ANALYTIC FIELD STUDY OF THE ELEMENT OF HOUSING STRUCTURE IN SANDY HILL AND ITS ADJACENT AREAS OF OTTAWA

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CURRICULUM STUDIORUM

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PREFACE

This thesis is a study on urban geography from an angle which is now so much neglected by the geographers who are interested in the branch of urban geography. Ottawa, the capital of Canada, can be studied from any aspect by the economist, historian, sociologist as well as geographer in accordance with their aims and interests. But it seems that, up to the present, little attention has been drawn on the topic of urban habitat of this City.

This thesis focuses on the structural element of the house as a living space, and as the cell of the urban habitat. Sandy Hill and its adjacent areas, in which this study is confined, is the densest and populated portion in this City. This study, with the supporting data, is an attempt to prove the problems of house existed in this area; and these problems are expected to be of interest to the researchers who are engaged to study the urban geography of this City.

The scope of this thesis is to study every house in this specific area by means of checking their structural elements point by point. Data appeared in this thesis are all collected through the author's laborious work from house to house in several months. It must be pointed out that this study represents only a small tract of the City

of Ottawa and the author believes that if the remaining part of this City would be studied by the other geographers, it may contribute not only to the study of urban geography of this City, but also to the planning of the future national capital city.

Finally, the author wishes to express her deepest gratitude to her adviser, Professor Bogdan Zaborski, from whom she is inspired to choose this topic for research, and without his valuable experience, thoughtfulness and inexhausive instruction throughout, this thesis could never be done.

INTRODUCTION

Urban geographers approach the study of cities by various means. Some of them are interested in the physical structure of the city, such as the forms and the functions of the buildings, and the layout of streets and railroads, while the others may focus their study on examining the existing phenomena to seek out the origin and then forecast the future development. Also they stress on the functions of the city and attempt to find out the functions which affect the growing and shrinking of the city. This thesis is to study Sandy Hill and its adjacent areas from the geographer's point of view, by means of analyzing the elements of housing structure.

Ottawa becomes the capital of the Dominion of Canada since 1867. Even the North American countries are customarily not to choose the biggest cities to be their capitals, Ottawa is far behind the standard of a giant city. Sandy Hill and its adjacent areas, the core and the densest area of the city, is perhaps a typical example of the substandard condition. In this area, the houses for commercial purpose are mainly small in size, old in epoch of building, and can only be used for small stores. As for the residential area, half of the houses are old, small and some are even in poor condition.

In order to give evidence to prove its substandard condition, the most representative elements of housing structure are selected for analysis in this thesis. These elements deal not only with the physical structure, but also with the environment, epoch, architectural style and function as well.

In discussing the physical structure, such elements as building material, number of stories, chimney, attic window and additional structure, verandah and balcony, outer stairs, additional attached house and parking space or garage, are employed for analysis.

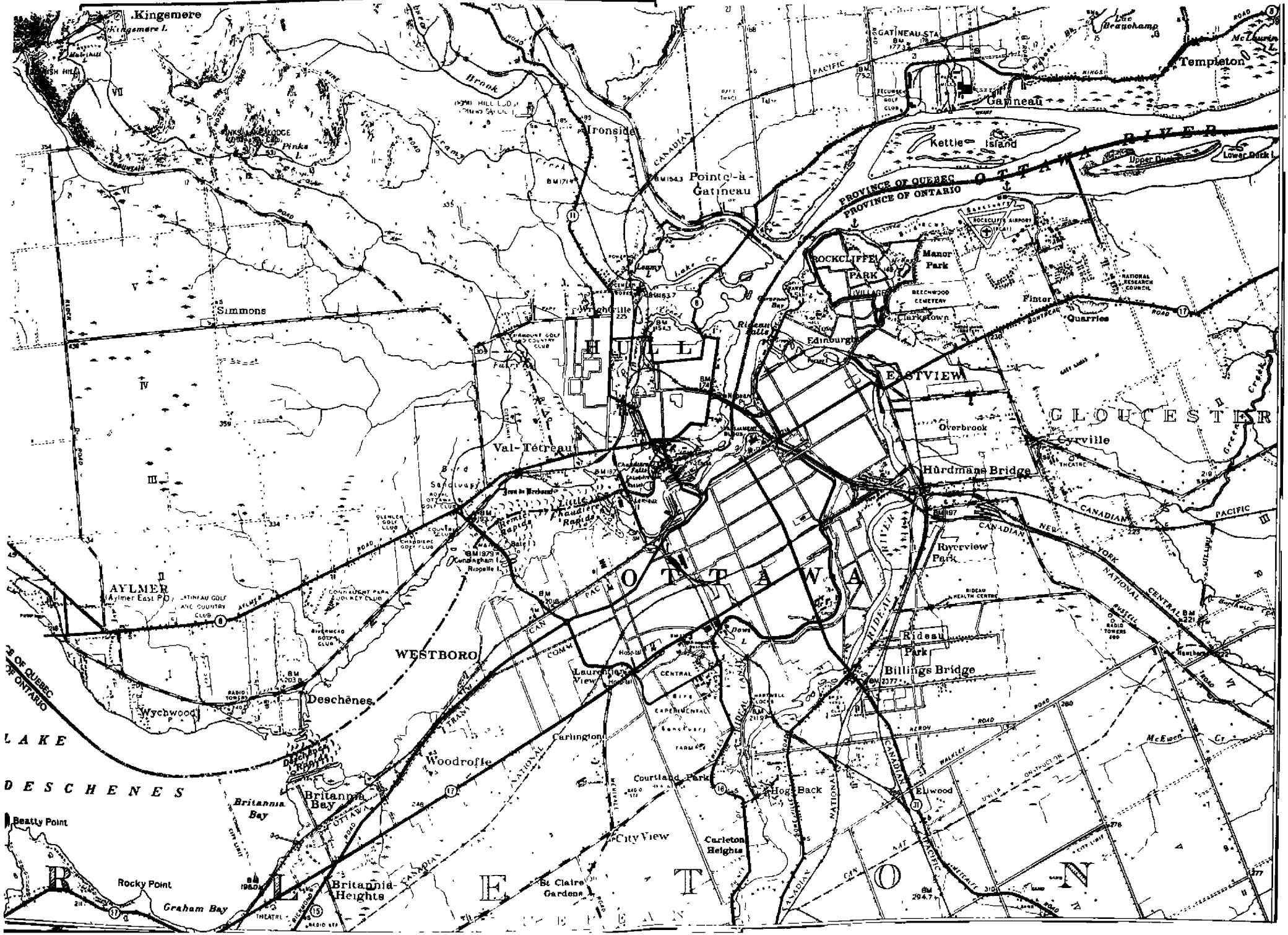
In judging the environment, elements like the distance from house to street, type of garden, and type of fence are selected for analysis.

Type of roof and position of house with regard to other houses in immediate neighbourhood (whether the house is single detached, semi-detached or attached) are the elements to be studied in connection with the architectural style. The functions of buildings and the classification of such functions are done in accordance with their uses.

The main body of this thesis is the analysis of elements and for the better understanding of the background of this area. A chapter is added to give a concise knowledge of its physical setting and historical development.

INTRODUCTION

The chapter which deals with methodology is a practical experience of data recording and analyzing. These data are of inestimable value not only in the thesis itself, but also in other related studies and city planning.



CHAPTER I

LOCATION, PHYSICAL SETTING, AND HISTORICAL DEVELOPMENT

Location: Greater Ottawa includes the metropolitan area of the city of Ottawa, the urban municipalities of Eastview and Rockcliffe Park in Ontario, and Hull, Aylmer, Deschenes, Gatineau-Pointe-a-Gatineau and Templeton in Quebec, and adjoining parts of rural townships. The total area can be seen in the following map.

Figure 1. Topographic map of Ottawa

Source: Department of Mines and Technical Survey, Ottawa-Gatineau District, 1953

LOCATION, PHYSICAL SETTING, AND HISTORICAL DEVELOPMENT

Sandy Hill and the adjacent area lie in the East-Central portion of the Greater Ottawa. They occupy approximately the upper half of Ottawa East. Within this area, the northern limit is bound by the Ottawa River, the western boundary follows the Rideau Canal while the eastern limit reaches the Rideau River. They all are well defined boundaries, only the southern boundary corresponds roughly with the C.P.R. railroad. The area is shown on Figure 2.

Figure 2. Road map of Sandy Hill and its adjacent areas

Source: Department of Planning and Works, The City of Ottawa, 1963

Physical setting: Ottawa is a city of rivers. It is located near the confluence of three rivers. Gatineau flows from the north, Rideau from the south; and it is just situated on the south bank of the Ottawa River.

Topographically, Ottawa is within the St. Lawrence lowland region. It is a depression between the Canadian shield on the west and northwest, the Appalachian on the east and northeast; while the southwest is bound by the Frontenac axis, a continuation of the shield.

The soil of the Ottawa clay plain is quite fertile. The critical element for making a desirable agricultural area is the short growing season, so that many middle latitude crops cannot be planted. The area surrounding the city also acts as a dairy region to serve the need of the city. Today, even the densely covered forest has been partly removed for the built-up area, timber trade still plays a significant role in the development of the city.

In Ottawa, the land form is relatively flat, almost nowhere rises above 500 feet. The city was built upon the hills about 60 to 155 feet along the south bank of the Ottawa River and commanding a fine, panoramic view in places.

Originally, the whole area of the city was covered by a dense forest interspersed with cedar swamps and beaver meadows. The appearance of the city is depicted by Ross in

his Ottawa Past and Present as:

> ..."Lower Town" and "Ottawa East" consisted of dense cedar swamps and muskegs; deer roamed through the open woods of "Sandy Hill"; and the region extending from Albert Street southward to the Rideau River was occupied by fever-breeding swamps. A map drawn by Thomas Burrowes shows that this great swampy area was drained by four creeks flowing into the Rideau River. The largest started just west of the present Exhibition Grounds, meandered northward to the southern end of King Edward Avenue (where it was joined by "Patterson's Creek"), and then flowed eastward to the Rideau River near Hurdman's Bridge. Another large creek started near the corner of Bay Street and Laurier Avenue West, flowed in the vicinity of Slater Street to the Canal Basin, ran across "Lower Town," and entered the Rideau River at the eastern end of Walter Street. From the corner of King Edward Avenue and Stewart Street a small creek flowed southeastward to the corner of Somerset and Nelson Streets, and thence eastward to the Rideau River at the eastern end of Somerset Street.[1]

Historical development: In order to study the original environment and the latter development of this area, attention is hereby paid to the brief history of Ottawa. In the following study, stress is placed on the

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1 Ross, A.H.D., Ottawa; Past and Present, Thorburn & Abbott, 1927, p.94.

elements affecting the early settlement, the later utilization, adaptation, formation and expansion. This retrospect is, however, a proper approach to understand its present status.

The history of the urban development of Ottawa is quite short in comparison with other big cities. It can be studied by the following stages:

The Indian Period

The earliest inhabitants in Ottawa were Indians. Their imprint can be traced by the place names. The name "Ottawa" is derived from an Indian word, but its original meaning is still controversial. According to Lucien Brault's thorough study:

> Ottawa is said to be the name of an Algonquin Indian Tribe that once lived on Manitoulin Island, in Georgian. ...Some authors argue that the word∞#∞ means those who have ears because these Indians were remarkable for their extraordinarily large or small ears. ... Other authorities claim that the word means dealers. As a matter of fact, these Indians were mostly engaged in the fur trade as middle-men between Indian tribes. It is also believed that it means people from the forest. This name would seem to have been given to this type of Indian by Algonquins who saw them coming out of the wilderness to trade.[2]

2 Brault, Lucien, Ottawa Old & New, Ottawa Historical Information Institute, 1946. p.17-18.

No matter what the meaning of the word would be, all the explanations are related to the Indians.

As for the functions of these three rivers, Ottawa was a logical market place of the Indian tribes. They were the tribes sparsely scattered over the place, and rivers and lakes were their highways. Since the natural waterways were interrupted everywhere by rapids and waterfalls, the primitive Indian canoe which was convenient and easy to carry provided a marvellous means of travel and conveyance in these circumstances and ways of life.

The Indians were predominately hunters. Competition for hunting grounds caused many battles. Evidence can be found through the unearthened arrows, knives and skeletons from the Indian camping grounds.

Although no detailed history can be traced, however, one can conclude that the earliest stage of the history of Ottawa was the history of several Indian tribes.

The Early Exploration Period

Sammuel de Champlain was the first important European to visit this area in 1613, but he was not the first to discover this place. Preceding him, Etienne Brule had visited the mouth of the Rideau River. Some years later, Nicolas de Vignau made his way up to Ottawa River. Champlain came to

the Ottawa River not only as a discoverer and explorer, but also as the Royal cartographer to the King of France. He translated the Indian name Asticou to Chaudiere, and named the Rideau River.

Later, the Ottawa River continued to be the route of the voyageurs; and fur trade dominated its life for almost two centuries.

The true settlement of the Ottawa district began in 1800 when Philemon Wright, a New Englander, brought a party of twenty five men and their families from Massachusetts, settled at the site of Hull on the north side of the river. In 1807, he took the first timber trade down the river to Quebec, and so pioneered the timber industry.

The settlement on the south bank of the Ottawa River followed some years later. It was first occupied by Ira Honeywell in Nepean township in 1811, then by Bradish Bulings (son of Boston immigrant) in Gloucester township in 1812; and Wellington and Lyon Streets were originally the possession of John Burrow Henry who got it in 1817. Nicholas Spark bought the estate which is now the heart of the City of Ottawa.

FROM BYTOWN TO OTTAWA

The further development of Ottawa begins with the construction of Rideau Canal by Colonel John By in 1827.

He was appointed to be in charge of the construction of the Rideau Canal by the Imperial Government on April 21, 1826. Since the war between Great Britain and the United States occurred in 1812-1815, Great Britain was awared of a further threat. For defensive purposes, she had to construct a more secure route which would keep away from being too close to the United States as that of the St. Lawrence.

By the time Colonel John By arrived at the south bank of the Ottawa River, he found only one stone house, three houses made of square timber, some log cabins and two shops in the Nepean township. Most of the area was untouched forests, swamps and beaver meadow which dominated the natural scenery.

When the construction was begun, the whole place was suddenly crowded with Royal engineers, labourers, tradesmen, and a considerable number of their families. The plan of development in the town was laid out; and the construction of Rideau Canal stimulated the coming into existence of Upper Town and Lower Town.[3] Between these two towns, the construction camps were located along the banks of the Canal.

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3 "Upper Town" extending from what is now Bank Street west towards Richmond Landing, and as far south as the present Wellington Street. "Lower Town" was at first bound by Murray Street, the Rideau River, Rideau Street and Sussex Street.

The number of population increased rapidly within the construction period. But, with the completion of the work, most of the workers and their families sought other employment elsewhere. As a result, population figure dropped accordingly.

With the advantage of Rideau Canal as well as the back-up of the natural wealth of forestry, Ottawa gradually became a commercial and industrial town of some importance.

By 1850, Ottawa was incorporated as a town. In 1853, with the rapid increasing population and wealth, it was erected into a city and named Ottawa. Wilfrid Eggleston, in his recent book, The Queen's Choice, has the following description about Ottawa at that period:

> Ottawa was a thriving saw-mill town, a market town for farmers and lumbermen, a site of important water power, a communication centre of some promise, an urban community of about ten thousand people.[4]

The union of two Canadas in 1840 created the necessity of choosing a proper site for the capital of the union. Since Quebec City was too far east and Toronto was too far west, Queen Victoria's decision that Ottawa should

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4 Eggleston, Wilfrid, The Queen's Choice, Ottawa, Queen's Printer, 1961, p.28.

be chosen to be the capital of Canada was perhaps the only fair compromise. Said Sir Edmound:

> With the exception of Ottawa, every one of the cities proposed is an object of jealousy to each of the others, Ottawa is, in fact, neither in Upper nor Lower Canada. Literally it is in the former; but a bridge alone divides it from the latter. Consequently its selection would fulfil the latter of any pledge given or supposed to be given, to Upper Canada at the time of the Union. The population at present is partly French, English and Irish. The settlement of the valley of the Ottawa is rapidly increasing, and will be at once stimulated by making it the capital.5

Ottawa in the Present Stage

After Ottawa was chosen to be the capital, it then becomes the architectural, social, political and cultural center of Canada. The immediate result is the rapid increase of buildings and population. However, the development was relatively slow until the Ottawa Improvement Commission began its work in 1899. The main task of this Commission was to clear up the bank of Rideau Canal, turn the west verges into a pleasant driveway, convert King Edward Avenue

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5 Eggleston, Wilfrid, The Queen's Choice, Ottawa, Queen's Printer, 1961, p.102.

