely modern system of highways are very remote. Here the existing development along the major streets make extensive widenings difficult and thus the most efficient use must be made of the existing facilities. Some widenings are absolutely essential in certain areas and some new openings and extensions are proposed. Following is a summary discussion of the various improvements proposed and of the several streets that should comprise the future system.

By-Pass Route

Data regarding local traffic movements revealed that the dominant movement is in a north and south direction and includes not only local autos but also a large volume of both passenger cars and trucks passing through the city. Further, the majority of through passenger cars traversed the central business district, which is a serious defect in the local street system. There is also no logical method of widening any north and south streets to adequately accommodate this movement.

The only satisfactory solution for accommodating the through traffic is the development of the express highway or by-pass route in the

general location shown on the plate. In the northwestern portion of the urban area, this route will be a short distance east of Military Trail and is the western boundary of the Westward Expansion Area. In the central and southern portion of the city, the by-pass route will generally follow the Seaboard Railroad. A substantial portion of this right-of-way has already been acquired in the southern portion of the city as well as in the area south of West Palm Beach.

This local route is a portion of an express highway serving the communities along the east coast and extending from Jacksonville to Miami. It is planned that the improvement will conform to high standards with no local property having direct access to the pavement. Any crossing, of or by local streets, will be separated and interchanges will be provided at the general locations shown upon the plan. The early improvement of this project can be one of the most important factors in the improvement of local vehicular movement and in protecting the established residential character of the city.

North-South Major Streets

The north-south major streets will be discussed beginning with Flagler Drive along the lake and then moving progressively westward.

Flagler Drive. An extension of Flagler Drive south of Okeechobee Road will be the most important major street improvement that can be undertaken in the developed portion of the city. This is particularly important because of the inability to make substantial improvements along either Clive or Poinsettia south of the business district.

The route should be improved with a pavement width that would accommodate two moving lanes in each direction and at least one parking

lane should be provided along the west curb so as to serve the adjoining development. It is proposed that the route eventually be extended across the canal and then southward through Lake Worth. Because of the port development immediately north of the city, there is no particular advantage in attempting to extend Flagler Drive north of 36th Street.

A major improvement and adjustment in this street is the widening of Chase Avenue and the extension of this street south so as to avoid the present circuitious routing near the South Bridge. A detail of this proposed improvement is shown on a later plate.

Olive Street. This is a very narrow route but its continued use as a major street is imperative because of the large volume of traffic moving in a north-south direction between the railroad and the lake. Some widening of the pavement would be disirable, but the major advantages will result from its continued use as a one-way route in the area south of the business district.

Poinsettia Avenue. This route now carries U. S. 1 south of Northwood Road and is the most heavily traveled route within the city. Some widening of the pavement is desirable and essential, especially in the southern portion of the city where there is adequate right-of-way. It is very desirable that much of the route be improved so that it would accommodate two moving lanes in each direction, at least during peak periods. This will undoubtedly require parking prohibitions, at least along one curb.

New Street Along the Florida East Coast Railroad. Because of the dominant north-south traffic movement through the cental business district, and particularly because of the very narrow streets over which this

movement is carried, it is most essential that a new north-south street be developed along the railroad. Further, such a street is necessary to insure efficient movement in this congested area, since there is no north-south route between Poinsettia and Rosemary - a distance of nearly 1,200 feet. The improvement of this route will be very difficult, particularly in about four blocks lying south of Clematis. However, it can be accomplished over a long period and will be an important advantage to the city. It is recommended that efforts be made to utilize a portion of the railroad right-of-way where there are no tracks as a part of the necessary right-of-way.

Because of the serious need of additional north-south major streets, some consideration was given to the possibilities of using the entire Florida East Coast Railroad right-of-way as a new street. The location is excellent for such purpose and substantial advantages would result to the surrounding residences by removing the railroad operations. However, the improvement would involve so many problems that it cannot be definitely recommended in this report but instead must depend upon the findings and recommendations of the transportation study.

Broadway. This street carries U. S. 1 in the extreme northern part of the city. Due to the port development immediately north of the city limits, it is impracticable to develop any route between the city and additional north-south streets between the railroad and the lake.

It is proposed that the route be extended for the short distance between Northwood Avenue and 23rd Street and that the latter route be improved as the major east-west thorough fare in this section of the city. An important advantage of improving 23rd Street is its direct connection

with Tamarind, which carries a large volume of traffic around the central business district. While there may be some objection to the removal of the through traffic from the business district north of 23rd Street, this can actually benefit the stores and shops, since the shoppers would not be handicapped by the large movements of through traffic that had no desire to stop in the district.

Pending the time that 23rd Street is widened and improved, it is recommended that 25th Street be used for one-way, west-bound traffic through this business district and that Northwood be used for one-way, east-bound traffic.

Georgia-Rosemary. These two routes now carry a substantial volume of traffic and additional volumes can be expected as industrial development occurs along the railroad and residential development occurs in the southern portions of the city. It is recommended that a new connection be made just north of Okeechobee Road so as to eliminate a bad jog. Effort should also be made to widen the pavement to at least 40 feet along this route.

Parker-Tamarind. Both of these streets now carry a substantial volume of traffic with many trucks being concentrated along Tamarind. The major improvement proposed along these routes is a new connection along the western boundary of Howard Park which will provide a continuous north-south route. While this improvement would require a bridge over the canal and would disturb some of the city's shops, no excessive expense would be incurred and no serious obstacles encountered. The convenient and direct routing would facilitate local traffic movement.

Greenwood Avenue. This route will continue to carry an increasing volume of traffic as the area north of the city develops. However, its

improvement as a major thoroughfare is recommended only as far south as 36th Street as it is impracticable to extend it through the cemetery and the industrial district.

Future Major Streets in the Westward Expansion Area and in the Area South of the Airport. The several major streets that were proposed in the study of the Westward Expansion Area are shown upon the Plate. These will adequately accommodate all north-south movement in this future urban area. Such routes can be secured with a wide right-of-way, and it will be noted that they are extended so as to connect with all major portions of the Palm Beach area.

Several north and south streets are also proposed in the area south of the airport in which some urban development is expected in the future. Much of this is now vacant and the securing of adequate rights-of-way can be accomplished at little or no expense whenever the area is subdivided.

Military Trail. This is now an important state highway, and the volume of traffic is constantly increasing. This should continue to be an important route, even after the express way is developed because of the new development occurring along it. A right-of-way width of at least 80 and preferably 100 feet should be secured so as to provide for adequate drainage facilities and for any pavement widening that may become necessary.

East-West Major Streets

The east-west proposed major streets will be discussed beginning at the northern city limits and continuing southward.

54th Street. This is the northern most major street within the corporate limits of West Palm Beach. It should eventually be extended westward to connect with the extension of the first north-south major street in the Westward Expansion Area.

45th Street. This route has now been improved as an important east-west route in the northern portion of the city. Eventually a 56 to a 60 foot pavement should be provided throughout so as to encourage the concentration of the east-west movement in this general section of the urban area and particularly to enable traffic to reach Military Trail and thus by-pass the older section of the city. This street is also the northern boundary of the Westward Expansion Area.

36th Street. This is another important east-west street in the northern section of the city. East of Broadway it should accommodate two moving lines in each direction. However, west of Broadway a narrower pavement will be adequate to accommodate the local movement.

23rd Street. The necessity of improving this street as a major thoroughfare was discussed in connection with Broadway.

15th Street. 15th Street will eventually be one of the most important east-west streets in the entire system. It is to be extended to the west where it will be one of the major routes in the Westward Expansion Area and will also be extended to serve the area beyond the Military Trail. Within the Westward Expansion Area the route is proposed to have a right-of-way width of 150 to 200 feet. However, because of existing development along the existing street, a pavement width accommodating two moving lanes in each direction is about all that can be achieved.

New Street Between 7th and 8th. The importance of this proposed major street was thoroughly discussed in the report upon the Westward

Expansion Area which also contained suggested cross sections. It should eventually become the most important entry into West Palm Beach and will also extend across the Flagler Memorial Bridge to provide access to the Town of Palm Beach. This route is proposed to have one of the few interchanges with the express highway, and most traffic entering the area from either the north or the south would use this street to reach the present development. A right-of-way width of 200 feet is proposed west of the Flagler Memorial Bridge. This route also extends southward along Congress Avenue and providing excellent access to the airport and to a rapidly growing portion of the urban area.

Clematis and Fern. These two streets should continue to provide east and west movement within and west of the business district. Commercial development is anticipated along Clematis Street at least as far west as Sapodilla.

Lakeview Avenue - Okeechobee Road. Okeechobee Road is now one of the most important east and west routes in the city and accommodates a large volume of traffic entering the central business district from the area west of the present corporate limits. Its service to the outlying area will be somewhat less after the improvement of the express way, since no grade separation is proposed. However, progress is now being made in providing a new connection between Okeechobee and Belvedere Roads by the use of Austrailian Avenue and a new extension along the Seaboard Railroad. Consequently, Okeechobee Road will continue to be an important thoroughfare, at least east of this new connection.

Because of the present traffic congestion and delays encountered at the west end of the south bridge and because of the difficulties of

widening either Okeechobee Road and Lakeview Avenue east of Poinsettia it is recommended that Okeechobee Road be made available for one-way, east-bound traffic east of Poinsettia and that Lakeview Avenue be utilized for one-way, west-bound traffic east of Poinsettia Avenue.

Park Street. This now accommodates considerable traffic, particularly where the traffic on Parker Avenue turns eastward at the south boundary of Howard Park. It is proposed that the route be extended westward to connect directly with Okeechobee and that it also be extended eastward to connect with the future Flagler Drive. However, the right-of-way is very narrow and a pavement width of 36 feet is about all that can be expected for this east-west major street.

Belvedere Road. Belvedere Road is now one of the important east-west streets and extends through the urban area west of the city. It also gives direct access to the airport.

The Armed Forces are now contemplating the closing of Belvedere Road west of Congress Street, but this should be only a temporary measure, and the highway should continue as important east-west route in the future. Further, it is recommended that the route be extended east of Olive Street so as to provide a direct connection with Flagler Drive.

Southern Boulevard. This is another important east and west major street providing service west of the city limits and also extending to the Town of Palm Beach via the bridge . It should be improved so as to accommodate two moving lanes in each direction, together with parking along each curb.

Lakewood Road. While this does not now accommodate a large volume of traffic, it should be improved with at least a 36 foot pavement

so as to provide the cross-town movement within the residential area south of Southern Boulevard.

