AN URBAN LIVING ENVIRONMENT

William L. Demienne
Author

Lawrence B. Anderson
Head of Department

March 11, 1957

Master of Architecture
DISCLAIMER OF QUALITY

Due to the condition of the original material, there are unavoidable flaws in this reproduction. We have made every effort possible to provide you with the best copy available. If you are dissatisfied with this product and find it unusable, please contact Document Services as soon as possible.

Thank you.

Pages 158–168 are missing from this document, however it appears to be a pagination error by the author.
ABSTRACT

AN URBAN LIVING ENVIRONMENT

William Lloyd Demiene
Submitted for the degree of Master of Architecture in the Department of Architecture on March 11, 1957.

The question of how men should be housed in order to live as human beings is here applied to a specific site known as the Lafayette Extension which is adjacent to the heart of the City of Detroit. This site is one of several designated as slum clearance projects and proceedings are underway that will clear the area of sub-standard dwellings and provide improved land for redevelopment by private enterprise. The cost of acquiring such land, while greatly alleviated by the Federal Government, necessitates replacing one- and two-family detached slum dwellings with some combination of high and low rise multiple dwelling units at a much higher density.

The Lafayette Extension as it is redeveloped provides eleven hundred dwelling units on forty-five acres. Approximately nine hundred dwelling units are arranged in tower apartment blocks while two hundred units are grouped in two story individual and duplex houses.

These must provide a combination of the desirable features of country living and the desirable features of city living. Trees and grass and a feeling of openness must be incorporated, density notwithstanding. There must be yards where mothers and fathers can grow flowers and drink iced
tea on a warm evening and let the children play and where you can lean on the fence and talk with your neighbor. There must be a part and a playground and a school.

The city, next door offers its symphony orchestra, museums, libraries, medical center, huge department stores, countless specialty shops, theatres, motion picture houses and its thousands of job opportunities.

This thesis attempts to provide an environment for living that offers these advantages of city and country.
234 Westgate West
Cambridge 39, Mass.
March 11, 1957

Pietro Belluschi, Dean
School of Architecture and Planning
Massachusetts Institute of Technology
Cambridge 39, Massachusetts

Dear Dean Belluschi,

In partial fulfillment of the requirements for the degree of Master of Architecture

Sincerely,

William Lloyd Demiene
TO ELAINE

whose help and encouragement
have made this possible
# TABLE OF CONTENTS

Title Page
Abstract
Letter of Submittal
Dedication
Table of Contents

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Introduction</td>
<td>9</td>
</tr>
<tr>
<td>The Problem</td>
<td>14</td>
</tr>
<tr>
<td>The City</td>
<td>17</td>
</tr>
<tr>
<td>The Future</td>
<td>31</td>
</tr>
<tr>
<td>The Site</td>
<td>42</td>
</tr>
<tr>
<td>The Density</td>
<td>50</td>
</tr>
<tr>
<td>The Schools</td>
<td>54</td>
</tr>
<tr>
<td>The Hospitals</td>
<td>62</td>
</tr>
<tr>
<td>The Churches</td>
<td>70</td>
</tr>
<tr>
<td>The Neighborhood Concept</td>
<td>75</td>
</tr>
<tr>
<td>The Yard</td>
<td>81</td>
</tr>
<tr>
<td>The Child</td>
<td>97</td>
</tr>
<tr>
<td>The Circulation</td>
<td>106</td>
</tr>
<tr>
<td>The Neighborhood Playgrounds</td>
<td>115</td>
</tr>
<tr>
<td>The Neighborhood Parks</td>
<td>125</td>
</tr>
<tr>
<td>The Community Facilities</td>
<td>133</td>
</tr>
<tr>
<td>The Shopping Facilities</td>
<td>139</td>
</tr>
<tr>
<td>The Living Space</td>
<td>140</td>
</tr>
<tr>
<td>The Program</td>
<td>148</td>
</tr>
<tr>
<td>Finance</td>
<td>151</td>
</tr>
<tr>
<td>The Law</td>
<td>170</td>
</tr>
<tr>
<td>The Solution</td>
<td>177</td>
</tr>
<tr>
<td>Bibliography</td>
<td>181</td>
</tr>
</tbody>
</table>
INTRODUCTION
The City of Detroit has felt the need of providing housing adjacent to its central core. As a step toward meeting this need it designated an area east of the core of approximately 180 acres for redevelopment.

Detroit's central core is contained within the limits of a circle of one-half mile radius. The city has already completed about one-quarter of a core encircling network of expressways which will give a finite definition to "Down-town Detroit". The redevelopment area is contained within the limits of a circle of one mile radius. This means that approximately 7,500 families are within from three-quarters to one mile walking distance of the heart of the central core.

There is a broad range of persons and families who need a living environment close to the central core. Although many personality characteristics, cultural backgrounds, nationality groups, age groups and income groups will find their way to this large redevelopment undertaking, they will all share some combination of many desires which were strong enough to guide them on such a road.

These desires will have a broad range also. For all ages and incomes there will be a desire to live near a means of livelihood in the central core. Among students, doctors and nurses both single and with families there is an increasing need for living accommodations near the expanding Wayne University Medical Center and Memorial and Receiving
Hospitals. There will be a desire to return to a former area of residence by families displaced during redevelopment. There is a demand for better housing for many employees of industrial plants located at various points on the periphery of the central core.

Aside from these perhaps more important motivating characteristics which govern choices of place of residence there are many other reasons for living close to the city.

There is a desire to shop regularly, in the large department stores and vast range of specialty shops, rather than just seasonally. There is a desire to be close to Detroit's many cultural activities including the Detroit Symphony Orchestra, the Civic Light Opera, legitimate theatres, museums and libraries. There is a desire for the choice of five or six first-run motion picture theatres within easy traveling distance. There is a desire to exchange an exhausting 30¢ bus ride complete with waiting for a 50¢ taxi and more relaxed nerves. For some there is a desire for the excitement and quickened pace of the central core that suburbia lacks.

There is a desire to exchange the responsibility of trimming hedges for the delight of green areas that someone else maintains. There is a desire to exchange all responsibility for home maintenance for a telephone call to the serviceman. There is a desire for the social intercourse of high density living accommodations.
Many and varied are the reasons that will draw individuals and families to Downtown Detroit. But for those "...many families (that) have moved to (the) suburbs only because desirable living facilities were unavailable nearer their economic, civic, and cultural interests."(1) Detroit's redevelopment plans offer a long awaited solution. This program is designed to reverse this trend and thus restore the center to the city.

In July, 1950, Common Council, the governing body of the City of Detroit upon the recommendation of the City Plan Commission, approved a 55-acre site as a slum clearance project and ordered preparation of condemnation proceedings.

Thus the first step was taken to provide another site for the purpose of constructing high density multiple dwelling units within walking distance of Downtown Detroit.

By so doing, the City of Detroit has presented the architect-planner with the problem of creating an environment for living for hundreds of families in the virtual shadows of the skyscrapers of the heart of the city.

"The assignment calls for the creation of a new way of life, in tune with the age of the automobile, as well as the need for rest and quiet -- a concept which must combine the advantages of living on the suburban lot with the desirability of being close to the center of a big city."(2)

It is this specific problem and its attendant ramifications with which this thesis will concern itself.

(2) *Progressive Architecture*, August 1955, p. 100
THE CITY
Several color reproductions of scenes of Downtown Detroit follow. They are followed by a map of Detroit showing the origin of the scenes and other points of interest.
2 VIEW
3 VIEW
WASHINGTON BOULEVARD
STATLER HOTEL
5 MICHIGAN CENTRAL DEPOT
IMPORTANT NOTICE

All persons entering the United States must report for customs before entering. Failure to report may result in the person being fined or imprisoned.

It is important that persons departing from the United States have their travel plans confirmed with customs officials regarding any transportation they may be using on leaving the country.
The preceding scenes provide an indication of the kind of environment that exists today in Downtown Detroit.

There are several parks and boulevards that offer grass, a few trees, very colorful flowers in season, and benches for a few minutes of relaxation. Although these areas are rather small and as a result crowded the visual relief and green atmosphere are welcomed and plans for at least one more parklike development are underway.

The Civic Center offers to Downtown Detroiters their first opportunity to see the Detroit River in years. The clearance of a few acres of blighted waterfront area has provided a pleasant view of Canada and the river, a feeling of openness and a landscaped atmosphere that makes it the nicest place to be in the city.

The architecture of Detroit, including that of the civic center, leaves something to be desired.

While from a distance a blanket of smoke from Detroit's industrial plants can occasionally be seen hanging over the city it is generally clear and bright in the downtown area. The wide streets and boulevards lend a feeling of openness to the city although it still has its traffic problems.

Detroit is not without its faults and has its share of problems. But it is continually taking steps to improve itself.

The Detroit City Plan Commission has published a report of the accomplishments the city has made so far, along
with their present plans and future proposals. An insight is given to the city's hope and desire to alter some of the more unpleasant aspects of its environment in an effort to revitalize itself and make it a more beautiful place in which to be and live.

In reference to the site with which this thesis will be concerned, which hereinafter will be called the "Lafayette Extension", the report, gives this background information:

"Detroit initiated its first redevelopment project in 1947 prior to the enactment of the federal aid program in the Act of 1949. In 1947 Detroit started condemnation of the 129 acre Gratiot redevelopment area site bounded by Gratiot, the Grand Trunk Railroad, Lafayette and Hastings."

"The project was subsequently qualified for federal assistance under the Housing Act of 1949. After acquisition and clearance it was first offered for sale by the Housing Commission in 1952... ."

"From the time the Gratiot project was initiated it has been recognized that the clearance program should be continued on the south at least as far as Larned. The Common Council ... approved the area south of the Gratiot area between Lafayette and Larned as a 55 acre slum clearance site ... (and) subsequent to the filing of preliminary plans by the city the LAFAYETTE EXTENSION has been included... ."
in the comprehensive development plan...". (3)

The city is carrying on redevelopment work and studies of several other areas closely related to the heart of the city.

"For the years 1954 and 1955 the physical changes at the heart of the city have been perhaps the most dramatic events in the city's development. The steady pace of clearance and rebuilding around the edges of Detroit's downtown area is now producing a cumulative effect which goes far to giving downtown Detroit a new appearance and making it a new focus of interest for the city." (4)

The civic center is fast nearing completion. Of its four buildings two, the Veterans Memorial Building and the City-County Building, are completed and occupied, one, the Ford Auditorium, is near completion, and the other, the Convention Hall and Exhibits Building, is under construction.

Detroit is ringing its downtown area with a system of expressways which are partially completed.

"The physical changes reflect an awareness of the challenge to the central business district by the new and relatively more convenient outlying centers. Downtown Detroit is faced with a basic need of creating and maintaining a focus of interest and activity for the whole

---


metropolitan area. (Furthermore) the continued attractiveness of the city as a place to live will depend on the cultural resources and other qualities of city living which people have learned to enjoy in the city. In the promotion of these urban values, Detroit is now directing much of its civic ambition and its municipal wealth."(5)

(5) Planning Detroit 1953-55, Text by Merle Henrickson, Detroit City Plan Commission, Nov. 1955, p. 7 & 8
THE FUTURE
On four successive Saturdays during the late summer of 1956 the Detroit Free Press, the oldest continuous business enterprise in Detroit, as part of its celebration of its 125th anniversary, published special supplementary sections in its newspaper entitled Michigan Tomorrow. The photographs presented in this section are from these issues subtitled The City, The State, The Auto, and Industry.

The opening photographs are in and of Detroit's Civic Center Redevelopment project. With construction started on the last and main building, the Convention Hall and Exhibits Building, the Civic Center is fast approaching the stage of completeness that will make it one of the major centers of activity in the city.

As the civic center progresses its stimulating effect can be seen in other planning and building proposals that seem to be popping up all over.

One of the more interesting ideas, though not new in view of the Fort Worth Plan, is a scheme for turning Woodward Avenue, Detroit's major thoroughfare, into a parklike mall with trees and sidewalk cafes. In view of the city's plan to encircle the downtown area with a system of interchanging expressways it would not be difficult to envisage a system of pentetrating streets and parking structures with most of the present streets becoming pedestrian ways exclusively.

One step towards the realization of this goal has been taken by the Great Lakes Greyhound Lines. They plan a huge
The fast-rising new Civic Center gives Detroit one of the nation's most beautiful skylines.
Above is a carless, busless Woodward, transformed into a beautifully-landscaped, designed-for-leisure shopping center. At left is what could be the central shopping area, tree-lined and panoramic, with parking space for everyone.
new terminal for a site one block away from the encircling expressway system that will virtually eliminate the operation of their large buses on downtown streets. Demolition of buildings on the one-block site will start as soon as leases on existing structures can be terminated with actual construction scheduled to begin by mid-1957.