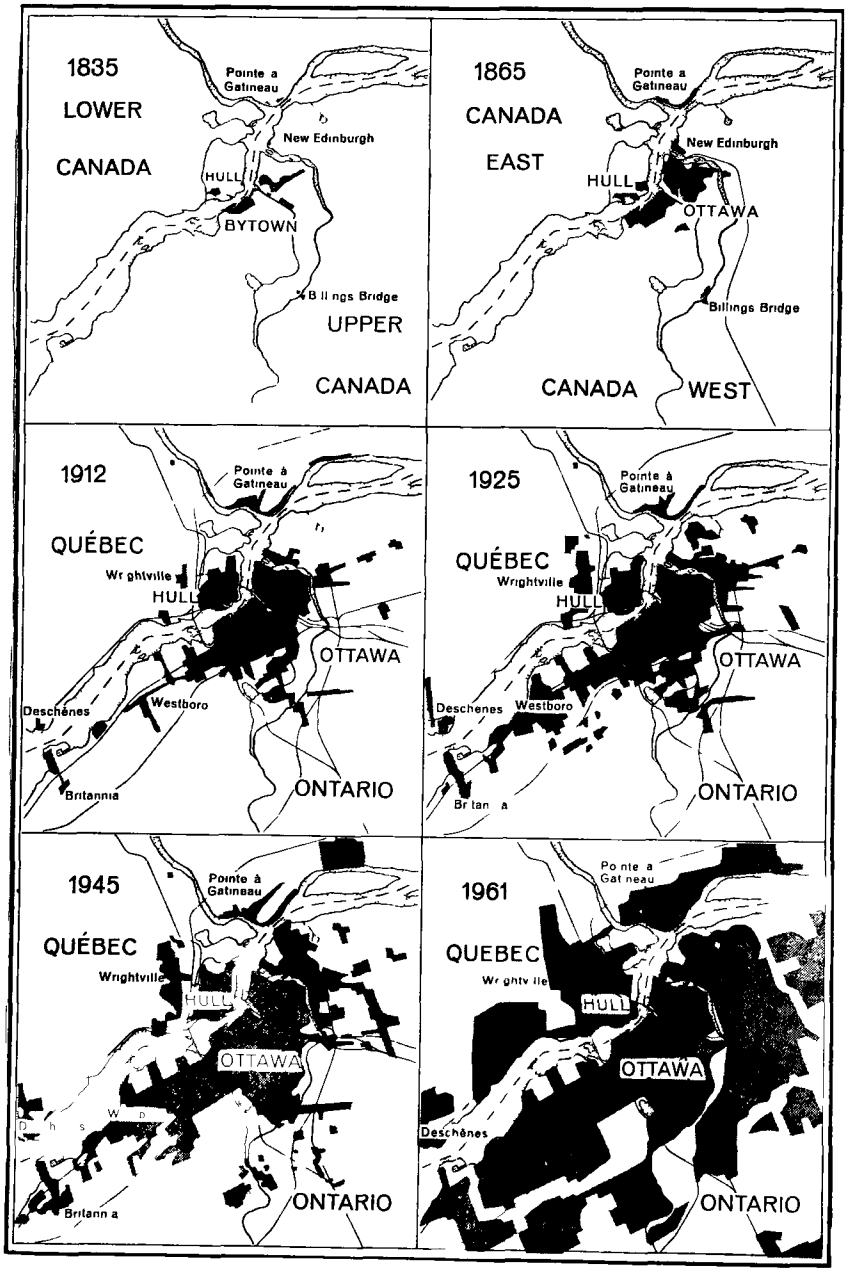
into a boulevard, and initiate the first-stage planning of Rockcliffe Park. Since the Commission was a voluntary body, it lacked a landscape architect or professional planner and also available funds are so often proved insufficient. In 1927, the Commission was reconstituted as the Federal District Commission with broadened powers.

After the Second World War, Ottawa has still retained its importance as a center of timber industries of the valley and of the hydro-electric industry developed in connection with them. Thereafter, the Federal Government adopted a long-range program for the development of the national capital in co-operation with the municipal government. The main efforts are directed to the removal of the railroads from the heart of the city and the decentralization of government buildings for unforeseeable needs.

With the rapid increase of population and the erection of new houses, Sandy Hill and its adjacent areas remain one of the Ottawa's oldest residential area where the University of Ottawa and most foreign diplomatic offices are located. At the present stage, it tends to be the densest populated area in the City of Ottawa.

In summing up the historical development of Ottawa, the following figures give an excellent account of the growth of Greater Ottawa.

Figure 3. The growth of the Ottawa-Hull urban region



Source: Eggleston, Wilfrid, The Queen's Choice, p.210.

CHAPTER II

METHODOLOGY

This chapter deals with the procedure and technique of the research method applied to this thesis. It should be noted that the factual information is gathered mainly by direct observation to the area concerned.

In setting out a research of this kind, the size of area included must be taken into careful consideration in accordance with time and cost. Since information has to be obtained from each house, the slowness of progress is unavoidable. It is not wise for an individual to start his survey in too large an area.

Season is another element which must be awared. For the sake of convenience, field work should not be carried out during the snowy season in Ottawa. It is also advisable to survey the busy streets in weekend or holidays. On the contrary, the residential area is better to be surveyed during the office hours.

Before going out for detailed field study, it is necessary to obtain a general idea of the area concerned by a rapid survey of the whole area. This kind of survey is also significant in setting up a plan of operations which establishes elements of phenomena and techniques in collecting and recording data. A form of categories is prepared

on sheet file, which embraces specific items for each of the constituent elements of the individual housing structure, such as roof, chimney, number of stories, etc.

An automobile-road map (see Figure 2) is used for the survey. It is advisable to start the field study with the nearest area. For a beginner, the judgement is less tangible caused by either underestimate or overestimate the reality for the first ten streets. So, the data which have been recorded at the beginning stage must be constantly checked later on. That is the reason why the nearest area should be chosen for the experimental stage.

An appropriate technique for the recording of data in this kind of survey is to take down the factual information by means of using various symbols. Each column on Figure 4 will provide a clear picture of the structural elements of the house indicated.

Figure 4. An example of field sheet

			Marlborough 195	193	191	189
1.	Name of street					
2.	Distance from house to street		10 yd	10 yd	10 yd	10 yd
3.	Type of garden		mx	gb	gb	mx
4.	Type of fence		h	-	-	-
5.	Whether house detached		d	d	d	d
6.	Building material		fh	st	fh/b/st	b/st
7.	Height of building		A+2+10	A+1+0	2+0	2+0
8.	Front to street and main entrance		tt	tt	tt	tt
9.	Type of roof		$\overline{2S}$	$\overline{2S}$	$\overline{4S}$	$\overline{4S}$
10.	Chimneys		si	si	si	si
11.	Attic window and additional structure		1 aw	2 aw	-	-
12.	Ground floor	Verandah or Balcony	1/8	1/8	1/8	-
	Second floor	Verandah or balcony	-	-	-	-
	Third floor	Verandah or balcony	-	-	-	-
13.	Outer stairs		1	1	1	1
14.	Epoch of building		m	m	n	o
15.	Any attached house		n	n	n	n
16.	Garage and parking		n	n	ga	ga
17.	Use of building		s	s	s	s
18.	Remarks					

The following are the explanatory notes on the items appeared in this survey.

1. Name of Street.

When a street is to be surveyed, a blank sheet marked with the name of such street is used. Other sheets recording the same street are arranged consecutively. The name of the street are omitted on the remaining sheets. If a house has no number, the symbol "x" is used. Generally, each house has a number, but some houses have several numbers. In this case, the survey is aimed at the building as a unit disregarding their numbers or dwellings.

2. Distance From House to Street.

The distance is measured from house to pavement. If no space exists between house and street, the symbol "o" is used in the column. Otherwise, the following symbols are used to stand for existed gardens or other spaces.

gd ..... Garden
gr ..... Grass
dt ..... Dirt
pb ..... Pebble
sd ..... Sand
st ..... Stucco

3. Type of Garden.

It is specified to the space in front of the door. Gardens may plant flower, grass, bush or tree. If a garden has more than two kinds of plants, it is marked

as "mixed." The following symbols are used for this element.

gr ..... Grass
gf ..... Grass-flower
gb ..... Grass-bush
gt ..... Grass-tree
mx ..... Mixed

4. Type of Fence (if any).

The fence can be made of different kinds of materials. Their symbols are:

h ..... Hedge
iw ..... Iron wire
sl ..... Steel
st ..... Stucco
wd ..... Wood
wl ..... Wall
mx ..... Mixed

Some houses use different materials for each side. Under such condition,"mixed" is marked.

5. Whether House Detached.

This is to indicate whether there is any space left between two neighbouring houses. Houses can be single detached, semi-detached or attached. A single detached house is the existence of space between two houses, for which the symbol "d" is used. A semi-detached house consists of two houses with a party wall, for which the symbol "s-d" is used. An attached house consists of two houses side by side, but without a party wall. Instead, they have their own walls but without space in between, for which the symbol "at" is used.

6. Building Material and Method of Building.

This refers to the material used in the construction of the building. If a building is constructed with two or more kinds of materials, they are recorded from the basement upwards. For example, when basement is constructed with stone, ground floor with brick, upper floors with stucco, the symbol c/b/s is used. Symbols used to indicate these categories are as follows:

b	Brick
st	Stucco
s	Stone
fh	Frame house
wd	Wood
ct	Concrete

7. Number of Stories.

0	Basement (if distinguishable from street)
1	1st floor
2	2nd floor
3	3rd floor
4	4th floor
a	Attic

8. Front or Gable to Street.

g	Gable
t	Trough
gt	Gable & trough

Main Entrance.

g	Gable
t	Trough
gt	Gable & trough

9. Type of Roof.

sr ..... Saddle roof
hr ..... Hip roof
fr ..... Flat roof
sg ..... Sloping roof
mr ..... Mansard roof
4S ..... Roof with flat top and four inclined slopes
2S ..... Roof with flat top and two inclined slopes
cr ..... Combined roof

10. Chimney.

To judge the position and number of chimneys is rather difficult for they are not visible on some high buildings or when street is too narrow. Their symbols are:

si ..... Side
ct ..... Center
mo ..... More than one
in ..... Invisible

11. Structure on Roof.

There are three types of structure.

aw ..... Attic window
as ..... Additional structure
aa ..... Attic window and additional structure

12. Verandah or Balcony.

There are not many houses having balconies. Plain figure is used to indicate verandah. When figure is followed by b, it stands for balcony (e.g. 1b). Houses having balconies and verandahs in different floors are specified accordingly.

13. Outer Stairs.

They are marked by numerals. If there is no stair, the symbol "n" is used.

14. Epoch of Building (estimated).

The age of a building can hardly be judged with sufficient exactness. However, houses are divided into following three categories.

n ..... New
m ..... Medium
o ..... Old

15. Any Additional Attached House.

This indicates whether there is any house attached to the rear part of the building.

y ..... Yes
n ..... Nil

16. Garage and Parking.

ga ..... Garage
p ..... Parking
n ..... Nil
bp ..... Parking inside the basement

17. Use of Building.

The nature of houses can be judged by advertisement, window display or even by mail box. But, sometimes when those houses give significance, it must be distinguished by the surveyer's own judgement. Symbols used to indicate categories are as follows:

s ..... Single family dwelling

t	Two family dwelling
mf	Multi-family dwelling
rc	Residential and commercial
com	Commercial
ed	Educational
hp	Hospital
re	Recreational
ch	Church
ar	Auto repair, sales and service

CHAPTER III

ANALYSIS OF THE ELEMENTS OF HOUSING STRUCTURE

In the previous chapter, the elements of housing structure have already been mentioned. This chapter deals with the analysis of housing structures by the unwielding mass of data obtained through field work.

In discussing the elements and analyzing the data, three methods are adopted to illustrate the text:

1. Cartographic method, in which maps are used for analysis.

2. Quantitative method, in which bar graphs are used for analysis.

3. Photographic method, in which photos are used for analysis.

All of the above methods are employed in most elements. In case that variation of some elements, such as outer stairs and chimneys, is not great, cartographic method will be omitted.

Analysis of the Distance from House to Street[6]

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6 To avoid redundant statement, the words like street, road, avenue, etc., are omitted from the text. Thus, Rideau Street appears here as Rideau, Laurier Avenue, as Laurier and so on.

This element can be subdivided into several categories.

1. The distance from house to street is zero.

2. The distance from house to street is a space of grass or garden.

3. The distance from house to street is a space of dirt, sand or pebble.

4. The distance from house to street is a space of stucco.

Each of the above four categories, in accordance with the length of distance, can be classified into:

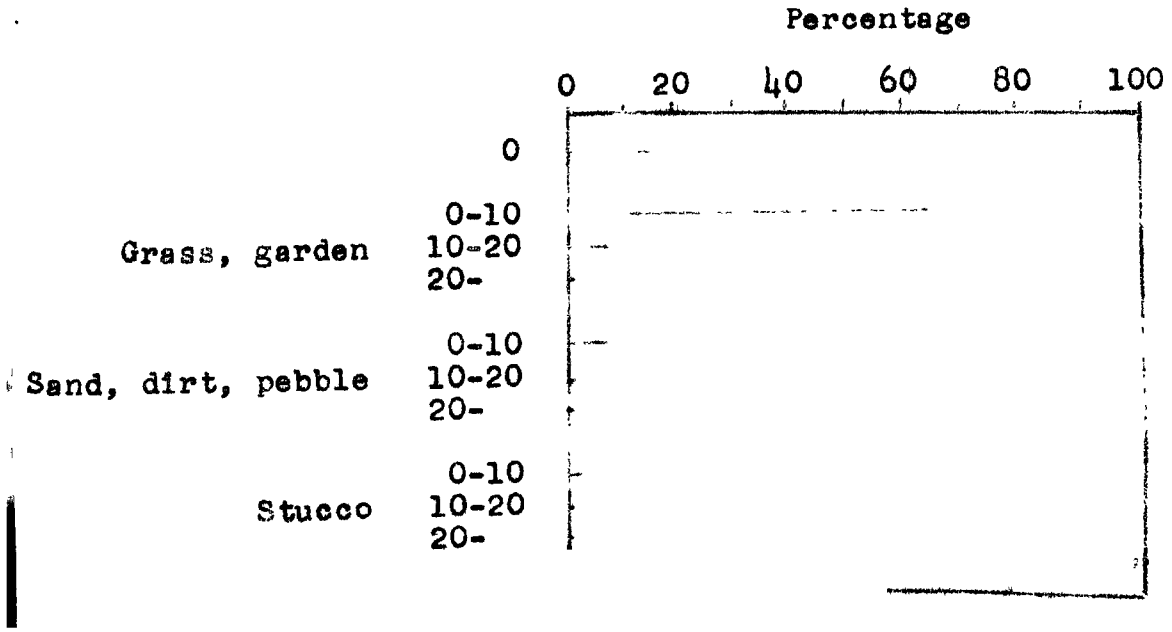
a. 0-10 feet.

b. 10-20 feet.

c. Over 20 feet.

For a further analysis, the percentage of each category is figured out by statistical method and shown by the bar graph below.

Figure 5. Percentage of distance from house to street

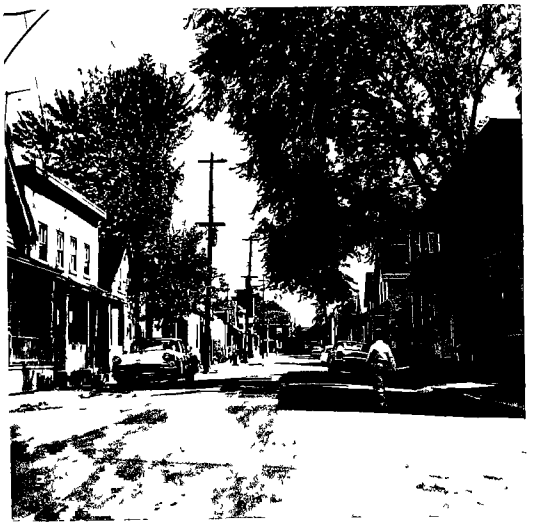


It must be pointed out that the "1" category has an areal significance. In the section north of Rideau, south of Murray, east of Sussex and west of Dalhousie, some 98 per cent of houses belong to this category. The most important factor in building houses without any distance from street in this area is due to the location of Byward Market. Besides the meat and poultry shops and supermarkets, this place is also the center of cheap department stores. While space reaches its marginal use for the commercial purpose, certainly, there will be no space left.

Figure 6. Byward Market - distance from house to street is zero

Another area predominated by this category is the district east of King Edward, west of Pinard, south of St. Andrew and north of St. Patrick. As shown in map 1, some 95 per cent of houses belong to this category. Since this area has little commercial importance, it can be explained that the width of the streets is not spacious enough and this makes expansion impossible.

Figure 7. McGee Street



Rideau is another typical example of this category, with 124 out of 164 houses standing right by the street. This is more significant in the downtown portion. By referring to map 12, it can be seen that this is the most

important commercial, financial and shopping center in Sandy Hill and its adjacent areas. Due to the value of land and the artery of traffic, houses have to stand by the street.

Dalhousie, St. Patrick, and Cumberland north of Rideau have the similar characters in general even they are less important than Rideau. Therefore, a larger proportion of houses in these streets still belong to this category.

Figure 8. Dalhousie Street

In Sandy Hill, houses belonging to this category are scattered. But Nicholas and Waller are the exception. Due to the heavy traffic, half of the houses have no space left from the street.

Summing up this category, one can point out that houses standing right by the street or divided from street by a strip of land are usually determined by the value of land, use of houses and their locations.

The category, in which the distance from house to street is a space of grass or garden, occupies 72 per cent of the total houses. This percentage can again be divided into the following:

0-10 feet	64.6%
10-20 feet	7.3%
Over 20 feet	1.1%

Owing to the fact that it is one of the major residential section in the City of Ottawa, this category possesses nearly three quarters of the total houses in this area.

In the triangular section south of Mann, most of the houses have a distance of twenty feet or more from street because of its spaciousness. From Mann north to Somerset, a great number of houses are good looking, one-family dwellings with a distance of less than ten feet from street. The outdoor space of these houses are usually utilized for grass or garden.

Figure 9. Range Road

The distance from house to street in the area between Somerset and Osgoode usually belongs to the same pattern as those south of Somerset, with the exception of Russell, Sweetland, Nelson, Henderson and King Edward, where the distance ranges from 0-10 feet or 10-20 feet irregularly.

In Sandy Hill, most outdoor space in the one-family dwellings are kept as grass and garden with the distance ranging from 0-10 feet. Some bigger houses at Goulburn, Blackburn, Chapel, Russell, Sweetland, Nelson and King Edward between Osgoode and Laurier have the distance of 10-20 feet. These houses, adequate in space and better in appearance, are considered to be the outstanding residential

buildings.

Even a large number of houses still belong to this category, area north of Rideau loses their areal significance by mixing with other categories. It can also pointed out that, even they are in the same category, houses in this area usually have a distance of less than five feet from street while houses in Sandy Hill always have longer distance.

Another category, in which the distance from house to street is a space of sand, dirt or pebble, occupies 6.4 per cent of the total number of houses. In Sandy Hill, only some lower class houses fall into this category.

In its adjacent areas, a large proportion of the houses belonging to this category are located in the section east of King Edward. There are thirty one out of 162 houses in Clarence, thirty out of 158 in St. Andrew, twenty nine out of 112 in Bruyere and seven out of twenty eight in St. George belong to this category. Only in a few exceptional cases, the distance of house from street ranges over ten feet.

