

HIGHWAY
PLAN



BATON ROUGE
LOUISIANA

Highway Plan

For

Baton Rouge, Louisiana

PREPARED FOR THE

STATE OF LOUISIANA

DEPARTMENT OF HIGHWAYS

AND THE

PUBLIC ROADS ADMINISTRATION, FEDERAL WORKS AGENCY

BY

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June 15, 1947

Mr. P. A. Frye, Director
State of Louisiana
Department of Highways
Baton Rouge, Louisiana

Dear Sir:

We are pleased to submit herewith a highway plan for the urban region of Baton Rouge, Louisiana, prepared in compliance with the directions of December 11, 1946.

In the development of the plan we made a thorough analysis of the capacity and adequacy of the Baton Rouge street and highway system based on existing requirements of traffic as well as those which can be anticipated within the next twenty-three year period. The recommended program of highway improvements is based upon the Origin-Destination traffic data obtained through surveys made by the State of Louisiana Department of Highways and the Federal Public Works Administration. In addition, consideration was given to the allied factors of commercial and industrial activities, present and anticipated land use, social and economic conditions and school and recreational developments as well as the general municipal plan. The report is, therefore, not the creation of this firm alone but rather was developed through the collaboration of the many agencies and individuals who contributed.

While this report is primarily concerned with the state and federal highways, it also includes city and parish roads and streets. To attempt to plan the one group without considering the other would be poor and inadequate planning. However, it is to be recognized that by so doing it is not recommended that the state assume the improvement of highways not now under its jurisdiction. Each agency must assume its own obligations in providing an adequate traffic system.

In the course of this study we found that Baton Rouge is suffering from traffic congestion. We are of the belief that the city and region are faced with a far more critical problem in the near future. It is, therefore, our considered opinion that the Baton Rouge area has reached a time in the history of its development where it is imperative that definite and vigorous action be taken in bringing this plan into realization.

Respectfully submitted,

Harry W. Lochner

H. W. LOCHNER & COMPANY

ACKNOWLEDGEMENTS

Especial acknowledgement is made of the contributions and cooperation of the following individuals and agencies who through their active participation, helpful suggestions and generous giving of their time assisted in the preparation of this plan:

Public Roads Administration, Federal Works Agency.

State of Louisiana, Department of Highways.

East Baton Rouge Parish Engineer for information of that agency's program of proposed improvements and coordination into the over-all plan.

Office of the Engineer of the City of Baton Rouge for valuable data.

Harland Bartholomew and Associates for much data obtained from the preliminary report of the Baton Rouge Master Plan in regard to population and density, schools and parks, and other basic data.

A. Hays Town, A.I.A. Architect, Baton Rouge, for development of the plan for the State of Louisiana departmental building group and the Baton Rouge Civic Center.

C. J. Brown and Heidel Brown, Baton Rouge, for right-of-way estimates of cost.

Reiner Swart, Engineer, Baton Rouge, for engineering data.

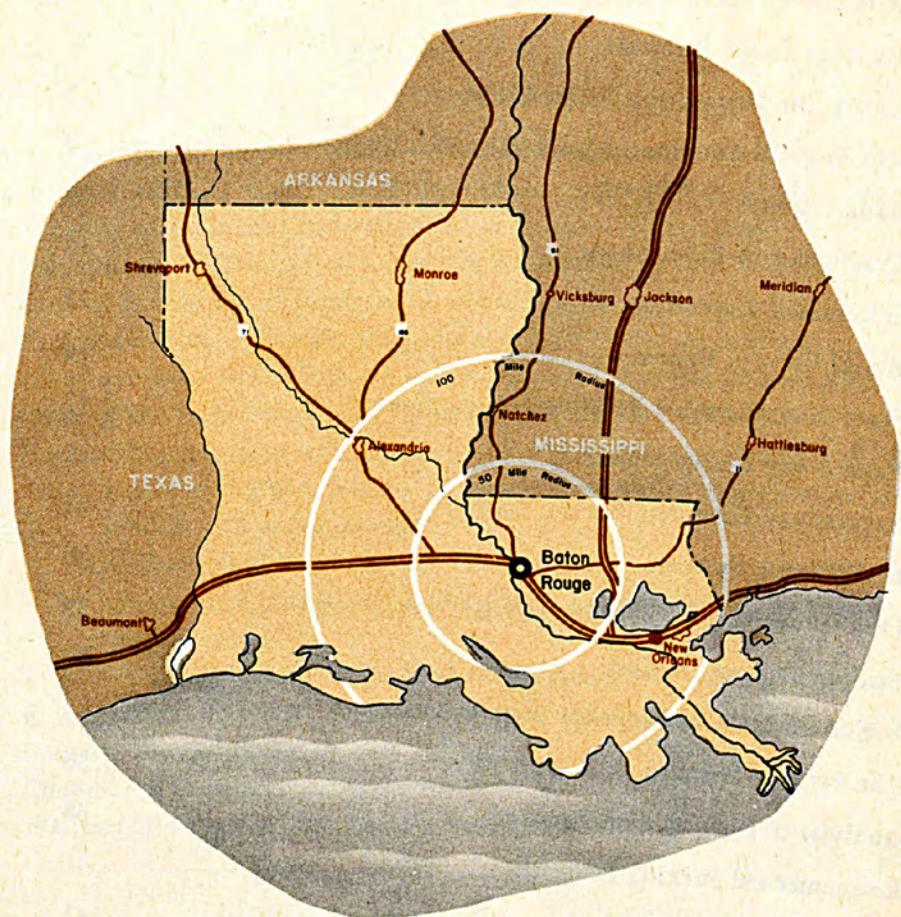
Fonville Winans, Baton Rouge, for aerial photography.

Chamber of Commerce of Baton Rouge.

War Department Corps of Engineers.

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A HIGHWAY PLAN FOR BATON ROUGE

BATON ROUGE, the capital of Louisiana, has had a colorful past and potentially can anticipate an interesting and prosperous future. It is the site of Louisiana State University. It possesses a progressive citizenry, a large modern industrial center, a most beautiful State capitol building—and a critical traffic and parking problem.

Originally the main traffic artery in Baton Rouge was the Mississippi River. The city's location at the head of deep water navigation on the river remains of great importance in its economic activities. In addition to the water connection to New Orleans and the Gulf, Baton Rouge is served by three railroads radiating in four directions; by four air lines; several barge lines; and a highway system including four Federal highways—one of which has been designated as an **interstate route** on the proposed network of Federal Interstate highways.

Baton Rouge was originally a "river town." The topography of its site on a bluff with a bayou immediately to its north, affected the pattern of street layout as the community outgrew the original plot. East-west streets developed along straight alignments, but to this day there is not one continuous north-south street.

In its physical arrangement, Baton Rouge is unique. Its main industries are concentrated in one large area with no thoroughfare through it. The extensive State-owned grounds within the heart of the city—largely vacant at present—also have no trafficways through them to the downtown area. Because of the inadequacy of streets, the Central Business District is pocketed, with its accessibility materially limited.

Population growth in Baton Rouge was greatly accelerated with the advent of large industries into the area. New residential sections developed to house the employees. Increases in population and industrial growth were further accelerated during the war years. Considering the fact that Baton Rouge is the State capital, the site of Louisiana State University, that its industries are modern and progressive and have excellent distribution facilities for their products, there is every indication that the city will not only maintain its present growth but will expand in population, territory, and industrial development.

TRAFFIC CONGESTION AND PARKING SHORTAGES MUST BE REMEDIED

Up to the present time, general municipal improvements have been unable to keep pace with the city's rapid growth. The inadequacy directly affecting the greatest number of people is the lack of streets and highways capable of efficiently serving the public in its daily trips to the industries, to the University, to the capitol grounds and to the Central Business District.

It is the purpose of this report to recommend a system of streets and highways which will remedy the present intolerable situation and to provide a pattern for the design of trafficways to meet the added demands of increases of the future.

In addition to physical improvements, a general understanding and cooperative effort on the part of the public is vital to insure the functioning of any traffic plan. It will take time to translate recommendations into realities. Meanwhile the aggravating traffic conditions can be greatly improved by public insistence on enforcement of present regulations. The public should be educated to realize that the many flagrant violations of traffic rules and parking restrictions—wrong direction on one-way streets, double parking, over parking, etc.—have a detrimental effect on their own comfort and safety greatly out of proportion to the selfish convenience realized by the violating individual.

VOLUME COUNTS SHOW PRESENT USAGE ON EXISTING STREETS

Two basically different presentations of traffic data appear on pages 4 and 5. They have been placed opposite each other to contrast the data each portrays. The one on the left page shows the relative number of vehicles which now travel over the existing street system. It indicates where people are compelled to drive on this system but does not show whether those streets are in the most advantageous location.

ORIGIN-DESTINATION DATA USED AS BASIC DESIGN INFORMATION

The Origin-Destination data portrayed on the right-hand page shows the path people would follow if a direct route existed from their origin to destination. This information has been previously published in a report on Baton Rouge by the State of Louisiana

Department of Highways. It is important enough to be repeated here because these are the facts further analyzed, applied and expanded for the future, that indicate the needs of traffic and the program of street and highway improvements required to satisfy those needs.

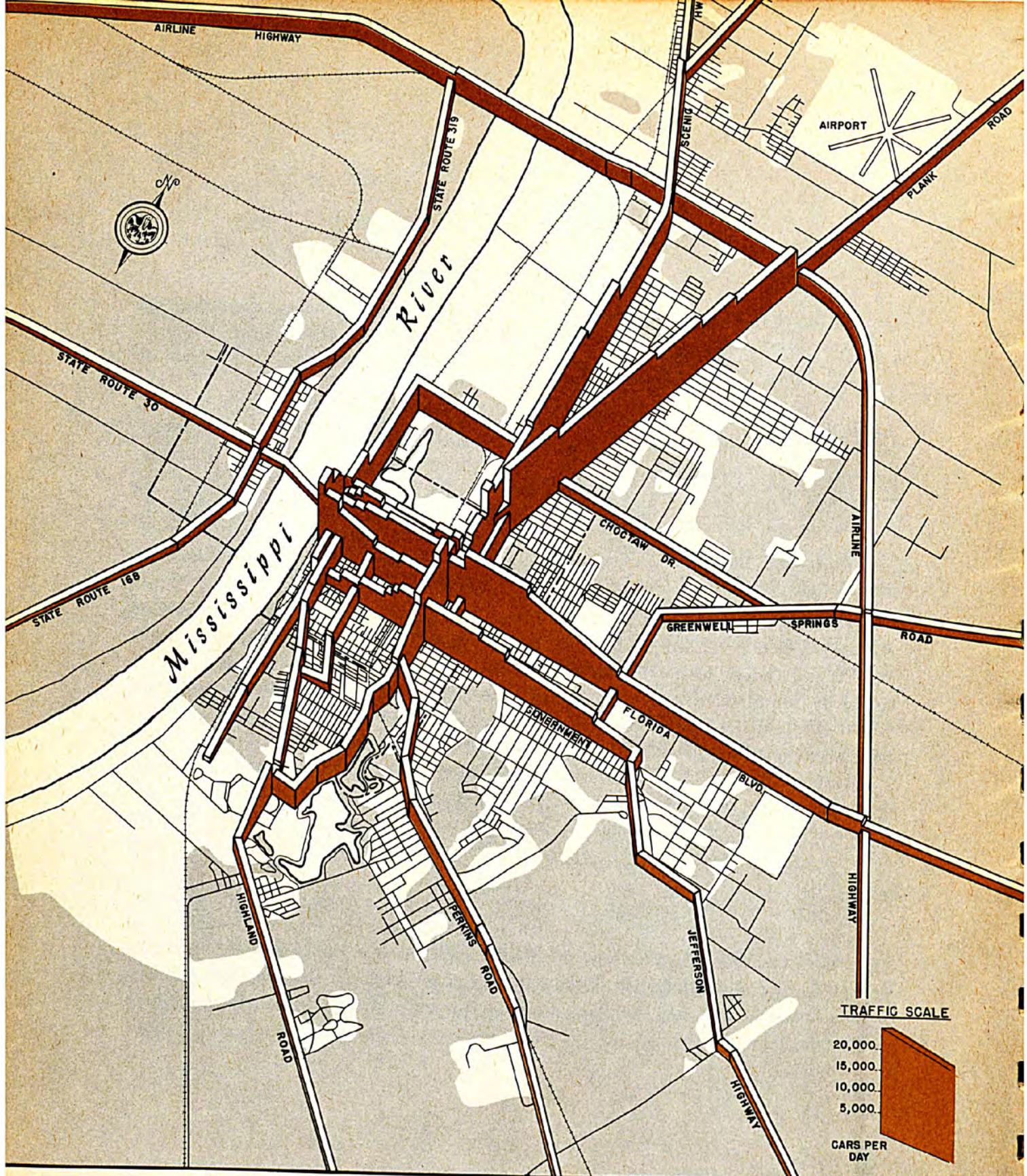
To obtain this necessary knowledge of origin and destination, the Louisiana State Highway Department and the Federal Public Roads Administration conducted a comprehensive traffic survey throughout the Baton Rouge area. In it a generous portion of the people in the Baton Rouge area were questioned as to the trips made on the day previous to the interview. This information was coded, sorted on business machines, expanded, organized and tabulated.

ORIGIN-DESTINATION DIAGRAM SHOWS LINE OF TRAVEL DESIRE

The many individual trips plotted as straight lines from origin to destination created the pattern of trips shown on the flow map. It represents the daily movement of traffic as it would choose to travel if direct highway facilities existed. For instance from the corner of Choctaw Drive and Bayou Sara, a vehicle bound for the downtown district would travel diagonally across the State-owned property rather than following the roundabout way over Choctaw Drive and Third Street which is now necessary.

In order to establish the relationship between various land use areas and traffic requirements, the origin-destination trips are superimposed on a land use map. This is necessary as an indication—present and future—of required trafficways for travel between the areas in which people live to the areas in which they shop, meet, relax, and earn their living.

The system of streets and highways considered in this plan consists of major radial and crosstown routes, fed by the traffic which is generated on the local residential streets. Only those movements, therefore, which have sufficient trip length and are important enough to affect the formulation of the system of major traffic arteries have been included in the flow diagram. For the sake of clarity the multitudinous short trips have been eliminated from the chart.



EXISTING TRAFFIC VOLUMES

These counts convey no other information than the magnitude of vehicular movement at specific sections. They show not how vehicles desire to go, but how they are forced to travel over existing routes although these may not be the most direct paths to their destinations.



ORIGIN AND DESTINATION TRAFFIC FLOWS—1947

This 1947 Origin-Destination Traffic chart indicates how traffic would travel if direct routes existed from Origin to Destination.

TRAFFIC WILL INCREASE AS BATON ROUGE POPULATION INCREASES

Baton Rouge is expected to grow. The probable increase in population has been extensively studied as part of the 25 year Comprehensive Play for Metropolitan Baton Rouge which is currently being prepared by Harland Bartholomew and Associates. The forecasts made in that study have been used here.

It is expected that by 1970 the present population of the area of 95,000 will expand to 138,000.

FUTURE POPULATION DISTRIBUTION CAN BE ASCERTAINED

In the planning of trafficways, consideration must be given to the technical phases of location, alignment, sight distance, drainage, etc., but at all times the foremost consideration must be people and their requirements for highway facilities.

The traffic of the future will directly depend on where the 43,000 additional people will be located, and the land use which will be developed in the urban region when these increases occur. The ultimate future population distribution was ascertained from trends indicated by recent growth, existing distribution of population, terrain, proximity to work and downtown, and future desirable density. These are the factors which determine where and how much additional future traffic will occur and indicate the amount of traffic for which the system must be designed.

At the present time much of the population of Baton Rouge is located outside of the city limits. In order to accomplish the highway plan and many other needed improvements, the corporate limits should be extended outward to include the people having common community interests and needs. A logical border for this necessary expansion would be the Airline highway.

FUTURE LAND USE INDICATES FUTURE TRAFFIC REQUIREMENTS

On the land use map opposite, the areas now occupied are indicated in light brown. Those expected to be utilized in the future for all uses are shown in dark brown. These new areas will vary in population density according to the incomes of their residents.

From origin-destination data obtained in many cities previously studied, it has been possible to arrive at a relationship of potential traffic generation to density of land occupancy and the income levels of the residents of the various areas. In Baton Rouge this potential traffic was arrived at by applying the results of the Origin-Destination survey to the anticipated future areas of development.

To determine traffic of the future, it is necessary to assume that an articulated system has been constructed. Such a system, being workable and convenient, would attract additional traffic use.

Improvement of rural highways will cause more cars to enter Baton Rouge from the highways converging on the city. These cars will distribute to the various areas now developed and also to the areas of future occupation.

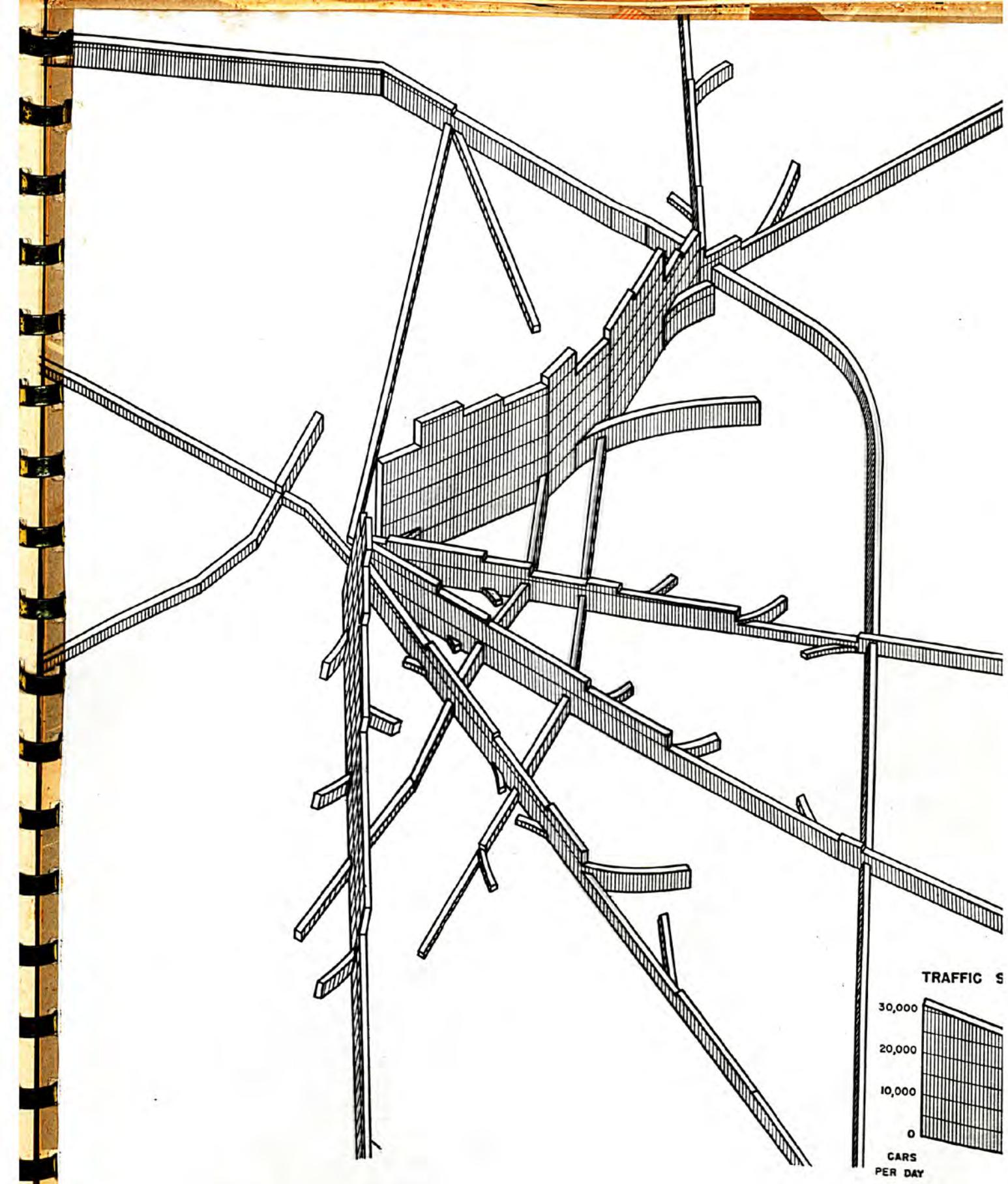
ANTICIPATED FUTURE TRAFFIC IS BASIS FOR HIGHWAY PLAN

All of these factors have been used to determine the anticipated traffic of the future. It is shown on the transparent overlay superimposed on the anticipated land use of the urban region of Baton Rouge.

