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Ville St-Laurent Revisited:
Wartime Housing and Architectural Change,
1942-1992



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**VILLE ST-LAURENT REVISITED:
WARTIME HOUSING AND
ARCHITECTURAL CHANGE,
1942-1992**

By Annmarie Adams, Jennifer Beardsley, & Pieter Sijpkens

School of Architecture
McGill University

February, 1997

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ABSTRACT:

This is a study of architectural changes made to houses over a fifty-year period in Ville St-Laurent, Quebec, Canada. These relatively modest units--most were 25' x 25'-- were originally constructed as temporary housing for workers in 1942 by Wartime Housing Limited, a company established by the Canadian government in 1941 to contract out the construction of emergency housing across the country. After the war, however, nearly all 400 houses in this Montreal neighborhood were sold, rather than demounted, and most were renovated and enlarged.

Modelled on Philippe Boudon's Lived-in Architecture, our study shows several basic patterns in the ways people changed their spaces over time. In-depth interviews with longtime occupants and a comprehensive photographic survey of the area show that architectural change is tied closely to changes in family structure, the availability of credit, and evolving trends in the use of building materials.

We also found that it was their wartime work experience which encouraged most householders to undertake renovations themselves; that the employment of professionals for difficult jobs, particularly pouring the foundations, followed a kind of "copy-cat" phenomenon which can be mapped throughout the neighbourhood; that many materials were recycled; and that many women, both living alone and in partnerships, supervised the alterations made to their houses. In a concluding chapter we outline the valuable lessons of wartime housing for today's homeowners.

This project offers no typology of architectural change; at least three other studies of wartime housing in Canada have fulfilled that objective. We focus, rather, on a smaller sample (25 case studies) in much more depth and attempt to explain why architectural change has occurred, rather than how it was done. In this way, the paper contributes to our understanding of how all spaces may change through time and suggests the dangers of studying design intentions, of considering buildings as they appear in architects' drawings, or of narrow typological housing studies.

EXECUTIVE SUMMARY:

This paper comprises the results of a two-year study of architectural changes made to individual houses in the half-century since their construction in Ville St-Laurent. The study is a collaborative effort between an architectural historian and a specialist in building materials and innovative construction methods. Inspired by both Philippe Boudon's legendary study Lived-in Architecture, which explored the changes made to Le Corbusier's housing units at Pessac, France, and Herbert Gans' sociological documentation of Levittown, our preliminary research has confirmed several basic patterns in the ways people change their spaces over time. In-depth interviews with longtime occupants of the wartime neighbourhood (25 case studies) and a comprehensive photographic survey of the area--almost all 400 houses are extant--have shown that architectural change is tied closely to changes in family size and structure, the availability of credit, and evolving trends in the use of building materials.

We explored three additional hypotheses: (1) that it was their wartime work experience which encouraged many householders to undertake renovations themselves, (2) that the employment of professionals for difficult tasks followed a kind of copy-cat phenomenon, and finally that (3) many women, living alone or with male partners, supervised and/or managed the alterations made to their houses.

Our study offers no typology of architectural change; at least three other studies of wartime housing in Canada have fulfilled that objective. We focus, rather, on a smaller sample (25 case studies) in much more depth and employ methods more commonly used in the fields of anthropology, cultural geography, and folklore than in traditional architectural research.

We began this project with a comprehensive photographic survey of the neighbourhood. This allowed us to "reconstitute" Ville St-Laurent at any time and provides a valuable record of the area's condition in the 1990s. A range of houses exhibiting evidence of renovation was then selected; letters were hand-delivered to these residents informing them of our interest. This was followed up by a telephone call. We were particularly interested in finding original wartime owners still residing in Ville St-Laurent, which was facilitated by networking. Once one longtime resident had been located, he or she frequently led us to others.

Twenty-five houses were eventually chosen for study. Students at the School of Architecture at McGill University conducted open-ended interviews with the residents, inquiring about the types of renovations completed, the dates, costs, and the decision-making process in general. These 25 interviews were recorded on audio tape; students also sketched, photographed, and took notes during their visits. In all cases, families were asked to lend us their personal photo albums and other images of the house, which were then duplicated for our records. These copied albums and the recorded tapes, together with the photographs of the houses' current condition, comprise an extremely rich source on the development of the neighbourhood over the last half century.

As a result of our interdisciplinary approach to the subject,

this report is structured in several distinct parts. The first part, Chapter 1, is a historical overview of Ville St-Laurent, setting the context for its postwar development. Because several studies of Wartime Housing Limited (WHL) have already been written, we have focused on information specific to Ville St-Laurent. In the second section, we document the 25 case studies in alphabetical order. Each house is represented by a series of plans showing the evolutionary stages of its development and annotated by the recorded comments of the owners who describe how they have shaped their own environments. Chapter 3 identifies the potential opportunities and limitations that each house type presented to the demands of expansion and adaptation. The following chapter examines the renovation process itself, the factors that have influenced it and how owners reacted to the challenges it presented. Finally, in Chapter 5, we suggest how the experience of wartime housing offers a model, or at least some valuable lessons that might be applicable in Canadian housing today.

Admittedly, this study includes a small sample of houses. We feel, nonetheless, that obtaining a closer, more human view of architectural change in Canada contributes to an understanding of housing issues in a new way.

«Ville Saint-Laurent revisitée : logements construits pendant la guerre et changements architecturaux, 1942-1992»

RÉSUMÉ

Ce rapport présente les résultats d'une étude de deux ans menée sur les changements architecturaux apportés individuellement à des maisons au cours des cinquante années qui ont suivi leur construction à Ville-Saint-Laurent. L'étude est le fruit d'une coopération entre un historien de l'architecture et un spécialiste des matériaux de construction et des méthodes innovantes de construction. Inspirée par l'étude légendaire de Philippe Boudon intitulée *Lived-in Architecture*, laquelle explorait les transformations opérées sur les logements créés par Le Corbusier à Pessac, en France, et par la documentation sociologique de Herbert Gans sur Levittown, notre recherche préliminaire a confirmé plusieurs courants de base dans la manière dont les gens transforment leur espace avec le temps. Des entrevues en profondeur menées auprès d'occupants de longue date de ce quartier du temps de guerre (25 études de cas) ainsi qu'un relevé photographique complet du secteur -- presque la totalité des 400 habitations existent encore -- ont montré que les modifications architecturales sont étroitement liées aux changements qui surviennent dans la taille et la structure de la famille, à la disponibilité du crédit et à l'évolution des tendances dans l'utilisation des matériaux de construction.

Nous avons exploré trois autres hypothèses : (1) que c'est l'expérience de travail acquise durant la guerre qui a encouragé bien des occupants à entreprendre des rénovations eux-mêmes; (2) que l'emploi de spécialistes pour les tâches difficiles a été caractérisé par une sorte de phénomène d'imitation et, enfin, (3) que de nombreuses femmes, vivant seules ou avec un partenaire masculin, ont supervisé ou dirigé les transformations faites à leur maison.

Notre étude n'offre pas de typologie du changement architectural; au moins trois autres études des logements du temps de guerre au Canada ont déjà examiné cette question. Nous avons plutôt mis l'accent sur un petit échantillon (25 cas) que nous avons étudié de manière beaucoup plus détaillée, et nous avons eu recours à des méthodes plus courantes dans les domaines de l'anthropologie, de l'histoire du paysagisme et du folklore que ce que l'on constate habituellement en recherche architecturale.

Nous avons amorcé ce projet en procédant à un relevé photographique détaillé du quartier. Grâce à ce relevé, nous pouvions «reconstituer» Ville-Saint-Laurent à n'importe quelle époque. Il nous a du même coup procuré une documentation précieuse sur l'état du secteur dans les années 90. Nous avons ensuite sélectionné un éventail de maisons montrant des signes de rénovation. Nous avons remis des lettres aux occupants en main propre pour les mettre au courant de notre projet et nous leur avons par la suite téléphoné. Nous voulions surtout trouver les propriétaires originaux vivant toujours à Ville-Saint-Laurent, une recherche que nous avons en partie menée par personnes interposées. En effet, lorsque nous parvenions à retrouver un résident de l'époque, celui-ci nous aiguillait souvent vers d'autres résidents.

Vingt-cinq maisons ont finalement été retenues aux fins de l'étude. Des étudiants de l'école d'architecture de l'université McGill ont mené des entrevues en profondeur auprès des résidents. Ils cherchaient à savoir quels genres de rénovations avaient été effectuées, à quelles dates, à quel coût

et qu'est-ce qui avait conduit à ces modifications en général. Ces 25 entrevues ont été enregistrées sur bande audio. Lors de leur visite, les étudiants ont aussi exécuté des croquis, pris des photographies et des notes. Dans tous les cas, nous avons demandé aux familles de nous prêter leurs albums de photo personnels et d'autres images de la maison que nous avons ensuite reproduites pour les verser à nos dossiers. Ces documents photographiques et les bandes sonores ainsi que les photographies de l'état actuel des maisons constituent une ressource documentaire extrêmement riche sur l'évolution du quartier durant les cinquante dernières années.

Étant donné la méthode interdisciplinaire privilégiée pour aborder ce sujet, cette recherche comporte plusieurs sections distinctes. La première section, le chapitre 1, présente un survol historique de Ville-Saint-Laurent et sert à situer le contexte de cet aménagement d'après-guerre. Comme plusieurs études ont déjà été conduites sur la *Wartime Housing Limited* (WHL), nous avons mis l'accent sur l'information qui concernait particulièrement Ville-Saint-Laurent. Dans la deuxième partie, nous avons documenté, par ordre alphabétique, les 25 habitations composant notre échantillon. Chaque maison est représentée par une série de plans qui montrent les étapes de son évolution et qui sont annotés selon les commentaires des occupants, enregistrés lors des entrevues, qui expliquent comment ils ont modelé leur propre cadre de vie. Le chapitre 3 fait état des possibilités et des restrictions que présentaient chaque maison en matière d'expansion et d'adaptation. Le chapitre suivant examine le processus de rénovation proprement dit, les facteurs dont il a fallu tenir compte et la manière dont les propriétaires ont réagi aux défis qui leur étaient posés. Enfin, au chapitre 5, nous expliquons comment l'expérience des habitations du temps de guerre peut servir de modèle, ou du moins donner quelques enseignements susceptibles de s'appliquer aux habitations canadiennes contemporaines.

Bien sûr, l'échantillon de maisons est petit. Nous estimons néanmoins qu'en examinant de plus près et de façon plus humaine les changements architecturaux survenus au Canada, il est possible de comprendre les questions de logement dans une autre optique.

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Table of Contents

Acknowledgements	4
Introduction	6
1. Historical Overview	11
<i>Brief History of Ville St-Laurent</i>	
<i>The Nationwide Housing Crisis</i>	
<i>The Temporary Prefabricated House</i>	
<i>Conservative Single-family Homes</i>	
<i>Norvic: The St-Laurent "Victory Village"</i>	
<i>The Postwar WHL Home</i>	
2. The Case Studies (in alphabetical order)	30
3. The House Types	80
<i>Family Needs and Adapted Houses</i>	
<i>The H-12 house</i>	
- <i>opportunities and limitations for expansion</i>	
- <i>other house configurations</i>	
- <i>interior alterations</i>	
- <i>storage</i>	
<i>The H-15 house</i>	
- <i>opportunities and limitations for expansion</i>	
- <i>interior alterations</i>	
- <i>second-floor alterations</i>	
- <i>storage</i>	
<i>Family Cycles and Architectural change</i>	
4. The Renovation Process	104
<i>Discussion of Tables</i>	
<i>Self-Help Renovations</i>	
<i>Contracted Renovations</i>	
- <i>the process</i>	
- <i>misunderstandings and errors</i>	
<i>Copy-Cat Renovations</i>	
<i>The Role of Women</i>	
<i>Recycled Products</i>	
<i>Factory Production and Domestic Renovation</i>	
<i>New Products</i>	

5. Conclusions: Wartime Housing Today 133

House design: Starting Small
Levels of Completion
Permanent Foundations
House design: Temporary Construction
House design: Aesthetics
Site considerations
Economic Concerns
The Government's Role in Planned Housing
Ownership vs. Tenantship

List of Illustrations 150

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We are also grateful to several students of the School of Architecture, McGill University, who worked as assistants on the project, especially Josée Lamothe and Maria Pantelopoulos. Jennifer Cousineau, Jocelyn Duff, Saul Hentelef, Marie-Alice L'Heureux, Vanessa Reid, and Conor Sampson also contributed to the research. The School of Architecture also graciously provided photographic and computer facilities. We are also indebted to its past director, Prof. Derek Drummond, for his support of this project, and to Prof. Norbert Schoenauer, for his unparalleled understanding of the history of housing.

We acknowledge the helpful assistance of the staffs of the Archives of Ville St-Laurent, the Archives of the City of Montreal, Blackader-Lauterman Library, Canadair, the Department of National Defence, the National Archives of Canada, and the National Film Board of Canada.

The musée de la ville de St-Laurent invited us to present our findings part way through the project, which led to their interest in an exhibition on the subject. For this honour, we are indebted to Diane Archambault-Malouin. Our preliminary

results were also presented at the annual meeting of the Society for the Study of Architecture in Canada at the University Laval in June 1994 and the Association of Collegiate Schools of Architecture in March 1995. The discussions following these presentations were critical to the final direction of this project.

Finally, this project would not have been possible without the generous financial assistance of the Canada Mortgage and Housing Corporation. Like the do-it-yourself "architects" who comprise the subject of this study, we have only ourselves to blame for delays, errors, and omissions.

Introduction

At first glance, the tree-lined streets of Ville St-Laurent, Québec, resemble most other North American postwar suburbs. Detached houses reflecting a wide variety of architectural tastes sit comfortably back from the street, framed by carefully manicured lawns, gardens, and mature trees. Named for the world's great universities--Oxford, la Sorbonne, Cambridge, and Laval--the winding streets of Ville St-Laurent present constantly changing perspectives, punctuated by picturesque crescents and tiny islands of green.

A closer look, however, reveals Ville St-Laurent's wartime, rather than postwar development. Belying the various setbacks, building materials, roof configurations, and changing scales of the houses of Ville St-Laurent are 400 nearly identical houses, constructed as modest, temporary dwellings for Canadair factory workers during World War II.

This paper comprises the results of a two-year study of architectural changes made to individual houses in the half-century since their construction in Ville St-Laurent. The study is a collaborative effort between an architectural historian and a specialist in building materials and innovative construction methods. Inspired by both Philippe Boudon's legendary study Lived-in Architecture, which explored the changes made to Le Corbusier's housing units at Pessac, France, and Herbert Gans' sociological documentation of Levittown, our preliminary research has confirmed several basic patterns in the ways people change

their spaces over time.¹ In-depth interviews with longtime occupants of the wartime neighbourhood (25 case studies) and a comprehensive photographic survey of the area--almost all 400 houses are extant--have shown that architectural change is tied closely to changes in family size and structure, the availability of credit, and evolving trends in the use of building materials.

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Our study offers no typology of architectural change; at least three other studies of wartime housing in Canada have fulfilled that objective.² We focus, rather, on a smaller sample

¹ Philippe Boudon, Lived-in Architecture: Le Corbusier's Pessac Revisited (Cambridge: MIT Press, 1969); Herbert J. Gans, The Levittowners: Ways of Life and Politics in a New Suburban Community (New York: Pantheon, 1967). Our preliminary findings were published in Annmarie Adams and Pieter Sijpkes, "Wartime Housing and Architectural Change, 1942-1992," Canadian Folklore Canadien, vol. 17, 2 (1995), 13-29; see also our "World War II left imprint on St. Laurent," The Gazette (Montreal), 30 July 1994, Sec. H, p. 4.

² Mary B. Galloway, "User Adaptations of Wartime Housing," M.A. thesis, University of Calgary, 1978; Denys Marchand, Wartime Housing Ltd.: 40 ans de transformation (Montreal: Université de Montréal, 1983); Pieter Sijpkes, "Wartime Housing in Canada: Variations on a Theme," paper presented at the annual meeting of the Association of Collegiate Schools of Architecture, Washington DC, 1983.

(25 case studies) in much more depth and employ methods more commonly used in the fields of anthropology, cultural geography, and folklore than in traditional architectural research.

Rather than focus on formal analysis, this project assumes architecture as a dynamic process and grants building users agency in the shaping of their own spaces.³ We believe that architecture as imagined or constructed by its designers is only a starting point for such analyses. American folklorist Michael Ann Williams has described this methodology (particularly the use of oral testimony) in the study of domestic space as a "reinhabitation of the house through narrative" and has suggested that the richness of this case-study approach may call into question the usefulness of studying buildings as mere artifacts.⁴

Following this thinking, we hope our research contributes to a growing understanding of the do-it-yourself home improvement

³ A similar analysis of a single house is presented in Annmarie Adams, "The Eichler Home: Intention and Experience in Postwar Suburbia," Perspectives in Vernacular Architecture, V, eds. Elizabeth Cromley and Carter L. Hudgins (Knoxville: University of Tennessee Press, 1995), 236-58. On this "functional" approach to vernacular architecture, see Dell Upton and John Michael Vlach, eds. Common Places: Readings in American Vernacular Architecture (Athens: University of Georgia Press, 1986), xviii-xx, 219-78 and Dell Upton, "Form and User: Style, Mode, Fashion, and the Artifact," Living in a Material World: Canadian and American Approaches to Material Culture, ed. Gerald L. Pocius (St. John's: ISER, 1991), 156-69.

⁴ The use of oral history as a way to reconstitute women's role in the production of architecture was also the subject of the paper by Michael Ann Williams, "Vernacular Dwellings as Artifacts of Lives of Southern Appalachian Women," at the conference Reclaiming Women's History Through Historic Preservation, held at Bryn Mawr College, 18 June 1994. See her book Homeplace: The Social Use and Meaning of the Folk Dwelling in Southwestern North Carolina (Athens: University of Georgia Press, 1991), 1-20.

industry in Canada, and more generally to the study of vernacular architecture.

We began this project with a comprehensive photographic survey of the neighbourhood. This allowed us to "reconstitute" Ville St-Laurent at any time and provides a valuable record of the area's condition in the 1990s. A range of houses exhibiting evidence of renovation was then selected; letters were hand-delivered to these residents informing them of our interest. This was followed up by a telephone call. We were particularly interested in finding original wartime owners still residing in Ville St-Laurent, which was facilitated by networking. Once one longtime resident had been located, he or she frequently led us to others.

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As a result of our interdisciplinary approach to the subject, this report is structured in several distinct parts. The first part, Chapter 1, is a historical overview of Ville St-Laurent, setting the context for its postwar development. Because several studies of Wartime Housing Limited (WHL) have already been written, we have focused on information specific to Ville St-Laurent. In the second section, we document the 25 case studies in alphabetical order. Each house is represented by a series of plans showing the evolutionary stages of its development and annotated by the recorded comments of the owners who describe how they have shaped their own environments. Chapter 3 identifies the potential opportunities and limitations that each house type presented to the demands of expansion and adaptation. The following chapter examines the renovation process itself, the factors that have influenced it and how owners reacted to the challenges it presented. Finally, in Chapter 5, we suggest how the experience of wartime housing offers a model, or at least some valuable lessons that might be applicable in Canadian housing today.

Admittedly, this study includes a small sample of houses. We feel, nonetheless, that obtaining a closer, more human view of architectural change in Canada contributes to an understanding of housing issues in a new way.

1. Historical Overview

Brief History of Ville St-Laurent

The industrial development which presently shapes the character of the City of St-Laurent was a recent occurrence in its evolution. The area extending from the present Namur to Côte-des-Neiges, and from there to the Côte Notre-Dame-de-Vertu, on both sides of today's Decarie Boulevard in Montreal, first developed as an agricultural area. After its establishment in 1687,⁵ the early settlers cultivated oat, wheat, and potatoes rather than pursuing fur trade, despite their convenient trading location on the banks of Rivière-des-Prairies.⁶ By 1755, the prosperous agricultural parish was the bread basket of Montreal and contributed to the Colony's war with England by satisfying the large demand for food.⁷

During the industrial boom of the second half of the nineteenth century, these agricultural endeavours "evolved to mixed farming. Orchards, apiaries, and dairy farms became more common."⁸ By 1896, the urban structure of the village had gradually evolved and a new tramway line provided passenger service between St-Laurent and Montreal. However, St-Laurent and

⁵ Robert Rumilly, Histoire de Saint-Laurent (Montreal: Beauchemin, 1970), 11.

⁶ Rumilly, 33.

⁷ Rumilly, 35.

⁸ Rumilly, 162.

other agricultural suburbs had shown no population growth.

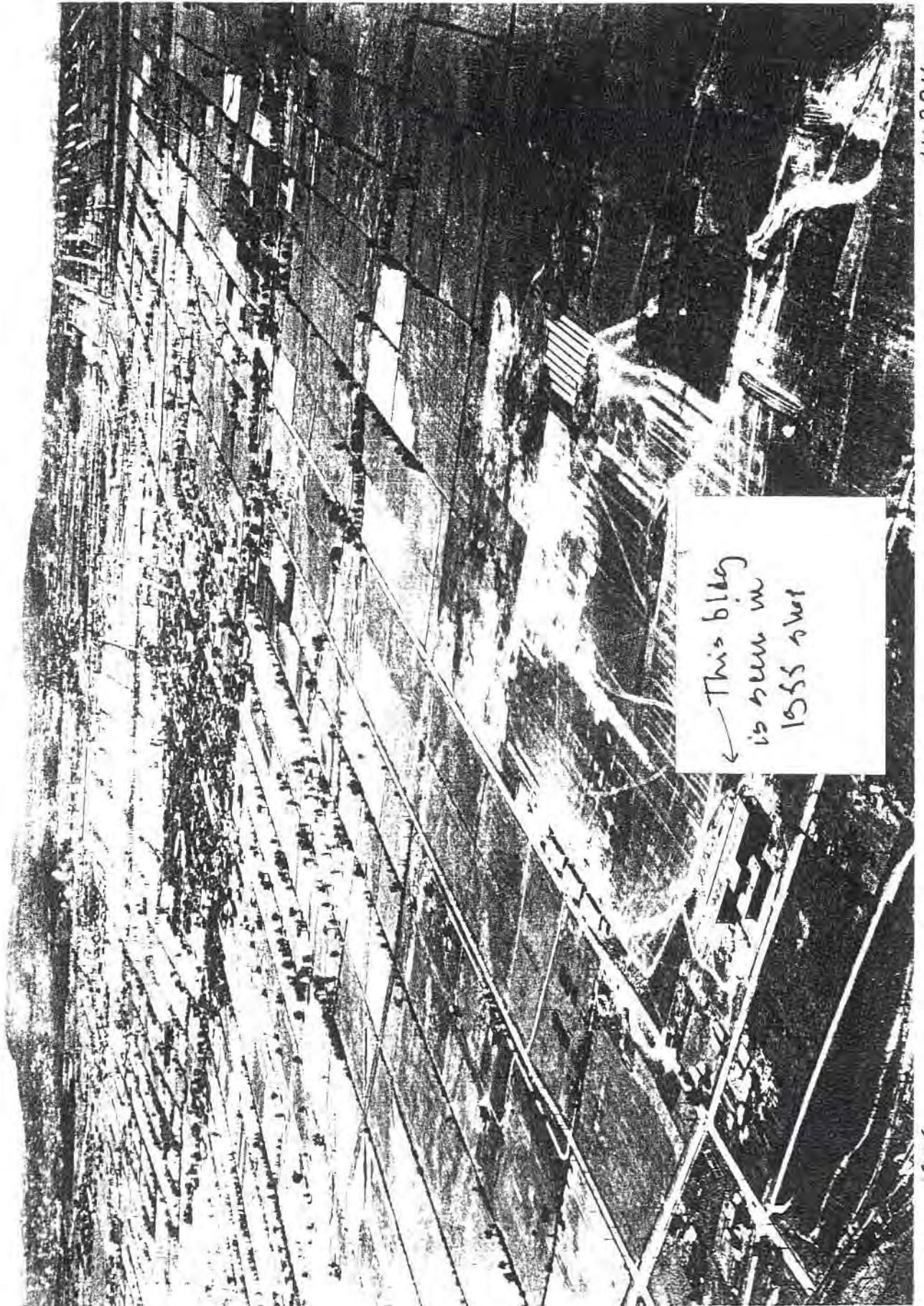
It was not until the 1920s that the nature of the area's development changed (Figs. 1 and 2). Two industries were established that set the tone of future development in Ville St-Laurent. One was the Reid Aircraft Company, which manufactured light planes for aviation clubs and the Robert Mitchell Company. They bought more than a million square feet of land in St-Laurent in order to build a modern foundry.⁹ Meanwhile, the agricultural community struggled under a new burden: competition from larger western Canadian farms.¹⁰ The young industrial community forged ahead and defied the odds, even in the face of the Depression. Two new factories opened in St-Laurent: the Preston Pure Preserve Limited and the small Noorduyn factory which built airplanes called Norsemans.

The beginning of large-scale industrial development of the city occurred during 1937-38. St-Laurent enjoyed close proximity to Montreal with its international shipping port and the new airport at Dorval, whose runways were actually located in the Parish. City administrators realized these benefits and tried to attract industrialists. Large tracts of land were made available for both expansion purposes and new companies. Lots that had been seized during the Depression, for example, for non-payment of taxes were sold for \$1 each in order to encourage development.

When Canada joined the war in 1939, St-Laurent was the ideal

⁹ Rumilly, 202.

¹⁰ Rumilly, 205.



1. Aerial View of St-Laurent, 1929, Ville St-Laurent Archives.



41388

1955

2. Aerial View of St-Laurent, 1955, Ville St-Laurent Archives.



3. Photo of Canadair factory, Ville St-Laurent Archives.

location for wartime industries: the Robert Mitchell Company began the manufacture of naval and aeronautic supplies; Noorduyn Aviation manufactured the Harvard, a single-engine training plane; and the Canadian Car and Foundry repaired planes and motors.¹¹ Finally, there was the new Canadair plant which produced Catalina war planes (Fig. 3). Established through a merger in 1943 of Canadian Vickers and Noorduyn, Canadair would have the greatest effect on Ville St-Laurent.¹²

The area became an important centre of production, as workers came from a variety of places to work in these plants striving to meet the ever-increasing demands of armament and munitions production. St-Laurent doubled its size within 10 years. From a population in 1940 of some 6,000 persons, the town grew to a point where, at war's end, there were close to 10,000 residents.¹³

The Nationwide Housing Crisis

The number of workers needed to feed the war machine was flooding not only St-Laurent, of course, but countless communities across the country, creating a strong demand for housing. Given that these war factories sites were chosen not

¹¹ Rumilly, 223-4.

¹² Rosario Clermont, Monographie de la Ville et Paroisse Saint-Laurent (Montreal: thèse, Hautes études commerciales, 1 mars 1946), n.p. Located at Ville St-Laurent Library.

¹³ B.J. Snyder, Jr., "Marked Expansion in Industrial and Residential Saint-Laurent", The Monitor (21 September 1950), 20.

with respect to available housing stocks but with regard to the availability of land and industrial transportation facilities, they were often far from towns, housing, and public transportation. Even if long-distance commuting had been possible, the travel time and cost would have been more than most workers' wages could bear. Various on-site housing solutions were examined: among them, the notion of lodging workers in barracks:

The workman who is away from his home isn't happy; he isn't the best kind of a workman. He is always worrying about what is happening to the folks back home, and they are worrying about what is happening to him...his efficiency, his value to the concern that he is working for, is absolutely in direct proportion to the standard of his family life and his family comfort.¹⁴

Employers had another reason to see their employees comfortably housed:

Not only through decreased efficiency on the part of the individual worker is there a loss of productive capacity involved in poor housing conditions. A further loss of industry is incurred through the great turnover of labour that invariably occurs when workers find themselves unable to find housing accommodation and therefore leave. The results of this turnover and the discontent and the inefficiency of those who stay are bound to be detrimental to the smooth functioning of the armament industries.¹⁵

Many considered the problem of housing workers engaged in the production of armament and munitions as temporary, believing

¹⁴ William Knudsen (speech before the National Committee on the Housing Emergency); quoted in Carl Major Wright, "Housing Policy in Wartime and Reconstruction", International Labour Review (March 1942), 247.

¹⁵ Knudsen, 247.

that the demand that developed upon Canada's entry to the war would simply subside at the end of the conflict. However, a re-evaluation of the pre-war situation reveals a problem of far greater complexity. Even "before the war, there was a shortage of some 100,000 homes in Canada due to almost complete lack of residential building during the Depression".¹⁶ The National Housing Act of 1937 initiated some efforts "to take up this slack but progress was slow."¹⁷ Despite the activities of the National Housing Administration, there were still only 2.8 houses per 100 families built in Canada between 1930 and 1937."¹⁸

Furthermore, Canada's involvement in the war led to a shift in both household income and size. By September 1939, the national income had increased by about \$1,800,000,000.¹⁹ People were able to find employment and get off relief. This meant a considerable decrease in the numbers of families "doubling up."²⁰ It "enabled many thousands of families to move from their then existing congested living conditions into single family

¹⁶ Leonard L. Knott, "War Housing Boom," Canadian Business (August 1941), 16.

¹⁷ Knott, 16.

¹⁸ E.G. Faludi and Catherine Chard, "The Prefabricated House Industry," RAIC Journal (March 1945), 16.

¹⁹ Extract from Report of Subcommittee of the Parliamentary Committee on War Expenditure, July 16th, 1942. Document issued by Wartime Housing Limited.

²⁰ J.M. Piggott, "Address to the Canadian Club," p.4, given in Montreal on December 8, 1941. Located at CMHC Archives.

dwellings".²¹ Moreover, the urgency of the war led many enlisting soldiers to marry, which also contributed to the new family units flooding the housing market. So the new "temporary" housing crisis arising from the movement of labour exacerbated the permanent housing crisis which had already set in across the country by 1939.

The Temporary Prefabricated House

In 1942, the Department of Munitions and Supply invoked the creation of Wartime Housing Limited under the Statutes of Canada, 4 George VI, Chapter 3 in order to build houses to relieve the housing crisis generated by the sudden expansion of the war industries.²² The central office for Montreal was located in St-Laurent.

However, the construction of these new houses was directly at odds with the policy of the government regarding the use of precious materials and labour. These were all to be directed towards the war effort. Yet the labour force could not be efficient unless it was properly housed and to do this required the diversion of both some raw material and labour to the construction of houses:

In time of war not one unit of labour and not one pound of essential war material should be needlessly consumed for domestic purposes...kept in mind that careful planning now will, when the war is over, enhance the

²¹ Extract.

²² Extract.

salvage value of present housing construction.²³

Any notions of building as cheaply and poorly as possible were curbed by, among other things, the Canadian climate:

The housing must be substantial enough to ensure protection from wind, rain, cold, snow and heat...It must be suitable for women and children and all the requirements of normal family life, and not for a selected group of men hardened to the severities of outdoor life.²⁴

To add to the crisis, economic realities were grim for the average factory worker: in 1941, the income of the average wage earner was \$1,350 per year and that of a salaried employee \$1,550 giving, on a monthly basis, \$113 and \$130, respectively. When one considers the monthly expense budget calculated by household economists of the time for a family of four, not including rent or mortgage payments was \$100 per month, this left very little for housing. To meet this expense, families were cutting back on food and clothing.²⁵ In response, Wartime Housing Limited undertook studies "to determine the most suitable type of house to build that would be uniform across Canada, sufficiently attractive in appearance to satisfy workers, having good living facilities, and at the lowest possible cost."²⁶

The staff architects of the National Housing Administration had previously tried to fill a gap in the housing industry by

²³ Extract.

²⁴ The Canadian Federation of Mayors and Municipalities, Report on the Wartime Housing Problem (Montreal: January 1941), 9.

²⁵ "Provincial Page: Alberta," RAIC Journal (Oct. 1942), 212.

²⁶ Extract.

The staff architects of the National Housing Administration had previously tried to fill a gap in the housing industry by researching the possibilities of prefabricated construction. They had designed a prototype in which "full size wall, floor, and roof panels were developed, with standard size frames, all parts interchangeable, and various factory fabricated materials used...[panels would be manufactured during winter months, shipped to the sites in the spring, and bolted together to create a]...model house which cost less than \$2000 and took eight hours to build."²⁷

Wartime Housing Limited thus opted to build temporary houses consisting of "a frame dwelling on posts, semi-prefabricated in construction, of three different standard types...and hot air circulating heater."²⁸ This appeared to be a rational and simple solution given the economies achieved through prefabrication. The associated "temporary" nature also quelled some of the debates surrounding the houses.

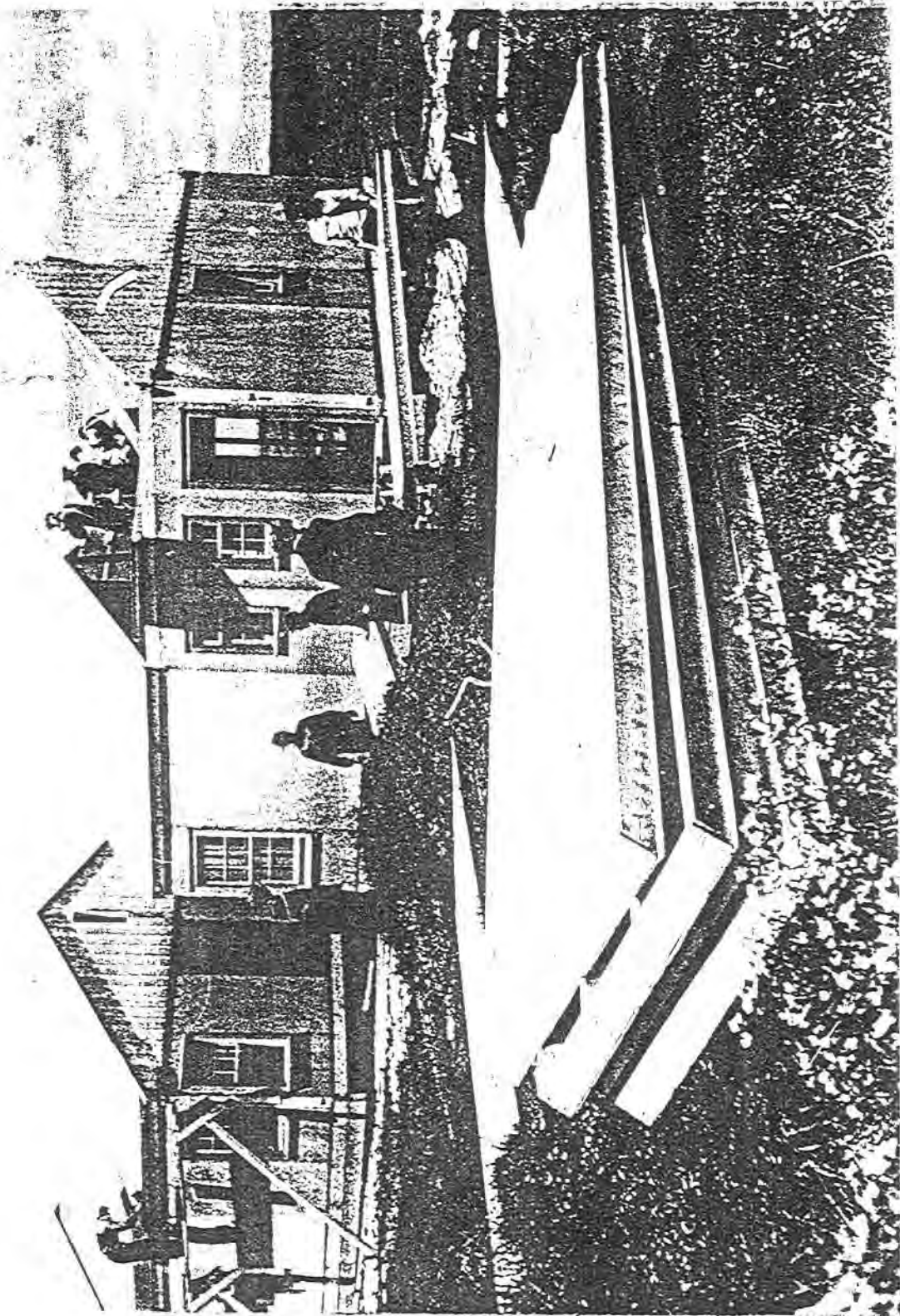
The driving forces behind the "prefab" method were economy and speed:

The houses are built by mass production methods, which is the only practical way of keeping up with the rapidly expanding requirements of the war industries. Lumber, hardware, fixtures and other supplies, are purchased at wholesale prices, and a minimum of scarce materials is released to these projects by the

²⁷ Knott, 21.