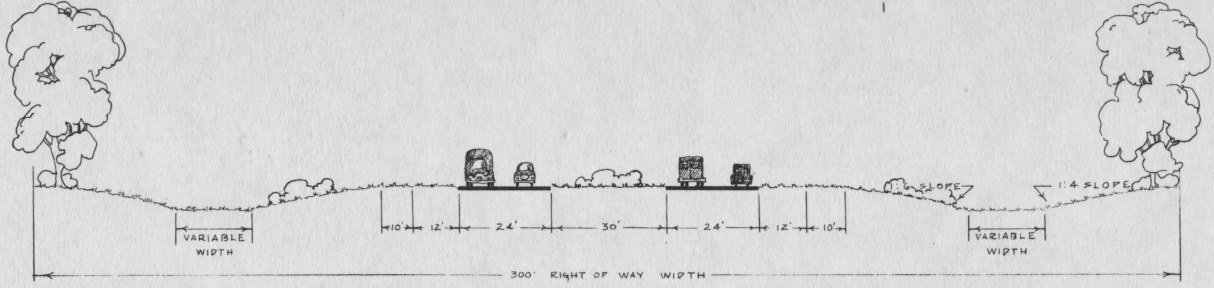
Palmetta Street. This route should be improved in a manner similar to the one discussed for Lakewood Road, but it need extend only between Parker and Olive.

Forest Hill Boulevard. The city has been taking steps to improve this street as an important east-west major street serving the extreme southern portion of the city. It is also recommended that it be extended west of the city beyond Military Trail generally in the location shown on the plan. Since this will be the southernmost east-west major thoroughfare and will serve urban development beyond the corporate limits, the street should be improved with a minimum right-of-way width of 80 feet and in the outlying areas a width of 100 feet would be desirable.

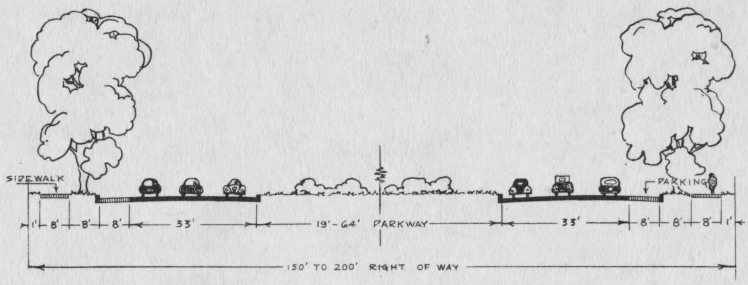
Summary

The proposed major street system should adequately serve the future vehicular movement in the Palm Beach urban area. Full utilization has been made of existing facilities, but the major advantages will eventually result from the opening and improvement of new streets. The system is designed to encourage a balanced urban growth and to protect future residential sections.

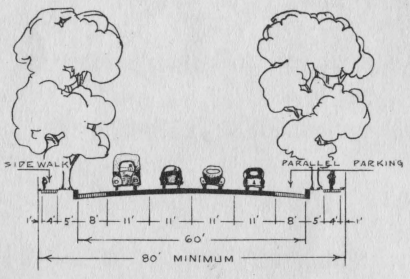
The suggested improvements may at first appear too ambitious. However, a substantial amount of future growth is anticipated for which the present streets cannot readily serve. Further, it is expected that the improvements will be gradually carried out over a long period with the assurance that each project will become an integral portion of the



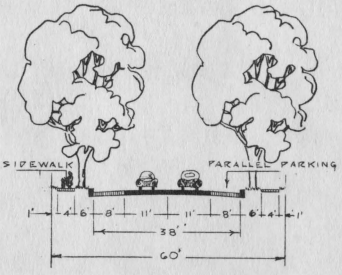
EXPRESSWAY SECTION



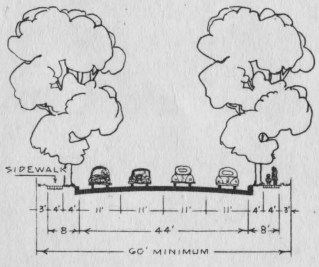
BOULEVARD SECTION
SIX MOVING LANES



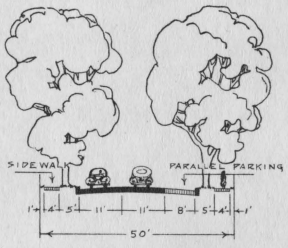
MAJOR STREET SECTION
FOUR MOVING LANES-DESIRABLE



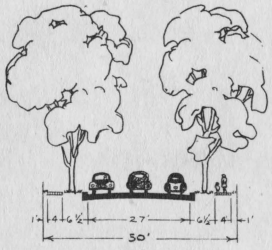
WIDE LOCAL STREETS
TWO MOVING LANES-DESIRABLE



MAJOR STREET SECTION
FOUR MOVING LANES-MINIMUM



WIDE LOCAL STREETS
TWO MOVING LANES-MINIMUM



MINOR STREET

SUGGESTED STREET CROSS-SECTIONS

CITY COMMISSION
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MARCH 1952

PLATE 5

ultimate system. Some of the projects should be primarily financed by agencies other than the city, such as the Federal, State and County Governments. These will include such routes as the express way and some of the streets carrying traffic between the outlying urban and rural areas and the central portion of the city.

Suggested Street Cross-Sections

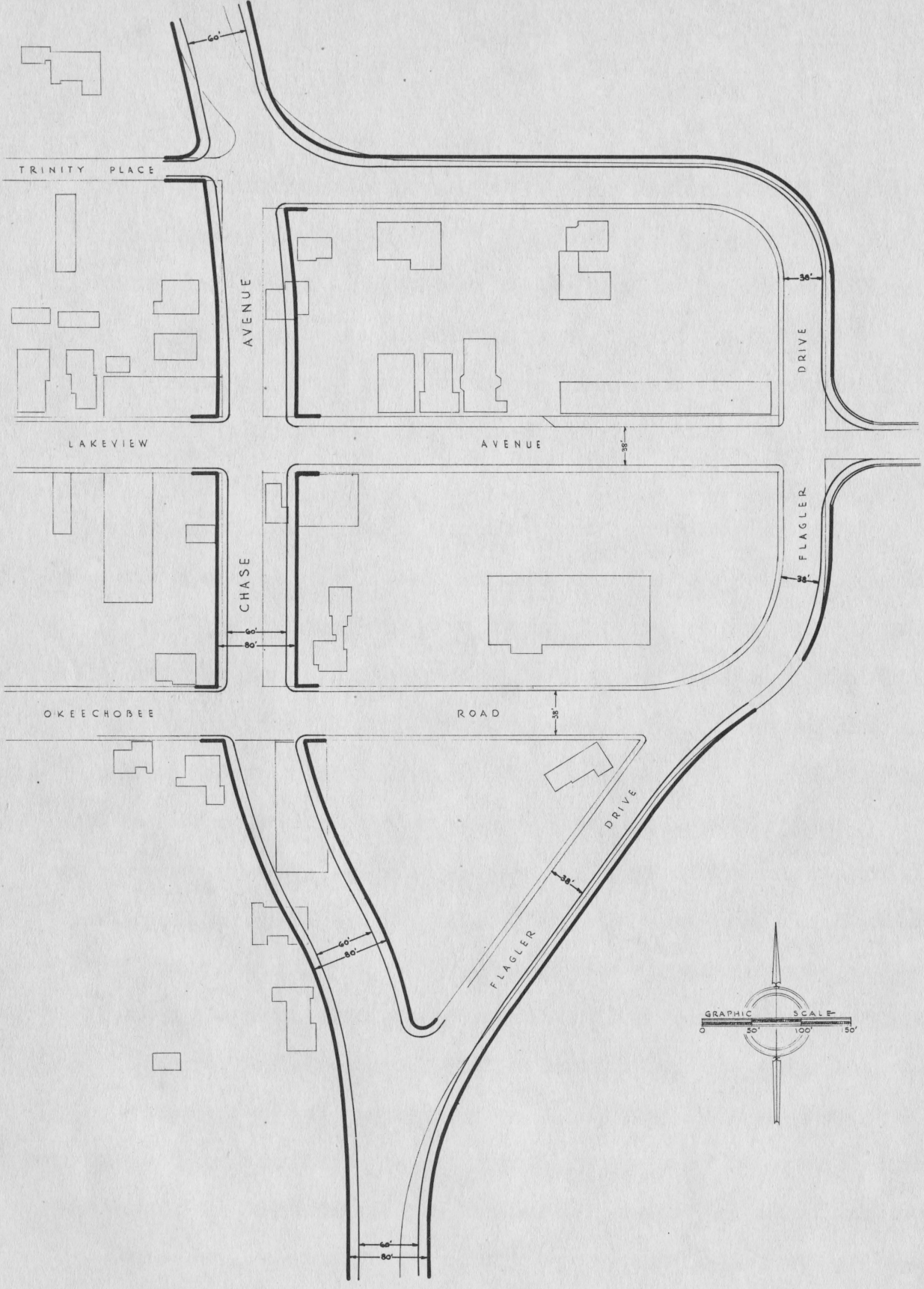
The proposed cross-section of the several types of major streets that should comprise the ultimate system are graphically shown on Plate 5. These indicate the desirable width of pavement, planting strips, sidewalks and rights-of-way. The cross-sections are self explanatory and little discussion is necessary.

With the exception of the express ways and the wide major streets that are to be provided in areas now vacant, the plate shows two possible cross-sections for the major streets. The wider rights-of-way are to be provided whenever an existing street is widened or when a new right-of-way is located in vacant property. This is the desirable modern standard for such routes.

The narrow right-of-way indicates how the existing streets can be improved so as to secure maximum efficiency when the overall width does not conform to modern standards and widening is impracticable. In such instances, planting and sidewalk areas are reduced to a minimum and no parking is proposed - at least during periods of peak movements.

Widening of Chase Avenue and Extension Southward

Beyond the central business district some of the most serious traffic congestion occurs in the area lying immediately south of the central



DETAIL OF WIDENING & EXTENSION OF CHASE AVENUE

CITY COMMISSION
CITY PLANNING BOARD
WEST PALM BEACH, FLORIDA

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SAINT LOUIS, MISSOURI

PLATE 6

MARCH 1952

district. This is primarily due to the few north-south streets, their narrow rights-of-way and pavement. The congestion is particularly acute in the vicinity of the South Bridge, for here there is substantial volumes of east-west traffic merging with and crossing the heavy north-south movement. These conditions will become worse as the city grows and also when Flagler Drive is extended for a substantial distance south of the bridge.

The accompanying Plate 6 shows a proposed improvement that will assist in the correction of this condition. Chase Avenue is now a very heavily used street; and, yet, it is only forty feet wide. It is imperative that this street, which is only two blocks long, be widened. Further, the present alignment of Flagler Drive at the bridge is very indirect and results in serious conflicts at the entrance to the bridge.

It is proposed that Chase Avenue be widened to eighty feet so that it can accommodate a sixty-foot pavement and that Chase be extended to the south to a new connection with Flagler Drive. The plate shows the existing structures that would be disturbed by this improvement. These include two residences and a commercial structure south of Okeechobee Road and a few small structures between Okeechobee and Trinity Place. These would result in any substantial expenditure for the necessary right-of-way, yet the project will afford many advantages and conveniences to such a major relief in expediting traffic movement that the cost can be fully justified. The improvement will be particularly necessary as Flagler is extended to the south and carries a large volume of traffic.