The anticipated future traffic is the basis used in the planning of the street and highway system which follows.



EXISTING AND ANTICIPATED LAND USE
TRAFFIC FLOWS ANTICIPATED IN 1970



TRAFFIC FLOWS ANTICIPATED IN 1970



EXISTING AND ANTICIPATED LAND USE

RADIAL ROUTES

RADIAL ROUTES LOCATED ALONG LINE OF MAJOR TRAFFIC REQUIREMENTS

A system of radial routes to satisfy the demands of major traffic flows is shown on the opposite page. These routes have been located as close as practical to the lines of major traffic bands. They are intended to be sufficiently attractive in alignment, capacity, continuity and articulation to draw the major number of vehicles to themselves and segregate this flow from the local and neighborhood streets.

Examples exist in a great many urban areas throughout the nation, where indiscriminate routings of heavy traffic through residential sections have so impaired the livability of those sections that property values were destroyed. This can happen in Baton Rouge if present conditions are permitted to continue.

The system shown provides a rapid, convenient and safe network of roadways, and in addition immeasurably enhances the stability of the neighborhoods from which heavy traffic is diverted.

In recent years there has been a growing realization that the welfare of any urban region is dependent on the active participation by the individual in the affairs of the community. This desirable activity is best encouraged by the establishment of small self-contained, stable divisions within the larger mass of the city. These smaller units function within the area served by an elementary school which is a common item of interest and concern.

PROPOSED ROUTES, BESIDES EFFECTIVELY SERVING TRAFFIC NEEDS, WILL PERMIT NEIGHBORHOOD DEVELOPMENT

In the arrangement of the radial street plan for Baton Rouge, in addition to traffic considerations, the potentialities of existing and future neighborhoods were studied. In the older section of Baton Rouge where a number of these highways converge, it was not always possible to prevent division of school districts. In the residential sections, and in the areas expected to develop in such land use, segregation of the neighborhoods from heavy traffic streams is achieved. In the area east of Scenic Highway in the vicinity of Weller Avenue the highway location not only permits the retention and development of the neighborhood west of the highway in regard to schools and commercial centers, but also taps the area of greatest vehicular origin—existing and future.

It is possible that in the older sections of the city, a number of neighborhoods can be redeemed to a stable future. Certainly in the newer areas and those which will develop in the future, the self-contained neighborhood unit can be developed within the proposed highway system and not be impaired by the deteriorating effects of constant streams of vehicular traffic.



EXPRESSWAY NEIGHBORHOOD

RADIAL ROUTES

EXISTING LAND OCCUPATION

POTENTIAL

EXISTING PRIMARY SCHOOLS

POTENTIAL EXISTING ●

SCALE OF MILES

PROPOSED RADIAL ROUTE SYSTEM

EXPRESSWAY

BATON ROUGE EXPRESSWAY WILL BE PART OF NATIONAL NETWORK

On the map of the recommended radial highway system (page 9) one of the routes is labeled "Expressway." This route is designated as a section of the Federal system of the interstate routes proposed to connect the important cities of the nation. These routes will be constructed in conformance to the highest type of highway design standards. They are intended to provide safe and efficient transportation facilities for all-purpose mixed high speed traffic.

EXPRESSWAY HAS VEHICULAR CAPACITY OF FIVE 40 FOOT SURFACE STREETS

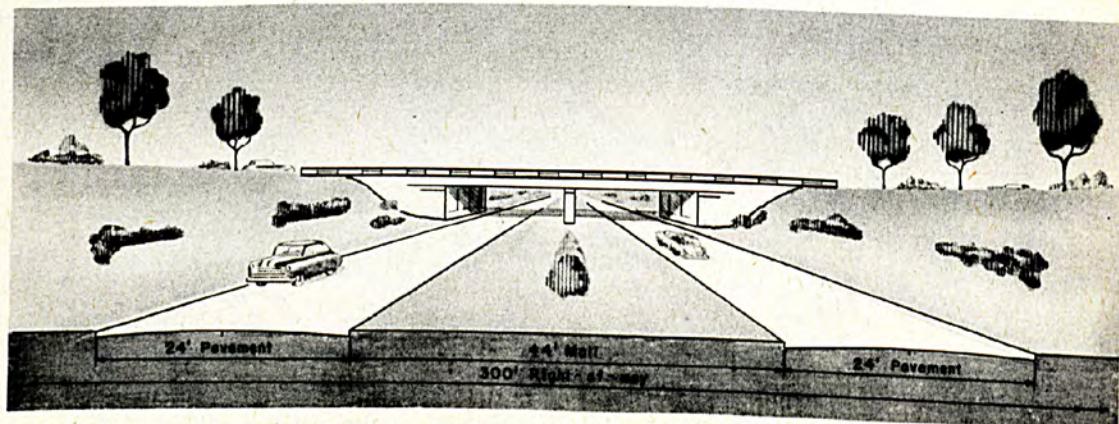
Within the urban area of Baton Rouge at the location proposed, sufficient traffic demand exists to warrant expenditure for the construction of this expressway type of improvement. It requires generally a right-of-way width of approximately 300 feet.

The four lanes of uninterrupted traffic flow will carry the same number of vehicles at nearly twice the average speed, as five 40 foot wide ordinary city streets on which no parking occurs and which have favorable control of traffic from cross streets.

The four lanes—two in each direction—are to be divided by a landscaped median strip. Unimportant surface streets which normally would cross the improvement will be terminated but have circulation continued by the provision of service drives which parallel the expressway. Important cross streets will be carried over or under the express lanes by means of grade separation structures.

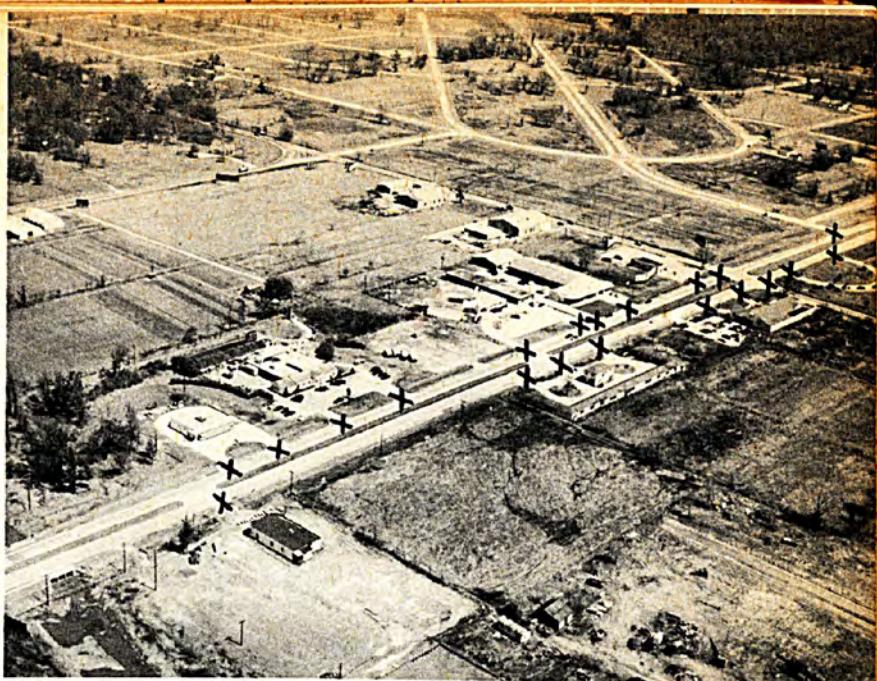
Access is to be limited with ingress and egress to the high speed lanes confined to controlled locations at designated major street intersections where smooth flowing ramp connections will be provided.

In general the highway will be depressed below the level of the adjoining streets, a design which is more desirable in effect on surrounding property and also more pleasing in appearance. The ample right-of-way will insure insulation of the traffic lanes from the surrounding properties, and the land not used for pavement is to be landscaped to provide a park-like appearance.



TYPICAL EXPRESSWAY CROSS-SECTION

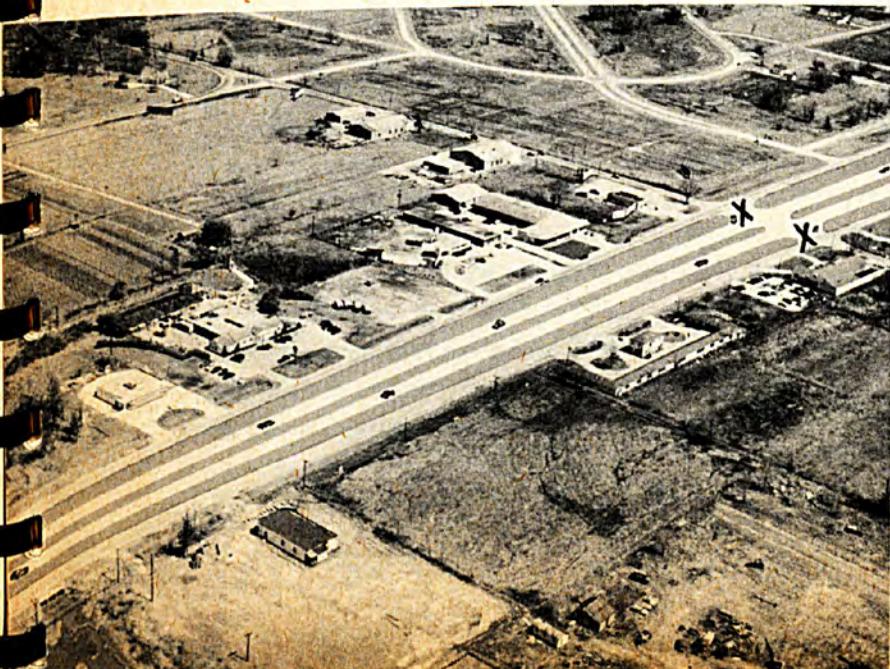
ACCESS UNLIMITED—
20 POINTS OF CONFLICT



EXPRESSWAYS ARE SOUND FINANCIAL INVESTMENTS

As an average, the cost of an expressway compares favorably to five 40 foot wide city streets having equal traffic carrying ability. In addition, it is to be noted that the expressway, once an actuality, retains for all time its traffic carrying capacity without encroachment from pedestrians, cross traffic, parked cars, and the activities of commercial establishments which usually spring up along an improved route.

An example of this destruction of capacity is present in Baton Rouge. Out beyond the cemeteries, Florida Boulevard has in recent years been improved by the construction of two multiple lane pavements divided by a traffic separating median strip. While constructed on a wide right-of-way, no provision was made for limiting access to it. Since its construction many residences and places of business have been built, attracted to a great degree by the traffic along the route. In the section here pictured, twenty points of access and therefore twenty points of potential **vehicular conflict** have developed. This number will increase throughout the length of the route as more business develops and as the pedestrian count increases. The safety and capacity of this boulevard, sought after



ACCESS LIMITED TO
MAJOR INTERSECTION

in its divided pavement design, will gradually be reduced while the necessity for these vital factors will increase with traffic volume expansion. Through its limited access feature, however, the expressway will permanently retain the safety and capacity originally designed into it.

The question that therefore presents itself is not whether any urban community can afford building expressways to satisfy major traffic demands, but rather whether it can afford not to do so. The economic justification of the Baton Rouge expressway recommended here is part of this report and follows on page 22.

SAFETY RECORD OF LIMITED ACCESS HIGHWAYS

In addition to the financial soundness of an expressway in regard to perpetuation of the investment and financial return through the elimination of delay, there is the factor of safety. The saving through prevention of injury and loss of life is difficult to assay. In this respect the following recent quotation by Thos. H. McDonald, Federal Commissioner of Public Roads is pertinent:

"The safety record of controlled-access highways is excellent. The Arroyo Seco Parkway in California, compared to major streets in the same vicinity, has five to eight times less fatal and personal injury accidents. The Merritt Parkway in Connecticut has shown the amazing record of 3.5 fatalities per 100 million vehicle miles. At the time of the President's Highway Safety Conference in May, the national average was 12 per 100 million vehicle miles. It has since been materially reduced, but as yet stands at eight."

EXPRESSWAY LOCATION DECIDED AFTER LENGTHY STUDY

A vast amount of study, research and careful consideration was expended before arriving at the expressway location recommended in this report. A long-term major street program, once the system has been established, becomes a series of jog eliminations, street widenings, extensions and similar improvements and can be modified to conform to minor changes should they occur. In the case of the expressway, however, because of the importance of its undertaking, an intensive analysis of the problems of alternate alignments, profiles, grades and access points was necessary to arrive at a conclusive decision. The location chosen therefore, represents the unbiased opinion of this firm of transportation consultants, and has included consideration of alternate locations and designs previously proposed by several agencies.

Of the several alternate locations considered, two were most carefully analyzed and compared. Both have in common a connection with the Airline Highway at its intersection with Scenic Highway north of the city proper. The one location lies parallel to Scenic Highway—one-half a block to a block to the east. That location was found not desirable as it divides the neighborhoods and school districts, probably would adversely affect the commercial development along Scenic Highway and does not provide any relief or service to Plank Road traffic.

The recommended location swings to the southeast from the intersection of the Airline Highway and Scenic Highway, lying roughly midway between Scenic Highway and Plank Road. In so doing it will effectively serve the entrance roads to the industrial

plants and in addition will intercept the airport and external traffic on Plank Road before it reaches the commercial section along that thoroughfare. This location will also better serve the present and future neighborhoods east of Plank Road, and in general will permit a better arrangement for neighborhood use and development.

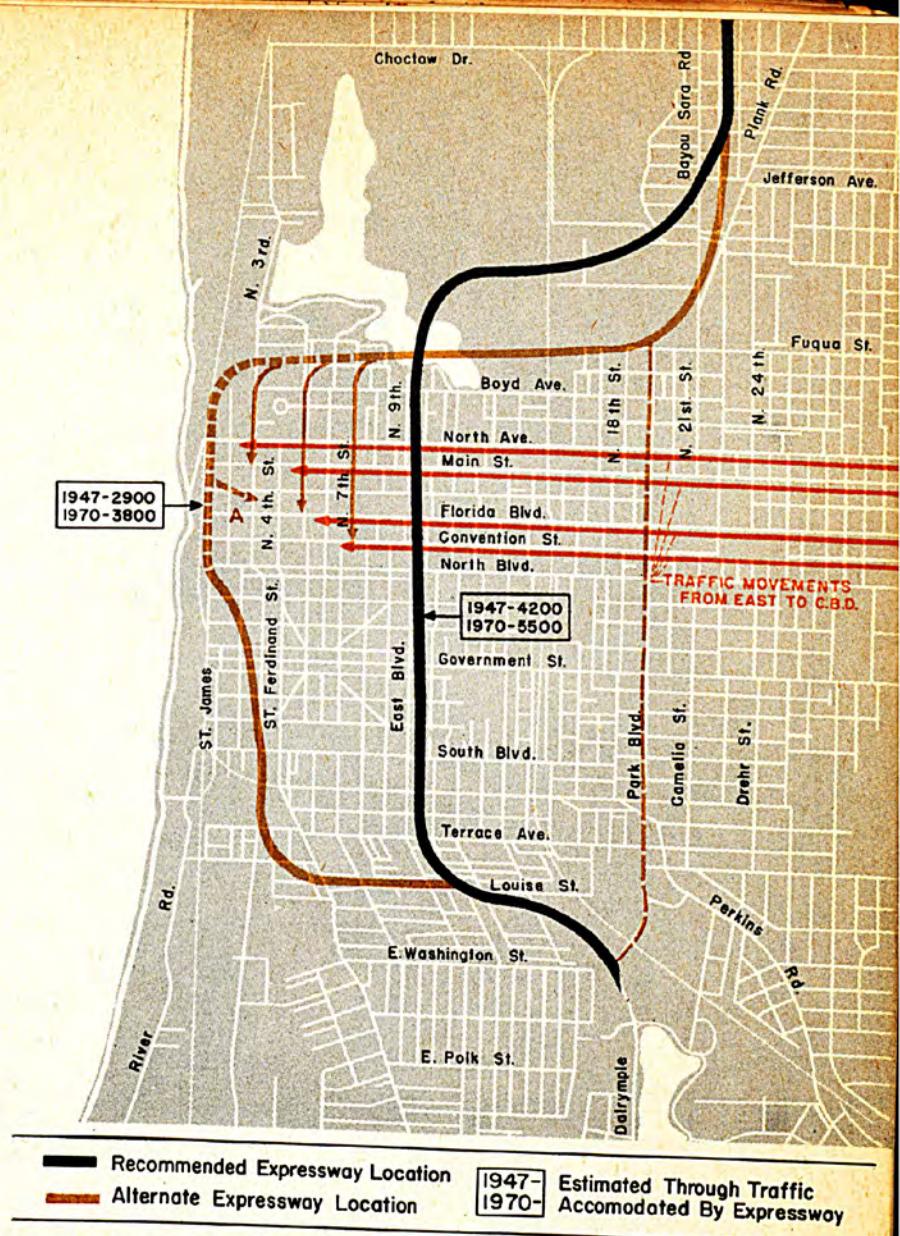
RIVER FRONT LOCATION WOULD NOT BE SOLUTION

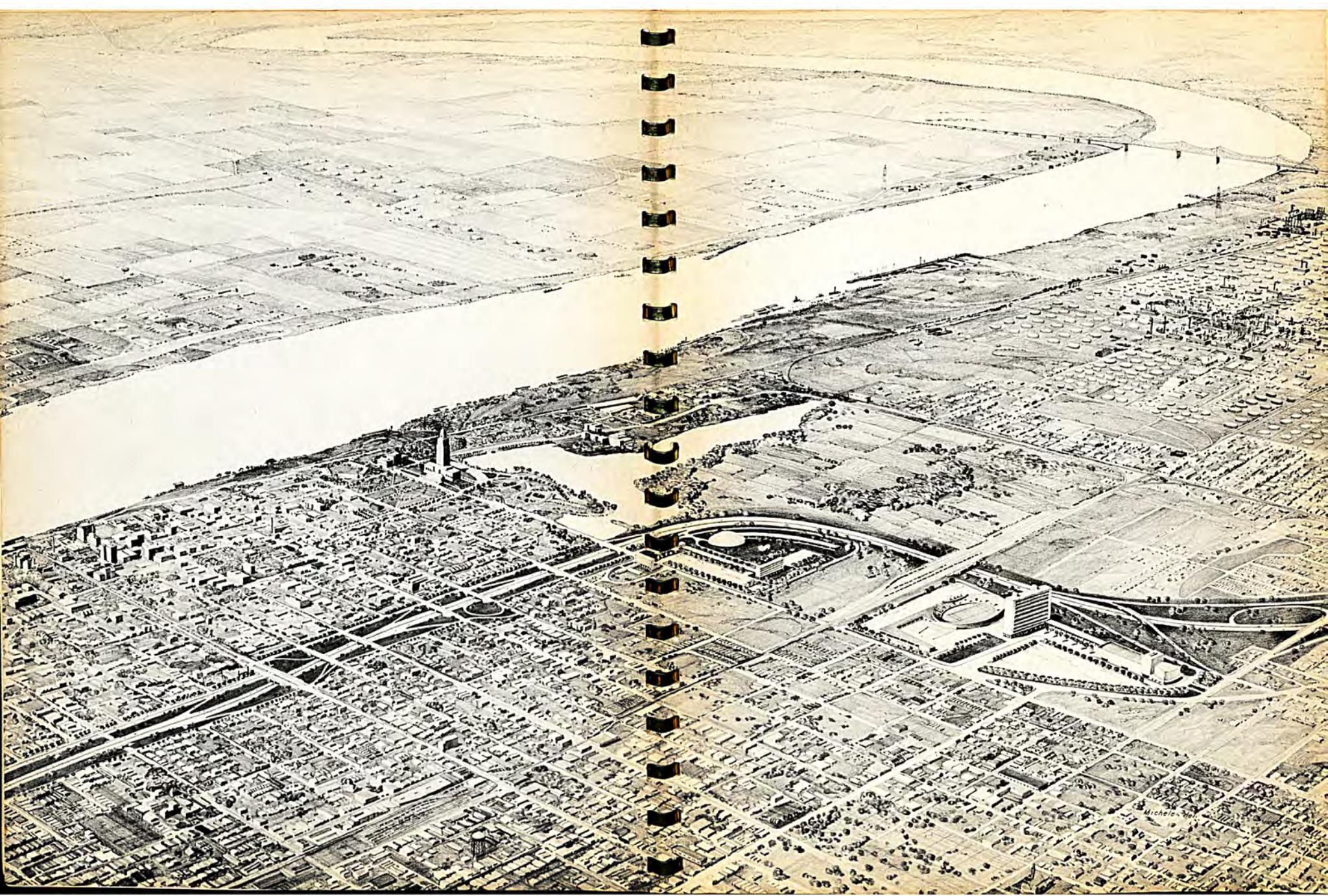
Again from the point of crossing of the expressway and Scenic Highway south of Choctaw Drive several alternates presented themselves. The first location analyzed would extend due west across the State property parallel to Fuqua, and then turn south across the downtown area along the river front, finally connecting to Nicholson Drive. After consideration this location was eliminated from recommendation for several reasons.

