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LAND USE CONSIDERATIONS IN THE RELOCATION
OF RAILROAD FACILITIES IN METROPOLITAN AREAS

A THESIS

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LAND USE CONSIDERATIONS IN THE RELOCATION
OF RAILROAD FACILITIES IN METROPOLITAN AREAS

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SUMMARY

The purpose of this study was to investigate the problems of land use resulting from the relocation of railroad facilities, including adjustments required in existing land uses adjacent to or within the vicinity of both the abandoned facilities and the relocated facilities and suggest methods for determining the best use of these lands.

This investigation was made in the following manner: first, the elements of a railroad system were identified, their development and general location in a metropolitan area reviewed, and the probable future trends in relocating the various elements discussed; second, the land-use developments resulting from the relocation of railroad facilities in Cincinnati, New Orleans, Philadelphia, Lakeland, and other cities were surveyed; third, a review was made of the proposed reuse of railroad lands scheduled for abandonment in Chicago, St. Petersburg, Providence, and Tuscon; fourth, an investigation was made of the use, reuse and redevelopment of individual stations and their lands, particularly the stations sold in many eastern cities of the United States; fifth, observations were made as to the methods used in the discussed projects in determining the most effective reuse of the abandoned railroad properties.

When railroads were first developed in most cities, it was essential to have stations and their supporting facilities in central locations. Now the lands occupied by the railroads are some of the most valuable in urban areas. Due to a general program of reorientation taking place within the railroad industry, railroad companies are abandoning or relocating a number of their facilities, thus freeing land for reuse in many cities. The proper reuse of these lands abandoned by the railroads gives a city an opportunity to provide additional and needed land uses in many developed areas. Also it provides an opportunity to improve adjacent lands which have been blighted by the presence of the railroad facilities. Only since 1950, however, have cities taken an active part in determining the reuse of abandoned railroad lands. Philadelphia was one of the first. On the basis of an informal agreement between the railroad company and the city, the local planning commission prepared the site plan and proposed the reuse of the lands abandoned by the Pennsylvania Railroad. This cooperation between the City of Philadelphia and the Pennsylvania Railroad has resulted in a reuse of the railroad land profitable for both parties.

A city should take part in financing the relocation of railroad facilities that will free land needed by the community for additional services and facilities. Other relocations, of course, should be entirely the responsibility of the railroads. In either case, however, the

local planning commission should participate in determining the best reuse of land in accordance with the comprehensive plan of the city. It would be desirable to use urban-renewal whenever needed as a method to adjust adjacent land uses and to supplement the reuse of abandoned railroad lands for the improvement of the entire area.

The reuse of abandoned railroad lands in completed projects, the designated reuse of railroad lands in projects, and the lessons learned from these examples are included in Chapter III.

CHAPTER I

INTRODUCTION

The railroad industry is now engaged in a program of reorientation that, it is hoped, will regain some of the business lost in the past years to trucks, buses, and planes. This program sometimes requires the relocation of certain facilities to enable better utilization or incorporation of mechanized methods of operations. Other times it results in the merger or consolidation of railroad companies which enables abandonment of duplicating facilities. In other cases, particularly in the Eastern part of the United States, it is carried on by the selling of passenger stations which are put to other uses. All the efforts, regardless of approach, are attempts to strengthen the financial and competitive position of the railroad industry.

Because of this program, valuable urban land is being released from use by railroads and made available for the development of new land uses. In many cases the proper reuse of these lands offers the opportunity to correct some of the land use problems now existing in many metropolitan areas.

This study will investigate the problems of land use resulting from the relocation or abandonment of

railroad facilities, including adjustments that are required in existing land uses adjacent to or within the vicinity of both the relocated and abandoned facilities.

To do this the following subjects will be surveyed:

1. The identification of the elements of a railroad system and probable future trends in the relocation of each facility;
2. The results of relocation projects completed in earlier years and the subsequent land use adjustments, including a comparison with some more recently completed projects;
3. A review of some proposed relocation projects now being executed or planned, including the proposed reuse of the particular site and adjacent lands;
4. A review of the current practices of selling railroad stations to private investors for the development of new or additional uses;
5. An observation of important factors in the investigated projects and activities that can be of value in other cities.

The information for this thesis was obtained from studies of and correspondence with railroads, planning agencies, and planning consultants who have been involved in railroad relocation projects; review of available reports and other pertinent literature on the relocation

of railroad facilities. This study has been limited to relocation projects, either completed or proposed, within metropolitan areas because the projects outside these areas usually present land use problems of lesser significance. In addition, the problems discussed are confined mostly to the better known projects and the activities of larger cities. It is hoped that the ideas and actions involved in the larger projects will find application in many smaller areas.

CHAPTER II

RAILROADS IN METROPOLITAN AREAS

Railroads are an important part of the present transportation system. In earlier years rail companies were the primary carries of passengers and freight. As other forms of transportation developed, however, both the passenger and freight business of railroads declined.

Railroad Development

Expansion, concentration, and reorientation best describe the periods of railroad development in the United States. In 1830 there were only 22 miles of rail lines in this country. It was in this year that railroads began expanding deeper and deeper into the yet undeveloped interior of America from the coastal towns of New York, Boston, Philadelphia and Baltimore. Communities developed along many of the lines, particularly at junctions or interchange points, with many important cities of today, such as Atlanta, Columbus, Indianapolis, and Denver developing as a result of the rail lines.

Realizing the economic advantage of transportation facilities, local communities openly competed for rail service that would provide connections with sources of raw materials and major markets. Many communities purchased stock in the rail companies or made loans or gave

land, materials, and equipment or furnished labor, all in an effort to secure rail facilities.¹ By 1920, rail mileage in the United States had reached a high point of 252,845 miles.

Between 1920, which marked the end of railroad expansion, and 1930 was the period of concentration. During these years, each railroad company attempted to provide more facilities than the competing company without planning for this development. The more productive areas experienced zealous competition between rail lines which, in most instances, resulted in the duplication of trunk lines, terminals (both passenger and freight), and yards (both primary and secondary).