²⁸ Knott, 21.

119709



4. Workmen erect prefabricated house for wartime workers near Halifax, Nova Scotia, National Film Board Collection, National Archives.

demand for housing, but also for reducing the number of man-hours diverted from the production of supplies and armaments. The advantages of mass producing panels in the factory and assembling them on site is clearly illustrated in the following paragraph:

Exterior sidings and interior lining and insulation are sometimes put on in the mill, sometimes in the field. Construction proceeds as follows: foundation posts are put in the first day; the following morning the floor is laid, part of the walls are up and part of the roof is on. By mid-afternoon the roof is being shingled and is completed that night. On the third day the plumbers and electricians complete their work, the next morning the interior wall board is in place, exterior sidings are applied and the house is ready.³⁰

The unofficial estimate for the assembly of the main frame of a small house was 16 man-hours (Fig. 4).³¹

In the interest of public relations, people preferred to call the war boom homes "demountable," rather than "prefabricated."³² WHL officials explained that "these houses are really demountable and their main virtue is not that their structural skeletons can be bolted together into complete frames in quick time but rather that they can be unbolted and the house dismantled when the time comes."³³

The implication of the homes as "temporary" had both economic and political benefits. There were economies realized by assigning the houses a life span of only five years: no

³⁰ Leonard L. Knott, "Prefabrication and the Post-War House," Canadian Business (vol. XVI, no.9)

³¹ Knott, "Prefabrication and the Post-War House."

³² Knott, "War Housing Boom," 21.

³³ Knott, "Prefabrication and the Post-War House".

basement was excavated; no central heating system installed; cheaper roofing materials were used; and, wallboard was used instead of plaster.³⁴ It also allowed a salvage value to be attributed to them. This was especially true when private companies were providing the housing accommodation for their workers. It was believed that at the end of the war, the prefabricated panels could be unbolted and "salvaged more cheaply and with greater salvage value."³⁵ This also presumed that the houses could be sold, dismantled, and reassembled on another site.

The "temporary" nature of the homes also helped to allay the concerns of private builders. The activities of Wartime Housing Limited were not to interfere with the interests of private builders and contractors. Unable to realize the economies of mass production about to be undertaken by the government and unwilling to build at a loss, builders feared their eventual elimination in the residential construction industry, especially after the war. The government believed that the construction of permanent structures would result in a glut on the postwar housing market. Private interests were reassured by WHL that homes would be built exclusively for defence projects. Agreements for their removal within a reasonable time at the end

³⁴ Ernest Ingles, "Wartime Housing Limited", Canadian Congress Journal (June 1947), 16.

³⁵ Knott, "War Housing Boom," 22.

permanent structures would result in a glut on the postwar housing market. Private interests were reassured by WHL that homes would be built exclusively for defence projects. Agreements for their removal within a reasonable time at the end of the war were usually made with the municipalities.³⁶

Some individuals were very much in favour of temporary homes because they feared the results of permanent, poorly built ones:

I am a strong believer in better housing. I am unable to find any justification for the construction of houses which are only fairly good. We should build either exceptionally good houses or temporary makeshift housing; we should not build something in between. Because we cannot build good houses for war housing we should build temporary housing.³⁷

Others, however, expressed far less enthusiasm for the relatively low standards to be provided: "It often gives an excuse for makeshift construction and makeshift land plotting under the plea of an emergency and leaves an aftermath of blight and slum."³⁸

Conservative Single-family Homes

Although group houses offered possible economies over single family dwellings, these were overridden by several considerations. The first was the increased fire hazard that was always present in temporary housing. Another consideration was the fact that most workmen engaged in war industries worked in

³⁶ Piggott, 10.

³⁷ Frederick M. Babcock, "Housing, Now and in the Post-War Era", RAIC Journal (January 1943), 3.

³⁸ The Canadian Federation of Mayors and Municipalities, 11.

shifts.³⁹ Temporary group housing would require expensive acoustic insulation whereas single units ensured that each workman could rest in peace, free from distractions.

In addition, there was a "fear of radical solutions and the appeal of a conservative model"⁴⁰ that led to single family homes. A sentiment of scepticism and preconceived notions of appropriate family housing also applied to the design of prefabricated houses. "In the early stages the public viewed prefabrication suspiciously. Futuristic designs and artists' conceptions didn't conform to the idea of home."⁴¹ J.M. Piggott, head of Wartime Housing Limited, concluded:

...that there was a definite limit to the economies that might be practised at the expense of appearance. The housing projects had to be sufficiently attractive to meet public approval, otherwise we faced unending trouble securing locations.⁴²

To alleviate these widespread fears, the houses were made to look as conventional as possible, with central entries, pitched roofs, and generous setbacks. It was recognized that

a modern housing development does not, therefore, constitute a mere mechanical extension of streets and agglomeration of individual, competitive dwellings. It has a beginning and an end, and some sort of visible,

³⁹ W.L. Somerville, "Site Planning for Wartime Housing", RAIC Journal, June 1942, 130.

⁴⁰ G. M. Pitts, "Special Meeting of Public Relations and Town Planning Committees on War Housing", RAIC Journal, July 1941, 111.

⁴¹ W.B. McCutcheon, "Canada Adopts Prefabrication," Canadian Business, XX, 3 (March 1947), 36.

⁴² Piggott, 8.

organic form.⁴³

Also, concerted efforts were made to provide the essentials of good housing: "proper sanitation and well-lighted and ventilated rooms, openings on air spaces of sufficient dimensions, with due regard to their proper orientation."⁴⁴ With these principles in mind, Wartime Housing Limited set about building houses in municipalities throughout the country.

Norvic: The St-Laurent "Victory Village"

Over the spring and summer of 1943, 'on vit surgir du sol comme des champignons, 400 maisons.'⁴⁵

Thus, another "Victory Village"--this time Norvic--was born. Thanks to the original agreement in 1943 between Ville St-Laurent, "his Majesty the King in Right of Canada" and Wartime Housing Limited, the building of the homes could proceed swiftly, without the ordinary permits of consent from the municipal authorities.⁴⁶ Once the contract was signed, tenders from responsible contractors were called and a local architect was typically hired to supervise the construction and issue

⁴³ Catherine Bauer from John Caulfield Smith, "A Housing Plan for Canada," Canadian Forum (January 1943), 306.

⁴⁴ Aimé Cousineau, "Housing in Montreal," Canadian Public Health Journal XXVI (January 1935), 15.

⁴⁵ Eugène Goulet, curé, paroisse Notre-Dame-de-Bois-Franc, Bribes d'histoire, no pages. Unpublished document located at Ville St-Laurent Archives.

⁴⁶ Copy of the Agreement between the City, His Majesty, and Wartime Housing Limited, 1945.

certificates of payment.⁴⁷

And as planned, the prefabricated housing components, anchored to cedar posts, were assembled on site. Four models were built: Type 1, a one-storey 24'x24' dwelling with a living room, two bedrooms, kitchen and bath; Type 2, the reverse plan of Type 1; Type 3, a slightly larger, 24½'x28', version of Type 1; and Type 4, a two storey 24'x28' unit containing additional bedrooms on the second floor (Fig. 5).⁴⁸

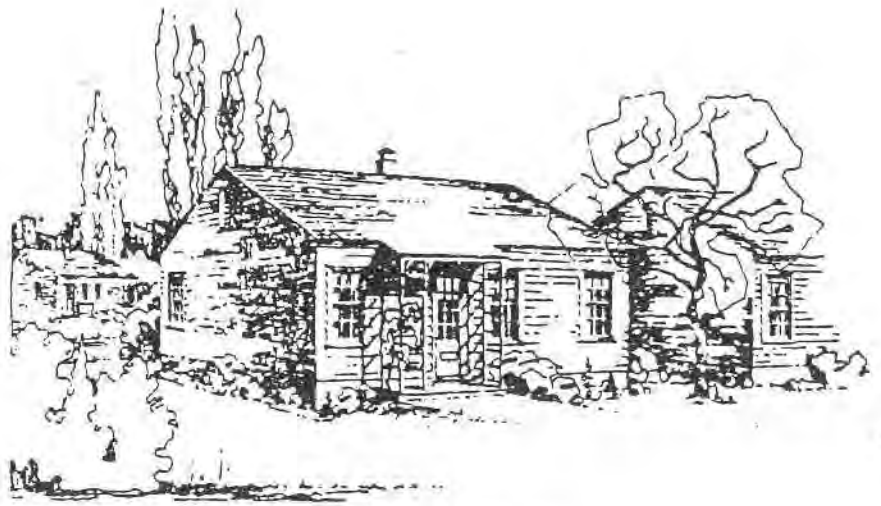
The structural impermanence of the dwellings was offset by several factors. Much concern was given to create variety and to avoid monotonous repetition: plans were reversed left to right; the design of porches varied; and there were four different sidings employed. These, again, varied in colour, like the roofing material. The latter was considered "next in importance to the grouping or mass outline of the houses."⁴⁹ However, the most striking feature of Ville St-Laurent was the bold master plan.⁵⁰ The streets, named by Wilfrid Legault, honoured great universities. Laval Street, a giant horseshoe, arched around all the other streets, creating an enclosed, distinct area in what was then a large open field (Figs. 6 and 7). The gentle curving streets created by this gesture resulted in a picturesque,

⁴⁷ Burwell R. Coon, "Wartime Housing," RAIC Journal (January 1942), 3.

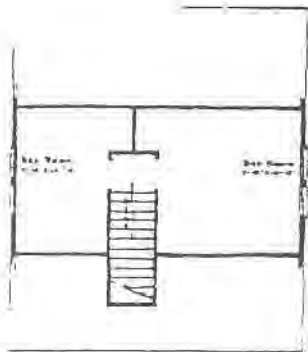
⁴⁸ Coon, 3.

⁴⁹ Sommerville, 130.

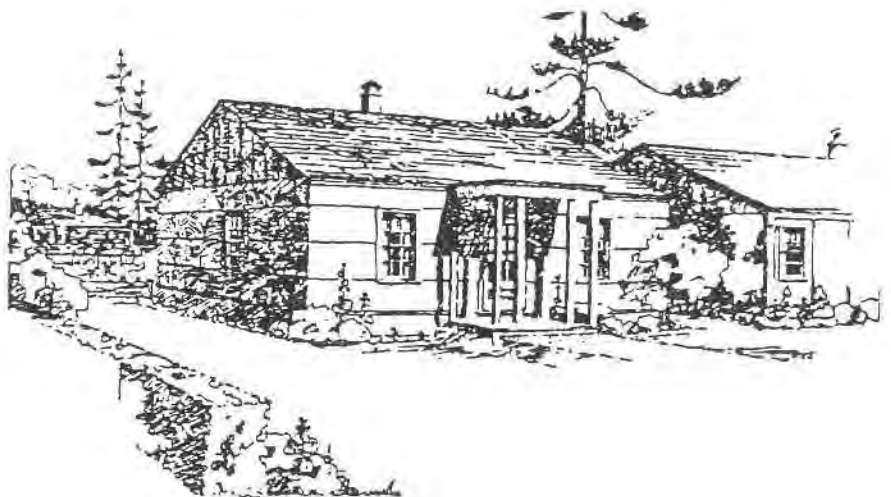
⁵⁰ Goulet.



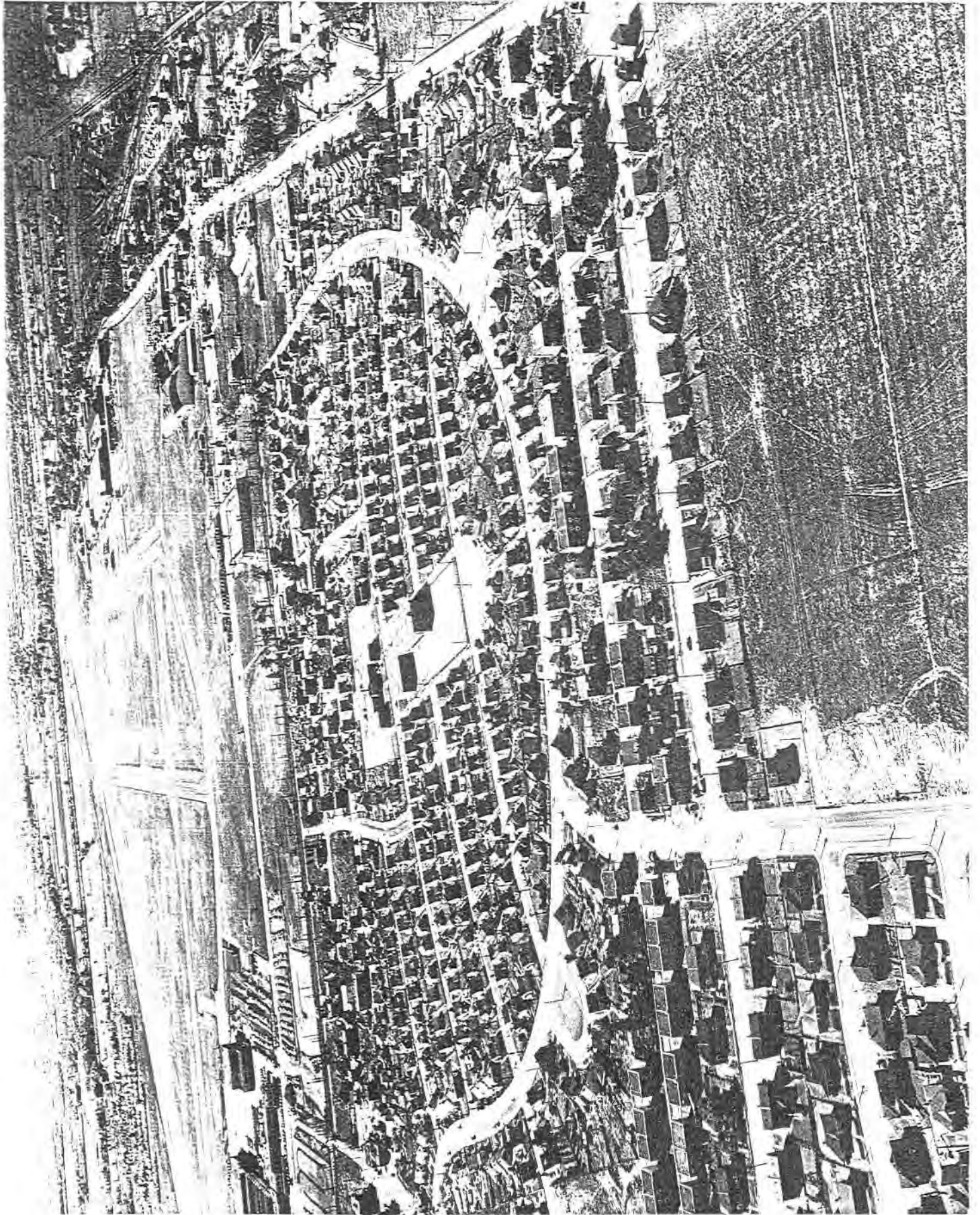
SINGLE FAMILY DWELLING: TYPE H1



SINGLE FAMILY DWELLING: TYPE H12



SINGLE FAMILY DWELLING: TYPE H22



6. Aerial View of Norvic, Québec National Archives.

romantic atmosphere. The relatively large plots of land on which the house were built also helped to anchor the residences. Tenants later cultivated food in their so-called "Victory Gardens", a blessing during tough economic times. A 1946 monograph praised the area:

Norvic est un endroit des plus sains. L'ouvrier, loin du bruit des villes, peut se reposer tout en cultivant un petit jardin, car toutes les maisons construites par Wartime Housing Co. possèdent à l'arrière un terrain assez vaste. Quelques-uns ont plus de 25' x 50. L'ouvrier peut donc jouir de la tranquillité complète. Sa famille vit au grand air, loin des dangers des grandes villes. Sa maison, ensoleillée du matin au soir, reste pour lui l'endroit idéal de repos, de santé et de bonheur.⁵¹

The wartime houses were rented primarily to employees considered essential to the war effort. However, the charter also provided that "sailors, soldiers or airmen of the three armed forces of Canada returned from general service in the present war and/or their dependents and to the dependents of any sailor, soldier or airman of such forces who is on general service outside Canada or who has been killed on active service in such war" be given priority when leasing these houses.⁵²

Given the enormous demand for housing, a merit point system was created to establish priorities. For a worker in industry, the relevance of his or her job to the production of war materials and the size of his or her family were important considerations. For tenants in the service, priority was given

⁵¹ Clermont.

⁵² Agreement, 4.

to those who fought overseas and those whose term of duty was longest. Apparently, many people obtained houses through sheer tenacity and persistent visits to the Wartime Housing Limited office on Laval Street.⁵³

Of the 247 houses built in St-Laurent (the remainder were located on what was then land in Montreal) (Fig. 8), 122 structures, renting for \$30/month, were 1½ storeys ; 103 were four rooms and rented for \$22/month; and 22 cottages had four slightly bigger rooms and rented for \$25/month. All water, gas and electricity charges were to be paid by the lessees, in addition to the rent. The monthly rental income to Wartime Housing Limited from the St-Laurent tenants totalled \$6476.⁵⁴

From this income, Wartime Housing Limited paid an annual sum to the city of \$24 for each two-bedroom house and \$30 for each home containing more than two bedrooms, in return for "services rendered and privileges and facilities made available."⁵⁵ One half of this amount was subsequently turned over to the city school boards. Moreover, the city collected from the company \$1 per house per year for street lighting services. In return, it agreed not to levy taxes of any kind on the tenants of houses owned by the government.⁵⁶

Because of the severity of the housing shortage, these

⁵³ Wiggins, Boysen, and Robinson interviews.

⁵⁴ Agreement, 4.

⁵⁵ Agreement, 5.

⁵⁶ Agreement, 6.

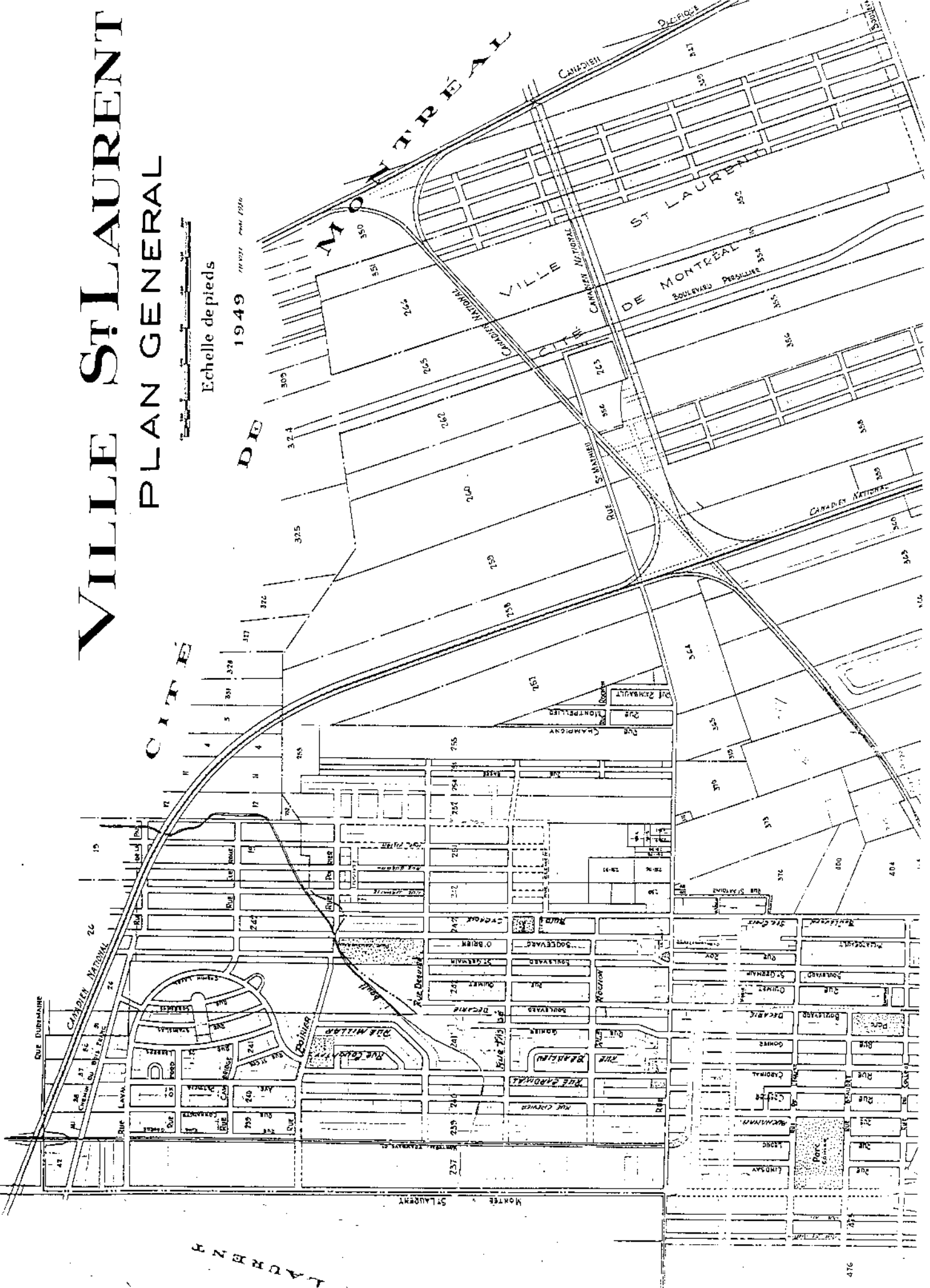
VILLE ST LAURENT PLAN GENERAL



Echelle depieds

1949

REVISEE PAR 1936



8. Map of Ville St-Laurent, 1949, Ville St-Laurent Archives.

houses were intended for nuclear families only. To accommodate single men and, as the war stretched on, single women, three "Staff Houses," located on the corner of Laval and Montée St-Laurent (Laurentian Boulevard) were built. Each of these structures accommodated 88 people in "single and double bedrooms with necessary toilet facilities, a writing room and a lounge."⁵⁷ There was also a large cafeteria, catered by Industrial Food Services Limited, where workers could eat for a modest sum. A double room and meals were \$9.50 per week, while a single room and meals cost \$11.00 per week. The total cost to Wartime Housing Limited for these installations was \$90,000.⁵⁸ As part of the original project, WHL also built a Community Centre fronting on de la Sorbonne Street.

Due to the complexity of the story, one might think that this series of events took place over the course of several years. The following chronological summary, however, tells of its rapid evolution. In 1942, the installations for Canadair were built and on December 26th of that year, the first employees began working. Prior to their arrival, Canadair had contacted Wartime Housing Limited regarding the necessary housing. In early 1943, the Agreement between Wartime Housing Limited and Ville St-Laurent was signed. By March 1943, the project had taken shape on paper and sewers and water mains had been designed. The new streets had been assigned their present names

⁵⁷ Somerville, 130.

⁵⁸ Clermont.

and a tentative location for the community centre had been chosen.⁵⁹ In the spring, construction of 400 houses began. In August, the first houses were ready for occupancy, the same month that the first Catalina plane off the Canadair production line took to the air.

In 1943 what had been farmland suddenly became a small cosmopolitan village of people with different religions, languages, and races. Among these were 241 Catholic families, 73 of which were English-speaking, and 158 Protestant families. In total, the community consisted of 798 adults and 891 children.⁶⁰ In response to needs of the new Catholic inhabitants, a new parish "Desserte Notre-Dame-du-Bois-Franc" was created in 1944, with Norvic at its heart.⁶¹

The Postwar WHL Home

It had been anticipated that at the end of the war the "community would be abandoned by its occupants and the installations cease to have value except for salvage or removal."⁶² However, the situation at the end of the war was very different than that anticipated: "none of these expectations

⁵⁹ Plan Showing Sewers & Water Mains, City of Montreal, Hydro-Electrical Operation Division, Water & Sewerage, March 1943.

⁶⁰ Goulet.

⁶¹ Goulet.

⁶² Letter to Town Manager, Lucien Toupin, from Central Mortgage and Housing Corporation dated January 27 1949. Document located at Ville St-Laurent Archives.

have come to pass and instead of a condition of vacancy, the community is faced with an unprecedented shortage of homes. This shortage has, of course, borne particularly heavy on the veteran group."⁶³ It was therefore decided that the "temporary" WHL homes would be sold, invoking clause 10 of the Agreement between His Majesty and Ville St-Laurent. It stated that His Majesty was at "liberty to sell or convey any or all lands appurtenant thereto at such time or times as His majesty may see fit."⁶⁴

The first houses were sold in the summer of 1947, despite the fact that they had yet to be made into permanent structures. By this time, WHL was absorbed by the Central Mortgage and Housing Corporation, who planned to replace the cedar posts under the homes with concrete foundations. At the time, however, they were actively engaged in building new homes to meet the housing demand, and were unwilling immediately to divert scarce materials to upgrade existing dwellings. The construction of permanent foundations was consequently delayed by two years. Despite this setback, CMHC hoped to upgrade them, whether they were purchased or not, by the end of 1948. This would mark the end of WHL's involvement in the homes and the beginning of the self-help process of the owners.

⁶³ Letter to town manager.

⁶⁴ Agreement.

2. The Case Studies

It is at this point that the self-help story of the WHL homes begins, once the buildings were purchased by their wartime inhabitants. Because many of the homes were bought before they were made permanent, the installation of the foundations became the focus of the first self-help project.

While CMHC was bound to provide concrete foundations, they had not undertaken to provide full basements. Given the small size of the homes, many owners pleaded that their homes be lifted higher, offering to pay the difference to have the three more rows of concrete blocks that would give them the full basement. Only three home owners who "insisted hard enough" managed to have it raised by CMHC.⁶⁵ Others had to dig their own basements, hire help, or accept the help of neighbours.

The varying heights of the once-identical houses are telling evidence of the difficulty of this process. Most of the excavations were carried on at night, after work, even during the winter months. Many owners described vividly the glow of lights beneath houses as people excavated their own basements.⁶⁶ Often family members involved in mechanical production at Canadair undertook the task themselves. Even for these ambitious workers, however, the prospect of digging a basement at night lying on their stomachs under a jacked-up house and then pouring a new foundation, was daunting. Robert Kemp, for example, dug his own

⁶⁵ Robinson interview.

⁶⁶ Ingerville interview.

basement. His wife, Madge Kemp, remembers with horror the summer of 1948,

This side of the house was a field; we had one wheelbarrow and my husband made a ramp down the side of the house; it took him a whole summer, meanwhile, we had lots and lots of rain, it was all running down the back, like a swimming pool underneath; I would go down there and cry; I thought we would never get it straight; he just kept at it all the time.

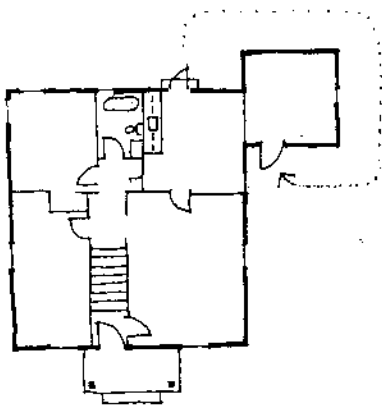
Tenants of WHL housing, according to Curtis Ingerville, could even earn \$100 by digging a trench in anticipation of CMHC's foundation; this was a particularly difficult task, as the soil in Ville St-Laurent is mostly clay, which was both sticky and heavy. "It sticks to everything," recounted Ingerville, "when you tried to throw it from your shovel, the shovel would often go with it."

Perhaps because of the homogeneous character of the neighbourhood, a sense of community developed quickly, much of which centred on house renovation. The Robinsons helped John Boysen to dig his basement in exchange for help building the extra floor on his home.⁶⁷

The following case-study diagrams trace the evolution of 24 WHL homes from their original state at the time of purchase through the alterations of the early 1990s.

⁶⁷ Guy Morin also provided an example of neighbourhood cooperation.

There were 2 houses in the whole project that had the coal shed at the side. We had a door at the back in the center of the kitchen that went outside and into the coal shed.

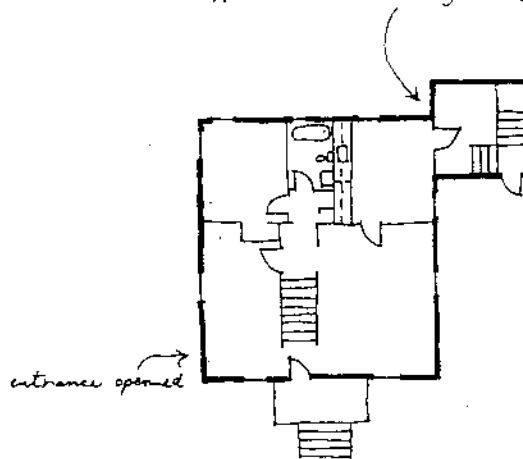


original plan

scale:



1950: "We used to freeze in the winter & the blowing in the kitchen and the whole house, so we decided to block it off & put the doorway through here..."



1955: new kitchen cupboards

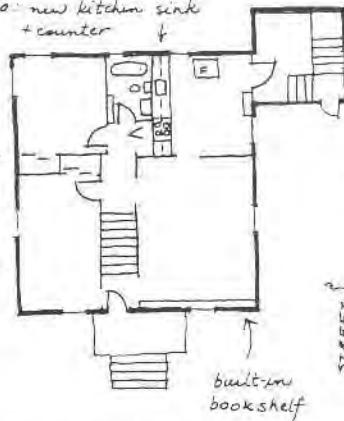
"Some are the original doors, but I put all that bottom section on there, modernized them a little bit. Then changed the hinges & all that."

1950's



"In 1967, we did the bathroom... it was our centennial project! ... we all had a hand in (the tiles), it was a family project!"

1970: new kitchen sink + counter



1960: "I moved that wall about 4" because the cupboard was so narrow your clothes wouldn't fit... -new sliding doors installed, same as the neighbours"

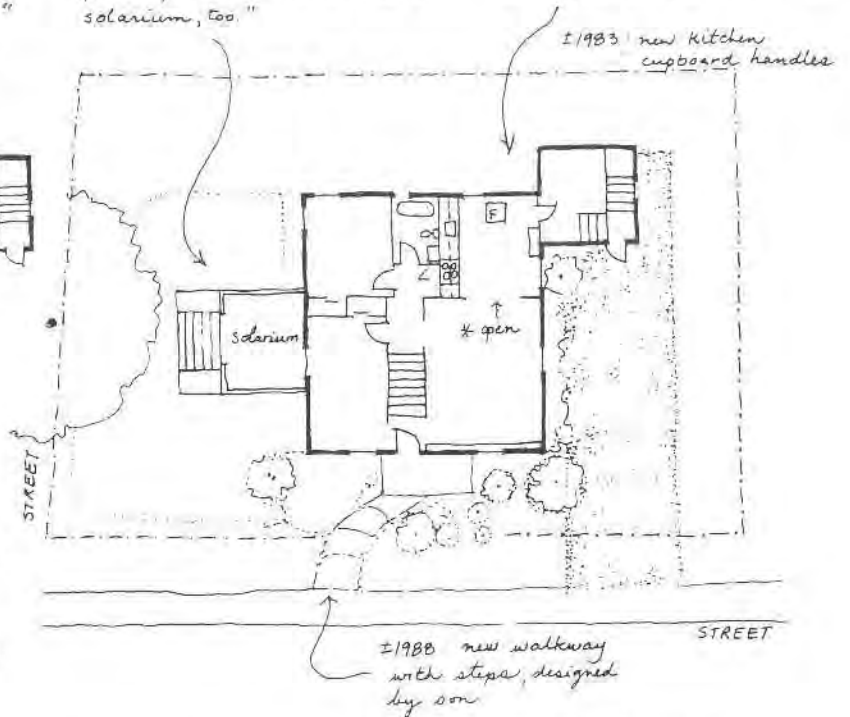
±1970: change gravel driveway to asphalt; "The four kids were dragging in too much dirt."

1960-70's

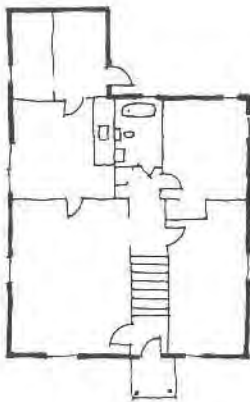
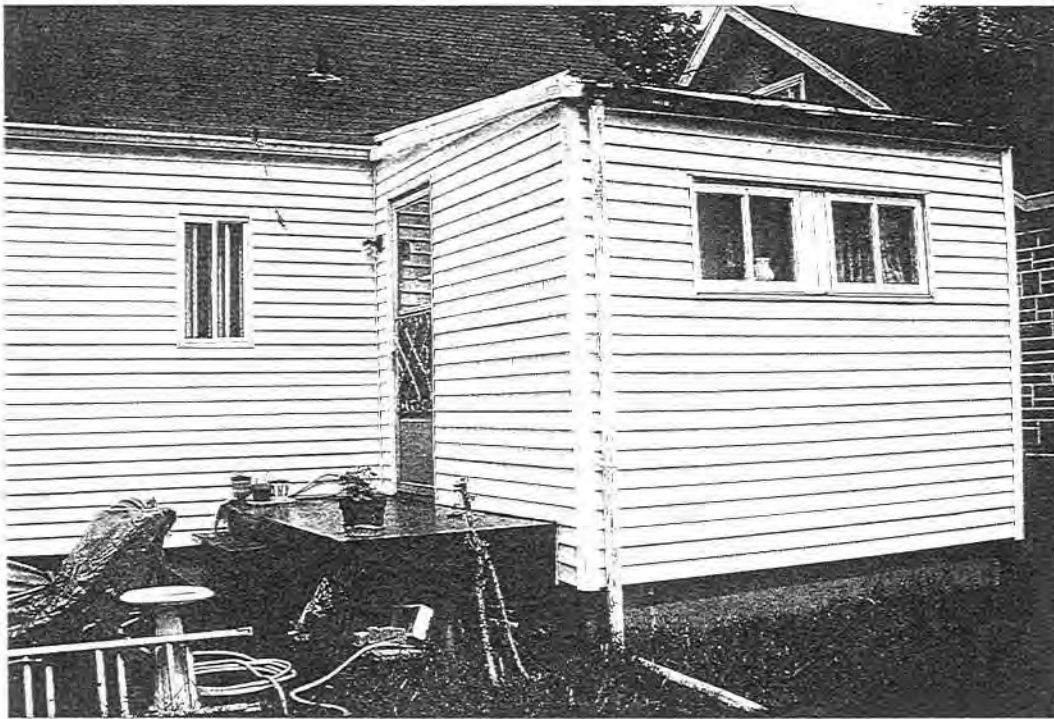
1993: solarium from a "home show" in Toronto, son drew up the plans (an architect) "He felt I had enough plants, that I should have a solarium, too."