Detroit will soon have a new hotel its first since the roaring twenties when several major hotels rose. A group of prominent Detroit businessmen and Conrad Hilton head of the Hilton Hotel chain, have already purchased a one block site adjacent to the Convention Hall and Exhibits Building. They plan to have in operation a one thousand room hotel sometime in 1960 coinciding as near as possible with the completion in late 1959 of their neighbor.

In addition to the Wayne University Medical Center adjacent to the Gratiot Redevelopment and the Lafayette Extension the Detroit Medical Center Committee in May, 1956 presented to the City Plan Commission a proposal for a North Medical Center. On a 208 acre site which includes the existing Harper, Grace, Children's and Women's Hospitals they plan an area of hospital buildings, ponds, apartments, plazas and shopping centers. In conjunction with Wayne University the Center will offer postgraduate medical education and an opportunity for many excellent doctors to pursue a combination of research and teaching.

Also in the planning stage is a new major airline terminal. Detroit's present major airline terminal is some
ARTIST'S CONCEPTION of the proposed Northeast Airport, at Ryan and Dequindre, Twelve to Fourteen Mile Road, includes an airport bus ramp that goes right into the main terminal building for unloading, terrace and grass plazas and a glass-walled restaurant with full view of airport.
35 miles from the downtown area and is too small, inadequate and distant to provide the amenities that the future demands. The proposed Northeast Airport will be equipped to handle the jet aircraft and atomic powered planes that will be in service in the not too distant years ahead.

The Rapid Transit Commission is probing the advantages of various forms of high-speed mass transit with some adaptation of monorail in the forefront.

The activities of the Common Council, City Plan Commission and the Citizens Redevelopment Committee in connection with the Lafayette Extension and Gratiot Project are only a small part of an over-all urban-renewal program for Detroit. It is envisioned that about 25 similar neighborhoods will eventually encircle the downtown area.

These are just some of the projects and plans that are part of Detroit's future. Tremendous commercial and industrial expansion programs are underway and in the making. The St. Lawrence Seaway project promises even greater growth.

The Port of Detroit is the second largest in the United States in value of trade while on a tonnage basis it ranks 12th in the nation-ahead of such ocean ports as Los Angeles, Boston and Mobile. The flood of overseas trade expected in 1959 will make Detroit an even greater port city. The economic, industrial and commercial impetus injected into the city will further its growth and development at an even more rapid pace. This development, bringing with it an expected jump in population, will have its growing
Foreign Vessels Await Unloading at Detroit Docks
pains but the opportunities, if properly exploited, will be a tremendous boom to the city in all the aspects of its life.
THE SITE
By 1981, an Unhappy Memory?
During World War II the United States Government erected a large factory approximately thirty miles outside of the City of Detroit. This factory was built as part of the war effort and was primarily concerned with the production of military aircraft and soon acquired the nickname "Bomber Plant". The "Bomber Plant" was located in an area called Willow Run, adjacent to the Willow Run Airport, Detroit's major airline terminal. The plant employed thousands of workers from Detroit and the metropolitan area and it was soon realized that some means of transporting workers, raw materials and services to and from the plant at a much faster rate that existing highway facilities permitted was needed. Thus the way was paved for the construction of the Detroit Industrial Expressway, the first link of the master expressway plan of the City of Detroit.

The Detroit Industrial Expressway is being extended across the city under the name of the Edsel Ford Expressway. Crossing it, at a point some three miles north of the civic center is the John C. Lodge Expressway which affords several outlets to the heart of the city and connects directly to the civic center. This expressway is now completed as far as the Convention Hall and Exhibits Building under which it passes. When construction work here is completed the expressway will continue along the river front about one mile and join the proposed Hastings-Oakland Expressway. The Hastings-Oakland Expressway borders,
View of the Edsel Ford and John C. Lodge interchange looking toward the City and the river
within one block, the Lafayette Extension. This link of the master expressway plan will provide the site with expressway connections to all points of the city and metropolitan area.

The Lafayette Extension is a 55 acre plot located to the east of the downtown Detroit shopping, business and financial center and within three-quarters of a mile of its largest department store.

The western boundary of the site is formed by Rivard Street and the Wayne University medical campus with the Hastings Expressway beyond. The southern boundary is formed by a proposed boulevard and an existing commercial development along Jefferson Avenue. A proposed street bordering the depressed Grand Trunk Railroad forms the eastern boundary while to the north is Lafayette Street and the Gratiot Redevelopment by Mies Van der Rohe which is now under construction.

The map on the following page gives the existing and proposed new land uses surrounding the site including the proposed expressway system.

The site, at present, is still occupied, as one eyewitness observer has put it, by "run-down houses." These are scheduled for demolition in the near future. The site is essentially flat and some very fine trees can be found in existing yards. A gridiron street system currently interlaces the site dividing it into nine blocks plus. The Grand Trunk Railroad is depressed with all the east-west streets
PROPOSED GENERALIZED LAND USES

MAJOR BUSINESS AREAS
GENERAL COMMERCIAL AREAS
MAJOR RECREATION AREAS
OPEN SPACE: INSTITUTIONS & PUBLIC BUILDINGS
HIGH DENSITY MULTIFAMILY HOUSING
MEDIUM DENSITY MULTIFAMILY HOUSING
LIGHT INDUSTRIAL AREAS

THE SCALE OF THIS AND SUCCESSING MAPS
1" = 500' 0"
overpassing it. With the elimination of many of these streets several of the overpasses will be demolished including two along the eastern boundary of the Lafayette site.
In a several page article in the Architectural Forum last year the story of Detroit's redevelopment plans was discussed and illustrated featuring an overall plan of redevelopment for the Gratiot Project, Lafayette Extension and St. Aubin Extension. This overall concept has since been abandoned and the Gratiot Project is being redeveloped by Mies van der Rohe separately thus paving the way for this thesis' development of the Lafayette Extension.

The article discusses the financial arrangement used in acquiring the land and proposals for acquiring additional land and gives the cost per acre of the cleared land. This thesis assumes that the chart accompanying the article showing the number and distribution of dwelling units over the entire redevelopment area to be based on correct and adequate data available to the Citizens Redevelopment Committee and the architects and that such numbers and distribution reflect a successful financial undertaking by private developers.

<table>
<thead>
<tr>
<th></th>
<th>Private</th>
<th></th>
<th>Public</th>
<th></th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>High</td>
<td>Low</td>
<td>High</td>
<td>Low</td>
<td></td>
</tr>
<tr>
<td>Gratiot-Orleans Area</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Efficiency units</td>
<td>192</td>
<td></td>
<td></td>
<td></td>
<td>192</td>
</tr>
<tr>
<td>1-bedroom units</td>
<td>240*</td>
<td></td>
<td>240</td>
<td></td>
<td>480</td>
</tr>
<tr>
<td>2-bedroom units</td>
<td>720</td>
<td></td>
<td>720</td>
<td></td>
<td>1440</td>
</tr>
<tr>
<td>3-bedroom units</td>
<td>240*</td>
<td>155</td>
<td>395</td>
<td></td>
<td>790</td>
</tr>
<tr>
<td>4-bedroom units</td>
<td>197</td>
<td></td>
<td>197</td>
<td></td>
<td>394</td>
</tr>
<tr>
<td>Total</td>
<td>1,392</td>
<td>352</td>
<td>1,744</td>
<td></td>
<td></td>
</tr>
<tr>
<td>St. Aubin Extension</td>
<td>832</td>
<td>226</td>
<td>420</td>
<td>128</td>
<td>1,606</td>
</tr>
<tr>
<td>Lafayette Extension</td>
<td>448</td>
<td>94</td>
<td>420</td>
<td>130</td>
<td>1,092</td>
</tr>
<tr>
<td>Total</td>
<td>2,672</td>
<td>672</td>
<td>4,442</td>
<td>258</td>
<td></td>
</tr>
</tbody>
</table>

* Two-bedroom units in one building are changeable into combination of one and three-bedroom units.

Architectural Forum, March 1955, p. 119
Thus the Lafayette Extension will provide apartment dwelling units for approximately 1100 families. The Lafayette Extension as defined as the area bordered by Lafayette St., Rivard St., Congress, Larned Boulevard and the Grand Trunk Railroad is a 55-acre tract of land. Thus the gross neighborhood density is 20 families per acre. However a five acre existing school and playground, plus approximately 20% land coverage in streets and service drives plus additional site development including an approximately two acre community building site net density approaches 30 families per acre. However, definite net density will not be known until final site plans are made.
THE SCHOOLS
The city proposes to clear the entire Lafayette Extension site with the exception of the K-8 Barstow Elementary School which is located approximately at the mid-point of the southern boundary.

Previous to the redevelopment plans of the city the Barstow School along with the K-4 Capron Elementary School to the north served an area bounded by Gratiot Avenue, St. Antoine, Larned and the Grand Trunk Railroad. The K-8 Duffield elementary school serves the area east of the railroad and the K-8 Bishop Elementary School serves the area north of Gratiot as indicated on the map on the following page.

However, with the increased density caused by the Gratiot Redevelopment and the Lafayette Extension it is obvious that the Barstow Elementary School will not be able to handle the increased enrollment. The Gratiot Redevelopment Plan includes a site for a new school for its elementary school children.

With the completion of the Gratiot project's school facility the Barstow school will serve only the area of the Lafayette Extension. With the clearance of the Lafayette site the school will technically be without students (although I have yet to see an empty classroom in September), and would probably have to transport students from other parts of the city to its classrooms during the period of redevelopment. This would however only be a temporary arrangement, the disadvantages of such a situation being obvious.
The Barstow School in 1954 accepted an enrollment of 1026 students. It would, as we shall see, provide more than enough classrooms for the needs of the Lafayette Extension. However, the school is approximately 40 years old now and since the Lafayette Extension will not be a reality for probably at least five years it would seem advisable to include the school in the clearance program and provide adequate new facilities encompassing today's changing educational needs and methods, and higher classroom design standards. Another point to consider is the problem of relocating the school's enrollment should it be replaced some time after the completion of the Lafayette apartments.

It is of course pure speculation as to the possibility of the school being cleared with the rest of the site despite the desirability. However, with the idea in mind of creating an integrated complex of community and school facilities, and playground and park development this thesis will assume that the existing school facility will be removed. Therefore it remains to determine the elementary school needs of the Lafayette Extension families.

The table below indicates that at the time of the 1950 census there were 126.31 elementary school children per 1000 population in the City of Detroit.
### GENERAL CHARACTERISTICS OF THE POPULATION

#### POPULATION BY AGE GROUP

City of Detroit

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Population</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-1</td>
<td>38,191</td>
</tr>
<tr>
<td>1-2</td>
<td>77,631</td>
</tr>
<tr>
<td>3-4</td>
<td>67,126</td>
</tr>
<tr>
<td>5-9</td>
<td>140,594</td>
</tr>
<tr>
<td>10-13</td>
<td>92,952</td>
</tr>
<tr>
<td>14-over</td>
<td>1,433,071</td>
</tr>
</tbody>
</table>

Total Population: 1,849,568

233,546 Elementary School Population

\[
\frac{233,546}{1,849,568} = 126.31 \text{ Elementary School Children per 1000 population}
\]

The Lafayette Extension will provide living accommodations for 1100 families. Further census investigation reveals the average number of persons per family in Detroit is 3.43.

### GENERAL CHARACTERISTICS OF THE POPULATION

#### City of Detroit

Selected Data

- Total Number of Households: 513,128
- Total Population in Households: 1,762,107
- Persons per Household: 3.43

---


8 Ibid, table 34.
Thus the total population of the Lafayette Extension will approximate 3,800 persons. Therefore there will be about 480 elementary school children that will require educational facilities. This assumes that the Lafayette Extension will be an average community since average figures are the only ones available for the determination of school population.

In addition to the elementary school facilities required, nursery school facilities must also be provided for all who might wish to use them.

"Enrollment as a per cent of total eligible children varies considerably, depending on the availability, quality and tuition charges of nursery schools. In a planned neighborhood with adequate facilities adjusted in cost to the income of residents, space allocation might be planned on the basis of an enrollment of 85 per cent of the eligible children..."9

Figures for the number of children aged 3 and 4 and total population given in Table on page indicate that there are 36.3 children per 1000 persons in the age group requiring nursery school facilities. Thus, 85% of this figure gives 30 children per 1000 persons or 114 children requiring facilities.