By 1930 the general pattern of railroad development in urban areas was established. Each rail company had secured, in most instances, the most direct route into cities. Terminals and supporting facilities had been located as near the center of the developed area as possible. In other cases cities had developed around the rail facilities. Thousands of acres of urban land were occupied by the various railroad facilities. In addition, acres of land adjacent to these facilities were restricted to a few compatible uses, primarily commercial and industrial, or they were susceptible to the blighting influences that usually beset incompatible uses. Many of the facilities occupying valuable urban land were, as mentioned

carelessly located as a result of competition. For instance, there were in 1932 with a radius of 35 miles of New York City over 500 freight stations, in Philadelphia 700, in Chicago 250, and in St. Louis 200.²

Rail lines, both main and secondary, cross streets and highways at grade creating hazardous conditions and many times interferring with the movement of the constantly increasing vehicular traffic. Houston illustrates an extreme example of these conditions. In 1954 there were 500 main-line grade crossings within the city limits, 150 of which were major thoroughfares. It was estimated that there were approximately five thousand grade crossings of both main and secondary lines in the Houston area.³ Rail lines not only cross streets but criss-cross throughout urban areas frequently restricting proper community development. In Chicago, for example, the 27 railroad trunk lines that entered the city crossed each other 280 times⁴ and, as in other cities, interferred with both traffic movement and adequate community development. As urban areas developed and land use needs increased, the restrictions placed upon community development by railroad facilities became more apparent.

In a like manner, as a result of urban growth, railroad companies experienced greater problems. In many instances sites selected for the location of facilities became increasingly inadequate. Growth that took place

around facilities restricted expansion that would permit utilization of many technological improvements. For instance, because steam locomotives were capable of pulling trains of approximately 50 cars, early classification yards were built to handle this number. Newer diesel locomotives, however, could easily pull trains of over 100 cars, but growth around many classification yards prohibited enlarging the sites for the longer trains.

In the early years of railroad development, rail companies carried a large percentage of the total passenger and freight business. Because of transportation limitations in many cities, both the passenger and freight depots required convenient locations. Hence, terminals were built in or near the city core. However, improvements in transportation accompanied city growth and competitive means of transporting passengers and freight emerged. Air lines, buses, and private automobiles, all providing faster and more comfortable services, reduced railroad passenger traffic. Trucking companies, with faster and cheaper short haul service, offering overnight delivery to the door of the receiver, of course, captured large volumes of freight business.

Hence, both cities and railroad companies are faced with difficult problems as a result of site locations and duplicating facilities.

Elements of the Railroad System

A glance at a map of railroad routes and major facilities in a metropolitan area shows a bewildering array of lines criss-crossing in all directions, with no apparent order. Yet an examination of these routes and facilities reveals an amazing degree of specialization. An individual organ, such as a station, yard or route, in one of these complex organisms cannot be understood until it is viewed in its functional as well as physical relation to the other organs and to the railroad organism as a whole, and finally to the region of which it is a part.⁵

Lines

The rail lines of a system whether main, branch, lead, or spur are the connecting units.

The main line forms the backbone of a rail system. These lines, in most instances doubled-tracked, are constructed for the movement of heavy tonnages at high speeds between cities.

Branch lines are used for secondary rail movement usually serving communities not located on the main line. Normally singled-tracked, branch lines are constructed for the movement of lighter tonnages than the main line and at lesser speeds.

Lead tracks are the connecting rails between main lines, and other tracks of the system. Spur lines and sidings serve industrial or business areas or perhaps an individual industry or business.

Belt routes or circumferential lines are developed around urban areas. The belt route usually bisects all

radial routes of the area and, at least theoretically, makes the lines of each rail company accessible to one another. Therefore, these routes provide for the movement of traffic around an urban area and the interchange of cars between rail companies.

Probable future trends in the relocation of lines.--Main lines are one of the most difficult parts of a rail system in the metropolitan area to relocate. Adjustments for the elimination of curvatures or the improvement in grades can be made, provided suitable land is available. Marked relocation of a main line, however, will completely disjoint the attendant facilities of terminals and yards. Therefore, the relocation of railroad main lines in metropolitan areas is dependent upon the relocation of other facilities.

The relocation of branch lines, lead tracks, and spur lines are not restricted by the same factors as main lines. The relocation or abandonment of these facilities is dependent upon the continuing productivity of the areas served.

Stations

Stations developed early in most cities within or near the fringe of the developed area. Stations are generally considered as either passenger or freight.

Passenger stations are the focal points of inter-city passenger movement whether they are located in or near

the central city or away from the central area. In New York, for example, Grand Central and Pennsylvania Station are located within the central area. Also the Atlanta and Nashville Union Stations are located there. The stations in Washington, Baltimore, and Detroit, however, are located outside the city core. In addition to being the focal point of passenger movement, stations provide space for ticket sales, restaurants, baggage facilities, mail handling, express freight, and administrative offices for allied services.

Passenger stations are generally classified as either "dead-end" or "through". "Dead-end" stations, which require a backing movement either in the approach or departure of trains, consume precious operating time. "Through" stations allow trains to pull in, discharge and take on passengers, baggage, and mail and proceed to the next destination.

Freight stations are for the receiving, shipping, and distribution of freight. Usually located in the station area are switching and storage tracks, spur lines to private industries, secondary classification yards, and team tracks for public use in loading and unloading cars. In addition, there are storage facilities for supplies, facilities for the reception and delivery of l.c.l. traffic, and loading and unloading equipment.

Special station facilities may be provided for handling particular types of freight in many cities:

stock yards, icing facilities for perishable fruits and vegetables, tank fields for petroleum products, grain elevators, and facilities for coal, lumber, and pulpwood. Port cities have, in addition, special areas for handling the interchange of freight between rail and water carriers. 6

Probable future trends in the relocation of stations.--The relocation of passenger station facilities as part of an improvement program is complicated by economic and competitive factors. Stations have been relocated in the past, and undoubtedly others will be relocated in the future; however, each of the completed projects have overcome delays and the future projects must do so. Many times railroad companies are unwilling to relinquish locations that are felt to offer competitive advantages. In addition, rail companies are reluctant to invest funds in new facilities for operations that are presently financial liabilities. The New Orleans project to consolidate five terminals into a single union terminal, for instance, required forty years of negotiations; the Chattanooga project to relocate the Louisville and Nashville Passenger Station required twelve years of negotiations; and the Chicago project to consolidate passenger stations is in the fiftieth year of negotiations. However, the recently completed relocation project in Lakeland, Florida required only fifteen months.

Despite the decline in passenger business, the convenience and accessibility of a central location are regarded as an advantage in competing with the automobile, bus, and airplane for the overnight passenger business within 300 to 400 miles of a particular location. In addition, in the larger metropolitan areas the central location is necessary for the thousands of daily commuters. Since passenger stations represent enormous capital investments and the decline in passenger traffic causes railroad companies to be reluctant in investing funds for new facilities, future relocation of passenger stations appear to be closely associated with governmental participation in financing the project.