*"We opened this up so when we have company, we can sort of talk instead of running around in circles all the time." ~1993

±1983: new kitchen cupboard handles

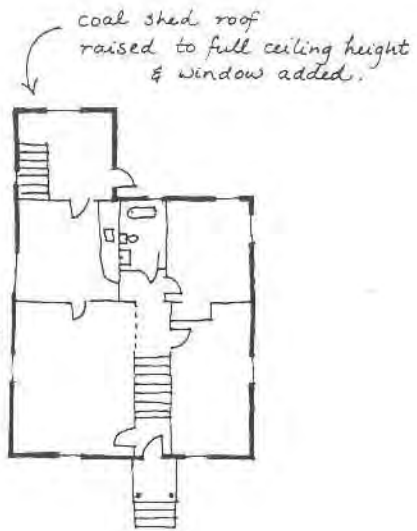


New windows "we kept them like the original windows with small squares ... they are full panes, but with fancy trims in between, so it looks like the original" ... It's still the original asbestos shingles, we're one of the few."

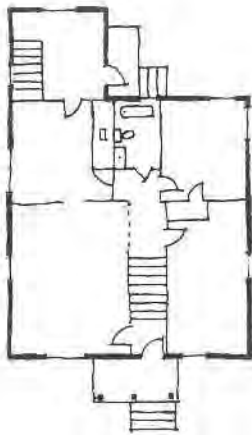


original plan

*squared off
arched opening* →

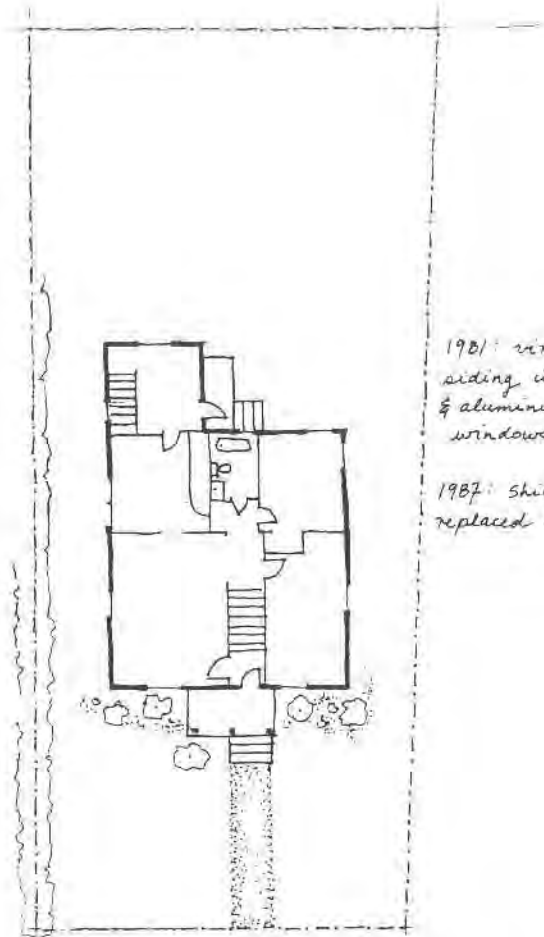


*1950's foundation
installed to
accommodate basement*



1960: front porch enlarged & back porch built

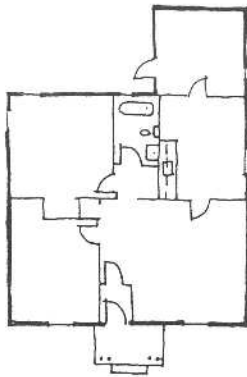
late 1970's: piping changed in kitchen & bathroom, shingles on roof replaced



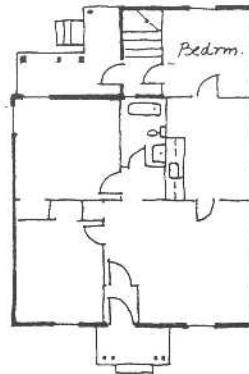
1981: vinyl siding installed & aluminum windows

1987: shingles replaced again

(House has retained original character)

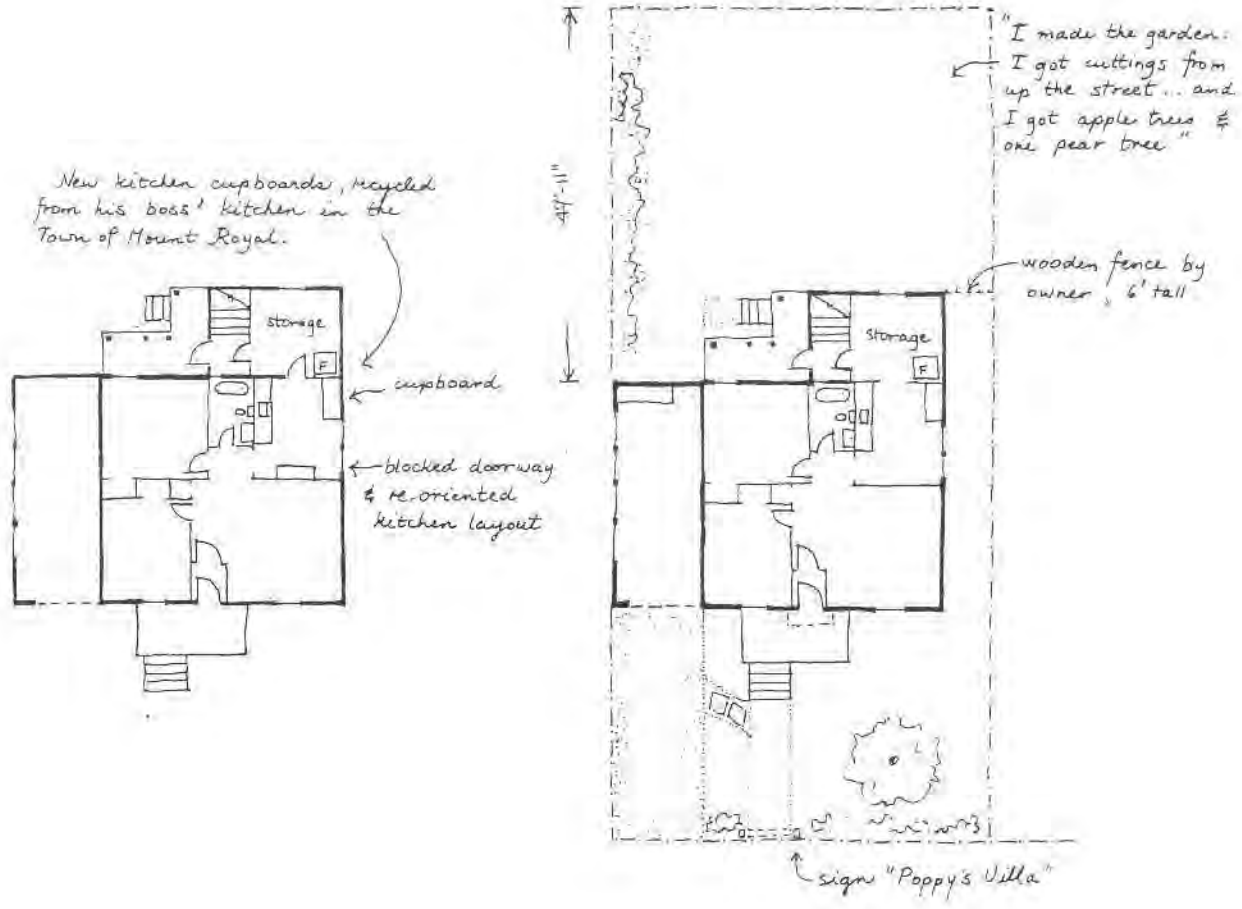


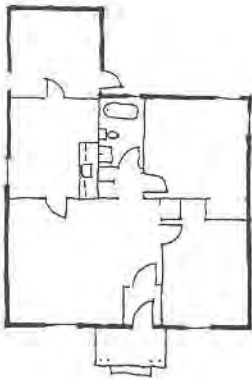
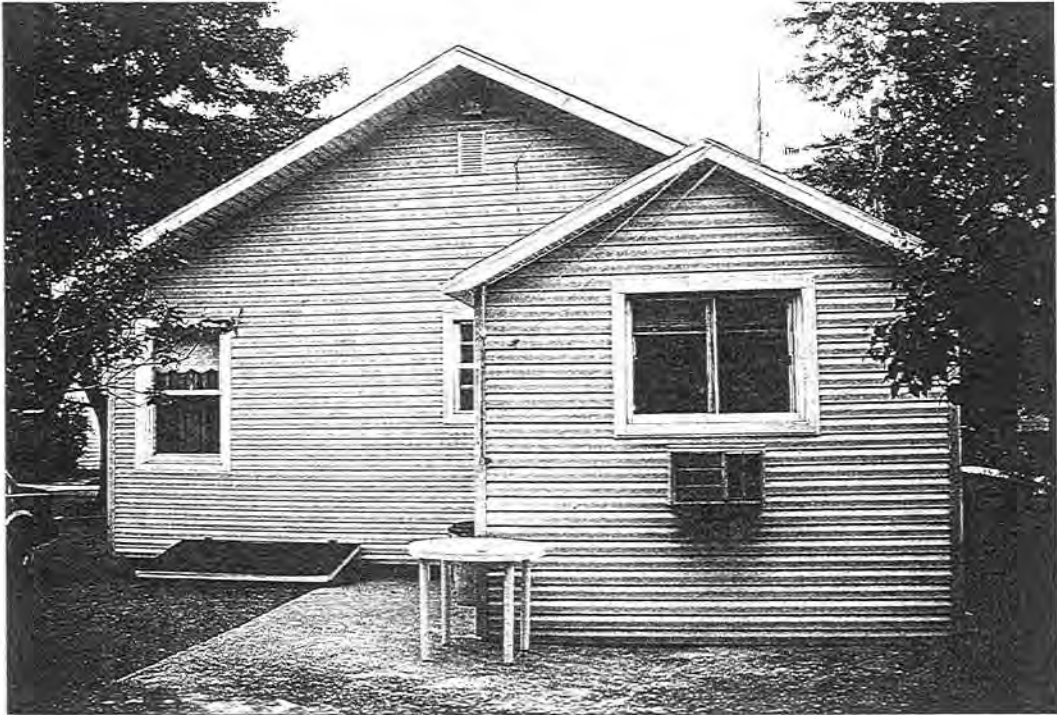
"I made 2x4 bunkbeds, I made them myself!" for the coal shed-turned-bedroom.



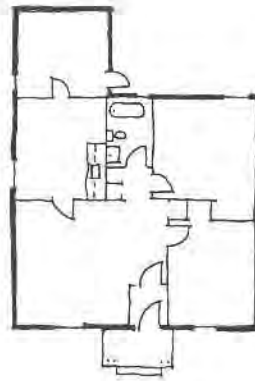
Basement installed:

"I love this place because I did all the work myself. I dug out the basement myself... I put the cement block up..."



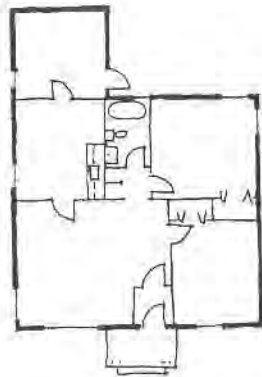


original plan





Owner purchased house in 1973, no children.



1960's new windows throughout & new picture-window in living rm.

1980 dining room

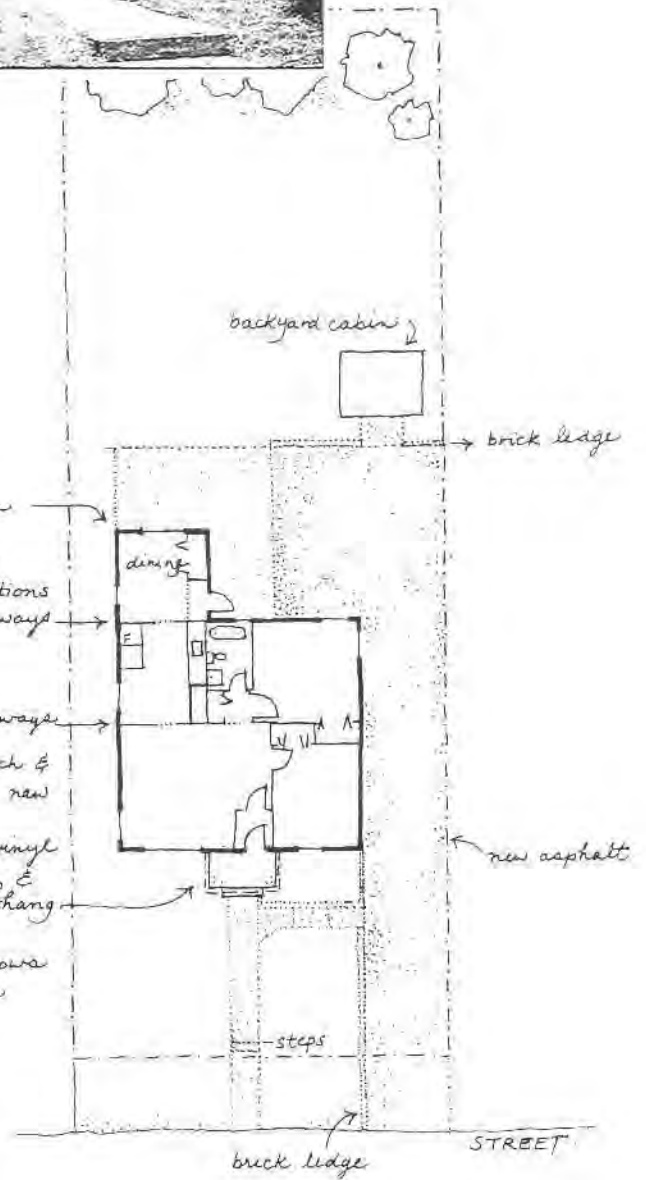
1980 kitchen & bathroom renovations & archways

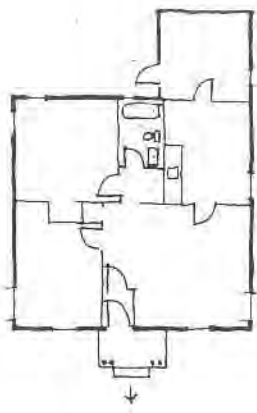
archways

1987: front porch & metal railings new

1991: new grey vinyl siding, roofing, & front porch overhang

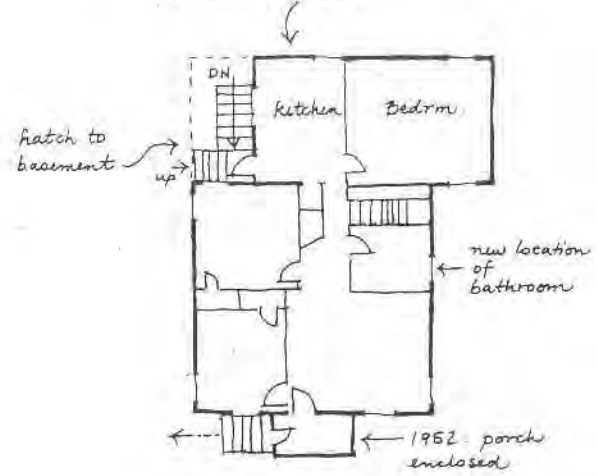
1991: all windows replaced





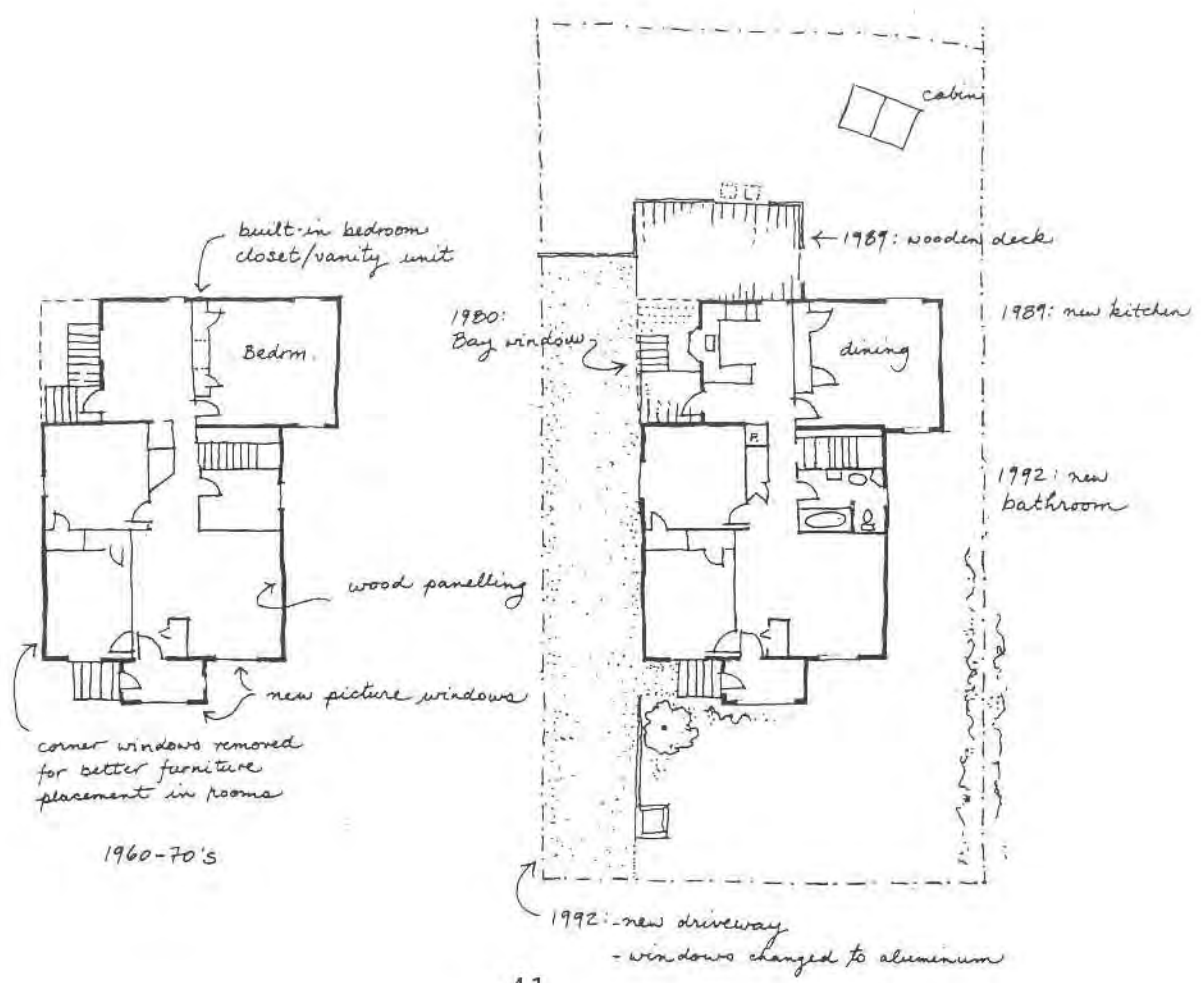
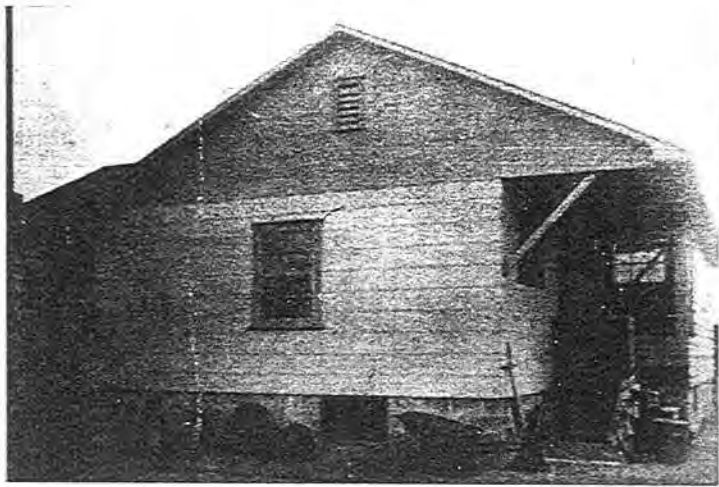
original plan

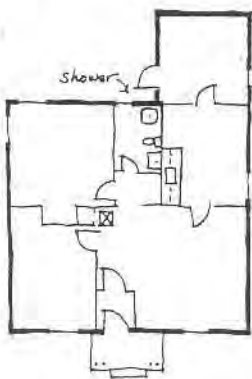
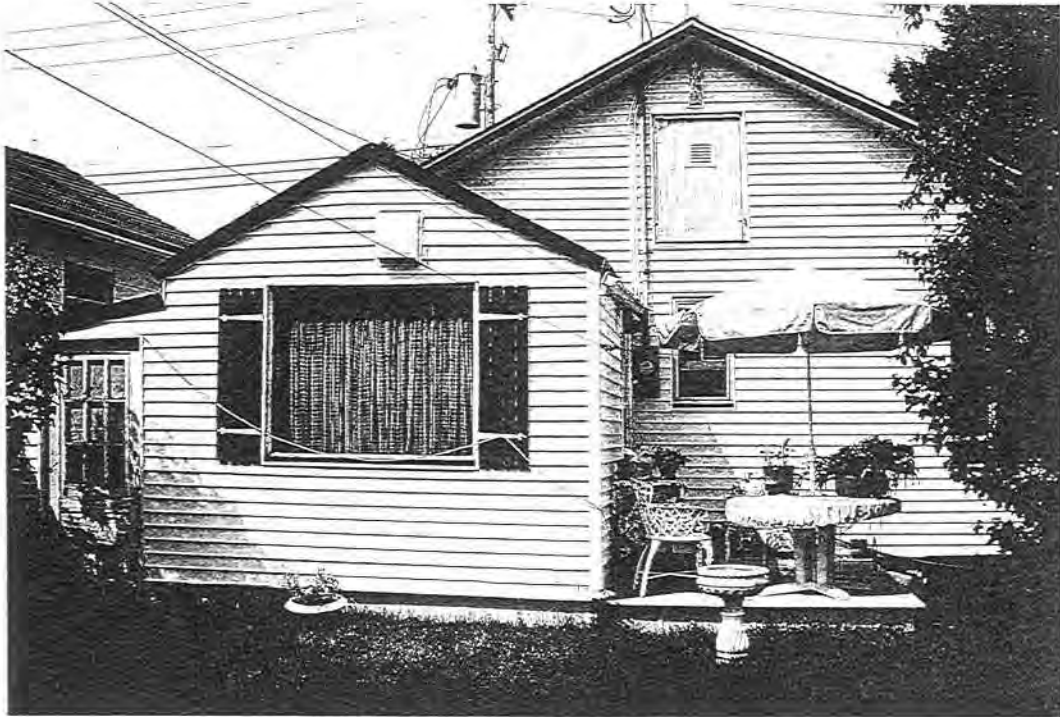
1957: Coal shed extended & kitchen relocated.



late 1950's: driveway added & porch re-oriented towards it.

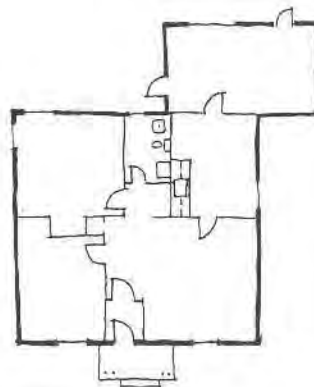
"We didn't have a dining room, so we had a big table that extended... a big table with room to fit 7 of us!"



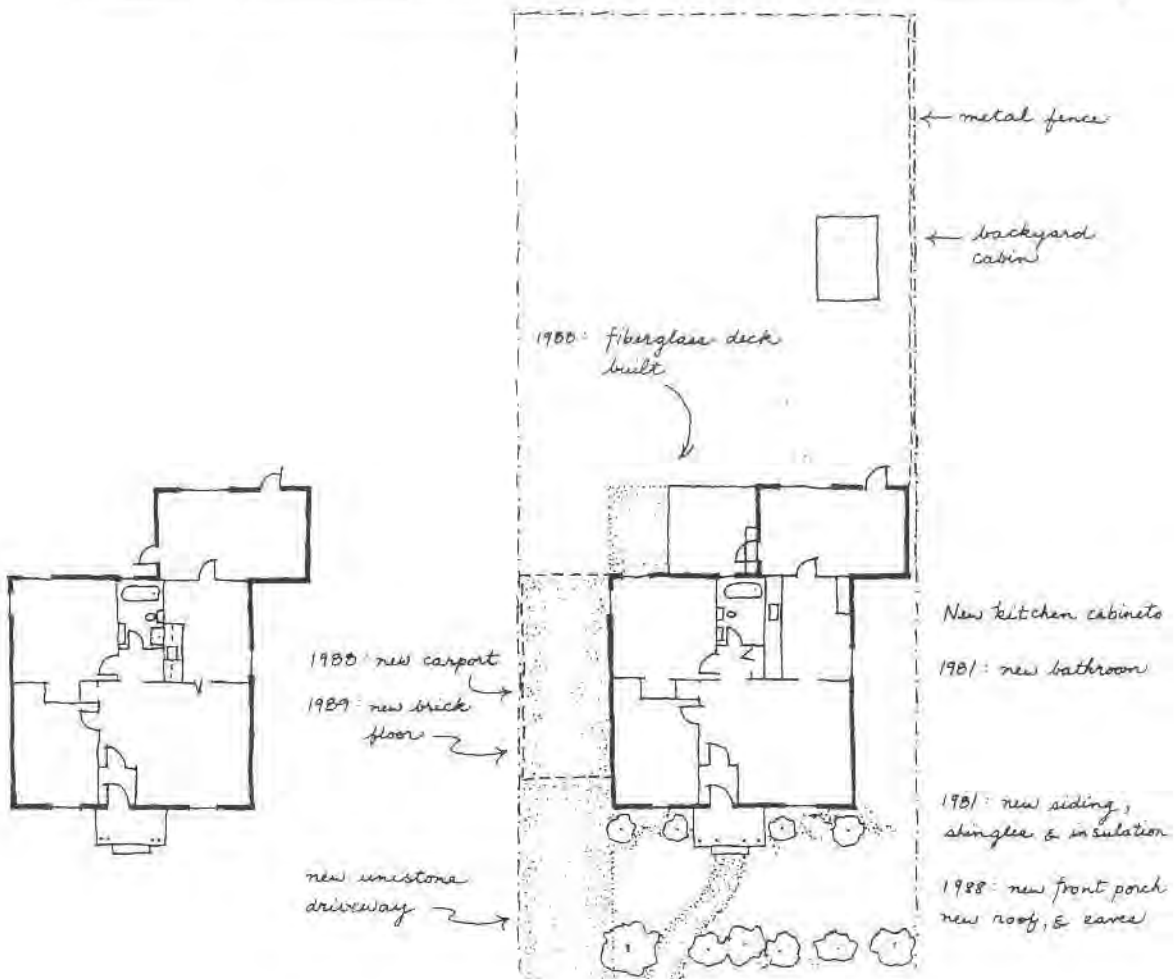


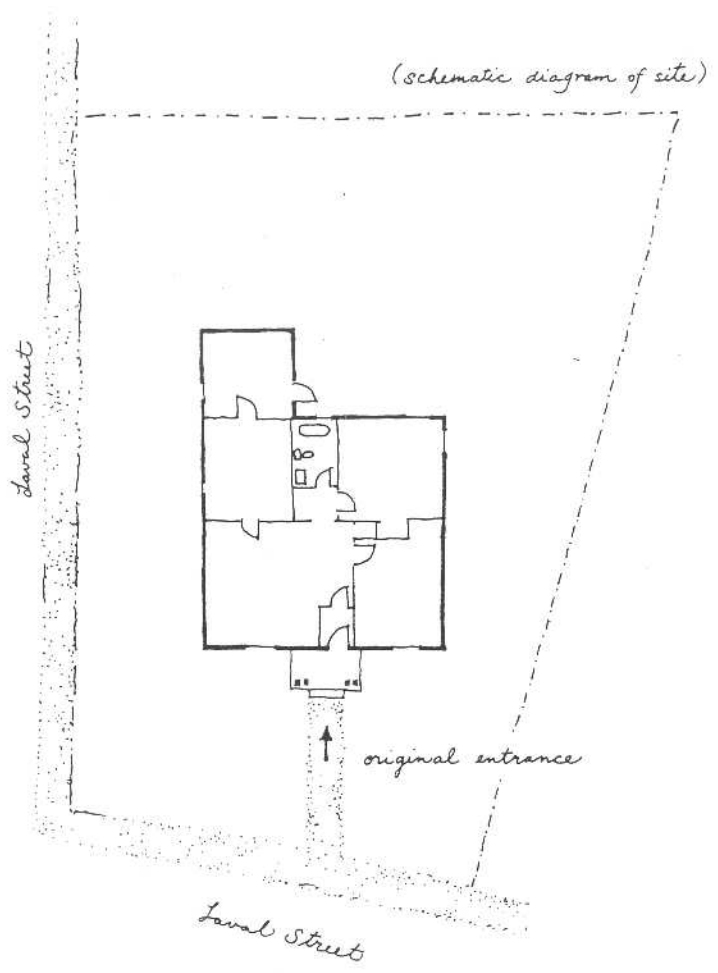
original plan

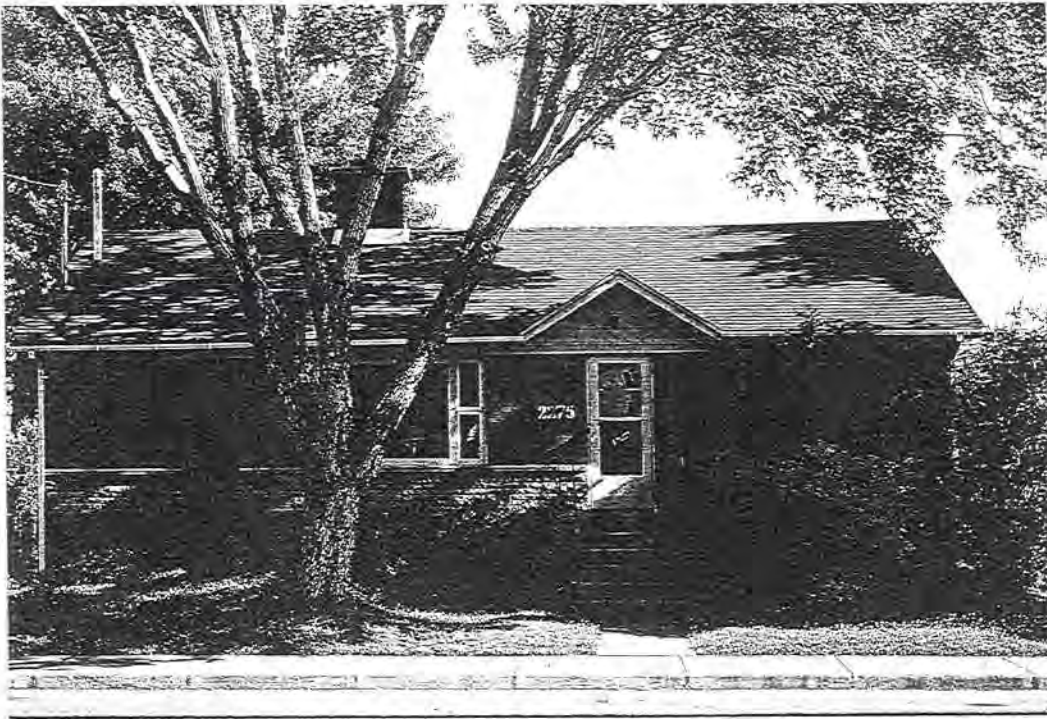
*original bathroom
had no bathtub, only
a shower stall*



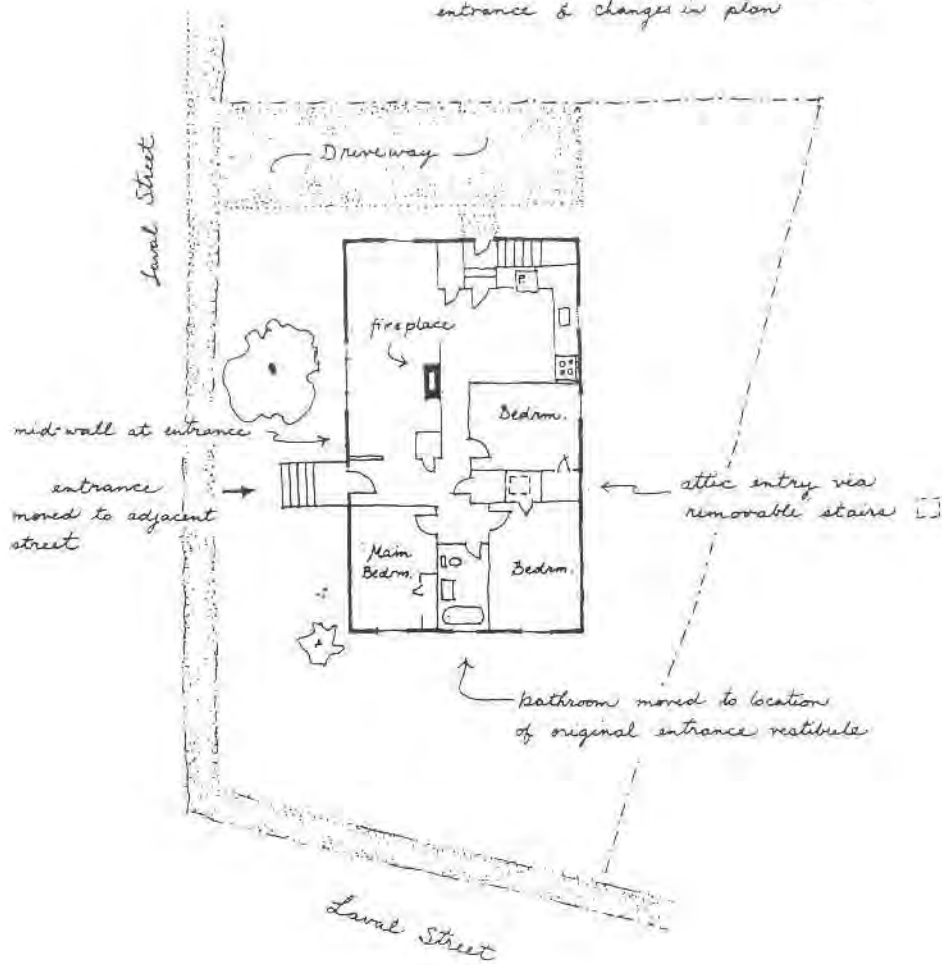
*Owned by a single veteran,
no basement added*