Even this category does not play an important part in this element, nevertheless, it can be pointed out that only poorer residential houses, local business shops and warehouses in Boteler, where no intention is made to the cultivation of their outdoor spaces, belong to this category.

The category, in which distance from house to street is a space of stucco, possesses only 3.3 per cent of the total. Characteristically, those houses having a distance of twenty feet or more from street are occupied by gas stations and auto repair, sales and service.

Figure 10. Gas Station

Houses of this category but having a distance of 0-10 feet are usually found at the intersection of streets. These houses are often used for small business stores. Since stucco has the advantage of cleanliness and cheapness, some churches, schools, and big apartment houses also choose this kind of material for their outdoor spaces.

DISTANCE FROM HOUSE TO STREET

ft.	Garden or meadow	Sand, mud or pebble	Stucco
0			
0 - 10			
10 - 20			
Over 20			

In concluding the analysis of this element, it must indicated that the outdoor space in the major part of this area is not in satisfactory condition either because it has limited space or it is not well utilized. It must also be pointed out that enough outdoor space for garden or grass is an important element to improve the environment.

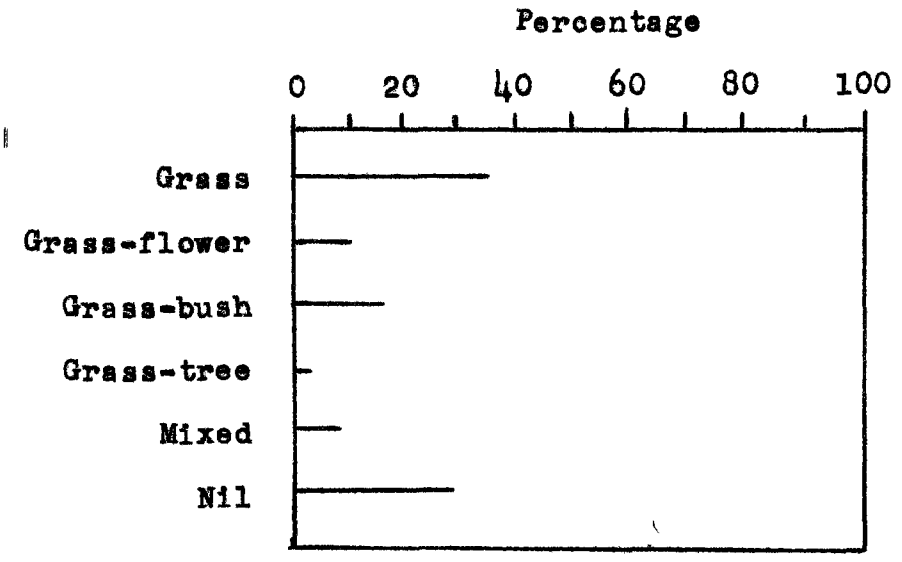
Analysis of the Type of Garden

The types of garden can be divided into the following categories.

1. Grass
2. Grass-flower
3. Grass-bush
4. Grass-tree
5. Mixed
6. Nil

The percentage of each category is shown in the following bar graph.

Figure 13. Percentage of type of garden



Grass occupying 35.6 per cent of the total is distributed in all part of the area. With reference to map 1, it can be found out that the triangular area south of Mann is a homogeneous area which has a distance more than twenty feet in its outdoor space. Characteristically, all the buildings in this area are apartment houses, with large grass in front of the houses used as playground for children. This type of grass can hardly be found in the rest part of this area.

Figure 12. Grass used as playground

In Sandy Hill and its adjacent areas, the distribution of this category has a close relation with the rank and the structure of the houses. Usually, buildings of this category are attached or semi-detached houses and are occupied by more than one family.

In analyzing the type of garden, grass-flower, grass-bush and grass-tree are grouped together into one category. Houses falling into this category are considered to be better in environment. However, there are many exceptions. In College, thirty-eight out of fifty-eight houses belong to this category, but most of them are not up to standard.

A large part of these houses are found in Sandy Hill, and some can be found in the section north of Rideau and east of Charlotte. In other part of this area, such houses can rarely be located.

The mixed type of garden, having more than three different kinds of plants together, is regarded as the best of all categories. Since keeping a mixed type of garden is a matter of time and money, houses belonging to this category are mostly occupied by the richer families.

Length of the outdoor space is not primarily important for the mixed type of garden. For example, in Range, most houses are the small good looking one-family dwellings with approximately ten feet of their outdoor spaces used for mixed gardens. These beautiful gardens matched with the new houses make this environment a good residential area.

A large portion of the mixed gardens is found in Sandy Hill, especially in the section east of Chapel. In the north of Rideau and east of Charlotte, some houses of this category are located.

In spite of this element, there are about 21.8 per cent of houses having no garden at all. Houses without gardens are due to the following reasons.

1. The distance from house to street is zero.
2. The distance from house to street is a space of sand, dirt or pebble.


GREEN ISLAND
MAPLE ISLAND
PORTER'S ISLAND
TYPE OF GARDEN
Grass
Grass-flower
Grass-bush
Grass-tree
Mixed
Nil

3. The distance from house to street is a space of stucco.

The proportion and condition of each of the above categories are already discussed. However, it must be mentioned that the residential houses which can reach a certain standard (e.g. a distance of at least ten feet in outdoor space with plants) occupy not more than ten per cent of the total. Therefore, it is evident that a large number of houses in this area are still not up to standard at the present stage.

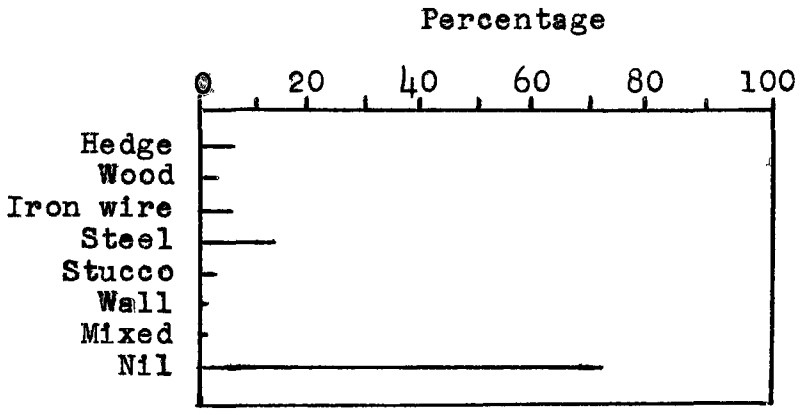
Analysis of the Type of Fence

This element can be divided into several categories.

1. Hedge.
2. Wood.
3. Iron wire.
4. Steel.
5. Stucco.
6. Wall.
7. Mixed.
8. Nil.

The proportion of each category are shown in the bar graph below:

Figure 13. Percentage of type of fence



From the above figures, it can be found out that the percentage of houses without fences are much higher than houses with fences combined. Since they are closely related, it will be much less meaningful to discuss this element if type of garden is not regarded. Usually, a good garden with an attractive fence is of primarily importance to beautify the environment, and, of course, if a house without a garden, there will be no fence at all.

In analyzing this element, only those representative categories such as hedge, steel and iron wire are mentioned. Hedge, the best type of fence, can be found mostly in Sandy Hill north of Osgoode and east of Nelson, also with some in Marlborough and Wurtemburg. Houses having this type of fence are usually found under the following conditions.

1. Single detached house.

2. Mixed garden.

3. The distance from house to street is from ten to twenty feet.

It may be assumed that a house under any of these conditions and fenced with hedge in its outdoor space would be occupied by a richer family.

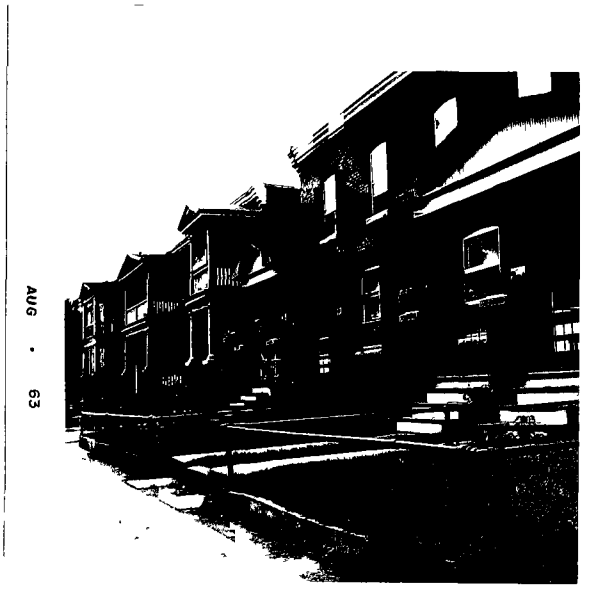
Figure 14. House with hedge fence

Steel rail is a very popular type of fence. It can be found either in the public and semi-public properties such as school, church, large institution and government buildings, or the ordinary residential dwellings.

The public and semi-public buildings are mainly located in Sandy Hill north of King Edward. The ordinary

residential dwellings for which this type of fence is used can be found in any portion of the area, especially in the section north of York.

Figure 15. House with steel fence



Houses fenced with iron wire possess the same proportion as those with hedge. But it has no significance in any specific section of the area. Due to its simplicity and cheapness, this type of fence is used for old, semi-detached or small houses.

There are still several other types of fence such as wood, stucco and mixed. But their proportions are not of significance in this area.

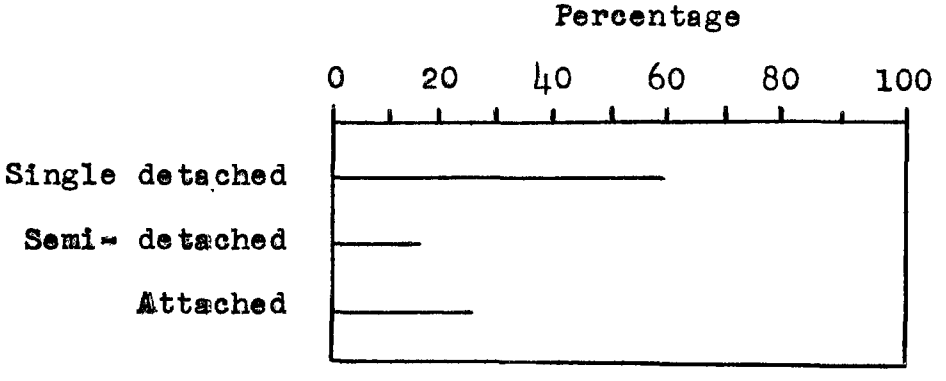

GREEN
SLAND
MAPLE
SLAND
PORTER'S
SLAND
TYPE OF FENCE
Bush
Wood
Iron string
Steel
Stone or stucco
Wall
Combined
Nil

Wall is also used for fence although it only occupies .1 per cent of the houses. Since walls are often built to isolated the house from its neighbours, undoubtedly houses of this type are occupied by the rich families.

Analysis of Detached, Semi-detached and Attached Houses

This is an important element to study the density of population and the intensity of land use. The proportions of the categories -- single detached houses, semi-detached houses and attached houses -- are shown by the bar graph below.

Figure 16. Percentage of single detached, semi-detached and attached houses



ANALYSIS OF THE ELEMENTS OF HOUSING STRUCTURE 40

Single detached houses possesses more than half of the total number of houses. In Sandy Hill, most of the houses in the small section east of Chapel and north of Osgoode up to Stewart, and another section between Mann and Templeton belong to this category. Range is a most homogeneous street where all fifty-nine houses are single detached. In its adjacent areas, houses of this category seldom group themselves together in any particular locality.

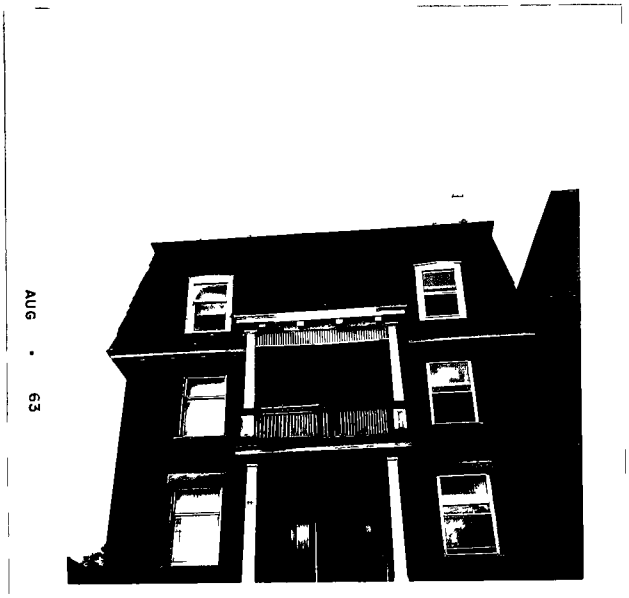
Figure 17. Single detached house

The nature of single detached houses are mostly the small size one-family dwellings. Only in the section east of Chapel and north of Osgoode up to Stewart single detached houses are comparatively bigger. Since the locality of the

houses belonging to this category is closely related to the intensity of land use, it should be noted that, even in the most populated section, newly built apartment houses, due to the intensive use of space instead of land, are mostly single detached.

Semi-detached house occupies only 16.8 per cent of the element. Houses belonging to this category are usually two-family dwellings. In Sandy Hill, these houses can be found mainly in the area north of Mann up to Osgoode with the exception of Range, and also in the area west of Chapel between Wilbrod and Besserer. In its adjacent areas, a large portion of these houses are located in the section north of York and Heney.

Figure 18. Semi-detached house



With reference to Table IV, it can be found out that there is no section in the area where more than half of the houses belong to this category. In Sandy Hill, they scatter among single detached houses; and in its adjacent areas, among attached houses.

Attached houses rank second popularity in the housing structure. Although they occupy only 23.8 per cent of the total, their locations have an areal significance which can be seen in the following example:

	Detached	Semi-detached	Attached	Total
Rideau	59	8	99	164
Dalhousie	17	7	52	76

The above two streets are the most prosperous business section in this area. Houses are built to their marginal limit due to the value of land. This phenomenon is more significant in Rideau west of King Edward.

The following streets are another example of those immediate vicinity of commercial sections.

	Single detached	Semi-detached	Attached	Total
York	28	14	39	81
Murray	36	20	46	102
William	1		13	14
Byward	1		7	8
Clarence	68	30	64	162

Another locality where attached houses are found is the intersection of streets. These houses are often used for small local business such as drug stores, coffee shops or groceries.

Attached houses appeared in the residential area are mainly the multi-family dwellings. They are usually not up to standard and more crowded except the triangular section south of Mann where all houses are newly built but attached.

Figure 19. Attached house

Summing up the above categories, houses for public or semi-public purpose are largely the single detached houses and a number of the attached houses are for commercial purpose.


GREEN ISLAND
PORTER'S ISLAND
WHETHER HOUSE DETACHED
Single detached .....
Semi-detached .....
Attached .....

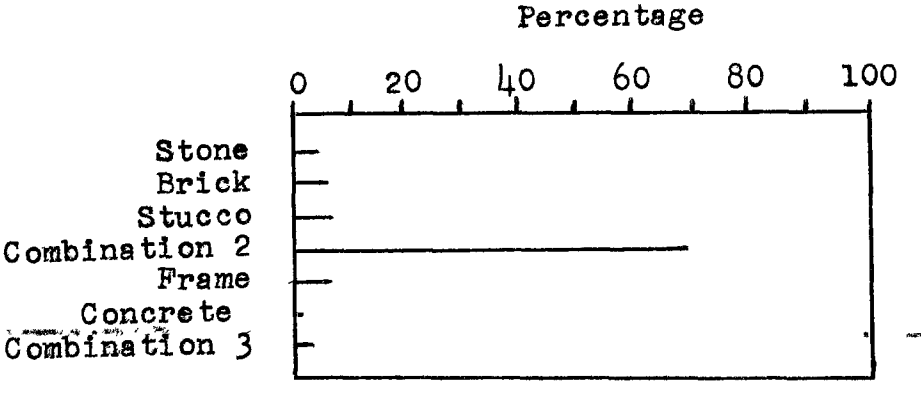
Analysis of Building Material

The building material implied here is the material used in constructing the walls of a house. It is the main element is analyzing the housing structure. A house can be built either by a single type of material or by a combination of several materials, and can be classified into any of the following categories in accordance with its building material.

1. Stone
2. Brick
3. Stucco
4. Combination (any two above)
5. Frame
6. Concrete
7. Combination (any three above)

The proportion of these categories are shown in the bar graph below.

Figure 20. Percentage of building material



Houses built with stone exclusively possess only 4.8 per cent, but they are mainly the public or semi-public buildings such as government offices, churches, schools and hospitals. These buildings function as the administrative, spiritual, cultural, and welfare centers of the area and are located significantly in certain sections. In Sussex, for example, there are eleven out of forty-two houses falling into this category. The commercial section in Rideau, west of Cumberland, is another example.

Stone houses have the advantage of preventing fire and lasting longer; but because this material is more expensive, it is rarely used in the residential areas.

Houses built with brick or stucco can be seen everywhere within this area. Usually, a building is composed of two different materials such as stone and brick, stone and stucco or stucco and brick. These combinations are the most popular material which totally occupy 87.8 per cent of the number of houses. Because stone is solid, it is often used for supporting element; and brick, due to its cheapness, is commonly used for filling element.

Frame houses do not occupy a significant portion in the element of building material. They lie scattered in this area except Templeton between Henderson and Sweetland, where all of them are frame houses.

Figure 21. Frame houses in Templeton Street

Generally, frame houses have the following characteristics. First, stone is used as the supporting element; secondly, the houses are relatively small in size; thirdly, they are one-storied houses; fourthly, they are always single detached; fifthly, they are inhabited by the lower class families; and sixthly, they are one-family dwellings. Even frame houses are easy to construct and the cost is low, there is a tendency that they are gradually disfavoured due to the danger of causing fire.