Another change in traffic regulations that will further improve traffic movement in this general area will be the use of Okeechobee Road

to carry one-way, east-bound traffic, at least east of Poinsettia and to utilize Lakeview Avenue for one-way, west-bound traffic between the bridge and Poinsettia.

General Traffic Problems

This report has indicated that the narrow rights-of-way and pavements in the developed portion of the city makes it imperative that maximum efficiency be made of the existing streets. This involves the establishment of one-way streets in the more congested areas and in prohibiting parking during the peak-hour movements. The painting of streets so as to clearly define the individual lanes would also afford advantages, particularly with strict enforcement in the proper use of such lanes.

While this report is concerned with the location and physical character of the streets, recommendations have been made regarding the establishment of additional one-way movements upon portions of 25th Street, Northwood, Lakeview, Okeechobee Road, Poinsettia and Clive. Similar regulations will undoubtedly be necessary upon portions of other streets as traffic increases in the future.

Due to the serious traffic congestion within and near the central business district of West Palm Beach a thorough and comprehensive traffic study should be made in this area in the near future. This would not only include study and recommendations regarding the establishment of additional one-way streets but would also include determination of areas where parking should be prohibited either during the entire day or during the peak periods. Another important phase of this study would be recommendations regarding the location of future traffic signals including a system of proper timing for each signal. A major objective

of this timing should be to insure progressive and continuous traffic movement at least on the north-south routes. A careful analysis is also needed regarding the turning movements at the major intersections, because some of the present three-phase lights now result in excessively long delays. With the traffic congestion and delay now reaching serious proportions and with every indication that they will become more acute in the future, such a traffic study can insure many conveniences and advantages.

Street Names

Again while the city plan is primarily concerned with physical conditions, one local condition has been observed that should be mentioned in this report. This is a matter of street names. It is not an unusual condition, for it prevails in many other American cities, yet needs correcting wherever it does exist.

The present system of numbering the east and west streets north of the business district has resulted in a sound and convenient system and assures many advantages. However, far different conditions prevail in the area south of the business district. Here there is not only a great variety of names, but several different names may appear on a series of streets that are almost direct continuations of each other. This condition results in many delays and inconveniences to visitors and probably to local firms that are required to make deliveries. It would be very logical if the streets in this section of the city were renamed and if the same system was used as now prevails in the northern part of the city. Experience has proved this is one of the most logical and simple systems in street naming. Certainly the minimum changes that should be made in

the near future is to give the same name to all streets that have a similar alignment. However, this would probably cause just as much difficulty as in completely renaming all streets, and it is recommended that the latter system be first attempted.

Control of New Subdivisions

Normally the first step in establishing the urban pattern is the preparation and recording of a subdivision plat for the development of vacant property. Such a plat determines the location of street, lot lines and, in many other respects, exerts a major influence upon the future character and desirability of the subdivided area. Many difficult problems now confront the West Palm Beach area because of mistakes made in past subdividing practices. It is therefore essential that such mistakes be avoided in the future and that subdivisions henceforth conform to the recommendations of the comprehensive plan and to modern standards and practices.

The city's charter provides that the Planning Board may study and recommend upon all subdivision plats within the corporate limits of West Palm Beach as well as upon plats in unincorporated territory lying within three miles of the city's corporate limits. It is most logical that the Board report upon such plats for it is a fact finding body familar with the city plan and having major responsibilities in seeing that the plan is consistantly followed. It is further desirable that the land beyond, but next to the city, be under the same subdivision control, for it may ultimately become a part of the city or, at least, will affect the entire urban area.

PLATE 7

BAD

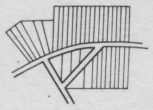
GOOD

MINOR STREETS SHOULD ENTER MAJOR STREETS AT RIGHT ANGLES TO MINIMIZE TRAFFIC HAZARD. LOTS WITH DOUBLE FRONTAGE ARE UNECONOMICAL AND UNDESIRABLE AND SHOULD BE AVOIDED.

BAD

GOOD

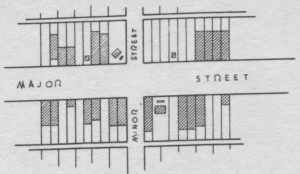
LOTS SHOULD BE ARRANGED TO OBTAIN MAXIMUM FRONTAGE ON OPEN SPACES, PARKS, AND VIEWS.



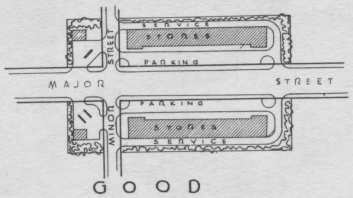
BAD

GOOD

MODERN HOMES WITH ATTACHED GARAGES REQUIRE WIDE LOTS GREAT DEPTH IN RESIDENTIAL LOTS IS WASTEFUL AND THE EXTRA LAND IN THE REAR OF THE LOT IS USELESS. LOTS 50 TO 60 FEET IN WIDTH SHOULD NOT GREATLY EXCEED 130 FEET IN DEPTH. LARGER LOTS SHOULD HAVE A SIMILAR PROPORTION.

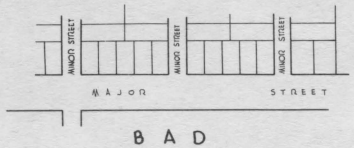


BAD

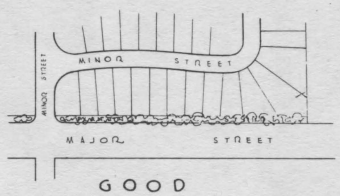


GOOD

COMMERCIAL AREAS SHOULD NOT BE DEVELOPED IN AN UNRELATED AND HAPHAZARD MANNER BUT SHOULD BE CONCENTRATED IN A GROUP AND PROVIDED WITH ADEQUATE OFF-STREET PARKING AND SERVICE AREAS.

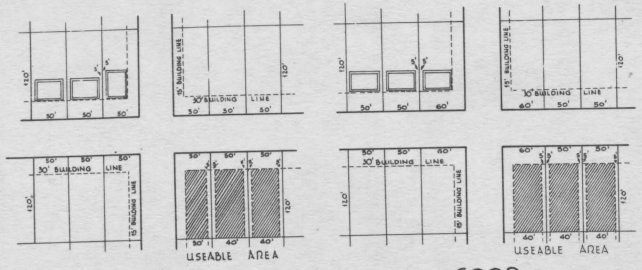


BAD



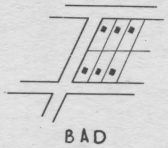
GOOD

INTERSECTIONS OF MINOR STREETS WITH MAJOR STREETS SHOULD ALWAYS BE HELD TO THE MINIMUM AS NUMEROUS INTERSECTIONS CAUSE DELAY AND HAZARD. LESS THAN FIVE PERCENT OF HIGHWAY FRONTAGE IS NEEDED FOR COMMERCE. FRONTING OF LOTS ON MINOR STREETS AND PROVISION OF PLANTING SCREENS WILL PROTECT HOMES FROM TRAFFIC.



BAD GOOD

BUILDING LINES ARE ESSENTIAL ON ALL STREETS TO CREATE A SPACIOUS CHARACTER IN RESIDENCE AREAS. CORNER LOTS NEED EXTRA WIDTH TO PROVIDE BUILDING LINES ON BOTH STREETS AND ALLOW ADEQUATE BUILDING AREA.



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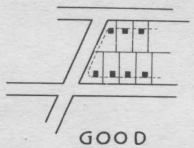
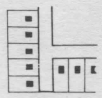


GOOD

LOT LINES PERPENDICULAR TO THE STREET PERMIT REGULAR BUILDING LINES, HOUSES IN GOOD RELATION TO EACH OTHER & TO THE STREET & PREVENTS AN UNSIGHTLY, "SAW-TOOTH" EFFECT.



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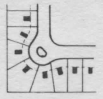
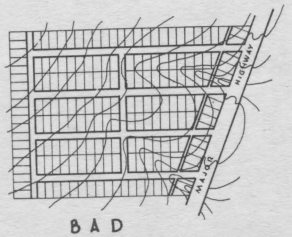
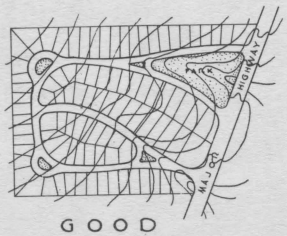


GOOD

DEAD END STREETS SHOULD BE AVOIDED. A MINIMUM AREA SHOULD BE IN STREETS AND THE LOTS ARRANGED TO PRODUCE ATTRACTIVE GROUPS OF HOMES.



BAD



GOOD

ADJUSTMENT OF THE SUBDIVISION TO THE TOPOGRAPHY OF THE GROUND RESULTS IN BETTER STREET AND LOT GRADES, A MORE ECONOMICAL DEVELOPMENT WITH LESS GRADING, AND A PLEASANTER - MORE BEAUTIFUL PLACE IN WHICH TO LIVE. USE OF ROUGH GROUND - RAVINES, WATERCOURSES, ETC. - FOR PARK PURPOSES ENHANCES VALUES WITHIN THE SUBDIVISION.

ILLUSTRATIONS OF CERTAIN PRINCIPLES OF LAND SUBDIVISION

NOTE: MANY OF THESE EXAMPLES ARE TAKEN OR ADAPTED FROM FEDERAL HOUSING ADMINISTRATION TECHNICAL BULLETINS NO. 5 & NO. 7 AND FROM THE LAND SUBDIVISION MANUAL OF THE AMERICAN SOCIETY OF CIVIL ENGINEERS.

CITY COMMISSION
CITY PLANNING BOARD
WEST PALM BEACH, FLORIDA

HARLAND BARTHOLOMEW AND ASSOCIATES
CITY PLANNERS
SAINT LOUIS, MISSOURI

MARCH 1952

It is also logical that the City Commission have final approval of all subdivision plats within the city, for the streets, easements and similiar facilities become public responsibilities and thus require official action. Likewise, it is essential that the County Commission have final approval over all subdivision plats lying within the unincorporated territory. The regulations proposed in this report authorizes the City Planning Board to report upon subdivisions beyond the corporate limits, but only when such assistance is requested by the county officials. Such assistance can result in so many advantages to the entire area that it should be requested at an early date.

In order that the Planning Board can properly and impartially study and report upon all future subdivision plats , it is essential that there first be available a comprehensive set of minimum standards and requirements. Such minimum standards are contained in the proposed subdivision ordinance found in the appendix of this report. The ordinance specifies the procedure that is to be followed in subdividing property; the minimum standards of design, such as location and width of streets, lot sizes, easements and similar factors; the minimum type of improvements that are to be installed; and miscellaneous provisions such as variations, changes and amendments and enforcement. The regulations and standards are most reasonable and are similar to those now in effect in many other cities. (See Plate 7).

