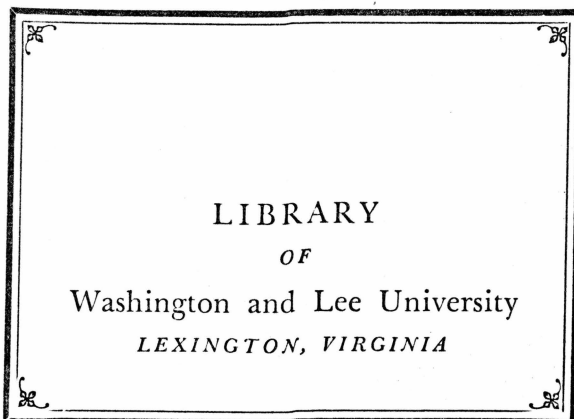


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A CITY PLAN  
for  
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A CITY PLAN FOR HUNTINGTON, WEST VIRGINIA.

Thesis

presented for the degree of

BACHELOR OF SCIENCE

in

CIVIL ENGINEERING

by

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Maps in folder on rear cover.

CHAPTER 1

(a)

PRINCIPLES OF CITY PLANNING AND THE NECESSITY  
OF A PLAN FOR HUNTINGTON

(b)

FLOOD CONTROL

PRINCIPLES OF CITY PLANNING AND THE NECESSITY  
OF A PLAN FOR HUNTINGTON

" The enormous losses in human happiness and in money, which have resulted from the lack of city plans which take into account the conditions of modern life need little proof. Our cities do not produce their full contributions to the sinews of American life and national character. The moral and social issues can only be solved by a new conception of city building."

Herbert Hoover  
1922

A definition of city planning that will produce a clear idea of all the issues involved might necessarily be long and involved in itself, since the scope of a proper plan is not limited to physical, political or social features, but is rather a rational interacting of all these phenomena. The following definition, while not taking into account the instruments and forces involved in developing a plan, does give a definite idea of the goal toward which modern city planners are striving.

" City planning is the exercise of such foresight as will promote the orderly and sightly development of a city and its environs along rational lines with due regard to health, amenity and convenience and for its commercial and industrial advancement."

The development of a city plan can in no sense be construed as the work of one man. Contrary to popular conception, city

planning is both a science and an art. It requires the cooperation of a widely diversified group of people. Architects, engineers, landscape architects, sociologists, economists, lawyers and writers, individually and cooperatively have come to solve the various problems involved.

The object of a plan is to give a general picture and program to which the city may in the course of time grow. The design of the City of Huntington as planned by Rufus Cook at the instigation of Collis P. Huntington some sixty years ago was adequate to suit the needs of the city up to a certain point. The part of the city laid out by Cook even today is in practically every instance, adequate for modern demands. However, proper extensions of the plan of Cook were not made to take care of the ever growing city and as a result, Huntington in general, is planned in a piecemeal, rather than a unified or comprehensive fashion. This is especially true of the sporadic development of subdivisions. The City of Huntington should profit by this experience, and develop a plan for the city not simply to take care of present needs, but also the probable needs of the city fifty years hence.

A graph showing the probable population of Huntington in years to come, based on the known growth of other cities will accompany this chapter.

The modern city plan deals in general with communication, land uses, location of public buildings and related problems, and the proper architectural treatment and coordination of the whole. Communication here means not only streets and railways etc. but telegraph and telephone systems as well.



In developing a city plan it will be found that though each topic be discussed under a separate head, the various phases are to a large extent dependent on, or at least related to each other. This is in keeping with what might be called the cardinal principle of city planning, that of unity and comprehensiveness of the parts, resulting in a coordinated and systematized balance of the whole.

City planning is the result of a civic awakening brought about by a great number of needs, economic, sociological and aesthetic. Although it is true that the planning of cities is as old as the cities themselves, for Athens and Rome had their planners, using many of the same principles in vogue today, the planning movement is a very modern development. However, since its instigation at the end of the nineteenth century, it has advanced by leaps and bounds.

Huntington, situated as it is in a region of almost unlimited natural resources, is practically certain to grow to a considerable extent. Considered geographically it might be thought of as the focal point of the eastern part of the United States. Huntington can very readily become a large distributing center, since manufactured materials and natural products can be shipped with equal facility to the north, south, east and west.

With this thought in mind, great consideration should be given to transportation facilities to and from the city.

The city plan is built upon the streets, which may be considered as its skeleton or as its arterial system, through which pulses the life blood of the city. This street system should be directly linked with highways connecting it with surrounding

cities. However, the street system cannot be considered without reference to the steam railroads, both as to location of tracks and street crossings. The union station idea is making rapid and deserving progress. City planning would simplify the railroad problem by reducing the mileage of tracks and the number of grade crossings, and by providing belt lines and classification lines for freight. The best city planning should not only curtail the abuses of the railroads, but should in every manner endeavor to assist them, for whatever aids the public carriers also aids the community.

Parks and parkways constitute an important part of the city plan. As the railroads provide for transportation needs, the parks provide for recreational needs. The majority of cities today have their park systems and the need of all growing cities for parks will be felt in the future. The concern of people today should be to secure the land before the cost makes it prohibitive. If it is felt that people in the future will get the benefit of these parks, the purchase can be defrayed by means of bonds which place the burden where it belongs with regard to time.

Probably one of the most important aspects of a city plan is zoning. Though looked upon with doubt by many people, zoning should be a mutual agreement among citizens for the protection of their mutual interests. Some think that zoning is intended only for the residential part of a city but this idea is erroneous. Its object is to benefit all properties, be they stores, residences or factories. The purpose of zoning is to impart stability to real estate and support to business, to remove suspicion and inspire confidence. It would prevent the intrusion of

business or industry on residential districts, which would cause a depreciation of values. The real estate term for this is "blighting."

It would protect the banking and retail districts by preventing the intrusion of laundries, dye works, etc. It would protect industry by dividing it into classes, separating those that are offensive by reason of noise, smoke etc. from the in-offensive ones.

The regional plan is important in connection with the development of a city plan since some thought or indeed a great deal of thought should be given to what the city's needs will be in the future.

All of these subjects will be taken up in some detail in relation to their application to Huntington in the body of this thesis.

In order to carry on a city planning movement, a city plan commission must be created. This commission is appointed by the city government and is composed of public spirited men who will serve without pay. A close relationship with the city government is obtained by including in the membership of the commission, the mayor, city engineer and one or two members of councils. The city plan commission reports its and investigations to the city government, and the city government refers all matters of street and building location to the commission.

The plan commission must necessarily have money to carry on its work and there are a number of ways of obtaining the necessary funds.