---

9 American Public Health Association Committee on the Hygiene of Housing, Planning the Neighborhood, R. R. Donelly and Sons Company, Chicago, Ill., 1948, p. 46
The Public Health Association recommends a maximum of 120 and a minimum of 30 children per nursery school. Within these limits there are several possible arrangements.

There will be a need for all-day nursery school care as well as half-day care. In determining percentage of children requiring all day care I can only rely on an assumption. Therefore for the purposes of programming I will assume that one-third or approximately 40 children will require all-day care and the remaining 74 children will require half-day care.

With these requirements one excellent method of solution would be to provide a central nursery school for the all-day enrollment that would be part of the elementary school complex with small self-contained units for half day enrollment located at various points over the site.

Approximately 1.3 miles from the site is located the Miller High School with an enrollment of 1,460 students. The density increase should not have a great effect on the high school's facilities since the redeveloped area is a relatively small part of the overall area from which the school draws its students.

Miller High School offers complete educational and athletic facilities for the grades 9 through 12. The school also offers an adult education program in the evenings.

Thus, with the provision of a new elementary school the educational requirements of all of the residents of the Lafayette Extension will be met.
Lafayette's 480 elementary school children will need a facility incorporating approximately 40,000 square feet of space and requiring a site of 2.2 acres according to the table on the following page. The nursery school sites will total approximately 1 acre.¹⁰

¹⁰ American Public Health Association, _Loc. Cit._, p. 46
**ELEMENTARY SCHOOL SITE SIZE**

Assumed Areas for Component Uses and Total Area, by Population of Neighborhood \( a, \ b \)

<table>
<thead>
<tr>
<th>School Site Area</th>
<th>1000 persons</th>
<th>2000 persons</th>
<th>3000 persons</th>
<th>4000 persons</th>
<th>5000 persons</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>275 families</td>
<td>550 families</td>
<td>825 families</td>
<td>1100 families</td>
<td>1375 families</td>
</tr>
<tr>
<td></td>
<td>90 pupils</td>
<td>180 pupils</td>
<td>270 pupils</td>
<td>360 pupils</td>
<td>450 pupils</td>
</tr>
</tbody>
</table>

**Component Uses**

1) Covered by building: \( c \) sq. ft. \( -d \) 15,300 23,000 30,600 38,200
2) Service lawn and parking: sq. ft. \( -d \) 28,000 31,000 34,000 40,000
3) Margin for expansion (20 per cent of 1 plus 2): sq. ft. \( -d \) 8,600 10,800 12,900 15,600

**Total Area**

4) Acres \( -d \) 1.2 1.5 1.8 2.2
5) Acres per 1,000 persons \( -d \) 0.6 0.5 0.45 0.4\( \frac{1}{4} \)
6) Square feet per family \( -d \) 94 78 70 68

---

a Values may be altered by practice of local school authorities

b Excludes outdoor recreation areas. Of neighborhood playground is not combined with school site, add 100 sq. ft. per pupil for school play area.

c Based on 85 sq. ft. per pupil, in 6-grade, 1-story building, in line with favored practice. For 3-grade school, add building area on basis of 30 pupils per 1,000 persons (kindergarten 15 per 1,000). Above 500 pupils allow 75 sq. ft. per additional pupil.

d. Elementary school not recommended for neighborhood of less than 2,000 persons. If conditions warrant provision of school, use figures indicated in next column.
THE HOSPITALS
With the opening of the Lafayette Clinic another mile-
stone has been reached in Wayne State University's program
for the creation of a Medical Campus. This campus is bounded
by Rivard St., Larned-Congress Boulevard, St. Antoine St.,
and Gratiot Avenue occupying land on both sides of the
Hastings Expressway.

The two parts of the campus are joined by a system of
pedestrian and vehicular overpasses spanning the depressed
expressway. Ease and convenience of access to the concen-
tration of medical facilities will, with the completion of
the expressway, be afforded to all Detroit area residents.
Residents of the Lafayette Extension will only have to cross
the street to avail themselves of the benefits of a hospital
complex offering perhaps the finest medical care and treat-
ment of the region.

At present the campus is composed of four buildings.
Two of these, Receiving Hospital and Memorial Hospital, have
existed for some time. Recently the college of Medicine
built a new 8-story structure and in cooperation with the
University, the State of Michigan built the Lafayette Clinic,
a 145-bed psychiatric hospital, which was completed this
year. Staffed with university personnel the hospital will
offer teaching and research opportunities in the field of
psychiatry as well as patient care.

Construction of the remaining buildings of the complex
is contemplated in the near future.
The following photographs are keyed to a map at the end of this section.
THE CHURCHES
Within approximately a one mile radius of the site there exist some thirty churches. Within this group are included almost every major denomination along with many of the minor ones (See the plan on the following page.)

People who move several miles to a new suburban development of homes, often because of the distance lose contact with their former place of worship and almost always there is a demand for a new facility somewhere within the development to serve their devotional needs. As is most often the case one Protestant and one Catholic church will fill the need and the newly located families will transfer membership to the nearer churches.

This is of course provided that facilities do not already exist at a reasonable distance from the development. What this reasonable distance would be I do not know but in the case of the Lafayette Extension it would certainly seem that with so many churches not more than a mile away there would be little inter-denominational transferring of membership. Most families moving to the Lafayette Extension will be able to continue worship in their chosen denomination by merely transferring membership.

Thus the religious training and guidance desired by the families of Lafayette should be amply provided by existing facilities.
THE NEIGHBORHOOD CONCEPT
The neighborhood concept -- a term -- three words -- "...residential areas (which are) physically delineated units, each with certain amenities, such as schools, shops, and other services appropriate to their size and population... (designed, so that) the social integration of the inhabitants of these areas will be facilitated."

The neighborhood, by the definition above, has been around for a long time except, perhaps, that social integration may not have been facilitated by the "design" in years gone by. Most small towns are essentially neighborhoods with their main streets, schools, and local services. Look a little deeper, a little closer, at the problem. Look at the word "neighbor". Look at your neighbors. Who are your neighbors? Who are mine?

Westgate West. Ten families per building, five families per floor. Neighbors all over. But what kind of neighbors? Real friends?

Two on the first floor are good friends. A hundred and fifty yards away another good friend -- former next-door neighbor. In Lexington a good friend -- fraternity brother from college.

---

days. Several more have-them-in-for-coffee friends and many hello-beautiful-weather acquaintances. Four families of good friends, three of which are headed by architecture students.

It seems that a nucleus of about six families of good friends is about the maximum number the social calendar can handle. Yet numerous studies have been made all over, including right here in Westgate, on how people make friends and where they make friends and with whom they make friends. Design factors like the placement of the kitchen door affect the entire social structuring of the neighborhood. But, think—does it really? Making new friends in a new neighborhood is a complex process. The determinants that contribute to the final friendships that are formed are innumerable. Reduced to the minimum one must be in contact, in verbal communication with people, to make friends. Verbal contacts, again, may be made in an infinite number of ways. True you may promote friendship by placement of kitchen doors but devices designed to promote social contact do not add numerically. If six kitchen doors all faced each other you would probably get to know all six families but chances are still strong that only one family of the six would appear on your list of best friends whom you regularly entertain.

A sister or brother-in-law or both, and their other halves, a fellow from the office and his wife, an old friend from high school or college days and his wife, one of your
wife's secretary friends she met when she working & her husband and the couple next door may fill the calendar. However, the, shall we say, next lower category of friendship often is built around a rotating monthly meeting of six or eight next-door neighbors.

Here in Westgate West we have what are affectionately termed "barracks parties." Ten couples can actually get together for an evening of charades and laughter even though Westgate West living rooms afford the guests six and a half square feet per person.

My parents had monthly "neighborhood bunco" parties. These involved eight families and were sexually segregated -- wives on the first floor and husbands in the basement.

During my high school days a group of nine boys got together to form a club for the purpose of getting together and having parties. We have a constitution and a sporadically published newspaper and call ourselves the F.U.N. Club. I recently missed the Ninth Annual New Year's Eve Party given by the club which indefinitely plans to give at least a dozen get-togethers a year.

The planned grouping of clusters of families in some recognizable form therefore seems to have definite merit. Here again, however, it is conceivable that such secondary friendship groups will not arise at all. They are particularly enjoyable and can be encouraged through planning.

Neighborhood only advances one stage further. Lafayette
will be a recognizable neighborhood because of its school and consequently its P.T.A. Its boy and girl scout groups, its little league baseball teams, its difference in design from the neighboring Mies van der Rohe apartments will all contribute to the recognition of the Lafayette Extension as a totality.

The hierarchy of present day identifiable areas in Detroit continues with the terms East Side and West Side. Woodward Avenue forms the dividing line between these two "sides" because it is the spoke in the wheel of Detroit's radial street pattern which is perpendicular to the river. Woodward Avenue does not run north-south but that doesn't matter. Lafayette is on the East Side. The only significance I have ever been able to assign to being on the East Side is that the high school athletic program is divided into Eastern and Western leagues with championship play-offs held between the two leagues to determine City Champions. This is however, sufficient to very neatly and plainly divide the city in halves in the thinking of almost everyone.

Surprisingly, though, the "sides" are virtually indistinguishable. There are no features peculiar to either. Thus the city exists as an entity in itself. The thought of "City" for the Lafayette residents will always be near at hand for not far from wherever they are will be a view of Detroit's skyline.
THE YARD
The Lafayette Extension will provide dwelling units for approximately 1100 families. It is as obvious that all 1100 dwelling units cannot be ground-contact units as it is that families with children need and want ground-contact units, that is units which have a privately controlled "yard" connected to them.

Singularly or in groups of two or three unrelated individuals who are presumably gainfully employed from 9 to 5 at various downtown business houses or nearby hospitals have little or no need for a privately controlled yard and probably have little time in which to spend themselves cutting grass, trimming hedges and fixing broken windows and undoubtedly little desire. They are looking for many opposite elements of social atmosphere than the family with children.

The elderly couple and the young recently married and/or childless couples may be interested in a seventeenth floor apartment with a balcony and a view and no responsibility or may desire a ground-contact dwelling unit with a garden and attached garage for any number of reasons.

The family with one child ranging in age from conception to about 11⁄2 years may prefer a high rise dwelling unit for children up to 11⁄2 years tend to play alone or with mother and father supervision in a relatively small space. As a child approaches the age of 11⁄2 years its field of interest broadens and should be allowed to seek the companionship of other children with the necessity of the yard looming large
ahead. Parents with children of this age soon start looking for someplace where junior can spread his wings without fear of falling off the balcony.

The family with a two year old and an infant for example finds mother constantly busy with household tasks and suckling and no time to supervise a child ten floors below or caught in an elevator between the sixth and seventh floors. And the two year old in his formative years needs to be able to play and come and go freely under a parent's supervision, not be watched and guided and corrected by a trained member of the staff: Nursery school for two or three hours in the morning or afternoon yes but trained supervision in a fenced "play area" all the time no.

Thus, for all families with children over about 1½ the yard in some form is necessary. The 1950 census indicates that household makeup is split approximately 50-50 between households with minor children and households composed of some combination of adults. However site limitations and the density requirements may eliminate the possibility of ground contact apartments for the 550 families with children. Since apartment space for entertaining etc. and yard space for outdoor living, etc. are so necessary some form of "yard in the air" may have to be devised to provide the necessary elements which provide structural solidarity in the family and promote healthy community relationships.

Therefore, the design objective is to provide as many ground contact apartment units as possible with some form of
yard in the air units as an alternative for about one half of the total number of families.
"The extent to which the design of the dwelling unit ('dwelling unit' meaning both the enclosed rooms and also any associated yard or garden space) facilitates the performance of certain activities within that unit, rather than outside of it (or not at all), will very powerfully affect, the social structure of the family itself.

"Certain activities in our culture are almost always family ones and are only occasionally and by necessity performed by family members outside their home: cooking and eating (morning and evening meals), sleeping, elimination of body wastes, sexual relationships between husband and wife, and the discipline and informal instruction of children. The list of these activities, however, merely serves to define the common activities of almost all present-day American families with children. Families vary infinitely in their actual structure, even though virtually all have these four functions in common. It is very often the other activities, in addition to these, which make a family happy or unhappy, harmonious or conflict-ridden, desirable or undesirable.

"It is noticeable in...housing literature, in housing research reports, and in the dwelling unit design typical of...housing projects, that little attention is given to facilities for the performance of other than the four essential activities. Among other activities frequently performed in homes in the United States in the twentieth century, the
following two are particularly significant in their social implications:

(a) entertainment of visitors ("dates," friends, relatives, club groups, etc.) by family members;

(b) maintenance, repair, and improvement of the premises by both father and mother.