A highway located in front of the Capitol, and of sufficient capacity to carry the required volume of automobiles, would act as a barrier, thereby isolating the capitol building and its annex from the remainder of the State building groups and also from the downtown district. It would also need to contend with the geological fault which exists in this vicinity, probably requiring a periodical replacement of pavement—an item of perpetual maintenance representing poor initial planning.

The extra mile in length necessary in this location would require a greater original investment than the alternate later herein described. Beside involving an additional driving length which would add up to an appreciable economic item over a number of years, its location would require an indirect and roundabout route downtown. This indirectness is shown as the line marked A. Because of this, drivers would leave the improvement before reaching the river front and drive directly to their destinations in the business district over available north-south routes. This would defeat the purpose of a direct connection route and retain the problem of congestion on existing streets no closer to solution than at the present time.

The points of conflict arising from the crossings of the north and south movements (shown as brown lines) and the heavy flows from the east (red lines) are shown on the chart.





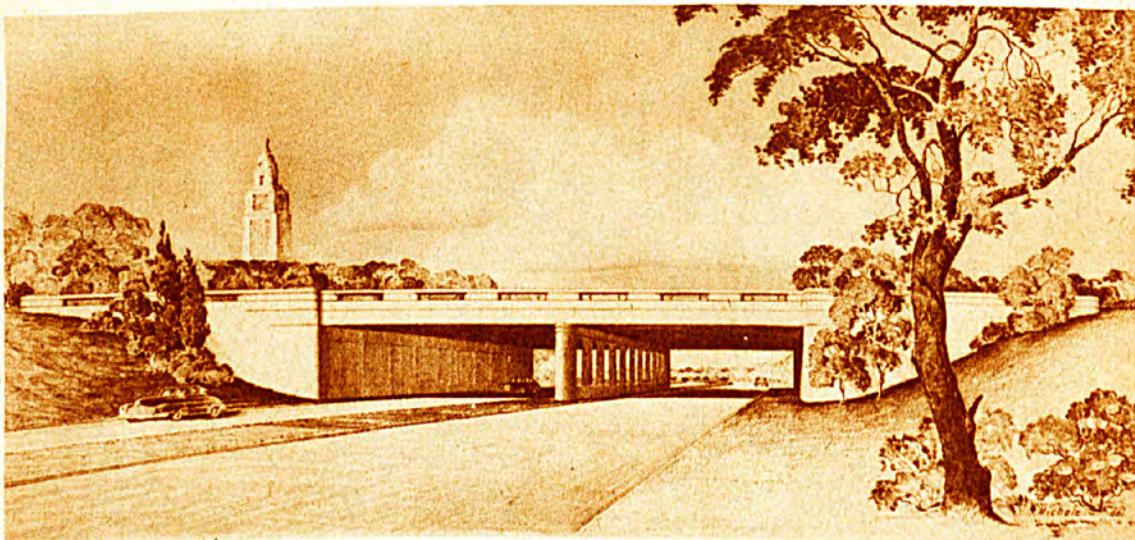
DISTRIBUTION FROM EXPRESSWAY OVER DOWNTOWN STREETS

The planning of provisions for movements from the downtown expressway interchanges to the ultimate destinations in the downtown area is probably the most vital single phase of expressway design. Almost every city now is faced with a crucial problem of congestion and delay in the street operation of its Central Business District. It is inviting traffic strangulation to attract additional motorists to the downtown area if these congested conditions are not alleviated. However an expressway will not only attract more people downtown, but it can also improve the functioning of the downtown streets if the highway is properly planned. Utmost care must be used so that the access and egress ramps are located to reduce driving on the surface streets to a minimum. An ample and convenient parking plan must be put in operation so that the vehicles are removed from these streets as quickly as possible, eliminating cruising. A recommended downtown street operational plan is found on page 29 of this report.

The expressway located along Tenth Street east of the downtown district would grade separate the north-south traffic movement from the traffic approaching that district from the east. Traffic from the north and south which was on the expressway would be distributed by ramps to east-west streets. Thus this north-south traffic would enter downtown parallel in direction to the traffic from the east. Parking places located on the east fringe of the Central Business District could intercept traffic from all directions.

LIMITED ACCESS SECTIONS WILL TERMINATE AT DALRYMPLE ROAD

The expressway is continued south (as shown on the map and on the detailed layouts) past the downtown district to a junction with Dalrymple Drive immediately south of L. & A. R. R. This is the terminus of the limited access section on the proposed interstate route.



TYPICAL EXPRESSWAY GRADE SEPARATION

From this junction a new connection is to be made to Perkins Road. The route proper will continue along Dalrymple through the park and a new extension built south to State Route 63.

The University and the areas around the lake will thus be directly served. It does not appear that the anticipated traffic beyond this point will justify the improvement of Route 63 as an expressway within the 23 year period contemplated in this report.

DEVELOPMENT OF STATE-OWNED PROPERTY

A discussion in detail of the future use of the State-owned property north and east of the State Capitol would normally be beyond the scope of a report of this nature, and is included only for reasons peculiar to the Baton Rouge area. The expressway location must unavoidably cross this property to reach the business district, for which a large volume of traffic is destined. This condition made necessary the study of the probable future development of the property so that the expressway location adopted would best serve the functional use of the property and its integration to the expressway in a comprehensive plan. Then too, after the Legislature purchased the property to prevent its commercialization and to permit its use as a community asset, the Governor instructed the Director of Highways to have the property surveyed and to have outline plans for its orderly use prepared. The suggestions presented here, therefore, are in accordance with the Governor's directive. These suggestions and the drawings that illustrate them were prepared by Mr. A. Hays Town, Architect.

STATE BUILDINGS

One obvious and important use to which the property can be devoted is to provide a location for future State department buildings that must be erected. These can be accommodated on that part of the property west of the Louisiana and Arkansas Railroad. It lies close to the existing State department buildings and easy access to it would obtain over the expressway and the improved highway and street systems. The buildings to provide for such activities are:

A building to serve as the central administrative office and for the State laboratory for the State Board of Health. Plans for this building were prepared for its erection on the rear of the area now occupied by the Department of Highways but they can be easily modified and adapted to this new and more appropriate location.

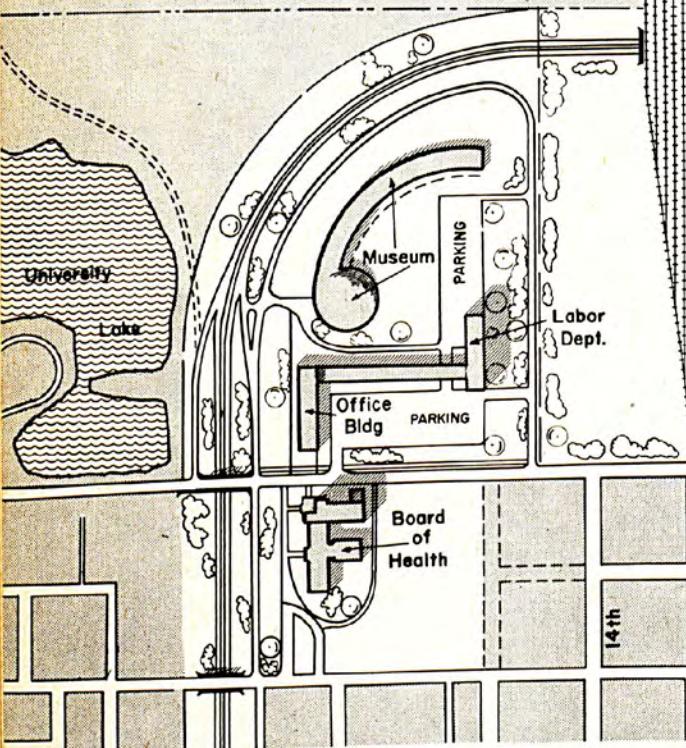
A building is also apparently needed for the Department of Labor and its expanding activities.

The third building suggested could be a museum to exhibit the commercial and industrial activities and the natural resources of the State. This building could also accommodate the offices of the Department of Commerce and Industry and the offices of the Department of Conservation.

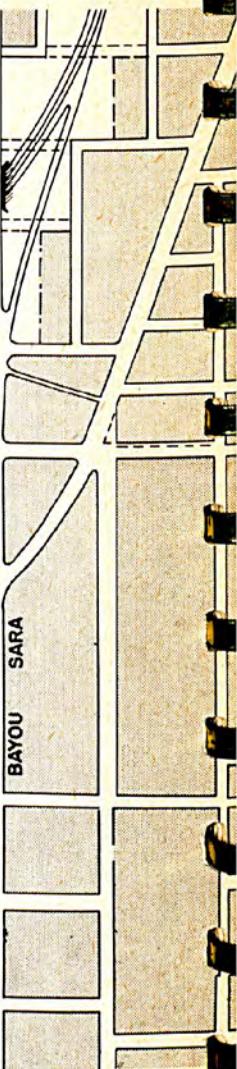
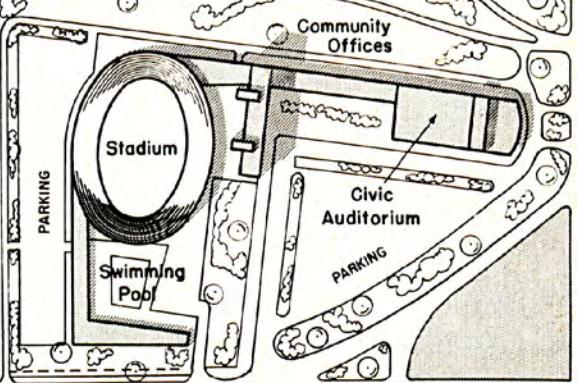
CIVIC CENTER

The area bounded on the west by the Louisiana and Arkansas Railroad and on the east by the Bayou Sara Road seems admirably adapted for the location of a community civic center for the City of Baton Rouge. Such a use is consistent with State ownership

LOUISIANA
STATE GROUP



BATON ROUGE.
CIVIC CENTER



of the property because Baton Rouge is the capital of the State. The buildings that could be accommodated in that area, which can also provide the required parking spaces to permit such buildings to function efficiently, are:

An auditorium so badly needed in Baton Rouge. This could be of any required seating capacity. Connected with, and to the rear of this building, could be a small theatre and offices for the civic theatre group.

In anticipation of the adoption of the proposed plan to merge the governmental functions of the city and parish this location will provide an excellent site for a building for the personnel of the Administration and Management Headquarters,

the Budgeting and Accounting Department, the Park and Recreation Commission, the Public Works and Services Department and possibly the tax assessing and collecting agency. This would leave the present parish courthouse exclusively for the use of the consolidated judicial and police functions. In addition, such a building could provide space for a modified version of the present City-Parish Planning Committee which should be continued as a permanent part of the consolidated governmental organization. Other activities that could be accorded office space, committee rooms and club rooms are the various civic groups, the woman's club, boy and girl scouts, Community Chest and others. The terrain of this area lends itself favorably for the economical erection of a stadium for outdoor athletic contests or for the accommodation of any outdoor gathering of large numbers of people. South of the stadium the terrain also economically favors the location of a large outdoor swimming pool.

Baton Rouge is fortunate in having this favorably located site available for development. Connections to streets and highways to provide quick access to downtown and all parts of the region can be developed as here described to provide ideal transportation facilities for the great number of people who will use the project

DRAINAGE OF EXPRESSWAY

The means for disposing of surface water in the Baton Rouge area are widely conceded to need early improvement. While thought must be given to assuring adequate drainage for the expressway, no special study of this problem has been made in connection with this report, both because the drainage problem is a general one—beyond the scope of this report—and because it is assumed that the city and parish will initiate active steps to solve it in the near future. Insofar as the drainage of the expressway is concerned, two obvious and relatively inexpensive projects would probably suffice. The first is an improvement of the Brunot Canal by increasing its capacity north of Government Street, and by extending it to connect with an 6' x 3' concrete box culvert at the intersection of Boyd Avenue and Fryoux Street. The second is to install a drum dam in the capitol lake dike with a weir elevation of 31.0 feet.

A study of rainfall data for the past ten years indicates that a twenty-four hour precipitation in excess of three inches has occurred twelve times; an average of 1.2 times per year. Of these twelve occasions, precipitation has exceeded four inches as follows:

January, 1942	4.57 inches
April, 1942.....	6.35 inches
March, 1947.....	8.35 inches

It is notable that on none of the twelve times was the river stage as high as 33. The significance of this is that, had a flood gate of adequate capacity been present in the University Lake dike, the level of the lake would not have been seriously raised by those rainfalls.

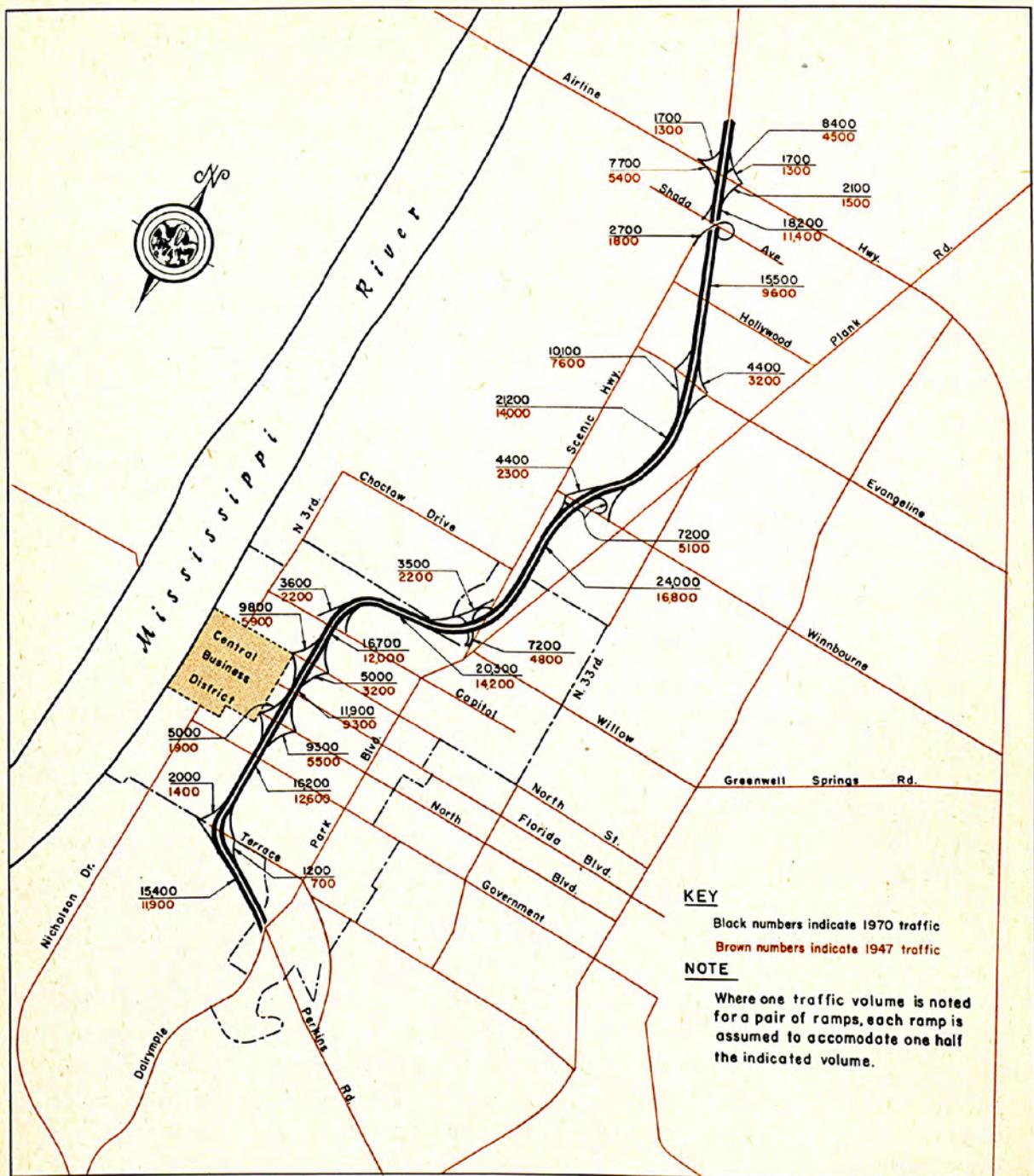
BATON ROUGE EXPRESSWAY DESIGN STANDARDS

The Baton Rouge expressway was designed for two lanes of moving traffic in each direction for its entire length. A median strip 20 feet wide was used throughout except at some bridges where economy could be realized by reducing the median strip width. Each lane is 12 feet wide with mountable curb and gutter and the outer lane on each side is flanked by a 10 foot wide stabilized shoulder for emergency parking. This is necessary to avoid clogging a traffic lane when someone has car trouble on the expressway.

The alignment of the expressway was designed for smooth, continuous travel. Even the sharpest horizontal curve of 5 degrees at one location permits a safe speed of 50 miles per hour. Greater speeds may be traveled safely on other sections of the expressway in so far as horizontal alignment and vertical curvature is concerned.