### 1- Special Assessment.

If the benefit is local, this is a good method. It is especially adaptable to parkways and boulevards which provide front lot sites, clearly a local benefit. There are cases on record where citizens have voluntarily assessed themselves for improvements on places where there are no Park or Plan Commissions. In quite a number of cases figures can be shown that many public improvements more than pay for themselves.

### 2- Excess Condemnation.

This implies the right of eminent domain outside the lines of the improvement, and perhaps is contrary to law in many states. When an improvement such as a new street or parkway is made land values increase for some distance back of the improvement. The principle of this method is to buy land for some distance back then as values are increased, the municipality sells the land and pays for the improvement from the proceeds

### 3- By Direct Taxation.

This is the old way of paying for improvements and is sound financially for work of a public nature. However it is inadequate to meet the demands of the first cost of large public undertakings.

### 4- Issuance of Bonds.

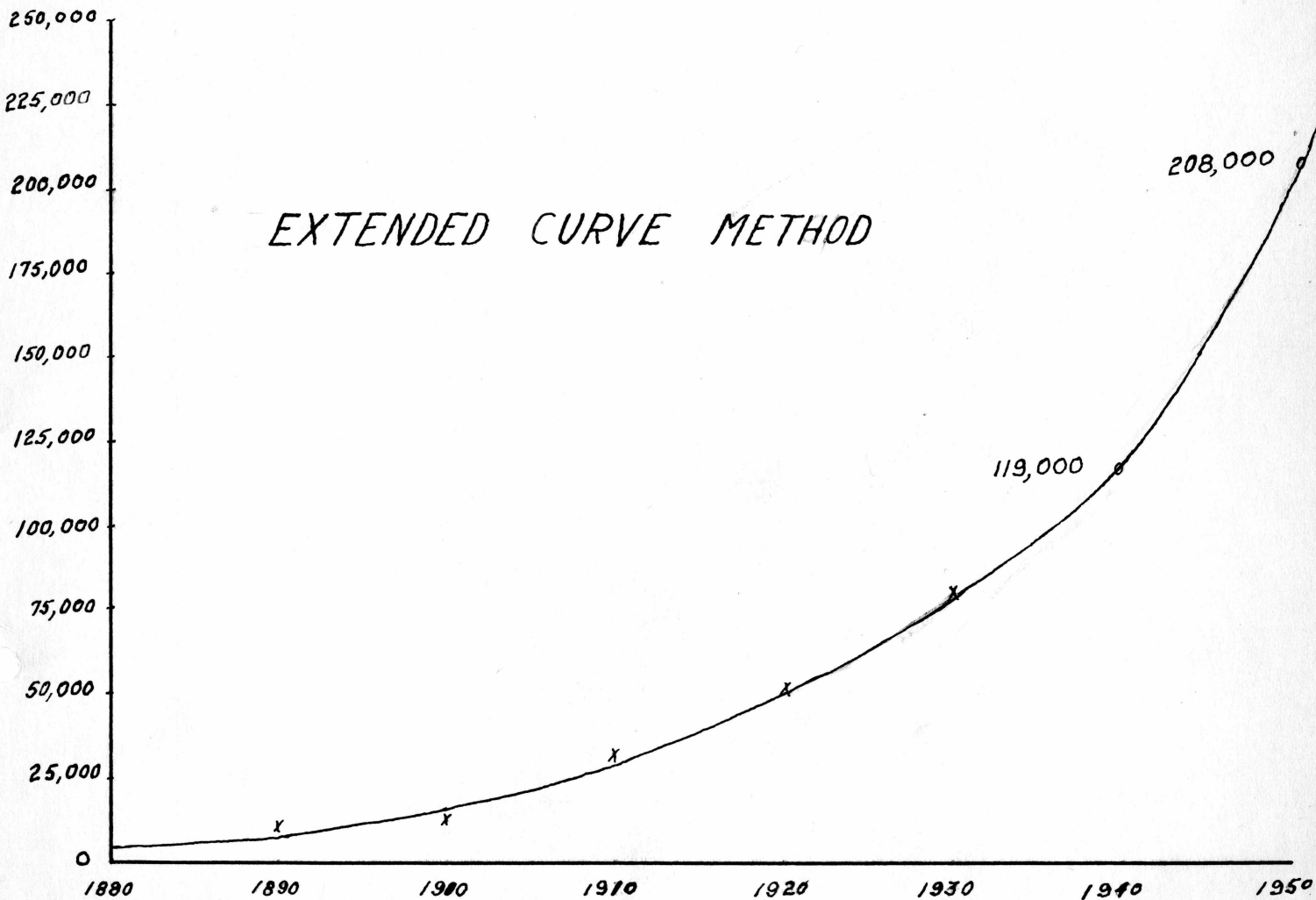
These bonds will vary for different improvements, depending on their character. Thus for a pavement whose value to the public is greatest when it is new, the charge for the early period is greatest, decreasing as the pavement becomes older. The terms of all paving bonds should be short since the life of

the pavement is short. For a park the terms of the bonds should be reversed, since parks will continue to increase in value. The sinking fund for the early period should be small with a high charge at the end. They should be long term bonds since future generations will reap the major benefit.

# POPULATION FORECAST

## METHOD OF DIFFERENCES

1890	1900	1910	1920	1930	1940	1950	1960
10,100	11,923	31,161	50,177	75,575	122,992	218,098	396,596
1,823	18,238	19,016	25,398	47,417	95,106	178,498	
16,415	778	6,382	22,019	47,689	83,392		
15,637	5,604	15,637	25,670	35,703			
10,033	10,033	10,033	10,033	10,033			



Population Forecast (cont'd)

By taking the average of the the two results obtained by using the different methods of predicting future population, we come to the following conclusion:

<u>1940</u>	<u>1950</u>
Method of Differences	Method of Differences
122,992	218,098
Extended Curve Method	Extended Curve Method
119,000	208,000
Probable Population	Probable Population
<u>120,996</u>	<u>213,049</u>

GROWING CITIES NEED CAREFUL PLANNING

## FLOOD CONTROL

The matter of flood control is ~~an~~ important for Huntington as was evidenced by the recent rising of the Ohio causing the inundation of many streets nearest the river.

The Federal government has had under consideration for some time the building of a concrete flood wall along the whole length of the river front and every effort should be made to have this done. The building of a boulevard along the top of this structure is a part of the project. This wall, while serving a very practical purpose would do away almost entirely with the unsightliness and disorder commonly associated with river fronts, while at the ~~same~~ time providing a very beautiful drive for motorists and one that would help lessen traffic congestion from the down town district to a great extent.

The reforestation program of President Roosevelt, together with this wall should lessen flood danger greatly.

While not directly connected with flood control, the elimination of the present sewer outlets along the river would facilitate the prevention of inundation of streets. In the recent flood practically all of the water covering certain streets came up through the sewers. The actual danger here is not so much from the water itself, but the spread of disease. All sanitary sewer outlets could be done away with if a sewage disposal plant were built. This matter should be given a great deal of consideration.