Let us consider the social function of these two latter factors.

"The entertainment of visitors of various categories is of prime importance in building up the adult's network of individual and family friendship circles with the community and in facilitating the formation and continuance of special-interest associations. Families are asked to come for an evening of beer and television, or for Sunday dinner; the sewing club meets successively in the members' homes; a man's friends come in to play a game of poker. The ability of children and adolescents to use the home as a place of congregation, either of the boys' or girls' gang ("gang" here not referring to delinquent or street-corner gang), or for dating, permits an integration of juvenile and young adult culture with that of the adults themselves. In suburban, small-town, and rural areas, the "yard" ("lawn", "garden", etc.), with perhaps porch or terrace, has as one of its essential functions, service as the place where children as well as adults entertain one another. The gang of four or five children, aged four to twelve or thirteen, play successively in one yard after another, while the mother
(and father, if he is at home) assumes limited temporary responsibility for the whole group while it is in her yard. Later on, the young woman may entertain her boy friends briefly at home before and after going out on a date. In American urban areas, however, there is often literally no publicly sanctioned place for the necessary juvenile associations to locate. The dwelling unit is too crowded, the mother too busy to permit children to play on the premises; there is not enough privacy for boy-girl conversation. The consequence is that the growing child and young adult carries on these associations (he does not normally forsake them) more or less in illicit places: streets and street corners, pool halls, downtown movies, in automobiles, etc. While settlement houses and school basements provide for a certain amount of "wholesome recreation," they do not entirely answer the emotional need of the child for independence and privacy in making his own friends (and enemies). The crucial design factor here is space: space within the house for family and for private individual entertainment, and space outside (in the form of porch and "yard") for children's play and for adult sitting-out-in-the-evening, and to serve as a sort of "buffer zone" between the privacy of the house and the hurly-burly of the street.

"In urban areas, and particularly in housing projects, where density is high, the dwelling unit does not have this entertainment and buffer-zone space. Attempts are often made to provide substitutes, in the form of club rooms, park-
like lawns (guarded by chains to keep children off the
glass—trespassers are fined), concrete playgrounds, benches
on the walks, settlement houses, etc. These substitutes are
certainly in part successful, but they do not fully meet
the need. An upper-income apartment dwelling family may
invite a friendly family to a hotel for cocktails and dinner
while a nurse cares for the children; the low-income project
family never makes the invitation. Romance does not flour-

ish under the eye of the settlement worker; it betakes it-

self to the movies or the parked car. Childish ingenuity
in building Indian tents of cardboard and rags (provided by
an amused mother) does not go farther on the playground
than chipping ineffectually at concrete sewer pipes, embedded
in asphalt, when the trained supervisor is absent. What is
happening, in summary, is a failure of integration of the
family itself. Because the home cannot provide the facili-
ties and space for activities needed by its members, they
must go elsewhere. The result is that the individual does
not find tangible support for his strivings within the
family unit; and the family unit, thereby already weakened,
is: further isolated as an institution from the rest of the
community.

"One of the conspicuous features of any new private
housing development, for any income level, where families
own their own detached or semi-detached, or even row house,
homes is the great amount of time which parents spend in
maintenance, repair and improvement of their premises.
Fathers are out every summer evening, and every Saturday and Sunday, putting in and mowing lawns, laying concrete, putting down flagstone, painting, sawing, sanding. Mothers are making flower beds, fitting curtains, weeding, picking up scraps of paper. Whatever the motives—keeping up with the Joneses and maintaining property values are two of the important ones—this busy activity on the part of the parents has several important implications for family structure. In the first place husband and wife are working together for something they both want; they have a stake in getting along together, and the appearance of their home is a mutual and public symbol of their adequacy as spouses. In the second place, some of the time they are working outside the house itself, in public view, and are hence probably more anxious to conform to community norms than they would be if they had absolute privacy. And finally, this maintenance, repair, and improvement work is one of the rare times when the father is able to do something constructive in the physical presence of his wife and children. He may work all day away from home, but most evenings and weekends he is at home, where he displays his masculine strength, skill and inventiveness in innumerable jobs, from fixing a broken light plug to laying a concrete patio. He plays a role in the family profoundly different from that of the apartment-dwelling robot bread winner who works from nine to five, comes home, eats, flops down in the big chair, and sits about drinking, watching television, reading the paper, and often
griping, until bedtime. The contrast is between, on the one hand, a harried cog-in-the-industrial-wheel whose family role is confined to bringing back an always inadequate paycheck and to grumbling impotent complaints about government, labor unions, and the landlord, and on the other hand, a harried cog-in-the-industrial-wheel whose paycheck may be inadequate, but who does visible work for his family and creates something, be it only a better screen door. The latter individual presents a very different model for his son's identification and his daughter's idealization, and a more promising one for society. The little man, unrespected by his wife, dependent on employers, landlords, ward heelers, and bartenders for everything from job, credit and promotions, to getting the broken window fixed, and presuming merely on a temporary advantage in size for the maintenance of discipline, is not going to find it easy himself to develop a mature personality. It is of course not going to be possible to provide all urban families with a two-hundred foot lot and a ranch house; but the problem of making the father's role more than that of the star boarder must still be considered.

"Just as it is important for the father to be able to do visible work for the family in his home, so also the mother needs—for the sake of her children, at least—to appear as a competent and adequate housekeeper. Actually the mother's role is much more adequately provided for, in most housing designs than the father's. Considerable attention has been
paid to the furniture and lay-out of the kitchen; closet and storage space is at least partially provided for; and substitutes for the mother, in the form of playground supervisors, summer camps, nursery schools, etc., are often built into the physical design of the community. Where the individual dwelling unit lacks laundry facilities, there will usually be provided communal automatic laundries, and either mechanical driers or common clothes lines. Materials are chosen for construction which will be easy to clean and will not mar; and so forth.

"The situation, curiously enough, is therefore that the mother's role as housewife is relatively much better facilitated than is the father's. The father is sometimes almost a nonentity, since no provision is made for his doing anything within the dwelling unit beyond the elemental activities of eating, excreting, sleeping, coitus, and yelling at the kids. He is "the old man" to both wife and children. Most of the day he is away somewhere, at the "office" or the "shop". He comes home tired and wants food, silence, and (occasionally) sex. At home he's a testy consumer. At work he may be a real producer; but his family never sees him at it. He is the invisible father, with whom his children cannot identify as an ideal and whom his wife can love but hardly respect. Needless to say, the family with the invisible father is not a very happy one.

"The trouble is that, in urban areas in the United States, the invisible father is the rule. In slums and expensive
apartment houses alike, there is no provision made for him. His world is the place where he works; when he comes home he is dependent and inaffectual, a boarder...

"Now this limitation of the father's activities in the home has other effects than undermining the structure of the family. It makes it difficult for men, in their capacity as heads of families, to meet informally and to develop norms of mutual obligation and behavior. In the community of privately owned homes each man maintains more or less regular, if informal, connection with his six or eight closest neighbors, and his neighbors see him, working or not working. From time to time he lends and borrows tools. He shares a bottle of beer occasionally with two or three others. By criticism and praise of absent neighbors' efforts, standards of house appearance and facilities are established and disseminated, and the matters of public concern are discussed in equally casual but effective fashion. All of this depends upon the existence of a yard. When "the men" are talking, furthermore, their wives frequently talk too, and matters concerning children, the school, the church, and house furnishings threshed out. The children see their parents as persons who belong to a community, and they see the parents of their playmates as friends of their own parents. This too depends on the existence of a yard.

"Indeed it would be hard to overemphasize the importance of the yard as a determinant of social relationships. It is much more than a place where the harassed city dweller can
see grass and a tree; it is a mechanism for greatly strengthening the solidarity of family and community. Parks—whether public parks or parklike grounds associated with high or low rent housing developments are not nearly as effective, even though they do serve to a limited degree to provide meeting places. Likewise, clubrooms, carpentry shops, settlement houses, and the like are relatively ineffective in promoting family and community solidarity, because they isolate the members of families rather than bring them together.

"The yard is really the crux of the whole problem of multi-storey apartments vs. ground-contact houses, where families with children are the major consideration..." 12

"The American family still likes its controlled plot of ground where mother can keep her eye on the children: no family enjoys an elevator per se." 13

"Architects are generally conscious of the social drawbacks of the multi-story project in having deprived the tenant of freedoms and facilities more easily provided by row housing. Privacy of the tenant's quarters and of his storage, his easier contact with the out-of-doors for sitting out, for gardening, or hammering on something in the backyard, seeing

---


his neighbors, having a bicycle, etc., are attributes of the low-density walk-up projects. These and many other things contribute to a fuller family and neighborhood life..." 14

"Our own post-war housing program should involve the creation of thousands of new gardens where a man and his family can work at the day's end to produce fruit, vegetables, flowers and above all to produce human contentment." 15

"...the public recreation movement--extensive and progressive as it is--has not as yet been able to fill the breach in the environment of child-life that was made when homes were shorn of yards by the institution of multi-family dwellings." 16

"In their sentiment in favor of yards, tenants are probably reflecting an almost universal value in American culture, held by the general public as well. Apparently the survey of 'The Effect of Housing on Family Life,' undertaken for the President's Conference on Home Building and Home Ownership revealed that dwellers in houses, whether rural or urban, renters or owners, high income or low, prevailingly regard a yard as an essential. While the 2,847 families' responses to this questionnaire, as well as the questionnaire itself, are not given in detail, the report asserts:


Families with a pleasant yard intimate that such an asset adds greatly to the pride and pleasure they take in their homes, as well as to the convenience of caring for children and doing certain household tasks...more than three-quarters of both the urban and rural women who mentioned surroundings listed a "nice yard" as a means of recreation for members of the family.

The section on "Using the Out-Of-Doors" concludes with the words of one housewife: "Too little recreation and amusement at home drives members of the family to find it outside."

"Hypothesis 18: In the dwelling unit without sufficient interior space for the entertainment of visitors, in groups and also in privacy as individuals, family solidarity is lessened by members being forced to carry on necessary extra-family relationships outside of the home.

"Hypothesis 19: The dwelling unit without a privately controlled yard tends to inhibit both family solidarity and community organization by (a) limiting the role of the father to that of a star boarder (b) severely limiting the opportunities for male family heads to establish stable associations among themselves as neighbors.

"Hypothesis 20: A large majority of American families with children feel that they need a privately-controlled yard attached to the dwelling unit."17

17 Wallace, Anthony F.C., Loc. Cit., p. 43
THE CHILD
The scope of the housing problem of the Lafayette Extension includes providing an environment for the mental and physical growth of children of all ages.

The physical aspects of the environment which are in the hands of the architect-planner must be investigated with regard to their affect on the outdoor activities of the child.

The results of some research done in this area appear in an unpublished report entitled "Some Childhood Memories of the City," which has been prepared by the Project on the Perceptual Form of the City, here at the Institute. Forty subjects were interviewed for their memories of their youth. Their responses are the basis of the work.

"Among the items mentioned most often are the lawns. A lawn is associated with spaciousness and a sense of freedom. The positive effect associated with this was expressed, for example, in the following:

'I was very happy. I remember the first day we got there I was running over the lawns...'

The size of the lawn and its unkeep indicates the status of an area. For instance:

'After you ride along Cleary Square the houses become nicer, they have lawns...'.

"...a child remembers what he can play on or with.

"Not only just the lawns, but the entire 'floor' of his environment is of great importance to the child. Very few things are so close to him for play. Of all the
various types of floor coverings mentioned, grass is the best liked, then dirt that can be dug or molded, and after that any smooth surface that allows roller skating or bicycling. Driveways are occasionally mentioned in this regard.

"The floor surfaces that a child seems to dislike are asphalt on open spaces that otherwise would remain grassy, and brick, gravel and cobblestones placed where he can suffer a nasty fall. Of the few people who mention brick-paved surfaces, none talk about the visual qualities of such surfaces, all dislike the uneven texture it provides. ...The child is sensitive to the floor and its various coverings because it is the prime condition of his main activity -- play. This surface, rarely the conscious concern of the designer, so often left to surveyor, contractor or sheer custom, thus turns out to be the most important sensuous element of all."18

Thus further support is lent to the importance of the yard as discussed in the previous section. Not only is it important for family solidarity, it is important as the center of activity for the child.