The use of reinforced concrete as building material has brought radical change in many large modern cities. In this area, only a limited number of houses belong to this

category. This fact reflects that, in the commercial section, the buildings are not up to the standard of a modern city. However, in Sandy Hill, reinforced concrete is used for newly built apartment houses and government buildings. If this area will be more populated and the governmental organizations will be expanded, more new concrete houses would be built on the sites of the old houses in near future.

Summing up this element, building material used in this area is predominately brick and the number of frame houses are still larger than concrete buildings. Even many new buildings are under construction, the number is relatively small in comparison with other modern cities.

Analysis of Gable and Trough House

The front of house to street can be grouped into the following three categories:

1. Front to street is gable.
2. Front to street is trough.
3. Front to street is gable and trough.

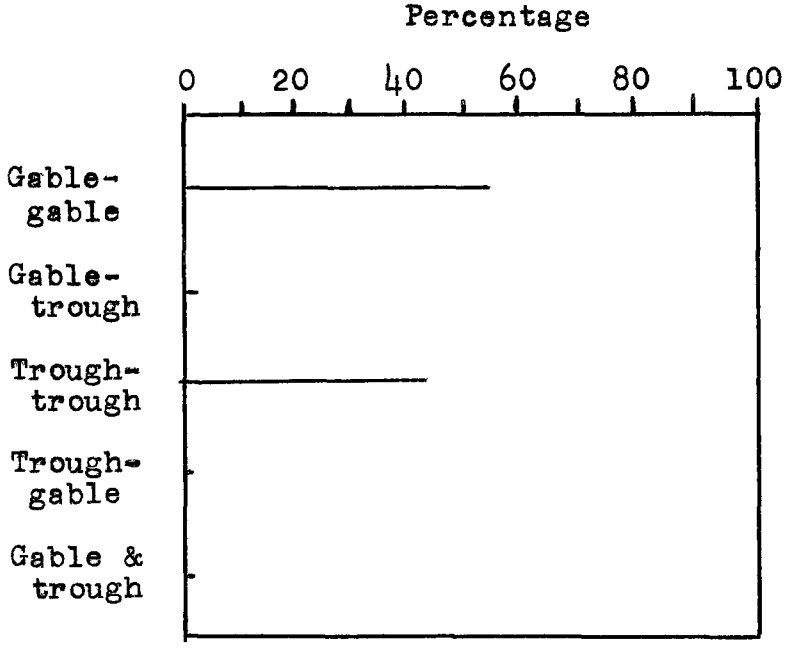
The main entrance of a house can also be classified similarly as:

1. Main entrance is gable.
2. Main entrance is trough.
3. Main entrance is gable and trough.


GREEN ISLAND
MAPLE ISLAND
PORTER'S ISLAND
RIDEAU
RIVER
BUILDING MATERIAL
1. Stone
2. Brick
3. Stucco
4. Combination (any two above)
5. Frame house
6. Concrete
7. Combination (any three above)

Usually, if front to street is gable, the main entrance is also gable, and vice versa. Below is the bar graph showing the percentage of each category.

Figure 22. Percentage of gable and trough house.



The above figure indicates the portion of gable houses with gable entrance is slightly over trough houses with trough main entrance. But in the areal study, one can find out that some streets are dominated either by gable houses or trough houses. In some other streets, gable houses and trough houses are equally located. The following are some examples of streets predominated by either category.

	Trough house	Total number of houses
Philip Cres.	6	6
Chapel Cres.	7	7
Goulburn	11	11
Mann	10	13
Range	40	51

	Gable house	Total number of houses
College	48	58
McDougall	11	12
Notre Dame	8	9

The difference between gable house and trough house is less important in the residential area. But in the commercial section trough houses usually have better appearance and are more easy to be converted. From map 7, one can see that gable houses occupy a large proportion of buildings in Rideau west of King Edward.

Another category is gable and trough house. It occupies an insignificant portion in this area. Gable and trough houses are usually used for residential purpose and most of them have combined roofs. Gable house with trough entrance and trough house with gable entrance altogether occupy 1.7 per cent. These houses are located in this area; and all of them are for residential purpose.


GREEN ISLAND
PORTER'S ISLAND
RIDEAU
FRONT TO STREET
MAIN ENTRANCE
Gable
Gable
Trough
Trough
Trough
Trough
Gable
Gable & Trough
Gable & Trough

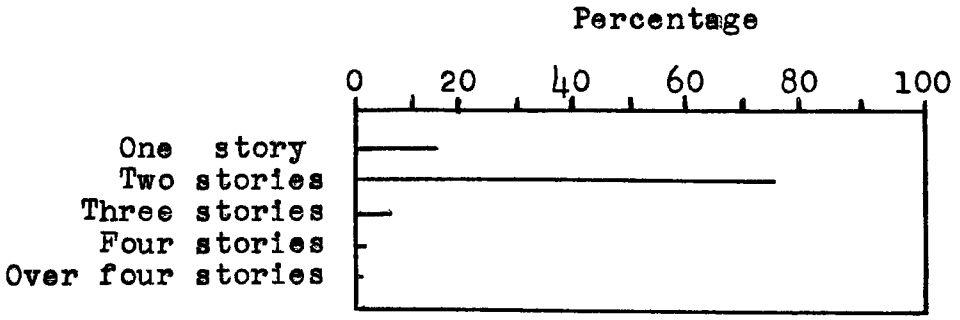
Analysis of the Number of Stories

The number of stories are influenced by the tradition of the locality, the present need and the future trend. Mainly, these three factors reflect the population of the area and the intensity of land use. In map 5, the number of stories and other additional structures such as attic and basement are all indicated. But they are classified according to the actual numbers of stories as below:

1. One story.
2. Two stories.
3. Three stories.
4. Four stories.
5. Over four stories.

Their percentages are shown by the following bar graph.

Figure 23. Percentage of number of stories and additional structures



Two-storied houses which have 73 per cent of the total predominate the whole area. These houses mainly built with brick and stone are occupied by one or two families and usually consist of attics and basements. This fact reflects that even though this is the densest area in Ottawa, upward growth is not yet urgently required.

One-storied houses rank second in popularity. In Sandy Hill, they are located mainly in the section between Mann and Templeton, especially in Range, Marlborough and Goulburn. In its adjacent areas, only a few of these houses are found. In the business section, a large number of them are still one- or two-storied houses. In Rideau, for example, there are thirty-four one-storied and eighty-three two-storied out of 164 houses.

Figure 24. Height of building in Rideau Street

There are 8.6 per cent of houses in this area having three stories. These houses are mainly used for commercial purpose. In the business section west of King Edward and north of Rideau up to Murray, a large portion of the three-storied houses are located. In the residential area, with few exceptions, three-storied buildings are used for apartment houses. These houses can be found mainly in the triangular section south of Mann and west of Chapel between Laurier and Daly.

Houses having four stories or more are mainly government or commercial buildings and occupy only 1.5 per cent of the total number of houses. As for residential purpose, the new apartment buildings in the area east of King Edward and west of Chapel between Wilbrod and Besserer fall into this category. Many of these buildings were built in this decade, and some are still under construction.

Summing up this element, it must be emphasized that the upward growth cannot parellel the development of a great city. This fact can especially be seen in the commercial section. Although it is a trend that the new apartment houses tend to be several stories high, the number of these houses are still comparatively few.

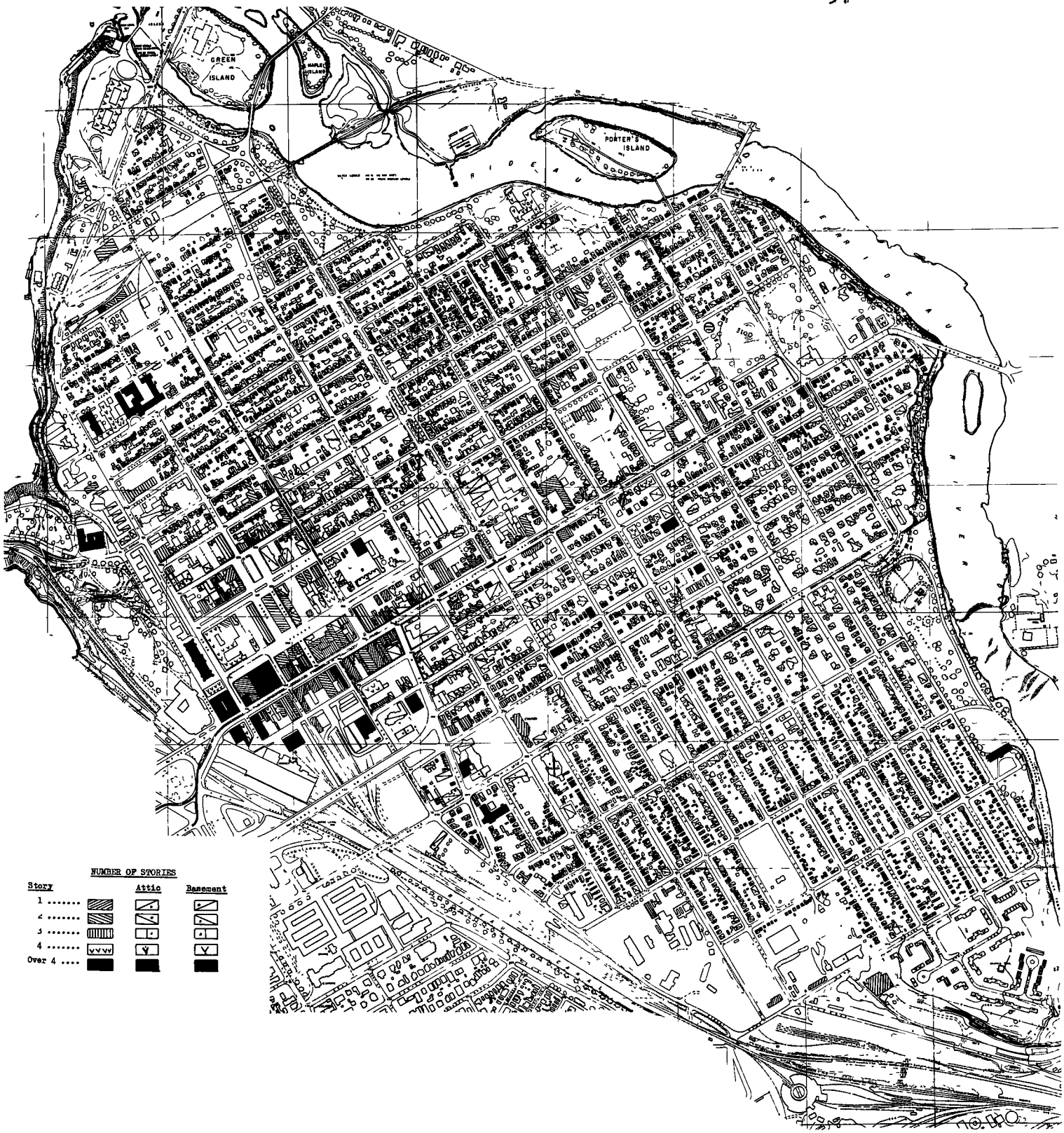
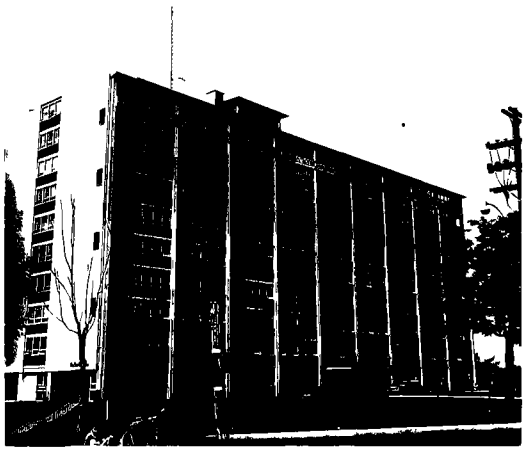

GREEN ISLAND
MARLEE ISLAND
PORTER'S ISLAND
NUMBER OF STORIES
Story
Attic
Basement
1 .....
2 .....
3 .....
4 .....
Over 4 ....

Figure 25. New apartment house with several stories



Analysis of Type of Roof

Until the twentieth century, type of roof depended on the geographical factors and the demands of climate. But in this Century, owing to the advancement of building technique, geographical and climatic factors are gradually overcome.

In this survey, the types of roof are classified as follows:

1. Saddle roof.
2. Hip roof.
3. Sloping roof.

4. Flat roof.

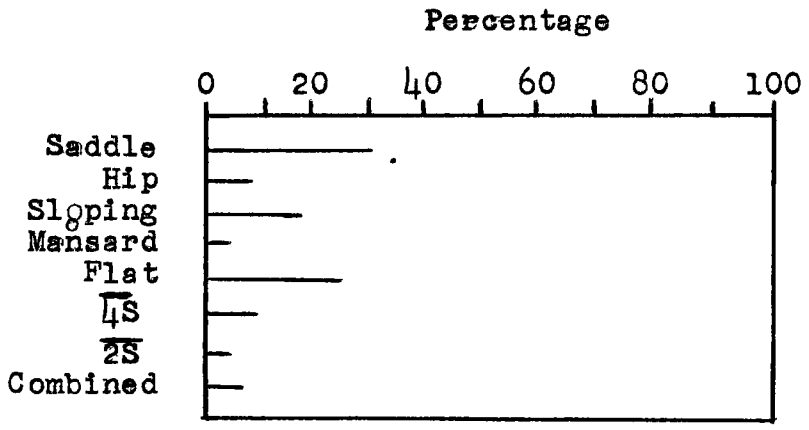
5. Mansard roof.

6. Roof with flat top and four inclined slopes.

7. Roof with flat top and two inclined slopes.

The percentage of each type of roof is shown by the bar graph below.

Figure 26. Percentage of type of roof



Saddle roof is very popular in the residential area, especially for the single detached house. Its distribution in Sandy Hill is mainly in the section north of Mann and south of Templeton; and the section west of Henderson, north of Somerset and south of Laurier. In its adjacent areas, this type of roof can be found among the others without particular locality.

Similar to saddle roof, hip roofs are also found on the top of single detached residential houses. The number of these houses are much less than saddle roof houses and they are mainly located in the area east of Blackburn between Templeton and Laurier.

Flat roof ranks second popularity in this area. Because it is easy to construct and economic in cost, it is used for modern buildings such as schools, government and commercial buildings. In the residential areas, this type of roof is used increasingly for the new apartment and the semi-detached or attached houses. The distribution of such roof is all over the area especially in Rideau west of King Edward and Sussex.

Sloping roof is advantageous in the snowy season. It is used mainly for the residential houses. To study its distribution, it should be noted that in Sandy Hill, they are found only in few streets such as McDougall, Henderson, Sweetland, Daly and Besserer. But in its adjacent areas, these houses are located in all parts especially in the area east of King Edward.

Roofs with flat top and four inclined and two inclined slopes (see Figure 18) are similar in nature. They are mainly used for the old semi-detached two-storied houses with attics and attic windows. These houses are located in Sandy Hill in the section between Somerset and Besserer.

Figure 27. Roof with flat top and four inclined slopes

Mansard roof is influenced by the French style. Buildings using this type of roof are two-storied gable houses with attics. Roof mixed with two or more of the above types is called combined roof. It is mainly located in Sandy Hill east of Chapel and north Osgoode.

Summing up the types of roof, three characteristics should be mentioned. First, in Sandy Hill, all types of roof are found without predominance. Secondly, flat roof is used for nearly all the big buildings. Thirdly, since new buildings tend to be flat roofed, those types such as flat top with four inclined slopes and two inclined slopes and mansard roof are gradually abandoned.


GREEN ISLAND
MAPLE ISLAND
PORTER'S ISLAND
TYPE OF ROOF
Saddle roof
Hip roof
Sloping roof
Flat roof
Mansard roof
Roof with flat top and four inclined slopes
Roof with flat top and two inclined slopes
Combined roof

Figure 28. Mansard roof

Analysis of Chimney

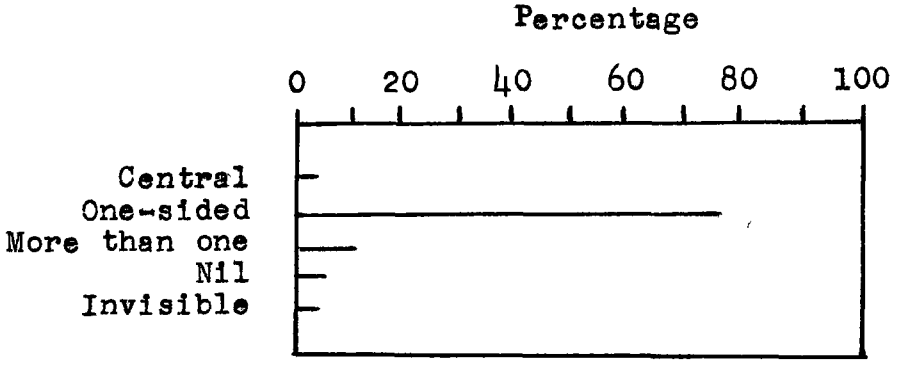
Since every house in this area is equipped with heating system, chimney can be seen over most of the houses. They are mostly built by brick, and some by metal. According to their positions and numbers, chimneys can be classified into the following categories.

1. Central.
2. One-sided.
3. More than one.
4. Nil.

It should be mentioned that sometimes chimneys cannot be seen on account of narrow street or high building.

In this case, they are classified into the invisible category. The percentage of each category is shown in the bar graph below.

Figure 29. Percentage of chimney



One-sided chimneys, having 75.8 per cent of the total number, are found mainly on single detached houses all over the area. If there are two chimneys on a house, they can be built side by side or in the opposite position. Chimneys belonging to this category can always be found on the flat top with four inclined slopes roof houses, and sometimes on the flat top and sloping roof houses too. Chimneys can also be built at the center of the roof. Most of them are found on saddle roof houses and some on hip roof houses.

Three or more chimneys can be found on attached houses and houses with combined roofs. On the newly built attached houses located in the area south of Mann, there is no chimney.

Summing up this element, more than three quarters of the total number of buildings have one-sided chimneys. The number and position of chimneys are usually determined by the type of roof. Because one-sided chimneys dominate the view, no great variation can be found.