On the other hand abandonments and direct sales of facilities by rail companies apparently will increase in the future. At present there are 23 railroads attempting to negotiate mergers.⁷ The completion of any of these mergers should result in the abandonment of many duplicating facilities. In addition, the New York Central Railroad has sold over 100 of the 406⁸ passenger stations recently put up for sale and the New York, New Haven, and Hartford and the Pennsylvania Railroads have sold and anticipate selling additional stations in the future. It is possible other railroads will follow the disposal plan now being carried out by the eastern railroads.

The competitive and economic advantages of a central location for freight stations have been greatly reduced.

Less-than-carload-lot freight shipments, which make up the main business of freight stations, have declined from 53 million ton miles in 1916 to 7 million in 1955.⁹ The growth of trucking companies with cheaper door-to-door service and more recently the piggy-back innovation have rendered many of the smaller freight stations unnecessary. The development of highway and expressway facilities which allow rapid delivery of shipments should prompt the relocation of many freight stations and the direct abandonment of many more.

Yards

The efficient and economical operation of railroad yards provides one of the greatest possibilities for savings both in time and money for rail companies.

Primary classification and secondary yards are the two principal types of railroad yards. Classification yards receive all incoming trains, principally freight. Here the cars are classified and assembled for movement, whether to a local customer or to another city. In addition, many rail companies locate maintenance and repair shops in the classification yards. Large tracts of land are required to carry out these operations; therefore, of all the facilities, the classification yards are the largest land users.

Secondary yards are much smaller than the primary classification yards and usually more numerous. These yards also serve as areas for the assembly and dispersal

of freight cars, primarily for customers within the area. Sometimes these yards are used for the storage of idle cars. Probable future trends in the relocation of yards.--Perhaps the force of gravity and the use of electronics will influence the size and location of railroad yards in the future. Due to these developments plus the increased power of diesel engines, many primary classification yards have become inadequate in size. Frequently, the existing yards cannot be expanded because of adjacent development.

Many existing yards were designed for trains made up of 40 to 50 cars. Today, with the increased diesel power, trains can be made up of 150 to 250 cars. Because the receiving and departure tracks of the classification yards are inadequate lengths, many times the entire yard operation is paralyzed during the assembly or classification of these longer trains. All of this results in delays in operation. Within the newer yards of adequate size, equipped with electronic controls, and using the newest techniques, the operation of assembly and classification is much smoother. Freights entering the yards are pushed up an artificial hump, uncoupled, then allowed to roll into a skein of classification tracks. From a watchtower, the yardmaster presses buttons to guide the free-rolling cars automatically into new combination ready to roll. This assures increased speed in operation and reduced costs. For example, the new yards of the

Pennsylvania Railroad in Conway, Pennsylvania, which cost 35 million dollars, will save approximately 11 million dollars a year in operating expenses and cut 24 hours from the long haul freight schedule.¹¹

Greater areas are required to take advantage of the tremendous reduction in operating costs made possible through the utilization of these modern techniques. Since urban growth has placed restrictions upon the expansion of many existing yards, it seems likely that a number of relocation projects involving yards will take place.

Conclusions

When railroads developed in most cities it was essential to have many of the facilities in a central location. With the improvement in other forms of transportation, however, the need and desirability of having rail facilities in or near the downtown diminished. Perhaps in the future many elements of the rail system will be relocated on lands better suited for present and future railroad operations.

CHAPTER III

THE EFFECTS OF RAILROAD RELOCATION ON LAND USE

In the preceding chapter the growth of the railroad industry was discussed. In addition, the elements of the railroad system were identified, including probable future trends in the relocation of facilities. This chapter will include an investigation of both land-use developments on abandoned lands and the uses that developed in the relocated areas of some completed relocation projects. It will also include a review of proposed reuses of railroad lands in a number of cities planning to undertake relocation projects. Also the new land uses that have developed as a result of the sale of station facilities in many eastern cities will be surveyed.

Completed Projects

Cities made little effort to influence the reuse of abandoned railroad lands in early projects. More recently, however, the proper reuse of abandoned railroad lands and the influence that these reuses exert upon the surrounding areas have been considered. Perhaps the fundamental difference, then, is the increased awareness of communities and railroads of the improvements that can be made through the proper reuse of the abandoned lands.

Cincinnati, Ohio.--In 1933 the consolidation of five passenger stations into one union terminal was completed in Cincinnati. The union terminal was located one mile west of the central business area on a site which had formerly served as a freight yard. This project was initiated and carried out by the six railroad companies serving the area.

Apparently little consideration was given by the city to the reuse of the abandoned passenger stations. All the stations were converted to other railroad uses except the former Pennsylvania Station. It was converted to a truck terminal. Two of the former stations now used for freight service will soon be demolished for the construction of a new expressway.

Until 1960 only a few significant land-use adjustments had taken place around the Union Terminal. As shown on Fig. 1, a post office and truck terminal had been located adjacent to the Cincinnati Terminal and a public-housing-¹² project had been developed along Lincoln Park Drive. Improvements now under way, however, will change the land-use character of almost the entire surrounding area. The slums south of the station are being cleared for industrial redevelopment. The south-side of Lincoln Park Drive is being cleared for public housing. And the area north of the existing public-housing-project is being developed¹³ for co-operative housing. All of these improvements are indicated on Fig. 1.