The generally level terrain of the Baton Rouge area lends itself to easy grades on the expressway. The steepest grade necessitated in the design was only 3% for the four main traffic lanes. In the final design a maximum grade of 6% for ascending and 8% for descending ramps at interchanges should not be exceeded. The final design for construction should incorporate approach transition curves for all horizontal curves greater than 2 degrees.

All structures were designed with a minimum vertical clearance of 14 feet and conform in horizontal clearance, loading, and other respects to the requirements of the standards of the Public Roads Administration.



1947 AND 1970 EXPRESSWAY TRAFFIC VOLUMES

EXPRESSWAY ECONOMIC BENEFIT ANALYSIS

FRACTIONAL INSTALLATION PROGRAM NECESSARY

The expressway recommended for Baton Rouge is probably the most needed single facility of all those proposed in this report. However, the financing capacity of the several governmental jurisdictions involved does have a limit. The cost of acquiring right-of-way for and constructing the entire expressway now, plus other exigencies both in and out of the realm of highway and street improvements would in all probability exceed this financing limit.

The highway plan in this report was developed with due cognizance of the condition of the Baton Rouge metropolitan area's present and potential economy, with a progressive scheduling of improvements, each of which would be comfortably financed by this economy. The costly nature of the expressway renders the scheduling of the entire facility at any one time impracticable, necessitating a fractional program of installation.

BENEFITS VERSUS COSTS

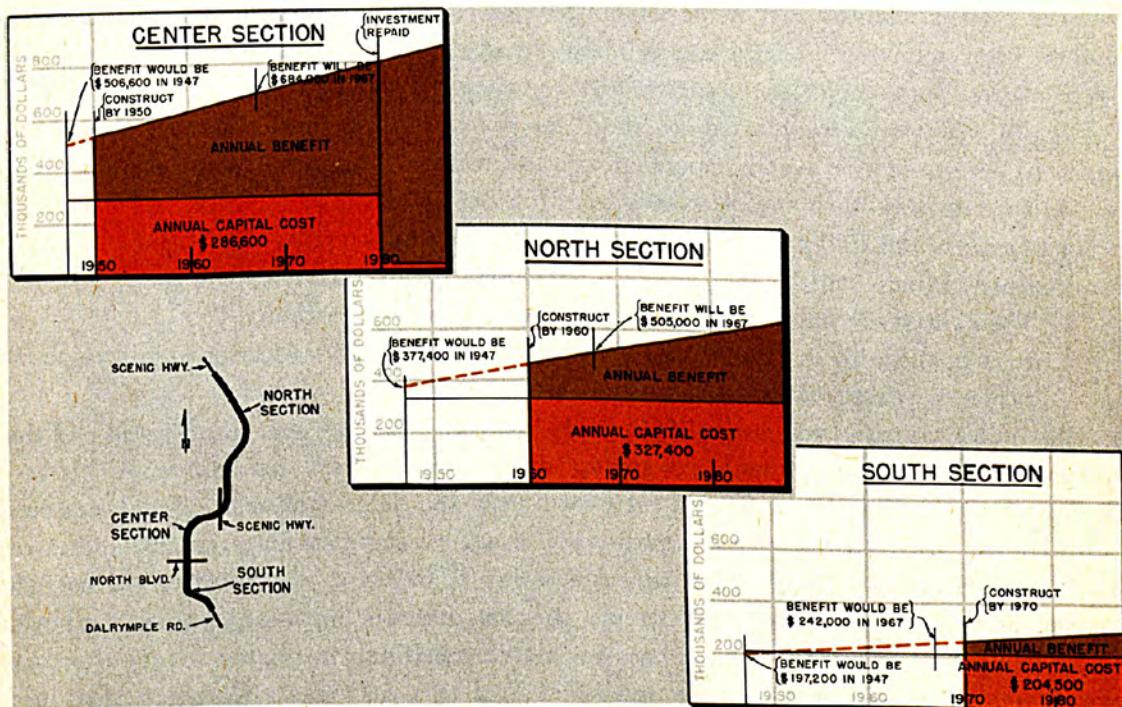
Before the expressway, in whole or in part, was included in the list of recommendations in this report, a detailed analysis to determine whether the facility is economically justified or not, was made. To be economically justified the expressway should show an annual benefit in dollars greater than the annual capital cost. This benefit is the monetary savings in time and cost of operation of vehicles that motorists would realize by using the expressway. The annual capital cost is the principal and interest on the investment required to acquire right-of-way for and construct the facility, plus the cost of maintenance and operation of the expressway when completed and in use.

More details concerning the technique employed in computing benefits are included later for those readers interested in that procedure; for those who are not, the results of the analysis are discussed now.

To achieve a sufficient degree of reliability, the benefit study was restricted to only those benefits which are tangible and measurable. It should be noted that the resultant benefits in this study represent but a fraction of the total advantage that the expressway would create. Some of these intangible and immeasurable benefits are the reduction of accidents, decreased cost of commercial activity and the services of the police and fire departments, and the diversion of heavy streams of noisy and dangerous traffic around residential neighborhoods rather than infiltrating through them.

CENTER SECTION SHOWS GREATEST BENEFIT

The Baton Rouge expressway was divided into three parts—the North, Center and South sections—each of which could be built and used separately. From the accompanying graphs showing the results of the benefit analysis it may be observed that the Center section at the Central Business District shows a benefit 77% greater than the annual capital cost at the present time which will increase to 138% in twenty years. The North section has a benefit now 15% greater than the annual capital cost, increasing to 55% in twenty years. The South section has a benefit now slightly less than its annual capital cost, but rises in twenty years to 18% greater than the annual capital cost.



GRAPHS SHOWING EXPRESSWAY BENEFITS AND COSTS

Fortunately the Center section is the most desirable and necessary one of the three, both from the point of view of the location of the most pressing need of such a facility as well as the results of the benefit analysis, and is recommended to be included in the immediate program of improvements. The North section is recommended in the second phase of improvements for completion by 1960. The South section though not economically justified now, shows sufficient benefit over cost to be included in the third phase of improvements for completion by 1970.

ANALYSIS TECHNIQUE DESCRIBED

For those interested, a few details are related here to make the technique used to determine benefits more readily understandable.

The benefit analysis was made only after the expressway was located and designed and its cost estimated. Then existing major streets generally parallel to the expressway were selected for comparison of costs of driving time and mileage.

Traffic volumes were plotted on these major streets and numerous time runs were made to determine the average speed of existing traffic. Since these volumes and speeds varied considerably with their distance from the Central Business District, more accurate results were obtained by considering smaller sections separately. The limits of these sections are in line with the expressway interchanges for two reasons, namely:

1. The expressway traffic volumes are constant between interchanges.
2. It is possible to determine the degree of economic justification of each section of expressway separately.

The mileage cost of operation of a vehicle is directly proportional to its speed and the number of stops it makes. Speed is greater on the expressway than on major streets. Since there are virtually no stops on the expressway, the number of stops on major streets is, of course, greater than on the expressway. Based on the reasoning that the increased cost of operation due to speed on the expressway is balanced by the increased cost of operation due to stops on the major streets, the same mileage unit cost was used for both.

In computing the time element cost for traffic remaining on major streets after the expressway is in operation, a reduction of 15% of this cost was allowed to take into account the increased efficiency of the major streets by virtue of traffic being diverted from them to the expressway.

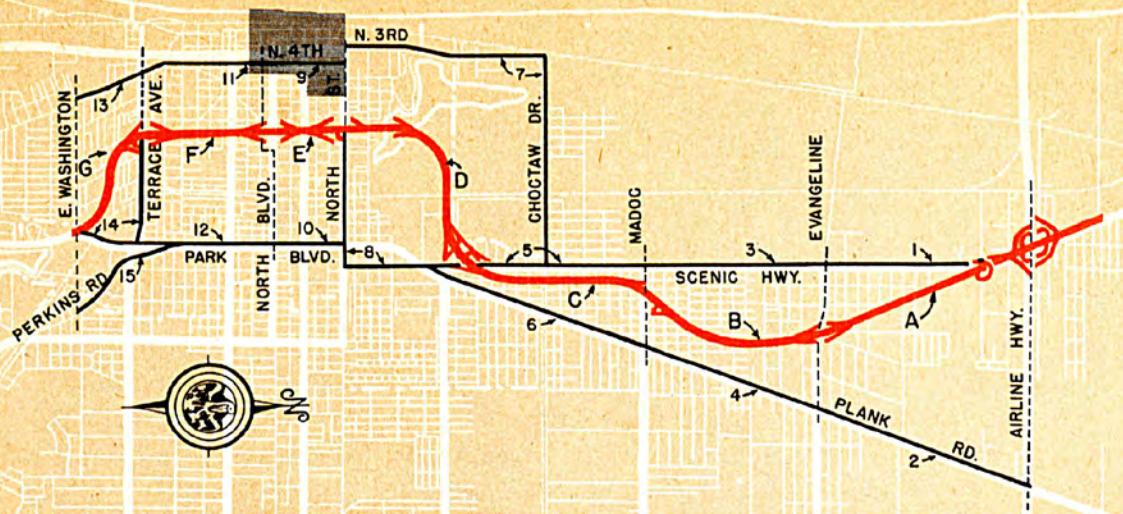


TABLE OF ECONOMIC BENEFITS FROM EXPRESSWAY

EXPRESSWAY SECTION	MAJOR STREET SECTION	LENGTH IN MI.	SPEED IN MPH.	TIME OF TRAVEL IN MIN.	NO. OF VEHICLES			1947 DAILY COSTS IN \$				BENEFIT IN \$				ESTIMATED ANNUAL CAPITAL COST IN \$+						
					1947		1970	WITHOUT EXPRESSWAY		WITH EXPRESSWAY		1947		1947		1970						
					1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
NORTH SECTION OF EXPRESSWAY	A	1.50	40	2.2	-			12,500	15,500	-	-	550	1,120									
	B	1.20*	38*	1.9*	-			14,000	21,200	-	-	530	1,020									
	C	1.05*	39*	1.7*	-			16,800	21,700	-	-	570	1,060									
	1	1.56	24	3.6	7,900			2,900	-	570	740	210	270	1,330	-220	1,110	377,400	505,000	505,000	327,400		
	2	1.30	26	3.0	8,000			500	-	480	620	30	60									
	3	1.01	17	3.6	11,600			4,600	-	840	700	330	280									
	4	1.08	26	2.5	11,000			4,000	-	550	710	200	260									
	5	1.00	16	3.8	13,000			4,600	-	990	780	350	280									
	6	1.08	23	2.8	12,900			4,500	-	720	840	250	290									
	D	1.29	40	1.9	-			11,200	20,300	-	-	540	1,100									
CENTER SECTION OF EXPRESSWAY	E	0.37	40	0.6	-			9,800	10,600	-	-	120	220									
	7	1.52	20	4.6	9,100			2,000	-	840	830	180	180	1,290	200	1,490	506,600	684,000	684,000	286,600		
	8	1.54	16	5.8	10,900			3,800	-	1,260	1000	140	350									
	9	0.37	13	1.7	7,900			1,900	-	270	180	60	40									
	10	0.37	13	1.7	12,200			8,400	-	410	270	290	190									
SOUTH SECTION OF EXPRESSWAY	F	0.75	40	1.1	-			12,600	14,600	-	-	280	570									
	G	0.71	40	1.1	-			11,900	15,400	-	-	260	510									
	11	0.78	19	2.5	5,400			1,200	-	270	250	60	60	580	0	580	197,200	212,000	212,000	204,500		
	12	0.75	19	2.4	10,400			2,000	-	500	470	100	90									
	13	0.40	28	0.9	5,000			1,200	-	90	120	20	30									
	14	1.04	21	3.0	5,000			500	-	300	310	30	30									
	15	0.71	22	1.9	4,800			1,300	-	180	200	50	60									

* THESE ARE COMPOSITE VALUES CONSISTING OF PART LOCAL STREET AND PART EXPRESSWAY TRIP. TO ACCOUNT FOR THE ADDITIONAL ACCESS TRIP TO WHICH A DRIVER WILL SUBJECT HIMSELF TO TAKE ADVANTAGE OF THE TIME SAVED BY USING THE EXPRESSWAY.

+ BASED ON 30-YR. PERIOD OF AMORTIZATION AT 2% WITH MAINTENANCE AND OPERATIONS COSTS PER MILE PER ANNUM OF \$15,000 & \$4,000 RESPECTIVELY.

MAJOR STREETS

MAJOR STREETS IMPROVED TO CAPACITY REQUIRED BY FUTURE TRAFFIC

The major street and expressway system recommended in this report is based upon the needs of the city for the next twenty-three year period. The map on the opposite page shows the anticipated traffic which would use these streets at the end of that period. This traffic was assigned to the various units of the street system, based upon the traffic information from the Origin-Destination survey. The future increases in traffic determined from the anticipated expansion of the city have already been described.

The types of improvements which will eventually be needed to accommodate these traffic loads are shown on the transparent overlay. The heavy north-south volume of traffic necessitates an improvement of expressway proportions. In order to expedite the movements of vehicles to and from the expressway with a minimum of travel over surface streets, additional feeder streets (Evangeline, Modoc, and Fuqua Streets) have been added to the major street system.

FLORIDA AND CONVENTION TO BE ONE-WAY STREETS

The heavy movement of traffic in an east-west direction indicates the necessity of selecting one or more principal routes to accommodate this demand.

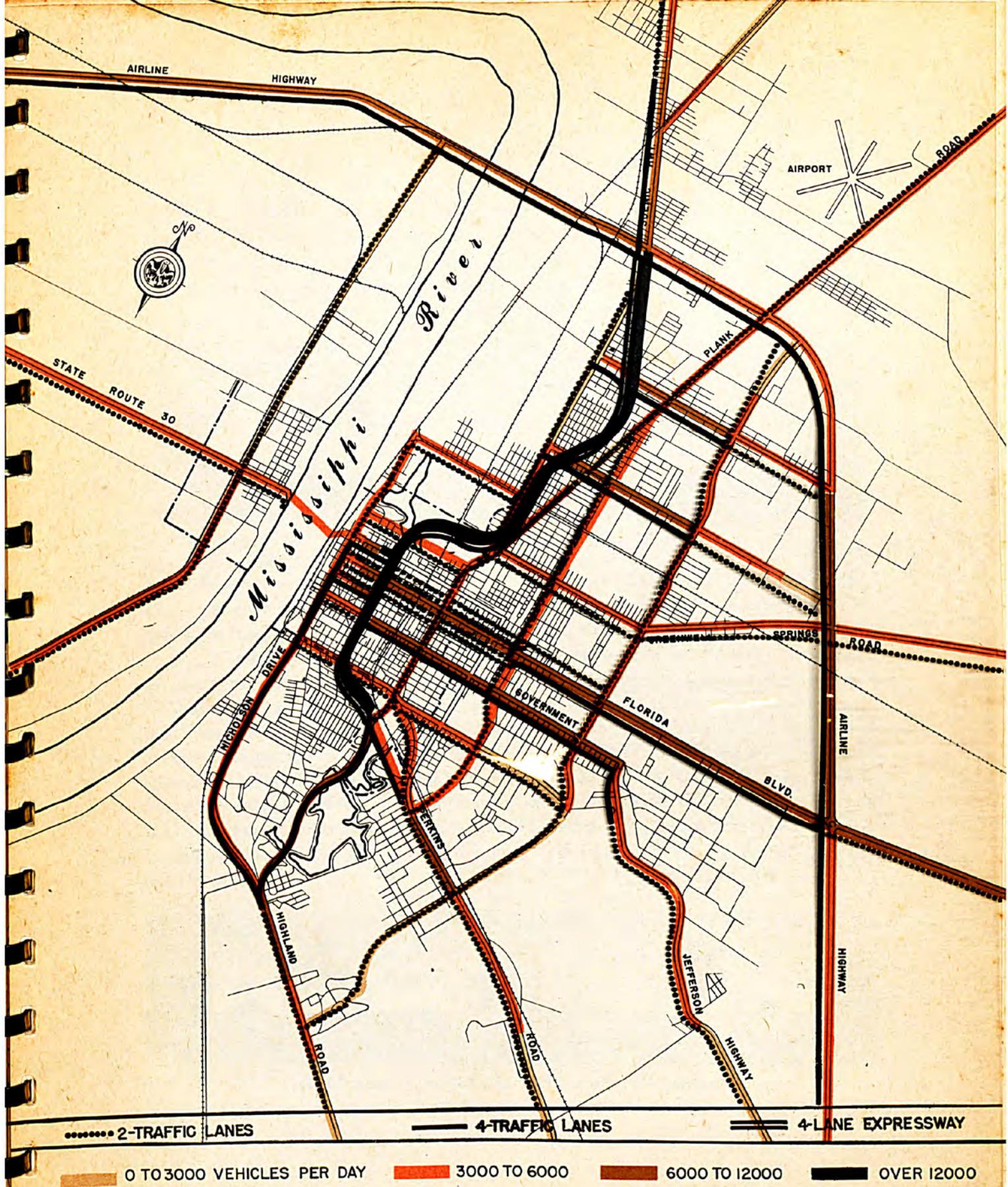
Florida Boulevard is a logical selection because of the investment already made in the four lane divided pavement from Wabash Avenue east to Airline Highway.

From Wabash Avenue west into the downtown area Florida narrows down to a four lane undivided street. In this section there are but two lanes left for moving vehicles since parking is permitted along both curbs.

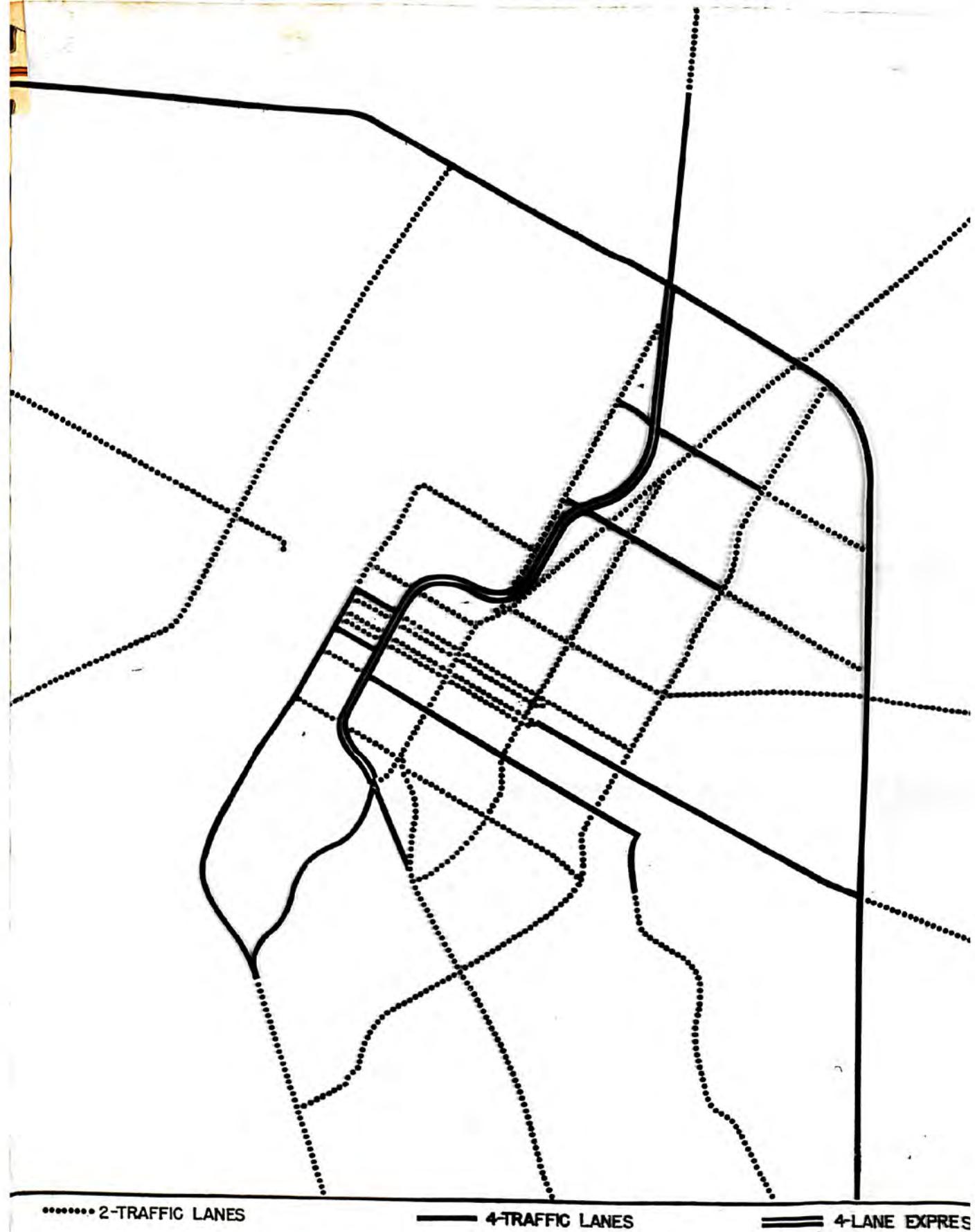
The existing right-of-way width along Florida west of Twenty-Second Street is 64 feet. Adding two lanes becomes physically impossible within that right-of-way. Acquiring additional width would involve a great many residences as well as the school and the Federal Court House and Post Office and thus appears impracticable.