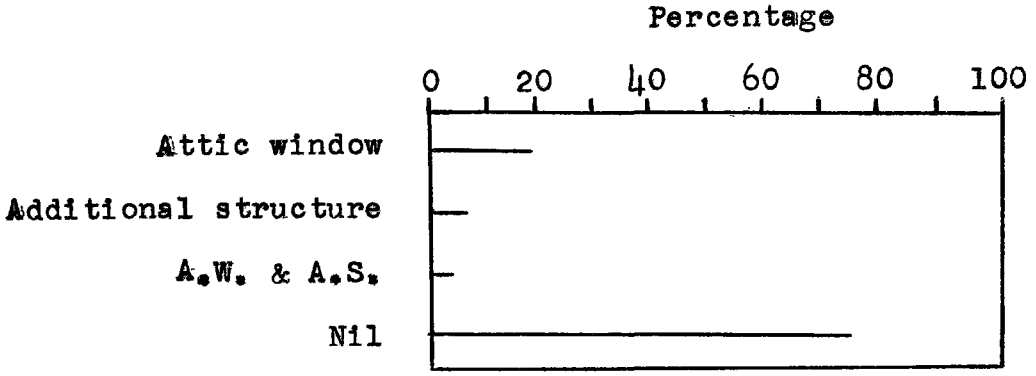
Analysis of Attic Window and Additional Structure

The element of attic window and additional structure is closely related with the type of roof. If a house has an attic, attic windows may then be found. The additional structures can be found on any type of roof; but most of them are for decoration purpose. This element can be divided into the following categories.

1. Attic window.
2. Additional structure.
3. Attic window and additional structure.
4. Nil.

Their percentages are shown in the bar graph below.

Figure 30. Percentage of attic window and additional structure

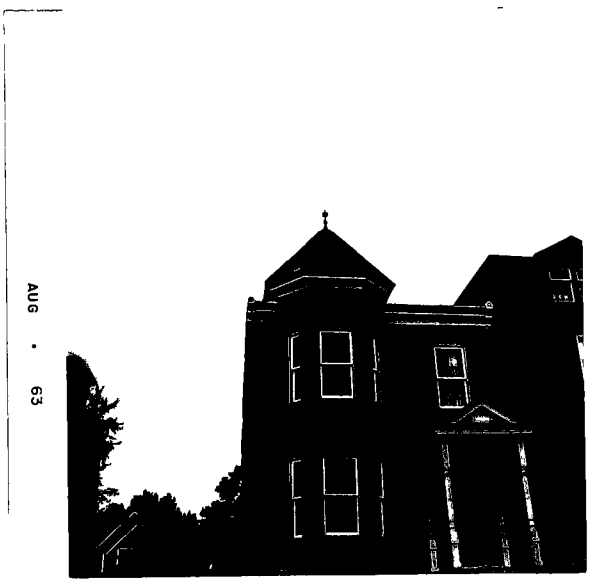


In this area, a great majority of the houses falls into the fourth category. This is perhaps due to two reasons. First, in the flat or sloping roof house, there is no attic window. Secondly, even in the houses with other types of roofs, not many of them have attic windows and additional structures.

Houses with attic windows occupy 19.1 per cent of the total. Usually, these windows can be found on the houses having roofs with flat top and four inclined slopes or two inclined slopes. Many of them can also be seen on the houses having combined roofs. Generally, the number and size of attic windows are determined by the number of slopes and the size of buildings.

Only 5.5 per cent of houses have additional structures. They can be found on any type of roof; and most of them are for decoration purpose. Houses having both attic windows and additional structures are not common in this area; and most of them are located in Sandy Hill.

Figure 31. Additional structure on the house with flat roof

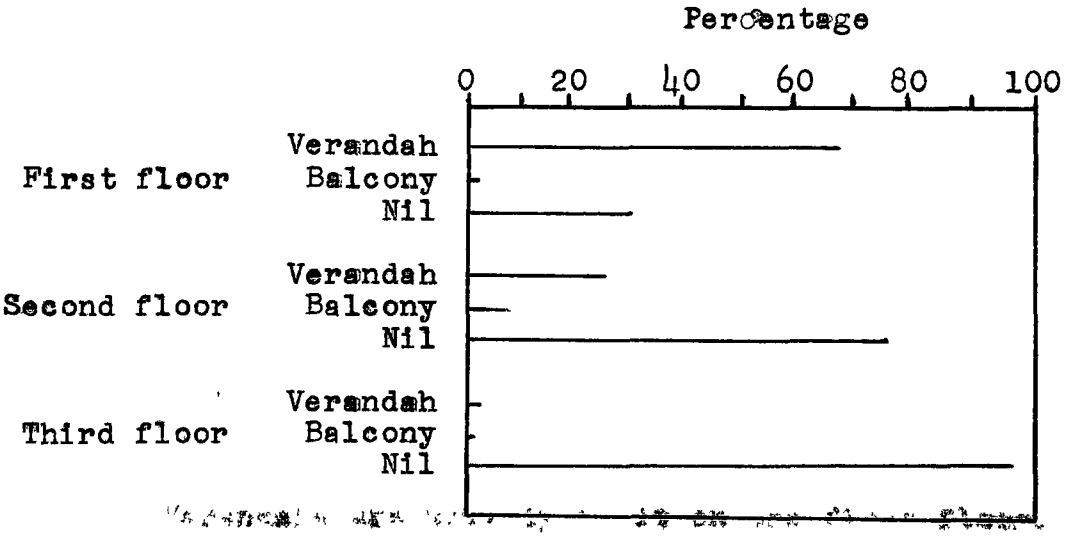


In concluding this element, it must be understood that attic windows and additional structures are gradually abandoned due to the fact that new houses are mainly built with flat roofs.

Analysis of Verandah and Balcony

The building material of balcony and verandah can be distinguished according to the epoch of building. In old and medium houses, balconies and verandahs are mainly built with wood; and in new houses, with steel and stucco. The percentage of each of the categories is shown by the following bar graph.

Figure 32. Percentage of verandah and balcony



proportion to the house can be whole, half, one-fourth or one-eighth. Sometimes, in a semi-detached house, a large verandah is partitioned by a piece of board at the middle for two family dwellings. There are only 2.9 per cent of houses having balconies on the first floor; but some 30 per

cent having neither verandah nor balcony at all. Houses without balcony and verandah are mostly located in the commercial section. If there is any balcony or verandah on the second floor, it would be similar to that on the first floor both in building material and proportion. Because of the decrease of verandahs on the second floor in comparison with the first floor, the total number of balcony and verandah are therefore dropped drastically.

Only a few balconies and verandahs can be found on the third floor or over. This phenomenon is due to the fact that houses having three or more stories are mostly governmental, institutional or commercial buildings in which no balcony or verandah would be needed. In Sandy Hill, there are many new apartment houses having balconies on the second floor and upwards.

In concluding this element, it should be noted that verandahs and balconies are found on the first floor since a large part of this area is for residential purpose. As the total number of verandah and balcony greatly decreases on the second floor, they become even rare on the third floor and over.

Analysis of Outer Stairs

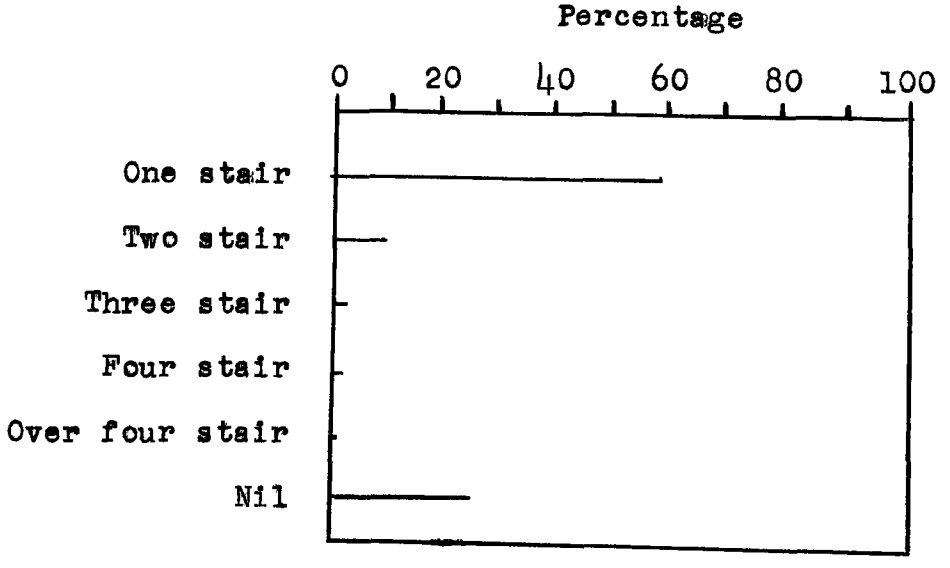
In this area, there is no great variation in the element of outer stairs. Usually, in the medium and old

buildings, they are built by wood or stucco with five steps. In modern buildings, the stucco stairs are small, and the number of steps are closely related with the size of the house. Numbers of outer stairs can be classified into the following categories.

1. One stair.
2. Two stairs.
3. Three stairs.
4. Four stairs.
5. Over four stairs.
6. Nil.

The bar graph below shows the percentage of each category.

Figure 33. Percentage of outer stairs



One-stair category occupies more than half of the total number of this element. This percentage is very close to the portion of single detached house. Comparing these two figures and their locations, it is known that a majority of these one-stair houses belong to the single detached houses. Similarly, two-stair houses are usually semi-detached and they are either in parallel or opposite direction.

Three, four or over four stairs are always found in the attached houses. Because each house has its own stair, the number of stairs are depended upon the number of houses attached. In new apartment and business buildings, most of them have no stairs.

In the whole area, there are no more than three houses having the French style of outer stairs. Because this is a bilingual city, the insignificant French influence in the style should be mentioned.

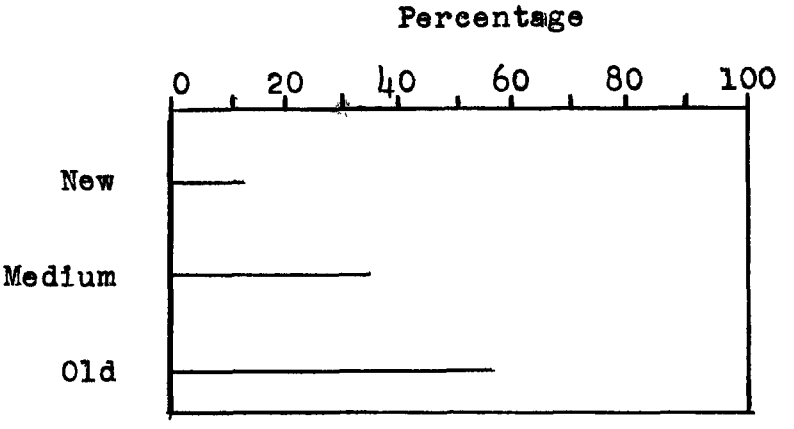
Analysis of Epoch of Building

Epoch of building forms a basic frame work for the study of urban buildings. For it not only reflects the style, but also the density of population in the city and the inhabitant's financial condition. The epoch of building in this area by estimation is classified into the following categories.

1. Old ..... Before 1910.
2. Medium ..... 1910-50.
3. New ..... Since 1950.

The percentage of each category is shown in the following bar graph.

Figure 34. Percentage of epoch of building



The above figure clearly indicates that old houses are more than any other category in every part of this area. In Sandy Hill, new buildings are mainly located in the triangular section south of Mann between Laurier and Besserer. In Laurier, Steward and Wilbrod, due to the existence of newly built apartment houses, there are larger proportions of new buildings than the other sections of this area.

In its adjacent areas, new houses are found in the section north of Rideau, south of St. Patrick and east of

Chapel. However, quite a large proportion of such new houses are converted from the old ones.

In the business section, the number of new buildings is not as many as that in Sandy Hill. Since the status of building always reflects the demand of community, this section leaves much room for the future development.

More than 80 per cent of the houses in the adjacent areas belong to the "old" category; and a number of them are in poor condition. Some wrecked houses in Baird, Redpath are now vacant for reconstruction. It is expected that in the near future new houses will be built on these sites.

The condition of old houses in Sandy Hill is not so serious. The figures listed below are some examples.

	New	Medium	Old	Total
College		8	50	58
Somerset	14	17	31	62
Osgoode	7	9	47	63
Daly	2	35	85	122

Although in the most prosperous section of Rideau, old one-storied and two-storied buildings still predominate. It is evident that this commercial area is not in the satistory condition at the present status.

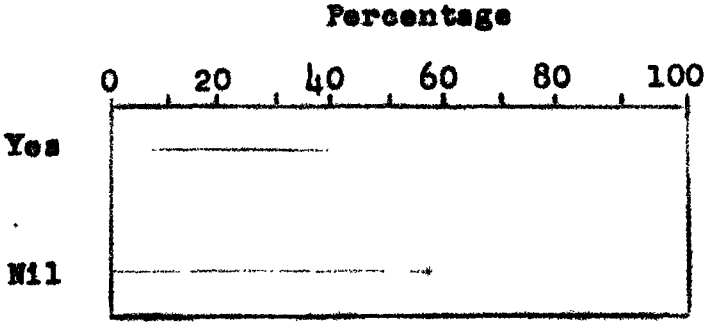
In concluding this element, one must take the note of the fact that old houses still occupy the larger percentage

than the other houses combined, and there are much work to be done before this city can reach the standard of a modern city.

Analysis of Additional Attached House

This element implies to the small house attached to the rear part of the building. They are mainly used as storage. In this survey, they are only classified into "yes" and "nil" categories. Their percentages are shown below.

Figure 35. Percentage of additional attached house



Houses without attached house can be seen in the following examples.

	Yes	Nil	Total
Rideau	22	142	164
Dalhousie	6	70	76
Sussex	6	36	42


GREEN ISLAND
MAPLE ISLAND
PORTER'S ISLAND
EPOCH OF BUILDING
New
Medium
Old

WHETHER ANY DETACHED HOUSE

Yes VV

Nil .....

Houses with or without additional attached house are mainly caused by the density of house and its function. In the commercial section, while most houses have utilized their marginal space, they usually have no attached house. In large government buildings, churches, schools and several storied apartment houses, small attached houses would not be needed. But in the residential areas, family dwellings usually consist of attached house at the back. The building materials used for the attached house is always similar to those for the house. But in better family dwellings, small attached house cannot be found.

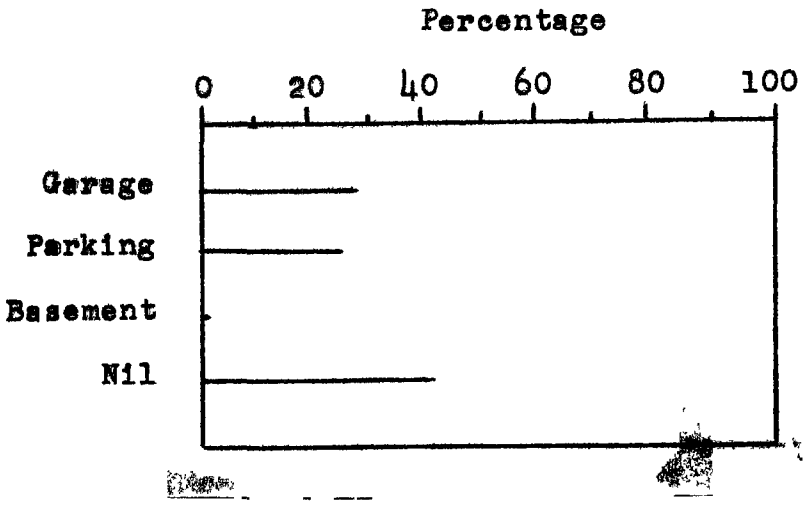
Analysis of Garage and Parking

This is the space or structure of a building, with a private lane, used for parking or sheltering the automobile. This element can be classified into the following categories.

1. Garage: a small structure beside or behind the house.
2. Parking: an open space beside or behind the house.
3. Basement: basement used as garage.

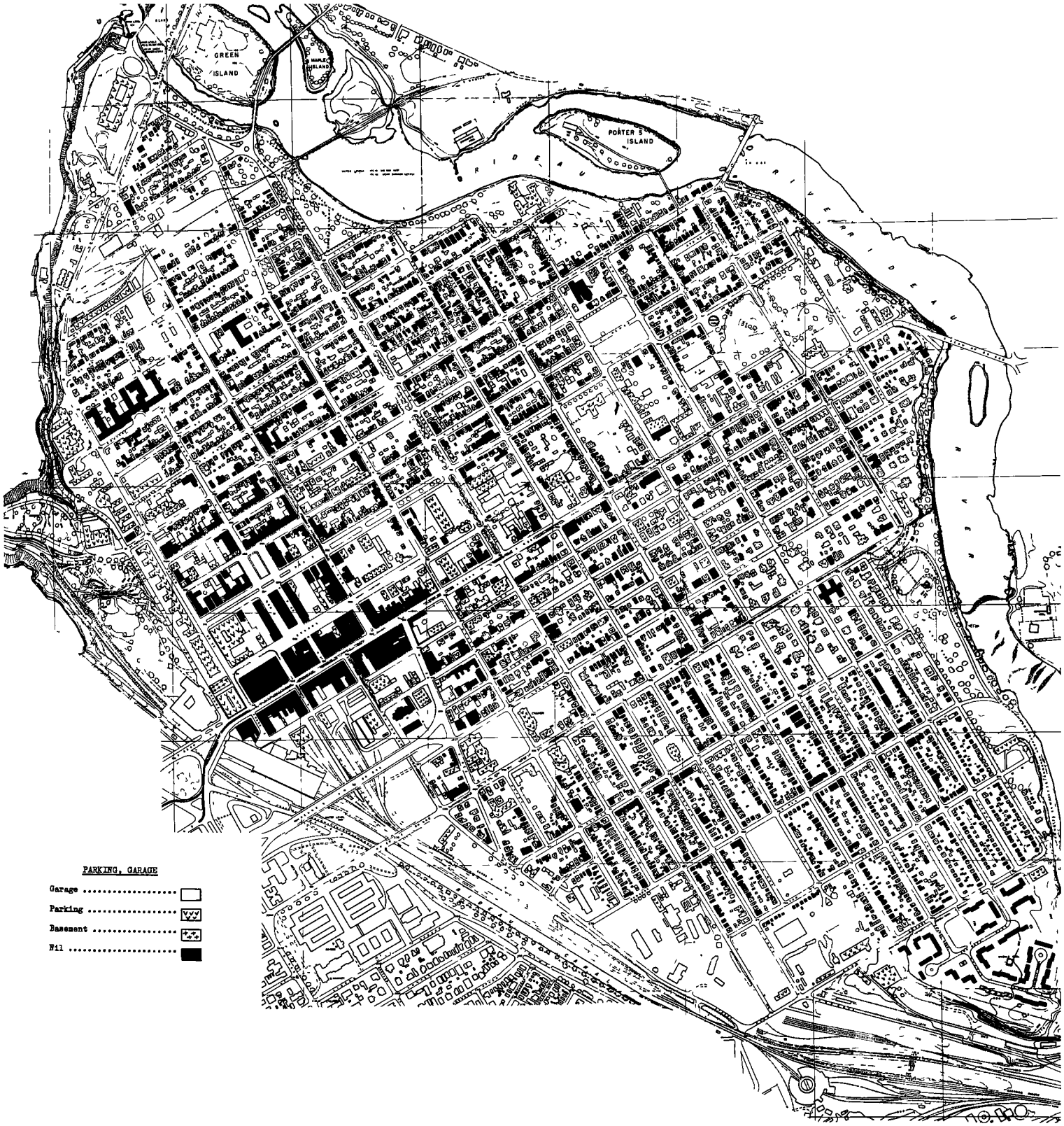
The percentages of these categories are shown by the bar graph below.