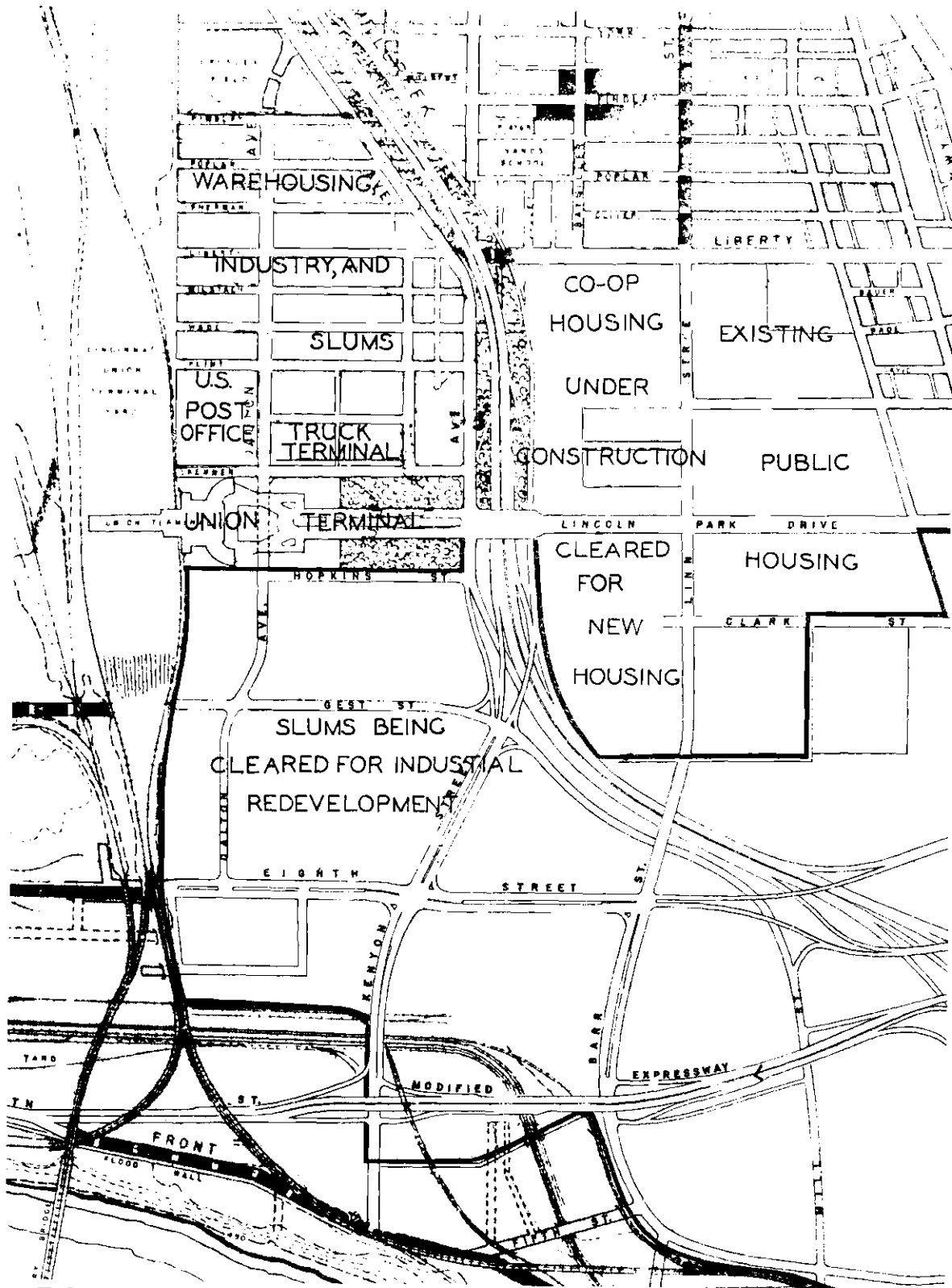


FIG. I. CINCINNATI UNION TERMINAL AREA

New Orleans, Louisiana.--In 1954 the New Orleans project to consolidate five passenger stations into one union terminal was completed. The five stations were located, at the time, within the general vicinity of the central business district. Unlike the Cincinnati project, both the city and the eight railroad companies serving the area, as a group, undertook the relocation project. The Union Terminal, located on the edge of the central business area, is on the site of a former passenger station.

The resulting uses of the lands abandoned by the railroads have been, in most cases, determined by the adjacent use. The Texas Pacific-Missouri Pacific Depot was located in a district zoned for light industrial uses. It is now used as a retail furniture outlet. The Louisville-Nashville Depot, also in a light industrial district, has been converted to a furniture store. Plans have been adopted, however, to redevelop this area into an International Port Complex with retail stores, offices, and convention facilities. The Terminal Station was formerly located in the Basin Street right-of-way. Since the railroad relocation, the station has been demolished and the land has been used as the street's median strip. The former Union Station has been demolished and the land used for a parking lot.

Since completion, there have been three major land-use developments near the Union Terminal. A new post office

and Federal building have been constructed to the north. South of the station an expressway has been developed, part of which is located on the abandoned railroad right-of-way. The remaining adjacent land continues to be in light industrial use.

Philadelphia, Pennsylvania.--In 1952 the Pennsylvania Railroad and the City of Philadelphia undertook jointly the project to remove from downtown the Pennsylvania Main line, Broad Street Station, and the accompanying yards. The removal of the station and yards released 22 acres of land for reuse. This project differs from the ones discussed above in three ways: first, the area released for reuse was substantially larger and in single ownership; second, the redevelopment of the railroad lands was coordinated with an adjacent redevelopment project; and third, although the railroad retained ownership of the land, the city took an active part in determining the reuse of the land.

The former station site was designated primarily for commercial and institutional uses. Thus far, approximately one-half of the land is being used or is committed for use. Located in the area are 2 twenty-story office buildings, a 1,000-room hotel, and a transportation center combining an underground bus terminal, a four-story parking garage, and an eighteen-story office tower. In addition, a 14-acre underground shopping concourse has been created which is available to thousands of rail, subway, and bus

passengers using the center. The underground areas has retail shops, landscaped gardens, courts, and a glass-walled skating rink for winter recreation. The rink area during the summer is used as an outdoor cafe. Committed for future development are two apartment buildings, one of which is to be the world's largest.

Penn Center is an example of the improvements possible on abandoned railroad property with adequate planning. It also illustrates the results of cooperation between a city and a railroad company.

Lakeland, Florida.--A relocation project was recently completed in Lakeland. The Atlantic Coast Line Railroad and the city jointly participated in the effort to relocate the passenger and freight stations away from the congested central city.

It is, of course, too soon to evaluate the development around the new station, which has been relocated one mile west of the city. Since it is a combined passenger-freight facility, it is possible the land adjacent to the terminal will be developed for railroad use.

The land vacated by the railroads and now owned by the city is to be cleared of the railroad facilities and redeveloped. One of the initial improvements will be the connection of two streets which previously ended at the railroad tracks. In addition, two other improvements are to be made. First, the former freight-station site is to

be redeveloped into a large parking area. Second, the former passenger station site is to be developed into a bus-transfer station. The transfer station will be an island 16 feet wide and extending an entire block. It will include public restrooms and provide shelter for pedestrians. As a result of these changes, an adjacent park is to be improved. A building in the park that presently contains public restrooms is to be demolished, which will provide more openness. Other improvements will be the installation of fountains, walks, seats, and a new pavilion.

Visualized in the total plan for improving the central area is both pedestrian and parking malls. The parking mall is an area in which traffic is allowed but in one direction and at slow speeds. The malls will be complemented by both through and collector routes around the area with parking lots at designated locations.¹⁵

This project illustrates the improvements that are possible using a small station area. Perhaps in many smaller cities an opportunity to adequately reuse these small areas can promote improvements for the entire central business district.