Part II

PARKING IN THE CENTRAL BUSINESS DISTRICT

INTRODUCTION

The major concentration of vehicular traffic in West Palm Beach is within and near the central business district. While some of this traffic is merely passing through the district to reach other portions of the urban area or state, the large majority of the vehicles desire to stop within the district. The parking of these cars presents difficult problems, and thus, facilities for storing as well as for moving vehicles are an integral part of the major street system.

A convenient, efficient and valuable business district is an important factor in the city's economy. The economic study revealed that a substantial amount of local employment was engaged in retail trade. Of particular importance are the high property values in the central business district. In West Palm Beach the assessed valuation of the central area is $11,012,970 or 13.2 percent of the total 1951 assessed valuation in the entire city, yet the area embraced in this central district is quite small in comparison with the total city area. Experience in other cities have revealed that the amount received from the central area by ad valorem taxes is far more than is required to provide the necessary services, improvements and facilities therein; and, thus the area provides a substantial net profit that can be used to pay for services and facilities in less valuable sections of the city. Because of the important influence of the central business district upon the city's structure and economy, it is essential that major steps be taken to improve its value and desirability.

The increased number and use of the auto has resulted in far more persons using cars to reach the business district than in former times. Further, most persons desire to park immediately in front of the store or office building that they visit; and thus, the streets are by far the most popular parking places. This is the basis of the parking problem for there simply isn't enough curb space in a business district to accommodate more than a fraction of the cars that wish to park. Neither is there any possibility of a substantial expansion of such space. Acutally the streets should primarily be used for moving rather than storing vehicles. The increasing number of cars in the urban area will soon result in the prohibition of parking along additional streets and some of the existing spaces will be lost. The only solution is to provide off-street parking facilities to accommodate the large number of cars that will visit the central area.

This report contains an analysis of the advantages and defects of existing parking facilities, consideration of probable future requirements and a plan showing the desirable location and extent of off-street parking facilities that should be provided during the next 25 years.

Principles and Standards

The planning for off-street parking facilities is a comparatively new phase of a comprehensive city plan and as yet there are no commonly accepted standards regarding the number of facilities that should be provided or their location and character. Certain general agreement is, however, gradually being reached upon major policies that will serve as a basic guide in developing a program for each community. Among the more important of these are:

Types of Parking Requirements

Persons parking vehicles in the central business district are normally engaged in one of three general activities, namely: (1) Persons shopping or transacting business that requires only a short time; (2) Long-time shoppers, and (3) Employees or owners. Each of these have different parking requirements which are briefly summarized as follows:

(a) Short-time parkers. The short-time parker desires to transact only a small amount of business or to make only a few purchases and naturally desires to park immediately in front of the store or office that he is visiting. Usually such parking is for less than 30 minutes. The street is the most popular parking space for these persons which is a major reason why no long time parking should be permitted along the streets in the central business district.

(b) Longer-time shopper. These persons normally desire to park from two to four hours and represent the major purchasing power. They naturally desire to park close to their destination, yet the majority do not object walking a couple of blocks. However, very few of these customers will walk more than three blocks to reach their destination; and, instead, will drive around for long periods attempting to find a more convenient parking space.

(c) All-day parkers. A large amount of parking space in the average business district is occupied by the business men and employees that work in the business district during the entire day. These persons contribute little to the purchasing power and, consequently, should park in the outskirts of the area, leaving the closer-in spaces for the customers

upon which the economy of the district so largely depends.

Location of Parking Facilities

Normally the land within the center of the business district is too valuable for parking use, although it would be the most convenient location. Unless the closer-in area is improved with multi-tier parking garages, the majority of the off-street spaces should be near the edge of the commercial development where land is less valuable. Another advantage of these periphery locations is that the cars approaching the business district from the residential area can park in the off-street lots without traversing the congested streets within the district.

Number of Facilities

There is now no accepted standard as to the number of parking spaces that should be provided on the basis of floor area or units of population. Many of the new outlying regional shopping districts now being developed are providing about three times as much ground area for vehicular parking as the amount of floor area contained in the commercial buildings. This ratio is neither practicable or impossible of achievement within the central business district where the land is so valuable. Further, the same amount of parking space is not required in the central area because more people can reach the center either by walking or by using the public busses. A table in a later section of this report contains data regarding the number of parking spaces per unit of population in West Palm Beach and in certain other American cities.

Character of Improvements

Parking lots should be improved with an impervious surface which is kept free from dirt and dust and have an orderly design for the

entrances and parking spaces. Some of the lots should be lighted for night use, particularly those that are close to the theaters, and other facilities that will attract night customers.

Ownership

Insofar as possible, the off-street parking facilities should be provided by private enterprise, but such operations should be under enough public control to assure a satisfactory type of improvement, fair charges and responsible operations. Because of increasing land values and the possibilities that some parking lots may be sold for commercial development, which would create additional parking problems, it may become necessary that some or all of the lots be under public ownership even though they may be leased to and operated by private firms or organizations.

Zoning

The present, as well as the proposed, zoning ordinance contains provisions whereby developers of new commercial structures are required to provide off-street parking facilities. However, this provision applies only to stores in the more outlying commercial districts where land is not too expensive rather than to new commercial developments in the central business district. Attempt to require developers of new stores within the central area to provide off-street parking would undoubtedly result in the majority of the commercial development being located beyond this valuable center and would defeat the objectives of the comprehensive plan.

CENTRAL BUSINESS DISTRICT

WEST PALM BEACH FLORIDA

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CITY PLANNING BOARD

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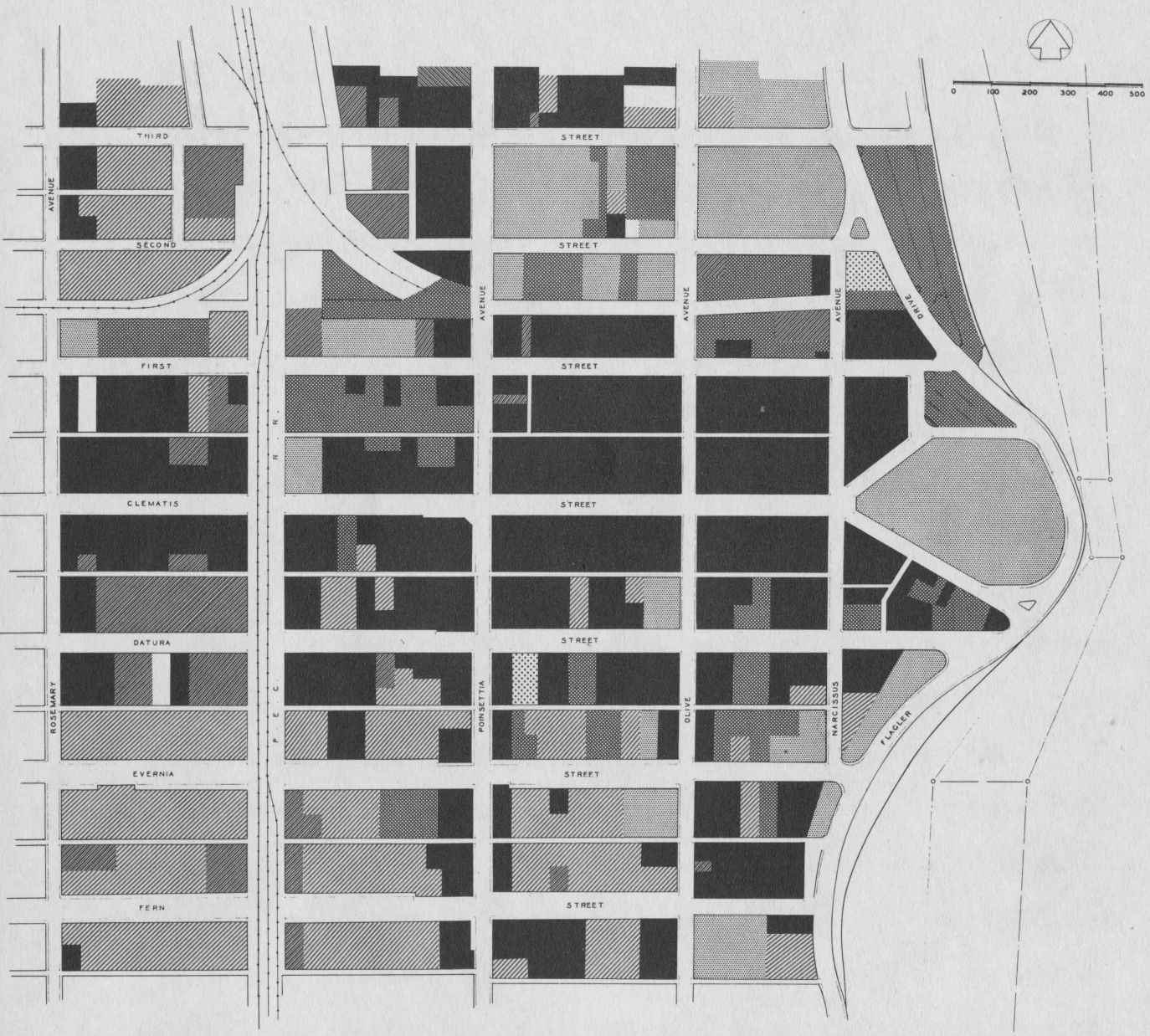
CITY PLANNERS ST LOUIS, MO.



EXISTING LAND USE

LEGEND

- RESIDENTIAL
- COMMERCIAL
- PUBLIC & SEMI-PUBLIC
- INDUSTRIAL
- PARKING LOTS
- GARAGES

MARCH 1952

PLATE 8

EXISTING CONDITIONS

This section is concerned with an analysis of the existing parking facilities within the central business district of West Palm Beach and with probable future requirements. For the purposes of this study the central business district includes the area extending from the north side of Third Street to the south side of Fern and from Rosemary to Lake Worth.

Existing Land Use

Plate 8 graphically shows the existing uses of property within the central area according to major classifications. Of particular importance is the almost complete absence of vacant or unoccupied property. Practically all areas not occupied by buildings are currently used for off-street parking.

The concentration of commercial uses from First Street to the alley south of Datura and from Poinsettia to Flagler Park is also indicated on the plate. Here are concentrated the more important stores, shops and office buildings with several of the structures containing many stories. There is also a pronounced concentration of commercial uses along Clematis and Datura west of Poinsettia. It is within these areas that the greatest need for parking facilities arises for this is the objection of the majority of the employees and of persons shopping or transacting business. Further, because of the concentrated commercial uses and the high land values, it is impractical to attempt development of off-street parking facilities within this intensively used portion of the business district. A

field study also revealed practically unoccupied areas in the rear of stores that could be used for parking purposes.

The majority of the off-street parking facilities are near the periphery of the central area, particularly south of Second Street and north of Evernia. These are logical locations for the off-street facilities for they are conveniently accessible to, yet at the edge of, the commercial uses. Further, they are blocks containing either public or semi-public uses or residential developments. Many of the residences are old and, while intensively used, could very logically be removed and the land utilized for off-street parking.

