

A COMMUNITY HOUSING DEVELOPMENT

FOR

ROANOKE, VIRGINIA

BY

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A Thesis Submitted to the Graduate Committee

For the Degree of

MASTER OF SCIENCE

in

Architectural Engineering

Approved:

Head of Department

~~Dean of Engineering~~

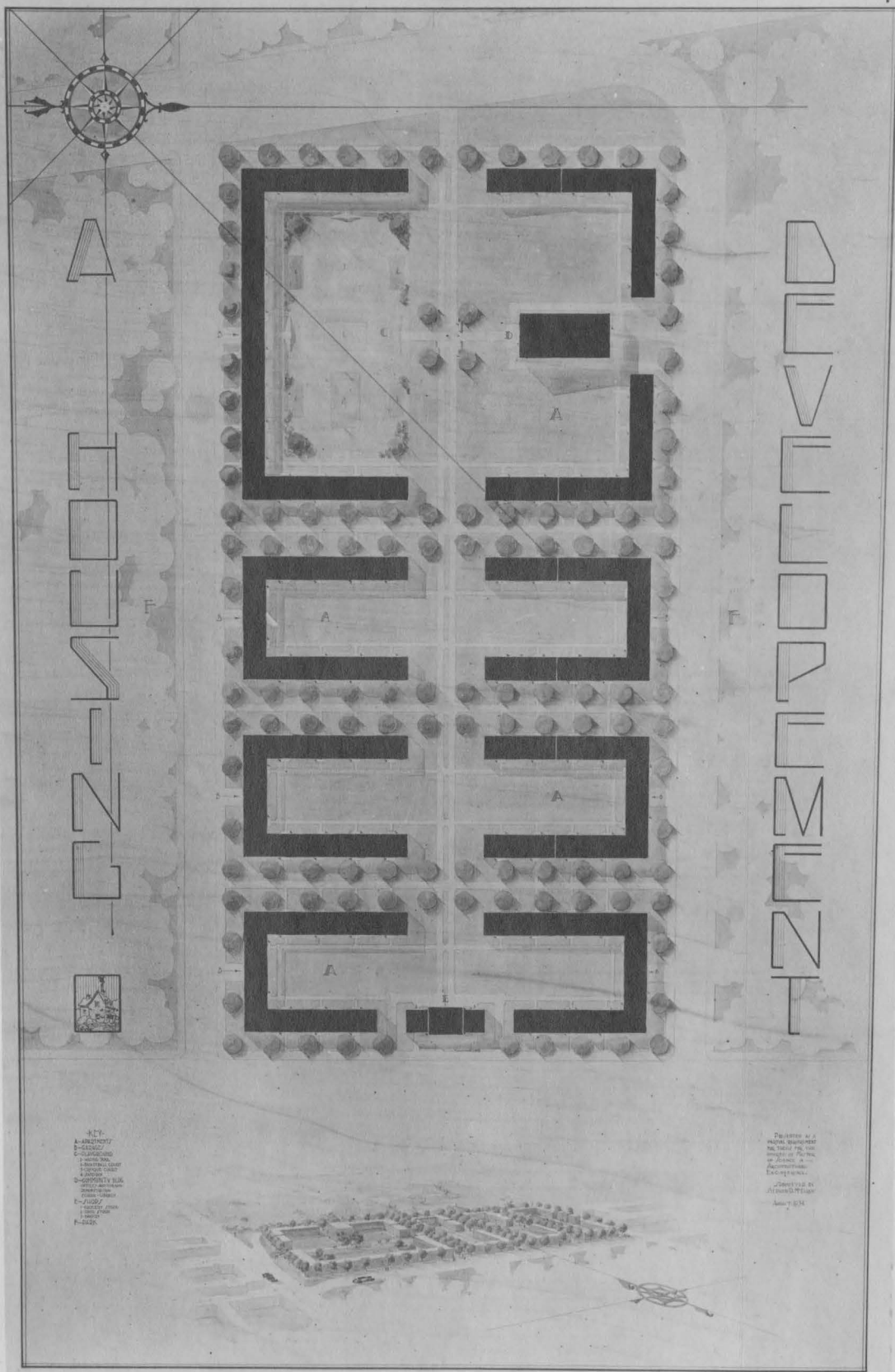
Chairman, Graduate Committee

Virginia Polytechnic Institute

1934

OF ROANOKE, VIRGINIA
LIBRARY
CLARK BUILDING

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I - INTRODUCTION

Robert D. Kohn, Director of the Housing Division of the Public Works Administration, in a recently published article says: "The depression has given America one lasting boon. It has centered attention on the greatest physical need of America today - adequate housing for its workers." Every city in this country has for many years been faced with the problem of securing adequate low cost housing facilities and in only a few cases has the problem been solved.