CHAPTER 2.  
TRANSPORTATION SYSTEM

## TRANSPORTATION SYSTEM

Huntington has five means of transportation; railroad, river boat, airplanes, street railways and motor vehicles. The latter will be discussed in the chapter devoted to the street system. In this chapter railroads, river traffic, air lines and street railways will be considered, under the following heads.

A-Railroads

B-Water transportation

C-Air lines

D-Street railways

A-Railroads:

Huntington is confronted by a peculiar condition in the matter of railroads. Modern city planners consider it extremely inadvisable to run railroad lines through the middle of a city, unless the road is electrified and depressed.

The Chesapeake & Ohio line at present runs through the heart of Huntington. There are three solutions to the railroad problem.

a-To remove all present trackage of the road and run a new line from the western corporate limit along the Ohio river following through to Highlawn.

b-To depress and electrify the road between the corporate limits, using the present right of way.

c-To leave the road in the position it now occupies.

The first solution is impractical since the cost would be too great and at least part of the river front should

be saved for other purposes.

The cost of the second would also seem to make that course prohibitive.

The third seems then to be the only feasible solution, and this idea will be followed through in this thesis.

In its present condition Huntington is literally chopped to pieces by its railroads. The great number of grade crossings caused by the seemingly haphazard windings of the Baltimore & Ohio and the freight belt line of Chesapeake & Ohio, are a menace to safety as well as a cause of great loss of time to many motorists and can be eliminated to a great extent.

This can best be done by joining the two lines of the railroads at a point approximately a half a mile west of the western corporation line on the present line of the C & O, running the two roads on the same tracks through the city along the present right of way of the C & O, and then splitting them at a point where the present lines run close together at Baltimore Court between Twenty Ninth (29) and Thirtieth (30) Streets. This will involve the construction of a new union passenger station and will be taken up later under a separate head.

#### Freight\*

As will be discussed under the chapter on zoning, the heavy industries and some of the light industries will be placed in a district along the river front necessitating a railroad belt line.

As the western side of the loop of the present C & O belt line is too near the business and commercial districts, it is suggested that it be removed and the belt line be started at

the "Y" in the tracks at Fifteenth(15) Street West. The line will proceed north along 15th Street W. on the present spur track to Ohio Ave; then east along Ohio Ave. running into Second Ave. at First Street. At this point it will join the present C & O belt line and follow along this line back into the main road at Twenty Third (23) Street E. In this way the part of the present belt line along Third Street will be removed and adequate freight facilities for all industries and warehouses will be furnished, including those located along the river in West Huntington.

Second Avenue should be paved so as to run to Twentieth Street as will be discussed in the chapter on the street system, and this avenue should be used as a freight thoroughfare, thus keeping heavy vehicles out of the business section.

Freight Station- A union freight depot would be built at the site of the present C & O freight station. Perhaps the one used at present could be utilized, but since the volume of freight will greatly increase enlargements will have to be made.

Passenger Station-

Under the above suggested linking of the railroads it will become necessary to build a new passenger station. Such a project involves a number of improvements. The present B & O station which is in reality an eyesore should be done away with. A union station will provide a great convenience to passengers finding it necessary to change from one road to the other at Huntington. If the present site of the C & O were used as a location, both stations would thus be centrally located and more accessible to passengers.

It is therefore suggested that the new station be located at this site. The station should be built so as to be on both sides of the tracks, with underground passages to connect the two sides. Access to the station could then be had from Seventh Ave. on the north side and Eight Ave. on the south side. The building should be attractive architecturally and station grounds landscaped.

Some attempt should be made to landscape the railroad from Eight Street to Sixteenth Street, using hedges along the track. A favorable impression of the city would then be made on people entering by train.

Action should be taken at once to eradicate slum district along the railroads and general measures taken to prevent "blighting".

#### B- Water Transportation:

Huntington is indeed fortunate in being situated on one of the larger rivers of the country. The importance of this fact is not appreciated by the layman, but when we consider that even now there is a plan, visionary as yet it is true, to develop the Mississippi River to accommodate ocean going vessels, we can readily see that such inland cities as St. Louis will be in reality, seaports. In time too, the Ohio might be dredged so as to permit vessels of large draft to proceed as far up as Pittsburg. Certainly at least there would be a tremendous amount of shipping along the Ohio since this river would form a direct connection between the Mississippi and Pittsburg.

If this project is carried through and there seems

to be no real reason why it will not be, in time, the effect on such cities as Huntington, situated on large waterways, would be tremendous.

Even today there is a great deal of shipping by water from Huntington. United States shipping reports show that there were 22,000,000 tons of material shipped from Huntington in 1932. Approximately 22,000 passengers embarked or disembarked in the same year.

Since docks and wharves without question must be situated close to railroad freight lines, so that materials brought in from the surrounding country can be readily transferred to barges and boats, and since the present docks located on the river at the foot of Tenth Street conform to this requirement, it is suggested that they be left in their present position. Improvements should be made on these docks however and docking facilities should be increased.

With a return to normal business conditions, it is very probable that shipping will be increased on the Ohio, since shipping rates on the river are only about one half of the railroad rates.

#### C- Air Lines.

Well served with other transportation facilities, Huntington is no less fortunate in being located on a commercial air line with terminal connections at Pittsburg, Columbus and Cincinnati. With air travel increasing by leaps and bounds and the amount of shipping by air being on the increase it is

important that an airport be located at such a site that there will be nothing to hinder its expansion or development. It is unfortunate that the city of Huntington had no such site available within its corporation limits. Despite the fact that the present airport is in Ohio, necessitating the crossing of the river to reach it, the situation is better here than it would be had the airport been placed at the western or eastern extremities of the city. The city will eventually grow to the east and west, and had the airport been placed at either end, it perhaps would have hindered this natural growth, at least to some extent. Then too, in its present position it is within ten minutes drive of the business section with a wide and well paved road and a wide bridge connecting it with the city proper. Since the southern boundary of the city is composed of high hills along its whole length, a suitable site could not possibly be located in this direction.

Taking all factors into consideration, it is deemed best to leave the airport in its present location, being here well located with regard to the business section with ample room for future expansion and development.

#### D- Street Railways:

An attempt is being made in many cities to do away with street railways because of the noise and because they offer in many instances obstruction to a smooth flow of traffic, and substitute busses in their stead.

Huntington could well take cognizance of this fact in a number of instances. At present one line runs through the

immediate heart of its best residential area. In a district of this type one expects to find at least some degree of peace and quiet, but as the situation now stands, the raucous clamor of one of these cars is heard at intervals of approximately twenty minutes through the whole day and most of the night. It is recommended that the present tracks be removed along Eleventh Ave. from Fifth Street W. to Eight Street. Along Eight Street between Sixth Ave. and Thirteenth Ave. Along Twelfth Ave. Between Eight Street and Twelfth Street. Along Charleston Ave. Between Twelfth Street and Sixteenth Street, substituting rubber tired passenger busses.