It is anticipated that a substantial amount of future growth of the business district will be to the south rather than to the north. The concentration of public and semi-public uses in the area between First and Third Streets tend to discourage commercial expansion in this direction except on the frontage adjoining the two major streets, namely, Olive and Poinsettia. It is expected that much of the frontage along Datura Street will eventually be developed with commercial and office uses and such uses will also extend to Evernia. Because of the railroad and the industrial development, no extensive commercial development is expected west of the F.E.C. Railroad - at least for a long time in the future.

The present compact development of commercial uses in the business district is desirable and provides efficient and convenient shopping facilities. The maintenance of some of the more convenient parking facilities within this area is an important future requirement as is the provision of a good standard of off-street parking facilities around the periphery of the future district.

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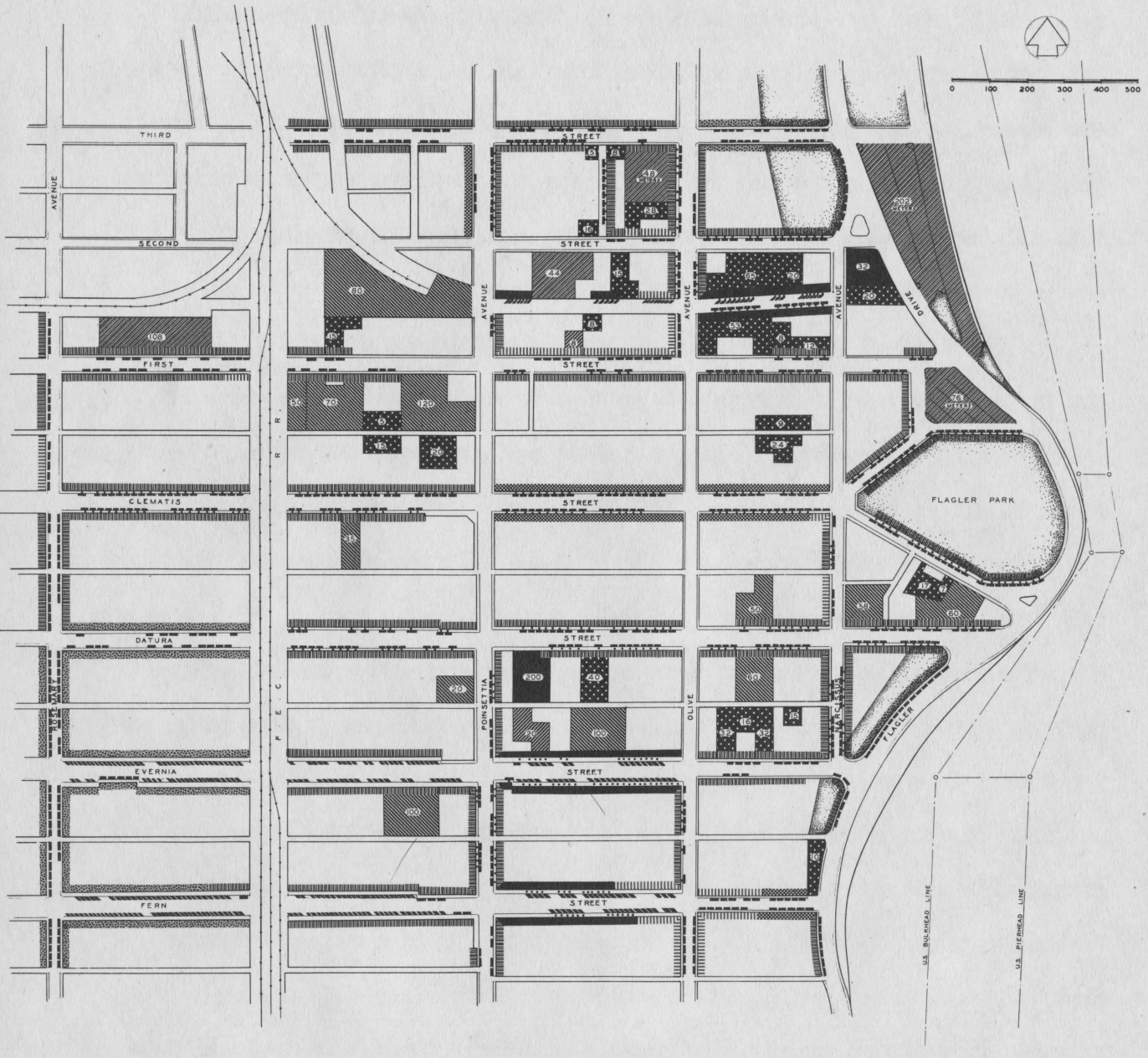

EXISTING PARKING FACILITIES

L E G E N D

OFF STREET PARKING

- PUBLIC LOT
- COMMERCIAL LOT
- PREDOMINATE USE-STORE OR PRIVATE SPACES
- GARAGES

- 15 MINUTE ZONE OR LESS
- 30 MINUTE ZONE
- 60 MINUTE ZONE
- 2 HOUR ZONE
- NO LIMIT ZONE

MARCH 1952

PLATE 9

Existing Parking Facilities

The location and type of the existing parking facilities serving the central area are shown on Plate 9. This includes both street and off-street facilities and the different types of delineation indicate whether the street parking is parallel or diagonal. Also indicated are the location of parking meters, and the maximum length of the parking periods. The delineations on the off-street parking lots indicate whether they are privately or publicly owned.

Because of the very narrow streets within the central area and the large volume of traffic that is forced to move through this district, curb parking is prohibited along some of the streets at all times. This is particularly true of portions of Poinsettia, Olive and Narcissus. While curb parking is always desirable, it is absolutely imperative that this type of regulation be continued on these streets in the future. There is also a substantial amount of no parking zones along the other streets where parking is permitted, such areas being reserved because of fire plugs and for loading and unloading purposes. This again is a desirable practice for the double parking of vehicles to load and unload persons and commodities seriously disrupts traffic movement in this congested district. While the majority of the blocks contain alleys, it is most unfortunate that they are so narrow that two vehicles cannot pass. Even though narrow, they afford many advantages, but efforts should be made to widen them wherever possible so that they would be much more convenient.

As before indicated, the off-street parking facilities are very logically located and are quite convenient to the major stores and shops. While a total of 478 off-street parking spaces are publicly owned and

TABLE 2

NUMBER OF EXISTING PARKING FACILITIES PER 1000 PERSONS
West Palm Beach and Typical Cities

Cities		Central Business District Parking Spaces Per 1000 Population	
		Curb	Total
4 cities	25, - 50,000*	41	65.0
2 cities	50, -100,000*	23	57.0
Lincoln, Neb.	100,000 pop.	47.6	30.4
Davenport, Ia.	75,000		41.0
St. Petersburg, Fla.	60,800	33	52.6
Decatur, Ill.	59,000	39.3	62.1
Greenville, S. C.	57,900		102.0
Sioux Falls, S. D.	51,000	38	65.5
Portsmouth, Va.	50,700	59.2	61.0
Quincy, Ill.	42,500	27.6	54.0
WEST PALM BEACH	43,162	25.3	69.7

* From Bureau of Public Road Studies

TABLE 1

EXISTING PARKING FACILITIES
CENTRAL BUSINESS DISTRICT

Curb Parking Spaces

Time Limit	Metered	Not-Metered
15 minutes		77
30 "	57	14
60 "	362	233
2 hours	108	
Unlimited		239
	527	563
Total Curb Spaces		1090

Off-Street Parking Facilities

	Not-Metered
Public Lots	478
Commercial	811
Predominate Store or Private	500
Garage	232
Total Off-Street Space	2021
Total Parking Facilities	3011

operated, the large majority of the facilities are operated as commercial parking lots by private operators. There are also several spaces that are owned or operated by individual stores or companies for the specific use of their employees or customers. This includes such lots as the one operated by Montgomery Ward north of First Street and east of Olive. There are only two parking garages, the one primarily serving the George Washington Hotel and the other on Datura Street being comparatively new and well used by the general public.

A number of the off-street parking lots are satisfactorily improved and are well operated by attendants. However, some lots have a minimum of surface and should be improved to a higher standard in the future. The charges for the different lots vary considerably, partly in relation of their convenience to the stores as well as to the character of their improvements and the manner in which they are operated.

Table 1 shows the number of curb and off-street parking according to major classifications. A substantial portion of the curb parking spaces in West Palm Beach permit a minimum parking time of one hour or less. This is a very logical restriction and is entirely in accordance with the current use. Slightly less than one-half of the curb spaces are metered and an extension of street meters would be logical in the future.

Of particular interest is the fact that there are almost twice as many off-street parking spaces as there are curb spaces. Table 2 reveals that this condition does not prevail in other cities where a substantial amount of the parking facilities are along the curb. Because of the narrow street, there is less opportunity to use the curbs for parking in West Palm Beach than in many other cities of similar size. It is thus