Other Completed Relocation Projects.--The previously cited relocation projects have been major undertakings. Millions of dollars have been required to finance each of them. In every instance the project has involved facilities located within the general vicinity of the central business district.

Other facilities, however, are being relocated. They are usually somewhat removed from the central area. Many times, however, railroad companies retain possession of these abandoned lands. This is particularly true when the land is located in areas zoned for industrial use. Usually the rail company will either lease the land for industrial development or develop the land itself for industry. For example, when the Atlantic Coast Line Railroad relocated its rail yards in Atlanta, Georgia, the site was cleared of the tracks. Most of the land was sold to a large paper company. A warehouse was constructed on the remaining land for a large retail outlet. Similarly, a smaller L & N yard was relocated in Nashville, Tennessee. Part of the vacated site is being used for an industrial plant and the remaining area for parking. It is likely, however, that the parking will be discontinued if the land is needed by an industry.

In other cases, rail companies relocate their offices and abandon facilities that can easily be converted for reuse. For example, the City of Wilmington, North Carolina, recently was given four buildings when the Atlantic Coast Line Railroad moved its general offices to Jacksonville, Florida. One of the buildings is now being used as city police headquarters. The other three, however, are still vacant. At present the continuation of the buildings is in question since they are located in an area under study for urban renewal. In Nashville the L & N abandoned three office buildings that had formerly served the railroad. These buildings have

been sold to an insurance company for reuse as business offices.

Railroad rights-of-way are likewise sometimes put to other uses. In Boston, for instance, the city purchased the abandoned rights-of-way of the Boston and Albany Railroad for its rapid transit system. Also, the New Orleans expressway is located on abandoned rights-of-way.

Proposed Projects

The proposed reuses of railroad lands perhaps reflect an increasing awareness by railroads and cities of the opportunities for improving many existing conditions through the proper reuse of these lands. Unlike some of the completed projects which were undertaken as a single program, the future projects usually are a part of a long range comprehensive plan to improve the central business district.

Chattanooga, Tennessee.--An agreement between the city and the L & N and Southern Railroads was made to remove the Union Station facilities from downtown Chattanooga. The new passenger station is to be in a location that will permit the removal of numerous grade crossings from the central core.

A civic center is planned for development on the present site. The yard area north of the station is to be zoned for light industry, which is the use designation of the adjacent land. Apparently development within this

area will be determined by the future land needs for light industry.

An urban renewal project being executed near the railroad lands will provide additional improvements. The expressway, commercial, residential, and public facilities that will result from the urban renewal project and the civic center that will result from this railroad relocation will improve downtown Chattanooga.

Chicago, Illinois.--The Development Plan For The Central
Area of Chicago ¹⁷ proposes major land use adjustments for Chicago's central business district. Possibly the greatest change will result from the recommended consolidation of the South Side railroad stations and the relocation of the adjacent yards. Since a large part of the downtown land area is now occupied by railroad facilities, their removal and redevelopment would have a tremendous influence upon the central city. In addition, it would permit commercial growth to the south of the Loop which has been blocked by the railroad yards.

The proposed uses for the railroad lands are comprehensive. The present sites of Grand Central and Dearborn Stations together with the adjacent yards are designated for the location of the University of Illinois in Chicago. The adjacent land on the south and east of the proposed 130 acre campus is to be redeveloped for residential purposes. LaSalle Station is to be redeveloped into a

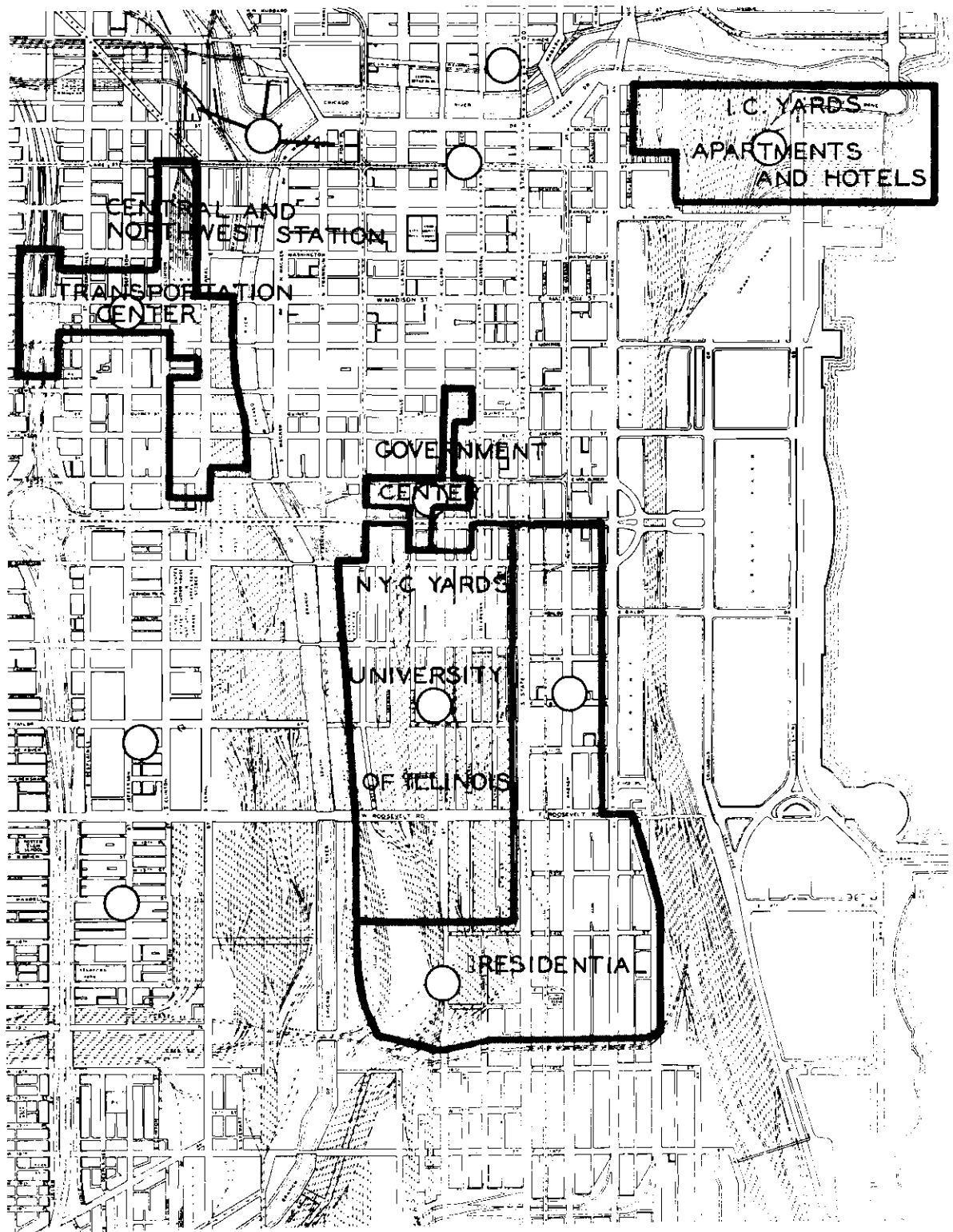


FIG. 2. CHICAGO'S PROPOSED REUSE OF RAILROAD LANDS

governmental center for federal offices. The Illinois Central freight terminal and classification yard between Michigan Avenue and Lake Shore Drive are also proposed to be relocated. The new uses will be hotels and apartments that overlook Lake Michigan.