Therefore, to acquire the additional roadway capacity required, it is recommended to take advantage of relatively lightly traveled Convention Street by means of a simple connection to Florida at Phillips Street, thus dividing the load between them. As soon as this connection is made it is strongly recommended that Florida and Convention be operated as one-way streets—Florida westbound and Convention eastbound.

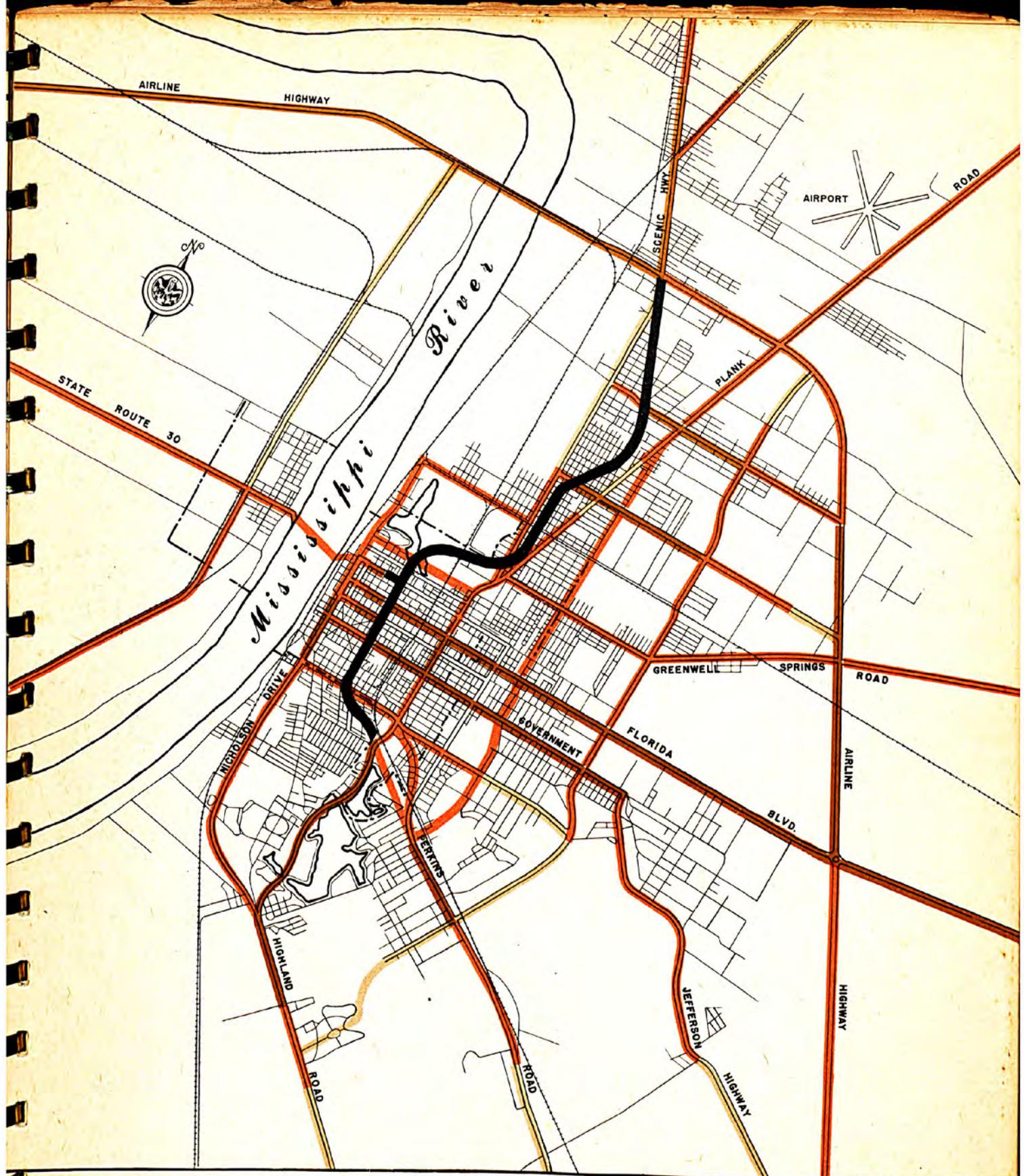
Besides adding more lanes, these one-way streets will greatly improve the efficiency since two lanes in the same direction are capable of carrying much more traffic than a roadway with two lanes in opposite directions. One-way streets having two or more



ESTIMATED 1970 TRAFFIC ON MAJOR STREET SYSTEM
 TRAFFIC LANES REQUIRED TO SERVE ANTICIPATED VOLUMES

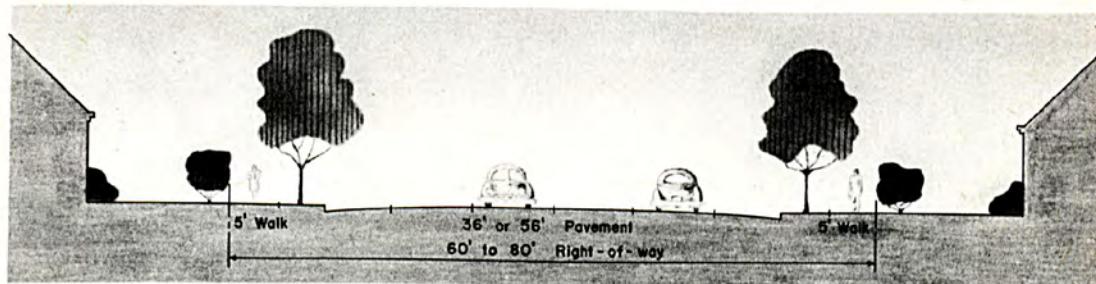


TRAFFIC LANES REQUIRED TO SERVE ANTICIPATED VOLUMES



ESTIMATED 1970 TRAFFIC ON MAJOR STREET SYSTEM

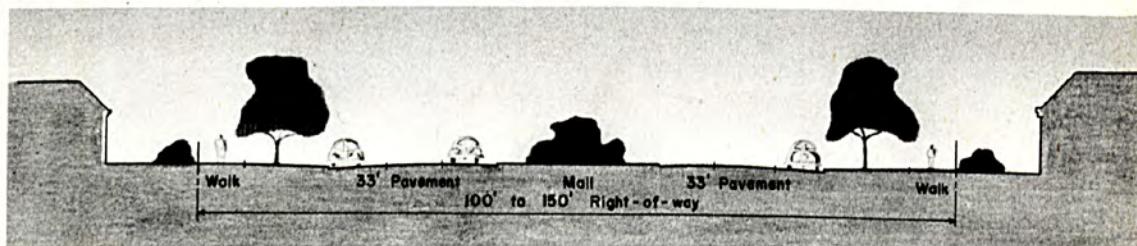
lanes permit the passing, without interference, of slower moving traffic. From the line of the expressway west it is necessary to limit curb parking to one curb at the present time, thus providing three moving lanes in each direction. This capacity would satisfy the needs of future traffic and would attract vehicles from other crowded east-west streets, relieving the congestion which now exists along them.



TYPICAL MAJOR STREET CROSS-SECTION

The Airline Highway marks the approximate limit of predictable population expansion for the coming twenty-three years. There is, therefore, a need for one or two continuous north-south cross-town streets west of this highway to serve as ties between the radial routes and to provide for north-south movements of inter-neighborhood traffic.

As was the case with the radial routes, where these cross-town routes lie in populated areas, locations were chosen that could be improved most economically and expeditiously. It is agreed that all portions of the outer cross-town routes will not be needed in the near future, in fact a few sections can probably be put off throughout the coming twenty-three year period. In view of the past indiscriminate and unguided subdivision of real estate, and the resultant discontinuity of streets, it is imperative that future major streets be defined, at least in location, before the land has been divided for residential purposes. This can be accomplished by the adoption of such a highway plan and the enforcement of conforming subdivision controls.



EXPRESSWAY EXTENSION ALONG DALRYMPLE DRIVE

DOWNTOWN STREET OPERATIONAL PLAN

With the construction of the expressway, the pattern of the vehicular movements to and from the downtown area would undergo a degree of alteration. Heavy downtown terminating volumes would be transferred from routes running north and south to those running east and west. It is necessary, therefore, to examine the relationship that would exist between the expressway and the downtown street system, and to devise an operational plan taking into account the altered flow pattern.

NORTH STREET WOULD BECOME PRINCIPAL DOWNTOWN ENTRY ROUTE

Downtown terminating traffic originating in the northern and northeastern areas would enter the business district over North Street. This entry path was selected in preference to Main Street to avoid the conflicts that would occur between fast moving expressway-leaving movements and the local circulation induced by Main Street's commercial establishments. At its present width, North Street would be too narrow to handle the flow from the expressway. Concurrent with the construction of the initial section of the expressway, it should be expanded to a 44 foot wide pavement. When the expressway is put into operation, curb parking should be eliminated from both sides of the street, so that four lanes would be available to vehicular flow.

NECESSARY TO INCREASE CAPACITY OF FLORIDA AND CONVENTION STREETS

Traffic generated in the eastern parts of the city would enter the business district over Florida Street and return along Convention Street. To facilitate flow as this heavy movement enters and leaves the downtown area, curb parking should be prohibited along the south side of Florida Street and the north side of Convention Street from the expressway westward to Lafayette Street. This necessary capacity expansion should be undertaken immediately.

North Boulevard has been selected as the downtown feeder serving traffic generated in the southern and southeastern areas for reasons that are more or less obvious. Its capacity is such that no widening or parking removal would be necessary to serve the volumes using it in the predictable future.

SERVICE DRIVES WOULD PRODUCE SELECTIVE EXPRESSWAY ACCESS

The service drives paralleling the expressway as it passes the business district would lend a high degree of flexibility to downtown street operation. Although the bulk of the expressway entering and leaving movements would probably elect to use the North Street

and North Boulevard, access to the expressway could be obtained over any of the downtown east-west streets. Traffic would seek out the paths of least resistance and no feeder would become overcrowded.

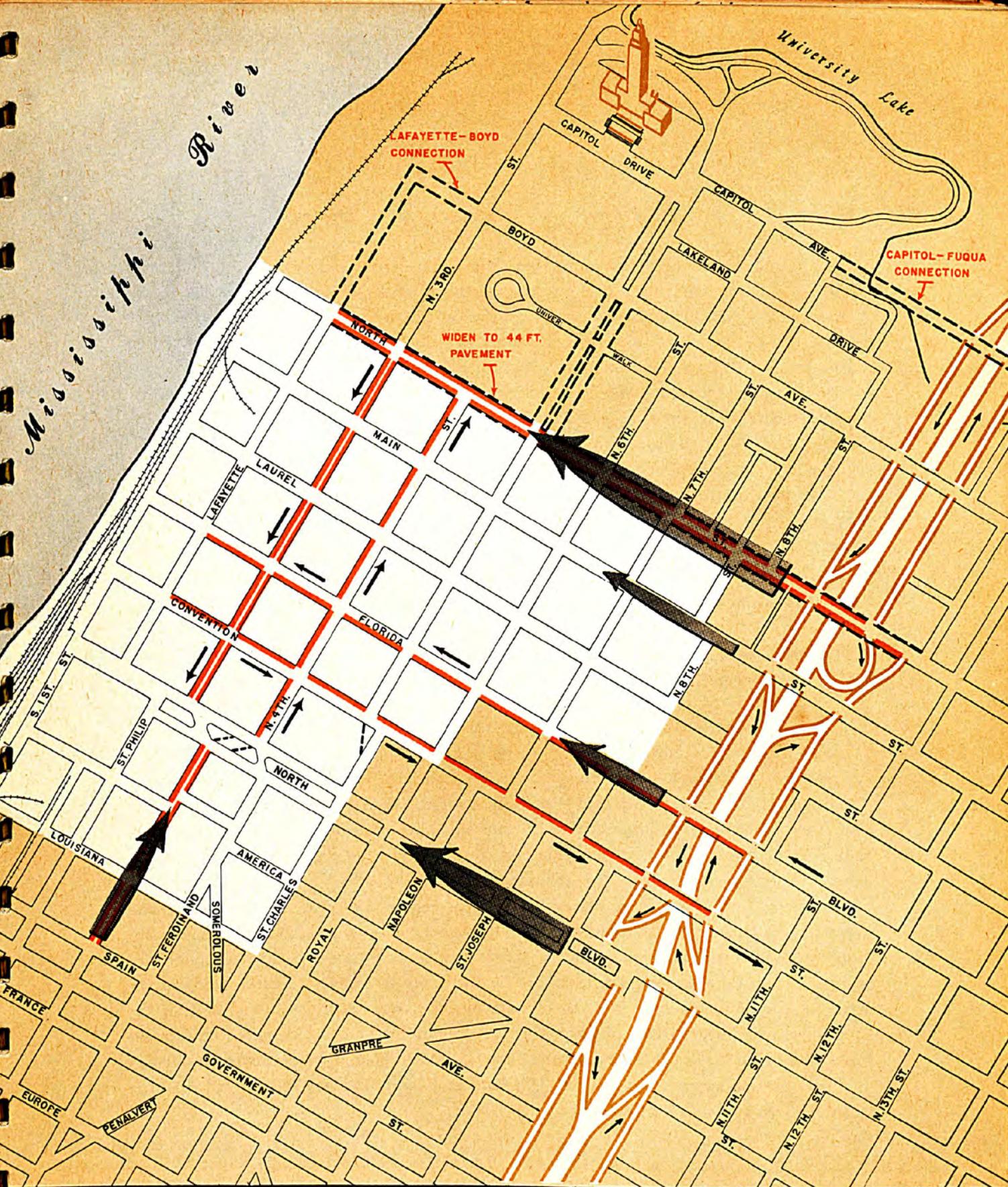
Terminating movements from the University area would continue to flow to the business center over Nicholson Drive and St. Louis Street. To lessen the bottling effect of the jog at North Boulevard, it is recommended that curb parking be removed from both sides of St. Louis Street between Spain Street and North Boulevard. This step is also urged for immediate undertaking, independent of the expressway construction.

DIRECTIONAL FLOW OVER THIRD AND FOURTH STREETS WOULD BE REVERSED

The greatest concentration of downtown congestion exists along Third and Fourth Streets. Despite one-way operation of these streets, they offer but two lanes each to vehicular movement and these are interrupted by the maneuverings of curb parkers and commercial vehicles. Curb parking should be prohibited on both sides of Third Street. Because of its greater pavement width, curb parking should be eliminated from only one side of Fourth Street. In addition, it is recommended that the directional flow over these streets be reversed. This change would produce a more direct routing, and would encourage the use of Lafayette and Fifth Streets by north-south through traffic. The proposed Lafayette-Boyd connection and North Fifth Street expansion would facilitate these movements and would provide better connections between the business district and the State administrative center. Through the expansion of the feeder streets described in the previous paragraphs, flow to Third Street would be facilitated, enhancing its position as the city's retail trade center.

Due to the flexibility lent to downtown traffic circulation by the expressway, it is difficult to predict the necessity of retaining one-way operation of Fifth, Sixth, and Seventh Streets. As noted previously, the expressway would tend to produce a predominant east-west directional flow. After the expressway is built, and the motorists have become familiar with its operation, the above streets should be closely examined with an eye to restoring two-way operation.

To alleviate much of the downtown congestion, steps should be taken to restrict the use of the streets for commercial loading and unloading. Angle parking and double parking of trucks along the curbs should be strictly prohibited. Truck loading and unloading should be banned between the hours of 8:00-9:30 A.M. and 4:00-6:30 P.M. Ordinances should be passed to require future commercial builders to provide adequate off-street loading docks.



MAJOR TRAFFIC MOVEMENT

RECOMMENDED STREET IMPROVEMENT

BECOMMENDED NO PARKING ZONE

DOWNTOWN STREET OPERATIONAL PLAN

PRIORITY OF CONSTRUCTION

The recommended order of improving this major street and expressway system is shown on the opposite page. It is based upon the adequacy or inadequacy of the routes in their present condition and also the future time at which they are anticipated to become inadequate. The extent of improvements in each of the time phases chosen are influenced by the possible budget available to do the required work.