The tracks along Fourth Ave. between Eight Street and Eleventh Street are unnecessary and should be removed. Since Fourth Ave. is one of the principal business streets with relatively heavy traffic, the cutting out of these tracks would relieve a great deal of congestion and increase the speed of flow of traffic, while at the same time increasing the ease and convenience of driving.



CHAPTER 3  
MAJOR STREET SYSTEM

## MAJOR STREET SYSTEM

The creation of adequate street facilities is one of the most important aspects of a city plan. In this thesis only the more important thoroughfares will be considered, the minor streets falling within the scope of the city engineer.

Most modern city plans call for a system of radial streets emanating from a "civic center", with circumferential streets for through traffic, but a project of this type in Huntington is impossible because of its topography and its geographical surroundings. For Huntington, wide and well paved thoroughfares should be developed as principal through streets.

Since Fifth Ave. is at present a principal through street it should be continued to be used as such, but a number of improvements are necessary. It should be developed into a super street along its whole length. Using the Chicago practice as a standard, the right of way should be eighty (80) feet, with a curb to curb measurement of fifty six (56) feet. This would make a six lane street with two eight (8) feet parking lanes and four ten (10) feet lanes for moving traffic, two in each direction. A street of these specifications would adequately take of any traffic requirement. In developing this street the present site should be used from the Guyan River to First Street. At First Street the present through street along Adams Ave. should be discontinued and a new street should be built along the present site of the B & O railroad, which would be eliminated as discussed under the Chapter on the Transportation system. This

street would be made a direct continuation of Fifth Ave. from First Street following the railroad bed and joining the Piedmont Road at Camden Street in Westmoreland, thence continuing along the Piedmont Road, running into the new Huntington-Kenova highway at the western corporation limit.

The development of this project would bring about a number of distinct improvements. Namely, removing the " S " curves at First Street and in Westmoreland which in their present state are a source of great inconvenience to motorists as well as being a menace to safety; getting away from the railway line along Adams Ave. and improving real estate values through the whole section. Also providing a through street without a single turn through the whole length of the town.

Since Third Ave. is a continuation of the state highway leading to Point Pleasant, it should also be developed under the same specifications as Fifth Ave. as far down as West Huntington from its beginning in Guyandotte. The approach to Third Ave. in Guyandotte should be widened considerably, even outside of the corporation limit. Through traffic on this avenue could be shunted over to Fifth Ave. either east or west of the business section, preferably east of it.

Eighth Street, being a continuation of the highway leading to Wayne should be wide and well paved, but not necessarily as wide as Fifth or Third Ave. since the volume of traffic will not be as great. This street runs directly to the down town district and since it intersects Fifth Ave. there will be some through traffic on it. The continuation of Eighth Street leading through Park Hills to the Wayne Highway should be widened and the

extremely bad curves now located on it should be removed.

The Parkway described under the Chapter on Parks and Parkways becomes important in connection with the street system. While through traffic should not be routed through a residential district this Parkway will be probably be used as a through street in a great many cases. To accomodate this traffic the street should be relatively wide though not necessarily as wide as the other principal through streets.

The boulevard to be built along the top of the flood wall on the river front will also be called upon to carry a great deal of traffic and should at least be as wide as the Parkway, and possibly as wide as Fifth Ave. since many people will use this thoroughfare as a quick means of access to the business section, and in many cases will probably be used as through street while carrying at the same time a great number of pleasure drivers.

As the trackage along Second Ave. would be eliminated as discussed under Railroads, Second Ave. proper should be developed as a relatively wide street from First Street to Twenty Second Street, using this thoroughfare for transportation of freight materials, thus keeping heavy and cumbersome vehicles out of the business section. This would also form a much needed trucking approach to industries along the river.

Sixth Ave. and Seventh Ave. should be extended from their present terminations at Thirty First Street so as to intersect the Guyan River Parkway.

If the street railway tracks along Fourth Ave. are eliminated as discussed under that head, the present width of the street

should be sufficient to take care of traffic needs, but if they are not removed the street should be widened, incurring of course a far greater expense than in removing the tracks. If the tracks along Ninth Street were removed, the street width would be sufficient to take care of traffic needs but otherwise the street should be widened.

The city, in conjunction with regional zoning, should plan a layout of streets outside of the eastern corporation limit to insure the proper development of that section.

The subject of grade crossings is a very important one and one that should be given a maximum of attention. Needless to say the elimination of grade crossings wherever possible is a problem that should be solved in conjunction with the development of a city plan. The removal of the B & O tracks as above discussed would reduce greatly the number of these hazards.

An underpass should be built where the freight line would cross the extension of Fifth Ave. at Fifteenth Street W.

Where the new Parkway would cross the C & O at Sixteenth Street W. an underpass should be built.

At the intersection of Fifth Street W. with the C & O the street should pass under the railroad since there is a relatively large amount of traffic on this street and a good view up and down the tracks cannot be had when going north on this street.

This same situation holds true at the intersection of First Street with the C & O and here too the street should pass under the railroad.

The present underpass at Eighth Street should be repaved

the street car tracks being removed as discussed under street railways.

The present underpass at Tenth Street should be widened considerably so as to cut out the bend in the street which makes it a danger point.

At the point where the railroad belt line crosses Fifth Ave. at Twenty Third Street an underpass should be built. There is a great volume of traffic on this Ave. and the elimination of this crossing becomes necessary to enhance the speed of flow of traffic and to remove the danger of accidents.

At the four points where the Parkway will intersect the railroads at Guyandotte underpasses should be built.

While no attempt will be made to find a definite radius of curvature for the intersection of perpendicular streets, this curvature should be sufficiently large so that a car in making a turn will not be on the wrong side of the street after the turn is completed. The curb should be well rounded at all intersections so that making a turn will be a simple matter and not one that requires a great deal of skill and effort.

CHAPTER 4  
PARKS AND PARKWAYS

## PARKS AND PARKWAYS

The modern practice in regard to parks is to have a connected system of parks and parkways. While a park system can be made in Huntington to conform to this requirement, the parks laid out by the city to date are very inadequate.

A policy of procrastination in acquiring park lands is certain to be an expensive one. Plots of land at various places, as yet surrounded by relatively undeveloped property can be bought now at a minimum rate. However as the city grows these properties will be built up and real estate values will increase costing the city a great deal more money because of the delay. The properties now available as park lands might also become so built up that they would become useless as far as being used as a park site is concerned. Perhaps <sup>the best example</sup> of this occurred in New York, where recently three parks covering less than ten acres were purchased by the city, at a greater cost than was paid for the whole of Central Park, covering 840 acres, which was purchased in 1853.