The new terminal for the consolidated passenger service will be located at the present site of the Union-Northwestern Station. This development, however, will be more than just a passenger station. It is to be a transportation center for the location of all forms of transportation. To be included, in addition to the railroad station, are a downtown airlines' terminal, a heliport, a bus terminal for the Chicago Transit Authority, and a large automobile parking garage.

The redevelopment plans for downtown Chicago are not little plans. They are long range plans to meet the future needs of Chicago.

St. Petersburg, Florida.--Efforts are underway to revitalize the core area of St. Petersburg. As pointed out in the St. Petersburg Central Core Plan,¹⁸ relocating the railroad lines from the downtown is necessary for the successful completion of the plan. Once the tracks have been removed, a program to improve traffic circulation will begin. The first step will be to establish a one-way street system. This temporary measure, it is hoped, will relieve much of the present traffic congestion during the development of a

belt loop system around the central core. Neither program is now possible because of the barriers created by the railroad rights-of-way.

The city plans to acquire the railroad passenger station after train services have been discontinued. It will be reused as a terminal by the Municipal Transit System. With minor remodeling, the station would provide shelter for bus passengers during inclement weather and restrooms for both drivers and passengers.

Tuscon, Arizona. -- In 1955, the report Railroad Relocation¹⁹
and Track Depression proposed the relocation of the Southern Pacific Railroad facilities in Tuscon. The relocation would enable the unification of the central area, which is now separated by the railroad rights-of-way. It would also permit the extension of streets that now dead-end at the railroad. The value of additional footage that would be created by the relocation and the street extensions was estimated at nearly three million dollars. This estimated value, of course, was based on commercial reuse. For the present, the city has decided to abandon efforts to negotiate the removal of the facilities.²⁰

Providence, Rhode Island. -- Railroad relocation is part of a long-range program for the improvement of downtown Providence. In the recently completed study Downtown²¹
Providence 1970, it was proposed that the New Haven Railroad main line and passenger station, now located in the

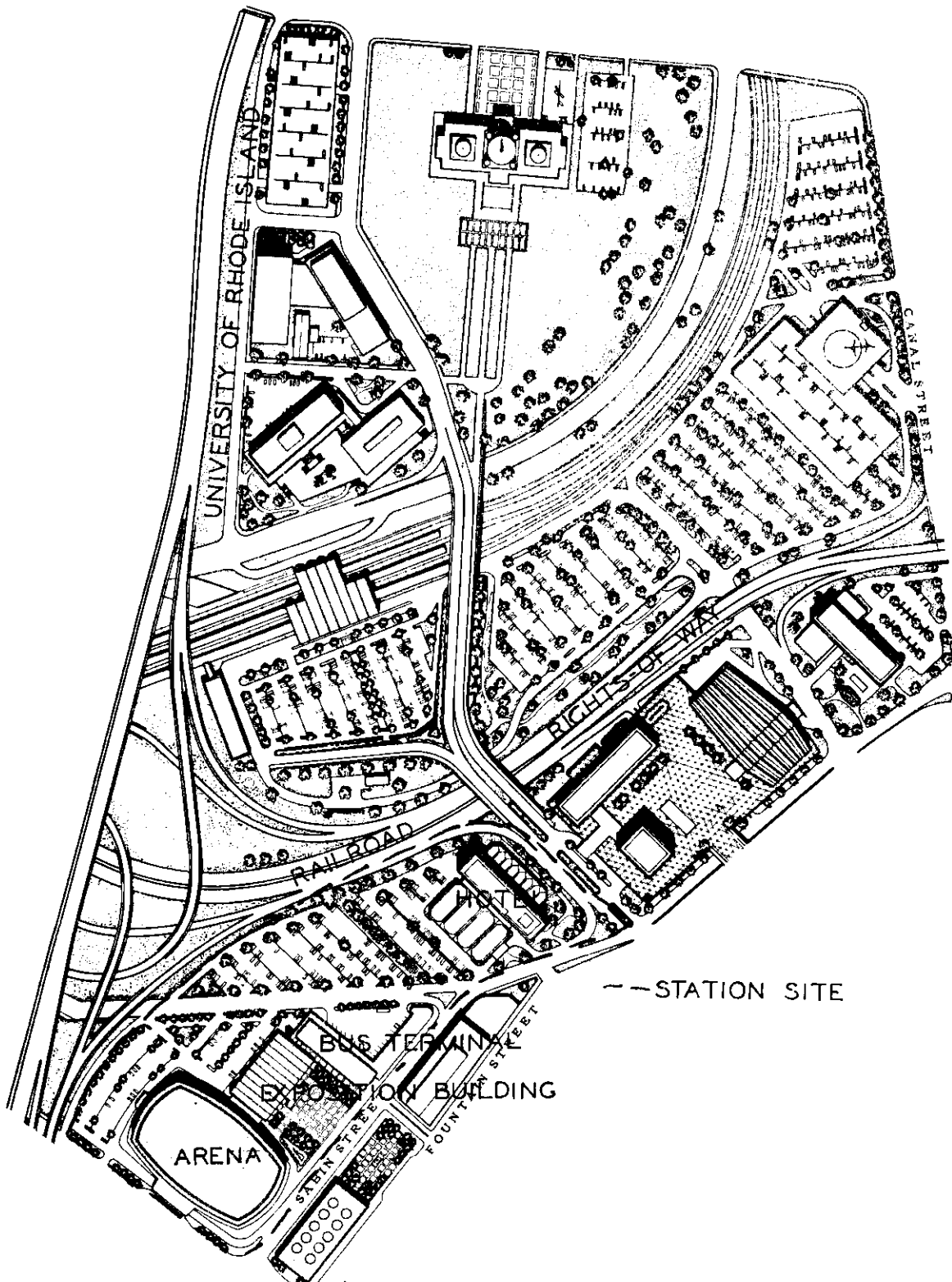


FIG. 3. PROVIDENCE'S PROPOSED REUSE OF RAILROAD LANDS

central core, be relocated on the northern edge of the central business district. The new location is to have adequate parking and be conveniently connected to the downtown and surrounding area by an expressway which will be partly located on an abandoned rights-of-way. Other proposed land uses in the area are the University of Rhode Island, a parking garage, a heliport, and a hotel.