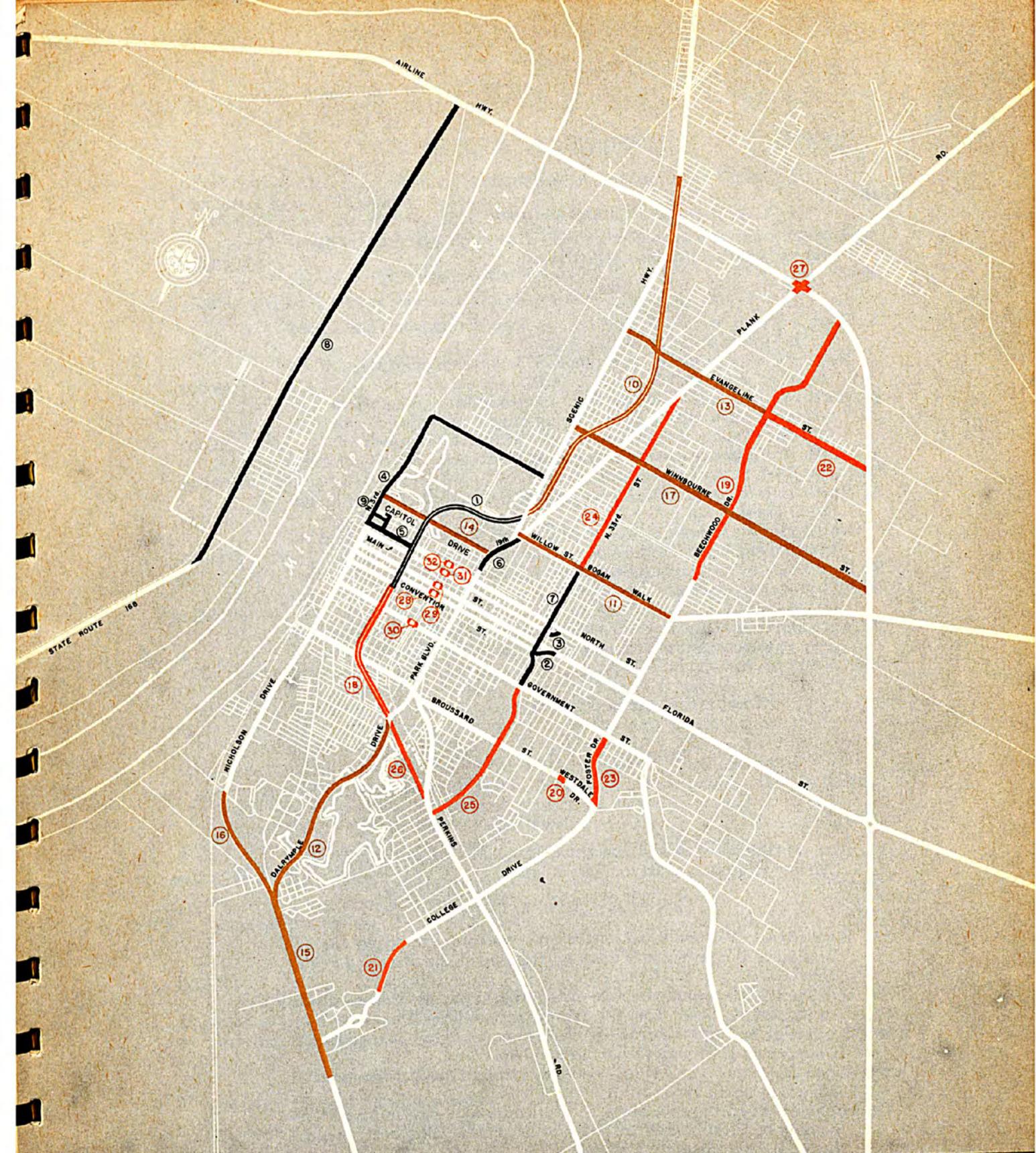
On the pages following are the tabulations of the estimated costs of improvements, grouped according to the time phase in which the work is to be done. Detailed layouts for the expressway also will be found on later pages.

The construction unit costs used are those current in 1947. It is anticipated that by the time most of the improvements are made there will be a substantial reduction in these costs. In order to balance the anticipated reductions; the usual 15% for engineering and contingencies was not added to the unit prices used.

On the map where the types of improvements to be provided are shown, only the number of lanes required for moving traffic have been designated. Parking lanes can be added to either side of these moving lanes if conditions at the time of the actual construction of each project make them necessary. Similarly, as at least a temporary expedient, when four lanes of capacity are required on a street where parking is allowed, the parking can be eliminated to provide two additional usable lanes if conditions indicate that the actual construction could be best postponed to some future date.

In preparing the tabulated costs of the recommended projects, full account was taken of local conditions that would cause variations from the desired typical cross sections. When extra right-of-way width could be obtained at little or no extra cost it was anticipated that it would be taken as insurance for the unpredictable needs of the more distant future. Following the same reasoning, where streets were projected over open unimproved areas, generous right-of-way widths were applied.

Properties which would be assembled as right-of-way for both the expressway and the major street improvements were originally appraised on a present-day market value basis. An appreciable number of the residences now located on the desired rights-of-way can be salvaged by moving them to nearby available locations, therefore 35% of the market value of improvements north of Capitol Drive was used. Similarly 90% of the value of improvements south of Capitol Drive appears in the cost estimates, this larger percentage being used in this area because of the decreased possibility of moving residences in this older, more congested district. All land to be acquired has been included in the cost estimated at 100% market value.



IMMEDIATE
IMPROVEMENTS

SECOND PHASE
IMPROVEMENTS (1950-60)

THIRD PHASE
IMPROVEMENTS (1960-70)

(②) Indicates Project Numbers in Tabulation on Following Pages

RECOMMENDED HIGHWAY IMPROVEMENT PROGRAM

IMMEDIATE IMPROVEMENTS

PROJECT NO.	LOCATION AND IMPROVEMENT	ESTIMATED COST	<i>Expressway</i>	
1.	Acquire right-of-way and construct first section of expressway— Bayou Sara Road to North Boulevard.....	\$5,720,000		
<i>Major Streets</i>				
2.	Florida St. improvement—new one-way connection from Convention St. to Florida St. near Phillips St.....	63,000		
3.	North St. improvement—new one-way connection from Main St. to North St. near 33rd St.....	48,000		
4.	North 3rd St. and Choctaw Rd. improvement—realignment and widening from North St. to Scenic Hwy., including access con- nections to industrial property north of the State capitol.....	268,000		
5.	North St. improvement—widening and repaving North St. from north 9th St. to Lafayette St.....	88,000		
6.	North 19th St. improvement—extending north 19th St. from Fuqua St. to Plank Road.....	87,000		
7.	North 33rd St. improvement—widening and repaving north 33rd St. from Bogan Walk—Willow St. to Government St.....	248,000		
8.	Port Allen improvement—relocation of State Route 168 from Airline Highway to connect with existing State Route 168 near southerly city limits.....	423,000		
9.	Street improvements near Capitol grounds—widening, repaving and new pavement between Lafayette St. and 5th St. and between North St. and the State capitol.....	127,000		
Total immediate improvements.....				\$7,072,000

SECOND PHASE IMPROVEMENTS

1950-1960

<i>Expressway</i>		ESTIMATED COST
10. Acquire right-of-way and construct second section of expressway— Airline Highway to Bayou Sara Road.....		
		\$6,170,000*
<i>Major Streets</i>		
11.	Bogan Walk-Willow St. improvement—widening, repaving and ex- tension to Bogan Walk-Willow St. from Scenic Highway to Foster Drive.....	401,000
12.	Dalrymple Drive improvement—widening, repaving and extension to Dalrymple Drive from the expressway to State Route 63.....	498,000
13.	Evangeline St. improvement—widening and repaving Evangeline St. from Scenic Highway to Beechwood Drive.....	407,000
14.	Fuqua St. extension (Capitol Ave.)—extend Fuqua Sts. from north 7th St. to north 19th St.....	97,000
15.	Highland Road improvements (State Route 63)—widening and re- paving of Highland Road from west Parker Boulevard south- easterly approximately 2 miles.....	496,000

PROJECT NO.	LOCATION AND IMPROVEMENT	ESTIMATED COST
16.	Nicholson Drive extension—extension to Nicholson Drive from State Route 273 to State Route 63.....	278,000
17.	Winnebourne St. improvement—widening and repaving Winnebourne St. from Scenic Highway to Airline Highway.....	591,000
	Total second phase improvements.....	\$8,938,000

*Includes construction of concrete box drainage conduit from Thielman St., east of expressway, to Hollywood St.

THIRD PHASE IMPROVEMENTS

1960-1970

Expressway

18.	Acquire right-of-way and construct balance of expressway—North Boulevard to Dalrymple Drive.....	\$4,064,000
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Major Streets

19.	Beechwood Drive improvement—widening, repaving and extension of Beechwood Drive from Foster Drive at Madison Ave. to Airline Highway.....	209,000**
20.	Broussard-Westdale Drive cut-off—extension of Broussard Drive from Country Club Drive to Westdale Drive.....	12,000**
21.	College Drive extension—widening, repaving and extension of College Drive from Whitehaven Ave. to DuBois Drive.....	47,000**
22.	Evangeline St. improvement—widening, repaving and extension of Evangeline St. from Beechwood Drive to Airline Highway.....	69,000**
23.	Foster Drive improvement—widening, repaving and extension of Foster Drive from Government St. to College Drive.....	114,000*
24.	North 33rd St. improvement—widening, repaving and extension of north 33rd St. from Bogan Walk-Willow St. to Plank Road.....	228,000**
25.	North 33rd St. extension—widening, repaving and extension of north 33rd St. from Perkins Road to Government St.....	225,000**
26.	Perkins Road extension—extend Perkins Road from Baywood Ave. to Dalrymple Drive.....	114,000**
27.	Plank Road and Airline Highway Grade Separation.....	220,000**
28.	Railroad Underpass—Convention St. and L. & A. R. R.....	178,000
29.	Railroad Underpass—Florida St. and L. & A. R. R.....	178,000

Major Street

30.	Railroad Underpass—Government St. and L. & A. R. R.....	\$ 178,000
31.	Railroad Underpass—Main St. and L. & A. R. R.....	178,000
32.	Railroad Underpass—North St. and L. & A. R. R.....	178,000

Total third phase improvements..... \$6,192,000

Grand total—all improvements..... \$22,202,000

**Cost of right-of-way not included as building setback ordinance will materially affect future right-of-way costs.

THE PARKING PROBLEM

Baton Rouge, like practically every present-day urban center, is faced with a shortage of downtown parking space. The shortage is not a new problem. It has been building up since the early 30's when automotive traffic to the business center became heavy enough to overflow the parking spaces existing along the curbs of the downtown streets. To handle the overflow, off-street storage lots were initiated, but they have not kept pace with the increases in vehicular flow to the business district.

The improvements to the highway and street systems recommended in the preceding sections of this report would result in greatly increased flow to the Central Business District. If adequate parking or terminal facilities are not provided to contain traffic upon its arrival, the improvements would be of little benefit to the motorists. More congestion—not less—would be the result. **Traffic flow and traffic storage must be considered jointly—improvements to one must be matched by improvements to the other if maximum results are to be obtained.**

Linked as it is to traffic flow, the parking problem may be attacked in much the same manner—through an analysis of existing conditions and the provision of improvements that would overcome existing deficiencies and set the pattern for forestalling future terminal space shortages.

In order to determine present parking needs and future trends, it was necessary to assemble certain basic facts. This factual information was gathered during the Origin-Destination survey. Motorists were questioned as to the destination and purpose of their downtown trips and where they parked while in the business district. The data thus obtained, supplemented by field information, forms the basis for the analysis and recommendations made in this section of the report.

EXISTING FACILITIES AND NEEDS

The map on the opposite page reveals the locations and capacities of the existing terminal facilities in downtown Baton Rouge. The photographic portion of the map encompasses the blocks of major business activity and the parking places most heavily used during the business day.

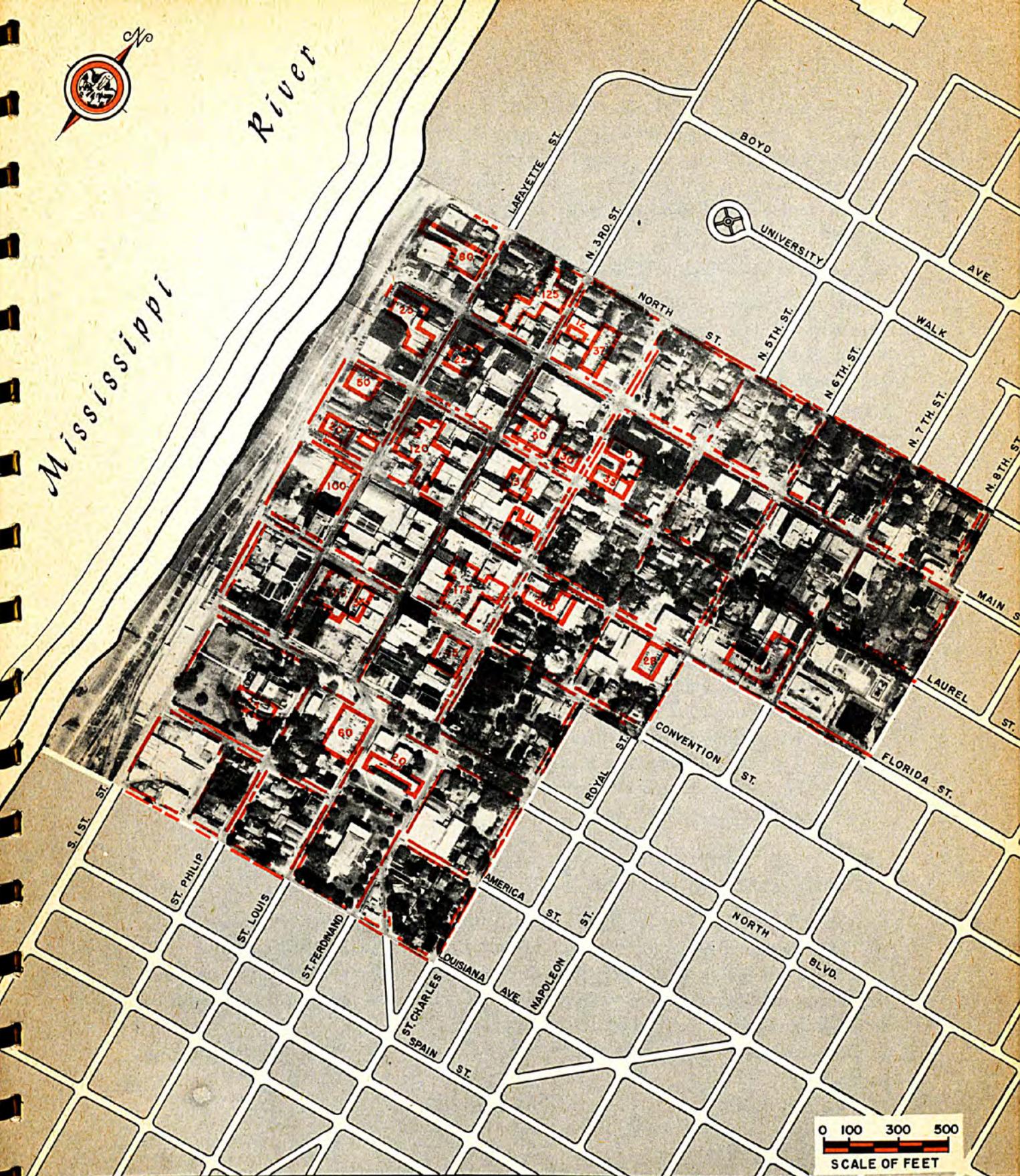
An inventory of these parking places discloses that approximately 3,460 vehicles may be stored in the Central Business District at one time. Of this total 1,800 are spaces existing along the curbs of the city streets. The remaining 1,660 are off-street spaces, found in parking lots and garages.

On the average weekday between 7 A.M. and 7 P.M., 15,400 motorists enter the Central Business District and park their vehicles in the 3,460 spaces. Of the 15,400 vehicles, 9,040 are stored in the 1,800 curb spaces, each space averaging 5 parkings daily. The 1,660 off-street spaces are used by 6,360 motorists, resulting in an average turnover rate of 3.8.

The demand for spaces varies from hour to hour during the business day. At 8 o'clock in the morning about 350 terminal spaces are required. The demand then increases sharply and uniformly until 10:30 A.M. when 3,050 spaces are needed. Demand continues heavy



River
Mississippi



OFF-STREET TERMINAL



CURB PARKING

EXISTING PARKING FACILITIES

over the period from 10:30 A.M. to 4:30 P.M. During this time interval there exists an average demand for approximately 3,200 spaces. Studies have shown that even during peak demand periods, parking facilities are only 80 per cent occupied, largely due to the turnover process. Applying this factor to the 3,460 spaces, it appears that Baton Rouge's existing terminals fall some 400 spaces short of satisfying the demand during the peak period.

SPACE SUPPLY IS DECREASING—SPACE DEMAND INCREASING

An examination of the existing off-street facilities reveals that over 30 per cent of the off-street spaces are located in the blocks fronting upon Third Street—blocks containing highly desirable business property. Many of the parking lots in these blocks will be taken over for more intensive uses as the wartime building restrictions are progressively removed. It appears logical to assume that no less than 200 spaces will be lost through this building expansion process in the next five year period.

The number of curb spaces is also a diminishing quantity. The incorporation of the downtown street operational plan, highly necessary to the successful operation of the expressway and the alleviation of the existing downtown street congestion, would result in the loss of some 400 curb spaces.

Concurrent with these space reductions, there will be an increasing demand for space. The anticipated growth in Baton Rouge's population, increased ownership and use of automobiles and the increased ease in driving downtown brought about by the highway and street improvements, will result in a need for at least 500 additional storage spaces in the next five year period.

Summarized, the additional space requirements are as follows:

1. Spaces needed to equalize existing supply and demand.....	400
2. Replacement of spaces to be lost through building expansion	200
3. Replacement of spaces to be lost through elimination of curb parking	400
4. Spaces necessitated by increased number of trips to the business district.....	500
TOTAL.....	1,500

PARKING HABITS BY PURPOSE

A sound parking plan for Baton Rouge must take into account the needs of the individual parker. The requirements of Central Business District parkers bear a close relationship to the purposes for which the downtown trips are made. This purpose-destination data is graphically portrayed on the facing map and is to be utilized in selecting locations and types of terminal facilities required.

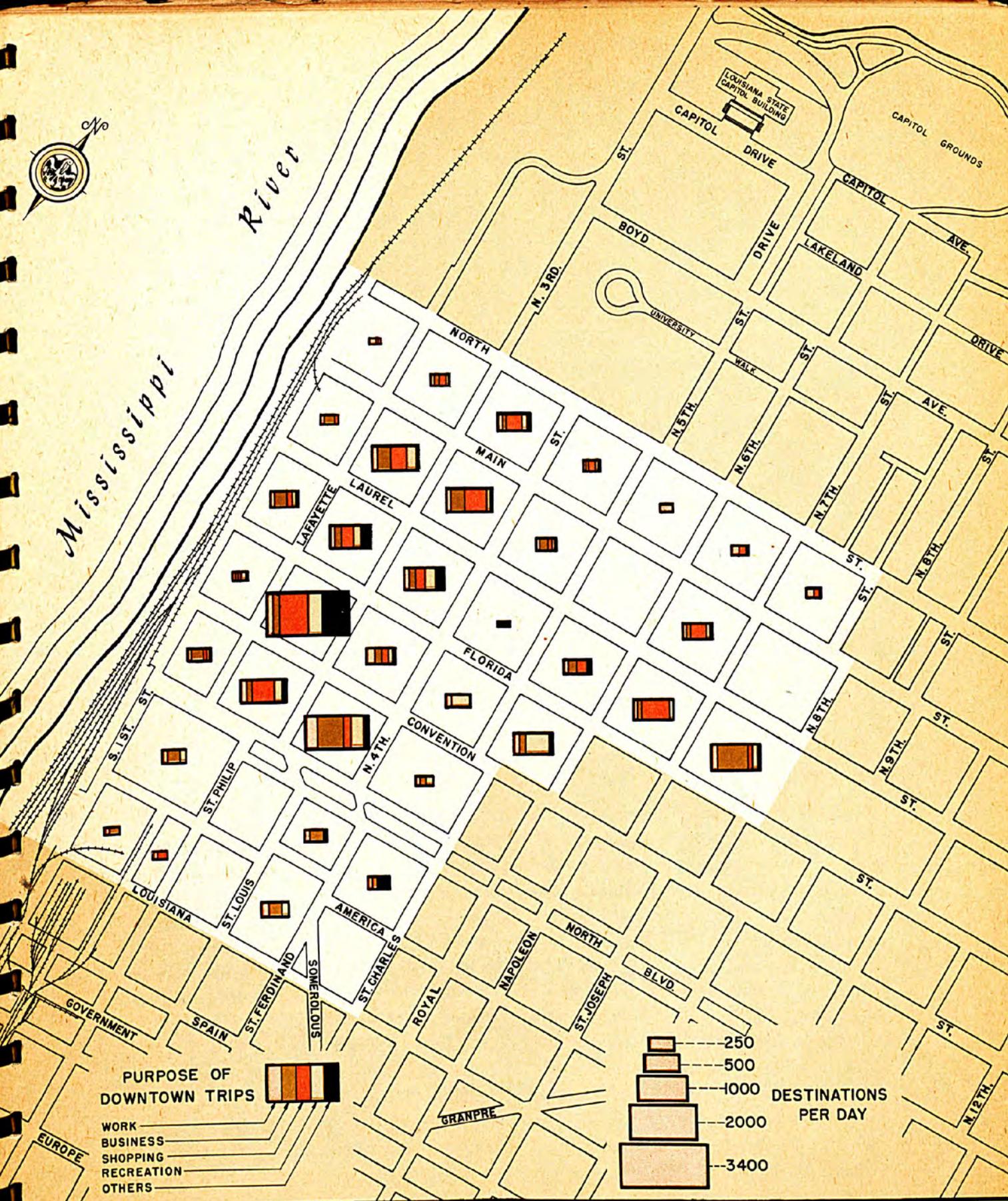
The relationship of the various data gathered in the survey is given in tabular form below:

PURPOSE	NO.	% TOTAL	CURB	OFF STREET
Work.....	1,350	9	530	820
Business.....	4,500	29	2,720	1,720
Shopping.....	4,440	28	2,710	1,790
Recreation.....	2,720	19}	3,080	2,030
Others.....	2,390	15}		
TOTAL.....	15,400	100	9,040	6,360



River

Mississippi



DESTINATION OF PARKERS AND PURPOSE OF TRIP

BUSINESS PARKERS REQUIRE TWO FACILITY TYPES

From the Origin-Destination survey, it was found that the highest percentage of parkers had "business" as their purpose in coming downtown. These "business" parkers may be divided generally into short and long-time space users. The businessman desiring space for a short time places a high value on convenience and will pay a correspondingly high fee for a space close to his destination. The long-term user may be attracted to terminals located at the fringe of the business district and will accept the longer walking distance involved, providing that the fee charged here is proportionately lower. It must be borne in mind as a general rule, however, that parkers will resist using any facility that imposes upon them a walking distance in excess of 1,000 feet.