"Trees are mentioned with great frequency. With few minor exceptions trees and foliage are remembered with great warmth. When describing an ideal street these are usually

included, and they are mentioned in the preferred downtown sections. Children like trees and foliage for many reasons. They provide the ideal environment for play. Offering shade in the summer, they can be climbed, they can be carved, they are hiding places. They are places where children can create their own fantasies. Here is a memory that expresses this:

'We had a big oak tree in front of our house which was sort of a favorite. Then they were planting these small ones which were supposed to grow into these big ones someday but never got a chance because we'd hang on them or try to climb them and break them off. During the latter part of the spring, when they used to get real bushy, they almost cover the street in sort of a tunnel. It gave a nice feeling of security. You could walk on the outside of the trees and be blocked off from the road. Yet it wasn't the same thing as barriers you encountered in Brookline, it was sort of a friendly thing. We carved our initials in them. You could do a lot of things with them, climb them, hit them, hide behind them, ... you could see out between the trees but none could see in, and we used to hide in there and watch people ... I always liked to watch people.'

'There are those who remember the pleasure of being shaded by trees.'
'I can remember in the summertime it was beautiful along Saratoga and Bennington Streets because it was shaded. We used to play on the front stoop of somebody's house, and it was so nice to get under the trees for shade.'

"Of course, not everybody feels this way, especially if their experience living among trees is limited. But the majority are so at ease in their love of trees and green that there is hardly an interview that in some way does not take them into account. Trees are alive, they move but are always there. They regularly change their form in step with the great seasons. For some subjects the trees are the dominant impression of their childhood."

We have seen that children are markedly aware of lawns, grass, floor surfaces in general and trees in particular. The interviews also called up pleasant memories of hills and water as part of the environment.

I am compelled to think of my childhood as I write. Pleasant memories of hills in my childhood come first to my mind. We moved to a new neighborhood, one of these builder developments, only this one was just a little more subtle than most, and there was a great deal of open space. My family was one of the first to move in and as the months went by houses continued to be built and occupied. These houses

---

19 Some Childhood Memories of the City, Loc. Cit., pp. 144 &
all had basements and the "steam shovels" would leave four piles of dirt, one on each side of the excavation for each house. I can remember many, many happy hours spent digging sliding and hiding in; on and around those hills.

The Lafayette Extension site is for all intents and purposes dead flat. Building eleven hundred apartments will entail no small amount of excavation work. At least enough will be done so that enough excess earth will be available to create some artificial, man-made, in-a-few-years-who'll-know-the-difference hills. They could be planted with grass and some shrubbery and would make excellent places for sledding in the winter time.

Not far from this same house was the water of my childhood. Under orders not to play anywhere near it I and a couple of bosom buddies spent long hours at the "stink ditch" which was the name we applied to this dirty stream that we thought had very ominous beginnings. But the "stink ditch" was heavily populated with tadpoles and frogs and all kinds of fascinating life that you could collect in bottles and jars and marvel at for hours. Occasionally one might lose balance or be lightly pushed and get a "hot-foot" but it was always well worth it.

This is not to advocate the creation of an artificial "stink ditch" but to suggest the fascination of water that probably possesses every child. Lafayette should provide some water where, for example, you might be able to sail a
boat or even a couple of pieces of wood, water that you could throw stones at or step in, shoes and socks and all. Water isn't fun only in a spray pool, swimming pool or river.

I imagine there are city children in large numbers who have never climbed a tree. But I am reasonably sure that everyone who has ever done so will agree that climbing up, sitting in, swinging from and hanging on trees can be sheer enjoyment.

Climbing seems to be a natural part of growing. I remember we used to climb up a billboard and stand precariously at the top looking out over the sign at things we'd hardly notice on the ground. I spent many hours "over at the sign". There were high weeds here and the sign had a kind of skirt-board so on the back side it was very secluded and shady.

It seems that play may be divided into two phases which seem to interact. These two phases might be called passive and active but I am thinking more in terms of passive play done in a secluded, private atmosphere and active play done on the ball field or in the swimming pool. Lafayette will have its beginnings in cleared land. Care in planning and landscaping must be taken to build back into the urban scene some seclusion and mystery for the stimulation of the imagination of the child.

The importance of the lawn in the memories of childhood is interesting in view of what has already transpired. I am encouraged to find another source that lends support to the
idea I have had for some time about the value and importance of a yard and some space where real earth may be dug up or planted with petunia seeds.

The site of the Lafayette Extension is ideally located. When I ask myself what I would require of a house on the site the first things I think of are two-bedrooms so my daughter may continue to have her own playroom-bedroom, a yard where I might be able to build a sand-box or plant a tree and a garage where the car may be protected from the elements.

I think this is further evidence of the trend in people's thinking toward a stronger and stronger desire to have in conjunction with actual living space some real honest-to-goodness land. Of course the Lafayette Extension will not be a place of 100-foot lots and "ranches" but will provide several hundred square feet of land for as many apartments as possible without encroaching on the feeling of spaciousness.
THE CIRCULATION
Proper planning of circulation is of prime importance in the design of a neighborhood. It must serve the positive function of circulation and must take into consideration its effect on other uses of the site.

"Functionally, circulation provides access not only for the residents but for all those who serve the development area. Physically, the circulation pattern link(s) residential structures to each other, residences to neighborhood community facilities and the neighborhood to centers of business and employment...". 20

Let us consider the following means of circulation; by automobile, by foot, by public transit and by a fourth general group including bicycle, baby carriage, roller skates, wagon, etc.

The street system providing automobile access to the site should observe a hierarchal order. Major streets should provide access to the central business area and expressways, minor streets should provide access to neighborhood shopping areas and major streets. Neighborhood streets should provide access to community facilities and residences.

The Lafayette Extension is bounded by major streets on opposite sides. On the lower, southern side the Congress-Larned Boulevard connects to the Hastings and Lodge Expressways and points north, east and west and to downtown Detroit. On the upper side Lafayette St. provides the same connections.

To the right and left of the site streets provide connections to the major streets and to the Gratiot project and Gratiot Avenue to the north. Neighborhood streets must then connect to the minor side streets and serve the residences and apartments in a manner similar to the diagram on the following page.

The rectanglarity of the site is unfortunately oriented with its longer sides bordering the major streets. However, upon consideration of the attendant advantages of the heirarchal street system and the ease and convenience it can afford both residents' vehicles as well as service vehicles it seems obvious that the foreseeable difficulties in site planning are by far preferable to the hazards of direct access to the site from a major thoroughfare. "...the idea(is) not to strain for intimate curves or cul-de-sacs, but to create exceedingly simple access to adjoining super highways in the family car." 21

A further aspect of the problem of automobile circulation is the provision of adequate and conveniently located parking spaces. "Parking for residents' cars in connection with residential structures is a two-fold problem; overnight storage and daytime parking. Off-street parking in private or group garages or parking lots should be provided... (for) not only does indiscriminate parking along streets slow down traffic, but it is a serious accident hazard at intersections.

21 Architectural Forum, "Redevelopment f.o.b. Detroit" March 1955, p. 121
Jefferson Avenue

proposed congress-lared boulevard

LAFAYETTE EXTENSION

LAFAYETTE STREET

rivard street

hastings-oakland expressway
and create(s) a potential hazard, particularly to children, . . .". 22

Parking spaces for overnight use must be provided for all residents who own automobiles. Several factors lead to the conclusion that one parking space should be provided for each unit. Detroit is the automobile capitol of the nation and the natural result is that its residents are enormously dependent on automobiles for their transportation. And since "...Detroit is so dominantly an auto city, its public transportation system has been neglected. People have to drive." 23

A case in point. A party of two using public transportation for a trip from western metropolitan Detroit to the downtown area must spend approximately one hour in travel time plus waiting time spent on street corners. If the added time and convenience are worth about a quarter, the same trip may be made by private car and expressway in fifteen to twenty minutes including time spent in parking. Thus if you can get your hands on a car, for goodness sake why not drive?

Although we are concerned with the travel habits of residents who will be living downtown and not with suburbanites coming into the city the above situation and its solution still apply. Residence within one-half mile of Detroit's major department store and downtown shopping area

23 Architectural Forum, March 1955, p. 118
does not eliminate the need of and dependence upon the automobile. For trips ranging from a few miles, to Masonic Temple's Civic Light Opera or Detroit's Metropolitan Beach to several hundred miles and Upper Michigan's deer hunting, the automobile alone still seems to be the only satisfactory means of transportation. In fact the stage of automobile dependence has reached the point where many people will drive to the corner grocery store. Of course the Lafayette Extension's site will appeal to a certain number of elderly couples and individuals who will not own cars. This situation should however be easily offset by groups of unrelated individuals living in one apartment and families who may own more than one car.

A system whereby one parking space is assigned to each apartment, the rent for which is included in the total rental price of the apartment, should be enforced. Provision could then be made for one tenant to rent his parking space to another for a stipulated sum which would automatically be deducted from and added to the specified rent.

The Architectural Forum's article on Detroit's Redevelopment plans states the solution aptly. "The new plan...uses the highways as the founders of Detroit used the river, emphasizing wharf space; there is 100% off-street parking--a hint of what (is) necessary...(under) the full pressure of Detroit's relentless assembly lines...".24

Thus, the Lafayette Extension will provide 100% off-street parking.

In view of Detroit's rather severe winters and the general protective advantages of covered parking it would seem desirable to provide it along with some form of covered way between residence and garage.

This must be so designed that it will conveniently serve as short term daytime parking space as well as overnight parking space. Provision for enclosed storage can then be made at the head of each parking space. Repairing and cleaning of automobiles can then be done by tenants with protection from the elements. In a central location provision can be made for the washing of automobiles by those residents who do not have private enclosed garages.

In addition there must be parking space provided for visitors automobiles located near the major entrances to all dwelling types. Parking facilities must also be provided for service vehicles. Driveways must be wide enough to allow moving vans and garbage trucks to park and still maintain traffic flow. Space must be provided for cleaners, bakers, and etc. to park their trucks for substantial periods of time while making deliveries.

Circulation by public transit (bus) is afforded residents of the Lafayette Extension, which passes along the northern and southern boundaries of the site. These lines provide direct service to east side points and downtown
Detroit where connections to all parts of the city and metropolitan areas are available. As I have intimiated this service is notoriously poor but nonetheless it will play its role in the lives of Lafayette Extension residents be it star or walk-on. For some it will be the only means of transportation to all activities outside of walking range while to others it will offer a way for mother to take the children to Belle Isle Park or Metropolitan Beach on a warm Thursday afternoon.

Designated areas for boarding buses must therefore be provided offering safe and convenient transfer from vehicle to pedestrian way along the two sides of the site. Final disposition of these boarding areas will depend on various design decisions culminating in the arrangement of pedestrian circulation.

Pedestrian walkways must of course be provided offering convenient and safe access from all residences to the elementary school, play areas, recreation facilities, shopping facilities and other major objectives of pedestrians. These may also observe a heirarchal order similar to the afore-mentioned vehicular ways.

"The emphasis should be on a system of continuous main walks connected to dwellings by service walks. The purposes of various walks should be clearly recognized and they should be differentiated in width, location, etc..." 25

25 American Public Health Association, Loc. Cit., p. 57
Care must be taken to insure safety, especially for children, by adequate separation of vehicular and pedestrian traffic particularly regarding the major pedestrian ways. Care must also be taken to provide at least as direct passage on walks as on streets to insure their usage and promote safety.

Here an opportunity to incorporate various materials and textures and patterns presents itself providing a visual relief and interest that is desirable. It must be kept in mind that the texture of some materials indicates limited usage. Such materials must be used in small quantities in not too well-travelled areas. People enjoy walking on cobblestones and brick and crushed gravel and flagstones and stepping stones in the course of short walks between neighbors houses and across small open spaces. However, for the main pedestrian ways primary reliance must be placed on patterns and colors with textures remaining generally constant and smooth. It is more likely that main walkways will be used by people anxious to get between points with no time to watch for unevennesses and women in high heels that get more slender each year and seem to get stuck in the smallest cracks and openings in surfaces thus favoring a relatively smooth and continuous surface.

This surface is also preferable for roller skating, tricycling and bicycling, jump rope, hop-scotch, ad infinitum. Childrens games demand areas of smooth, hard surface as well as soft green surface and such must be provided.
THE PLAYGROUND
Outdoor recreational facilities are generally grouped under two headings: active, which includes neighborhood playgrounds, larger district playgrounds and city facilities such as Metropolitan Beach, Belle Isle Park, golf and country clubs, yacht clubs, etc; and passive which includes neighborhood parks, city parks such as Civic Center Park or Grand Circus Park and regional parks such as Belle Isle Park which provides facilities for every activity possibly connected to a park.

It is of course important that the city and regional parks be provided, and they are, but of immediate concern is the provision of neighborhood playgrounds and parks to be used by residents of the Lafayette Extension.