Figure 36. Percentage of garage and parking



Because of sufficient space and the snowy season, most residential houses have their own garages. But in the big apartment houses or houses occupied by the lower class families, there are only parking lots. In the public or semi-public buildings such as schools, churches and business buildings, parking spaces are always available in their surroundings or neighbourhood. In some houses occupied by upper class families, due to the special construction, basements are used for parking purpose.

In Rideau and Dalhousie, and in Osgoode and Somerset, many houses are built side by side without leaving any space. Under such circumstance, availability of parking space would be impossible. In its adjacent areas, many houses also have no garage or parking space. It is mainly caused by the narrowness of the streets and the limited space of the houses.


GREEN ISLAND
MAPLE ISLAND
PORTER'S ISLAND
RIDEAU
RIVER
PARKING, GARAGE
Garage
Parking
Basement
Nil

If parking space is really a problem in most cities, it is less serious in these areas. Probably it is due to the sufficient space left for parking and the sparse density of building.

Analysis of Use of Building

For there exists a great variety of uses that characterize the city, a primary problem of planning building in accordance with its use in urban survey would naturally arise. But in these areas not so much difficulties have been confronted because the whole area is primarily residential and the business is for local interest. Basing upon the nature of uses, the classification adopted in this survey are as follows:

1. One family dwelling.
2. Two family dwelling.
3. Multi-family dwelling.
4. Commercial and residential.
5. Commercial.
6. Auto repair, sales and service.
7. Educational.
8. Church.
9. Embassy.
10. Government building.
11. Hospital.

12. Recreational.

Since Sandy Hill and its adjacent areas are predominated by residential houses and no other category is of particular importance, the bar graph is hereby omitted.

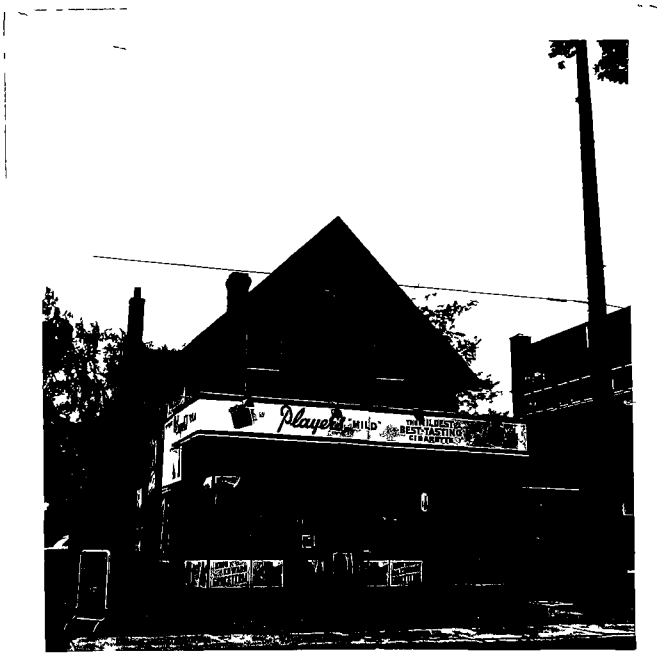
According to the dwelling units, houses are classified as one-family dwellings, two-family dwellings and multi-family dwellings. One-family dwellings have larger proportion than other categories and are mainly single detached houses. Two-family dwellings are mostly semi-detached houses and multi-family dwellings may be either single detached or attached houses.

In studying their distributions, the small section south of Mann is occupied by multi-family houses; and the section from Mann to Templeton is primarily for one-family houses. The section between Templeton and Besserer are mainly one-family and multi-family dwellings with some two-family dwellings, except the area east of Cumberland, west of Henderson and north of Somerset where most houses are one-family dwellings. In its adjacent areas, one-family dwellings still occupy a larger portion of houses. In the section east of King Edward, the numbers of two-family dwellings and multi-family dwellings are very are very close, but in the section west of King Edward, multi-family dwellings become much less.

Commercial buildings are concentrated in a certain section. Mainly, they are found in the area east of Sussex,

west of Dalhousie, south of Murray and north of Rideau. Since business in this area is primarily for the local interest, most buildings are comparatively old and usually have less than three stories. In some commercial buildings, the first floor is used for business and the upper floors for residence. This type of house can be seen all over the area, particularly in the intersection of streets.

Figure 37. Commercial and residential building



This area also has political importance. In the area east of Chapel in Sandy Hill, a number of foreign embassies are found. In Sussex, the Department of National Revenue, Public Archive and Canadian War Museum, Royal Canadian Mint and National Research Council are all located.

Summing up this element, it can be pointed out that most buildings are for residential purpose. Because these areas are comparatively populated, many churches and schools were built; and also because these areas are near the Parliament Hill, there are many embassies and government buildings.


GREEN ISLAND
MAPLE ISLAND
PORTER'S ISLAND
USE OF BUILDING
One-family
Two-family
Multi-family
Commercial and residential
Commercial
Auto repair, sales and service
Education
Church
Embassy
Government building
Hospital
Recreational

Attention is focused on the detailed analysis of the elements of housing structure in this study. In discussing each element, figures such as photograph, bar graph, analytical map and table are all used to illustrate the text. Although the status of building cannot be judged by any single element, houses may be classified as "above standard," "standard" or "substandard" without prejudice after the analysis of its physical structure as well as environment from all aspects.

Generally speaking, the classification of residential houses is based upon the following factors:

1. Substandard house:

This type of house is constructed by wood or brick several decades ago with poor state of maintenance. The outdoor space is usually less than ten feet long covered by grass, pebble, sand or dirt and fenced by iron wire or without fence.

2. Standard house:

This type of house is constructed by brick or stucco in these decades with good state of maintenance. The outdoor space is usually at least ten feet long covered by grass and other plants and is fenced by steel rail, stucco or wood. This type of house has either garage or parking space.

3. Above standard house:

This type of house is constructed by stucco, stone or reinforced concrete in this decade or the last few decades with very good state of maintenance. Its outdoor space is a mixed type of garden and is fenced by hedge or wall. This type of house has either garage or basement for sheltering the automobile.

Some new apartment houses do not have gardens; but, instead, they have indoor swimming pools.

Factors in classifying the houses for commercial purpose are different:

1. Substandard house:

This type of house is constructed by brick several decades ago and usually has no more than three stories. In a number of these houses, the upper floors of the buildings are used for residential purpose.

2. Standard house:

This type of house is constructed by stone or reinforced concrete in this decade or last few decades with very good state of maintenance. It has three or more stories; and the upper floors are also used exclusively for business purpose.

Factors in classifying the houses for other uses are mainly determined by the epoch of building, the building materials and the number of stories.

SUMMARY AND CONCLUSIONS

In the general conclusion, although Sandy Hill and its adjacent areas cannot be considered as the most important portion in this city, yet they are the densest populated areas in which many government buildings, embassies and institutions are located. When this study emphasizes that more than half of the houses in these areas are not up to standard, it is by no means a discouragement. Instead, the author only attempts to give a clear picture of these areas in their present status. Because these areas are located closely to the Parliament Hill, and also because Ottawa is an ever growing capital, this study may have some contributions to other urban geographers in studying the present status and planning the future development of this city.

TABLE I.- DISTANCE FROM HOUSE TO STREET

	Garden or meadow				Sand, mud or pebble			Stucco			
	0	0-10	10-20	20-	0-10	10-20	20-	0-10	10-20	20-	Total
Chapel Cres			2	5							7
Philip Cres		2	2	2							6
Goulburn Cres			2	9							11
Mann		2	7					2		2	13
Templeton		37									37
Somerset East		46			3			10	3		62
McDougall		12									12
Osgoode		48	3		8			4			63
Laurier	9	45	11	5	2			6	1		79
Wilbrod	2	77	18	1	2			2			102
Stewart		114	2	1	2						119
Daly	13	95	9		2			3			122
Besserer	10	106	3		7			5			131
Rideau	124	19	7	3	1	1	1		2	6	164
Tormey		5									5
St. George	11	4			7			5		1	28
Heney		20			2			1			23
Anglesea		4			1						5
York	25	47	1		5			3			81
Clarence	29	99			31			3			162
Papineau	6	4			1			1			12
Des Jardins		13									13
Myrand		5									5
Murray	41	46	1		10			3	1		(102)
St. Patrick	74	94			14		1	1	1	5	190
Guigues	25	64			9			3			101
Martineau	9										9
St. Andrew	4	119			30	2		3			158

TABLE I. (CONTINUED)- DISTANCE FROM HOUSE TO STREET

	Garden or meadow				Sand, mud or pebble			Stucco			
	0	0-10	10-20	20-	0-10	10-20	20-	0-10	10-20	20-	Total
Bruyere	2	75			29			6			112
Cathcart	3	61	1		1	1		2			69
Bolton		61	1		4						66
Boteler		35			13						48
Redpath		14			4			1			19
Baird		16	1		4						21
Range		50	1								51
Marlborough		94									94
Goulburn	3	84	2								89
Blackburn		79	8		2			1			90
Chapel		122	19		1			2	2		146
Russell		65	31					1			97
Sweetland		21	37	1				1			60
Nelson		62	40		1			6	2		111
Henderson		44	28	2	2			2			78
Cornwall	2	1									3
King Edward	1	93	35	7	4			8	1	5	154
College		57		1							58
Cumberland	42	63	1		6			5	5		122
Hastey		5			1						58
Waller	7	12	4		1						24
Nicholas	9	5	1	1			1				17
Wurtemburg		18	1	1							20
Charlotte	7	28	1		6						42
Rockwood		18									18
Cobourg		54			11						65
Pinard	4	1									5

TABLE I. (CONTINUED)- DISTANCE FROM HOUSE TO STREET

	Garden or meadow				Sand, mud or pebble			Stucco			
	0	0-10	10-20	20-	0-10	10-20	20-	0-10	10-20	20-	Total
Augusta	2	53	2		2						59
Notre Dame	9										9
St. Joseph	11	6									17
Friel	20	57			7	1					85
McGee	20										20
Rose	18	1									19
Cathcart Sq.		6									6
Dalhousie	67	7				1	1				76
Earnscliffe		4	1	1							6
William	14										14
Mosgrove	2										2
Byward	8										8
Parent	6	5	1					1	2		15
Sussex	23	14	1	3						1	42
Mackenzie	2		1								3
Total	7,664	2,518	286	43	241	6	4	91	20	20	3,893
Percentage	17.3%	64.6%	7.3%	1.1%	6.2%	.1%	.1%	2.3%	.5%	.5%	100%

TABLE II.- PERCENTAGE OF TYPE OF GARDEN 88

	Grass	Grass-flower	Grass-bush	Grass-tree	Mixed	Nil	Total
Chapel Cres	7						7
Philip Cres	5		1				6
Goulburn Cres	9		2				11
Mann	4	2	1		2	4	13
Templeton	11	11	4		11		37
Somerset	17	13	3		11	18	62
McDougall	7		4		1		12
Osgoode	23	9	13		3	15	63
Laurier	14	5	17	1	20	22	79
Wilbrod	24	22	30	1	19	6	102
Steward	47	21	33		15	3	119
Daly	39	6	39		19	9	122
Besserer	40	13	43	1	13	21	131
Rideau	15	1	8		4	136	164
Tormey	4		1				5
St. George	3	1				24	28
Heney	11	2	5	1	1	3	23
Anglesea	3		1			1	5
York	34	5	6	1	2	33	81
Clarence	73	5	15	1	4	64	162
Papineau	3					9	12
Des Jardins	9	2	1	1			13
Myrand	4				1		5
Murray	30	3	3	6		60	102
St. Patrick	60	8	16	2	3	101	190
Guigues	45	5	14		1	36	101
Martineau						9	9
St. Andrew	99	8	8	3		40	158
Bruyere	55	5	10		4	38	112
Cathcart	42	10	10			7	69
Bolton	49	6	7			4	66
Boteler	24	2	8			14	48
Redpath	11	3	1			4	19
Baird	13				3	5	21
Range		4	8	1	36	2	51
Marlborough	10	18	25		41		94
Goulburn	23	10	13	5	37	1	89
Blackburn	23	3	33	3	22	6	90
Chapel	49	10	45	2	28	12	146
Russell	35	8	34	18	2		97
Sweetland	26	8	11		10	5	60
Nelson	79	6	11		6	9	111
Henderson	23	24	10	2	15	4	78

TABLE II. (CONTINUED)- PERCENTAGE OF TYPE OF GARDEN

	Grass	Grass-flower	Grass-bush	Grass-tree	Mixed	Nil	Total
King Edward	82	21	17		17	17	154
College	21	27	6		3	1	58
Cornwall	1					2	3
Cumberland	43	13	10	1	4	51	122
Hastey	5					5	11
Waller	11		5			8	24
Nicholas	3		3			11	17
Wurtemburg	4	1	12		3		20
Charlotte	11	2	11		5	13	42
Rockwood	5	3	6		4		18
Cobourg	25	12	10		5	13	65
Pinard	1				4		5
Augusta	19	11	13	2	3	11	59
Notre Dame						9	9
St. Joseph	3	3				11	17
Friel	29	3	12	2	1	38	85
McGee						20	20
Rose	1					18	19
Cathcart Sq.	5				1		6
Dalhousie	4	1	2			69	76
Earncliffe	2		3		1		6
William						14	14
Mosgrove						2	2
Byward						8	8
Parent	5				1	9	15
Sussex	6	4		1	5	26	42
Mackenzie					1	2	3
Total	1,388	360	614	55	388	1,088	3,893
Percentage	35.6%	9.2%	15.8%	1.4%	9.9%	28.1%	100%

TABLE III.- TYPE OF FENCE

	Hedge	Wood	Iron wire	Steel	Stucco	Wall	Mixed	Nil	Total
Chapel Cres								7	7
Philp Cres								6	6
Goulburn Cres								11	11
Mann	1				1			11	13
Templeton	1	1	2				1	32	37
Somerset	5	2	7	3			2	43	62
McDougall								12	12
Osgoode	1	1	7	6	2		1	45	63
Laurier	17		1	6				55	79
Wilbrod	12	2	6	16	2			64	102
Stewart	10	2	11	9	4			83	119
Daly	10	1	4	7	4		2	94	122
Besserer	14		10	10	5			92	131
Rideau		2		2	5			155	164
Tormey				2				3	5
St. George				3				25	28
Heney		1	2	2				18	23
Anglesea		1		1				3	5
York	1	5	4	26				45	81
Clarence	1	13	11	39	2			96	162
Papineau	1		1	1				9	12
Des Jardins		2		7				4	13
Myrand				4				1	5
Murray		6	3	23				70	102
St. Patrick	3	4	7	38	2		1	135	190
Guigues	1	2	6	38				54	101
Martineau								9	9

TABLE III. (CONTINUED)- TYPE OF FENCE

	Hedge	Wood	Iron wire	Steel	Stucco	Wall	Mixed	Nil	Total
St. Andrew		3	12	63	3			77	158
Bruyere	2	1	6	27				76	112
Cathcart	2	1	8	27	1		1	29	69
Bolton	1	2	9	23			1	30	66
Boteler	3	2	1	11				31	48
Redpath		3		1				15	19
Baird		2	2	3				14	21
Range	14				8	1	2	26	51
Marlborough	21				3	1	3	65	94
Goulburn	5	3	4	5		2	1	69	89
Blackburn	11		1	2				76	90
Chapel	18	2	6	9	4		1	106	146
Russell	1	1	10	4	4			77	97
Sweetland	7		3	4	5			41	60
Nelson	12	6	2	18				73	111
Henderson	1	2	9	6	2			58	78
King Edward	3	3	2	20	5		1	120	154
College	2		10	4	1			41	58
Cornwall			1					2	3
Cumberland	4	2	5	16	1			94	122
Hastey			1					10	11
Waller		2	3	1				18	24
Nicholas							2	15	17
Wurtemburg	6			1	1			12	20
Charlotte	1	1	3	4	1			32	42
Rockwood								18	18
Cobourg	2	3	5	6	4		1	44	65
Pinard					1			4	5