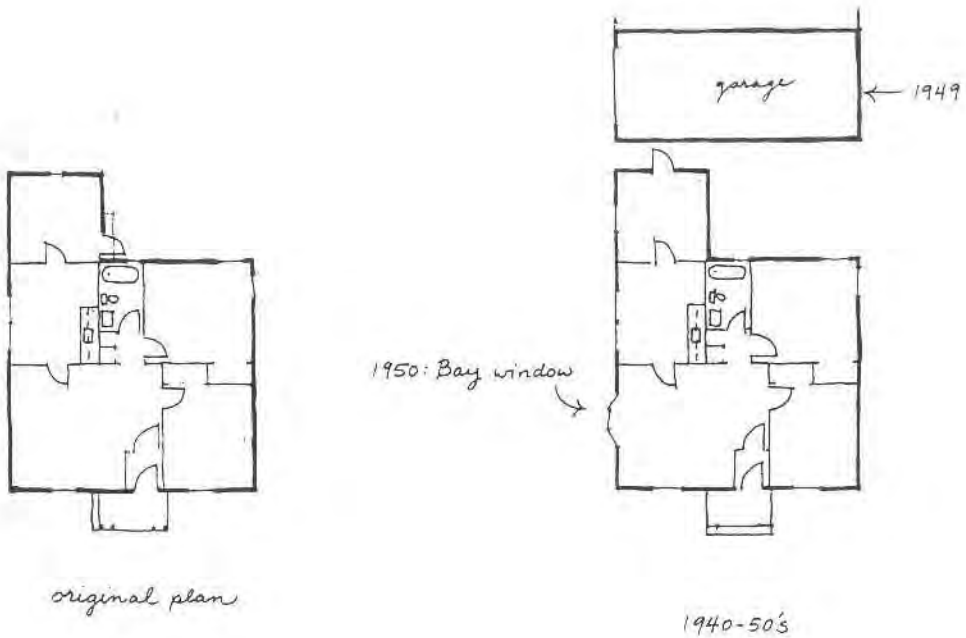
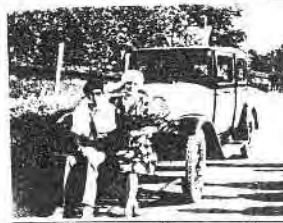
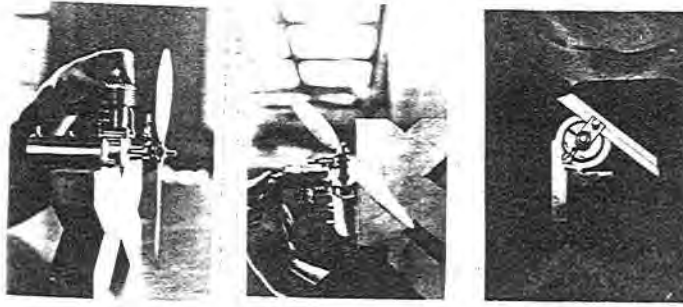


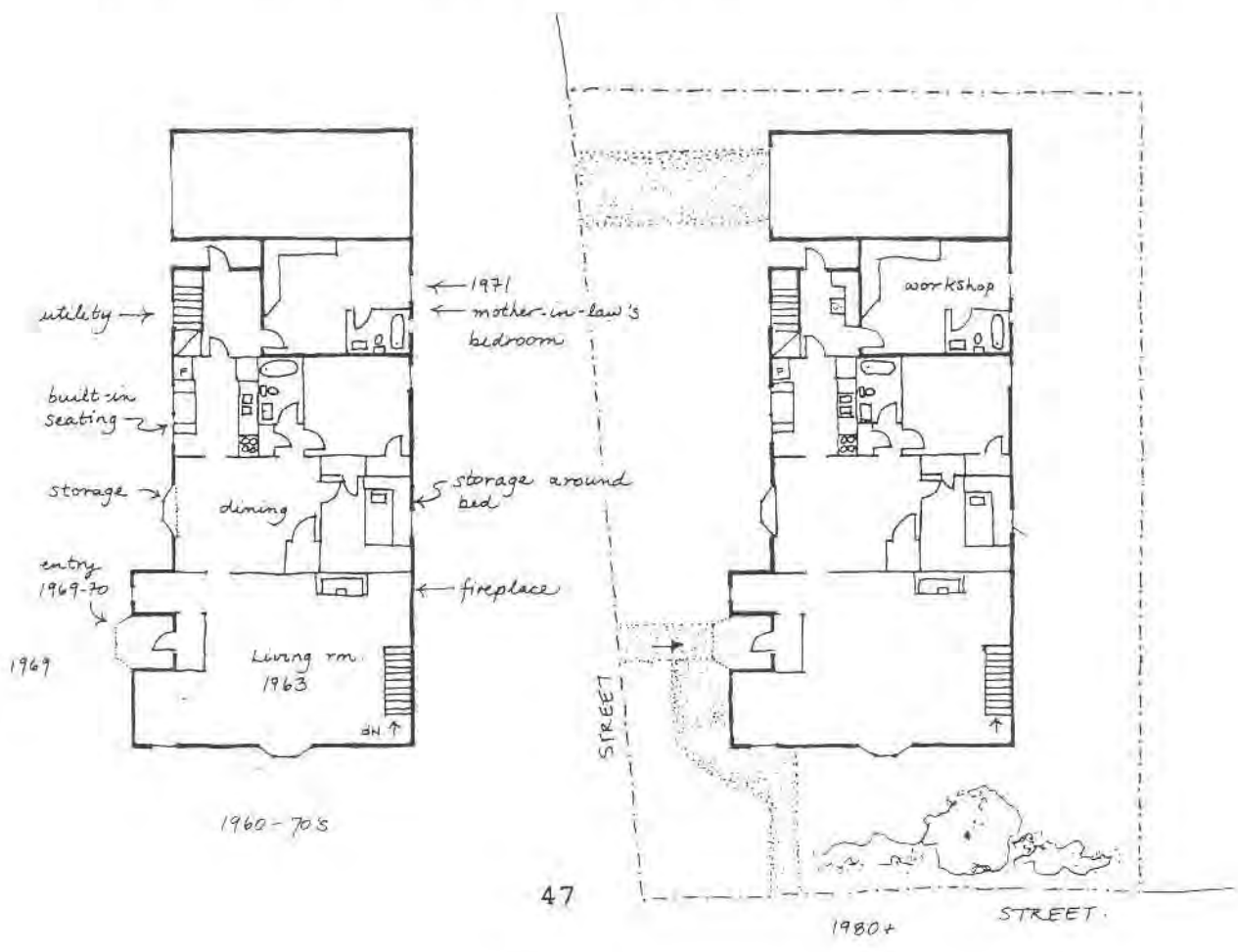




Corner site allowed for reorientation of entrance & changes in plan

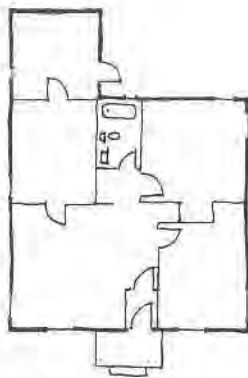




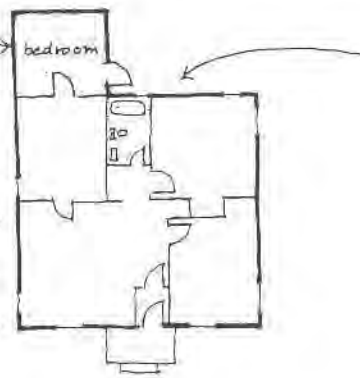


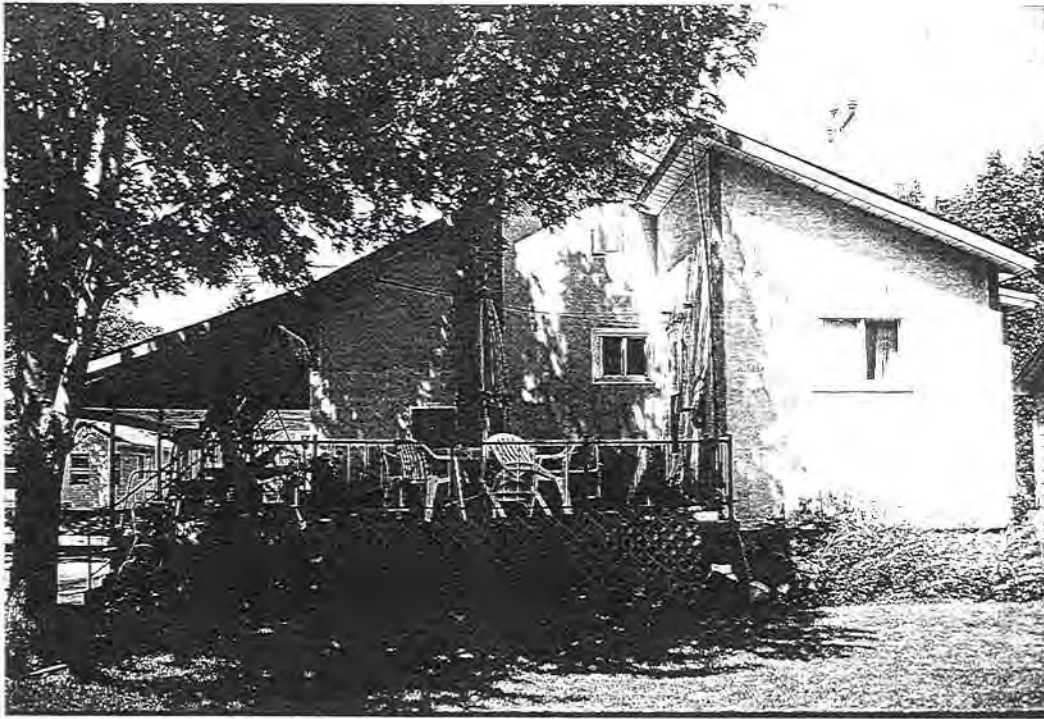


One daughter slept in the coal sled which was converted to a bedroom:
 "It's a little cool here, she enjoys it, says it's okay. Now she can't stay in hot places..."



1950's:
 gyproc added on top of masonite in the kitchen + tinted in the livingroom:
 "New gyproc is like a new house!"





1984: "I couldn't stay on the gallery because it was too warm, the sun reflected the art + the cement was very hot... I was really sensitive with my eyes. I said let me build one tree..."

1967: visitors came for expo!
 "Oh, my God, now we have to do something!
 ...and I couldn't find the new... because so many jobs were around."

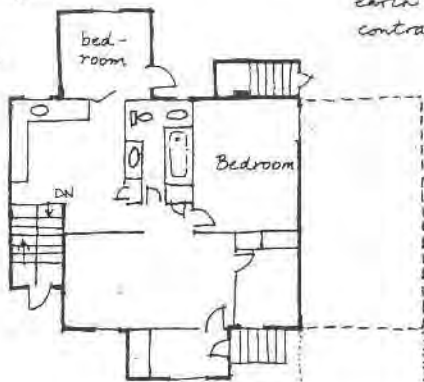
Kitchen, + bathroom + extension all organized by owner, sketch of bathroom done by owner



First deck was 5-6" off the ground, filled with grass + earth by poor contractor.

- bathtub was too drafty in old location

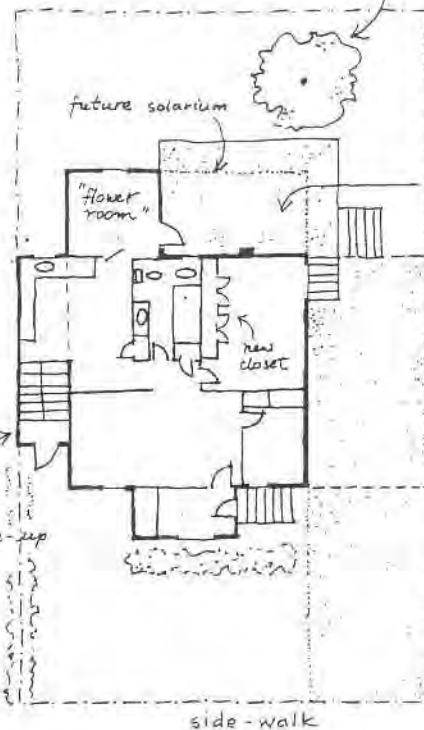
Early 60's: gyproc in remainder of house



1967: carport

owner hopes to eventually close-up front entry to basement

Mrs. Dimatteo: 1967
 "We're going to change the windows because now the style is better and it's better."
 New entry, windows + door installed. Front facade finished done according to contractor's sketch



1982: cement deck

"I have in mind to put in... a patio door + all windows here, eventually"

"Some day, I want to enjoy this as a solarium, but covered... Eventually, it will be covered + (the roof will) regain the shape"

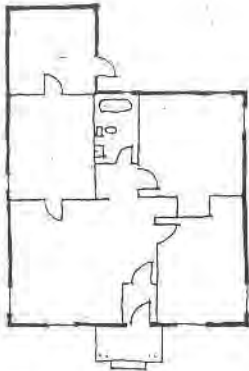
"It's a lot of work to put the grass, cultivate it... they say it's the best grass."

Basement finished in 1976 (lifted in 1960) by owner and used for receptions, daughter's engagement party

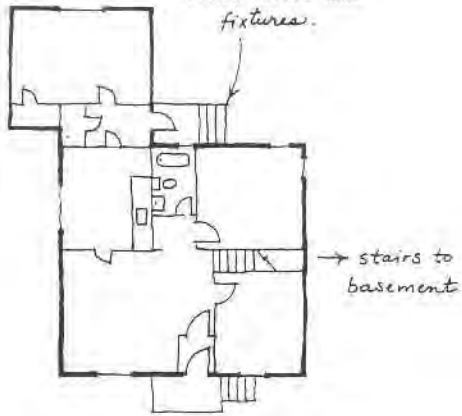
Basement is like a second living room (stereo, tv, desk) "It is a living room... you should see in winter how nice it is. It's much nicer there than upstairs."



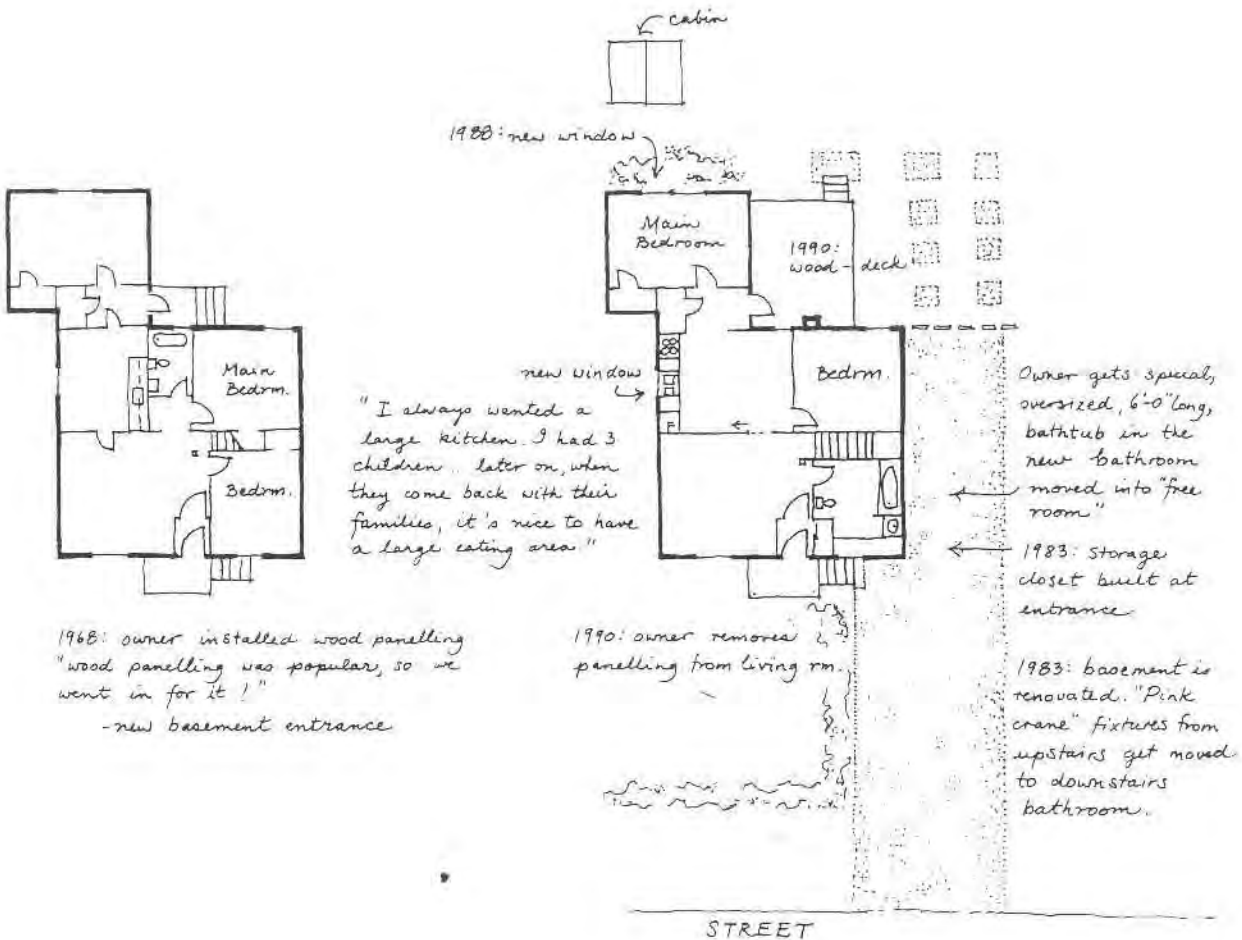
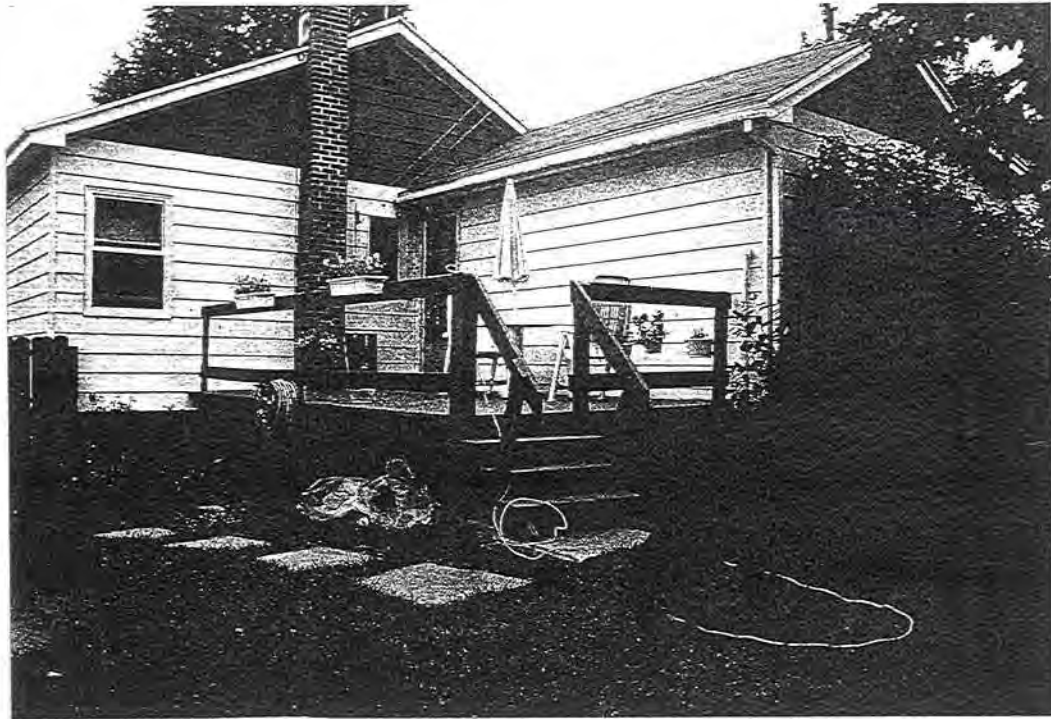
Pre-1964, previous owner had already built-on bedroom addition & removed bathroom with new fixtures.

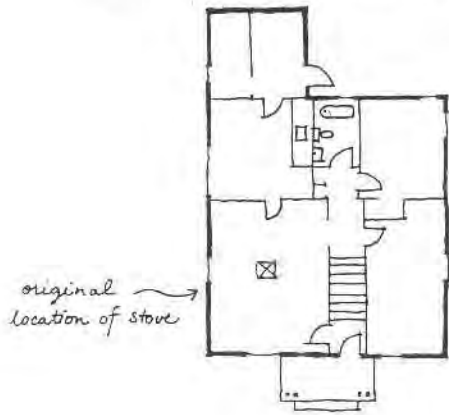
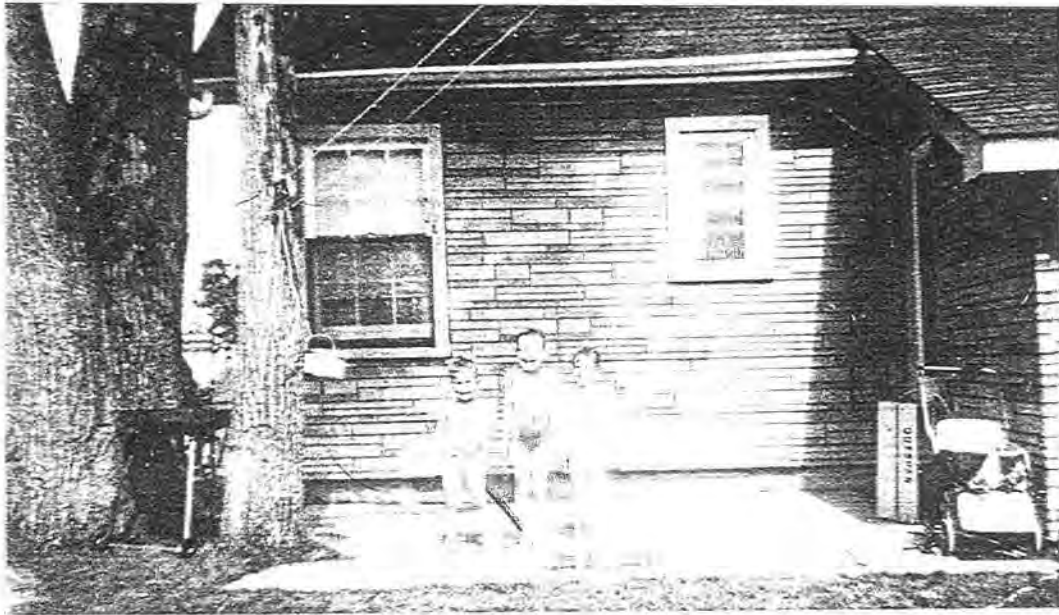


original plan



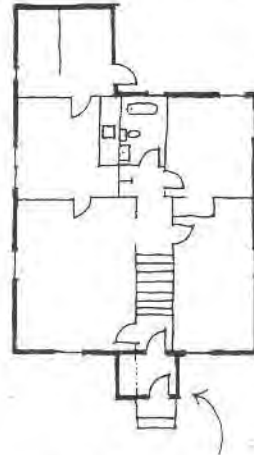
Owner would not have purchased the house had it not already been up-graded i.e. new addition (with wiring) and kitchen "semi-done" 10yrs. previously





original
location of stove

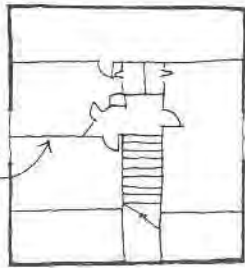
original plan



1956: roof line was changed,
eaves extended, front porch
enclosed and change of roof



1967: largest attic bedroom divided in 1/2 for owner's daughters

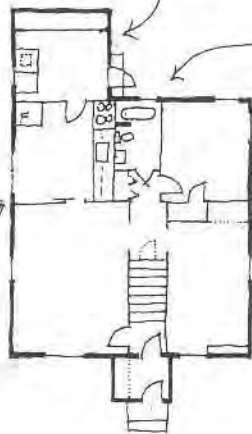


2nd floor

1962: coal shed converted to utility room

1962: kitchen & bathroom replaced, new fixtures, finishes

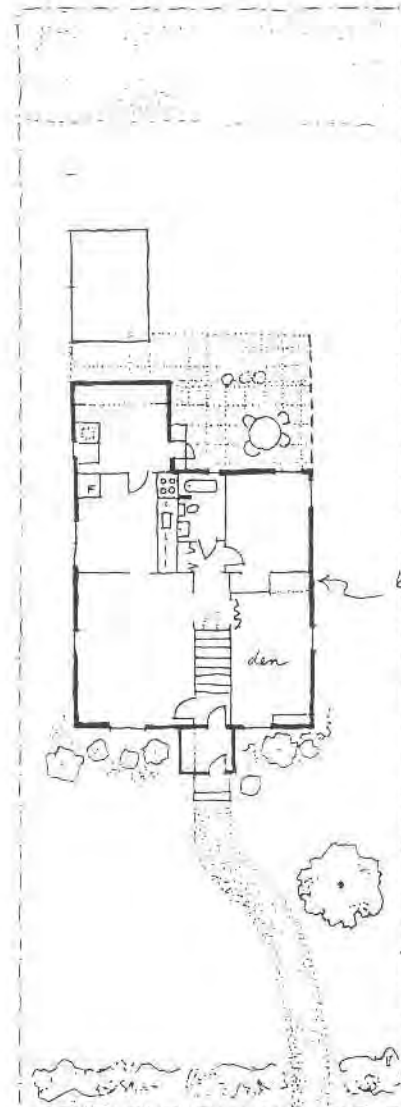
sliding pocket door



built-in bookshelves

1960 new aluminum windows

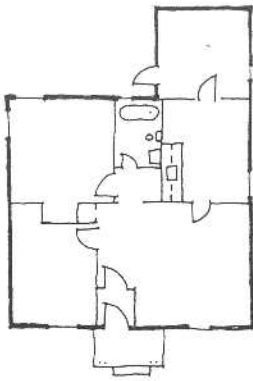
1993: new asphalt driveway



built-in wall unit with TV

den

Hedges put in when Henri-Bourassa was widened

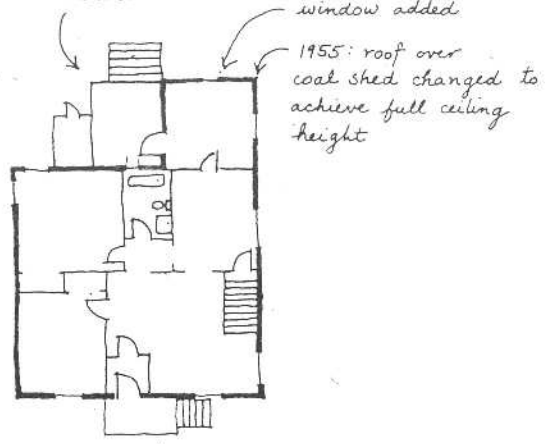


original plan
1940's

1946: new kitchen
cabinet doors

1955: basement added

1958: front & back galleries
added

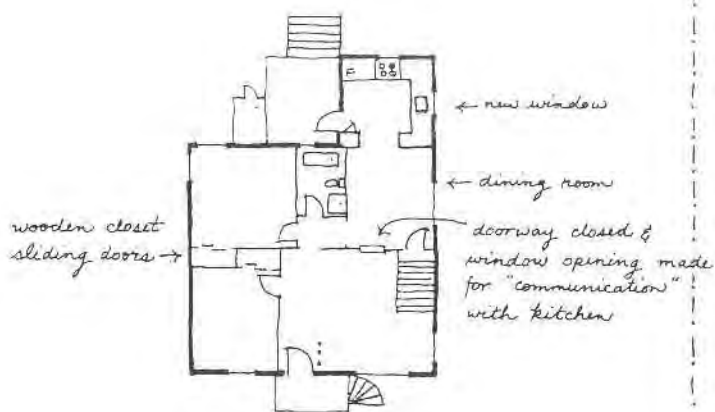
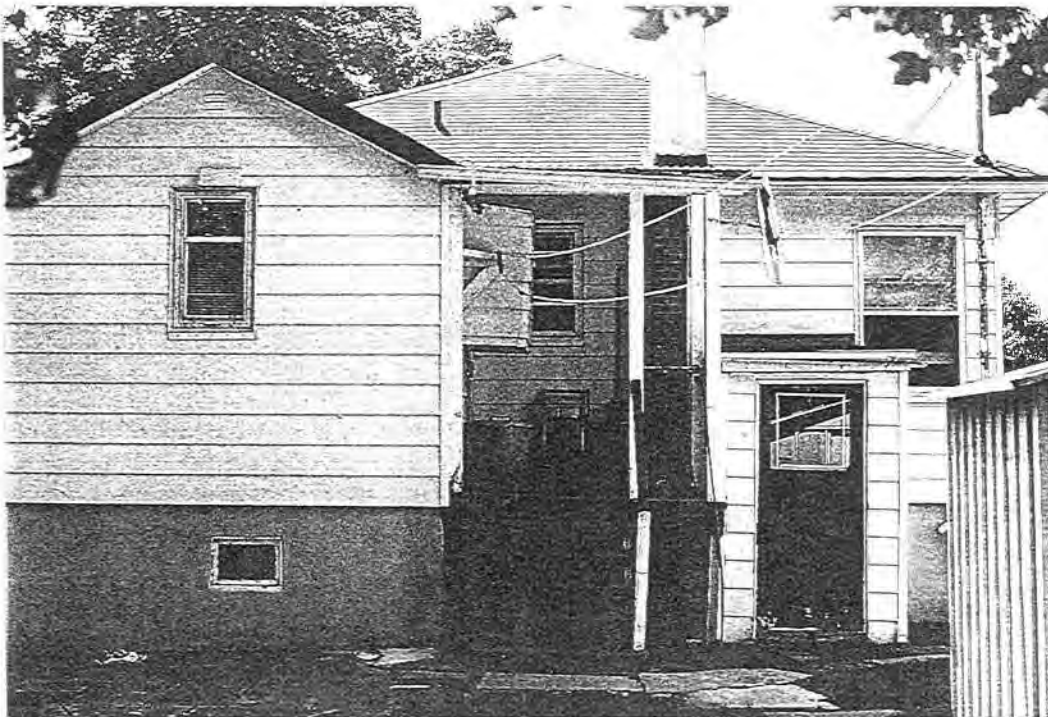


window added

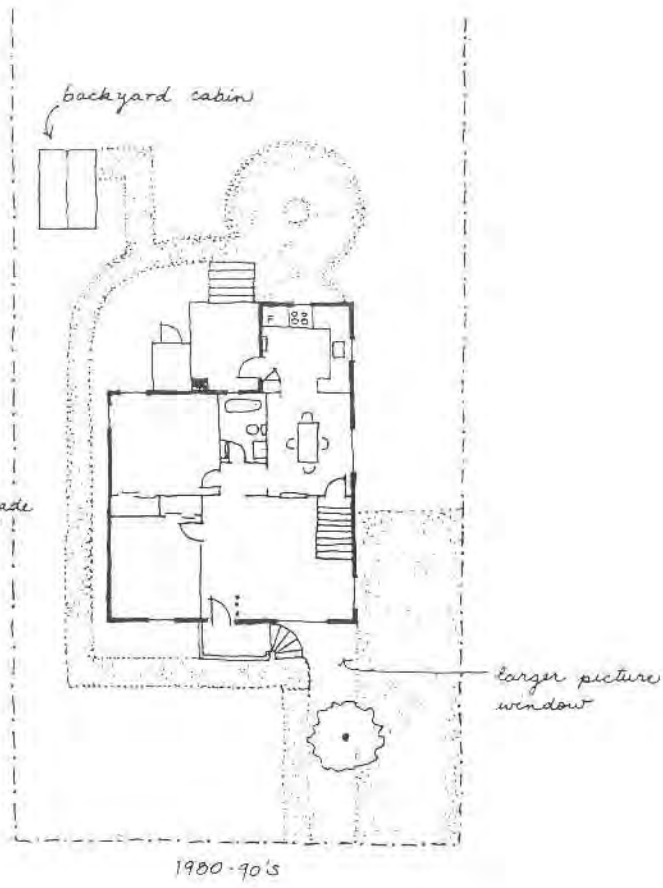
1955: roof over
coal shed changed to
achieve full ceiling
height

1950 - gallery enlarged

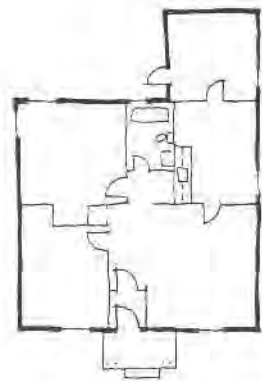
1950's



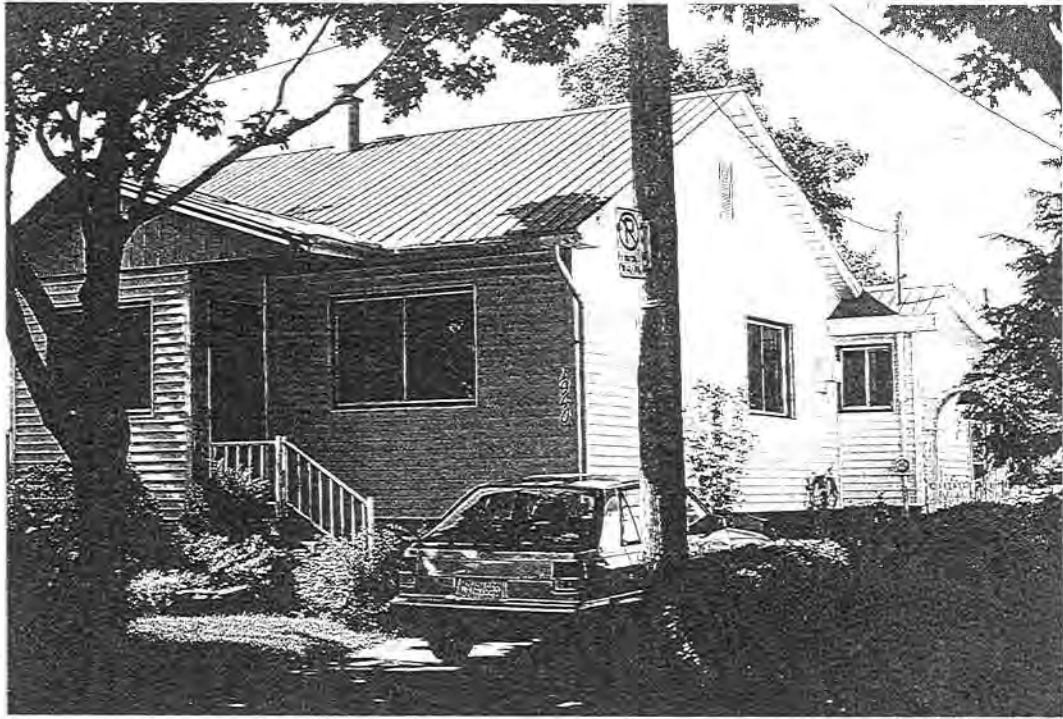
1975 - new roofline
1960's - 70's



1980-90's



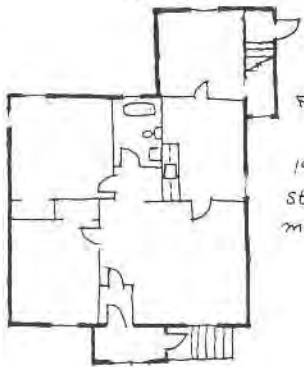
original plan



1969 House raised for basement

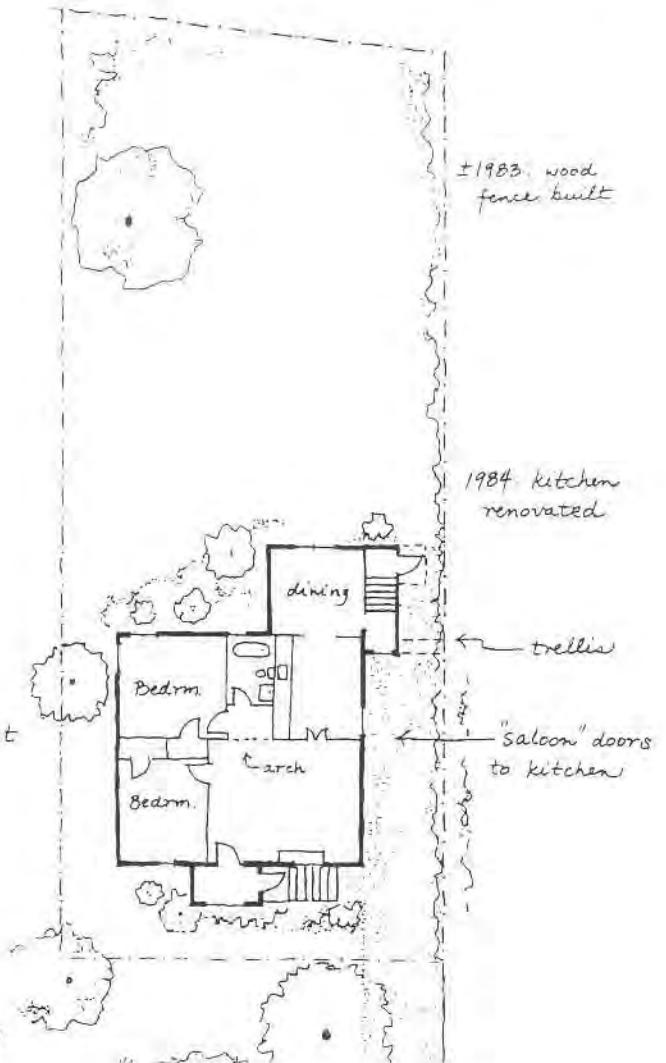
1973/74 Bathroom finished & new fixtures

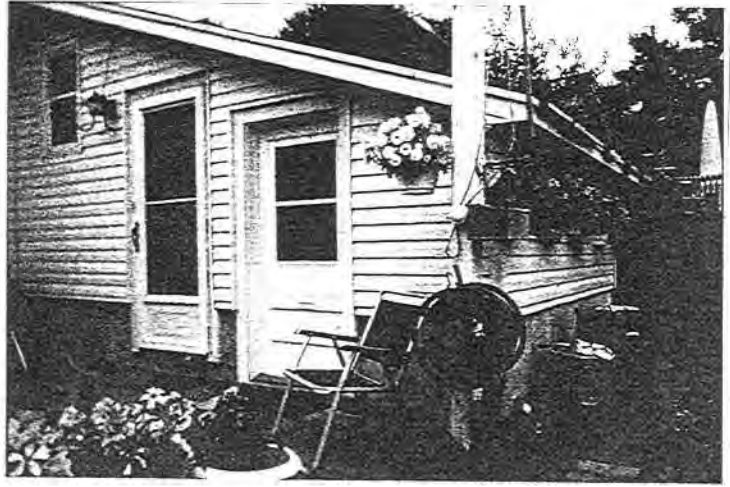
1976: coal shed finished



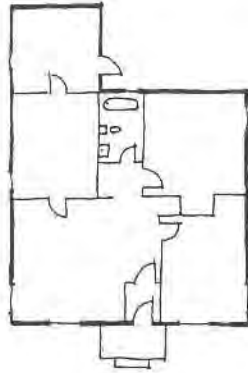
1976: coal shed stairs to basement modified.