The reuse of the abandoned railroad lands will comprise an important part of the over-all improvement plan. The new uses, in addition to a variety of commercial establishments, such as a department store and fashion center, will be varied. Public uses in the area will include a sports arena, exposition hall, and an office building. When the entire project is completed, sixty acres of the central business district will have been completely redeveloped.

Reuse and Redevelopment of Stations

In the past railroad stations have been converted to other uses. For instance, freight depots have been reused as feed stores and as storage buildings. Passenger stations have been reused as lodge halls and as commercial stores. In most cases these conversions have taken place in smaller communities. There are, however, railroad companies in the eastern part of the United States that are selling a number of stations. Many of these are located in the central core of the larger metropolitan areas. It is the reuse of some of these stations that will be

considered here.

There is, of course, a difference between the relocation of a station, as previously discussed, and the sale of one. In relocation, facilities and services are removed to another site. Usually relocation projects are undertaken as a joint effort either by cooperating railroad companies or a local governing body and a railroad company or companies. A sale is somewhat different. Usually it is undertaken by the rail company owning the site. Many times the railroad service and facilities remain, using only the space necessary to carry on business. Other times the services are discontinued and the stations abandoned. The sale of abandoned railroad stations is usually made by rail companies to secure relief from the high taxes imposed upon the facilities.²² To lease-back space in a station costs the railroads less per year than the annual taxes on the property.

Reuse With Railroad Facilities.---Although a railroad company might sell a station in fee simple, it sometimes reserves the privilege of continuing operations. Where passenger facilities are required, the purchasers usually furnish such facilities as heated and lighted waiting rooms, toilet facilities, and ticket offices.²³ Generally the railroad acquires a twenty year lease with option of renewal for its purposes.

Apparently the most favored uses in terminal retaining train services are retail establishments and business

offices. When structures are built above the railroad facilities, apartment buildings and motels are favored uses. In Concord, New Hampshire, the passenger station and its 25 acres of land are to be redeveloped. In addition to the needed railroad facilities, there will be a shopping center and office building located on the site.²⁴ In Boston, the South Side Station is to be completely remodeled. On the ground floor, in addition to passenger facilities, will be a group of retail stores. The upper floors are to be leased for business offices.²⁵ The New York Central Railroad has sold its stations at Valhalla, Thornwood, Hawthorne, Brewster, and Carmel in Westchester and Putnam Counties of New York State. The new owners plan to remodel each of these stations to provide better facilities for passengers. For added convenience each station will have a few retail stores and, in some cases, a supermarket.²⁶ The Suburban Station in Philadelphia was recently sold by the Pennsylvania Railroad. The passenger service will be continued; however, it will be carried on from a sub-level floor of a new 30 story apartment building that is to be constructed over the station.²⁷ Also, the Illinois Central has sold its freight station in downtown Chicago. A 20 story motel is to be constructed on this railroad land.²⁸ Perhaps one of the most elaborate developments to be made on railroad property is the new office building in New York City. The new building will replace the Grand Central Terminal Office Building. This

50 story structure will include, in addition to office space and terminal facilities, three theaters, an exhibition area, a parking garage for 2,000 cars, and possibly a heli-²⁴port.

Reuse Without Railroad Facilities.--There seem to be various reuses of station sites that have been sold in fee simple without continuing rail services. In some cases, the existing structures are remodeled for other uses. In other cases, the stations are demolished and the sites redeveloped for a new use. Many existing structures have been reused for such purposes as gasoline service stations, gift shops, retail stores, and libraries. More specifically, the South Chicago Street Station and suburban station in Philadelphia are now supermarkets. The Easton Rapids, Michigan Station is used as a seed store. In Briarcliff Manor, New York, the former passenger station is now a public library. A newspaper office now occupies the former passenger station in Waterburg, Connecticut.³⁰ The Rock Island Railroad Accounting Building in Chicago has been donated to the Good Will Industries.³¹ It will be converted to a workshop for the handicapped.

The stations that are abandoned and sold in fee simple give the purchasers more flexibility in developing the sites. Since most terminals are located in or near the central city, they, in many instance, occupy valuable land that can be redeveloped to provide needed services. The sale of these sites gives both private investors and city governments an

opportunity to provide many facilities in the central area that will add to the utility and convenience of the downtown area.

In Cleveland, Ohio, for instance, it has been proposed that the union terminal, which is for sale, be purchased by the city. It is suggested that this site be used for the location of a new convention hall to increase the city's attraction as a convention center.³² Another significant development is proposed for the West 40th Street Freight Station and its yards that have been purchased on Manhattan Island from the New York Central Railroad. It is to be the site of the world's largest motel.³³ In Rochelle, New York, a group of realtors has purchased the New Haven freight station that is located in the business district. In an attempt to improve the services of the central business district, a 24-story urban shopping center will be developed, including adequate parking facilities and the amenities of proper landscaping.³⁴

Observations for Future Application

There are several lessons that can be learned from the railroad relocation projects discussed in this chapter. First, the lesson that abandoned lands are reused more effectively when guided by a comprehensive plan of development. Second, the lesson that there are numerous possible reuses of abandoned railroad lands and structures. Third, the lesson that cities take an active part in the relocation of railroad

facilities from the central business district and many times designate the best reuse of these abandoned lands. And, fourth, the lesson that urban renewal and relocation projects can be used together to change the land-use character of an entire area.

Railroad lands usually occupy valuable land within a city. Only in recent years, however, have cities attempted to influence the reuse of these abandoned lands. Apparently there is an increasing recognition of the use potential of these lands, particularly when reused in accordance with the comprehensive plan of the city. For instance, the reuses planned for the railroad lands in both Chicago, as discussed on page 25, and Providence, discussed on page 28, were based on comprehensive development plans, including such aspects as future land use, population, economy, transportation, and community facilities. In every case where the comprehensive plan has established the framework for reusing abandoned railroad lands, it has resulted in the improvement or proposed improvement of the entire surrounding area. In Cincinnati and New Orleans where the comprehensive plan apparently did not establish a framework for reusing the abandoned railroad lands, there were no improvements in the surrounding area.