TABLE III. (CONTINUED)- TYPE OF FENCE

	Hedge	Wood	Iron wire	Steel	Stucco	Wall	Mixed	Nil	Total
Augusta	1	6	9	6	2			35	59
Notre Dame								9	9
St. Joseph			1	2				14	17
Friel		3	4	19	3		1	55	85
McGee								20	20
Rose								19	19
Cathcart Sq.		2		3				1	6
Dalhousie	1			3				72	76
Earncliffe					1			5	6
William								14	14
Mosgrove								2	2
Byward								8	8
Parent		1		3				11	15
Sussex	3			2				37	42
Mackenzie				1				2	3
Total	199	97	199	537	77	4	21	2,759	3,893
Percentage	5.1%	2.6%	5.1%	13.8%	2%	.1%	.5%	70.8%	100%

TABLE IV.- PERCENTAGE OF SINGLE DETACHED, SEMI-DETACHED AND ATTACHED HOUSES

	Single detached	Semi-detached	Attached	Total
Chapel Cres	2		5	7
Philip Cres			6	6
Goulburn Cres	3		8	11
Mann	10	2	1	13
Templeton	35		2	37
Somerset	33	17	12	62
McDougall	11		1	12
Osgoode	41	12	10	63
Laurier	70	5	4	79
Wilbrod	88	8	6	102
Steward	100	9	10	119
Daly	82	17	23	122
Besserer	100	8	23	131
Rideau	57	8	99	164
Tormey	4		1	5
St. George	17	2	9	28
Heney	9	8	6	23
Anglesea	4	1		5
York	28	14	39	81
Clarence	68	30	64	162
Papineau	8	2	2	12
Des Jardins	5	8		13
Myrand	2	2	1	5
Murray	36	20	46	102
St. Patrick	81	37	72	190
Guigues	40	23	38	101
Martineau	8	1		9
St. Andrew	71	39	48	158
Bruyere	47	26	39	112
Cathcart	25	20	24	69
Bolton	37	15	14	66
Boteler	29	12	7	48
Redpath	11	7	1	19
Baird	9	4	8	21
Range	51			51
Marlborough	77	15	2	94
Goulburn	69	15	5	89
Blackburn	75	7	8	90
Chapel	115	25	6	146
Russell	74	18	5	97
Sweetland	43	10	7	60
Nelson	50	39	22	111
Henderson	51	19	8	28

TABLE IV. (CONTINUED)- PERCENTAGE OF SINGLE DETACHED, SEMI-DETACHED AND ATTACHED HOUSES

	Single detached	Semi-detached	Attached	Total
King Edward	102	31	21	154
College	49	7	2	58
Cornwall	2		1	3
Cumberland	75	28	19	122
Hastey	3	2	6	11
Waller	11	4	9	24
Nicholas	11	4	2	17
Wurtemburg	17	3		20
Charlotte	22	13	7	42
Rockwood	16	2		18
Cobourg	44	10	11	65
Pinard	4	1		5
Augusta	36	16	7	59
Notre Dame	5	1	3	9
St. Joseph	14	1	2	17
Friel	48	17	20	85
McGee	11	1	8	20
Rose	5	2	12	19
Cathcart Sq.	3	2	1	6
Dalhousie	17	7	52	76
Earncliffe	6			6
William	1		13	14
Mosgrove			2	2
Byward	1		7	8
Parent	8		7	15
Sussex	22		19	42
Mackenzie	3			3
Total	2,313	658	922	3,893
Percentage	59.4%	16.8%	23.8%	100%

TABLE V.- BUILDING MATERIAL

	Stone	Brick	Stucco	Frame	Concrete	Combination 2	Combination 3	Total
Chapel Cres						7		7
Philip Cres						6		6
Goulburn Cres						11		11
Mann		4	5	1		3		13
Templeton	4	1	1	14		11	6	37
Somerset	4	5	4	1		43	5	62
McDougall			1			11		12
Osgoode	1	3	1	3		55		63
Laurier	5	1	10			66	2	79
Wilbrod	8	8	8	1		76	1	102
Steward	2	3	8	4		98	4	119
Daly	9	1	6	2		102	2	122
Besserer	4	5	12	4		104	2	131
Rideau	12	26	23	4	4	94	1	164
Tormey		1				4		5
St. George	2	4	2			20		28
Heney		1				21	1	23
Anglesea						5		5
York	5	1	6	5		64		81
Clarence	6	18	8	14		108	8	162
Papineau	2		1	2		7		12
Des Jardins		1				11	1	13
Myrand	1		1			3		5
Murray	4	3	10	9		72	4	102
St. Patrick	15	23	22	12		111	7	190
Guigues	5	8	7	6		68	7	101
Martineau			2	1		5	1	9

TABLE V. (CONTINUED)- BUILDING MATERIAL

	Stone	Brick	Stucco	Frame	Concrete	Combination 2	Combination 3	Total
St. Andrew	7	6	6	30	6	100	3	158
Bruyere	5	10	14	10		64	9	112
Cathcart	5	1		8		52	3	69
Bolton	2	1	6	11		42	4	66
Boteler	3		5	8		30	2	48
Redpath		1	4	4		9	1	19
Baird			3	5		12	1	21
Range	3	2	18	3		24	1	51
Marlborough	2	1	11	6		65	9	94
Goulburn	2	1	6	7		68	5	89
Blackburn		1	6	4		78	1	90
Chapel	2	1	16	8		113	6	146
Russell	2	3	3	9		77	3	97
Sweetland	4	4	2	6		39	5	60
Nelson	9	13	2	7		80		111
Henderson	2	4	5	4		61	2	78
King Edward	5	19	9	8		109	4	154
College	1	1	1	7		44	4	58
Cornwall						3		3
Cumberland	12	16	12	13		67	6	122
Hastey						11		11
Waller	2	1	1		1	19		24
Nicholas	5		1	2		8	1	17
Wurtemburg			2			15	3	20
Charlotte	1	1	1	1		37	1	42
Rockwood			2			15	1	18
Cobourg	2	2	5	3		46	7	65

TABLE V. (CONTINUED)- BUILDING MATERIAL

	Stone	Brick	Stucco	Frame	Concrete	Combination 2	Combination 3	Total
Pinard			1			4		5
Augusta	1	4	6	7		39	2	59
Notre Dame			1	2		4	2	9
St. Joseph			2	4		7	4	17
Friel	2	2	7	5		61	8	85
McGee			1	5		13	1	20
Rose		1		6		12		19
Cathcart Sq.		1				5		6
Dalhousie	7	10	10	3	3	50	3	76
Earncliffe			2			4		6
William		3			6	5		14
Mosgrove		1				1		2
Byward		1			7			8
Parent	1		4	1		8	1	15
Sussex	11	1	4			25	1	42
Mackenzie	2		1					3
Total	189	220	318	280	27	2,690	169	3,893
Percentage	4.8%	5.7%	8.2%	7.2%	.7%	69.1%	3.9%	100%

TABLE VII.- PERCENTAGE OF GABLE AND TROUGH HOUSE

	Gable-gable	Gable-trough	Trough-trough	Trough-gable	Gable and trough	Total
Chapel Cres			7			7
Philip Cres			6			6
Goulburn Cres			11			11
Mann	3		10			13
Templeton	20		17			37
Somerset	36		25	1		62
McDougall	1		11			12
Osgoode	21		40	2		63
Laurier	48	1	26	1	3	79
Wilbrod	59		42		1	102
Steward	72	1	44	1	1	119
Daly	45	3	59		5	122
Besserer	79		50		2	131
Rideau	102	3	55		4	164
Tormey	4		1			5
St. George	18		10			28
Heney	13		9	1		23
Anglesea	3		2			5
York	50	1	29			81
Clarence	99	1	58	4		162
Papineau	8	1	3			12
Des Jardins	5		8			13
Myrand	2		3			5
Murray	50	1	51			102
St. Patrick	112	2	76			190
Guigues	47		53		1	101
Martineau	7		2			9
St. Andrew	102	3	53			158
Bruyere	58	1	50	2	1	112
Cathcart	30		39			69
Bolton	40		26			66
Boteler	33	1	12	1	1	48
Redpath	14		5			19
Baird	14		7			21
Range	11		40			51
Marlborough	33		60		1	94
Goulburn	40	2	47			89
Blackburn	53	1	33		3	90
Chapel	77	3	62	2	2	146
Russell	68	1	22	5	1	97
Sweetland	42	1	17			60
Nelson	49	2	59	1		111

TABLE VII. (CONTINUED)- PERCENTAGE OF GABLE AND TROUGH HOUSE

	Gable-gable	Gable-trough	Trough-trough	Trough-gable	Gable and trough	Total
Henderson	52		25		1	78
King Edward	113	1	46	3	1	154
College	48		9		1	58
Cornwall	1		2			3
Cumberland	66		56			122
Hastey	6		5			11
Waller	10	1	12		1	24
Nicholas	6		9	1	1	17
Wurtemburg	14		6			20
Charlotte	16		26			42
Rockwood	14		4			18
Cobourg	46	2	17			65
Pinard	4		1			5
Augusta	31	2	25	1		59
Notre Dame	8		1			9
St. Joseph	17					17
Friel	44	2	38		1	85
McGee	16	1	3			20
Rose	12		7			19
Cathcart Sq.	3		3			6
Dalhousie	34		42			76
Earncliffe	1		4	1		6
William	7		7			14
Mosgrove			2			2
Byward	2		6			8
Parent	7		7	1		15
Sussex	20		21	1		42
Mackenzie	1		2			3
Total	2,177	38	1,616	29	33	3,893
Percentage	55.9%	1%	41.7%	.7%	.9%	100%

TABLE VI.- NUMBER OF STORIES 100

	1	2	3	4	Over 4	Total
Chapel Cres				7		7
Philip Cres			4	2		6
Goulburn Cres	1		4	6		11
Mann	7	2	4			13
Templeton	19	18				37
Somerset	10	50	2			62
McDougall		10	2			12
Osgoode	4	55	4			63
Laurier	6	59	12	1	1	79
Wilbrod	6	84	10		2	102
Steward	8	95	10	1	5	119
Daly	5	105	8	3	1	122
Besserer	108	6	11	1	5	131
Rideau	34	83	37	4	6	164
Tormey		3	2			5
St. George	4	17	3	4		28
Heney		22	1			23
Anglesea		4	1			5
York	6	56	14	4	1	81
Clarence	17	121	24			162
Papineau		12				12
Des Jardins		13				13
Myrand	1	4				5
Murray	10	84	7	1		102
St. Patrick	22	151	15	1	1	190
Guigues	13	77	11			101
Martineau		9				9
St. Andrew	31	117	9	1		158
Bruyere	11	91	8	1	1	112
Cathcart	4	58	3	1	3	69
Bolton	4	62				66
Boteler	11	34		1	2	48
Redpath	3	14	2			19
Baird	4	17				21
Range	23	28				51
Marlborough	43	51				94
Goulburn	28	58	2		1	89
Blackburn	30	102	13	1		146
Chapel	8	87	2			97
Russell	4	54	2			60
Sweetland	4	92	14	1		111
Nelson	2	76				78
Henderson	10	129	14	1		154
King Edward	3	54	1			58

TABLE VI. (CONTINUED)- NUMBER OF STORIES 101

	1	2	3	4	Over 4	Total
Cornwall	1	2				3
Cumberland	15	96	10	1		122
Hastey	1	10				11
Waller	2	18	1	3		24
Nicholas	6	7	2		2	17
Wurtemburg	1	18	1			20
Charlotte	2	29	9	1	1	42
Rockwood	1	17				18
Cobourg	8	52	5			65
Pinard	5					5
Augusta	11	45	3			59
Notre Dame	1	8				9
St. Joseph	1	16				17
Friel	4	75	5	1		85
McGee	2	18				20
Rose	5	13	1			19
Cathcart Sq.	1	5				6
Dalhousie	20	31	20	4	1	76
Earncliffe	1	5				6
William		11	3			14
Mosgrove	1	1				2
Byward	2	5	1			8
Parent	3	11	1			15
Sussex	4	17	18	2	1	42
Mackenzie				1	2	3
Total	624	2,842	336	55	36	3,893
Percentage	16%	73%	8.6%	1.4%	.1%	100%

TABLE VIII.- PERCENTAGE OF TYPE OF ROOF

	Saddle	Hip	Sloping	Mansard	Flat	$\overline{4S}$	$\overline{2S}$	Combined	Total
Chapel Cres					7				7
Philip Cres					6				6
Goulburn Cres		1			10				11
Mann	2				11				13
Templeton	13	17	2	2	3				37
Somerset	4	14	4	5	22	5	7	1	62
McDougall	3		6	1				2	12
Osgoode	16	4	4	7	17	4	11		63
Laurier	22	3		3	30	10	2	9	79
Wilbrod	36	6	2	7	22	15	3	11	102
Steward	28	14	1	9	24	21	12	10	119
Daly	28	3	9	9	16	26	8	23	122
Besserer	48	11	15	7	28	15		7	131
Rideau	26	4	32	2	78	5	4	13	164
Tormey	1		2		1		1		5
St. George	3		3	1	19	1		1	28
Heney	2	1	15			5			23
Anglesea		2	2		1				5
York	20	3	45	3	4	1	4	1	81
Clarence	57	5	66	3	29	1	1		162
Papineau	5		1		5		1		12
Des Jardins	3	1			9				13
Myrand	2				2	1			5
Murray	29	2	26	5	35		5		102
St. Patrick	56	4	39	2	80	2	5	2	190
Guigues	40	1	25	2	29		1	3	101
Martineau	5				4				9

	Saddle	Hip	Sloping	Mansard	Flat	$\overline{4S}$	$\overline{2S}$	Combined	Total
St. Andrew	64		42	1	46	1	2	2	158
Bruyere	47	4	26	2	27	3	1	2	112
Cathcart	20		31	1	11	1	2	3	69
Bolton	36		25	2	1	1		1	66
Boteler	24	1	12	1	4	2	1	3	48
Redpath	10		5	1	1			2	19
Baird	9	1	10	1					21
Range	28	15		1	2	3	1	1	51
Marlborough	44	28	1	2	6	4	4	5	94
Goulburn	28	21		1	18	5	8	8	89
Blackburn	18	32		3	7	11	3	16	90
Chapel	35	27	13	6	34	8	3	20	146
Russell	39	11		4	25	12	2	4	97
Sweetland	19	7	13		7	7	1	6	60
Nelson	6	8	1	2	68		1	25	111
Henderson	23	13	18		18		1	5	78
King Edward	51	5	5	2	78		1	12	154
College	35	1	1	5	4	8	1	3	58
Cornwall	1		2						3
Cumberland	33	4	8	2	62	5	3	5	122
Hastey	1		3	1	5		1		11
Waller	6	2	5		3	4	3	1	24
Nicholas	4		3		6	2		2	17
Wurtemburg	5	2	1	1	3	4		4	20
Charlotte	2	2	6		17	9	5	1	42
Rockwood	3	7		3	1	2		2	18
Cobourg	20	5	6	1	19	12	1	1	65

TABLE VIII. (CONTINUED)- PERCENTAGE OF TYPE OF ROOF

	Saddle	Hip	Sloping	Mansard	Flat	$\overline{4S}$	$\overline{2S}$	Combined	Total
Pinard	2			3					5
Augusta	27	1	7	2	18	2		1	59
Notre Dame	4				3			2	9
St. Joseph	14				3				17
Friel	26	1	46	1	5	4		2	85
McGee	8		6		6				20
Rose	4		12		3				19
Cathcart Sq.	2				3	1			6
Dalhousie	12		26		35		2	1	76
Earncliffe	1	2	1		1			1	6
William Mosgrove	1		8		5 2				14 2
Byward	1		3		4				8
Parent			3		10			2	15
Sussex	7	1	1		28	2	1	2	42
Mackenzie					3				3
Total	1,169	297	649	117	994	326	113	228	3,893
Percentage	30%	7.6%	16.6%	3%	25.5%	8.4%	3%	5.9%	100%

TABLE IX.- PERCENTAGE OF CHIMNEYS 109

	Central	One-sided	More than one	Nil	Invisible	Total
Chapel Cres		2		5		7
Philip Cres				6		6
Goulburn Cres				11		11
Mann		4		5	4	13
Templeton	2	34	1			37
Somerset	1	60	1			62
McDougall		12				12
Osgoode	1	52	3	5	2	63
Laurier	5	46	23		5	79
Wilbrod	10	67	17	3	5	102
Steward	5	90	20		4	119
Daly	1	74	38	4	5	122
Besserer	7	98	13	6	7	131
Rideau	4	98	20	27	15	164
Tormey	1	4				5
St. George		13	2	12	1	28
Heney		21	2			23
Anglesea	1	3	1			5
York	3	58	5	11	4	81
Clarence	2	135	21	1	3	162
Papineau	2	10				12
Des Jardins		12	1			13
Myrand		2	3			5
Murray	6	70	22	2	2	102
St. Patrick	10	133	26	10	11	190
Guigues	10	62	14	7	8	101
Martineau	1	8				9
St. Andrew	8	111	23	8	8	158
Bruyere	3	75	20	9	5	112
Cathcart		59	4	4	2	69
Bolton	13	41	9	3		66
Boteler	7	35	2	2	2	48
Redpath	2	13	2	2		19
Baird	3	14	2	2		21
Range	4	37	10			51
Marlborough	2	69	15	6	2	94
Goulburn	3	80	6			89
Blackburn	3	82	5			90
Chapel	1	126	18	1		146
Russell		89	7		1	97
Sweetland	2	54	3		1	60
Nelson		102	6	3		111

TABLE IX. (CONTINUED)- PERCENTAGE OF CHIMNEYS

	Central	One-sided	More than one	Nil	Invisible	Total
Henderson		70	7	1		78
King Edward		145	14	5		154
College		53	5			58
Cornwall		3				3
Cumberland	3	109	9	1		122
Hastey		11				11
Waller	5	8	5	5	1	24
Nicholas	1	7	8		1	17
Wurtemburg	1	12	7			20
Charlotte		37	1	4		42
Rockwood		16	2			18
Cobourg		61	3	1		65
Pinard	1	4				5
Augusta	2	52	4	1		59
Notre Dame	2	6	1			9
St. Joseph	4	13				17
Friel	5	65	7	7	1	85
McGee	4	15	1			20
Rose	2	15		2		19
Cathcart Sq.			1	5		6
Dalhousie		48	1	13	14	76
Earncliffe		6				6
William	1	5		2	6	14
Mosgrove		1		1		2
Byward		2	1	5		8
Parent	1	9	1	4		15
Sussex		20	7	5	10	42
Mackenzie		1		2		3
Total	145	2,949	450	215	134	3,893
Percentage	3.7%	75.8%	11.6%	5.5%	3.4%	100%