1976: Basement finished & fireplace installed



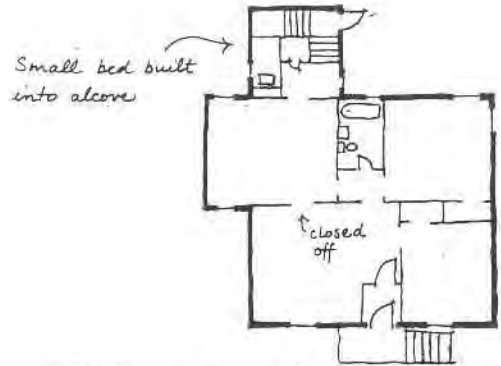


"There were no trees, none at all,
It was just a barren place, it
looked like an army tent-community..."



original plan

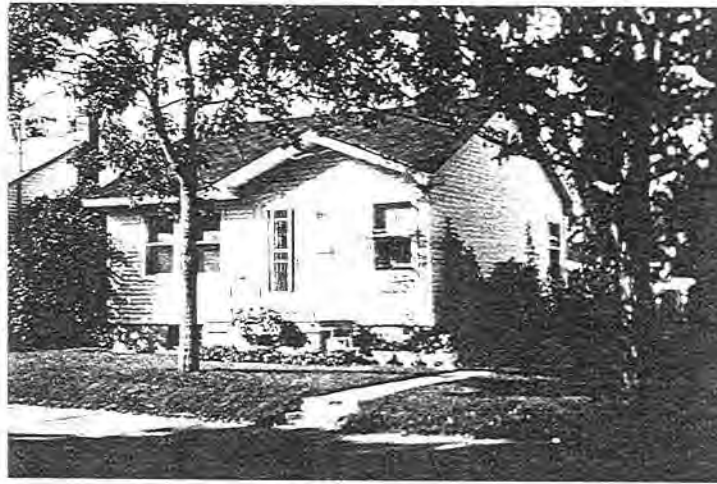
"There was a lot of activity in the
beginning. People were anxious to
make the place look a little better."



1953: Basement added & toilet, next year

1955-56: extended kitchen

"I made the drawings, got the
permits & did the whole thing...the
only cost was materials"



1965: extended coal shed roof over addition, it is used for storage, the lawn mower & lawn furniture

1967: New bathroom: "Expo project"

Built-in storage

built-in shelf for television

1975: Removed vestibule: "That was a nuisance!"
Mid-wall with shelves built in.

1965: Roof line changed.
"No logical need, mostly for appearance sake... the neighbour wanted the same thing done."



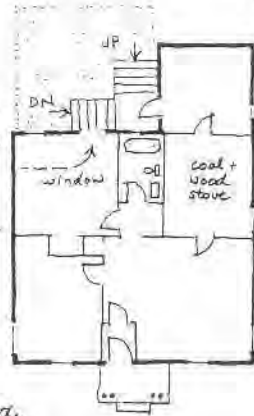
1987: all windows changed.



He insisted on building stairs outside to go down to the basement + although I wasn't a Canadian, I said I didn't think you could have an outside entrance in this climate...

It filled-up full of snow + you'd have to shovel snow out and as the snow's piling up higher + higher at the top of the stairs, you just couldn't... we used to get big icicles coming off the roof, dripping down... so the stairs were... always slippery!

Patio had no foundation, each year the paving stones had to be re-aligned



Coal + wood stove in the kitchen heated the house, it was a beautiful cooker... and we also heated all the water. We had a great big water heater standing in the bathroom...

1948: Basement dug out

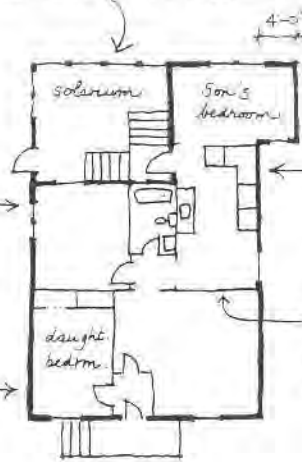
1950's the solarium:

So he said there is only one thing I'll have to do: Extend the roof + cover the stairs in so that they're inside the house...

Coal + wood stove in kitchen heated the house + the water!

Moved window back to original spot after solarium was added

Entrance changed for more wall space



Extended the kitchen by 4'-0" for more cupboard + dining space

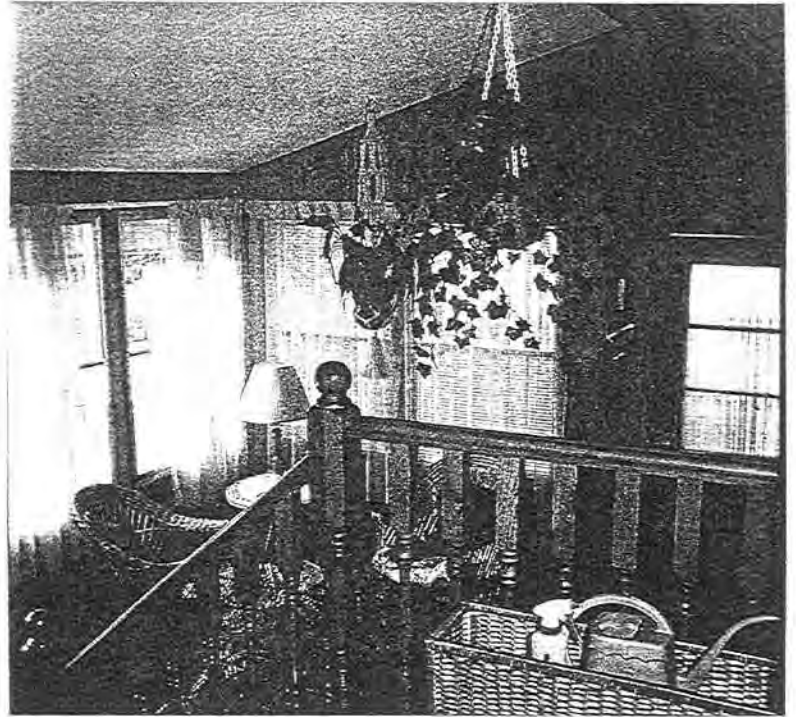
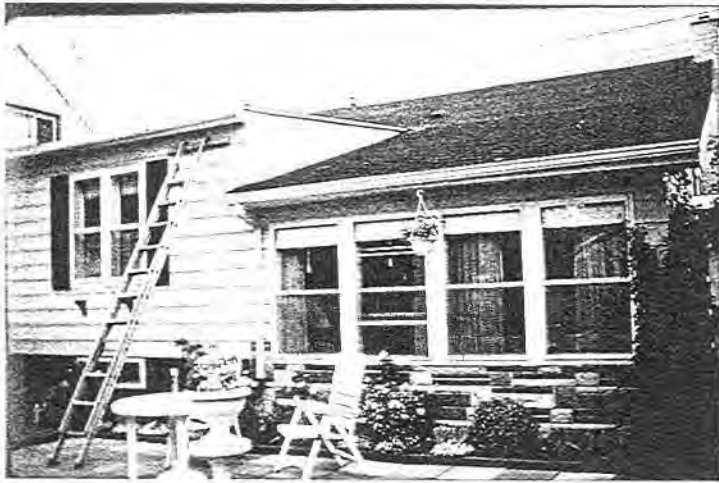
"Not enough wall space in the living room" so kitchen entrance closed-off

1950's

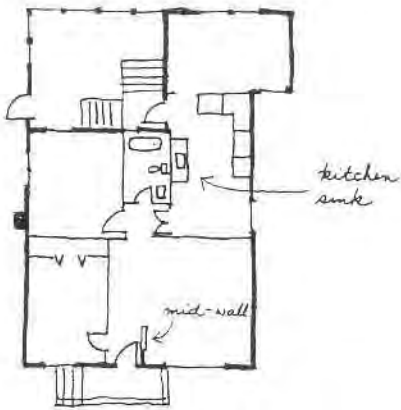
1953: Changed to oil heating (forced air). "... so very dirty! When you used to take your curtains down to wash them, it used to be just like oil in the water"

60

1950+ Changed to electrical heating

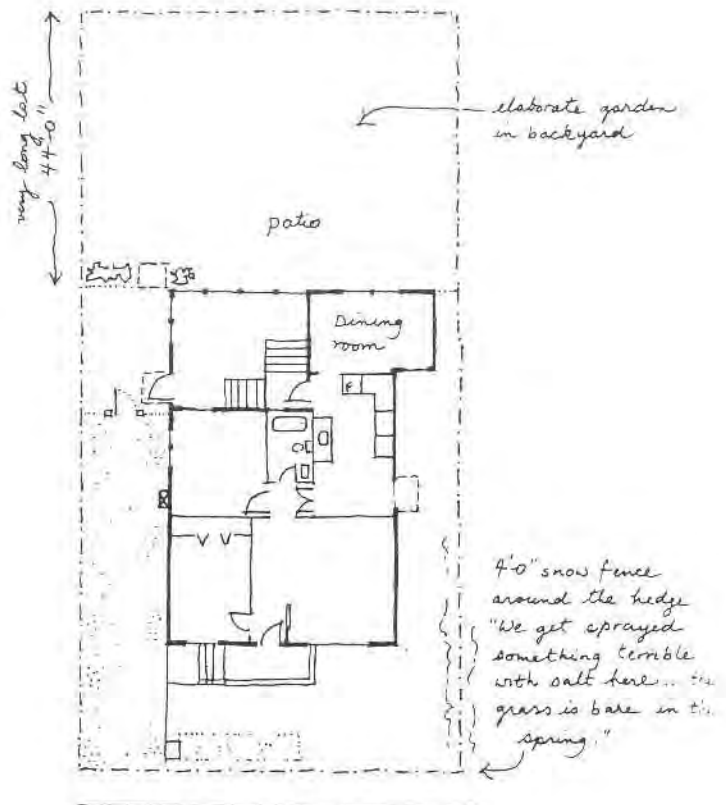


Carol would have liked that the sink was facing a window instead of a blank wall & has only since realized this



1960-70's

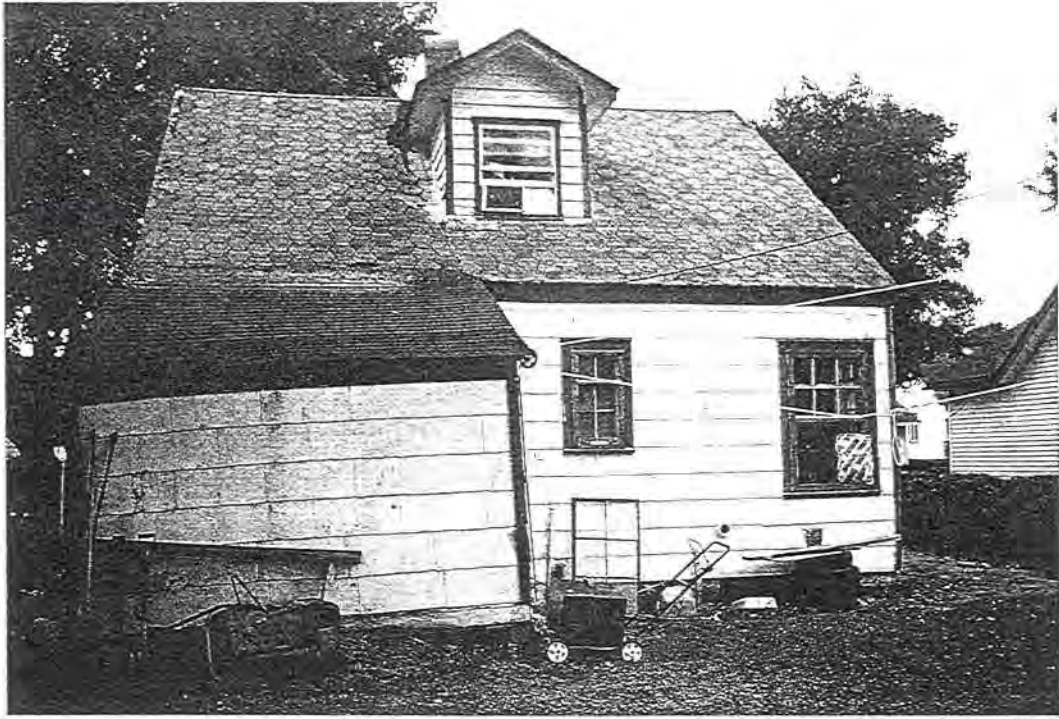
1965 Basement had to be refinished 2nd time because it had not been waterproofed 1st time
Ceiling is very low: they wish they had gone up 4 blocks instead of three when house was raised



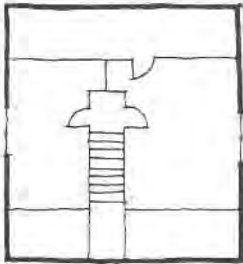
Henri Bourassa

1980-90's

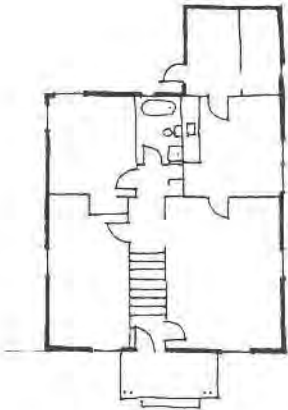
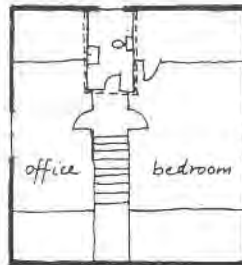
1993: "Over the years, we've more or less created a monster now we can't keep up with it."



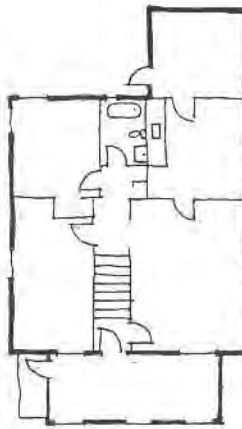
Owner's mother had dormer window & bathroom built in late 1950's/early 60's



2nd floor plan



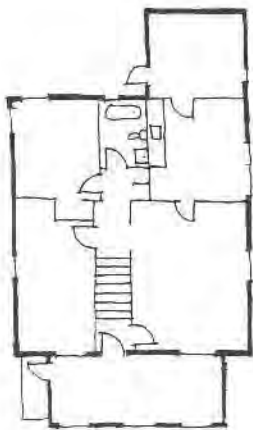
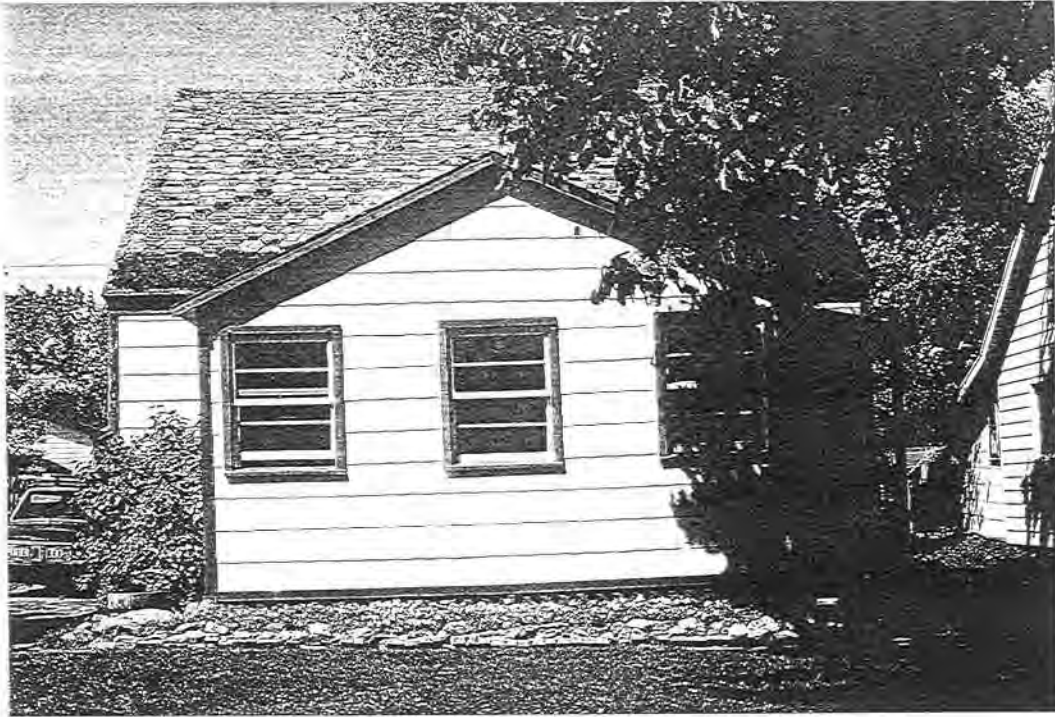
original plan



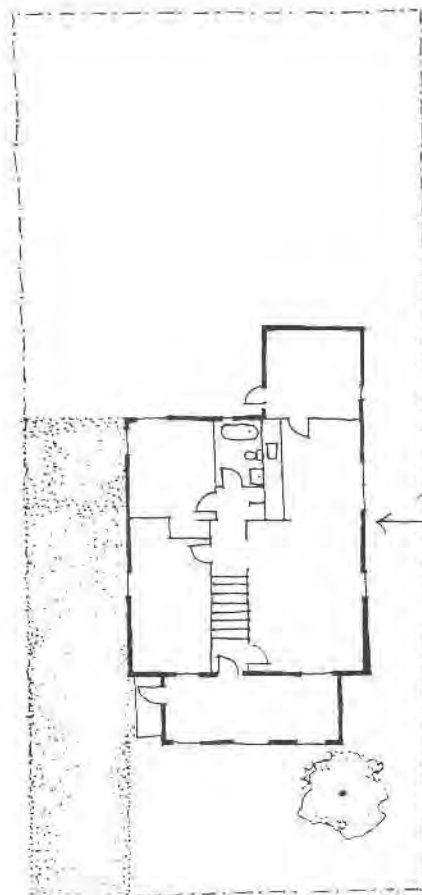
1950's: porch enclosed by previous owners

Foundation installed, no basement

Meyer

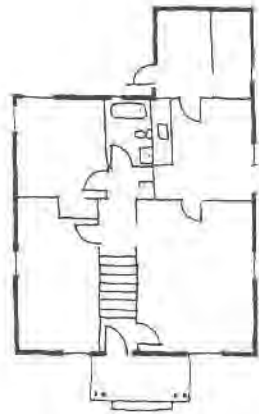


late 1960's: downstairs
bathroom re-done

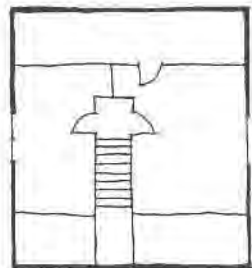


1990' partition
wall removed
between the
kitchen + living rm.

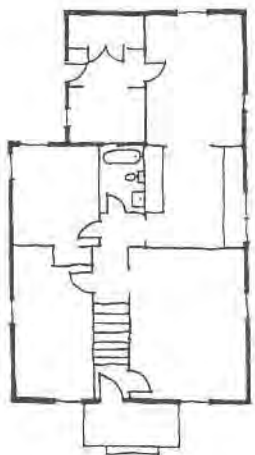
schematic site plan



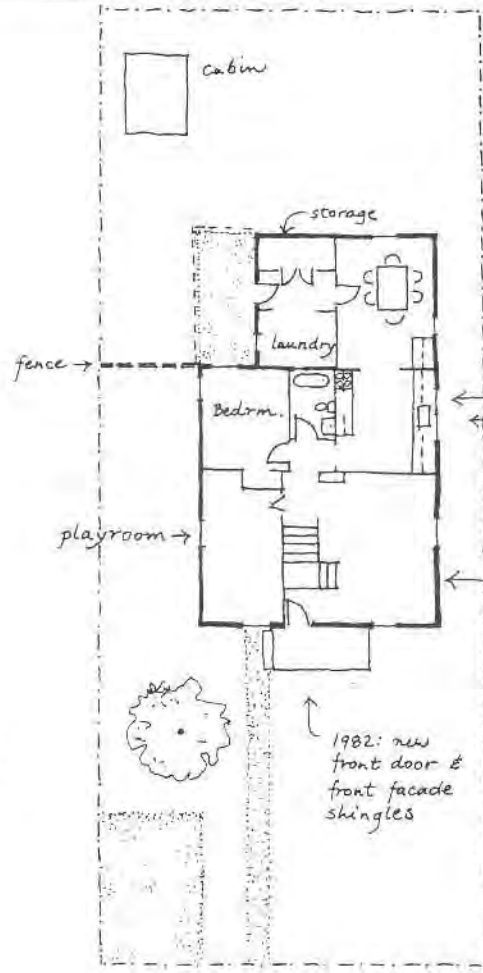
original plan



original 2nd floor



↑ "the second door was locked because there were 2 separate dwelling units"



1982: old windows replaced: "I was pregnant + I was afraid children would get their fingers caught because they were being held up by sticks..."

1984: new bathrooms: "My father helped us out with that... the new fixtures wouldn't fit... he had a lot of fun..."

← new window
 ← "the first thing we did was change the sink... it was one of those big washing room sinks..."

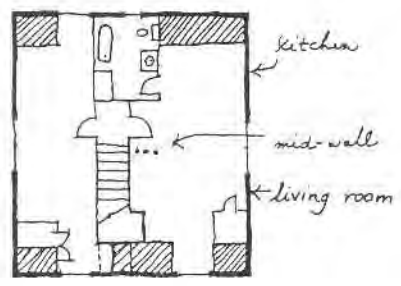
← stair re-oriented into living room

1988: replaced kitchen finishes, cupboards & floor: "the previous owner had re-faced (the original) cupboards) with very dark wood. It made the kitchen extremely dark." The floor was replaced a year later, because the old glue came up through the new linoleum "and stained everything."

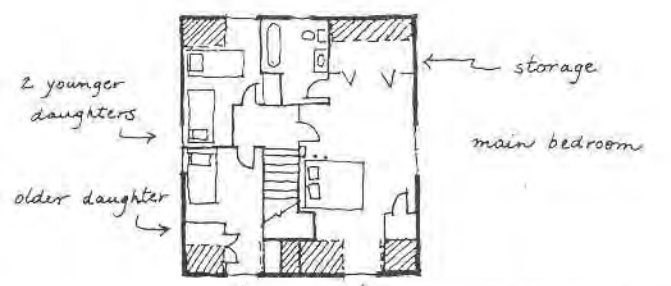
1982: new front door & front facade shingles

An older couple lived upstairs

Early 1980's: new family buys house

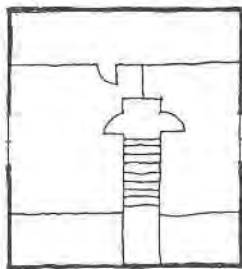
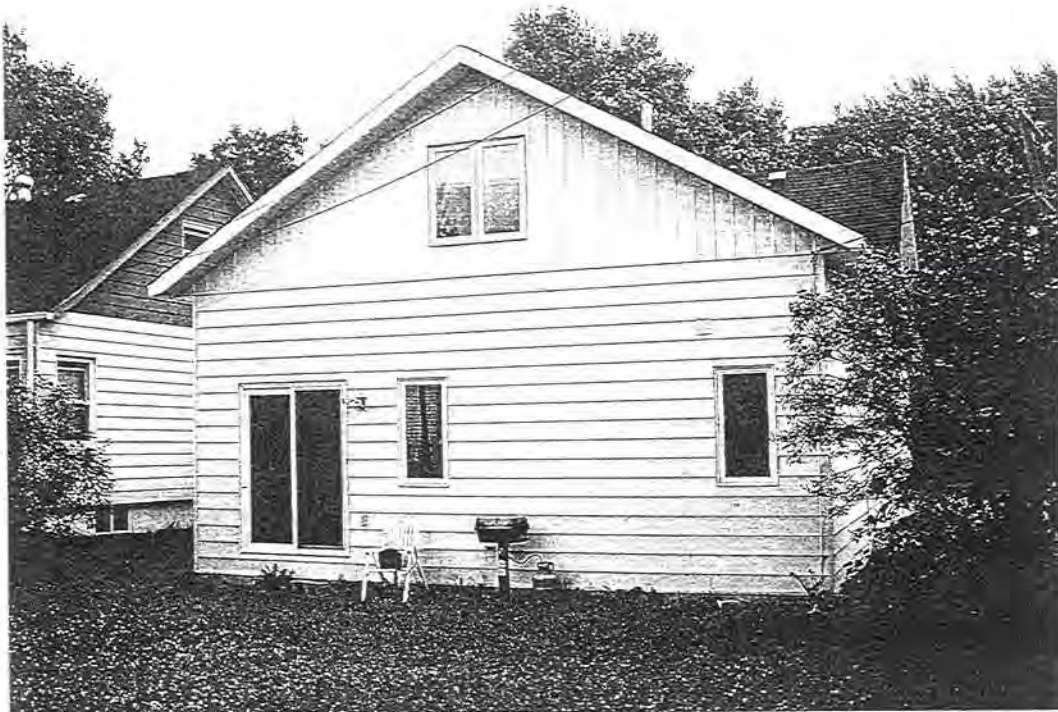


1970's



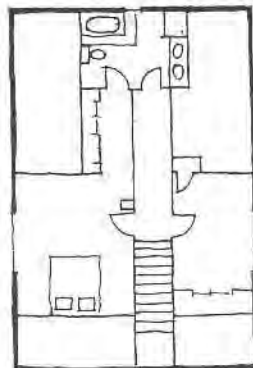
1980's+

← dormer windows



original upper floor

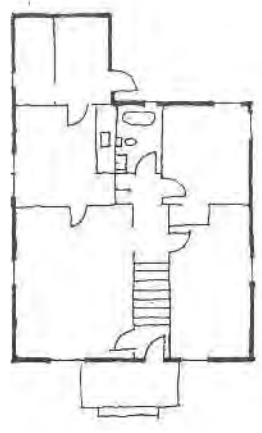
66



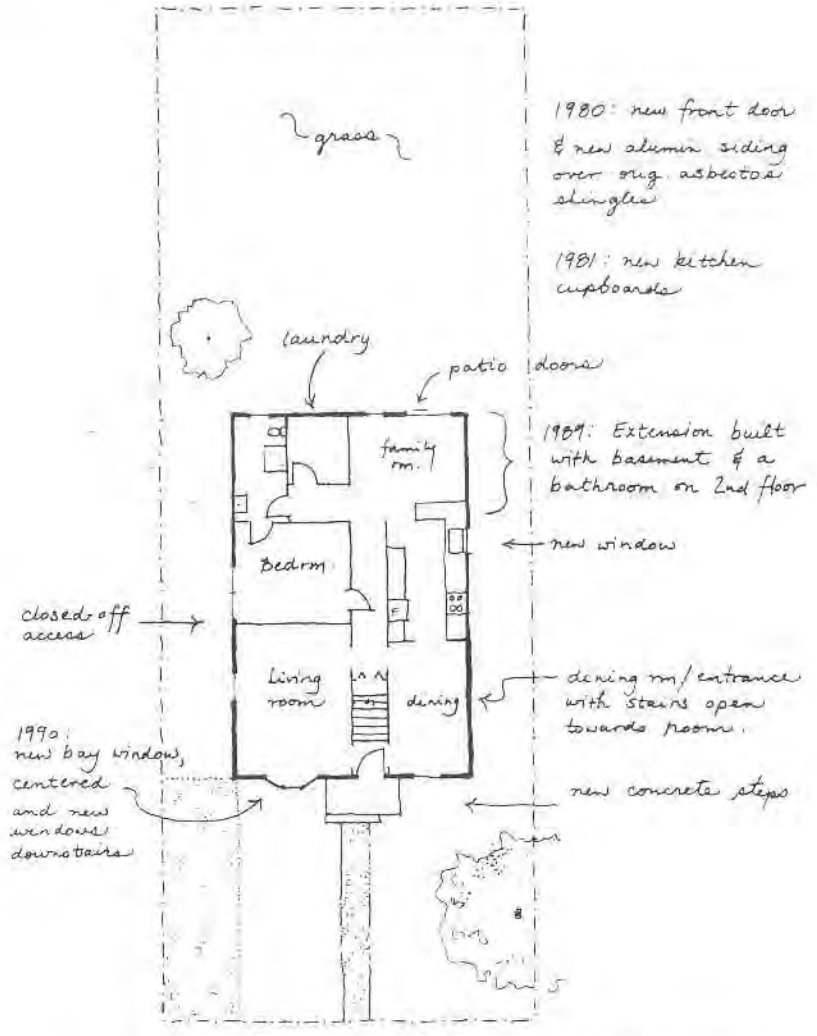
2nd floor plan

(addition on upper floor has very little natural light or floor space that is useable)
 New lay-out of 2nd floor has much more closet space/storage

Moger



original plan



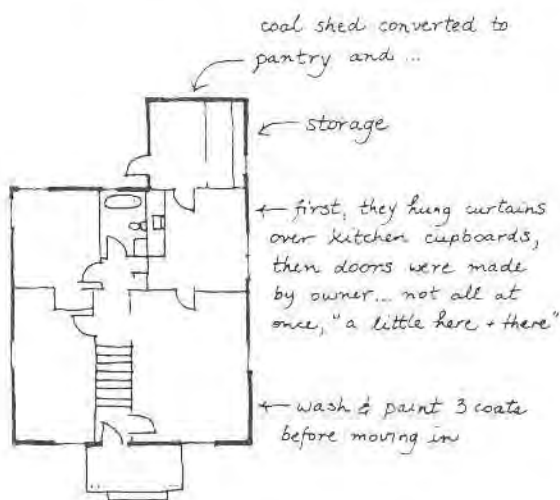
1980: new front door & new alumin siding over orig. asbestos shingles

1981: new kitchen cupboards

1987: Extension built with basement & a bathroom on 2nd floor

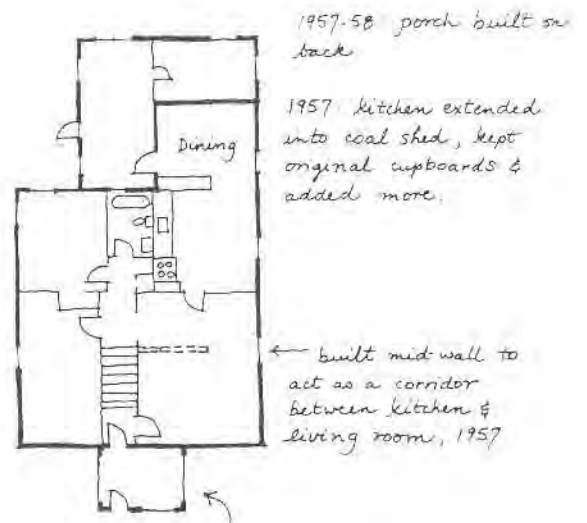
1990: new bay window, centered and new windows downstairs

67 Owner purchased house in 1976 & did major clean-up, first, before renovating.



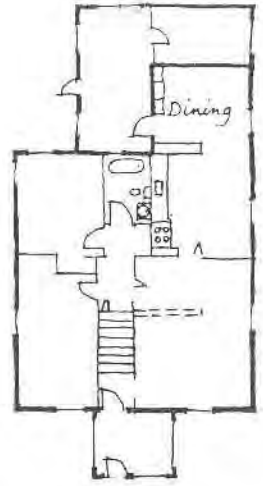
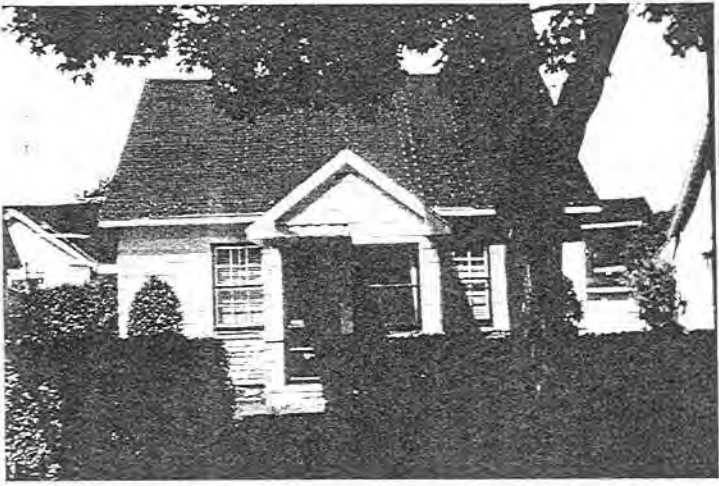
original plan

1947- foundations by CMHC.