The American Public Health Association suggests in their book on "Planning the Neighborhood" that the neighborhood playground may be combined with the elementary school and the neighborhood park may be combined with the neighborhood playground. This of course indicates that facilities can be used interchangeably resulting in greater flexibility. The whole concept of combination of open areas is one I have felt to be desirable for some time. It offers continuous open green areas which may filter through and around the dwelling with the possibility that all tenants may leave their yards and walk in a green park-like atmosphere on their way to the neighborhood playground or community building or the neighboring houses for that matter.
The neighborhood playground will, under the combination plan above, serve as the major outdoor recreational space for the elementary school children during supervised school play periods as well as for the various activities that cannot be undertaken in the backyard of the individual dwelling units.

"The playground should provide most of the following facilities:

a) small space for preschool children
b) apparatus area for older children
c) open space for informal play
d) surfaced area for court games, such as tennis, handball, paddle tennis, shuffleboard, volleyball
e) field for games such as soft ball, modified soccer, touch football, mass games
f) area for storytelling, crafts, dramatics, quiet games
g) spray pool or other water activity area
h) shelter building with toilets, washbowls
i) drinking fountains (may be in combination with h)"

The size of the playground is governed by the minimum area needed to provide for the activities as enumerated above, the maximum number of persons that can be adequately accommodated and the maximum area that can be properly supervised. The table below provides information as to recommended sizes for various populations.

---

26 Planning the Neighborhood, Loc. Cit., p. 48
Neighborhood Playground Size

Recommended Total Area, by Population of Neighborhood

<table>
<thead>
<tr>
<th>Neighborhood Population</th>
<th>Playground Area 1000 persons</th>
<th>2000 persons</th>
<th>3000 persons</th>
<th>4000 persons</th>
<th>5000 persons</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>275 families</td>
<td>550 families</td>
<td>825 families</td>
<td>1100 families</td>
<td>1375 families</td>
</tr>
<tr>
<td>Acres: Total</td>
<td>2.75</td>
<td>3.25</td>
<td>4.00</td>
<td>5.00</td>
<td>6.00</td>
</tr>
<tr>
<td>Acre per 1,000 persons</td>
<td>2.75</td>
<td>1.63</td>
<td>1.33</td>
<td>1.25</td>
<td>1.20</td>
</tr>
<tr>
<td>Square feet per family</td>
<td>435</td>
<td>258</td>
<td>208</td>
<td>198</td>
<td>190</td>
</tr>
</tbody>
</table>

*Playground area per family as recommended by the National Recreation Association "Standards: Playgrounds, Playfields, Recreation Buildings, Indoor Recreation Facilities"
Thus the Lafayette Extension must provide a playground of at least five acres but not exceeding the recommended maximum of six acres.

Grass is of course the best general playing surface, because of its resiliency and esthetic qualities. However at points of continuous hard usage such as around swings and slides it will be difficult at best if not impossible to maintain and the provision of some other "Relatively safe surface which (is) easily maintained (such as) fine stone screenings on cinder foundation (settled and bound with calcium chloride)" is indicated. Such games as tennis and handball demand concrete or asphalt surfaces and must be provided as indicated but the general open green atmosphere of the general play space will predominate providing visually pleasant surroundings for participants, spectators and pedestrians alike.

"Some Childhood Memories of the City", a published report made by the Rockefeller Project provides some valuable thoughts on the concept of the playground.

"One of the interesting things...is that children seem to play anywhere but the playground. Some of the following comments will illustrate the feelings of many children. A boy from Jersey City played in the park near the bushes to get away from the playgrounds."

---

Planning the Neighborhood, Loc Cit., p. 48
"A girl remembers:

'We would rather play in the foliage. I think it represented a certain amount of mystery and imagination. You could invent things. Bushes sort of formed a clump surrounding an open space, and this can begin to mean something to you, such as a house.'

"Another person:

'Our idea, when I was 9 or 10 years old, was not to play on the playground but to find some place where there were rocks and broken bottles ... a lot of trees and holes to fall into.'

"In commenting on the extensive program of playground construction that took place in Manhattan under the direction of Robert Moses, one person said:

'I remember Riverside Park before it turned into ... developed areas. ... I remember there being a lot more space to play in. The big change, the big spurt of playground building had gone up. I was sort of pleased with having all these nice places to play in, the nice things that moved and worked, etc., but there simply wasn't enough space just to go and play in and do idiotic things in. You couldn't dig, for example; I like to dig. There weren't many places to dig because of the hard asphalt on the playground.'

"Another, in referring to where he used to play, said:

'Out in back was a big field where the grass was over your head. They have cut that down now and made a
playground out of it so it isn't as romantic.'

"Referring to some empty land, one person said:

'The land surrounding the school was sort of jungle--trees and brush growing up, very unkempt . . . it wasn't much outside but I remember we used to play there a lot and have a great time there.'

"One girl remembers:

'I really liked to play most of all in the back alleys. It was interesting. There were all kinds of doorways to go under. Very colorful place. I'd feel like an adventurer. That seemed to be the main place of activity for children . . . It was a wonderful place to hide, you see, because of all kinds of doors and passageways.'

The garage and garage area, so often the insoluble part of many architectural design problems, is usually remembered by the child with great affection. Children remember garage roofs as places to climb to and jump off from. Garages seem to have the importance of enclosed spaces without the accompanying authority of adult organization.

"These are positive statements and nowhere do we find them contradicted. A child's play is most satisfactory when it allows him the greatest opportunity to manipulate his environment according to his needs: to imagine, create and hide. A well-differentiated world, and one that is plastic to his hands and mind, is his desire. That is perhaps why
so many people remember with pleasure the overgrown lot, thick brush and woods. It is sufficient to give us pause in our treatment of 'waste' or 'untidy' areas, or in the design of play spaces. Naturally, as the child grows older, the type of organized activity he wants demands a different type of open space. In some of the interviews we find the conventional open playground, mentioned without any negative affect, but again not with any positive affect either. Most often it is in reference to the organized games of adolescence. 29

These comments lend support to the idea of providing a junk pile with old boards, dirt, rocks, etc. to allow the creativeness of the children to take some form. Bushes and just plain weeds seem also to be desired as they were in my own childhood when we would tiptoe in a zig-zag fashion into a open field of high weeds until we were somewhere in the middle and then stamp down the weeds to make a house. The above would indicate that the provision of such areas is vitally important in an overall plan for the play facilities of Lafayette.

The use of plantings may be required to screen off some of these areas from the view of pedestrians and for that matter the children may prefer to have them completely

29 Some Childhood Memories of the City, Loc. Cit., pp. 145
enclosed with plantings to give them a greater sense of privacy.

All of the above must be considered and included in Lafayette's playgrounds.
THE NEIGHBORHOOD PARK
When I stop and think about a neighborhood park it seems a million things rush into a quick focus in my mind and then disappear as quickly. What is a park? Why is a park? I ask myself. The first thing I think of is a walk, maybe paved, maybe cobblestone (cobblestone is an almost new work in my vocabulary) that is not straight as a taught string but curved, perhaps very sharply in some places. There is large shrubbery on both sides of the walk in some places and on some of the curved parts of the walk the shrubbery and various bushes line the sides for a distance enough to create an enclosure. To have grown so high these shrubs and bushes must have been planted several years ago. In some places the leaves or needles have not grown, who knows why, and as you walk along you can look into the bushes and see the gnarled roots and twisted branches that push the leaves ever closer to the sun. Grass does not grow here under the leaves because in their own struggle the leaves won't let much light come through. In other places the needles from some fir trees have piled up and you know what a soft carpet they make for you recall a walk you once had through a forest of fir where needles had fallen everywhere. Though there is little light in the dark recesses of the bushes and the firs and there are few places where you can see in you know it is a whole world for some animals or insect and you wonder what kind of a story the common sparrow could tell of things transpired on a dark branch somewhere inside.
Large trees spread their branches in a wide sweep overhead, creating shade ever changing with the certainty of a kaleidoscope. Of course the sun streams down uninterrupted over most of the open spaces but the walks are generally shady. If you are wheeling a carriage you may find a sunny spot where the baby can take advantage of the sunshine while you take advantage of the sound of quiet breathing to do one of the many things that only seem to be possible to do when that little one sleeps. If you are particularly fortunate you will find a bench a few feet back from the walk where you can sit in the shade and finish knitting the sleeve for that sweater you are making for Jim.

At another point the walk will have high greenery only on one side and a grassy open space will unfold on the left. You'll leave the walk with Billy and take a station in the center of the openness and ascertain which way the wind is blowing. Then move with the wind some distance and then bend down to your son and say "I think we ought to be able to get a kite into the air from here." "Ok Dad -- will you help me with this string?" Afterwhile you look up and see Mr. Andrews from two doors down, You scream "Look at my new kite." He nods and only smiles a reply for he is remembering.

And so it goes. The park is many things to many people. By its total greenness it is an area set apart and thus when you experience its multiplicity you are yourself set apart.
### Neighborhood Park Size

**Recommended Total Area, by Type of Development & Population of Neighborhood**

<table>
<thead>
<tr>
<th>Neighborhood Population</th>
<th>Type of Development</th>
<th>1000 persons</th>
<th>2000 persons</th>
<th>3000 persons</th>
<th>4000 persons</th>
<th>5000 persons</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>275 families</td>
<td>550 families</td>
<td>825 families</td>
<td>1100 families</td>
<td>1375 families</td>
<td></td>
</tr>
</tbody>
</table>

#### One- or Two-Family Development with private lot area per family of
- ½ acre or more
  - Park: no neighborhood requirement
- Less than ½ acre
  - Park: total acres
    - 1.50
  - Park: acres per 1000 persons
    - 1.50
  - Park: square feet per family
    - 238

#### Multi-family Development or other predominantly without private yards
- Park: total acres
  - 2.00
- Park: acres per 1000 persons
  - 2.00
- Park: square feet per family
  - 318

---

*a* Park areas as recommended by Committee on the Hygiene of Housing, APHA.

*b* Assumed: at least 600 sq. ft. of outdoor living space private to each family. Below this figure, use multi-family value.
THE COMMUNITY FACILITIES
If the inhabitants of the neighborhood constitute a social group, then there must be some form of interaction between them, otherwise they would merely be an aggregation.

Peter H. Mann
In order to provide recreational facilities for the Lafayette Extension the types of recreational activities the residents will pursue must first be determined.

Of all the activities the first that come to mind are basketball and swimming. These because they are, of the sports, the major indoor ones and require the largest, costliest spaces. Here the obvious solution is to combine the recreation facilities with the elementary school facilities so the gymnasium and swimming pool may serve both needs.

In fact, the elementary school curriculum is becoming more comprehensive each year. Today swimming instruction begins in the fourth grade as do gym classes. Instruction in sewing begins in the seventh grade. Chorus and Band practice are part of the life of the sub-teen. And so it goes. The progressive, modern elementary school educational facility, particularly the K-8 type, offers a curriculum with tremendous variety.

This offers further support to a scheme of dual use. Of course there are some activities such as wood-working, metal-shop and auto shop which would primarily be for recreational purposes as would lounges, a snack-bar and various administrative offices and meeting rooms.

A zoned arrangement along the lines of that shown below seems to offer the best combination of activities.
Such a scheme necessitates a very close cooperative arrangement between the school and the recreation department. In a study of administrative arrangements where cooperation had been achieved it was found that membership of school board member(s) on recreation boards and periodic joint meetings of school and recreation administrative staff members were by far the most common devices employed. This same study also found that, "the necessity of using buildings which were not planned for recreational use is by far the most common... cause of difficulty..." in planning a successful program.

The kinds of indoor school facilities used by the recreation authorities of 105 communities and the times when these facilities are used for recreation are tabulated on the following page.