TABLE X.- PERCENTAGE OF ATTIC WINDOW AND ADDITIONAL STRUCTURE

	Attic Window	Additional structure	Attic window & additional structure	Nil	Total
Chapel Cres				7	7
Philip Cres				6	6
Goulburn Cres				11	11
Mann		1		12	13
Templeton	9	1		27	37
Somerset	23	1		38	62
McDougall				12	12
Osgoode	14			49	63
Laurier	25	9	6	39	79
Wilbrod	35	11	11	45	102
Steward	36	16	17	50	119
Daly	42	14	8	58	122
Besserer	32	17		82	131
Rideau	12	10	4	138	164
Tormey	1			4	5
St. George	2	1		25	28
Heney	4	1	2	16	23
Anglesea	1			4	5
York	8			73	81
Clarence	28	4		130	162
Papineau	3			9	12
Des Jardins		1		12	13
Myrand	1	1		3	5
Murray	18	3	4	77	102
St. Patrick	34	7		149	190
Guigues	18	4		79	101
Martineau	3			6	9
St. Andrew	21	9		128	158
Bruyere	27	4		81	112
Cathcart	9	1		59	69
Bolton	9	2		55	66
Boteler	7	4		37	48
Redpath	5			14	19
Baird	1	2		18	21
Range	24	3	1	23	51
Marlborough	46	8	1	39	94
Goulburn	39		1	49	89
Blackburn	31	15	2	42	90
Chapel	31	11	2	102	146

TABLE X. (CONTINUED)- PERCENTAGE OF ATTIC WINDOW AND ADDITIONAL STRUCTURE

	Attic window	Additional structure	Attic window & additional structure	Nil	Total
Russell	11	11	1	74	97
Sweetland		12	48		60
Nelson	15			96	111
Henderson	1	7		70	78
King Edward	1	1	3	149	154
College	16	3		39	58
Cornwall				3	3
Cumberland	20	4		98	122
Hastey			1	10	11
Waller	4		3	17	24
Nicholas	3			14	17
Wurtemburg	6	1	1	12	20
Charlotte	10	1	3	28	42
Rockwood	5	2	1	10	18
Cobourg	10	2	8	45	65
Pinard	3			2	5
Augusta	10	2	1	46	59
Notre Dame	2	1		6	9
St. Joseph	3			14	17
Friel	7	1		77	85
McGee	1			19	20
Rose	2			17	19
Cathcart Sq.				6	6
Dalhousie	7	1		68	76
Earncliffe				6	6
William				14	14
Mosgrove				2	2
Byward				8	8
Parent	1			14	15
Sussex	5	3		34	42
Mackenzie				3	3
Total	742	213	81	2,857	3,893
Percentage	19.1%	5.5%	2%	73.4%	100%

TABLE XI.- PERCENTAGE OF VERANDAH AND BALCONY

	First floor			Second floor			Third floor			
	Verandah	Balcony	Nil	Verandah	Balcony	Nil	Verandah	Balcony	Nil	Total
Chapel Cres			7			7			7	7
Philip Cres			6			6			6	6
Goulburn Cres			11			11			11	11
Mann	1		12			13			13	13
Templeton	19	8	10	4		33			37	37
Somerset	39	7	16	21		41		1	61	62
McDougall	12			4	1	7	2		10	12
Osgoode	49		14	29	3	31	2		61	63
Laurier	54	7	18	16	7	56	4	4	71	79
Wilbrod	78	9	15	20	11	71	3	1	98	102
Steward	102		17	39	11	69	3	4	112	119
Daly	90	6	26	26	22	74	7	3	112	122
Besserer	93	1	37	27	6	98	4	4	123	131
Rideau	24	1	139	12	3	149	3		161	164
Tormey	3		2	2		3	1		4	5
St. George	6	1	21			28			28	28
Heney	20	1	2	14	2	7			23	23
Anglesea	4		1	2		3			5	5
York	48	1	32	31	1	49	2		79	81
Clarence	107	2	53	42	9	111	3	1	158	162
Papineau	7		5	2		10			12	12
Des Jardins	11		2	10		3			13	13
Myrand	5			2	1	2			5	5
Murray	50	3	49	25	1	76	1		101	102
St. Patrick	122	1	67	60	6	124	3	3	184	190
Guigues	71	1	29	25	2	74		1	100	101

TABLE XI. (CONTINUED)- PERCENTAGE OF VERANDAH AND BALCONY

	First floor			Second floor			Third floor			
	Verandah	Bal-cony	Nil	Verandah	Bal-cony	Nil	Verandah	Bal-cony	Nil	Total
Martineau	6	1	2			9			9	9
St. Andrew	127	1	30	38	3	177	2	1	155	158
Bruyere	79		33	20	1	91	1		111	112
Cathcart	50	2	17	21	2	46			69	69
Bolton	55	2	9	15	3	48			66	66
Boteler	36	2	10	3	2	43			48	48
Redpath	14		5	2		17			19	19
Baird	18	1	2	4	1	16			21	21
Range	28	10	13	1	2	48			51	51
Marlborough	71	6	17	8	4	82	1		93	94
Goulburn	77	5	7	20	3	66			89	89
Blackburn	82	1	7	15	5	70			90	90
Chapel	113	3	30	30	6	110	1	1	144	146
Russell	84	1	12	16	6	75		2	95	97
Sweetland	49	7	4	21	3	36		1	59	60
Nelson	80	1	30	54	2	55	4		107	111
Henderson	68	3	7	23	4	51	1		77	78
King Edward	117	3	34	63	10	81	6	2	146	154
College	56		2	14	3	41			58	58
Cornwall	3			1		2			3	3
Cumberland	66	5	51	22	4	96	2		120	122
Hastey	10		1	5		6			11	11
Waller	4		20	2	1	21			24	24
Nicholas	7		10		1	16			17	17
Wurtemburg	16		4	2		18			20	20
Charlotte	33	1	8	20	3	19		1	41	42
Rockwood	17	1		3	2	13		1	17	18

	First floor			Second floor			Third floor			
	Verandah	Bal-cony	Nil	Verandah	Bal-cony	Nil	Verandah	Bal-cony	Nil	Total
Cobourg	51	2	12	16	3	46	5		60	65
Pinard	2		3			5			5	5
Augusta	42		17	18	4	37			59	59
Notre Dame	9			2		7			9	9
St. Joseph	17			1	2	14			17	17
Friel	64	4	17	23	7	55	3	2	80	85
McGee	14		6	2		18			20	20
Rose	10	1	8	2		17			19	19
Cathcart Sq.	5		1	2		4			6	6
Dalhousie	8		68	4		72	1		75	76
Earncliffe	2		4	1		5			6	6
William			14			14			14	14
Mosgrove			2			2			2	2
Byward			8			8			8	8
Parent	4		11	2	1	12			15	15
Sussex	6	2	34	3	3	36		1	41	42
Mackenzie			3			3			3	3
Total	2,615	114	1,164	917	177	2,799	66	47	3,780	3,893
Percentage	67.1%	2.9%	30%	23.5%	4.5%	72%	1.7%	.9%	97.4%	100%

TABLE XII.- PERCENTAGE OF OUTER STAIRS 112

	1	2	3	4	Over 4	Nil	Total
Chapel Cres						7	7
Philip Cres						6	6
Goulburn Cres						11	11
Mann	3	1				9	13
Templeton	36					1	37
Somerset	37	13				12	62
McDougall	11					1	12
Osgoode	55	5				3	63
Laurier	57	4	3			15	79
Wilbrod	76	8				18	102
Steward	93	10				16	119
Daly	79	16	6	3	1	17	122
Besserer	89	15	1	1		25	131
Rideau	29	8				127	164
Tormey	3		1			1	5
St. George	9	1				18	28
Heney	10	8				5	23
Anglesea	4	1					5
York	30	10	3	3		35	81
Clarence	87	11	4	2		58	162
Papineau	8					4	12
Des Jardins	10		2			1	13
Myrand	1	4					5
Murray	52	17				33	102
St. Patrick	77	26	6	2		79	190
Guigues	42	16				43	101
Martineau	2		1			6	9
St. Andrew	77	21	3	4		53	158
Bruyere	42	12	2			56	112
Cathcart	37	8	1			23	69
Bolton	24	8				34	66
Boteler	27	3				18	48
Redpath	8	1				10	19
Baird	11	4				6	21
Range	48					3	51
Marlborough	90	1			1	2	94
Goulburn	78	7				4	89
Blackburn	86	1				3	90
Chapel	115	11	3	1		16	146
Russell	78	14		1		4	97
Sweetland	52	5				3	60
Nelson	73	20	3		1	14	111
Henderson	57	10	1			10	78
King Edward	98	16	2	1		37	154

TABLE XII. (CONTINUED)- PERCENTAGE OF OUTER STAIRS 113

	1	2	3	4	Over 4	Nil	Total
College	56	1				1	58
Cornwall	2	1					3
Cumberland	67	7				48	122
Hastey	8	3					11
Waller	12	1			1	10	24
Nicholas	7	2	2			6	17
Wurtemburg	15	2				3	20
Charlotte	26	6		1		9	42
Rockwood	17	1					18
Cobourg	39	4		1		21	65
Pinard	5						5
Augusta	31	6	1			21	59
Notre Dame	5	2				2	9
St. Joseph	15	1				1	17
Friel	48	16	4			17	85
McGee	11	4				5	20
Rose	8	3	1			7	19
Cathcart Sq.	2	2				2	6
Dalhousie	11	5	3			57	76
Earncliffe	4					2	6
William						14	14
Mosgrove						2	2
Byward						8	8
Parent	5	1	1			8	15
Sussex	11	3				28	42
Mackenzie						3	3
Total	2,306	387	54	20	4	1,122	3,893
Percentage	59.3%	9.9%	1.4%	.5%	.1%	28.8%	100%

TABLE XIII.- PERCENTAGE OF EPOCH OF BUILDING 114

	New	Medium	Old	Total
Chapel Cres	7			7
Philip Cres	6			6
Goulburn Cres	11			11
Mann	8	4	1	13
Templeton	4	12	21	37
Somerset	14	17	31	62
McDougall		6	6	12
Osgoode	7	9	47	63
Laurier	21	35	23	79
Wilbrod	18	48	36	102
Stewart	21	46	52	119
Daly	2	35	85	122
Besserer	10	45	76	131
Rideau	24	37	103	164
Tormey			5	5
St. George	2	9	17	28
Heney		9	14	23
Anglesea		3	2	5
York	2	12	69	81
Clarence	10	50	102	162
Papineau			12	12
Des Jardins		13		13
Myrand		4	1	5
Murray	3	34	65	102
St. Patrick	18	44	128	190
Guigues	1	23	77	101
Martineau		2	7	9
St. Andrew	2	36	120	158
Bruyere	7	24	81	112
Cathcart	4	27	38	69
Bolton	3	14	49	66
Boteler	5	1	42	48
Redpath	1	3	15	19
Baird	2	5	14	21
Range	21	21	9	51
Marlborough	22	58	14	94
Goulburn	7	64	18	89
Blackburn	3	74	13	90
Chapel	16	84	46	146
Russell	4	75	18	97
Sweetland	10	24	26	60
Nelson	15	59	37	111
Henderson	5	36	37	78
King Edward	20	36	98	154

TABLE XIII. (CONTINUED)- PERCENTAGE OF EPOCH OF BUILDING

	New	Medium	Old	Total
College		8	50	58
Cornwall			3	3
Cumberland	15	47	60	122
Hastey		4	7	11
Waller	3	3	18	24
Nicholas	3	2	12	17
Wurtemburg	4	15	1	20
Charlotte	10	15	17	42
Rockwood	3	15		18
Cobourg	17	18	30	65
Pinard	3	2		5
Augusta	16	23	20	59
Notre Dame	3	2	4	9
St. Joseph		5	12	17
Friel	1	27	57	85
McGee		5	15	20
Rose		6	13	19
Cathcart Sq.		6		6
Dalhousie	8	8	60	76
Earncliffe	1	3	2	6
William	2	3	9	14
Mosgrove		1	1	2
Byward	1		7	8
Parent	2	9	4	15
Sussex	6	4	32	42
Mackenzie		1	2	3
Total	505	1,299	2,089	3,893
Percentage	11.1%	35.2%	53.7%	100%

TABLE XIV.- PERCENTAGE OF ADDITIONAL ATTACHED HOUSE 116

	Yes	Nil	Total
Chapel Cres		7	7
Philip Cres		6	6
Goulburn Cres		11	11
Mann	2	11	13
Templeton	5	32	37
Somerset	27	35	62
McDougall	7	5	12
Osgoode	23	40	63
Laurier	36	5	41
Wilbrod	53	49	102
Steward	47	72	119
Daly	43	79	122
Besserer	41	90	131
Rideau	22	142	164
Tormey	1	4	5
St. George	5	23	28
Heney	2	21	23
Anglesea		5	5
York	23	58	81
Clarence	60	102	162
Papineau	9	3	12
Des Jardins	3	10	13
Myrand	3	2	5
Murray	31	71	102
St. Patrick	87	103	190
Guigues	57	44	101
Martineau	8	1	9
St. Andrew	77	81	158
Bruyere	38	74	112
Cathcart	27	42	69
Bolton	36	30	66
Boteler	25	23	48
Redpath	8	11	19
Baird	12	9	21
Range	21	30	51
Marlborough	35	59	94
Goulburn	29	60	89
Blackburn	66	24	90
Chapel	96	50	146
Russell	89	8	97
Sweetland	45	15	60
Nelson	71	40	111
Henderson	72	6	78
King Edward	88	66	154

TABLE XIV. (CONTINUED)- PERCENTAGE OF ADDITIONAL ATTACHED HOUSE

	Yes	Nil	Total
College	53	5	58
Cornwall	2	1	3
Cumberland	59	63	122
Hastey	11		11
Waller	8	16	24
Nicholas	5	12	17
Wurtemburg	1	19	20
Charlotte	8	34	42
Rockwood	8	10	18
Cobourg	20	45	65
Pinard	4	1	5
Augusta	26	33	59
Notre Dame	5	4	9
St. Joseph	12	5	17
Friel	39	46	85
McGee	10	10	20
Rose	6	13	19
Cathcart Sq.	2	4	6
Dalhousie	6	70	76
Earncliffe	2	4	6
William		14	14
Mosgrove		2	2
Byward		8	8
Parent		15	15
Sussex	6	36	42
Mackenzie		3	3
Total	1,623	2,170	3,893
Percentage	41.7%	58.3%	100%

TABLE XV.- PERCENTAGE OF GARAGE AND PARKING

	Garage	Parking	Parking inside basement	Nil	Total
Chapel Cres		3		4	7
Philip Cres				6	6
Goulburn Cres				11	11
Mann	1	5		7	13
Templeton	17	4		16	37
Somerset	20	7		35	62
McDougall	3	7		2	12
Osgoode	20	13		30	63
Laurier	25	28		26	79
Wilbrod	45	20	1	36	102
Steward	68	21		30	119
Daly	46	43		33	122
Besserer	44	42		45	131
Rideau	13	42	1	108	164
Tormey	2			3	5
St. George	1	9		18	28
Heney	7	3		13	23
Anglesea	1	2		2	5
York	13	26	1	41	81
Clarence	51	39		72	162
Papineau	3	2		7	12
Des Jardins	1	5		7	13
Myrand	3			2	5
Murray	28	44		30	102
St. Patrick	29	57		104	190
Guigues	38	24		39	101
Martineau	1	4		4	9
St. Andrew	54	38		46	158
Bruyere	34	38		40	112
Cathcart	26	20	1	22	69
Bolton	34	20		12	66
Boteler	13	21		14	48
Redpath	9	6	1	3	19
Baird	7	10		4	21
Range	35	1	6	9	51
Marlborough	61	5	4		94
Goulburn	48	9		32	89
Blackburn	67	3		20	90
Chapel	73	21		52	146
Russell	46			51	97
Sweetland	18	7		35	60
Nelson	47	10		54	111
Henderson	31	28		19	78
King Edward	78	14		62	154

TABLE XV. (CONTINUED)- PERCENTAGE OF GARAGE AND PARKING

	Garage	Parking	Parking inside basement	Nil	Total
College	31	12		15	58
Cornwall	1	1		1	3
Cumberland	30	25		67	122
Hastey	9			2	11
Waller	3	11		10	24
Nicholas		14		3	17
Wurtemburg	7	1	2	10	20
Charlotte	9	13	1	19	42
Rockwood	8			10	18
Cobourg	20	17	1	27	65
Pinard	1	3		1	5
Augusta	19	19		21	59
Notre Dame		4		5	9
St. Joseph	7	9		2	17
Friel	29	34		22	85
McGee	4	5		11	20
Rose	3	4		13	19
Cathcart Sq.	3			3	6
Dalhousie	5	8		63	76
Earncliffe	3	1		2	6
William				14	14
Mosgrove				2	2
Byward				8	8
Parent	2	7	1	5	15
Sussex	5	10	2	25	42
Mackenzie		2	1		3
Total	1,360	920	23	1,590	3,893
Percentage	34.9%	23.5%	.5%	41.1%	100%

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APPENDIX 1

ABSTRACT OF

Analytic Field Study of The Element of Housing Structure In Sandy Hill and Its Adjacent Areas of Ottawa

This is the study of the housing condition in Sandy Hill and its adjacent areas by means of analyzing the elements of housing structure. In order to have a concise knowledge of these areas, a brief account of their physical settings and historical backgrounds are given. Since this study is completed mainly by field work, the method and procedure of collecting data are described.

Different kinds of illustrations are presented to illustrate the text. From this study, it is evident that more than half of the houses in these areas are not up to standard in the present stage. Because Ottawa is the national capital, much work are left for the future planning.