1948 - enclosed porch on front with french windows

"The first thing I did was to build this porch ... There were no other buildings than the wartime houses and no trees. So the wind came from Dorval and when you opened the door in wintertime, you cooled down the place for 2 hours."

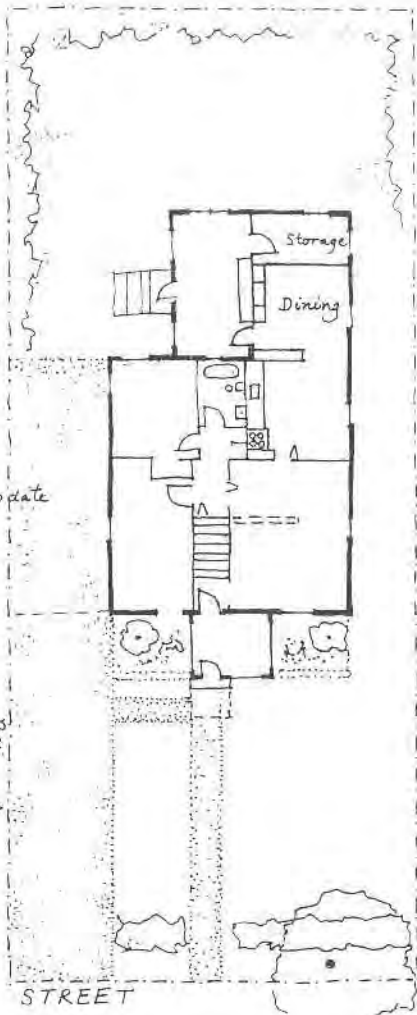


1961: roof shingles replaced

"For a long time, I wanted to have a bay window... my wife said no, that wouldn't be like the house we bought... I'm no monkey (copy-cat)"

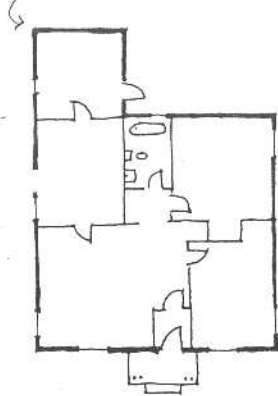
1961: Rear driveway added to accommodate children's cars

Front driveway added for owners first par in 1954



1980: roof shingles changed again

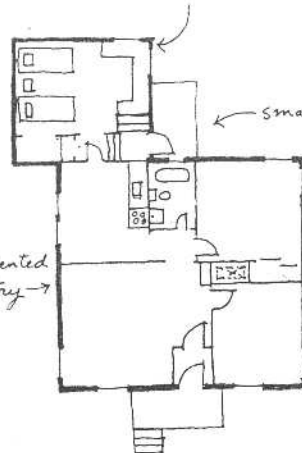
"We used to have a shed on the back
...where they kept odds + ends, ... They
all went rotten underneath"



original plan

1956: Coal shed converted
to a bedroom

built-in desk

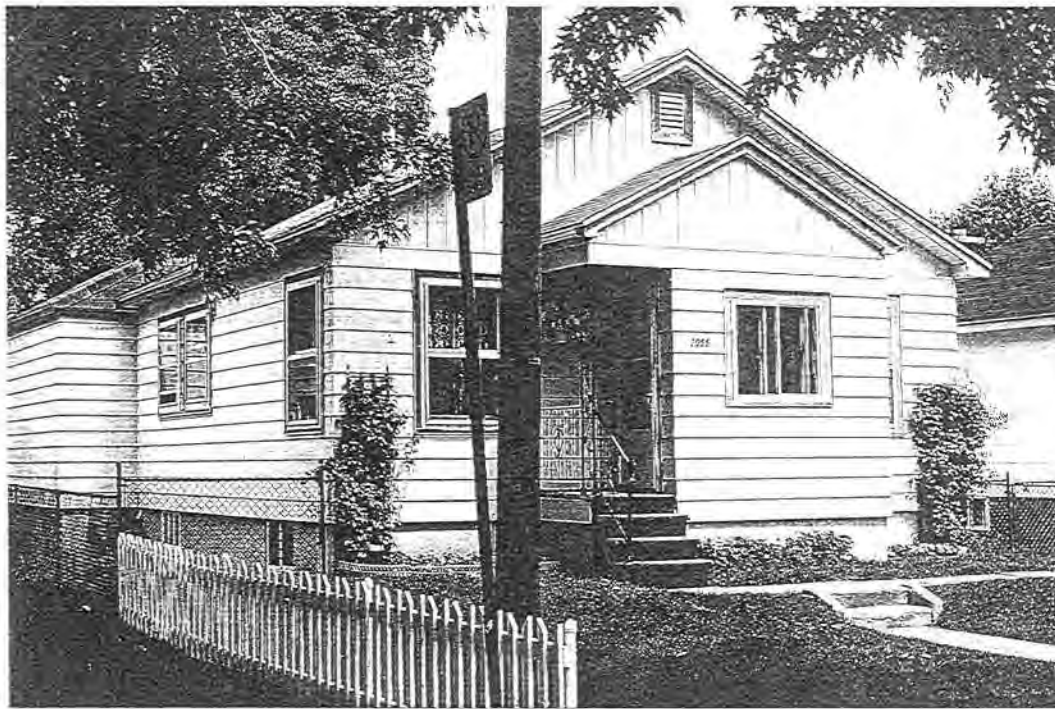


1953: re-oriented
kitchen entry →

1952: Raised the house & added
basement, by owners.

1953: Removed chimney.

"We weren't very rich, we did most
of this ourselves. I don't think we
could have afforded to pay somebody
to do it."



"Gradually put in closed cupboards and sliding doors in bedrooms... Gradually, as we painted"

"Sometimes we wish we had a bigger kitchen when we have people in to eat, but I've got plans of taking one of the bedrooms that we don't use much anymore and making it a small dining room"

1973: kitchen sink and cupboards replaced

1978: Vestibule was removed when porch was added, that made the living room bigger"

1960 family gets car + installs driveway

1978 aluminum siding replaces old cedar shingles. "The kids helped rip out all the shingles I think they quite enjoyed that"

1985: kitchen counter changed

Patio 1990

1993: Basement finishing is on-going

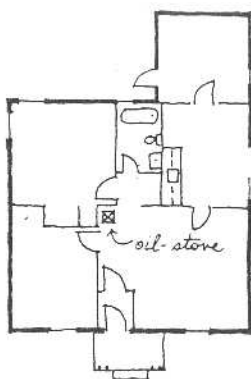
1983±: Bathroom "The 1st time, we did it with plastic tiles, which didn't last too long, ... now we've got ceramic tiles"

1988 driveway replaced with limestone

STREET

"We always wished we'd put an outside entrance when we did the basement... we're finding it hard now that we're older to get things up & down the stairs."

Garden tools work bench are all downstairs

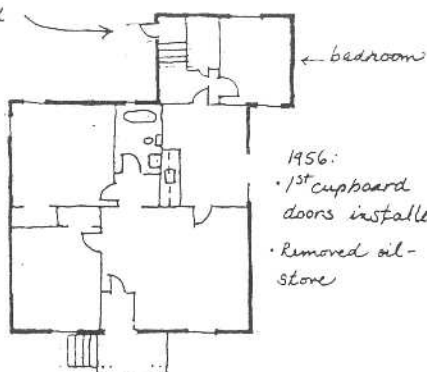


the original plan

Owner built cupboards, separations,
+ playroom by himself, on weekends
and evenings

New entry incorporated
stairs to basement

Wood panelling
installed in all
rooms by previous
owner:
"It was a fad at
the time, everybody
wanted wallboard..."



1956:
• 1st cupboard
doors installed
• Removed oil-
stove

1956: New owners move in:

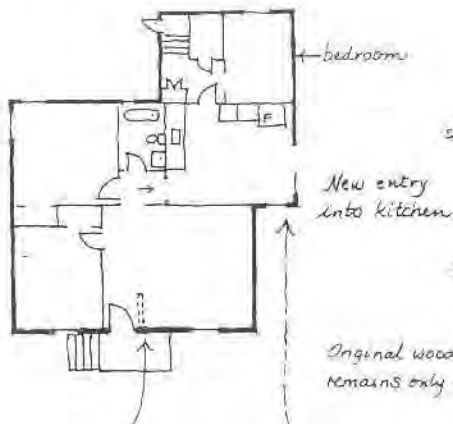
Basement is raised & playroom is built

"Where are your kids gonna play when it's freezing outside?
So we thought, we'll build a playroom then they'll be indoors.
...the toys + stuff, we didn't want it up here in the house..."

"I took alot of slide pictures in those days + there was
plenty of room to put up a screen + show your pictures."



1967: - old bathroom is gutted, new fixtures + plumbing installed
 - Extension done by contractors + kitchen is "gutted".
 "At that time, this was very good - the latest thing... and he hates it now. He wants me to change it but it suits me fine."



Mid-wall replaced vestibule, 1960

There used to be 2 windows together + then we put them on the corner because we didn't want to be looking into (the neighbour's) kitchen.

Wood panelling is no longer in vogue.
 "Now that's finished so we covered it with wallpaper; now, that's just about finished"

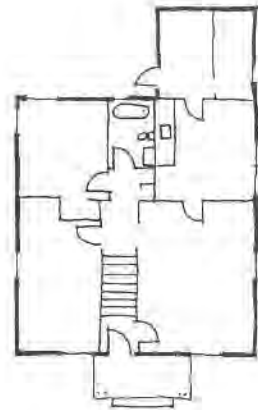
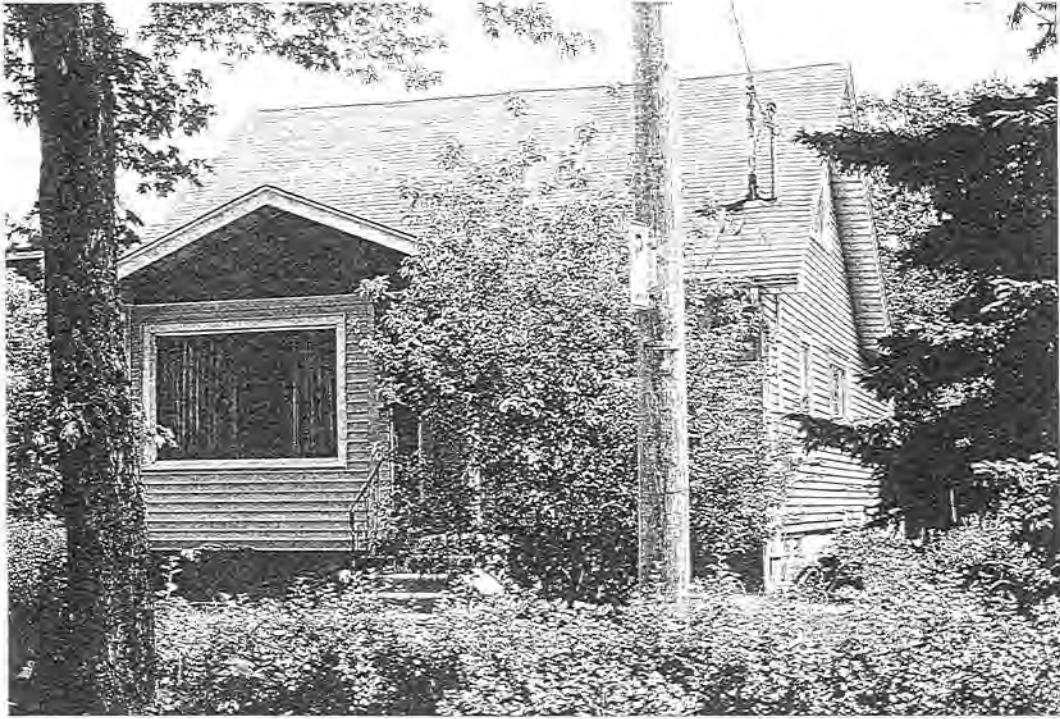


"We have a very nice backyard and I could not see longing it to an addition. We have very short frontage, so we prefer the back"

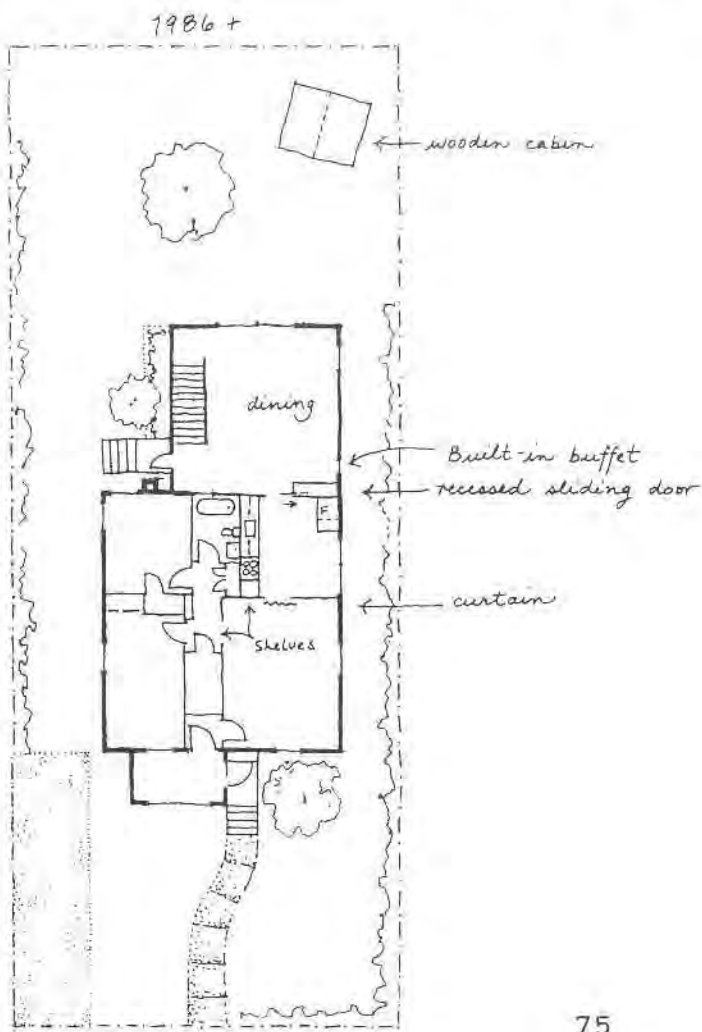
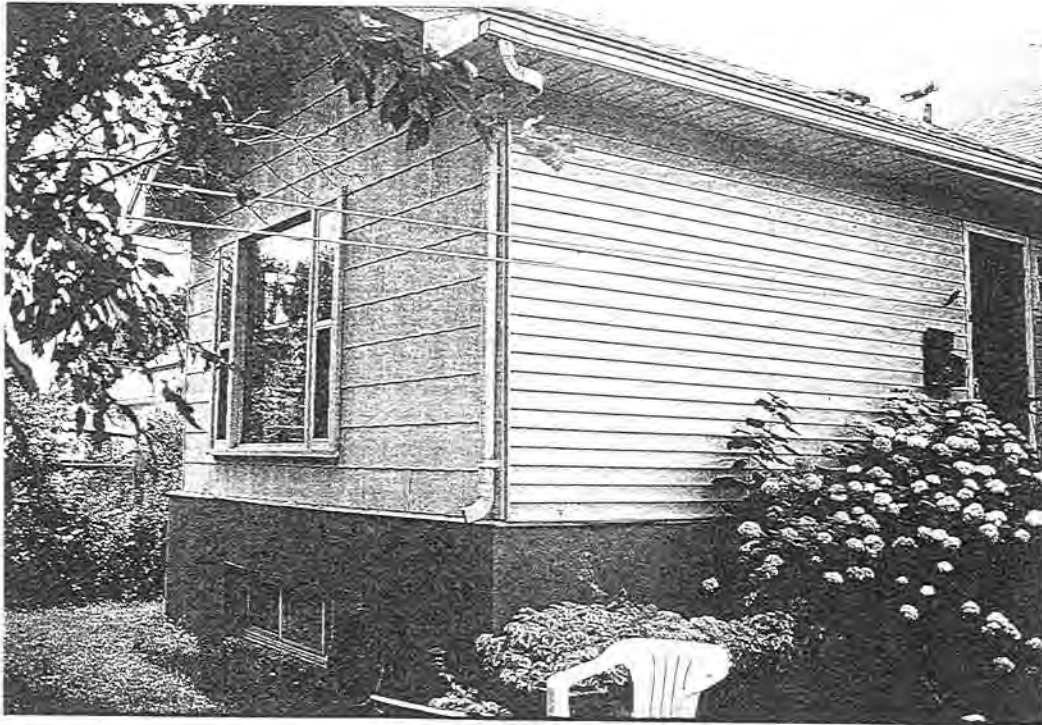
office, kids have moved away
 -Real-estate agent said, "This kitchen will have to go, it's too out-dated..."

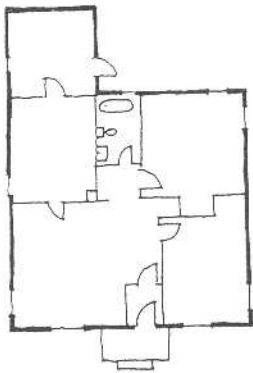
1993

Owner wanted to build an extension in the back for a dining room + big master bedroom, but thought it was too much trouble + would not increase the value of the home.



original plan

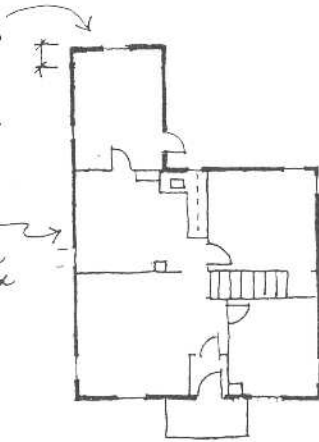




original plan

2 feet added to coal shed with left-over wood from raising the 2nd storey.

Kitchen was remodeled when bathroom moved upstairs

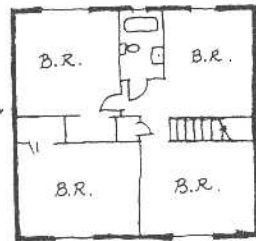


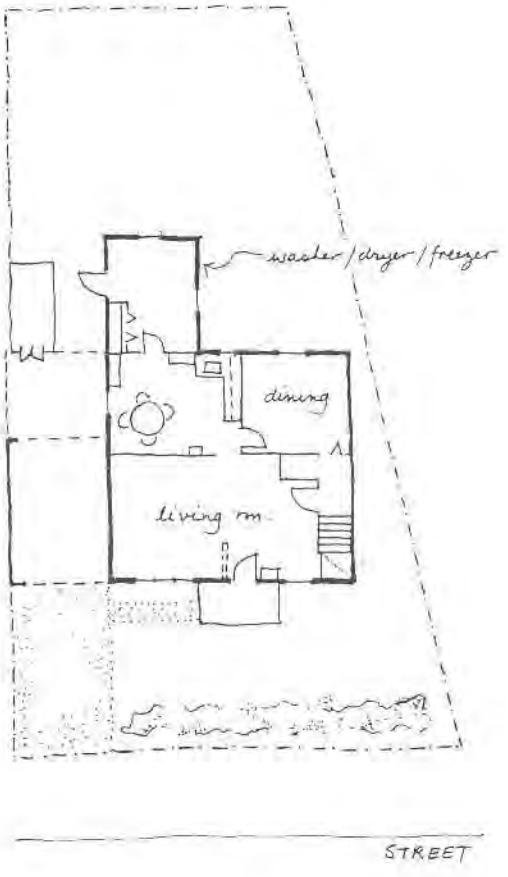
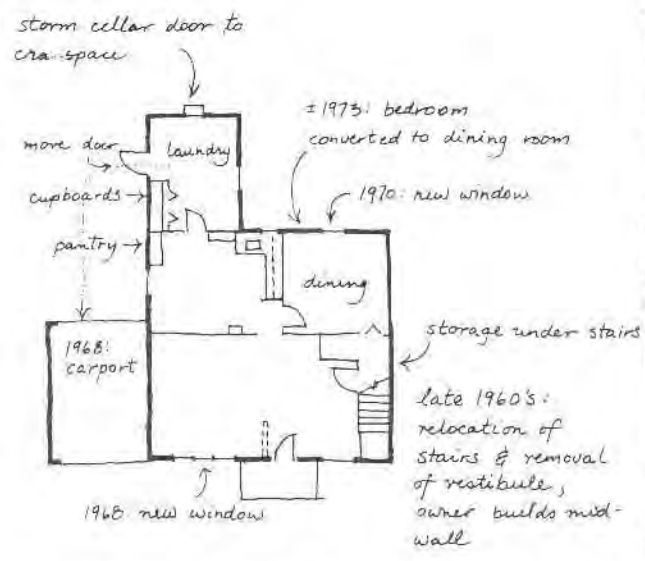
The 1st priority was more bedrooms for the family of 3 children... in 1949.

Beams for second floor were salvaged from an old farmhouse on Cote de Liesse Rd. : 3'x7'x32' long. Windows & doors, as well.

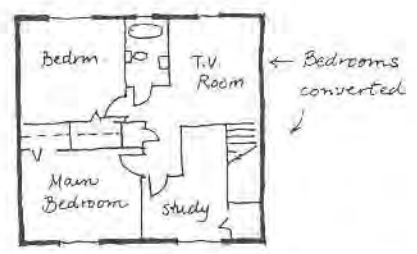
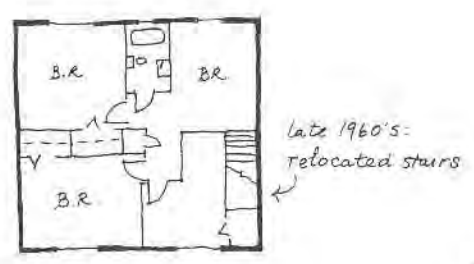
Bathroom re-located to 2nd fl. 1-2 yrs. later

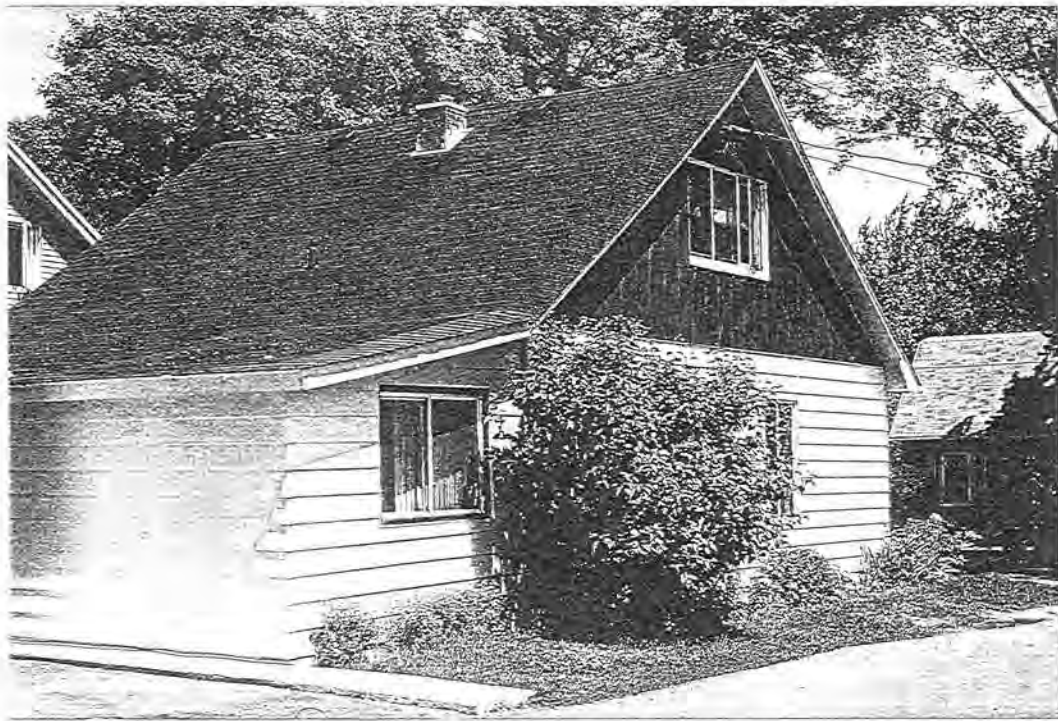
The kids "didn't care if the walls were finished or not, they just wanted their own room!"



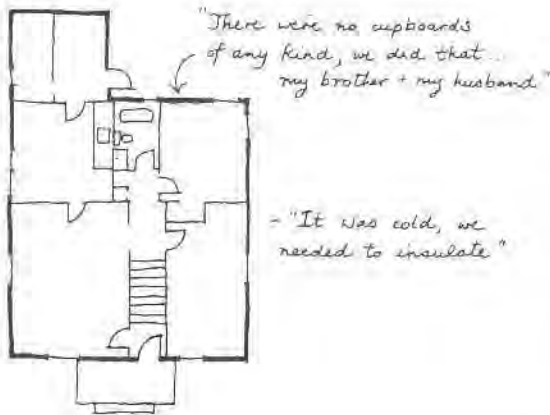


"We had the kids upstairs, we tried to tell them that if we ever had a fire, they could open their window & get out onto the roof"



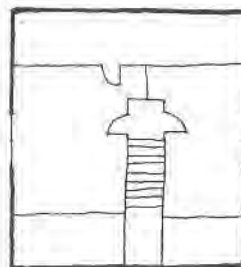
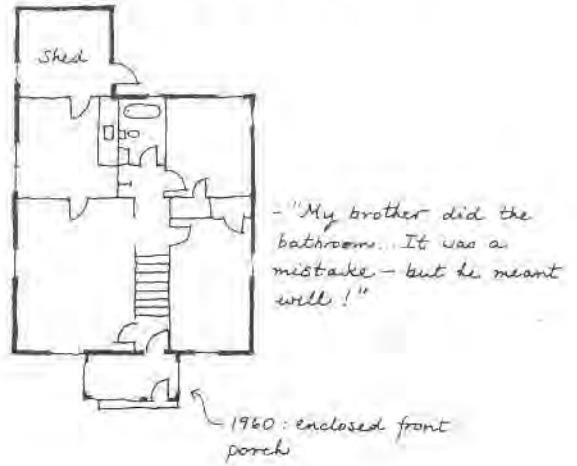


"We had the kitchen different:
We lived in the kitchen... a lot
of company, but we didn't have this
dining room to sit down to eat."



original plan

1945-46: imitation brick
applied on exterior facade

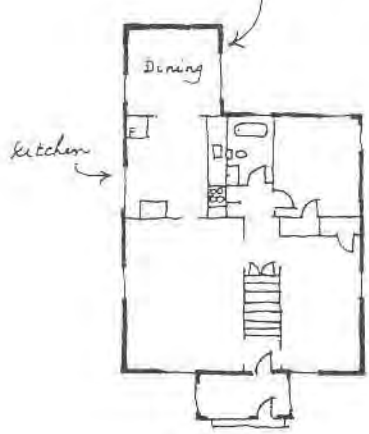


original 2nd floor



"My son was a photographer, he made (the pool shed) into a darkroom, for a short time..."

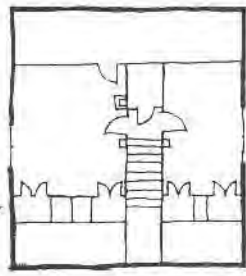
±1973: coal shed becomes a dining rm.



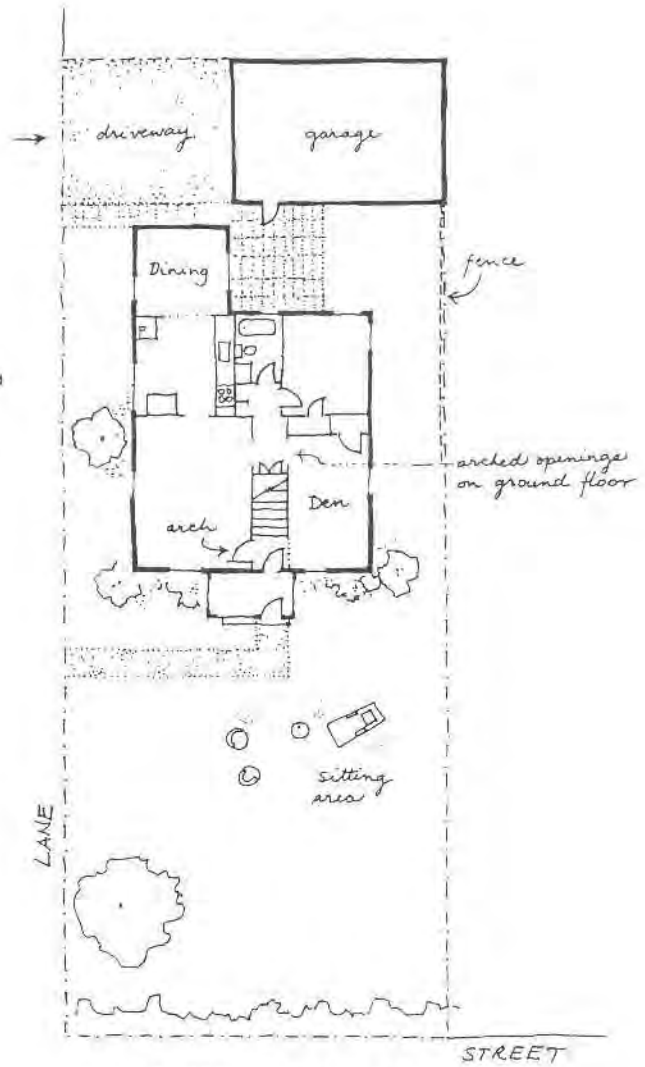
1973: kitchen layout incorporates washing machine

1962- roof shingles replaced
1972- aluminum siding applied to exterior facade.

1965 built-in storage units & closets



1965



1980: Bathroom replaced, new fixtures & tiles

1986: Casement windows installed

3. Observations: The House Types

Family Needs and Adapted Houses

This chapter outlines the strategies to expand and adapt the WHL homes by their owners and identifies potential limitations and opportunities that the various housing types presented. As previously mentioned, WHL built both single and two-storey houses, the H-12 and the H-15, respectively. These two main types were then given variety by inverting the floor plan or by placing the roof parallel or perpendicular to the street.

According to residents, the allocation of large and small homes was done according to family size. The 4-1/2 room H-12 house had only two bedrooms and thus was considered appropriate for a family with one child. The WHL tried to rent the larger two-storey houses, the H-15, to families with more than two children.

With the overwhelming housing demand, however, there were not enough large homes to satisfy the need. Rather, families at the time were happy to get any house at all,⁶⁸ even if only a 4-1/2 room, two bedroom house. The fact that many tenants of 4-1/2 room homes eventually went on to have more children explains why, when WHL tenants were given the option to buy their rented homes a few years later, many small H-12 homes were occupied by larger families than they were originally intended to accommodate. For the majority of these new owners, the acquisition of more living

⁶⁸ Wiggins, Boysen, and Robinson interviews.

space for the family, particularly for children, was a priority.⁶⁹ It consequently became the driving force behind renovations in the early years of ownership in both single and two-storey houses, but especially in the single-storey H-12.

The H-12 House

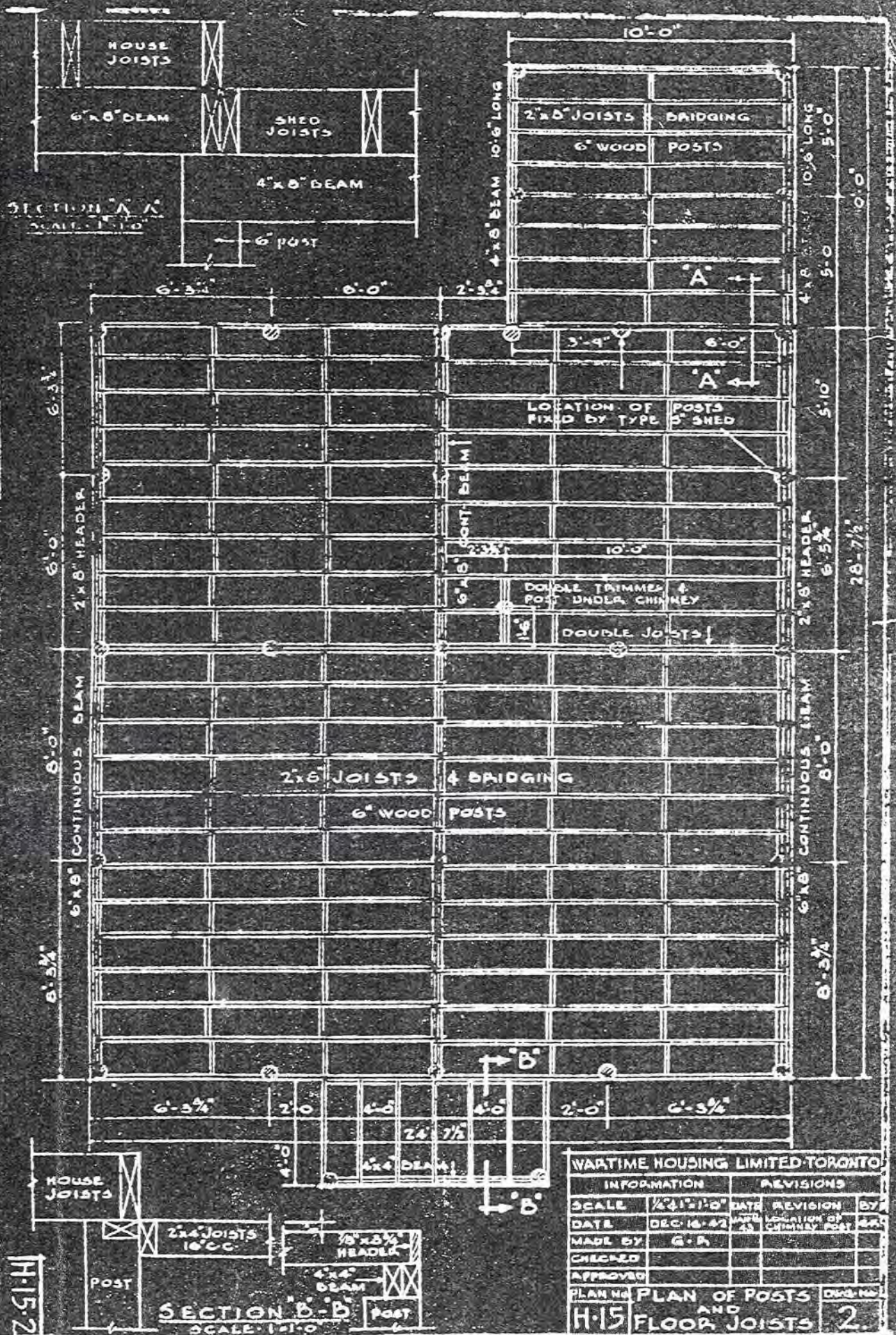
The original structures were built on temporary cedar posts, which were then covered in cedar planking, as shown on the original WHL framing plan (Fig. 9). When it was decided after the war that the homes were to be sold, CMHC decided that foundations were to be constructed under all of them. This presented the first logical opportunity for acquiring more space; basement expansion. In the 25 case studies, 12 of the 15 single-storey home owners decided to pay extra to construct full basements, many of them right away. (Of the three who did not, two regretted this decision not to: Robinson⁷⁰ and Wiggins) These accommodated additional bedrooms for children, playrooms (Nuttal and Murphy), and in five cases, additional washrooms.⁷¹

The other obvious and relatively simple strategy to expand was on the main floor of the single-storey home: converting the

⁶⁹ These include the Dimatteo, Nuttal, Murphy, Cabot, Elliot, Boysen, Kemp, McMEnamin residences.