The laying out of suitable parks in a town increases the desirability of the town as a place of residence. Park development also increases the value of adjoining real estate. In support of this fact examples will be cited from some of the larger cities. The assessed value in 1856 of the three wards adjoining Central Park, New York was \$20,500,000.00 In 1873 it had risen to \$236,100,000.00. The natural increase as obtained by averaging the gain in the other wards was found to be \$53,000,000.00, making the earning capacity of the park for the three adjoining wards \$183,000,000.00. In three years the value



of the wards surrounding Prospect Park in Brooklyn rose \$7,000,000.00 which was twice the cost of the land acquired for the park. The " Back Bay " improvement at Boston caused an increase of \$12,000,000.00 on the value of surrounding property from 1877 to 1885. These facts would seem to support the theory that parks have actual money value as well as esthetic value.

The best residential frontages in cities will be found on parkways and boulevards. A study of the Use Map that accompanies this thesis will show all such areas to be zoned as first class residential districts.

Huntington, insofar as parks are concerned, is relatively undeveloped. Ritter Park is at present the only one of any size and the only one with space enough to offer any recreational facilities. The prospective improvements now being considered by the Park Commission with regard to Ritter Park should be carried through at once. This park is situated in the best residential district of the city and should be developed to its fullest extent.

However, one park is not sufficient for a city as large as Huntington and the following suggestions should be carried through to develop a fitting park system for the city.

In developing a park system it will be found that water, whether in a fresh, polluted or stagnant form is a great asset. Of course the water in either of the last two cases must be purified in some manner, but as a general rule water is one of the greatest aids to natural scenic beauty.

In accordance with this idea, since the river front is largely taken up by industries and the railroad, Four Pole Creek

should be utilized. A parkway should then be established, beginning at the point where the new through street (Route 60, discussed under the head of the Street System) joins the Piedmont Road in Westmoreland, following as closely as possible along Four Pole Creek, through Memorial Park into the Washington Boulevard at Fifth St. West. Thence proceeding along the present site of the Washington Boulevard, through Ritter Park and then to Ricketts Place. It should then be cut directly through to where the Washington Boulevard takes up again at the Beverley Hills subdivision; proceeding again along the Washington Boulevard to join the Guyan River Parkway which will be handled in subsequent discussion.

To use as much of the Ohio and Guyan river fronts as possible, another parkway should be established along these fronts. The approach to the parkway along the Ohio should be made from Third Ave. on Twenty Fifth St. to the river front. The parkway should proceed from this point up the Ohio, crossing the Guyan where the Guyan joins the Ohio, proceeding along the Ohio through Guyandotte to the subdivision of the Hillview Land Co. above Guyandotte. It should then cut directly across the undeveloped plot of land at Eastland to the Russell Creek Bridge; thence across the bridge, turning west along the river and following the river to run into Fifth Ave. Part of this parkway would be along the site now occupied by the Guyan River Road, meeting the Washington Boulevard at the bend in the Guyan River. Using improved Fifth Ave. as a connecting link, a parkway encompassing practically the whole city would thus be established.

Landscaped park districts should be located at intervals

along these parkways. The large plot of land now known as Eastland, lying just east of Guyandotte should be bought up by the city for use as a future park development. Part of this property lies outside of the corporation limit, but as the city will in time extend eastward along the Ohio, this plot will probably at a later date lie within a highly developed district, for which park facilities will be highly necessary.

Part of the Beverley Hills subdivision adjoining the parkway through that district should be secured and developed into a park. This part of the city is as yet relatively undeveloped but in time will probably assume major importance as a residential district.

The plot of land included between Nineteenth Street W. and Twenty First Street W. and between Monroe Ave. and the railroad should also be acquired. This is a rather small plot but it could be used to great advantage as a small neighborhood park. Part of the wooded slope across Four Pole Creek and joining the Cabell County line could also be developed as an addition to this park.

Thus a connected system of parks and parkways, which as stated in the first paragraph of this chapter, is an indispensable asset to a modern city plan, could be established in Huntington.

CHAPTER 5

ZONING

## ZONING

Although there are many definitions of zoning, the following seems to be the most definite and composite. "Zoning is planning with relation to the differences, existing and potential, between the parts of cities".

More and more, people are beginning to recognize the beneficial effects of zoning. Although zoning was first inaugurated in 1909, it has only been in recent years that it has come to be accepted by men interested in the proper development of their cities.

Los Angeles, the first city to inaugurate zoning, in 1909 passed a retroactive zoning ordinance and a number of objectionable features in the city were done away with at once. In most states however this is contrary to law and we find that zoning ordinances now are not retroactive but are used as measures to control future developments.

New York was zoned in 1917 against tremendous opposition from business men and corporate interests, but since then they have begun to take cognizance of the benefits accruing from the ordinance and now they will brook no controversy in regard to it.

Unlike the subjects, streets, transportation, and recreation, which represent more or less public aspects of city planning zoning is more directly concerned with private properties. Under a proper zoning ordinance, a city can be divided into districts or zones, in each of which uniform regulations govern the proper location and development of residential, business and industrial

sections, the height above which a building may not be built, and the area that may be covered by an individual building. Districting of this type, involving segregation of industries, and establishment of definite residential districts is conducive to good health, as well as bringing a greater degree of comfort and safety to inhabitants of cities.

Without zoning, city development is left entirely in the hands of individual builders. Business centers become congested, transit and street facilities are overwhelmed and factories invade business and residential areas. In general then, it might be said that the city becomes a patchwork of mixed uses and disorder.

Zoning does not prevent the construction of buildings, or lessen their value. Regulations as to bulk, use and location are made, but these factors in reality increase the usefulness and value of the buildings.

Interesting statistics have been compiled by the U.S. Department of Commerce on zoning and its effects. Every state legislature in the Union today has passed zoning enabling acts, and it is now incumbent on the cities to take advantage of this fact. In January 1930, every state in the Union with the exception of three, of which West Virginia was one had at least one zoned municipality. New York state headed the list with with a total of 148. In 1930 there were 856 zoned municipalities in the U.S. representing a total population of 39,000,000, or approximately three fifths of the total urban population.

Zoning, except where property considerations are sacrificed to more important social demands, increases individual

and aggregate money values and returns. These conclusions are in accord with experience, both abroad and in this country.

Zoning is not so much a matter of theorizing as it is a matter of diagnosis. As one eminent engineer put it, "zoning is four fifths a matter of fact and one fifth a matter of skill and judgment".

In modern zoning, a town is divided into three kinds of districts, first the "height district", second the "area district", and third the "use district".