- *Definitions -

For the purposes of this report the following definitions are used:

A blighted area is one that has become an economic liability to the community.

A slum is a residential area where the houses and conditions of life are of a squalid and wretched character and which hence has become a social liability to the community.

- Blighted Areas -

Blighted areas in our cities result from many different causes. The blighted area often tends to become a slum when the property owners let out the buildings for uses which are detrimental to the community at large.

Many blighted areas are residential areas which were once good neighborhoods but have lost their desirability from various causes. The encroachment of business or industrial districts upon a good residential section will in a few years cause it to become a blighted area. The occupants will soon move elsewhere turning the houses over to a poorer class of people

* Report of the President's Conference on Home Building and Home Ownership - Vol. III - page 1.

who are financially unable to keep up the property. As a result the buildings soon deteriorate to a point where they are not only unattractive but also are often unsafe, unsanitary and obsolete. It is this type of section which has become the low-class "rooming-house" district of our Eastern cities, which extends for many blocks around the business centers.

Another cause for blighted areas is the automobile, railroad and other methods of rapid transit. Wherever a through traffic way has entered a good residential neighborhood the people have at once moved back a few blocks away from the noise, dirt, dust, and other undesirable elements which come with the introduction of heavy traffic upon streets which were originally intended for the horse-drawn vehicle and light traffic. A good description of this type of district is here quoted from Vol. III, Chapter I of the Report of The President's Conference on Home Building and Home Ownership. "With every new highway improvement the speculative value of abutting and adjacent property formerly began to rise, and the usual picture of a line of prosperous stores and apartments arose in the minds of the purchasers; but the motor highway from downtown to the suburbs carries few local customers and a dreary line of signboards and gas stations is likely to be the only productive development." The railroad, street car, and elevated railroads always have a large blighted area on either side of them for similar reasons.

- Slums -

Slums are always blighted areas. They usually originate in sections of the city where one type of activity is being supplanted by another. Where business is moving into places of former residences the land is

being held by the owners at speculative values, hopefully waiting for a chance to sell out to business enterprises. As a result the house rents are low. No attempt is made to improve the living conditions by reconditioning the buildings. And finally the people who come to live in these places are of the poorest class. They are well termed "the backwater of city life." Here are found the low class immigrants, the poor factory worker, the negro, as well as those unfortunate individuals who, because of sickness, loss of work, bad investments, or some other factor have found their way into these areas.

The slum is a social as well as an economic problem which our cities have to face today.

- Reasons For Study of This Problem -

The problem of low cost housing is of vital importance and one which is causing a great deal of study at the present time because of the following reasons:

1. Need of better low-cost living quarters.
2. Elimination of blighted areas.
3. Employment of men on building projects.
4. Advantage of financial aid from the Public Works Administration.
5. Raising of land values.

II - INVESTIGATION

In order to make the study of the housing problem as practical as possible it was decided to select some section of the city of Roanoke which was in need of a low-cost housing development. The following districts were considered:

A. Southeast Roanoke

The first site selected was the property of the Viscose Company of Virginia located in Southeast Roanoke between the Virginian Railway and the Roanoke River. The Viscose Company employs over four-thousand people in the silk mills and it was assumed that there would be some housing problem. However, upon investigation it was found that there is no such problem. The employees own their own homes in or near the city. The Company has at present a large dormitory for girls which was built as the first unit of a housing scheme in anticipation of this problem. The dormitory is not now in use and there has never been as great demand for it as was expected.

B. Salem Avenue

The next site selected for rehabilitation was on each side of Salem Avenue from 7th Street West to 14th Street. Upon investigation it was found that this section was the natural line of expansion for the light industrial district on the south. On the north the space was the natural area for the development of the Norfolk & Western and Virginian railroad yards and freight storage and warehouses. The worst parts of this section have already been abandoned and there seems to be no problem here.