⁷⁰ The Robinsons consequently added a whole second storey on their home.

⁷¹ Dimatteo, Nuttal, Ingerville, Dawson, and Elliot residences.



WARTIME HOUSING LIMITED TORONTO		REVISIONS	
INFORMATION		DATE	REVISION
SCALE	1/4" = 1'-0"	DATE	REVISION
DATE	DEC. 16, 42	DATE	REVISION
MADE BY	G. A.	DATE	REVISION
CHECKED		DATE	REVISION
APPROVED		DATE	REVISION
PLAN NO.	PLAN OF POSTS AND FLOOR JOISTS	DWG. NO.	2.

9. Drawing of Original WHL Framing Plan, National Archives.

existing coal shed into a bedroom.⁷² This ten-foot-square, uninsulated shed was originally designed to store fuel for the coal-burning stove which sat in the middle of the ground floor. Once it was realized that the stove was an insufficient means of heating the entire house, other means of heating replaced it and the coal shed became a space that was easily appropriated for other uses.

Concurrently, however, another major planning consideration shaped the ground floor: the need to find a place for stairs to the new basements. In the single storey 4-1/2 room unit, the coal shed area was found to be a convenient area (Ingerville and Demine case studies). In cases where this space was already used as an additional living space (e.g. a bedroom for children), the coal shed area had to be enlarged to include this staircase (Murphy, Boysen, Nuttal, and Illasciwicz case studies).⁷³ The exceptions to this pattern among the case studies are: the Gervais stairs, whose entry into the basement was located in the kitchen; the Cabot stairs inserted into the original kitchen location, after the kitchen was moved into an addition off the coal shed; and the Elliot stairs located lengthwise between the two bedrooms (Gervais, Cabot and Elliot case studies). The size and shape of the enlarged coal shed depended to a great extent

⁷² This was done in the Dimatteo, Nuttal, Murphy, Cabot, Elliot, Boysen, Kemp, Wiggins and Robinson homes. The Cabot and Elliot homes had bedrooms both in the coal shed and basement.

⁷³ The Kemps built their stairs outside, off the coal shed, but later decided to enclose them because of the weather.

upon the configuration of the original house type, as outlined below.

While there was the obvious and immediate need to incorporate stairs and add bedrooms in the four-room house, there was also a general feeling that existing rooms were too small:

The only thing we couldn't change were the rooms- the rooms are not big enough.⁷⁴

Mr. Kemp's home had some of the most extensive alterations done to it, but despite all his additions, he still felt frustrated by small-sized rooms. Mr. Ingerville reflected the sentiment of many new home owners:

the kitchens were quite small... the way (the houses) are situated on the lots, they're rather close together, it's difficult to find a way that you can stretch it. And the kitchen needed stretching more than anything else, we could live with the remainder if we could stretch the kitchen a bit...it's pretty pokey...fortunately, we only had one child, there were some people who raised a whole family in one of these places. I don't know how they managed.⁷⁵

Extending the small kitchen was one of the most common alterations in the 4-1/2 room house. Eventually, nine of the fifteen single-storey homes would have enlarged kitchens.⁷⁶ Since none of the homes included separate dining rooms, the kitchen was hard-pressed for space, especially as families grew. In most homes, this situation was alleviated by extending the kitchen either through eventual interior alterations (Kemp,

⁷⁴ Kemp interview.

⁷⁵ Ingerville interview.

⁷⁶ Kemp, Nuttal, Dimatteo, Cabot, Dawson, Robinson, Elliot, Gervais, and Ingerville residences.

Elliot, Robinson case studies), or by extending the house by several feet in one direction, as the house configuration and lot-size would allow (see Dimatteo, Ingerville, Nuttal case studies). Some owners also chose to enlarge their bathrooms⁷⁷ (usually by relocating other rooms as they became available in later years), but this did not affect exterior changes.

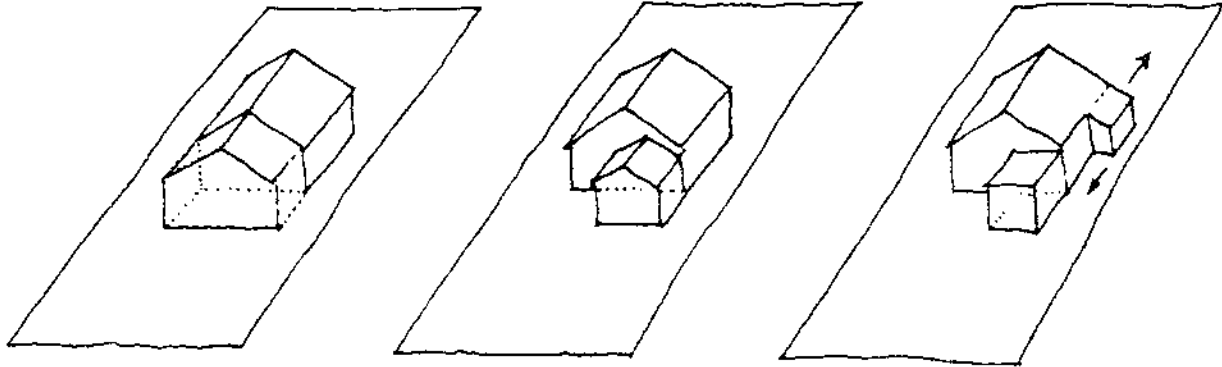


Fig. 10: H-12 single-storey house, main roof perpendicular to street.

Opportunities and Limitations of the H-12 types

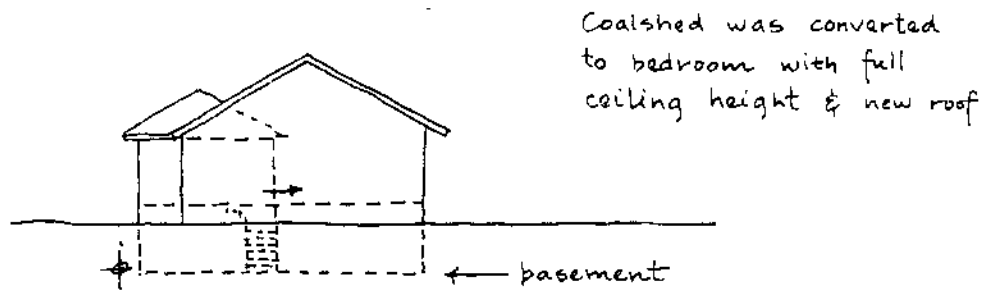
The configurations of the original houses offered a variety of limitations as well as opportunities for expansion. The single storey, 4-1/2 room home came in four possible variations. Generated from the same floor plan, they varied in the orientation of the gable roof which was either parallel or perpendicular to the street, and with the inversion of the plan. The orientation of the roof proved to be the biggest factor when adding an addition onto the ground floor area of the single-storey house.

Houses where the gable roof is perpendicular to the street were by far the simplest ones on which to add. An addition on

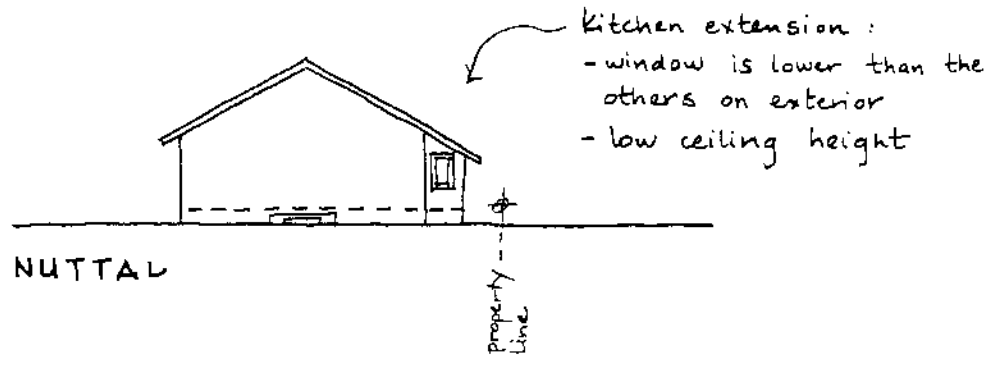
⁷⁷ Cabot, Dawson, Dimatteo, and Elliot residences.

the back end, easily accommodated in the long lots (between 95-110 feet long), could take a variety of roof forms independent from the main roof. Simple shed or smaller gable roofs are common additions (Bray, Elliot, and Coleman case studies and the Murphy house in Fig. 11), and in several cases, owners made attempts to follow the lines of the main roof (Cabot case-study photo). One creative owner, Mr. Dimatteo, redesigned the coal shed roof to line-up with one half of the main roof, with the intention of one day adding a solarium on the other half to complete the gable shape (Dimatteo case-study photo).

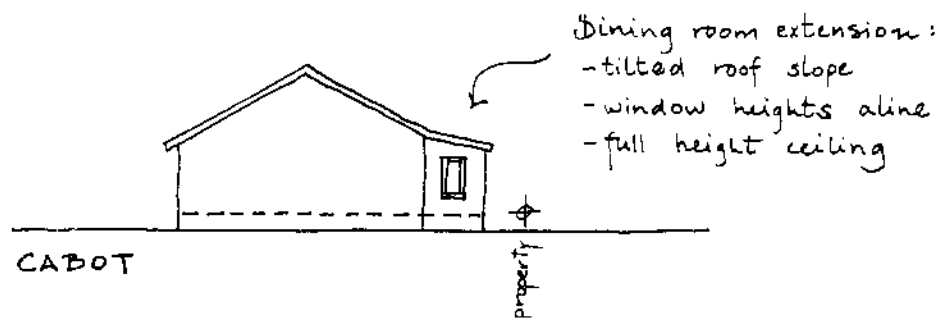
The roof orientation also proved critical when adding to the sides of the house. Side additions, as previously mentioned, were common attempts to increase the spaciousness of the kitchen. Since the lots are generally tight on the sides, extending out to any large degree was not a option, so side additions were limited in most cases to no more than four feet. Even this small amount posed difficulties due to the configuration of the main roof. In some cases, the new roof took the slope of the original roof. Even when the extension is small however, the steeply sloped roof quickly reduces floor to ceiling height below the minimum. The Nuttal home, where the kitchen was extended by four feet, provides a good example (Fig. 11). The resulting interior ceiling height is quite low, as are the windows in the addition. Consequently, on the facade, these windows are lower than all the others and reveal the awkward situation inside (Nuttal case-study photo).



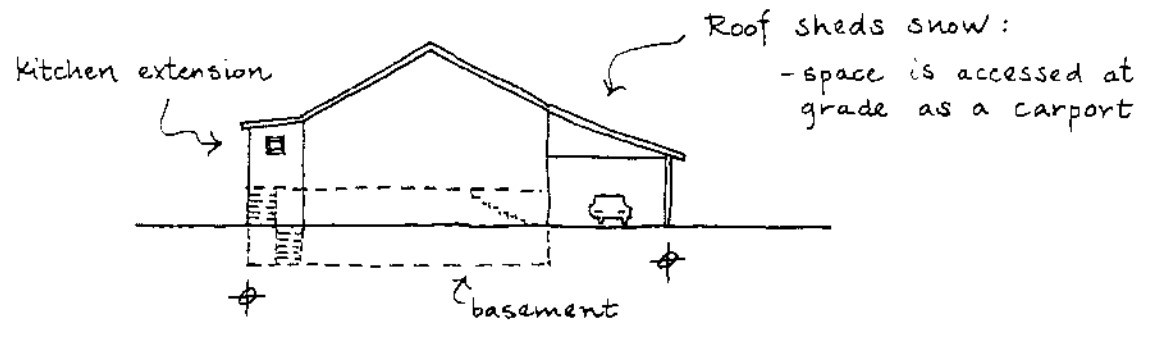
MURPHY



NUTTAL



CABOT



DIMATTEO

11. H-12 Single-storey Houses, Front Elevations (Murphy, Nuttal, Cabot, Dimatteo), drawn by Jennifer Beardsley.

Alternatively, a full floor to ceiling height is maintained by tilting-up the addition roof to a more shallow slope. This solution is used in several cases, such as the Cabot and Dimatteo houses (Fig. 11). A more shallow roof slope in these small, side add-ons is not a problem. Problems of drainage and snow-shedding occur only in some of the larger additions of the next house type.

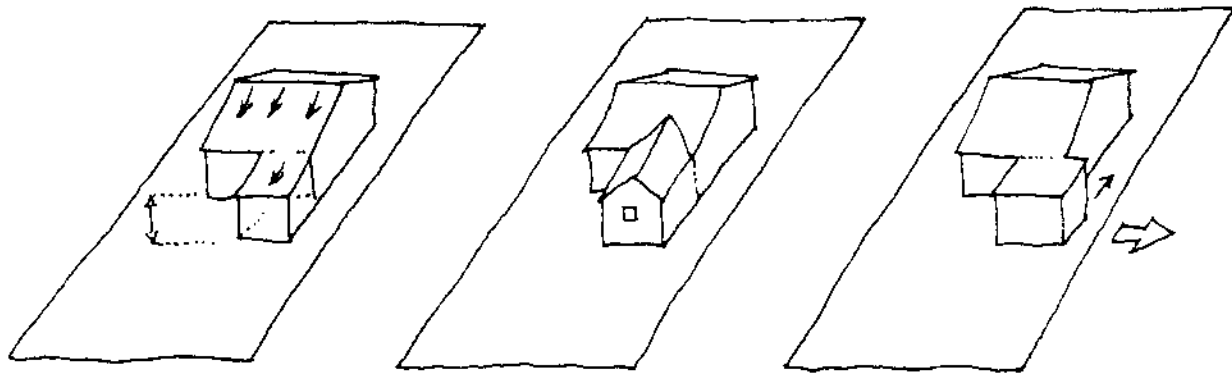


Figure 12: H-12 single-storey house, main roof parallel to street.

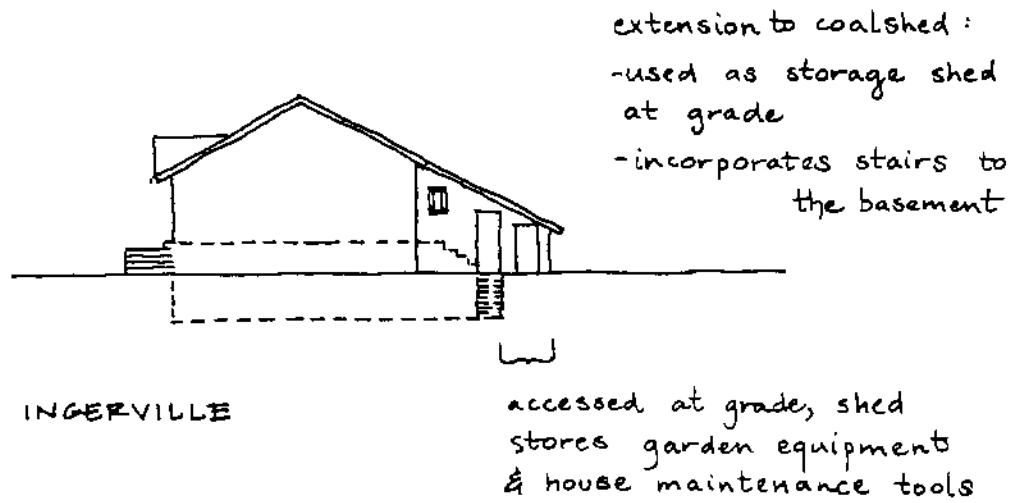
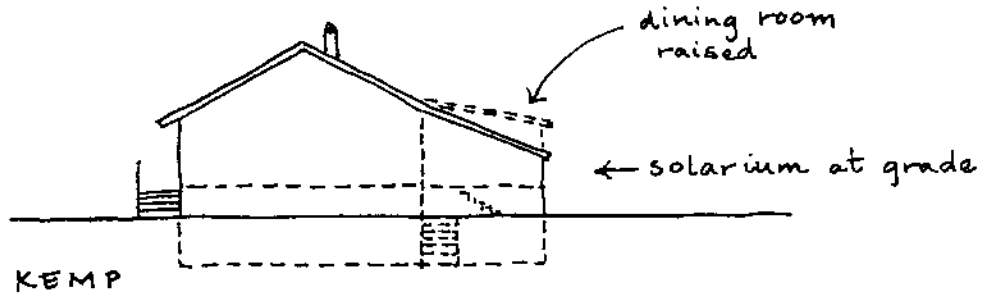
The second variation generated from the single-storey home was that with the main roof parallel to the street. This type is somewhat harder to add onto without more costly construction and better detailing. Rear additions, still possible thanks to long, narrow lots, have to be resolved with the large sloping main roof. These include the following types:

1. Additions with smaller gable-roofs at right angles were one option. Although they accommodated any size addition, roof construction would have been quite elaborate given the junction of the two gables. Only one home owner (Gervais) consequently

chose this option. In this case, the main roof had, coincidentally, also been changed to a hipped roof (see Gervais case study).

2. All other home owners settled on very large, low-pitched shed roofs over their new additions. This option has limitations because the pitch has to be low enough to allow headroom at a reasonable distance from the main house. Conversely, when the slope is not steep enough to shed snow, snow and ice accumulates, along with that from the main roof, and melt-water often backs up into the house. In the Kemp home, the roof over the solarium leaked so badly, the ceiling tiles had to be replaced (Fig. 13). At the Mofford house, an addition with a similar roof suffered the same drainage problems and had to be reroofed shortly after having been resingled.

3. In some houses, the steep main roof slope is simply carried down over the new addition. The space under these roofs quickly loses floor to ceiling height and the main floor of the house gains very little usable floor space. The Illasciwicz home demonstrated a dining room with this uncomfortably low ceiling height (see case-study photo). Nonetheless, another opportunity presented itself: A full ceiling height can be achieved if the floor level in the addition is placed at grade instead of at the level of the main floor. When foundations were installed in the WHL homes, most of them were raised to accommodate basements, so the main floors sit several feet off grade. Even though created inadvertently, an addition at grade becomes a very useful space.



13. H-12 Single-storey Houses, Side Elevations (Kemp and Ingerville), drawn by Jennifer Beardsley.

In the Ingerville home, it provided much appreciated storage at grade for home maintenance and garden equipment (Fig. 13) and children's toys and bikes in younger families. Many residents who did not have this "found space," bought small backyard sheds for this purpose, while others lamented the arduous job of storing such items in their basements.⁷⁸ This space at grade also functioned comfortably as a carport in the Dimatteo home (see Fig. 11).

Another advantage to this scheme is that the stairs from the first floor to grade to basement are incorporated within the level changes of the house. In the Kemp addition, the stairs gently descend (4 steps) into an enclosed solarium at grade, before proceeding down (5 steps) into the basement (Fig. 13). Thanks to this particular layout, the solarium benefits from dynamic changes in floor levels and a sloped ceiling (see Figs. 11 and 13).

Other House Configurations

In one exceptional case, the Robinson house, the owners built an extra floor on top of their 4-1/2 unit to accommodate more bedrooms and to relocate their bathroom (see Robinson case study). Theirs was one of the three homes that had not had a full basement put in when the foundations were poured. Since expansion in the basement was not possible, they had to find

⁷⁸ Murphy interview. They found this all the more difficult as they became older.

another location for more bedrooms and so turned to creating an upstairs level.

Corner lots presented other design possibilities. They tended to be much wider and gave owners the opportunity to re-orient their entrances to adjacent streets. In both the Demine and Dawson homes, the house layout became radically changed by this strategy (see Demine and Dawson case studies).

Interior Alterations

As the WHL homes were built with a view to savings of cost, they had only the barest of amenities and a frugal approach to space was also adopted. Allotments for secondary spaces such as entrances, hallways and storage were too luxurious. The homes did not have a distinct hallway to access the kitchen, bathroom and bedroom at the rear of the house, instead the passage was through the living room. Providing room for an entrance area was not a primary concern, however, the WHL designers must have realized the necessity of a vestibule in the harsh Canadian climate. The vestibule area was thus included, although it borrowed space from the already cramped living room.

Many owners made alterations to interior walls in order to gain space where they could and to maximize efficiency and comfort in their leanly planned single-storey homes. The easiest and most effective way to gain space in the living room was to remove the front vestibule. Over half of the single-storey homes

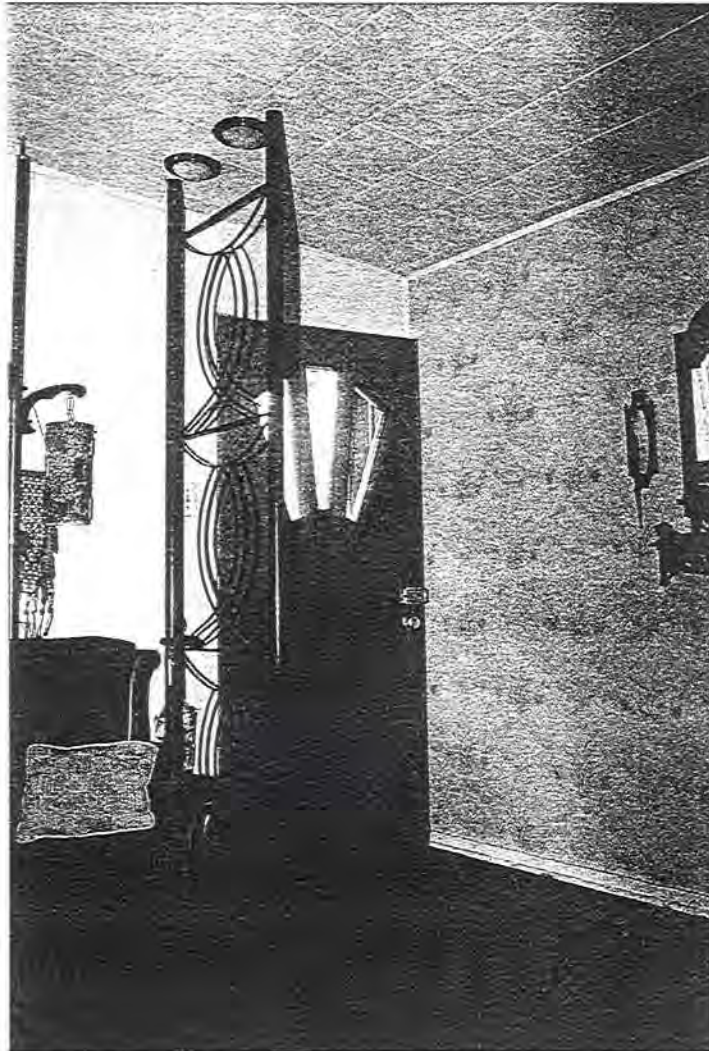
took advantage of this opportunity.⁷⁹ Some replaced the vestibule by enclosing the exterior front porch (see Cabot, Dimatteo, Illasciwicz, Murphy case-study plans). This served the same purpose of airlock and provided a place for storing outerwear.

The remaining owners who had removed their vestibules recognized the need to distinguish the entrance area from the living room. These owners added decorative elements or midwalls adjacent to the front entrance which were transparent enough so that the vestibule space still seemed to belong to the living room (Figs. 14 and 15).

Efforts were also made to maximize efficiency. Ten of the fifteen single-storey home owners tried to minimize the traffic passing through the living room to the kitchen by moving the kitchen door from the middle of the room off to one side.⁸⁰ One owner, Mr. Morin, chose to add a midwall to distinguish the pathway to the kitchen, instead of moving the door (see Morin case-study photo). Altering the door was still the most popular option even though it necessitated reconfiguring the kitchen layout. This move also served the double purpose of providing additional wall space in the living room. Several owners voiced concern over the lack of wall space because it made furniture

⁷⁹ Nine removed the vestibule: Cabot, Dimatteo, Illasciwicz, Kemp, Ingerville, Gervais, Murphy, Nuttal, and Robinson.

⁸⁰ The Gervais left a small window opening "for communication" when they closed up the wall.



14. Photo of Gervais Entrance, by Josée Lamothe.



15. Photo of Ingerville Entrance, by Josée Lamothe.

placement difficult.⁸¹ This prompted several key doors in the bedrooms to be moved also.

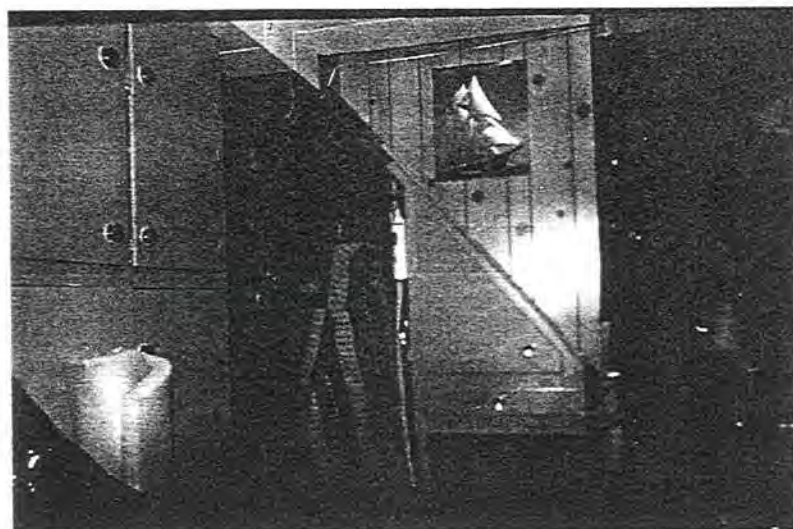
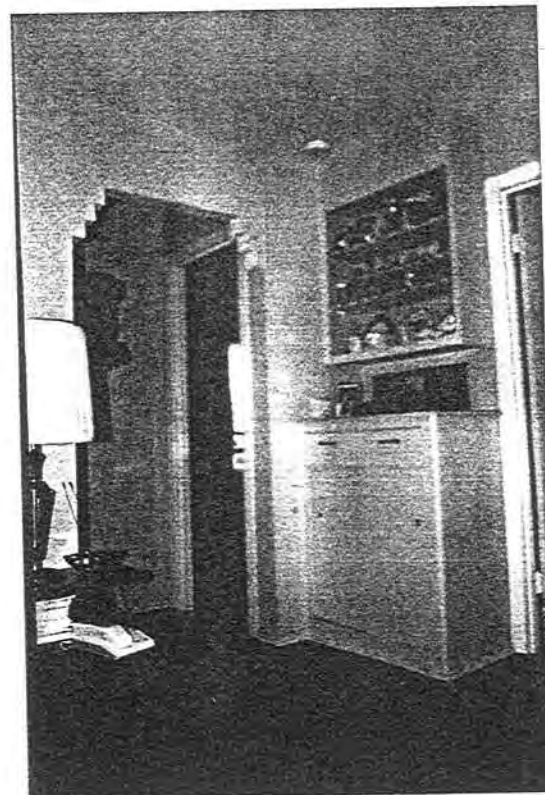
Storage

The original units were designed with very little concern for storage. Over the years, every available space was considered and adapted for possible storage solutions, sometimes with creative results.

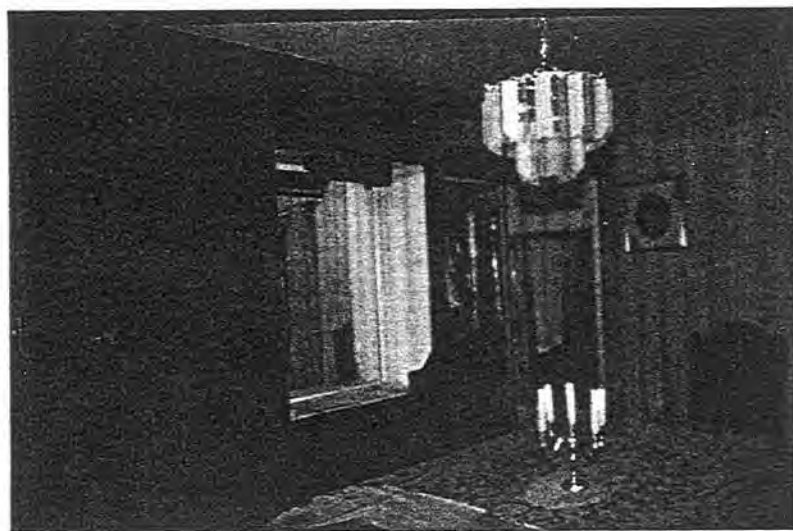
In all the cases, the bedroom closets were reconfigured into larger ones and built-in wall units with shelves and drawers were common in bedrooms (four case studies). One owner, Mr. Cabot, managed to integrate a small coat closet with folding doors near the front entrance. However, the myriad of built-in furniture was perhaps the most ingenious way in which space was maximized in the frugally-planned WHL homes. This included a dining room buffet, built-in kitchen tables with seating, bookcases and tailor-made beds with integrated storage (Figs. 16-20).

⁸¹ Cabot and Kemp interviews.

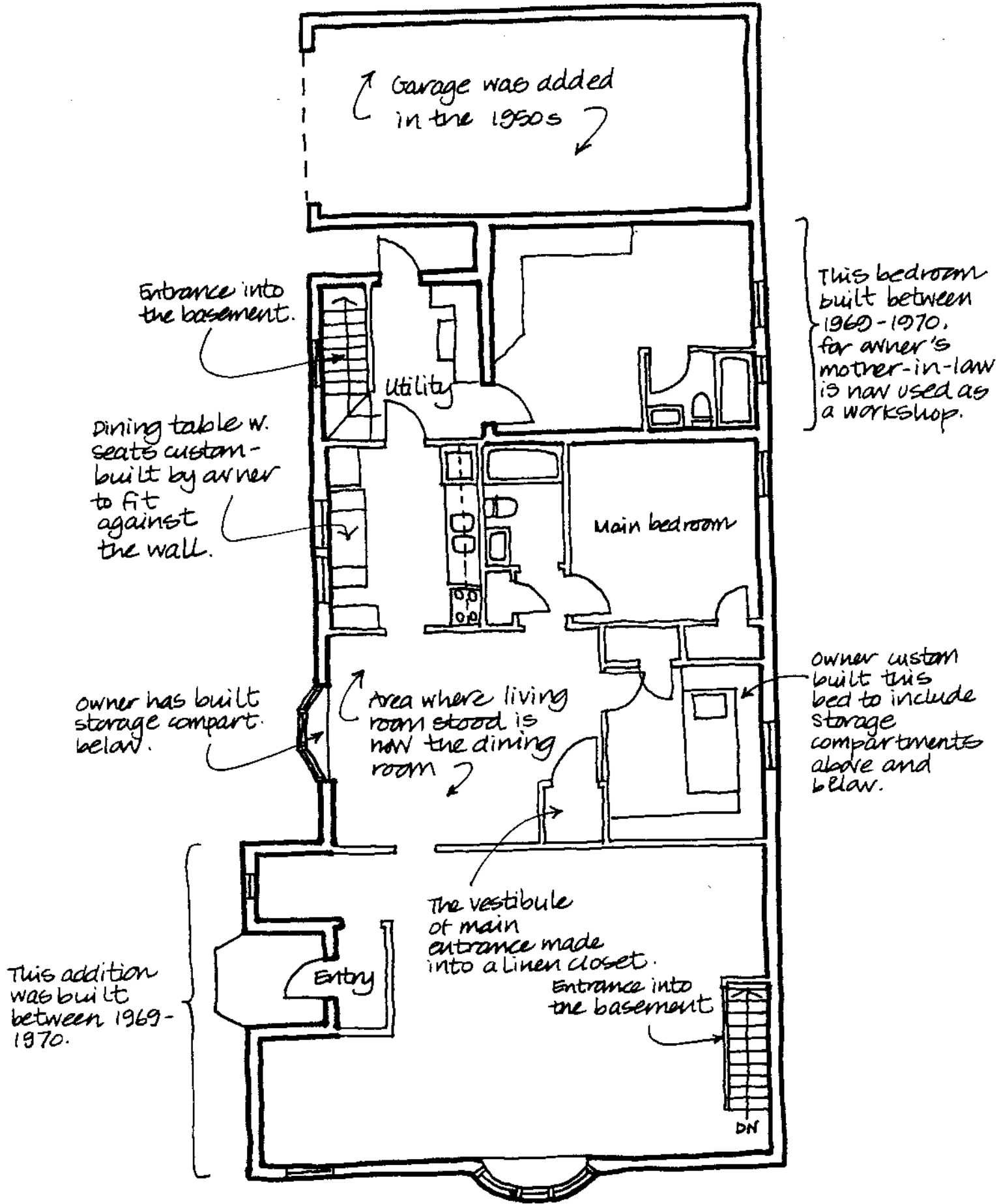
16. Photo of Murphy Built-in Cupboard



17. Photo of Cabot Stair Storage, by Josée Lamothe.



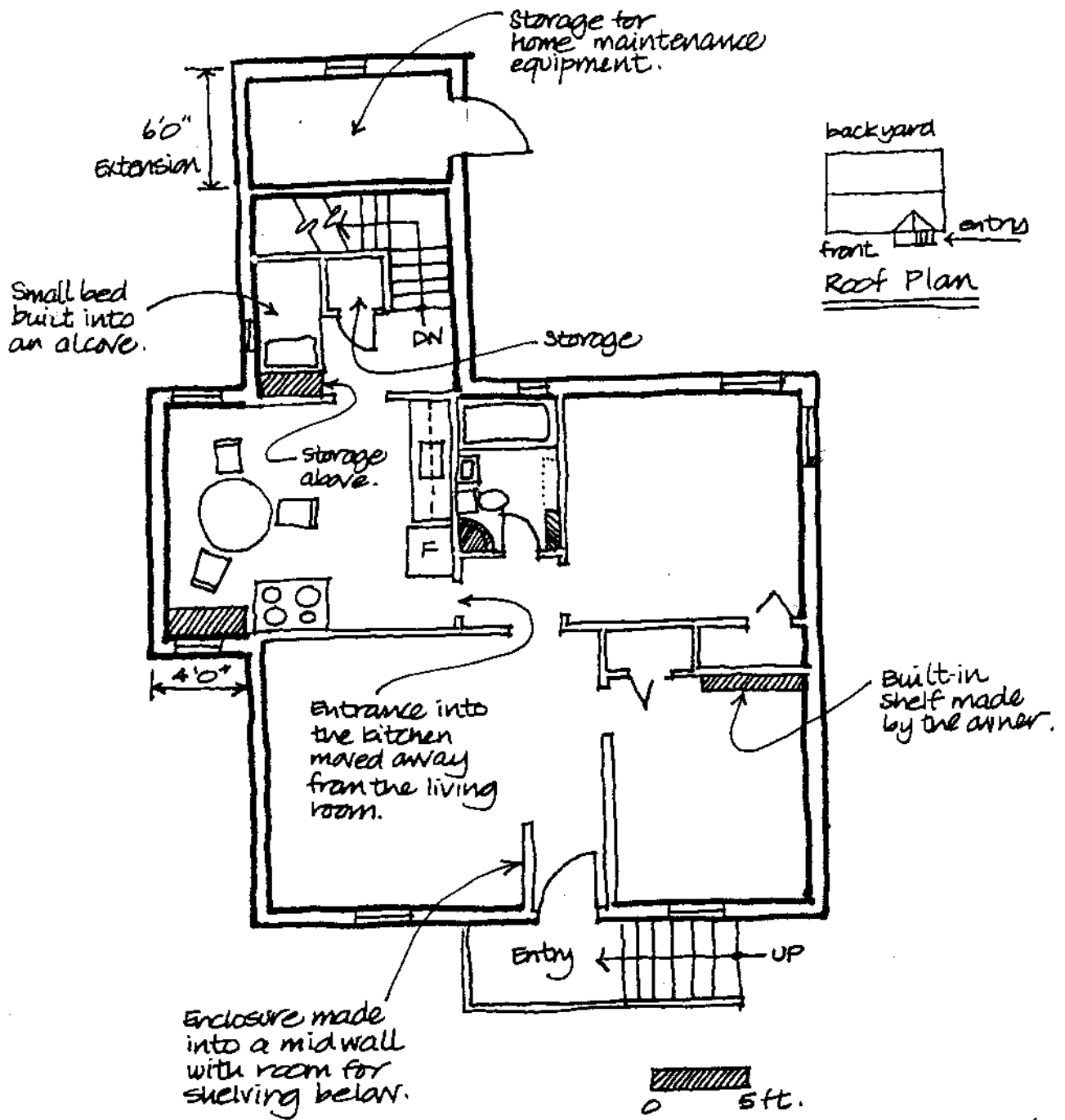
18. Photo of Cabot Closet/Vanity, by Josée Lamothe.