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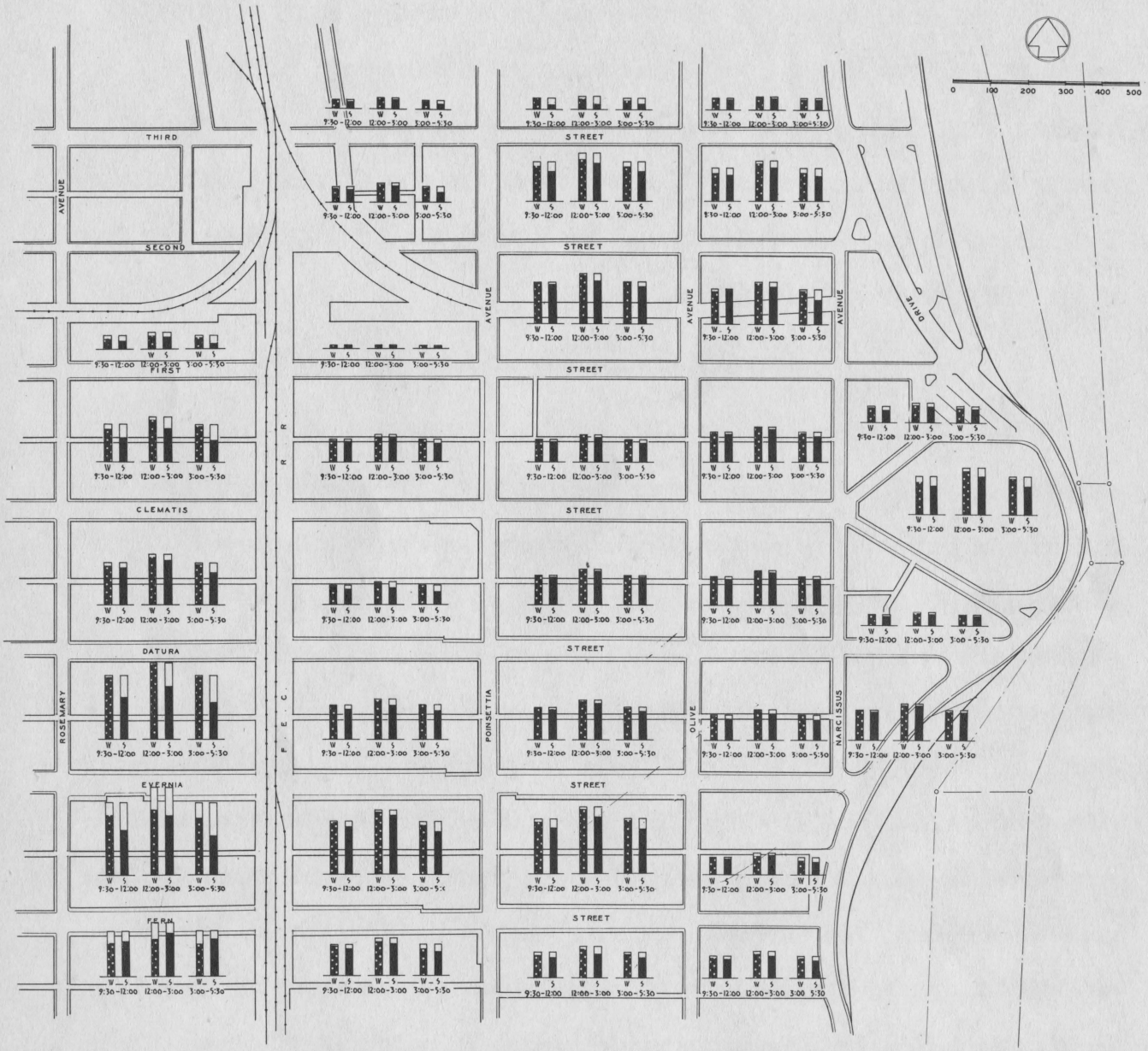

USE OF CURB PARKING SPACES

LEGEND

- W — OCCUPIED ONE HALF HOUR PARKING SPACE (WINTER SEASON)
- S — OCCUPIED ONE HALF HOUR PARKING SPACE (SUMMER)
- VACANT ONE HALF HOUR PARKING SPACE

SCALE OF GRAPHS
1" = 200 HALF HOUR
PARKING INTERVALS

PARKING CHECK MADE EVERY HALF HOUR
9:30 TO 5:30 DURING SUMMER,
AND DURING WINTER SEASON.

MARCH 1952

PLATE 10

important that the off-street facilities be maintained and additional ones provided in the future.

Table 2 also reveals that the number of parking spaces per 1,000 persons is higher in West Palm Beach than in many other cities of similar size. This is necessary not only because of the parking demands during the tourist period, but also because of the fact that the West Palm Beach business district is used by a much larger population than resides within the corporate limits.

Use of Curb Parking Spaces

In order to determine the extent to which the existing parking spaces were utilized, a survey was made of the curb spaces during the summer of 1951 and during the current winter season. This survey included the checking of each curb space every 30 minutes to determine whether it was occupied or vacant. The counts were made during typical periods of an average day including 9:30 a.m. to 12:00 noon, 12:00 to 3:00 p.m., and 3:00 to 5:30 p.m. The accompanying Plate 10 graphically shows the results of the study. The height of the bar indicates the total number of 30-minute spaces available around each block during each of the periods counted. For example, if there were 35 parking spaces around an entire block, then in the two-and-a-half hour period around 9:30 and 12:00 noon, a total of 175 spaces would have been counted. The open portions of the block indicates the number of vacant spaces that were counted during that particular period. The two bars indicates the results noted during the winter and summer seasons.

One of the major findings was the small number of vacant spaces in the blocks on each side of Clematis during both the winter and summer

season. Here are concentrated the larger stores, shops and office buildings and the curb spaces are used to capacity throughout the entire year. The number of vacant spaces is less than is normally desirable; for in order to provide convenient parking, a vacancy of about five to ten percent is desirable so that there will not be an excessive amount of driving around the block to find a parking space.

It is in the blocks both north and south of First and Datura Streets that the major difference is noted between the number of vacant spaces during the summer and winter seasons. In the first blocks immediately south and north of these streets, there is still practically no vacant spaces during the winter season, yet a substantial number of vacancies were found during the summer. A similar condition prevails in the blocks west of the Florida East Coast Railroad. However, in the block south of Evernia, there was a substantial number of vacancies during both the summer and winter season. A small number of vacancies are also found during both seasons in the blocks south of Fern and east of the railroad. It is obvious that there is more demand for parking space in this latter area because of its convenience to the central business district. Since this general area contains a number of older residences, it is a logical location for the development of future off-street parking facilities.

During the summer of 1951, the survey also included an analysis of how long the cars were parked in the various locations. This revealed that a substantial number of cars parked in the center of the business district for comparatively short periods. For example, during a typical period, 436 cars parked on Clematis and 282, or more than 60 percent, stayed for less than 30 minutes. On Datura Street during a

similar period, 158 cars parked, and here 128 of them stayed for one hour or less. In contrast, along Evernia west of the railroad, a total of 58 spaces were counted in a typical block and 52 cars remained here all day. This clearly reveals that any available curb parking within the central portion of the business district should be restricted for the short-time shopper, whereas, the more outlying areas can be reserved for the person that stays in the business district a longer time and particularly for the all-day parker.

A check was also made upon the off-street parking lots during the summer and winter season. In the conveniently located lots, such as along Datura Street between Olive and Narcissus Avenue, the available space was used almost to capacity during both the winter and the summer season. The same was true of the small public parking lot immediately north of Flagler Park. However, in the more outlying lots, many spaces were available during the summer season; but wherever there was a satisfactory type of improvement, they were practically fully occupied during the winter. This same condition was found in the public parking lot east of Flagler Drive extending northward along the Municipal Pier. Few cars parked here during the summer season, yet the spaces were almost completely occupied during the winter.

The survey revealed that there was no shortage of parking facilities during the summer season; but because of the large number of tourist, all satisfactory facilities were used to almost capacity during the winter season. Additional facilities would now be desirable in the winter and certainly will be absolutely essential as the city increases in population. It should also be noted that it would of course be desirable

to have more conveniently located facilities during the summer months. However, Palm Beach now has more parking facilities satisfactorily located than the average city of similar size; and because of the high land values, it is not practical to locate any additional parking lots in the heart of the business district. If such facilities become imperative, they can best be provided by multifloor garages such as the one located on Datura Street.

A substantial number of additional parking spaces must be provided during the next 25 or 30 years, particularly since parking will undoubtedly be prohibited along some of the existing curb spaces in order to expedite vehicular movement, to provide more space for loading and unloading and in changing from diagonal to parallel parking. Additional facilities will also be needed to accommodate the vehicles of the increasing population and of the shoppers that should come from the rural areas and from the tourist. However, it is not practicable to attempt to double the number of parking spaces even though it is estimated that the local population will double by 1980. All new commercial development that will serve the increased population will not be located within the central areas, for much of it will be provided in the outlying shopping centers where adequate and convenient parking space can be provided at a nominal cost. The major problem in connection with the central business district is to provide enough off-street space to maintain present uses and values as well as a nominal expansion of commerce within this area. There is no reason whatsoever why this cannot be accomplished if sound plans and policies are gradually followed over a long period.

CENTRAL BUSINESS DISTRICT

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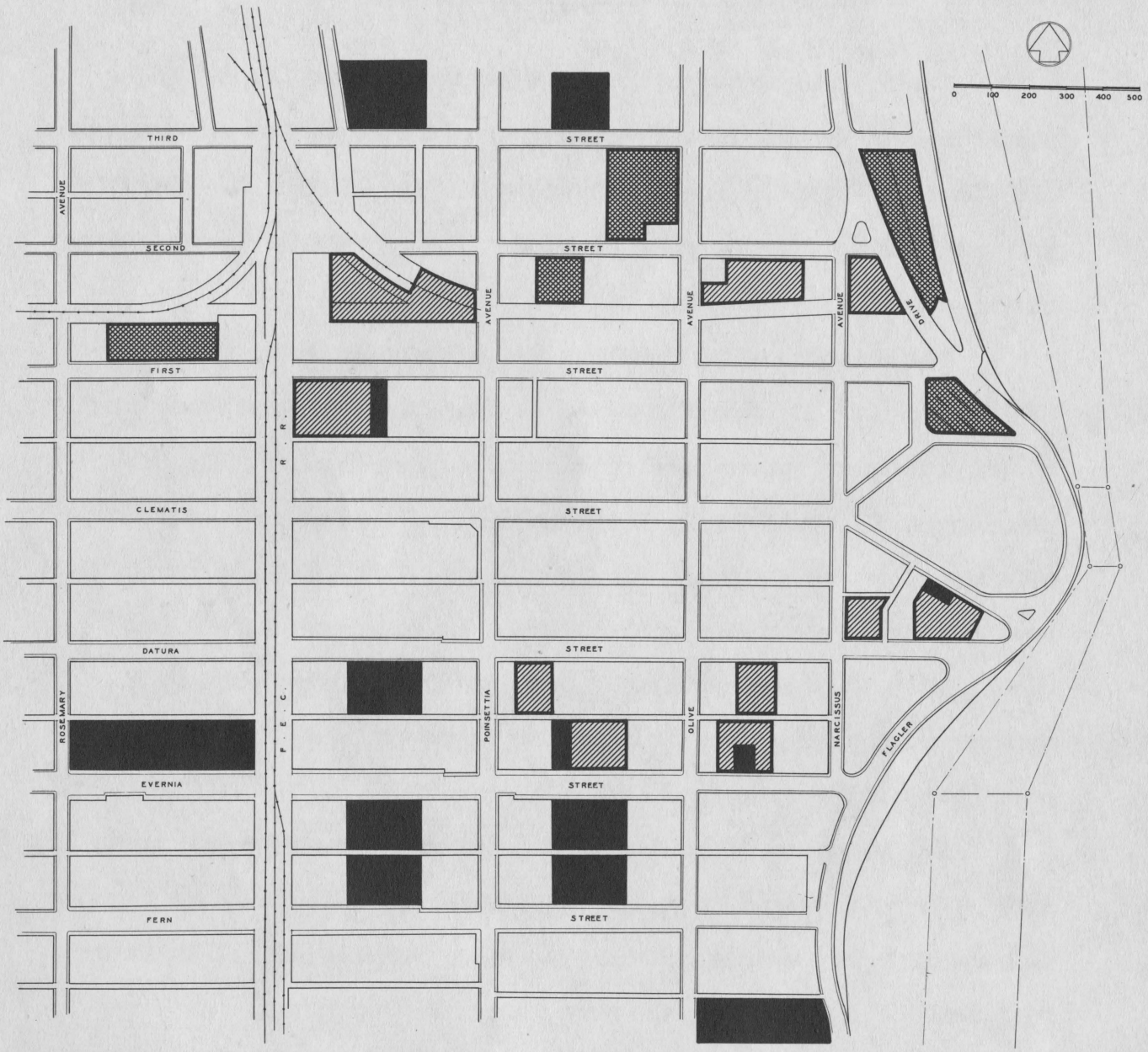

SUGGESTED OFF-STREET PARKING FACILITIES

LEGEND

- PROPOSED OFF-STREET PARKING FACILITIES
- EXISTING PUBLIC PARKING FACILITIES TO BE RETAINED
- EXISTING PRIVATE PARKING FACILITIES

MARCH 1952

PLATE 11

PROPOSED PARKING FACILITIES

The location and extent of the off-street parking facilities that should be provided during the period covered by the comprehensive plan are shown on Plate 11. These include most of the existing off-street lots and facilities, irrespective of whether they are publicly or privately owned, as well as a substantial number of new sites.