A Scene in Northeast Roanoke

C - Northeast Roanoke

The section which was decided upon as the basis for the study of this problem is that district known as Northeast Roanoke. This section is the Negro district of Roanoke. It runs east from West 8th Street to East 7th Street, and South from Hart Avenue, sixteen blocks to Wells Avenut. In this district are concentrated practically all of the city's 10,000 negroes.

Northeast Roanoke is one of the oldest sections of the city. In 1889 the land here was purchased by the Home Building and Conveyance Company and divided up into building lots. This company erected many fine residences and sold them to the best families of Roanoke. The site was originally intended for the homes of the officials and employees of the old Shenandoah Valley and Norfolk & Western Railroads. The first



Scene Along 2d Street in Northeast Roanoke

lots were all 50 feet by 200 feet or larger. A large section between Walker and Patton Avenues, on the North and South, and Holliday and Jefferson Streets, on the East and West, was bought by the local Catholic Church for a building site. On the East the section was bordered by the Virginia Packing Company, the Roanoke Gas Company, and the freight yards of the Shenandoah Valley Railroad. As these industries grew the desirability of the bordering area for residences and the value of the land decreased. The owners moved to better sections and the negro and unskilled laborer moved in. Now the entire district has been taken over by the negro.

Northeast Roanoke is characterized by unpainted and dilapidated houses, unkept streets and yards, and unsanitary conditions in general. A glimpse at the records in the Tax Assessor's Office shows the condition



Corner of 2d Street and Gregory Avenue

and value of the land and dwellings in this section. The average size of the lots are about 26' x 90', and the assessed value of fifty-two of the lots, selected at random, was \$346.00. These lots ranged as high as \$905.00 in value and as low as \$25.00. The records showed the dwellings which were located on these lots to have an average value of \$735.00. These values ranged from a business block at \$4260.00 to a residence at \$165.00. The descriptions of the houses showed them to be single dwellings of from four to six rooms; wood frame construction; brick foundations; no basements; pine flooring; stoves and fireplaces for heating; few bathrooms; hot water, in some cases; and electric lights in most of the houses. The houses are crowded close together. In some cases there is only about five feet of clearance space between dwellings and they are built up very close to the street line leaving only a few feet for the front yards. The back yards are cluttered up with small shacks, coal-houses, out-houses, chicken coops, and garages. The soil



Scene on 4th Street - Northeast Roanoke

in this section is very poor. There is little top soil and the land shows the marked effect of erosion. There are few trees and no gardens or planted areas of any value. The streets, for the most part, are unimproved sand and gravel without sidewalks or gutters.

A study of the effect of such an environment shows the need of immediate remedy of this blighted area. The majority of juvenile delinquent cases brought into court come from this section. At the same time it is noticeable that the character building agencies, such as the Y.M.C.A., Boy Scouts, Girl Scouts, and Girl Reserves, have very few members from this section. The percentage of illiteracy is also far too high in this section. Dr. Frank W. Hoffer, of the University of Virginia, has made a thorough study of the public and private welfare of the city. In his report "The Public and Private Welfare of Roanoke, Virginia," he terms Northeast Roanoke as a center of delinquency and dependency.