Height districts are determined by the broad principle of equal rights to light. In the business district, a skyscraper may be erected covering one hundred percent of the lot. Office apartments will become much in demand, especially in the upper stories, and the property will assume an inflated value. In the course of time other high buildings will be erected, perhaps in close contact with it, cutting off light and air. Occupants will then move to another similar building which will perhaps meet the same fate. Such properties after deflation may not yield more than two percent on the investment, with no hope for the future. As another example the case of an apartment house erected in a residential district may be used. The apartment house will cut off light and air from the surrounding buildings, and the value of surrounding homes will drop perhaps thirty percent.

There are two methods of regulating the height. By a flat limit and by making the height a function of the street width. The latter method has the merit of encouraging street widening, for the wider the street, the higher may be the building.

Merely limiting the height of buildings is not enough

however, for the building may cover the entire lot and thus cut off all light from adjacent windows. Area restrictions require the setback of the street wall as the building gets higher, causing a reduction in area and thus allowing the access of light and air to all parts of the building, while the building itself does not cut off light and air from surrounding structures.

Zoning on the basis of the use to which the buildings are to be put has been sustained by courts in many cases. According to use, a town is divided into classes of residential district classes of business and public use districts and classes of industrial districts.

Two zoning maps will accompany this thesis, one showing "height and area" and one showing "use districts". In conjunction with these a zoning ordinance will be drawn up.



PROPOSED ORDINANCE FOR HUNTINGTON, W. VA.

Ordinance Establishing Districts or Zones and Regulating  
Therin the Use of Property, Height of Buildings, and Required  
Open Spaces for Light and Ventilation of Such Buildings.

Whereas, the health, comfort, convenience, public safety,  
morals, order and the general public welfare of the City of  
Huntington require the classification of the city into districts  
within some of which it shall be lawful and in others unlawful,  
to erect, construct, alter or maintain certain buildings or uses  
of property, or to carry on certain trades or callings, or within  
which the height and bulk of future buildings shall be limited,  
be it ordained that the following districts, with their subordi-  
nate classifications be established.

Article 1-Use Districts.

Section 1 - Use Districts:-For the purpose of regulating  
and restricting the location of trades and industries, business,  
residences and buildings designed for specified uses, the City of  
Huntington is hereby divided into the following districts, namely  
Residence, Business, and Industrial Districts.

A- Residence Districts:

Class 1-Single family dwellings

Class 2-Dwellings, flats, clubs, railroad shelter

stations, apartment houses, hotels without stores.

B- Business and Public Use Districts

Class 1 - Retail business, trades and professions, schools, public and semi public buildings, churches, playgrounds, green houses, parks, including residences of Classes 1 and 2.

Class 2 - Hospitals, sanitariums, charitable and other eleemosynary institutions including residences of Classes 1 and 2.

C- Industrial Districts:

Class 1 - Factories not objectionable, warehouses, and business, including residences of Classes 1 and 2.

Class 2 - Objectionable and odor producing factories, including any business use but excluding new residence of any kind.

Section 2 - Residence Districts of Class 1+ - No building structure, or premises may be erected, constructed, altered or maintained, which shall be used for, or designed or intended to be used for any other purpose than that of a single family dwelling.

Section 3 - Residence Districts of Class 2: -No building, structure or premises may be erected, constructed, altered or maintained, which shall be designed, intended or used for any other purpose than a single family dwelling, flat, group dwelling, club, boarding or lodging house, fraternity dwelling, apartment, or hotel without stores.

Section 4 - Business and Public Use Districts of Class 1.

Retail Business and Offices.

a- In these districts, no building, structure or premise, shall be erected, constructed, altered or maintained, which shall be designed, intended or used for any other purpose other than those specified in Residence Districts of Classes 1 or 2, and those of a business or professional office, retail trade, theater or store.

b- In any business or public use district, no building or premises shall be used, and no building shall be erected, which is arranged, intended or designed for use in any trade, industry or use that is noxious or offensive by reason of the emission of odor, dust, smoke, gas or noise.

c- No building, structure or premises shall be erected, constructed, altered or maintained, which shall be designed, intended or used for any other purpose other than that of an assembly hall, church, public or private school, playground structure, park structure, art gallery, museum, fire house, library or convenience station, or other public or semi-public building, or residence use specified in Class 1.

Section 5- When an established Business or Public Use District of Class 2 adjoins and touches the boundaries of a Residence District of Class 1 or 2 on three of its sides, or is completely surrounded by the same, upon the change of use of said district, or of any portion thereof to a use specified for Residence Districts of Classes 1 or 2, said property shall thereafter be described as a Residence District of Class 1 or of Class 2 respectively.

Section 6 - In a Business or Public Use District of Class 2

no building ,structure or premises shall be erected,constructed, altered or maintained,which shall be designed,intended or used for any other purpose than that of a public or private hospital, sanitarium or asylum,institute for the treatment of disease, clinic,day nursery or other eleemosynary institution or Residence specified in Classes 1 or2.

Section 7 - Industrial Districts of Class 1 -

a - No building,structure or premises shall be erected,constructed,altered or maintained,which shall be designed,intended or used for any other purpose than tha of a retail or wholesale business such as specified in Business and Public Use Districts of Classes 1 and 2, for Residence Districts of Classes 1 and 2 and for the following specified trades,uses or industries.

Blacksmithing,glass factory,brick yard or kil carpet cleaning,coal yard,dock or wharf,fruit packing or curing,warehouses,livery stable, lumber yard,machine shop,planing mill,sash and door,box factory,railroad freight yard, sheet metal works,silk cotton or other mill using power,loading,receiving or distributing station for rock,sand or gravel,tar roofing or other tar waterproofing manufacture.

b- It shall be unlawful for any person,firm or corporation,to erect,establish,carry on or maintain within the District described in paragraph (a) of this section,any industry engaged in making or preparing soap candles,glue,tallow oils,chemicals,gunpowder,or other

explosives, tanning, dressing or preparing skins, hides or leather or crematory.

c- No premises shall be designed, intended or used for any trade, industry or use that is objectionable or offensive by reason of the emission of odor, dust, smoke, gas or noise.

Section 8 - Industrial Districts of Class 2

Objectionable Industries --No building, structure or premises shall be erected, constructed, altered or maintained which shall be designed, intended or used for for any other purpose than that of a Business or Industrial Use.

Section 9 - Existing Buildings and Premises -

a - In any building or premises, any lawful use existing therein at the time of the passage of this ordinance may be continued therein, although not conforming to the regulations of the Use Districts in which it is maintained, providing that no structural alteration requiring a building permit shall be made therein, and no new building or addition be erected, except in conformity with the requirements of this ordinance, or unless required by law.

b - No existing building, designed, arranged, intended or devoted to a use not permitted by the Article in the Use District in which such use is located, shall be enlarged, extended, reconstructed, or structurally altered, unless such use is changed to a use permitted in the Use District in which such building is located.