As you notice the position of various facilities on the list you must realize that "...the figures...do not give a complete picture of the school facilities that are suitable and available for recreation in the cities reporting, nor do they represent all the facilities which the school authorities are willing to make available for community recreation use. They record primarily the facilities which the recreation departments have asked the school boards to turn over to them

* The National Recreation Association study made in 1950

<table>
<thead>
<tr>
<th>Facilities</th>
<th>Cities Reporting Uses</th>
<th>Number of Cities Reporting Use</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>During Wkdays</td>
</tr>
<tr>
<td>Gymnasiums</td>
<td>102</td>
<td>School</td>
</tr>
<tr>
<td></td>
<td></td>
<td>After eve-</td>
</tr>
<tr>
<td>Toilet rooms</td>
<td>94</td>
<td>School</td>
</tr>
<tr>
<td></td>
<td></td>
<td>sessions</td>
</tr>
<tr>
<td>Showers and lockers</td>
<td>86</td>
<td>Sat.</td>
</tr>
<tr>
<td>Auditoriums</td>
<td>78</td>
<td>Sun-</td>
</tr>
<tr>
<td>Playrooms</td>
<td>62</td>
<td>School</td>
</tr>
<tr>
<td>Classrooms -- other</td>
<td>41</td>
<td>Holi-</td>
</tr>
<tr>
<td>Hallways</td>
<td>37</td>
<td>School</td>
</tr>
<tr>
<td>Bulk storage space</td>
<td>34</td>
<td>School</td>
</tr>
<tr>
<td>Community rooms</td>
<td>32</td>
<td>Vacation</td>
</tr>
<tr>
<td>Conference rooms</td>
<td>28</td>
<td>days</td>
</tr>
<tr>
<td>Shops (industrial art)</td>
<td>26</td>
<td></td>
</tr>
<tr>
<td>Music rooms</td>
<td>24</td>
<td></td>
</tr>
<tr>
<td>Swimming pools</td>
<td>22</td>
<td></td>
</tr>
<tr>
<td>Cafeterias</td>
<td>22</td>
<td></td>
</tr>
<tr>
<td>Art rooms</td>
<td>17</td>
<td></td>
</tr>
<tr>
<td>Kindergartens</td>
<td>15</td>
<td></td>
</tr>
<tr>
<td>Craft workshops</td>
<td>15</td>
<td></td>
</tr>
<tr>
<td>Office space</td>
<td>13</td>
<td></td>
</tr>
<tr>
<td>Libraries</td>
<td>13</td>
<td></td>
</tr>
<tr>
<td>Sewing labs</td>
<td>13</td>
<td></td>
</tr>
<tr>
<td>Cooking labs</td>
<td>12</td>
<td></td>
</tr>
<tr>
<td>Drama workshops</td>
<td>11</td>
<td></td>
</tr>
<tr>
<td>Lounges</td>
<td>9</td>
<td></td>
</tr>
<tr>
<td>Rifle ranges</td>
<td>8</td>
<td></td>
</tr>
<tr>
<td>Science rooms</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>Photography labs</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>Teen club room</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Children's theater</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Totals</td>
<td>833</td>
<td>2989</td>
</tr>
</tbody>
</table>

SCHOOL FACILITIES USED FOR RECREATION BY TIMES OF USE (105 communities)
for their program. Ten recreation executives volunteered the information that any suitable rooms in the schools of their city would be made available to them upon request; several others who reported the use of only a few facilities stated that they had never asked the school board for permission to use others. A few reported that several types of school facilities in their city were being used for an adult education program. It is clear that recreation department funds, personnel and programs, rather than rulings of the school authorities, determine the nature and extent of the use of school buildings in many cities.32

Thus, with proper administrative planning a successful community-school recreation-educational program can be made available for Lafayette.

32 H. Clifton Hutchins, The Use of School Buildings for Recreation, Recreation Magazine, New York, New. 1950 (this footnote also includes chart on page 135)
THE SHOPPING FACILITIES
By travelling less than one mile east-northeast along the proposed Congress-Larned Boulevard which borders the site residents of Lafayette may avail themselves of an existing major neighborhood shopping center. (See proposed land use map on page 46) Complete with dime stores and specialty shops this center serves a large area of the lower east side of the city.

The two photographs mounted on the following page illustrate the general character and quality of the property facing the southern boundary of the site. It is virtually inconceivable that this area will not undergo a major physical change either in conjunction with the change in the Lafayette area or shortly thereafter. The Gratiot Project and the Lafayette Extension along with the neighboring St. Aubin Extension will provide residences for approximately 4,500 families.

This number of families will support a shopping center of considerable size themselves. The question is will the tremendously increased density cause an expansion and modernization of the existing shopping facility near the site? The city hopes so. Behind their redevelopment activities is a desire to boost the economy of such centers as the one near Lafayette as well as the economy of the heart of the city.

Thus, this thesis will assume that general shopping will be done at this existing center while the strip of commercially zoned land between Jefferson Avenue and the site will be occupied by perhaps a florist and a variety store, a package-goods store, a bar & grille and perhaps a small market.
looking east on present larned street

rivard street between larned and jefferson avenue
THE LIVING SPACE
Efficient planning may enhance the usability of limited space, but it cannot be a substitute for reasonable dimensions.
The living space requirements listed on the following pages are from "Planning the Home for Occupancy" by the APHA. They are based on the necessary areas required for satisfactory performance of ordinary household activities. As standards they may be considered high by some and low by others, as are all standards. By comparison to what is available in apartments today they are probably high. However, since minimum standards are so often the maximum obtainable these standards will be used here for design purposes in the hope that within a short time they will become the accepted standard in the face of even higher recommendations.
LIVING SPACE REQUIREMENTS FOR ONE PERSON

space for sleeping and dressing 74 sq. ft.
space for personal cleanliness 35 sq. ft.
space for food preparation 8 sq. ft.
space for serving food and dining 53 sq. ft.
space for family recreation & self improvement 125 sq. ft.
space for extra-familial association 17 sq. ft.
space for housekeeping activities 48 sq. ft.
space for laundering, drying & ironing 36 sq. ft.
circulation 20 sq. ft.

416 sq. ft.
**LIVING SPACE REQUIREMENTS FOR TWO PERSONS**

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Area (sq. ft)</th>
</tr>
</thead>
<tbody>
<tr>
<td>space for sleeping and dressing</td>
<td>148</td>
</tr>
<tr>
<td>space for personal cleanliness</td>
<td>35</td>
</tr>
<tr>
<td>space for food preparation</td>
<td>76</td>
</tr>
<tr>
<td>space for serving food and dining</td>
<td>44</td>
</tr>
<tr>
<td>space for family recreation &amp; self improvement</td>
<td>164</td>
</tr>
<tr>
<td>space for extra-familial association</td>
<td>17</td>
</tr>
<tr>
<td>space for housekeeping activities</td>
<td>91</td>
</tr>
<tr>
<td>space for laundering, drying &amp; ironing</td>
<td>48</td>
</tr>
<tr>
<td>circulation</td>
<td>20</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>643</strong></td>
</tr>
</tbody>
</table>
LIVING SPACE REQUIREMENTS FOR THREE PERSONS

<table>
<thead>
<tr>
<th>Space</th>
<th>High-Rise - 3 persons</th>
<th>Low-Rise - 3 persons</th>
</tr>
</thead>
<tbody>
<tr>
<td>space for sleeping &amp; dressing</td>
<td>148 sq. ft.</td>
<td>1054 sq. ft.</td>
</tr>
<tr>
<td>space for care of the infant</td>
<td>124 sq. ft.*</td>
<td></td>
</tr>
<tr>
<td>space for personal cleanliness</td>
<td>35 sq. ft.</td>
<td></td>
</tr>
<tr>
<td>space for food preparation</td>
<td>97 sq. ft.</td>
<td></td>
</tr>
<tr>
<td>space for serving food &amp; dining</td>
<td>91 sq. ft.</td>
<td></td>
</tr>
<tr>
<td>space for family recreation &amp; self improvement</td>
<td>221 sq. ft.</td>
<td></td>
</tr>
<tr>
<td>space for extra-familial association</td>
<td>34 sq. ft.</td>
<td></td>
</tr>
<tr>
<td>space for housekeeping activities</td>
<td>110 sq. ft.</td>
<td></td>
</tr>
<tr>
<td>space for laundering, drying &amp; ironing</td>
<td>65 sq. ft.</td>
<td></td>
</tr>
<tr>
<td>circulation</td>
<td>45 sq. ft.</td>
<td></td>
</tr>
<tr>
<td>space for operation of utilities</td>
<td>20 sq. ft.</td>
<td></td>
</tr>
<tr>
<td>space for household repairs &amp; hobbies</td>
<td>42 sq. ft.</td>
<td></td>
</tr>
<tr>
<td>space for circulation, two-story</td>
<td>32 sq. ft.</td>
<td></td>
</tr>
</tbody>
</table>

* subtract 50 sq. ft. when infant gets a little older APHA gives 74 sq. ft. per person for sleeping. All families assumed to have 1 infant.
LIVING SPACE REQUIREMENTS FOR FOUR PERSONS

space for sleeping & dressing 222 sq. ft.
space for care of the infant 124 sq. ft.
space for personal cleanliness 35 sq. ft.
space for food preparation 97 sq. ft.
space for serving food & dining 105 sq. ft.
space for family recreation & self improvement 286 sq. ft.
space for extra-familial association 34 sq. ft.
space for housekeeping activities 127 sq. ft.
space for laundering, drying & ironing 80 sq. ft.
circulation 35 sq. ft.
space for operation of utilities 20 sq. ft.
space for household repairs & hobbies 42 sq. ft.
space for circulation, two-story 32 sq. ft.

1239 sq. ft.
LIVING SPACE REQUIREMENTS FOR FIVE PERSONS

<table>
<thead>
<tr>
<th>Activity</th>
<th>Space (sq. ft)</th>
</tr>
</thead>
<tbody>
<tr>
<td>space for sleeping &amp; dressing</td>
<td>296</td>
</tr>
<tr>
<td>space for care of the infant</td>
<td>124</td>
</tr>
<tr>
<td>space for personal cleanliness</td>
<td>70</td>
</tr>
<tr>
<td>space for food preparation</td>
<td>113</td>
</tr>
<tr>
<td>space for serving food &amp; dining</td>
<td>119</td>
</tr>
<tr>
<td>space for family recreation &amp; self improvement</td>
<td>357</td>
</tr>
<tr>
<td>space for extra-familial association</td>
<td>51</td>
</tr>
<tr>
<td>space for housekeeping activities</td>
<td>146</td>
</tr>
<tr>
<td>space for laundering, drying &amp; ironing</td>
<td>96</td>
</tr>
<tr>
<td>space for operation of utilities</td>
<td>20</td>
</tr>
<tr>
<td>circulation</td>
<td>45</td>
</tr>
<tr>
<td>space for household repairs &amp; hobbies</td>
<td>42</td>
</tr>
<tr>
<td>space for circulation, 2-story</td>
<td>32</td>
</tr>
</tbody>
</table>

**Total:** 1516 sq. ft.
LIVING SPACE REQUIREMENTS FOR SIX PERSONS

space for sleeping & dressing 370 sq. ft.
space for care of the infant 124 sq. ft.
space for personal cleanliness 70 sq. ft.
space for food preparation 118 sq. ft.
space for serving food & dining 146 sq. ft.
space for family recreation & self improvement 383 sq. ft.
space for extra-familial association 51 sq. ft.
space for housekeeping activities 149 sq. ft.
space for laundering, drying & ironing 112 sq. ft.
circulation 45 sq. ft.
space for operation of utilities 20 sq. ft.
space for household repairs & hobbies 42 sq. ft.
space for circulation, two-story 32 sq. ft.

1568 sq. ft.
THE PROGRAM
1100 apartments

550 high-rise

550 low-rise with yards

480 pupil elementary school

2.2 acre site

nursery schools for a total of 114 pupils

8 acre park

5.5 acre playground

9 acre park
FINANCE
On July 15, 1949 President Truman signed the Housing Act of 1949, which made available $1,000,000,000 in Federal loans and $500,000,000 in capital grants to help communities acquire and clear their slums and sell or lease the land to private developers for rebuilding.

Detroit had a head start over many cities in being ready to take advantage of these aids. On November 18, 1946 the then Mayor Edward J. Jeffries, Jr. announced the "Detroit Plan", now commonly referred to as the "Gratiot Project ", which proposed that the City acquire the 128 acre tract of land north of the Lafayette Extension. Present Mayor Albert E. Cobo, then City Treasurer, pioneered this plan some years earlier.

Condemnation proceedings on the first forty acres of the site were started as early as February, 1947 but were stopped by a taxpayers' suit in November. A year later the State Supreme Court ruled in favor of the City and the proceedings were resumed in March, 1949. A petition for the condemnation of the balance of the site was filed in Recorder's Court in June, 1949. Subsequently the entire site was acquired, cleared and prepared for rebuilding. The Housing Act of 1949 made it possible for the City to secure a Federal grant covering two-thirds of the net cost incurred in making the land available to private developers.

The original "Detroit Plan" was published in pamphlet form by the Detroit City Plan Commission sometime in 1949.
Builder interest however was anything but enthusiastic. Meanwhile the cleared land laid idle.