There are a number of possible reuses of abandoned lines, stations, and yards. The rights-of-way of abandoned lines can be used for other forms of transportation. The

New Orleans expressway, discussed on page 19, is located on abandoned rights-of-way, and the east-west expressway proposed in Providence and shown on Figure 3 will be located on the New Haven Railroad rights-of-way that is to be abandoned. Boston has also used abandoned rights-of-way for transportation needs. A rapid-transit line uses the former Boston and Albany land. By using the abandoned rights-of-way New Orleans and Boston reduced the rights-of-way costs of their facilities. In addition, the use of the abandoned rights-of-way reduced the cost of base materials for the expressway and tracks of the rapid transit line. It is estimated that Providence will save approximately five million dollars by using the abandoned railroad rights-of-way.

Other uses should be made of abandoned rights-of-way that cannot be utilized for other means of transportation. In New Orleans the former rights-of-way of the Gulf, Mobile, and Ohio Railroad were paralleled on either side by Basin Street. This land has been used as a grassed median strip since the line was abandoned. There have been no indications in the studies or reports of the other cities included in this thesis that abandoned rights-of-way not suited for other means of transportation have been reused. The reuse of these lands will prevent them from becoming uncared for strips of land that would be unsightly and detrimental to the area. Perhaps the following suggested uses will be applicable in such cases. Between residential and non-residential uses, the abandoned

rights-of-way may be ideal for a buffer strip. Since rights-of-way pass through developed and undeveloped areas, they may be useful for utility easements. In other cases the abandoned rights-of-way could be sold or given to the adjacent property owners.

Stations may be reused in various ways. As discussed on page 29, uses in addition to those necessary for railroad operations may be established within a station. Abandoned railroad structures can be remodeled for new uses as were the South Chicago Station or others discussed on page 33. In some cases the structures may be demolished and the land redeveloped as was done in Lakeland and as proposed for the Union Station in Chattanooga. In other instances, the station and its adjacent yards may be redeveloped as in Philadelphia and as is soon to be done in Chicago and Providence. Discussions of these projects are included with this chapter.

The reuse of an abandoned yard will be influenced to a large extent by its location. The New York Central and Illinois Central yards are located on the edge of the Chicago central business district. As shown on Figure 2, the NYC yard has been designated for the future site of the University of Illinois in Chicago and the IC yard is to be the location of high-rise apartment buildings and hotels. The yards abandoned in Atlanta and Nashville, discussed on page 23, were located away from the central area. These lands were used for industrial purposes. It is significant that the reuse of

yards located in central areas were planned by local planning commissions, but the reuse of abandoned yards outside these areas were determined by the railroads according to the zoning of the district in which the lands were located.

All the cities discussed in this chapter, except Cincinnati, have taken or plan to take an active part in the relocation of railroad facilities from the central business district. Usually cities share part of the relocation costs, as worked out with the railroad companies. In every instance, except in New Orleans and Cincinnati, the local planning commission has designated the best reuse of the lands abandoned in the central area. In Lakeland, the city purchased the land and developed the uses that are discussed on page 21. St. Petersburg plans to purchase the abandoned railroad station for reuse, as discussed on page 27. In other cases, however, the local planning commissions have planned the reuse of land that has or will remain in private ownership. For instance, both the use and site plan of the railroad land abandoned in Philadelphia, discussed on page 20, were prepared by the local planning commission at the request of the railroad company. This cooperation between the city and railroad has resulted in a reuse of the railroad land profitable for both parties. The officials of the New Haven Railroad have agreed to allow the city planning commission of Providence to determine the best reuse of their property that is to be abandoned. Perhaps this agreement will be as successful as the one on Philadelphia.

Urban renewal can be used on the lands adjacent to a relocation project to completely adjust the land-use character of the entire area. The reuse of the Philadelphia Broad Street Station and its yards, discussed on page 20, was complemented by the uses within an adjacent urban-renewal project. These two improvements have completely changed the land use in the area and given downtown Philadelphia added vitality. Urban renewal will also be used in Chicago to improve the land adjacent to the yards proposed to be relocated. Since the NYC yard is designated for the site of the university, a proposal has been made to redevelop the adjacent land for apartment facilities. The area is shown on Figure 2. The improvement of both areas will completely alter the land-use pattern south of the Loop. Also an urban-renewal project is now underway adjacent to the Chattanooga Station that is to be relocated.

In summary, it has been demonstrated that through adequate planning for the proper reuse of abandoned railroad properties, a city has, perhaps, one of its few opportunities to correct many physical features that have been rendered obsolete through technological improvements.

CHAPTER IV

CONCLUSIONS AND RECOMMENDATIONS

It is becoming evident that passenger and freight stations, in many instances, can be operated more effectively and more economically in locations outside the central-business district. Also, it has been demonstrated that classification yards of sufficient size and with electrically controlled equipment can reduce both yard-operating costs and freight-shipping schedules. In many cases existing classification yards are too small and lack the equipment necessary for this effective operation. Because of adjacent development it is frequently impossible to enlarge many of them. In the future, therefore, railroad companies will probably relocate many of their facilities and, in so doing, abandon lands can be put to new uses.

Railroad structures will be available for new or additional uses in the future. Many railroad stations are good locations for commercial uses oriented to the service of passengers using the stations. Since railroad are attempting to reduce expenses they are often interested in leasing space in stations not needed for their operations. Also, the consolidation of railroad companies, which should increase in the future, will result in the abandonment of a number of stations that can be converted to new uses.

As clearly shown by the examples included in this thesis, the only way to adequately determine the reuse of abandoned railroad structures and lands is through adequate planning within the framework of a comprehensive development plan for the city. Also, these examples have demonstrated that through the use of informal agreements between the city and the railroad company, abandoned lands can be used in a manner that will benefit both parties.

A city should participate in financing the relocation of railroad facilities that will free land needed by the community for additional services and facilities. Other relocations, of course, should be entirely the responsibility of the railroads. In either case, however, the local planning commission should participate in determining the best reuse of land in accordance with the comprehensive plan of the city.

It would be desirable to use urban renewal whenever needed as a method to adjust adjacent land uses and to supplement the reuse of abandoned railroad lands for the improvement of the entire area.

The opportunity to reuse abandoned railroad lands and structures will prove invaluable to many cities, particularly the reuse of land in densely developed areas. It is hoped this thesis has served two functions: one, that it has created an awareness of the use possibilities present in abandoned railroad properties; and two, that it has indicated the benefits of adequately planning for their development.

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