Section 10 - Reversion of Exceptions.

a - If at any time, any building or premises now erected or maintained, which by the terms of this ordinance, or of a later ordinance, or amendment thereto, is declared to be an exception to the Use District, either completely or partially surrounding such exception shall be changed from its present use to a different use or destroyed, or more than forty (40) percent burned, moved or altered, then, and without further action by the City Council, the said premises on which said building or structure was erected or maintained, shall from and after the time of such destruction, burning, removal or alteration be deemed to be classified without further notice as a district of the same class of use as the surrounding or adjoining district to which said premises formed originally an exception, and the same shall be to all restrictions of such classification.

b- Doctors Offices in Dwellings.

Single family or other type of dwellings may include the office of a physician, surgeon, dentist or an artists or musicians studio without violating the restrictions of any classifications in any paragraph of this ordinance.

c - Private Garages and Other Outbuildings.

Private garages and the customary outbuildings may be located or maintained as accessory to any building lawfully within the limits of any district herein described.

A private garage for more than five motor vehicles shall not be deemed accessory.

Article 2.

Section 11 - For the purpose of regulating and limiting the height of buildings hereafter erected, the City of Huntington is hereby divided into the following height districts.

A -  $2\frac{1}{2}$  Story Height District - Limited to a maximum of two stories and attic, not to exceed a total height of thirty five (35) feet to finished ceiling line of the attic story above the curb.

B - 3 Story Height District - Three stories not to exceed forty ( 40 ) feet.

C - 4 Story Height District - Four stories not to exceed fifty ( 50 ) feet.

D - 8 Story Height District - Eight stories not to exceed ninety ( 90 ) feet.

E - 18 Story Height District - Eighteen stories not to exceed two hundred and ten ( 210 ) feet.

These height districts are shown on an accompanying map.

No building or part of a building shall be erected, constructed or altered, except in conformity with the regulations herein described for the Height District in which such building is located.

Section 12 - A District-

No building shall be erected hereafter to a height in excess of two stories and a finished attic nor more than thirty five (35) feet to the finished ceiling line of the second story, above the established curb grade of the street in

front of the building or adjoining ground level, except as provided for in Section 17 of this ordinance.

Section 13 - B District-

No building shall be erected hereafter to a height in excess of three stories, nor more than forty (40) feet to the finished ceiling line of the third story above the established curb grade of the street in front of the building or the adjoining ground level except as provided in Section 17 of this ordinance.

Section 14 - C District-

No building shall be erected hereafter to a height in excess of four stories nor more than fifty (50) feet to the finished ceiling line of the fourth story above the established curb grade of the street in front of the building, or adjoining ground level, except as provided in Section 17 of this ordinance.

Section 15 - D District-

No building shall be erected to a height in excess of eight stories nor more than ninety (90) feet to the finished ceiling line of the eighth story above the established curb grade of the street in front of the building, or adjoining ground level, except as provided in Section 17.

Section 16 - E District-

No building shall be erected hereafter to a height in excess eighteen stories nor more than two hundred and ten (210) feet to the finished ceiling line of the eighteenth story above the established curb grade of the street in front of the building or the adjoining ground level, except as provided in Section 17.



Section 17 - Height District Exceptions.

a - No building shall be erected in any height district in excess of four stories nor more than fifty (50) feet to the finished ceiling line of the fourth story above the above the established grade line of the street in front of the building unless the width of such building on each abutting public street is at least one half of its height.

b - Towers, chimneys, spires, gas or water tanks closed in with walls down to the ground or to the lower adjoining story of the building may be permitted to extend to a height greater than allowed in the height district in which they are located, provided that no such exception shall cover at any level, more than fifteen (15) percent in area of the lot.

c - Nothing in this article shall prevent the projection of a cornice beyond the street wall to an extent not exceeding five (5) feet.

Section 18 - Area Requirements.

For the purpose of determining and regulating the area of yards, courts and other open spaces for buildings hereafter erected, the following area requirements are established. No building or part of a building shall be erected except in conformity with the area regulations herein described for the district in which said building is located.

To conform with the height districts, area districts will be divided into sections A -B-C-D-E.

Section 19 - A District.-Minimum Requirements.

Rear yard - Depth twenty five (25) feet.

Side yard - On both sides of a building, not less

than five (5) feet in width.

Outer Court - Least dimension not less than five (5) feet, not less than two inches for each foot of height of court, nor less than two inches for each foot of length of court from the closed end.

Inner Court - Least dimension not less than six (6) feet nor less than two and one half ( $2\frac{1}{2}$ ) inches for each foot of height of court, nor should its area be less than twice the square of its least dimension.

Setback - Not less than thirty (30) feet for the building line, and a minimum of twenty (20) feet for the front porch line.

Lot area per family - Not less than 3750 square feet.

Section 20-- B District.-Minimum Requirements.

Rear yard - Minimum depth twenty five (25) feet

Side yard - One on each side of the building not less than five (5) feet in width.

Outer Court - Least dimension five (5) feet, nor less than two (2) inches for each foot of height of court, nor less than two (2) inches for each foot of length of court from the closed end.

Inner Court - Least dimension six (6) feet nor less than two and one half ( $2\frac{1}{2}$ ) inches for each foot of height of court, nor should its area be less than twice the square of its least dimension.

Setback - Not less than thirty (30) feet for

the building line and a minimum of twenty (20) feet for the front porch line.

Lot area per family - Not less than 1000 square feet.

Section 21 - C District.-Residence in Industrial Districts.

Rear Yard - Minimum depth fifteen (15) feet.

Side yard - One on each side, minimum width six (6) feet.

Outer Court - Least dimension five (5) feet nor less than two (2) inches for each foot of height of court, nor less than two (2) inches for each foot of length of court from the closed end.

Inner Court - Least dimension six (6) feet nor less than two and one half ( $2\frac{1}{2}$ ) inches for each foot of height of court nor should its area be less than twice the square of its least dimension.

Setback - Not less than thirty (30) feet for the building line and a minimum of twenty (20) feet for the front porch line.

Lot area per family - Not less than 625 square feet.

Section 22 - D District.

Rear yard - Minimum depth ten (10) feet.

Side yard - (If provided) Not less than five (5) feet.

Outer Court - Not less than five (5) feet nor 1

less than two (2) inches for each foot of length of court from the closed end.

Inner Court - Least dimension six (6) feet nor less than two (2) inches wide for each foot of height of court.

Area - Not less than twice the square of its least dimension.

#### Section 23 - E District.

Above seventy (70) feet or six stories, minimum inset of buildings from all streets on all sides, ten (10) feet.

Above one hundred and thirty five (135) feet or twelve stories, inset twenty five (25) feet from all sides.