Object of Study

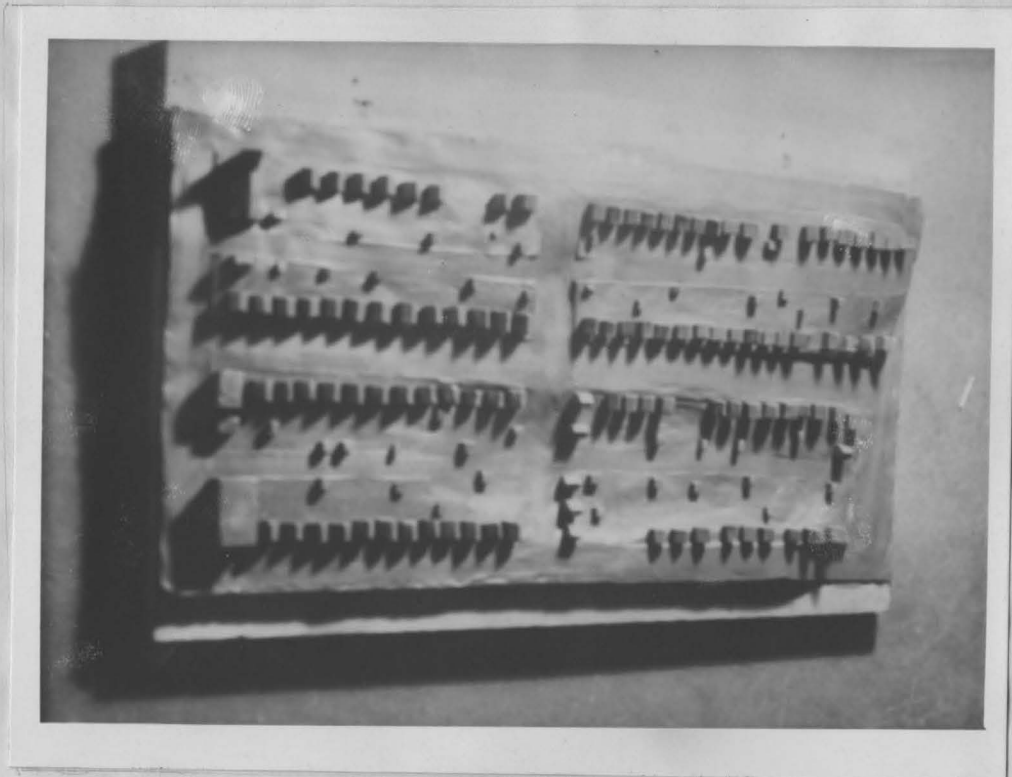
Northeast Roanoke was chosen as a basis for the study of this problem because of the existing conditions there which demand immediate attention. The objectives of the study are:

1. To better housing and general living conditions.
2. To design apartments, the rental cost of which will be low enough for the present residents to afford.
3. To improve the highway entrance to the city.
4. To increase the land value.

Method of Study

The problem was studied in the following manner:

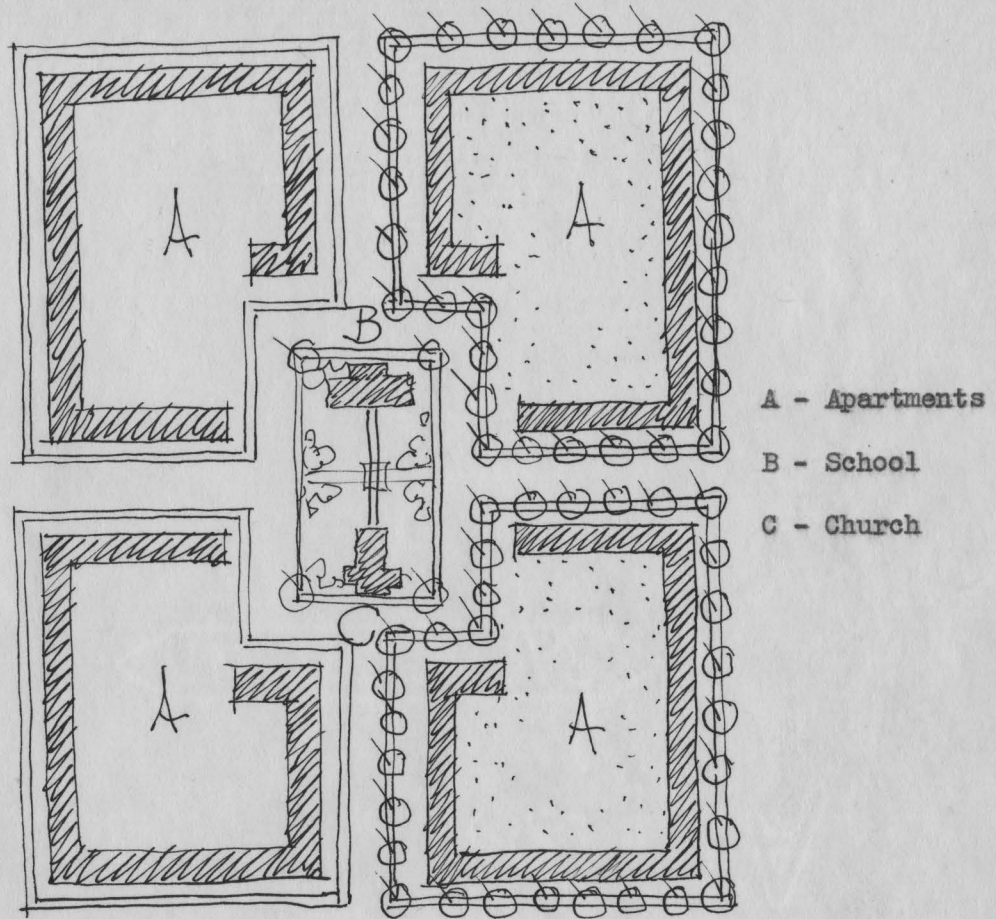
1. Research.
2. Visits to the site of the proposed development.
3. Preliminary sketches.
4. Models.
5. Criticism by members of faculty.
6. Final presentation.