SHOPPERS REQUIRE CONVENIENTLY LOCATED FACILITIES

On the average weekday 4,440 motorists drive to downtown Baton Rouge to shop. Shoppers, like the "business" parkers, fall into two general parking habit categories. The first group to be considered consists of shoppers who drive downtown to purchase one or two items. Their stay is of short duration and they prefer to park their vehicles along the curbs close to the retail trade center of the district. They will patronize off-street terminals only where the fees charged for short-time parking are low and if the facilities are close to their blocks of destination. The other group is composed of shoppers who drive to the Central Business District to make a day of it. The existing time limits on the use of curb spaces restrict their parking to off-street facilities. They do not object to using terminals located two or three blocks from their destinations, as the time consumed in walking to and from their vehicles comprises a relatively small portion of the total time spent downtown.

WORKERS PLACE HEAVY LOAD ON PARKING FACILITIES

The survey revealed that of the total number of business district parkings, 9 per cent were made by downtown employees—a figure somewhat lower than that obtained in most cities comparable in size and function with Baton Rouge. Nevertheless, workers' vehicles do place a disproportionate load on terminal facilities due to their long parking durations. Workers drive to the business district early in the day and park as closely as possible to their destinations, many of them occupying spaces best suited to the needs of short-time users who will arrive later. Of additional concern is the fact that workers enter and leave the business center during peak traffic hours, producing considerable confusion at the parking facilities and congestion on the downtown streets.

Motorists who have "recreation" as the purpose of their downtown trips park for time durations varying between one and three hours. Because of their relatively short stay in the area they prefer to use parking places close in to the recreation centers. Of the parkers whose trip purpose is classified as "other," 45 per cent are drivers who enter the business district to discharge and pick up passengers. They confine their parkings almost exclusively to curb spaces.

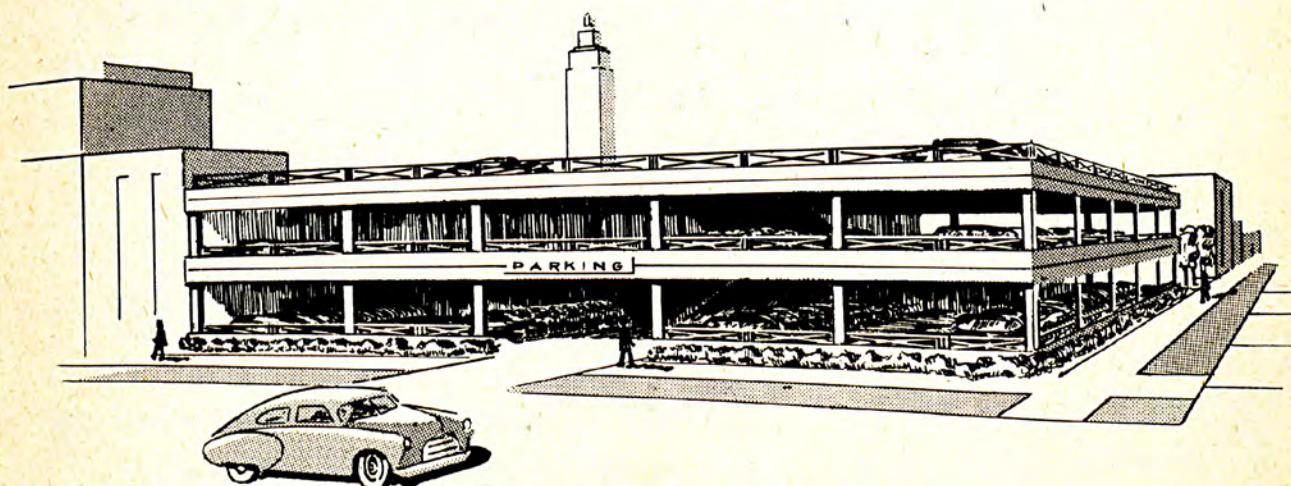
RECOMMENDED PARKING PROGRAM

A program providing adequate terminal facilities in downtown Baton Rouge would result in benefits to the entire urban community. The individual parker would benefit directly by being able to find a convenient parking place. The downtown merchant would accrue direct returns from the increase in customers that adequate and convenient parking facilities would attract. The municipality would benefit through the maintenance of the Central Business District's position as a heavy tax contributor.

The three interested groups should, of course, contribute to the carrying forward of the program. The parker should contribute by paying fees for the use of convenient space. The businessman should contribute interest in, and cooperation with, the details of the plan and possibly subsidize some customer and employee facilities. The municipality should provide the overall co-ordination of the program and, where necessary, should make tax allowances to secure property for parking facilities.

To provide adequate and convenient parking in downtown Baton Rouge, the following recommendations are made:

1. That four multiple-story terminals and one parking lot to be constructed within the next five year period on sites similar to those shown on the facing map.
2. That the multiple-story facilities be of the open-deck type similar to those illustrated in this report.
3. That parking meters be installed along the curbs as shown on the Proposed Parking Location Map.
4. That curb parking durations be restricted in conformance with the pattern shown on the Proposed Parking Location Map.
5. That Baton Rouge retain a traffic and parking expert on a full-time basis.
6. That all future buildings in Baton Rouge be required to provide off-street parking facilities.
7. That future buildings provide off-street loading and unloading facilities.



TYPICAL OPEN-DECK PARKING FACILITY

FACILITIES SHOWN ARE LOGICALLY LOCATED

The facilities shown would provide the 1,500 additional spaces required for the needs of the next five years. The walking distance between them and the blocks of concentrated commercial activity would fall well below the acceptable maximum. Located adjacent to the principal routes of entry to the downtown area, these terminals would be in a position to be heavily patronized. They would have the additional advantage of intercepting traffic before it could reach the high activity blocks, and would thus prevent considerable street congestion. The capacities of the individual facilities have been held low to prevent congestion resulting from mass exodus of vehicles during peak traffic hours.

OPEN-AIR TYPE IS ATTRACTIVE AND LESS COSTLY

Open-air parking structures have been successfully employed in many municipalities throughout the country. They are particularly applicable in cities having mild climatic conditions such as Baton Rouge. The buildings present an attractive and highly functional appearance. The simplicity of their design permits them to be constructed for approximately one-third the cost of the conventional enclosed parking garage.

CONSTRUCTION BY PRIVATE ENTERPRISE IS DESIRABLE BUT DIFFICULT

Every effort should be expended to interest private enterprise in the procurement of the necessary sites and the construction of the terminals recommended. The businessman must be educated to the realization that the off-street parking space is an integral part of his business establishment. Terminals owned and operated by individual merchants and merchant groups have achieved a high degree of success in many urban centers. Aid by the community might take the form of "freezing" the taxable values of the subject properties, rather than increasing them to be proportionate to the value of the proposed improvements. The tax revenue loss to the municipality thus effected would certainly be less than the loss resulting from decentralization of the business center if adequate terminals are not secured.

It is believed, however, that due to the necessity for immediate action, and the difficulties confronting individuals in securing downtown property at fair prices, it will be necessary to form a public parking agency or authority having the power of property condemnation. Through the authority, the sites would be acquired and the terminals constructed. These facilities would be leased to private enterprise for operation. It is not recommended that the City of Baton Rouge enter into the parking business in competition with private enterprise. The rates charged for parking in the public-owned terminals should not be lower than the minimum rates charged by operators of comparable privately owned facilities. However, the rate structure would be set up to obtain equitable charges in all facilities.

PARKING METERS WILL PRODUCE EFFICIENT USE OF CURB SPACES

Increased space turnover rates have the effect of increasing total terminal capacity. One good method of achieving high space usage is through the use of parking meters. It has been well established that motorists will pay for the use of convenient spaces, and charges for use of curb spaces are quite justifiable from an economic standpoint since these



OFF STREET FACILITIES

- RECOMMENDED FOR IMMEDIATE CONSTRUCTION
- SUGGESTED FUTURE PARKING SITE
- EXISTING LOTS AND GARAGES

CURB PARKING

- | METER | 15 MIN. | 1 HOUR | 2 HOUR |
|-----------|------------------------------|--------|--------|
| | | | |
| NON METER | — | — | — |
| | RECOMMENDED NO PARKING ZONES | | |

PROPOSED PARKING LOCATIONS

spaces are more expensive than are off-street from a first cost as well as a maintenance standpoint. The meters should be installed gradually over the next five year interval, beginning at the curbs surrounding the high destination blocks. The financial return from the meters would approximate \$50,000 annually. This revenue might well be applied to the financing of additional off-street facilities.

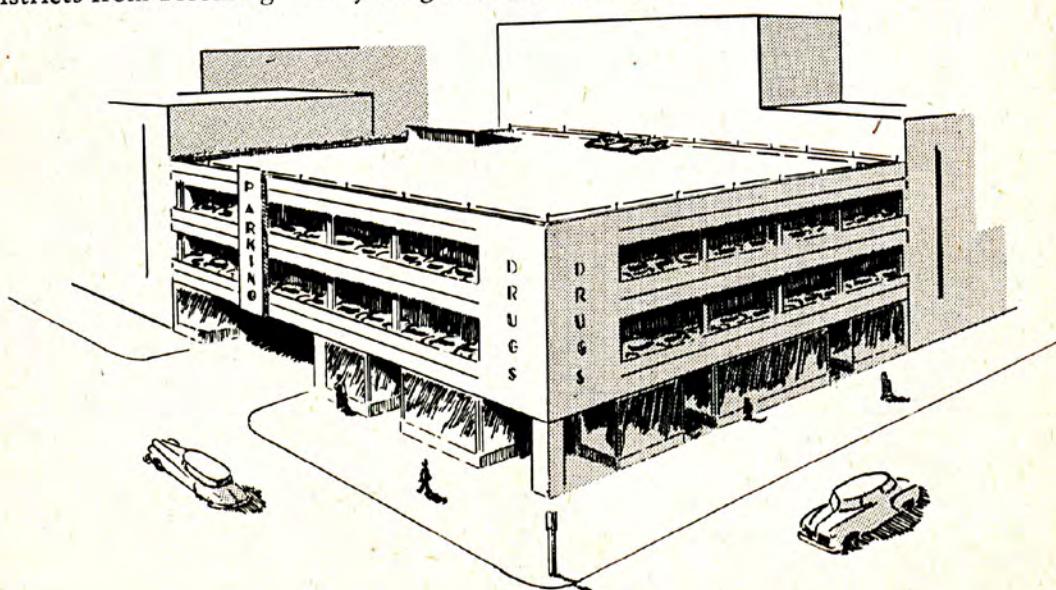
TIME RESTRICTIONS ALSO PRODUCE EFFICIENT CURB SPACE USE

High turnover may also be obtained by restricting the time usage of curb spaces. The time limits shown on the map were carefully arrived at through a study of downtown land use and the habits of the parkers. Any exception to the proposed limits should be carefully considered from the standpoint of its benefit to the whole community. To be effective in producing high turnover rates, the restrictions would require vigorous enforcement. It would probably be necessary to augment the police force currently assigned to this task.

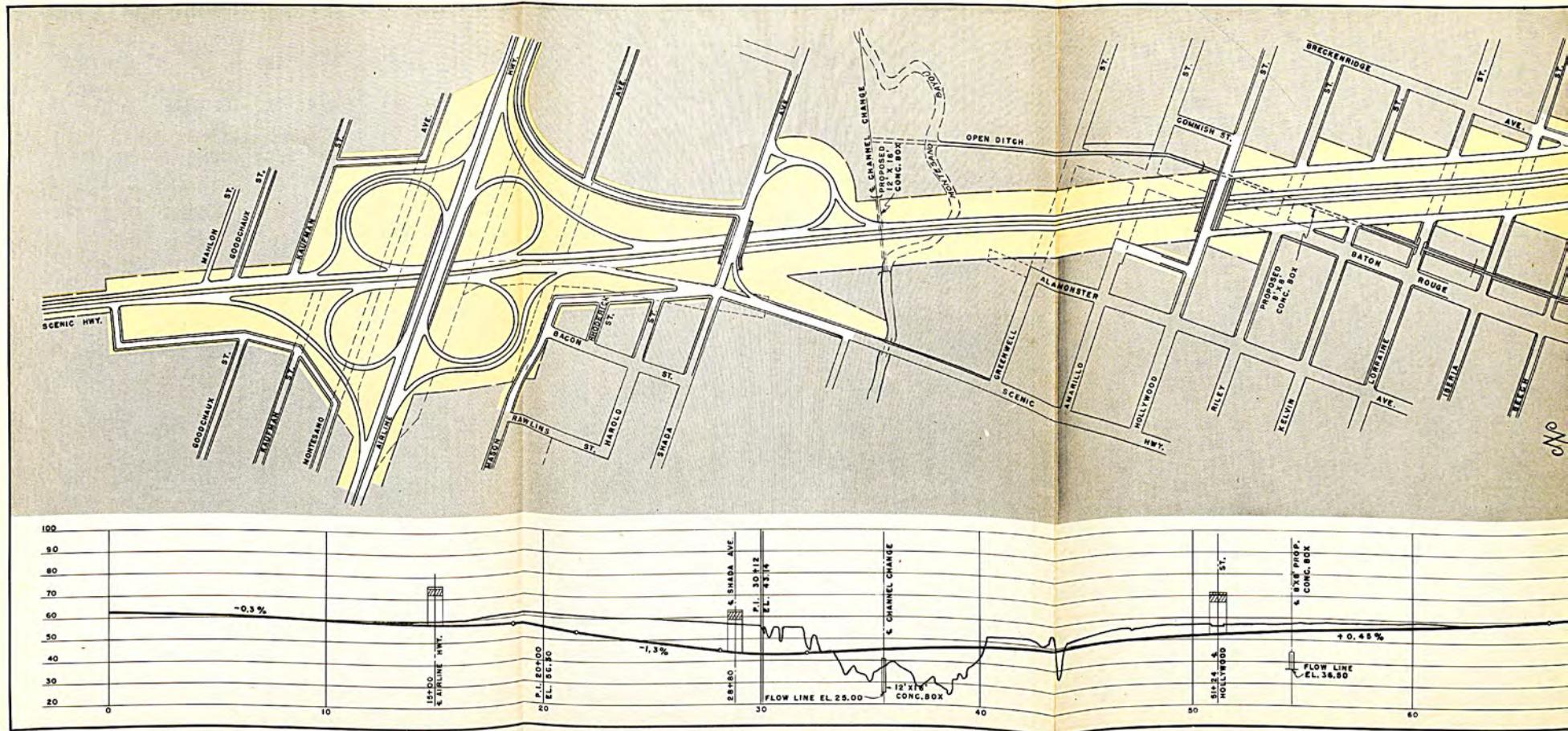
CONTINUOUS APPLICATION TO PARKING PROBLEMS NECESSARY

It must be borne in mind that the problems of Central Business District parking are not static. Steady, continuous application to the problems must be maintained to prevent the recurrence of space shortages. It cannot be maintained in Baton Rouge as the part-time responsibility of the police department or the city engineer, but must have the constant attention of a technical expert.

It appears logical to predict that there will be approximately 24,000 daily parkings in the Central Business District in 1967. Locations which now seem suitable for serving future terminal needs are shown on the map as "Suggested Future Parking Sites." To help prevent future space shortages, it is recommended that the building ordinances be amended to require new buildings to furnish off-street terminals of sufficient size to accommodate the vehicles attracted. This provision should be made not only for the downtown area, but for the entire urban region. This would prevent the neighborhood shopping districts from becoming unduly congested and hazardous.