Eventually the Citizen's Redevelopment Committee was formed by various leaders on the Detroit scene including Walter Reuther, the president of the United Automobile Workers, Foster Winter of the J. L. Hudson Co., Banker Walter Gehrke, Broker Walter J. Gessell, and executives from all the large auto producers. Drawn together to promote redevelopment of the City the Committee felt, in the words of Mr. Reuther, that "...Detroit must demonstrate to itself and the world that we have the will and good sense to apply our productive know-how to this problem."\(^{33}\)

The Citizen's Committee is designed to serve as a form of middleman-client. They will buy cleared land ready for rebuilding from the City, hire an architect, agree on a design, and select a contractor. When the construction is finished the contractor will buy the land from the Committee and will then be in the apartment house business as well as the contracting business. Thus the builder in essence will be a co-developer with the Citizens Redevelopment Committee.

In March, 1956 the Committee had raised over \$400,000 (including \$30,000 from Ford and \$50,000 from Chrysler) with which to purchase land. It also has authority to issue debentures for any more funds it might require. The present

---

\(^{33}\) Architectural Forum, "Redevelopment f.o.b. Detroit", March, 1955, page 118
goal of the Committee is to set up an operating corporation with $1 million in capital half contributed and half raised by the short-term debentures.

The first 50 acres of the Gratiot Project will cost a total of nearly $950,000 or almost $20,000 per acre. Federal aid brought the price of the entire 128 acre plot down from $60,000 per acre. The Committee plans to invest only part of their cash in land by buying acreage a section at a time and setting up an installment payment plan with the city. As each building was completed the contractor-co-developer would make full payment to the corporation for the land it occupied. In this manner the Committee can retain control over the redevelopment, enforce an over-all design and at the finish of the redevelopment have all of their investment returned.

Thus a revolving fund will be in operation to finance redevelopment of other areas in the city. It is in this way that the Lafayette Extension will be redeveloped as well as the neighboring St. Aubin Extension. As the completion of the Gratiot project nears the Committee will be able to continue its land purchases in the area of the Lafayette Extension. Also as the Committee buys the cleared Gratiot Project land the city will have funds with which to pay its share of the costs of clearance of the condemned Lafayette acreage.

In fact the realization of the Lafayette Extension redevelopment is not too far ahead. A few months ago ground
breaking ceremonies were held at the Gratiot Project preliminary to the beginning of construction of its first apartment building, part of an over-all design by Ludwig Mies van der Rohe. The 22-story building will contain 340 air-conditioned apartments and be the forerunner of five like "towers". Also the project will contain one and two story town-houses with interwoven landscaped green areas and an 18 acre plaisance running through its heart.

The co-developers of the project with the Committee are two Chicago builders, Herbert S. Greenwald and Samuel N. Katzin. They expect that the project will take three to four years to complete.

Rentals for the Gratiot project will range from $80 per month for an efficiency apartment up to $200 per month for some two-bedroom units. The tower apartments will be available on this rental basis only but the town houses will be available on a rental, co-operative or outright purchase basis. A similar arrangement will be provided for the Lafayette Extension.

Thus with the Gratiot Project underway it can be hoped that construction on the Lafayette Extension will begin sometime in 1960. With almost ten years of preliminary efforts invested in the redevelopment of just one area it can further be hoped that the built up momentum will be reinforced by a continuous redevelopment program encompassing many other virtually equally blighted areas of the city.
A statement of the overall financial facts and figures projected for the development of the Lafayette Extension follows:

Estimated Cost to the City for Redevelopment of the Lafayette Extension

Estimated gross cost to the City of Detroit of acquiring, clearing and preparing the site for rebuilding:

- 45 acres @ $60,000/acre

2,700,000

Estimated proceeds from sale or lease of the site at "fair value"

540,000

Estimated net loss to the city

2,160,000

Estimated Federal grant-in-aid under the Housing Act of 1949

1,440,000

Estimated City contribution - can be in cash or in site improvements, schools, playgrounds, etc.

720,000

Estimated Increased Tax Revenue

Present Tax Revenue

Assessed value (approximate)

1,237,500

Tax rate, 1955-56, city county

43,609

Revenue per year

53,966

Estimated Future Tax Revenue

Assessed value, 1100 dwelling units @ $10,000

11,000,000

Revenue per year

479,700

Estimated increase in Tax Revenue per year

425,734
Using the figures from the preceding page and assuming that the City will fail to receive its present income from the site of $53,966 per year for a period of five years the total cost to the city for redeveloping the site will be

\[
\text{720,000 site cost} \\
5 \times 53,966 = 269,830 \text{ tax loss} \\
$989,830
\]

or approximately 1 million dollars. With an increase in revenue of $25,734 per year it will take approximately 2.5 years for the city to recover their investment other things remaining equal. If construction begins in 1960 and is completed in 1965 the city will begin to realize a profit in 1968.
Facts and figures for the text of this section have been obtained from the following sources:

"Detroit Plan, A Private Enterprise Redevelopment Project"
Detroit Housing Commission, Detroit

Architectural Forum, "Redevelopment f.o.b. Detroit"
March 1955, p. 117-121

Architectural Forum, March 1956, page 9
MISSING PAGE(S)

Pages 158-168 are missing from this document, however it appears to be a pagination error by the author.
THE LAW
EXCERPTS FROM PUBLIC LAW 171, 81st CONGRESS---THE HOUSING ACT OF 1949

Sec. 2. Congress hereby declares that the general welfare and security of the Nation and the health and living standards of its people require housing production and related community development sufficient to remedy the serious housing shortage, the elimination of substandard and other inadequate housing through the clearance of slums and blighted areas, and the realization as soon as feasible of the goal of a decent home and a suitable living environment for every American family, thus contributing to the development and redevelopment of communities and to the advancement of the growth, wealth and security of the Nation.

Sec. 102(a). To assist local communities in eliminating their slums and blighted areas and in providing maximum opportunity for the redevelopment of project areas by private enterprise, the Administrator may make temporary and definitive loans to local public agencies for the undertaking of projects for the assembly, clearance, preparation and sale of land for redevelopment.

Sec. 103(a). The Administrator may make capital grants to local public agencies to enable such agencies to make land in project areas available for redevelopment at its fair value for the uses specified in the redevelopment plans.

Sec. 105. Contracts for financial aid shall be made only with
a duly authorized local public agency and shall require that:

(a) The redevelopment plan for the project area be approved by the governing body of the locality in which the project is situated and that such approval include findings by the governing body that

(1) the financial aid to be provided in the contract is necessary to enable the land in the project area to be redeveloped in accordance with the redevelopment plan;

(2) the redevelopment plans for the redevelopment areas in the locality will afford maximum opportunity, consistent with the sound needs of the locality as a whole, for the redevelopment of such areas by private enterprise; and

(3) the redevelopment plan conforms to a general plan for the development of the locality as a whole

(b) When land acquired or held by the local public agency in connection with the project is sold or leased, the purchasers or lessees shall be obligated:

(1) to devote such land to the uses specified in the redevelopment plan for the project area;

(2) to begin the building of their improvements on such land within a reasonable time; and

(3) to comply with such other conditions as the Administrator finds, prior to the execution of the contract for loan or capital grand pursuant to this
title, are necessary to carry out the purposes of this title.

(c) There be a feasible method for the temporary relocation of families displaced from the project area, and that there are or are being provided, in the project area or in other areas not generally less desirable with regard to public utilities and public and commercial facilities and at rents and prices within the financial means of the families displaced from the project area, decent, safe, and sanitary dwellings equal in number to the number of and available to such displaced families and reasonable accessible to their places of employment: Provided, that in view of the existing acute housing shortage, each such contract entered into prior to July 1, 1951, shall further provide that there be no demolition of residential structures in connection with the project assisted under the contract prior to July 1, 1951, if the local governing body determines that the demolition thereof would reasonably be expected to create undue housing hardship in the locality.

(d) No land for any project to be assisted under this title shall be acquired by the local public agency except after public hearing following notice of the date, time, place and purpose of such hearing.

Sec. 110. The following terms shall have the meaning respectively ascribed to them below:

(b) "Redevelopment plan" means a plan, as it exists from
time to time, for the development or redevelopment of a re-
development or project area, which plan shall be sufficiently
complete

(1) to indicate its relationship to definite local ob-
jectives as to appropriate land uses and improved
traffic, public transportation, public utilities, re-
creational and community facilities, and other
public improvements.
(2) to indicate purposed land uses and building require-
ments in the project area.
(c) "Project" may include:
(1) acquisition of...a slum area or a deteriorated or
deteriorating area which is predominantly residential
in character, or...any other deteriorated or deter-
iorating area which is to be developed or redeveloped
for predominately residential uses...
(2) demolition and removal of buildings and improvements;
(3) installation, construction or reconstruction of
streets, utilities, and other site improvements
essential to the preparation of site for uses in
accordance with the redevelopment plan;
(4) making the land available for development or re-
development by private enterprise or public agencies
(including sale, initial, leasing, or retention by
the public agency itself) at its fair value for uses
in accordance with the redevelopment plan.
For the purposes of this title, the term "project" shall not include the construction of any of the buildings contemplated by the redevelopment plan.
THE SOLUTION
The final arrangement of the site plan recognizes the basic differences in the requirements of families with children and groups of adults.

Grouped at the east side of the site are individual and duplex dwelling units each with private, enclosed rear yard. These houses are two-story, three-bedroom units with attached garages and semi-enclosed front yards.

The rear yards of groups of ten houses have gates which open onto play yards equipped with swings and a sand box and a paved area for wheeled toys. The thinking here is that the very small child may play with blocks in the rear yard are even the front yard for that matter. As the child progresses in age and begins to play on a tricycle and other larger toys its play space will become the yard beyond the house. Here communication with other children may abound. Older children will play their more organized games on the main playground provided for use in conjunction with the combined elementary school community center.

The large yard is also available for picnics and croquet should the families be so inclined. To promote the possibilities of some form of loosely organized groupings occurring the yards may be maintained by the ten families that use them and get-together-to-clean-up-the yard days might be instituted.

The tower apartments are situated on the west side of the site, the side nearer the city and expressway. They are arranged in two twenty-four story towers and include efficiency
units are intended for one person and have pullman type kitchens, sleeping alcoves and small balconies. The one bedroom units are similarly arranged but on a slightly larger scale. The apartments designed for three and four persons are somewhat larger, offering full kitchen, two bedrooms and larger balcony areas.

The elementary school and community building are located approximately in the place occupied by the old school. The location tends to provide a culmination for the park development of the site which continues from the plaisance of the Gratiot Project while still allowing the park to flow around it. The playground is adjacent to the school and extends to the western boundary.
BIBLIOGRAPHY


American Public Health Association, Committee on the Hygiene of Housing, Planning the Home for Occupancy, R.R. Donnelley & Sons Company, Chicago, 1950

American Public Health Association, Committee on the Hygiene of Housing, Planning the Neighborhood, R.R. Donnelley & Sons Company, Chicago, 1945

Architectural Forum, March, 1956

Architectural Forum, Planned Neighborhoods for 194X, October, 1943


Butler, George D., Standards for Municipal Recreation Areas, Reprinted from Recreation Magazine, New York, 1948

Dahir, James, Communities for Better Living, Harper & Bros., New York, 1950

Detroit City Plan Commission, Planning Detroit 1953-55, Text by Merle Henrickson, Detroit, 1955

Detroit Housing Commission, Detroit Plan, A Private Enterprise Redevelopment Project, Detroit, circa 1950

Detroit Metropolitan Area Regional Planning Commission, Home Location Pattern of Industrial Workers in the Detroit Region, Detroit, 1955

Fischer, Victor, et. al, A Redevelopment Study in the Lower East Side, Massachusetts Institute of Technology, Cambridge, 1950


Hoiberg, Otto G., Exploring the Small Community, University of Nebraska Press, 1955

Loge, Gordon, The Urban Scene, Faber & Faber, Ltd., London circa 1954

Lynch, Kevin & Lukashok, Alvin K., "Some Childhood Memories of the City", Journal of the American Institute of Planners, Summer 1956


National Playing Fields Association, Playgrounds for Blocks of Flats, London, 1953

Perry, Clarence A., Housing for the Machine Age, Russell Sage Foundation, New York, 1939

Progressive Architecture, May, 1955

Progressive Architecture, August, 1955

Simey, Prof. T.S., Editor, Neighborhood and Community, Social Research Series, University Press of Liverpool, 1954

Straus, Nathan, The Seven Myths of Housing, Alfred A. Knopf, New York, 1944


Wallace, Anthony F.C., Housing & Social Structure, Philadelphia Housing Authority, 1952

Weimer, Betty L., Projection of Public School Enrollments in the Detroit Region by Grade, 1950 through 1970, Detroit Metropolitan Area Regional Planning Commission, Detroit, 1951

Whittlesey, Julian, "New Dimensions in Housing Design", Progressive Architecture, April, 1951