For the purposes of this problem four blocks in Northeast Roanoke, which are typical of this section, were selected. They are bounded by Madison and Walker Avenues, on the north and south, and by 2d Street and 4th Street on the east and west. The above photograph shows a scale model of this section, which was prepared to show the existing conditions.

After the selection of the site for the proposed development, it was necessary to determine several factors. First, it was necessary to decide upon the number of families to be taken care of. There are at present 116 families living in this area. In order to allow for the growth of

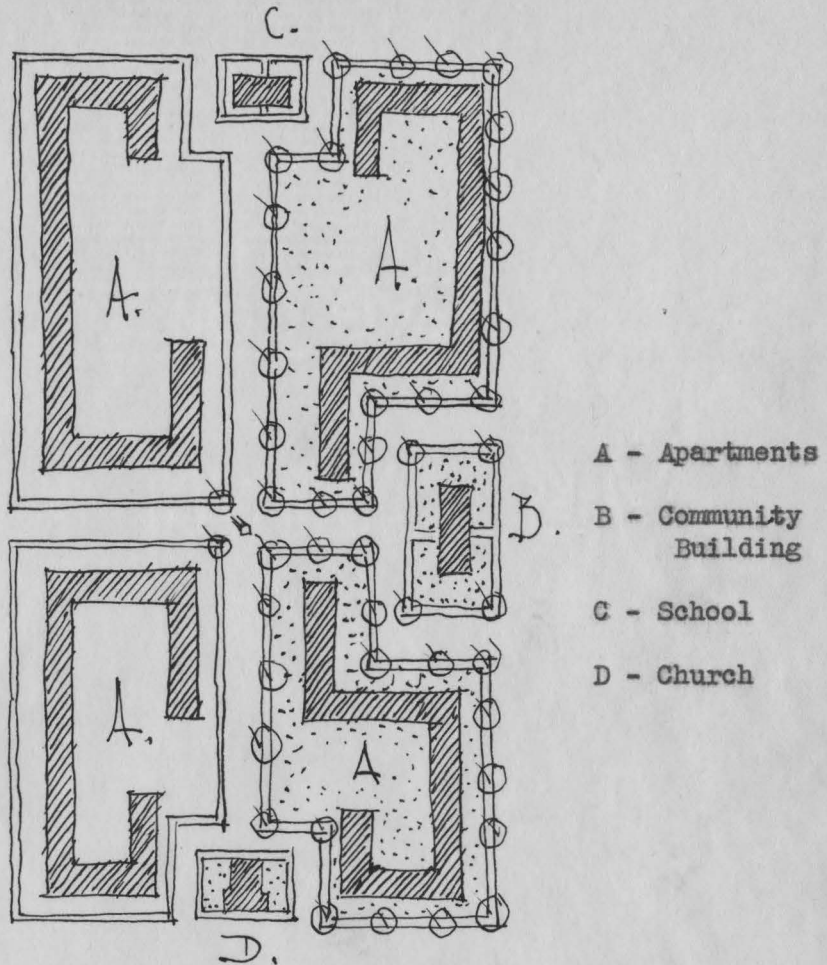
population within this area and to care for those families which would have to be moved out of adjoining blocks to make space for parks, it was decided to increase this figure by fifty per cent, or to plan for 175 apartments. In order to avoid congestion, to provide plenty of open space for planting, and to allow for sufficient light and ventilation it was decided to keep the land coverage below thirty per cent. This is a very low percentage of coverage for two story apartment buildings. There being a church in the area at present, it was reasonable to assume that provisions should be made for the location of a church within the area which would serve not only this area but the entire neighborhood as well. A play-ground, which must be provided, need only meet the demands for this housing unit, similar housing units being assumed to have their own playgrounds. The nearest business center being several blocks away, it was natural to assume the necessity of a small section for this purpose. A grocery store, drug store, and bakery shop should be adequate to fill this need. A community building which would contain a small branch library, a home demonstration school, and an auditorium equipped with motion picture apparatus and facilities for presenting amateur stage plays would be a social asset to the community. It should be large enough to serve not only this housing unit, but the neighborhood as a whole.