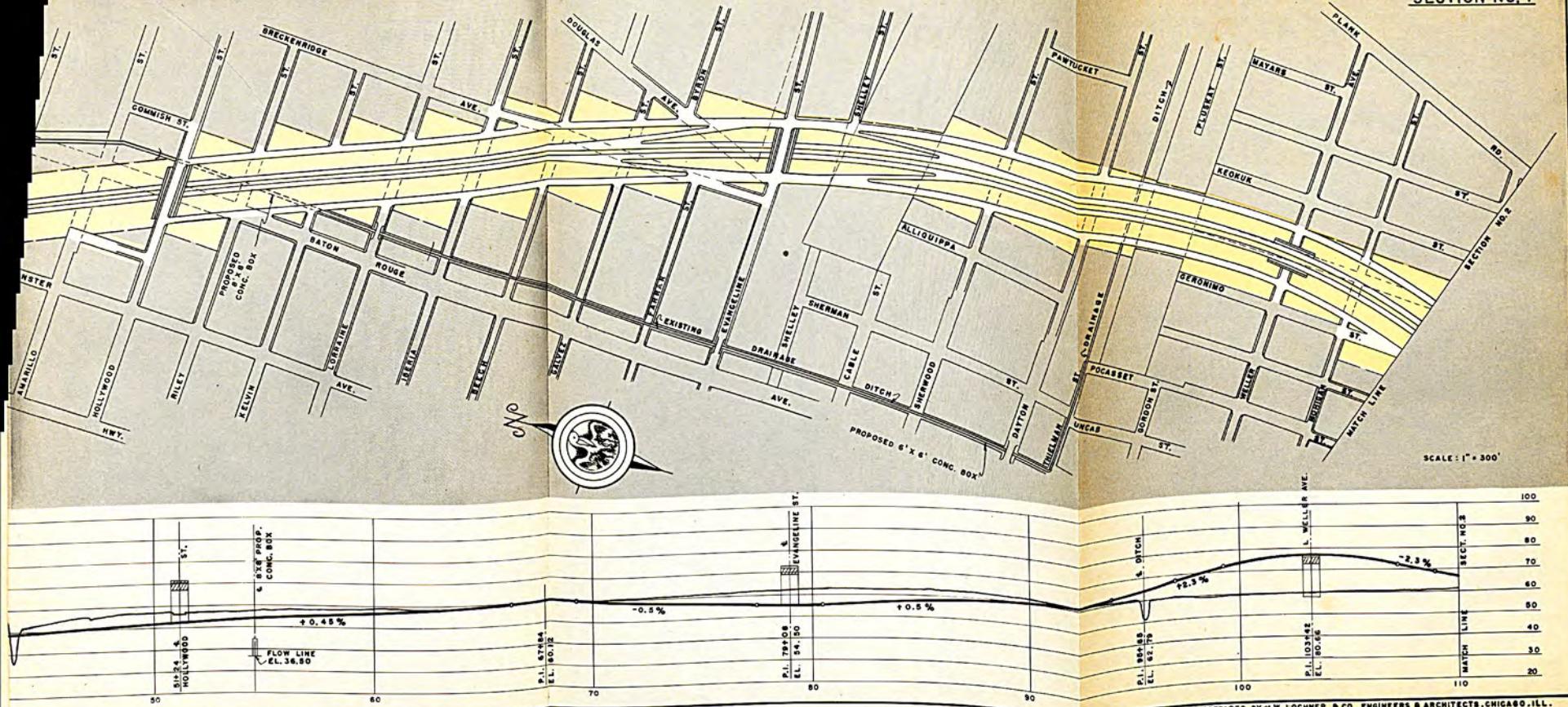


TYPICAL OFF-STREET PARKING FACILITY

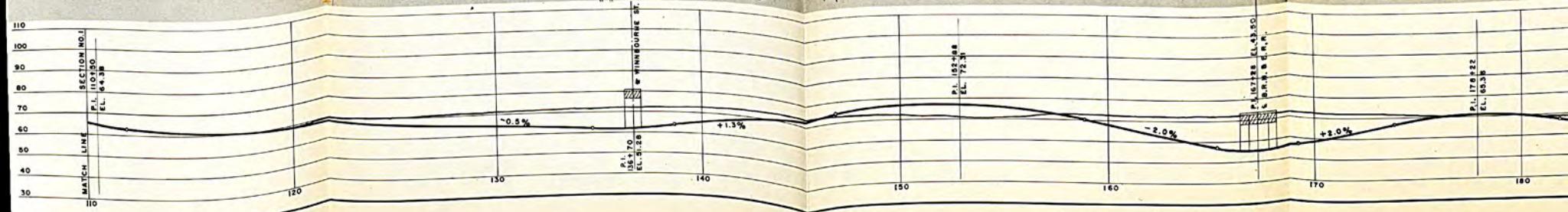
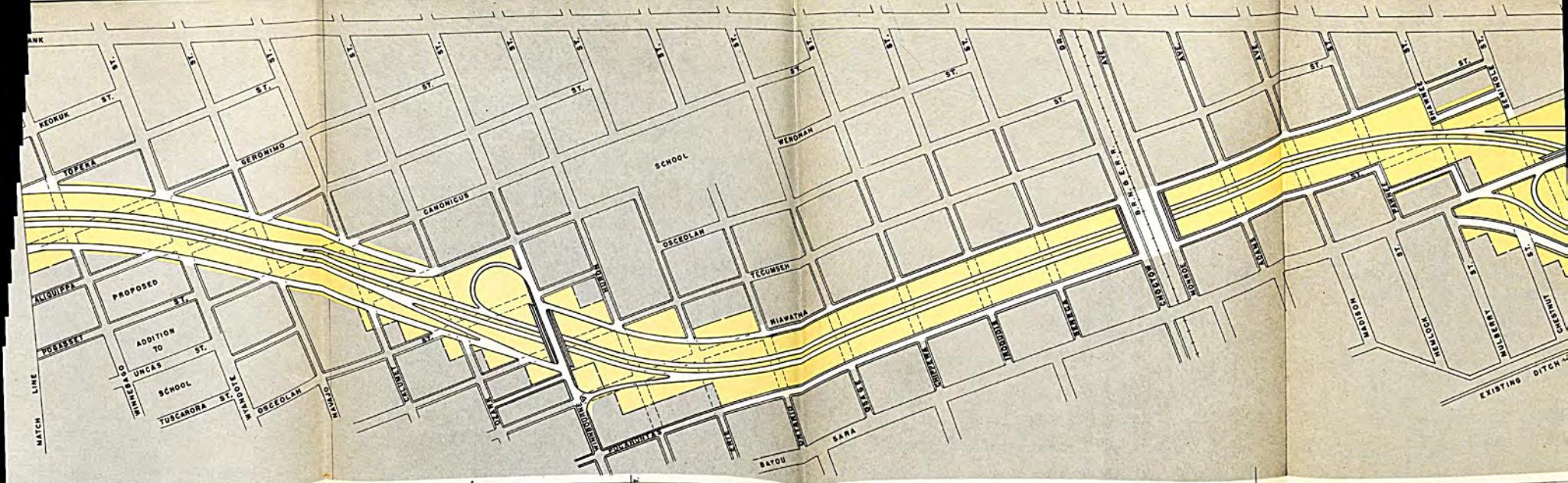


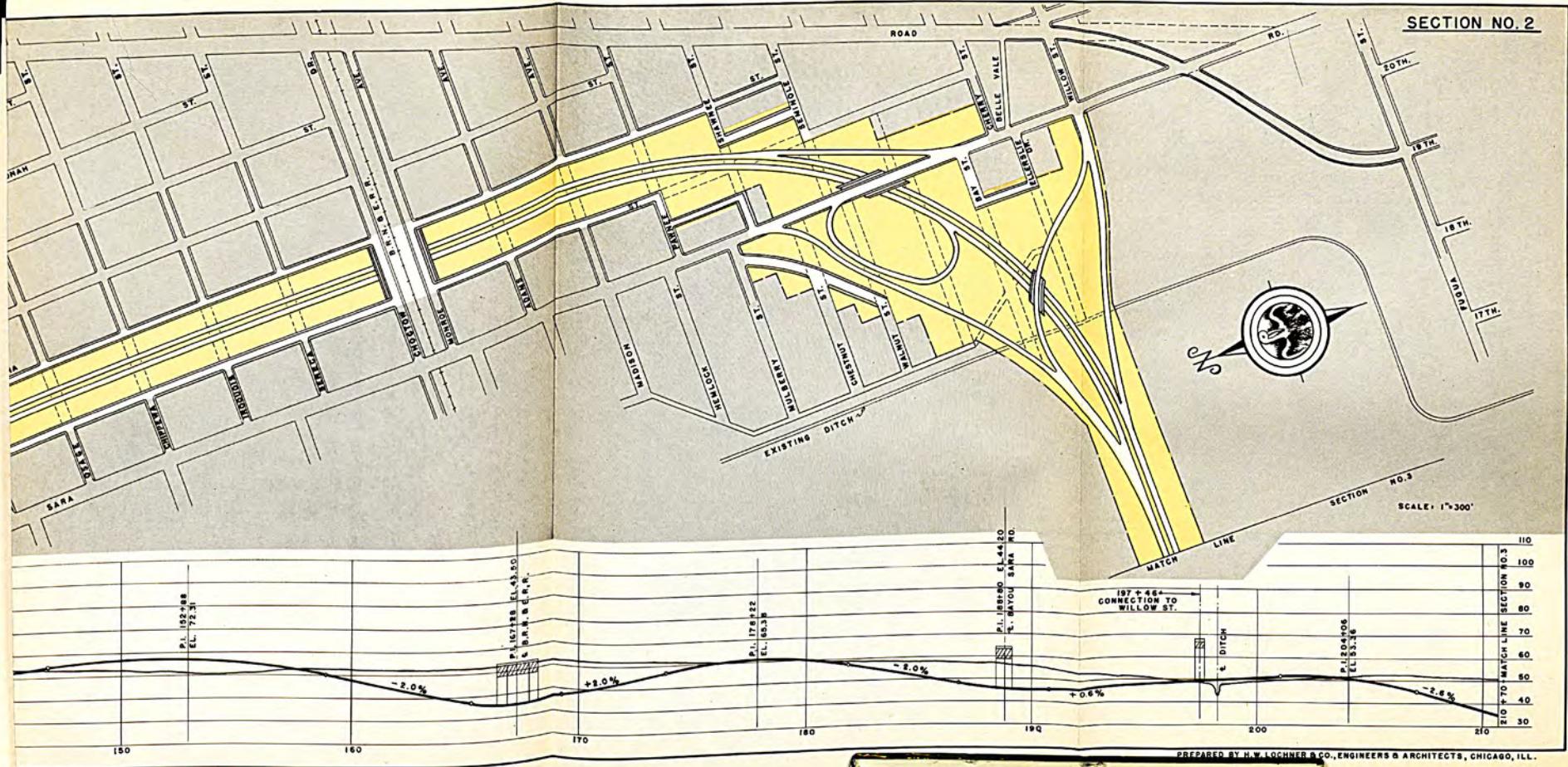
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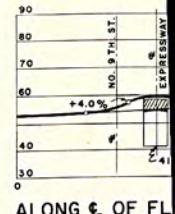
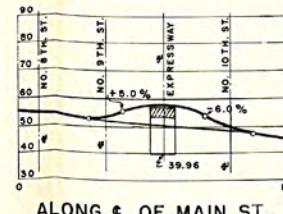
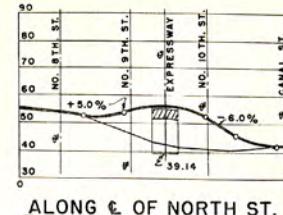
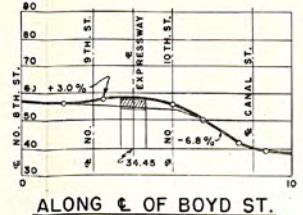
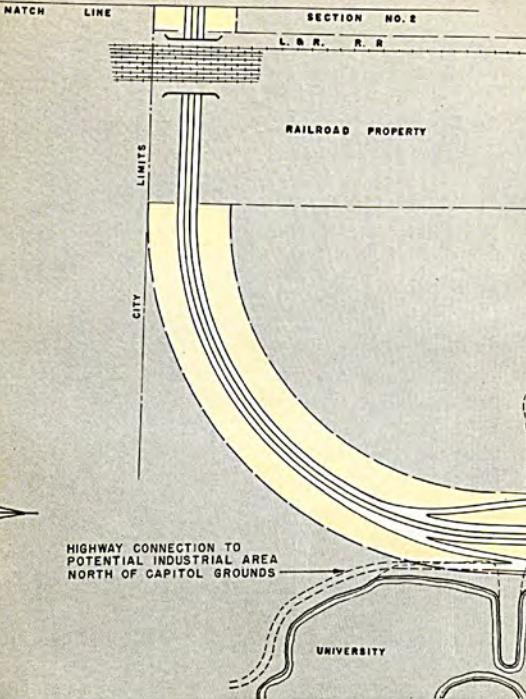
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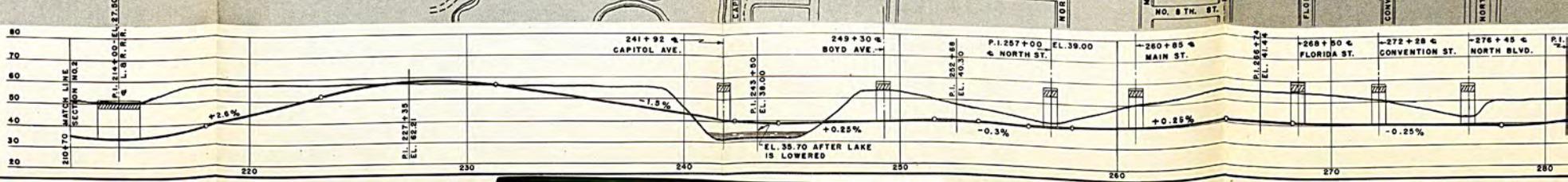
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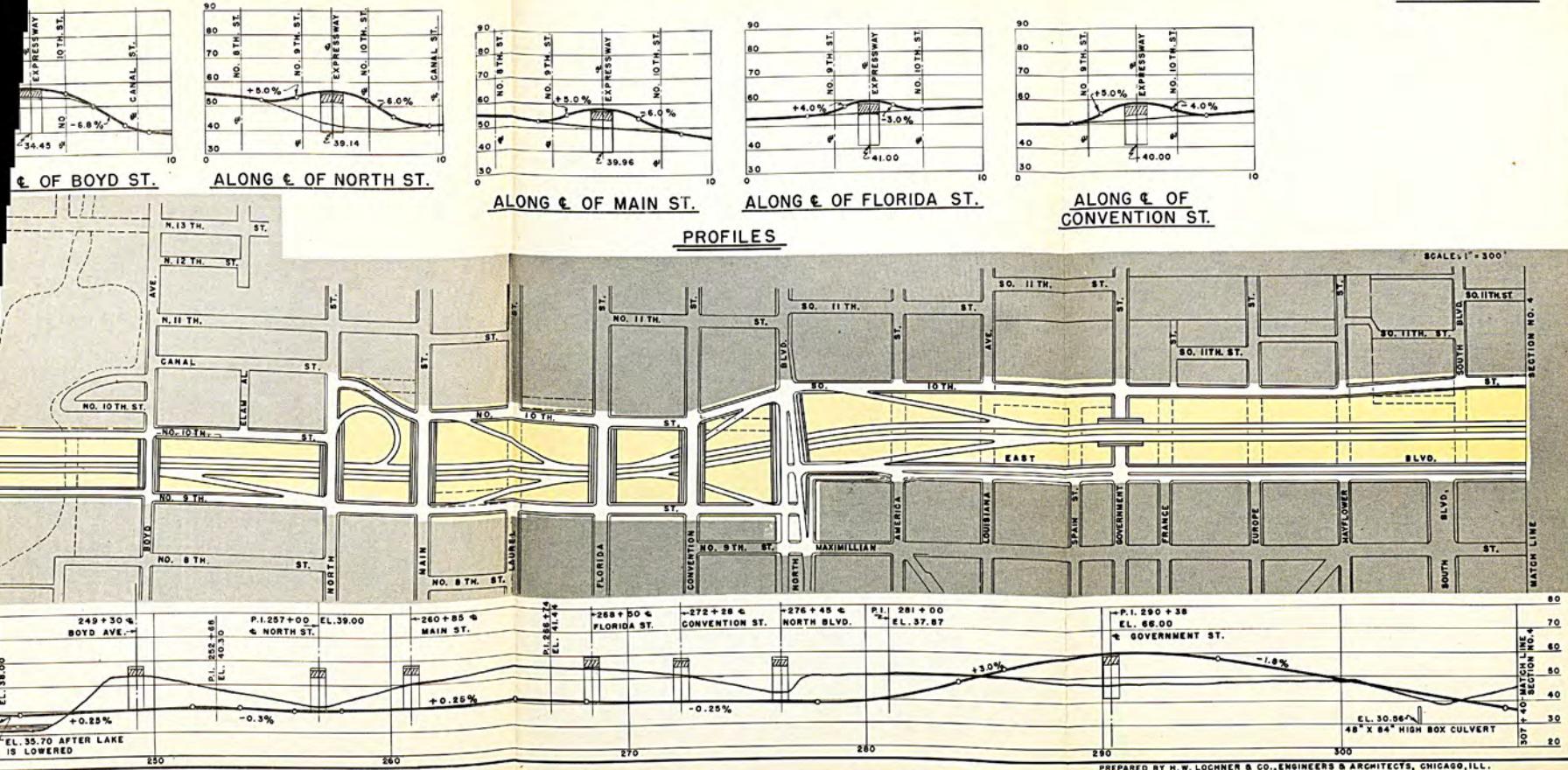


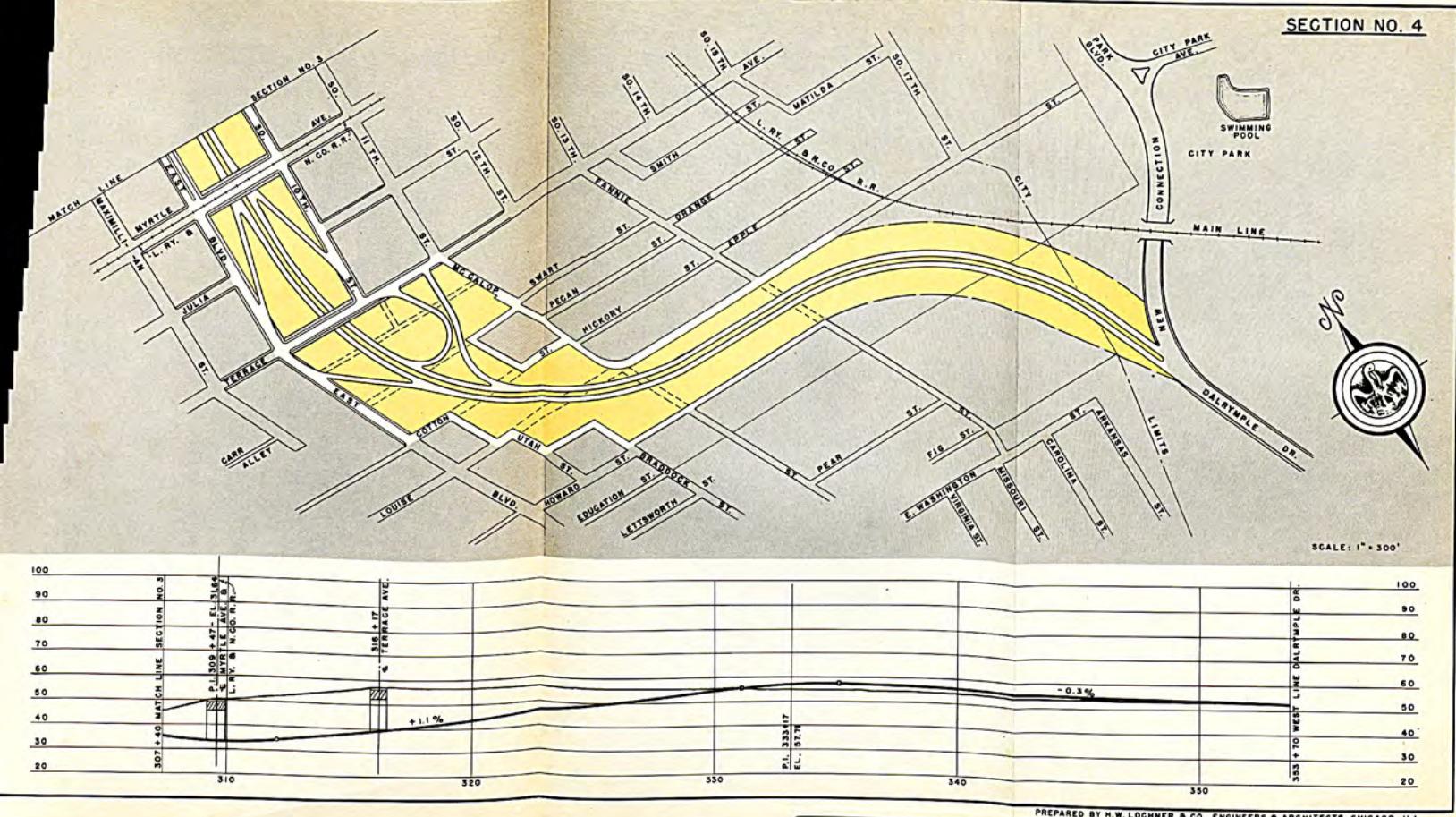


PROFILES



SECTION NO. 3





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