The majority of the facilities are located around the periphery of the business district and in locations where the land is now occupied by old residences rather than by valuable commercial or industrial structures. It should also be noted that the majority of the proposed off-street lots are located within the center of the block and a substantial area at each corner will thus be available for commercial use. The corner sites are the most valuable for commercial development and their convenient accessibility to parking spaces should encourage a valuable type of development.

The lots along Datura, as well as some of them along the north side of Evernia, should be primarily occupied by longer time shoppers, at least during the winter season. The more outlying lots, particularly those north of First Street, the ones west of the railroad and the ones south of Evernia should primarily be available for all-day parkers, although it is expected that portions of these areas should eventually be reserved for the longer time parkers. The lot south of Fern, just west of Flagler Drive is primarily proposed to serve persons visiting the post office. This is a particularly congested area during the winter

season; and because of the large volume of traffic that uses Olive Street, it is essential that off-street parking space be made available.

The proposed new off-street parking areas can accommodate approximately 1075 vehicles if designed for self-parking. A substantially larger number could be accommodated if the cars were parked by attendents, or if improved with more than one tier of parking. This is an increase of more than 50 percent of the existing off-street parking facilities. However, this is the minimum number that should be provided during the next 25 years. If the district should develop to the extent that additional spaces become essential, they could either be made available by double-decking some of the lots or by acquiring additional lots in near-by locations.

A number of the existing off-street lots which now accommodates 1,413 cars are recommended to be retained in the proposed parking system. These are so logically and conveniently located that their most effective and valuable use is for off-street parking purposes. The total proposed off-street parking facilities will accommodate nearly 2,500 vehicles which together with the curb facilities would accommodate more than 3,500 vehicles.

A comparison of the proposed plan with Plate 9 indicates that some of the existing parking lots are not shown on the proposed system. While it is hoped that the majority of these will continue to be used, a number of them are small and some are so logically located for commercial use that they are more valuable for this type of development than for off-street parking. It is of course anticipated that some of these will be retained for parking purposes or that other somewhat similar

facilities will be provided by the individual stores and shops. Thus about 500 additional facilities will be made available other than those shown on the plan and a total of about 4,000 parking spaces should be available to serve the central business district.

Responsibility for the Plan

Both the city and private enterprise have been responsible for the existing off-street parking facilities. It is most desirable that private enterprise continue to provide a substantial amount of the off-street facilities, but the city will undoubtedly have to assume an increasingly prominent role in this activity. Otherwise it is quite possible that the land will become so valuable for commercial development that it will be unprofitable for private enterprise to operate the facilities at a price that the general public will pay for their use.

Fortunately, the city has entirely adequate legal authority to acquire, improve and operate off-street parking facilities. In addition to the authority to acquire the facilities by the use of revenue bonds which are amortized by the income from the parking lots as well as from street parking meters, there is also legal authority to assess some of the cost of the lots against benefitted property. A number of cities are now engaged in parking programs through the use of revenue bonds, but there is also considerable background for the use of both general obligation and special assessment bonds. The entire city will benefit from the improved convenience and value of the central business district and certainly the owners of commercial property will benefit from the provision of convenient off-street parking spaces. It is, therefore, recommended that while private enterprise should be given an

opportunity to carry out the plan, the City should be in a position to acquire any of the facilities shown on Plate 8 wherever there is a real threat of them being used for expensive residential, commercial or industrial structures. Further, it is recommended that some of the more convenient located lots be acquired in the near future as additional off-street parking spaces are needed during the winter season.

Improvement and Administration

All of the lots shown on the plan should be improved with a good type of surface as soon as they are acquired and cleared. The city has been successful with improving many of its lots for self-parking and parking meters. This type of operation is also proving popular in other cities and should undoubtedly be used in the first phase of developing new lots. If there is need for additional spaces, it may be necessary to double-deck a few of the more conveniently located facilities.

It is also recommended that careful consideration be given to relating the parking charges to the type of use that will be made of the area. For example, in the more outlying blocks which are primarily used by all-day parkers, the charge should be lower than on the lots that are conveniently related to the center of the business district and which are used by customers. In this connection, it would seem desirable to charge a lower summer rate in the large public parking lot on Flagler Drive than is now charged throughout the year. This lower rate in the summer season should attract more all-day parkers.

The lots should also be administered so as to insure the reservation of an adequate number of spaces for the use of customers in the

more conveniently located lots. This can be accomplished by keeping the entrance to the lots closed until 9:30 or after so that they will not be available to the all-day parkers.

Administrative policies regarding use, charges and the like for both the street and off-street parking lots will have to be adjusted from time to time as changing conditions occur. It is especially important that these local regulations be adjusted to the winter and summer seasons. The necessary adjustments can be determined by the local officials with the several administrative policies discussed herein used as the basis for changes.

APPENDIX

PROPOSED ORDINANCE

REGULATING THE SUBDIVISION OF LAND

APPENDIX

PROPOSED ORDINANCE

REGULATING THE SUBDIVISION OF LAND

AN ORDINANCE PRESCRIBING MINIMUM REQUIREMENTS FOR THE DESIGN AND DEVELOPMENT OF NEW SUBDIVISIONS AND OF RE-SUBDIVISIONS; PROVIDING FOR PRELIMINARY AND FINAL APPROVAL OF ALL SUBDIVISION PLATS; PROVIDING FOR THE ENFORCEMENT OF THESE REGULATIONS AND PROVIDING FOR CHANGES AND AMENDMENTS; ALL FOR THE PURPOSE OF PROMOTING THE ADEQUACY AND EFFICIENCY OF THE STREET AND ROAD SYSTEM SO AS TO AVOID CONGESTION AND PROMOTE SAFETY; FOR THE PURPOSE OF SECURING THE PROPER DISTRIBUTION OF POPULATION AND THE NECESSARY OPEN SPACES FOR LIGHT AND AIR, AND FOR THE PURPOSE OF IMPROVING THE HEALTH, SAFETY, AND GENERAL WELFARE OF THE CITIZENS.

BE AND IT IS HEREBY ORDAINED BY THE CITY COMMISSION OF THE CITY OF WEST PALM BEACH IN PALM BEACH COUNTY, FLORIDA:

Section 1. General

Each subdivider of land should confer with the City Manager before preparing a preliminary subdivision plan in order to become thoroughly familiar with the subdivision requirements and with the proposals of the city plan affecting the territory in which the proposed subdivision lies.

Section 2. Definitions.

For the purpose of this ordinance, certain terms and words are herewith defined as follows:

(a) Plat: A map drawing, or chart on which the subdivider's plan of the subdivision is presented and which he submits for approval and intends in final form to record.

(b) Major Street: A street shown on the current Major Street Plan.

(c) Subdivision: For the purpose of these regulations a subdivision of land is either (1) the division of land into three (3) or more lots, sites or parcels of three (3) acres or less in area: (2) establishment or dedication of a road, highway, street or alley through a tract

of land regardless of area, or (3) resubdivisions of land heretofore divided or platted into lots, sites, or parcels, provided, however, that the sale or exchange of small parcels of land to or between adjoining property owners, where such sale or exchange does not create additional lots, shall not be considered as a subdivision of land.

Section 3. Jurisdiction and Procedure

(a) It shall be unlawful for any person being the owner, agent, or person having control of any land within the city of West Palm Beach to subdivide or lay out such land in lots unless by a plat, in accordance with the regulations contained herein. Such plat shall first be submitted to the City Planning Board for approval or disapproval. After report and recommendation of the Board is made and filed, such plats shall be submitted to the City Commission for its approval or disapproval. No plat shall be recorded and no lots shall be sold from such plat unless and until approved as herein provided.

(b) The design and layout of all subdivisions shall conform with the requirements of Section 5 hereof. The subdivider shall submit a preliminary plan in accordance with the specifications of Section 4 hereof. Following approval of the preliminary plan, the subdivider shall install the minimum improvements or furnish a bond or provide for guaranteeing such installations in accordance with the requirements of Section 6 hereof. Upon approval of improvement installations or arrangements therefor, the final plat shall be submitted in accordance with the provisions of Section 4 hereof.

(c) The City Planning Board is also authorized to approve subdivision plats in any unincorporated area lying within three (3) miles of the corporate limits of West Palm Beach; provided, however, that the Board shall not consider any such plat until and unless a request for such consideration and action has been made to the Board by an appropriate resolution adopted by the Board of County Commissioners. Palm Beach County. Wherever a subdivision is located beyond the city limits, the Board of County Commissioners and the County Highway Engineer shall perform the appropriate functions of the City Commission, the City Manager and the City Engineer required in these regulations.

Section 4. Data Required Upon Preliminary and Final Plans

A. Preliminary Plan

Whenever any person desires to subdivide land into building lots or to dedicate streets, alleys or land for public use, he shall submit three copies of the preliminary sketch plan conforming to the requirements of Section 5 to the Planning Board before submission of the final plan. Plats containing three lots or less may be exempted from the provisions of this section. The preliminary plan shall show:

(a) The location of present property and section lines, boundaries of incorporated areas, streets, buildings, lakes and watercourses.

(b) Any existing sanitary and storm sewers, water mains and culverts within the tract or immediately adjacent thereto. The location and size of the nearest water main and sewer or outlet are to be indicated in a general way upon the plat.

(c) The proposed location and width of streets, alleys, lots, building and set-back lines and easements.

(d) The title under which the proposed subdivision is to be recorded and the name of the subdivider platting the tract.

(e) The names and adjoining boundaries of all adjoining subdivisions and the names of recorded owners of adjoining parcels of unsubdivided land.

(f) North point, scale and date.

(g) Written statements regarding the grades of proposed streets, the facilities for storm water drainage, and any other proposed improvements within the subdivision.

B. Final Plat

The final plat on tracing cloth and four (4) prints thereof together with copies of any deed restrictions where such restrictions are too lengthy to be shown on the plat, shall be submitted to the City Commission. The final plat is to be drawn at a scale of not more than 100 feet to the inch from an accurate survey. If more than two sheets are required, an index sheet of the same dimensions shall be filed showing the entire subdivision on one sheet and the areas shown on other sheets.