Scheme I

The above sketch shows the first scheme which was studied. In this case two blocks were added on the south of the plot which was used in the final plan. This scheme was abandoned for the following reasons:

1. The two blocks on the south were quite rough and hilly and were not good sites for the apartments.
2. These two blocks should be used for park space which would serve as a division between the negro district and the white district on the south of it.
3. The percentage of land coverage of the apartments was too low.



Scheme II

The above sketch shows the second scheme. In this case the two blocks on the south have been eliminated and a community building which includes a theatre and library, has been added. This scheme was discarded for the following reasons:

1. Walker Avenue, which had been left to continue through the site, is the most important of the three streets and would probably become a through traffic way.

2. The location of church, school, and community building was considered to be bad. Each building is surrounded by streets. They should have been grouped better. They do not take advantage of the contours of the site.

3. The school was not considered necessary. There are two colored schools within eight blocks of the site.

4. The church and community building could easily be combined, thus eliminating the cost of one building.

5. It was decided that there should be no vehicular traffic inside the plot.

6. There was no centralized playground area for the small children.

Final Plan

The scheme which was finally adopted is illustrated by a rendered drawing measuring 40 x 64 inches, consisting of a block plan, at the scale of 1 inch = 25 feet, and a birdseye perspective of the entire layout. A photograph of this drawing is the frontispiece of this booklet.

The plot of ground contains 505,000 square feet, which is divided in this manner:

	<u>Area in Sq.Ft.</u>	<u>Percent</u>
Apartments -----	126,755	25.1
Playground -----	35,100	6.9
Walks -----	77,056	15.2
Community Building -----	5,000	.7
Business -----	2,250	.3
Open Space -----	258,839	51.8
	<u>505,000</u>	<u>100.0</u>

Apartments

There are 176 family apartments to replace the 116 single houses which now stand on the site. The sixty extra apartments will replace the fifty-six houses in the two blocks, bordering south of the property, which have

been converted into park space. The apartments measure about 27' x 40' each. The design of these individual apartments is not a part of this thesis but will be taken care of in another problem by Mr. J. B. McBryde, Jr.

A clearance space of sixty feet is allowed between the buildings which is ample for proper lighting and ventilation.

Playground

The playground is located in a natural sunken garden. This location is the lowest place on the property and drains naturally into the stream which flows down the center of 2d Street. This location is ideal for the playground area. It is away from any lines of traffic and thus removes the children from the streets and sidewalks. The playground area is quite large. It is equipped with four large sand boxes, a croquet court, basketball court, and wading pool. In addition to these there is ample space for the usual assortment of playground equipment such as slides, swings, and see-saws.

The large park on the north of the property is the proposed Washington Park for Negroes. Within this area will probably be provided, a swimming pool, and tennis courts for adult recreation.

Circulation

Ample circulation space is provided for the group of buildings. A wide walkway with a planting strip in the center emphasizes the main axis. At the crossing of the major and minor axes a seating space is provided, which is surrounded by shade trees and planted areas.

No provision is made for the passage of vehicular traffic through the area.

Community Building

The community building is located on the highest point of the site. It is located on a sloping piece of ground which allows for the provision of ample space in the basement for offices, toilets, etc. The community building will have an auditorium with a seating capacity of 800, with provisions for the presentation of motion pictures and amateur plays. It will also have space for a small branch library, and rooms for a demonstration school, as well as office and toilet space.

Business

The business activity is centralized in one small building containing space for a grocery store, drug store and a small bakery. This building is located at the end of the main axis of the plot.

III - CONCLUSION

The problem has been studied with the main purpose in mind of developing a low cost housing unit to replace the outmoded and unsuitable housing conditions which now exist in Northeast Roanoke. The design has been kept simple because of the necessity of keeping it within the financial means of those people who live there now. The layout could have been made much more elaborate but for this factor.

The plan is simple, economical to construct, and most of all, it is of great value to those whom it would serve.

Submitted by Stephen D. McElroy as a partial requirement for a thesis for the degree of Master of Science in Architectural Engineering from the Virginia Polytechnic Institute. The remainder of the thesis consists of the rendered drawing.



Model of Development

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