Side yard - (If provided) Five (5) feet.

Outer Court - Not less than five (5) feet nor less than two (2) inches wide for each foot of length of court from the closed end.

Inner Court - Least dimension six (6) feet nor less than two (2) inches for each foot of height of court. Area not less than twice the square of its least dimension.

#### ARTICLE 3 - Definitions.

Section 24 - Certain words are defined in this ordinance for the purpose hereof, as follows.

1-The "curb level" for the purpose of measuring the height of a building is the mean level of the curb in front of such portion of the building. Where a building is on a corner,

the curb level is the mean level of the curb on the street of greatest width.

2 - The " street wall " is the wall of a building closest to the street.

3 - The " height " of a building is the vertical distance from the curb level to the finished ceiling of the highest story.

4 - The " depth of a lot " is the mean distance measured from the street line of a lot to its rear line.

5 - A "rear yard " is an open,unoccupied space on the same lot with a building between the rear line of a building and the rear line of the lot.

6 - The " depth of a rear yard " is the mean distance from the rear building line to the rear line of the lot.

7 - A " court " is an open, unoccupied space, other than a rear yard,on the same lot with a building.A court not extending to the street or a rear yard,is an " inner court ". One extending to a street or a rear yard is an "outer Court". A court on a lot line extending through from a street to a rear yard or another street is a " side yard ".

8 -"Dwelling " - any house or building or portion thereof which is occupied in whole or part as a home,residence or sleeping place,either permanent or transient of one or more human beings.

9 - A " story " is the vertical distance from floor to ceiling.

CHAPTER 6  
REGIONAL PLANNING

## REGIONAL PLANNING

The idea of city planning has expanded a great deal since 1893. Starting with the worlds fair in Chicago, planners were concerned chiefly with the idea of the " City Beautiful." During the course of time this thought became secondary and planning was developed on the principle of what might be called the "City Useful." Within the last decade the idea of planning has expanded so as to include regional, state and national planning. There has even been some discussion on a world plan, but this idea is highly impractical. In this Chapter only the regional plan in its relation to Huntington will be considered.

The most serious defect of city planning to date has been that the plans stop abruptly at the city line. This is due in large part to the fact that planners fail to appreciate that someday the area beyond the arbitrary city line will be a part of the city and that these areas will later have to be adjusted to conform with civic conditions under the plan, whereas they should be planned so that as they grow they will suit standard plans to suit the present city.

City planning is concerned chiefly with reconstruction and replanning of built over areas, while regional planning deals with territories to a large measure undeveloped, and must provide for interrelated activities of a number of communities. With this idea in mind, it can readily be seen that the street system of every town, whether large or small, should be articulated with the highways of other towns and counties, the main highways of two

towns forming a direct connection with the most important traffic thoroughfares of each.

To get away from the " piecemeal " subdivision planning which is present to marked extent in Huntington, land outside of the corporation limits should be acquired and the city should plot and develop new suburban areas to control this important factor. Unsightly approaches to growing American cities are proverbial. Cheap and unsightly houses are very much in evidence in the suburbs. By acquisition of suburban property this factor in practically every instance could be controlled.

The City of New York has spared neither labor nor money in the development of its regional plan. This plan controls an area of 5500 square miles, while extending out a distance of one hundred miles from the city proper. This area lies in three states and covers a territory as large as the whole state of Connecticut and four and one half times as large as Rhode Island. The region is inhabited by over 110,000,000 people and more than \$100,000,000 has been spent in its development.

Under the development of a proper regional plan there are unlimited opportunities for the prevention of regional difficulties and for the development of proper regional conditions. In this connection park areas should be considered. Cities commonly confine their park areas within their corporate limits, but in selecting a reservation for the development of a park district, the environs of the city should be closely considered. Some of the most valuable and useful pleasure grounds could very easily and very profitably be acquired long before the city limits are expanded to include them.



In regional planning as in the planning of the city proper, zoning is an extremely important factor. Regional zoning should affect the regulation of the use of all property throughout the region under consideration. It should provide a varied assortment of public services for the people and set aside districts for all legitimate private enterprises. In this connection it should be remembered that misplaced uses produce economic loss. All factory sites should be reserved with the idea in mind of producing the greatest economic and social advantages, while recognizing their dependence on transportation facilities. In short, by allocating everything as far as possible on the canvas of the region according to economic, topographic, health giving and aesthetic fitness, the congested city of today will give way to the more open and spacious city of tomorrow.

While no attempt will be made in this thesis to go into the details of regional planning, some of the broader principles as applied to Huntington will be discussed.

The development of proper regional conditions around Huntington should be a relatively simple matter. The city is hemmed in by the river and the foothills and in reality can expand only in an east and west direction. Since the city is more built up at its eastern end and since here there is more room for expansion, it is very probable that the major subsequent development will take place in this direction.

With this idea in mind it is suggested that a large plot of land east of the corporation limit along the Ohio be bought up by the city. Part of this should be developed into a park as was discussed in the Chapter on Parks and Parkways. The rest of

the property should be platted and zoning restrictions should be made, allocating certain districts for industrial use, others for residential use, and a district for the establishment of a small retail center to serve this development.

The small flat space along the Guyan River, part of which is now occupied by the International Nickel Company, should be reserved for an industrial development center. This is served with transportation facilities since the C & O runs through this area.

Since the river valley is not very wide and since the peneplain above the city cannot well be used in the development of the city because of the sudden jump in altitude, the flat space slightly above Huntington on the Ohio side should be utilized. The establishment of an industrial city at this site, although its charter would be entirely separate from that of Huntington would be of great benefit to Huntington. In connection with this project it would become necessary that the B & O bridge the river at some point above this area, either following down the Ohio side or again bridging the river at a lower point, or that the N & W run a branch line from Kenova to serve the area, or that both be done. Co-operation of the people in Ohio would be necessary to develop this project, but should they be convinced that a city development in this area would be beneficial to them, they would probably be more than glad to cooperate.

A new highway bridge would necessarily have to be built at a point above Guyandotte to accommodate this area, and the building of another such bridge at a point below Huntington across the Ohio would probably pay for itself in a relatively

short time.

All highways leading into the city should be well paved, with wide approaches entering the city limits. Control should be exercised over these approaches in suburban areas so that they will be well laid out and built up, offering an air of attractiveness that will immediately create a favorable impression on people entering the city by highway.

Suburban areas and subdivisions, even outside the corporation limits, if not owned by the city should at least be controlled by it, insofar as platting and types of dwellings are concerned, to get away from the "piecemeal" and "helter-skelter" planning of subdivisions that Huntington is afflicted with at present.

It should be kept in mind that the maximum efficiency of a good city plan cannot be realized without the development of a regional plan in conjunction with it.