The final plat shall show:

(a) The boundary lines of the area being subdivided with accurate distances and bearings. The correct legal description of the property being subdivided shall be shown on the plat.

(b) The lines of all proposed streets and alleys with their width and names.

(c) The accurate outline of any portions of the property intended to be dedicated or granted for public use.

(d) The lines of adjoining streets and alleys with their width and names.

(e) All lot lines together with an identification system for all lots and blocks.

(f) The location of all building lines and easements provided for public use, services or utilities.

(g) All dimensions, both linear and angular, necessary for locating the boundaries of the subdivision, lots, streets, alleys, easements, and any other areas for public or private use. Linear dimensions are to be given to the nearest 1/100 of a foot.

(h) The radii, arcs, chords, points of tangency and central angles for all curvilinear streets and radii for rounded corners.

(i) The location of all survey monuments and bench marks together with their descriptions.

(j) The name of the subdivision, the scale of the plat, points of the compass, and name of owner or owners or subdivider.

(k) The certificate of the Surveyor attesting to the accuracy of the survey and the correct location of all monuments shown.

(l) Private restrictions and trusteeships and their periods of existence. Should these restrictions or trusteeships be of such length as to make their lettering on the plat impracticable and thus necessitate the preparation of a separate instrument, reference to such instrument shall be made on the plat.

(m) Acknowledgment of the owner or owners to the plat and restrictions, including dedication to public use of all streets, alleys, parks or other open spaces shown thereon and the granting of easements required.

Section 5. Subdivision Design Standards

A. Relation to Adjoining Street System

The arrangement of streets in new subdivisions shall make provision for the continuation of the principal existing streets in adjoining areas (or their proper projection where adjoining land is not subdivided) insofar as they may be deemed necessary by the Board for public requirements. The width of such streets in new subdivisions shall be not less than the minimum widths established herein. The street and alley arrangement shall be such as not to cause a hardship to owners of adjoining property when they plat their own land and seek to provide for convenient access to it. Off-set streets should be avoided. The angle of intersection between minor streets and major streets should not vary by more than ten degrees from a right angle.

Streets obviously in alignment with existing streets shall bear the names of the existing streets. All proposed street names shall be checked against duplication of other street names.

B. Street and Alley Width

(1) The widths of major highways shall conform to the widths designated on the Major Street Plan.

(2) The minimum width for minor streets shall be 50 feet. A wider street width may be required where the storm water is accommodated in an open ditch or in ditches along the pavement. When streets adjoin unsubdivided property, a half street at least 25 feet in width may be dedicated and whenever subdivided property adjoins a half street the remainder of the street shall be dedicated.

(3) Alleys are not recommended in single and two-family residential districts; and when provided, a minimum width of 20 feet shall be required. Alleys are required in the rear of all business lots and shall be at least 20 feet wide. A five-foot cut-off shall be made at all acute angle alley intersections.

C. Easements

Easements of at least five feet in width shall be provided on each side of all rear lot lines and along side lot lines, where necessary, for poles, wires, conduits, storm and sanitary sewers, gas, water or other mains. Easements of greater width may be required along or across lots where necessary for the extension of main sewers or other utilities or where both water and sewer lines are located in the same easement.

D. Blocks

(1) No block shall be longer than 1,200 feet. Where blocks are over 1,000 feet in length a cross walk at least 10 feet in width may be required near the center of the block.

(2) In platting residential lots containing less than 15,000 square feet, the depth of the block should not exceed 300 feet.

(3) Where a tract of land is of such size or location as to prevent a lot arrangement directly related to a normal street design, there may be established one or more courts, dead-end streets, or other arrangements, provided, however, that proper access shall be given to all lots from a dedicated street or court. A dead-end street shall terminate in an open space (preferably circular) having a minimum radius of 50 feet. A dead-end street shall not exceed 1,000 feet in length.

E. Lots

(1) The lot arrangement and design shall be such that all lots will provide satisfactory and desirable building sites, properly related to topography and the character of surrounding development.

(2) All side lines of lots shall be at right angles to straight street lines and radial to curved street lines except where a variation to this rule will provide a better street and lot layout. Lots with double frontage shall be avoided.

(3) No lot shall have an area or width less than that required by any zoning ordinance. In unzoned areas, no lot shall have an average width of less than 60 feet nor shall it contain less than 7,500 square feet.

(4) Where corner lots back upon lots facing the side street, the corner lots shall have extra width sufficient to permit the establishment of front building lines on both the front and side of the lots adjoining the streets.

F. Building Lines

Where the subdivided area is not under zoning control, the subdivider shall establish building lines in accordance with the needs of each development, but in no case shall such building lines be less than 30 feet from the right-of-way of the street or highway upon which the lot fronts. Restrictions requiring buildings to be set back to such building lines shall be shown on the plat.

Except where zoning regulations apply, restrictions shall also be made and shown on or referred to on the plat, requiring all residential buildings to be set at least six feet off each side lot line and not less than 30 feet from rear lot lines.

G. Character of Development

The subdivider shall confer with the Board regarding the type and character of development that will be permitted in the subdivision and may agree to place certain minimum restrictions upon the property to prevent the construction of substandard buildings, control the type of structures or the use of the lots which, unless so controlled, would clearly depreciate the character and value of the proposed subdivision and of adjoining property. Deed restrictions or covenants running with the land may be included to provide for the creation of a property owners association or Board of Trustees for the proper protection and maintenance of the development in the future, provided, however, that such deed restrictions or covenants shall not contain reversionary clauses wherein any lot shall return to the subdivider because of a violation thereon of the terms of the restrictions or convenants.

Where the subdivision contains sewers, sewage treatment plants, water supply systems, park areas, street trees or other physical facilities necessary or desirable for the welfare of the area and which are of common use or benefit and which the city or county does not desire to maintain, provision shall be made by trust agreement a part of the deed restrictions, acceptable to the city or county for the proper and continuous maintenance and supervision of such facilities by the lot owners in the subdivision.

H. Parks, School Sites, etc.

In subdividing property, consideration shall be given to suitable sites for schools, parks, playgrounds, and other common areas for public use so as to conform to any recommendations of the city plan. Any provision for schools, parks and playgrounds should be indicated on the preliminary plan in order that it may be determined when and in what manner such areas will be provided or acquired by the appropriate taxing agency.

I. Easements along Streams or Canals

Whenever any stream or important surface drainage course is located in an area which is being subdivided, the subdivider shall provide an adequate easement along each side of the stream for the purpose of widening, deepening, sloping, improving, or protecting the stream or for drainage, parkway, or recreational use.

Section 6. Minimum Improvements Required

Receipt of the signed copy of the approved preliminary plan is authorization for the subdivider to proceed with the preparation of plans and specifications for the following minimum improvements and with the preparation of the final plat. Prior to the construction of any improvements required or to the submission of a bond in lieu thereof, the subdivider shall furnish the City Engineer all plans, information and data necessary to determine the character of said improvements. These plans shall be examined by the City Engineer and will be approved if in accordance with the requirements of this section. Following this approval construction can be started or the amount of a bond determined.

No final or official plat of any subdivision shall be approved unless:

(a) The improvements listed in the following subsections have been installed prior to such approval, or

(b) the subdivider shall file with the City Commission, a surety bond, cashier's check or a certified check upon a solvent local bank conditioned to secure the construction of the improvements listed in the following subsections in a satisfactory manner and within a period specified by the City Commission such period not to exceed two years. No such bond or check shall be accepted unless it be enforceable by or payable to the city in a sum at least equal to the cost of constructing the improvements as estimated by the City Engineer, and in form with surety and conditions approved by the City Attorney.

A. Street Improvements

All street and public ways shall be graded to their full width, including side slopes, and to the appropriate grade and shall be surfaced in accordance with applicable standard specifications of the city or county. Such construction shall be subject to inspection and approval by the City Engineer.

B. Sidewalks

Concrete sidewalks shall be constructed along at least one side of every minor street shown on the plat in accordance with applicable standard specifications of the city, and concrete sidewalks shall be constructed along both sides of all major streets and arterial streets.

C. Water Lines

(1) Where an approved public water supply is reasonably accessible or procurable, each lot within the subdivision area shall be provided with a connection to such water supply. Fire hydrants shall also be installed in all subdivisions.

(2) In areas outside the city limits, pending availability of a public water supply, the subdivider shall construct wells or a private water supply system in such a manner that an adequate supply of potable water will be available to every lot in the subdivision. The water supply system shall be constructed under supervision of the County Health Cfficer and shall comply with all regulations of the State Board of Health.

D. Sanitary Sewers

(1) Where an adequate public sanitary sewer is reasonably accessible, each lot within the subdivided area shall be provided with a connection to such sanitary sewer. All connections and the subdivision sewer system shall comply with regulations of the State Board of Health and shall be approved by the City Engineer.

(2) Where sewers are not accessible and no plans for sewers have been prepared, the subdivider shall install individual sewage disposal devices for each lot. All such individual sewage disposal systems shall be constructed in accordance with regulations and requirements of the State Board of Health, and under the supervision of and approval by the County Health Cfficer.

E. Drainage

All necessary facilities either underground pipe, canals or drainage ditches shall be installed to provide adequate disposal of surface water and to maintain any natural water courses.

Section 7. Variations and Exceptions

Whenever the tract to be subdivided is of such unusual size or shape or is surrounded by such development or unusual conditions that the strict application of the requirements contained in these regulations would result in real difficulties or substantial hardship or injustice, the City Commission after report by the City Planning Board, may vary or modify such requirements so that the subdivider may develop his property in a reasonable manner, but so that, at the same time, the public welfare and interests of the city and surrounding area are protected and the general intent and spirit of these regulations preserved.

Section 8. Enforcement

(a) No plat of any subdivision shall be entitled to record in the Cffice of the Clerk of the Circuit Court of Palm Beach County or have

any validity until it shall have been approved in the manner prescribed herein.

(b) The City Commission shall not permit any public improvements over which it has any control to be made or any money expended for improvements in any area that has been subdivided or upon any street that has been platted after the date of the adoption of this Ordinance unless such subdivision or street has been approved in accordance with the provisions contained herein.

Section 9. Changes and Amendments

Any regulations or provisions of this Ordinance may be changed and amended from time to time by the City Commission, provided, however, that such changes or amendments shall not become effective until after study and report by the Planning Board and until after a public hearing has been held, public notice of which shall have been given in newspaper of general circulation at least fifteen (15) days prior to such hearing.

Section 10. Validity

If any section, subsection, sentence, clause, or phrase of this Ordinance is for any reason held to be unconstitutional or void, such decision shall not affect the validity of the remaining portions of this Ordinance.

Section 11. When Effective

This Ordinance shall be in full force and effect after its passage and publication, as provided by law.