0 5ft.

1973

19. Plan of Demine house, drawn by Maria Pantelopoulos.



20. Plan of Ingerville house, drawn by Maria Pantelopoulos.

The H-15 House

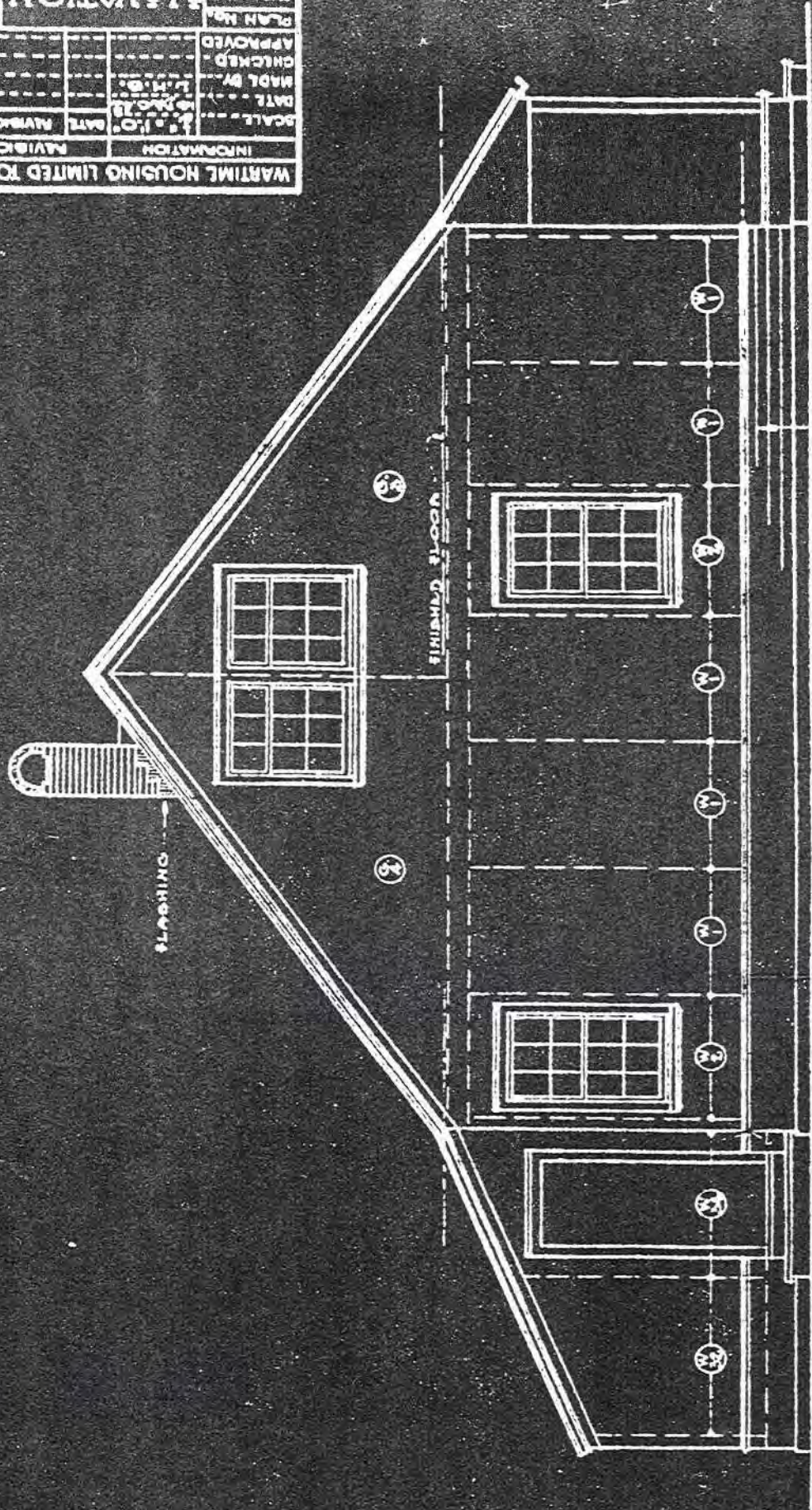
The two-storey, six-room H-15 home had only one roof orientation and thus came in only a left-hand or right-hand variation (Figs. 21 and 22). Unlike the single-storey home, the owners of the two-storey houses were less pressed for space, because extra bedrooms already existed upstairs. In only three of the nine cases studied did the owners go through the trouble of putting in basements when foundations were being installed in the newly purchased homes.⁸² As mentioned, nearly all the single-storey home owners either put in basements or wished they had.

As with the single-storey house, the installation of a basement involved finding a suitable location for stairs. This problem could have been resolved in the 6-1/2 room unit by conveniently locating the stairs behind the main staircase of the home, but the three residents who built basements chose to locate them in the coal shed. Only one of the three, Mr. Poozhikala, subsequently decided to enlarge the coal shed to accommodate the stairs (see Poozhikala case study).

Also, most of the H-15 homes were constructed on long, narrow lots which provided the opportunity to expand at the back. Additions at the rear of the house (to enlarge coal shed/bedrooms and in one case, to include stairs) were also less frequent than in the single-storey homes because the owners were less pressed for space. In fact, only four additions were made in the nine

⁸² Alford, Bonnema, and Poozhikala residences.

WARTIME HOUSING LIMITED TORONTO		INFORMATION	
DATE	SCALE	DATE	SCALE
APPROVED	APPROVED	APPROVED	APPROVED
MADE BY	MADE BY	MADE BY	MADE BY
CHECKED	CHECKED	CHECKED	CHECKED
PLAN NO.	PLAN NO.	PLAN NO.	PLAN NO.
ELEVATION 3		ELEVATION 3	



ONLY MATERIALS & COVE SHIPPER SHIPMENT WHEN DEPARTING FROM FINISH IS USED.

ELEVATION 3

22. Original WHL Side Elevation, National Archives.

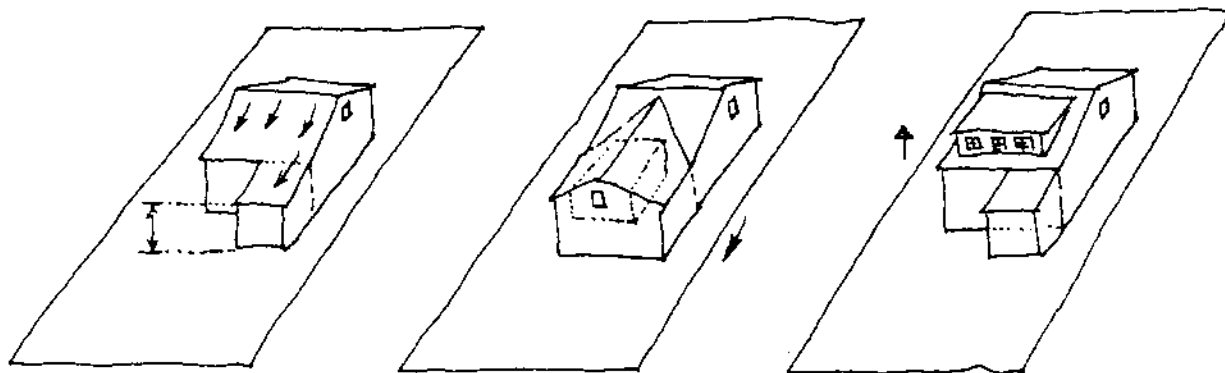
case studies.⁸³

Owners ran into some of the same problems experienced by the single-storey home owners who had roofs parallel to the street. Of notable difference between this type and the single-storey model is the amount of space that the various additions gave to the second floor:

1. The limitations of the gable addition are evident in the two-storey house. The large, sloped gable roofs leave the upstairs, unfortunately, with very limited usable space and very little natural light. Mrs. Moger's considerable gable addition only served to gain her a long, unlit corridor leading to a small bathroom with limited fenestration on the end wall (Moger case-study second floor plan). Owners chose to use the gable addition, nonetheless, because it allowed for a larger addition on the ground floor (see Poozhikala and Morin case studies).

2. The obvious and simplest expansion upstairs was the installation of dormer windows, which increase floor area as well as natural light. Two owners installed a second bathroom upstairs within the additional floor space under a dormer. The Mofford house had dormers built on both sides of the roof which increased the upstairs to nearly the full area of the ground floor. The only drawback of this arrangement is that it requires additions on the ground floor be of the shed type which are limited in size.

⁸³ Mofford, Moger, Morin, and Poozhikala residences.



Shed addition with continuous sloped roof:

- size is limited by shrinking floor to ceiling height
 - if the slope is altered, care must be taken in correctly detailing the roof at the joint
 - slope can only be flattened so far and still shed snow and rain properly
- See Gelineau, Wiggins, and Bonnema; Fig. 24

Gable-roof addition perpendicular to main roof:

- allows addition of larger size
 - more complicated, extensive & costly framing is involved
 - the upstairs has a very limited usable space with little amount of natural light
 - ground floor loses access to natural light
- See Moger, Morin, and Poozhikala; Fig. 25

Upstairs dormers

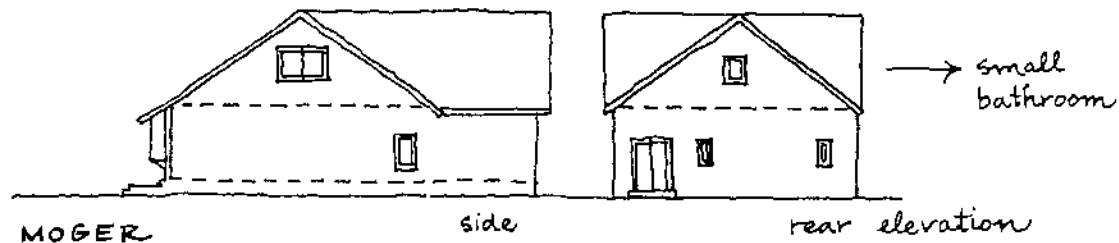
- relatively easy to build
 - adds more usable area to the second floor as well as more natural light
 - dormer slope may become too shallow to properly shed snow and rain
 - limits future expansion on the ground floor to simple shed additions
- See Mofford and Meyer; Fig. 26

Figure 23: H-15 two-storey house, all roofs parallel to street.

Overall, the owners of the two-storey homes seemed to be less pressed for space. The additional bedrooms upstairs, perhaps along with the fact that the two-storey homes had a slightly larger ground floor plan to start (28 x 25 instead of 25 x 25 feet), provided these owners with enough space. None of these larger homes had any of the ground-floor room extensions off the kitchen, of the kind so common in the 4-1/2 room house.

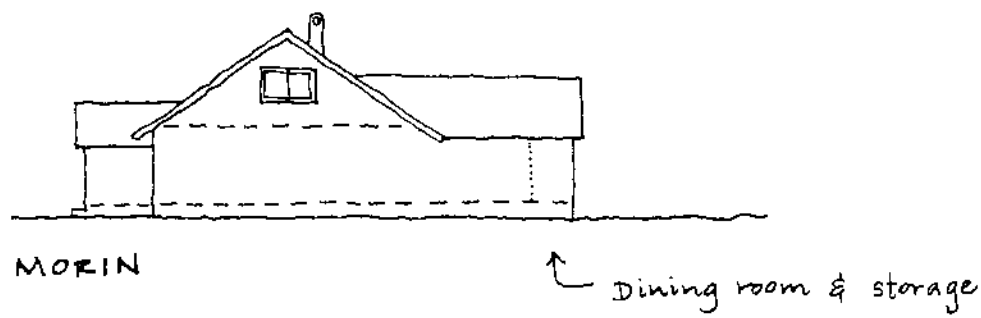
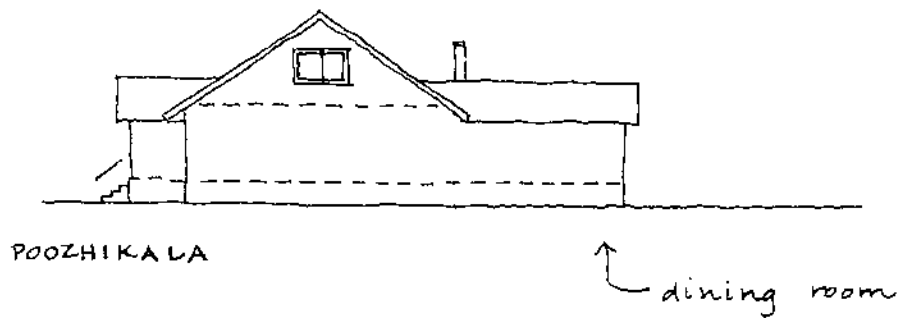
Interior Alterations

The two-storey house had certain limitations due to its interior layout. The most noticeable constraint was the location of the interior stair which defined a narrow room of only eight feet wide on both the ground and upper floors. For structural

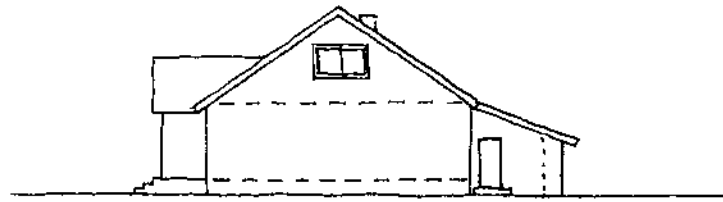


Addition:

- family room, laundry, bathroom on ground floor
- bathroom on second floor

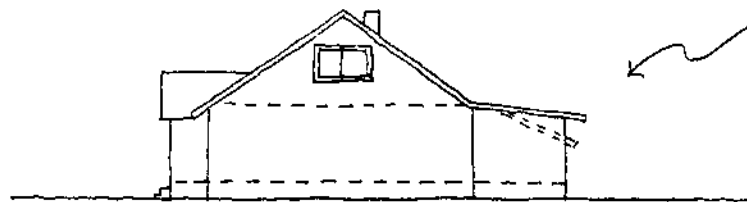


24. H-15 House with Gable Additions, Side Elevations (Moger, Poozhikala and Morin), drawn by Jennifer Beardsley.



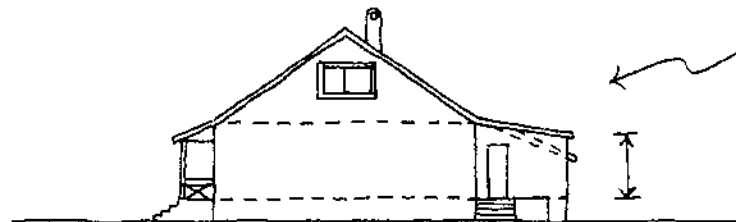
GELINEAU

↑ closet in utility room
has low ceiling height



WIGGINS

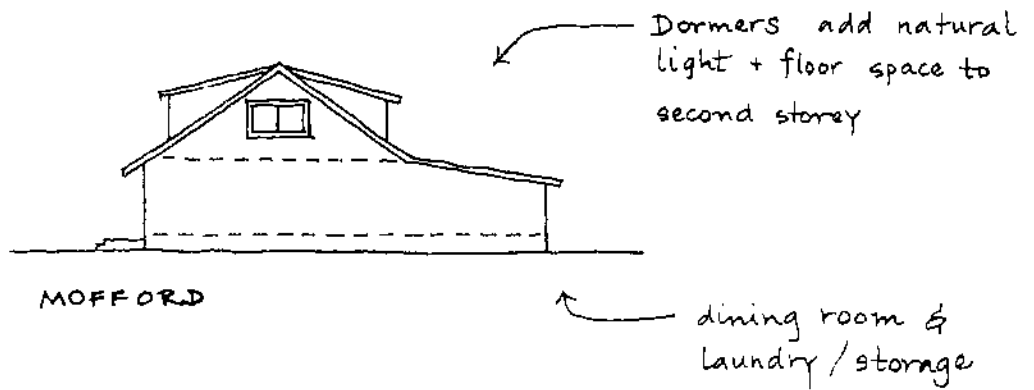
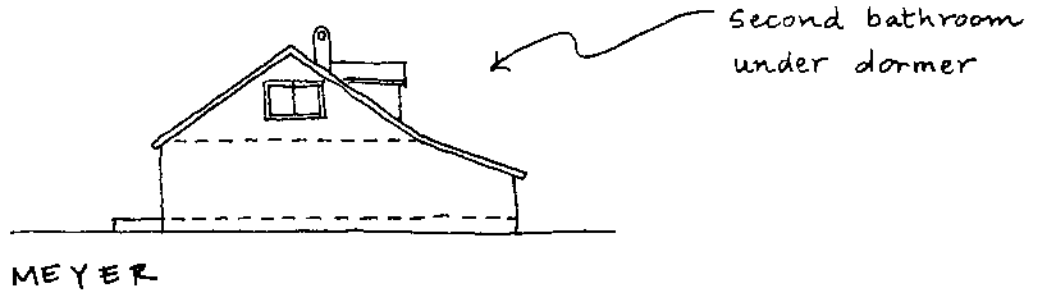
← tilted slope allows
for headroom in
dining room



BONNEMA

← storage & utility room

25. H-15 House with Shed Additions, Side Elevations (Gelineau, Wiggins and Bonnema), drawn by Jennifer Beardsley.



Mofford house has reached its limit of possible additions...

26. H-15 house with Dormer Additions, Side Elevations (Meyer and Mofford), drawn by Jennifer Beardsley.

reasons, the stair was prohibitive to move. One owner tried, unsuccessfully, to talk two separate contractors into moving the stairs off to one side (Moger). Owners expressed regret over this initial size restraint and some made attempts to make the rooms larger.

Nearly all of the owners removed the second entry door that closed off the stair from the rest of the house⁸⁴ and several opened up the stairs towards one or another of the downstairs rooms by removing the wall between them (Moger case-study photo). This increased the apparent spaciousness of the living room somewhat. One owner went as far as to re-orient the bottom of the stairs to turn into the living room (see Mofford case study). These were to soften, in some limited way, the meanness of the narrow original stair.

The narrow room which was originally planned as a bedroom, came to take on a variety of other uses in later years. In the Wiggins home, the door to the living room from the main entrance was closed off and the passage rerouted through the narrower eight-foot room. In this plan, it acts as both a large vestibule and small den. In another house, the narrow room is used as a child's playroom (Mofford). Although many of these small rooms have been linked directly to the front entrance and stairs, case studies reveal that the room is simply too narrow to accommodate a passageway as well as maintain a functional use of its own. In the Moger household, the main thoroughfare to the back of the

⁸⁴ Only Poozhikala, Bonnema, and Meyer did not.

house passes through this small room, instead of the large one. Intended as a dining room, however, the room is too small for both purposes and the dining furniture is kept off to one side (see Moger case-study photo).

Two families satisfied their desire for more space by creating a large opening between the kitchen and the living room (see Alford and Meyer case studies). This added to the spaciousness of both rooms and "took the kitchen out of isolation" from the rest of the house.⁸⁵

Unlike the single-storey homes, there was less concern for more wall space or efficiency in these houses. There was only one attempt to make the living room more efficient by moving the kitchen door off to the side from its original position in the middle. This was in the Mofford home. Instead, owners removed the doors and replaced them with more compact options: curtains, sliding doors, bar-room doors and folding doors. Front porches were enclosed in four cases.⁸⁶

Second-floor Alterations

Just as the location of the stairs governed the size of rooms on the lower floor, it determined the layout for the upper floor, as well. The smaller room upstairs, as a bedroom, was considered quite tight even from the outset. At the time, however, the wartime residents were happy enough to have the

⁸⁵ Alford interview.

⁸⁶ Gelineau, Morin, Poozhikala, and Wiggins homes.

much-needed extra bedrooms. In one case, the Gelineau home, the largest bedroom on the upper floor was partitioned off to create two bedrooms (see Gelineau case-study plans). The owner's daughters preferred having their own small, but private, rooms rather than sharing one larger room. The configuration of the windows in the larger room made this an attractive alternative. The window was centred on the end wall and was easily divided in two, along with the room so both new, half-sized rooms benefitted from natural light.

Alterations were also made to accommodate a separate dwelling unit on the upper floor in one case study (see Mofford case study plans). A full bathroom had been installed, under a dormer window addition, which enabled it to be rented out as a separate unit. The house accommodated an elderly couple upstairs for many years. Mrs. Mofford found clues which revealed the previous layout of her home:

At one point this house was being used as two dwellings. That's why the staircases were changed...they had an old couple living upstairs and an old couple living downstairs. The stairs (went) straight down with this door being locked...there's a little back room in the back of the (upstairs) cupboard that we use for storage...and that, at one point, was part of a little kitchen.⁸⁷

There is only one other case of a separate, second floor dwelling. This was during the early wartime tenure and involved a couple with a young baby.⁸⁸ At the time, the upstairs level they occupied was in its original form and had no bathroom. They

⁸⁷ Mofford interview.

⁸⁸ Morin interview.

shared this with the family downstairs and used an upstairs windowsill to cool milk as they had no refrigerator of their own. Second floor dwelling was, however, a limited occurrence. Given the long, steep staircase to the upper floor, it was probably not an inviting prospect for seniors nor for families with young children.

Despite the relatively simple job of adding a dormer, only three owners chose to expand upstairs in order to add upstairs bedrooms or bathrooms.⁸⁹ This may be due to the average age of the residents for whom the original bedrooms were sufficient in the early years. They gradually saw their households shrink as children moved away and were not looking to increase their space.

By today's standards, however, the rooms are painfully small as bedrooms. The Moffords, a young family of three children (between 5-12 years old) and a mother-in law, do not expect to remain in their WHL house because they feel they need more space.⁹⁰ Their home has already been expanded and they feel any more additions would not add to the market value of the house. What was once an acceptable "starter home" for a family of six is now too small. Mr. Poozhikala decided not to add dormers to his second floor and echoed this sentiment:

If I were to live here, I would make some modifications upstairs...once, I thought of making it straight (raising the roof)... so that we get a lot of headroom on the sides and this would be big enough for a big family. (The upstairs) doesn't give me enough room. It's small...it could be a

⁸⁹ Meyer, Mofford, and Moger added second-storey bathrooms.

⁹⁰ Mofford interview.

very roomie house with that change, but when you put in the money, you won't get it back, you do it... you won't want to sell it...no matter how much you put in, the area has a value, so it doesn't appreciate more than that. So maybe if this house were in a different place, it would be more valuable.⁹¹

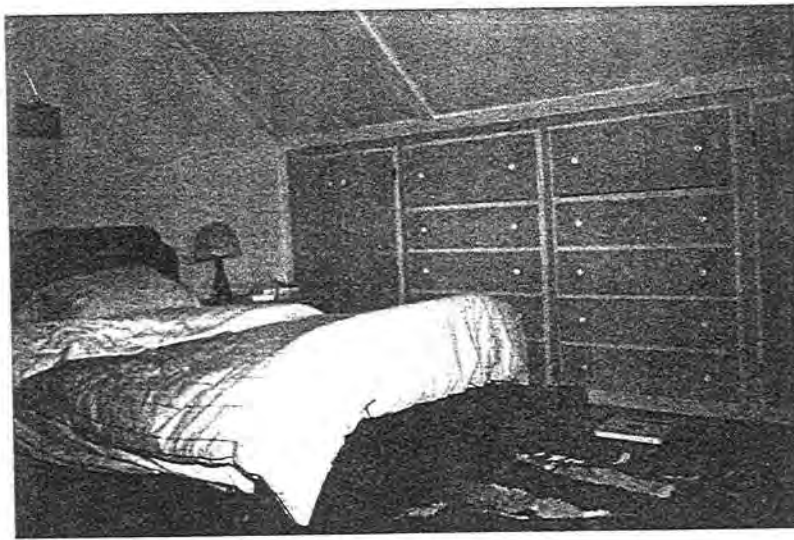
Storage

The lack of much needed storage space was a spatial challenge that was common to both housing types. The two-storey home, however, provided opportunities for storage that did not exist in the single-storey home.

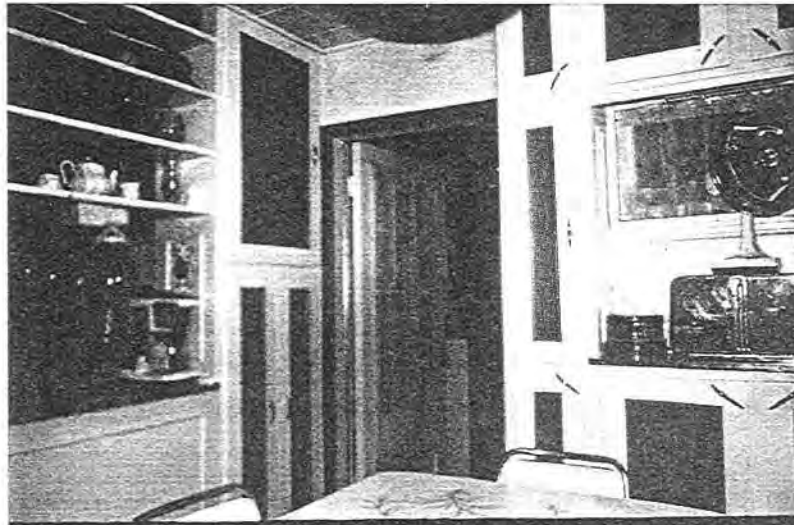
In the 6-1/2 room house, closets were conveniently built in under the staircases to the upper floor and at the top of the stairs between the two rooms, in some cases (see Wiggins case-study plans). Attic bedrooms also provided opportunities: Mrs. Wiggins built a storage unit across one of the lower walls, taking advantage of the unused space under the sloped roof (Fig. 27). In another home, storage compartments were built in beneath the windows in attic bedrooms.

The presence of creative and efficient built-in furniture was equally common to both the single and double-storey house types (Figs. 28 and 29).

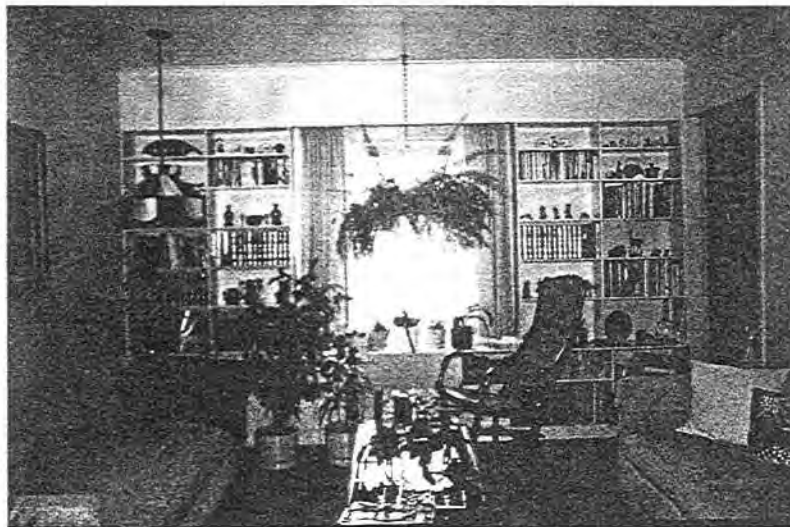
⁹¹ Poozhikala interview.



27. Photo of Mrs. Wiggins Storage, by Josée Lamothe.



28. Photo of Morin Shelves and Cupboards, by Josée Lamothe.



29. Photo of Alford Storage, by Josée Lamothe.

Family cycles and architectural change

The case studies reveal that home renovation was directly linked to evolving patterns in the family. Not only did young couples expand their WHL homes to accommodate their growing families, but shrinking family size also affected change. When grown-up children started to leave the home, extra bedrooms were no longer needed and rooms took on new, specialized uses. Spare bedrooms were converted into dining rooms, sewing rooms, utility and storage rooms. The dining room conversion was particularly convenient because a typical child's bedroom had been located off the kitchen, in what was the original coal shed. Had it been otherwise, the dining room might have been too far from the kitchen to be functional. Nearly all the single-storey home owners who had not already extended their kitchens, appropriated this new space (see Bray, Illaszewicz, Kemp, Cabot, Robinson case studies).⁹² Built-in furniture, while efficient, can make room conversions awkward. In the Cabot dining room, the built-in closet/vanity unit was a tell-tale sign of the previous bedroom (see Fig. 18).

Of those who had made extended their kitchens to include a dining area, some now used the coal shed-cum-bedroom as specialty rooms: a "flower room" in the Dimatteo home and an office in the Nuttal's. In some cases, newly-acquired space on the main floor

⁹² Five had made the coal shed into a dining room, one was in the middle of planning it (Murphy), and one appropriated the coal shed for a kitchen/dining combination (Gervais). Five had made kitchen extensions. Of the remaining three families, one was a young family who needed the space (Elliot).

allowed for changes in interior layout. In the Elliot home, the bathroom was moved to a "spare" bedroom, which consequently freed up space for the small kitchen to expand into a new, more generous one (see Elliot case-study plans).

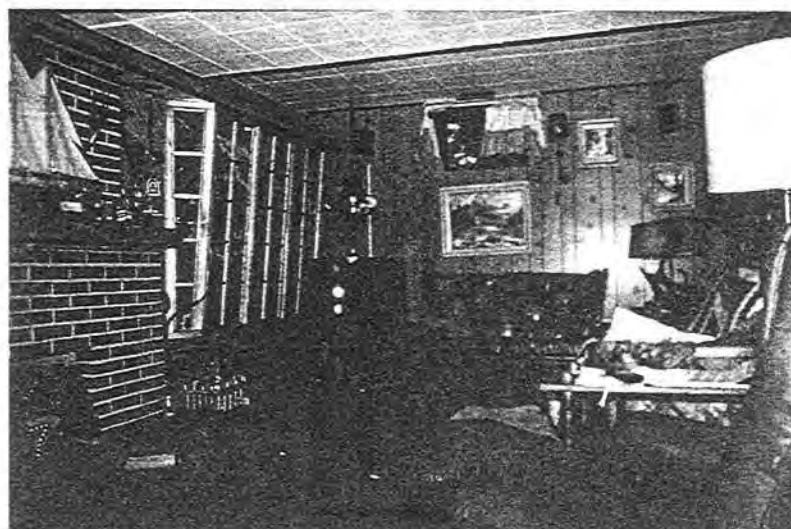
In both housing types, basements were also subject to the change in family life. Those which originally housed the much-needed extra bedrooms were eventually finished throughout, and converted to encompass dens, entertainment and specialty rooms. Only one home owner, John Boysen, chose not to finish his basement at all. Nearly all the single-storey home owners established laundry areas and dens/t.v. rooms,⁹³ many with quite a lot of attention and care. The Dimatteos likened their finished basement to a second living room,⁹⁴ while four other owners (Kemp, Gervais, Illaszewicz, and Cabot) had fireplaces installed (Figs. 30 and 31). Some were quite elaborately designed for entertaining guests; with built-in "bar" areas (Gervais, Nuttal); and place for showing slides (Nuttal) and movies (Demine) (Fig. 32).⁹⁵

Specialty rooms were established by several owners: John Cabot converted his sons' downstairs bedroom into a workshop for

⁹³ The only exceptions are the Demines who put their laundry area in the coal shed and the Elliots who still had a daughter living at home in a basement bedroom. One two-storey home did follow this pattern, the Poozhikala residence.

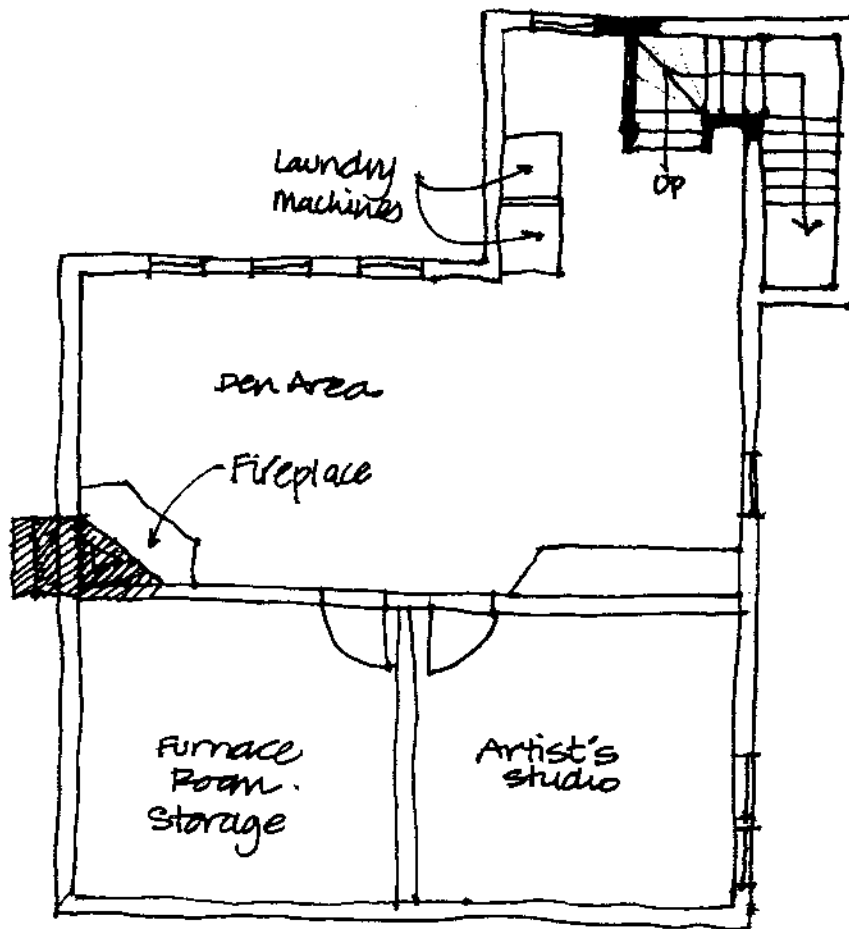
⁹⁴ Dimatteo interview.

⁹⁵ Nuttal and Demine interviews.

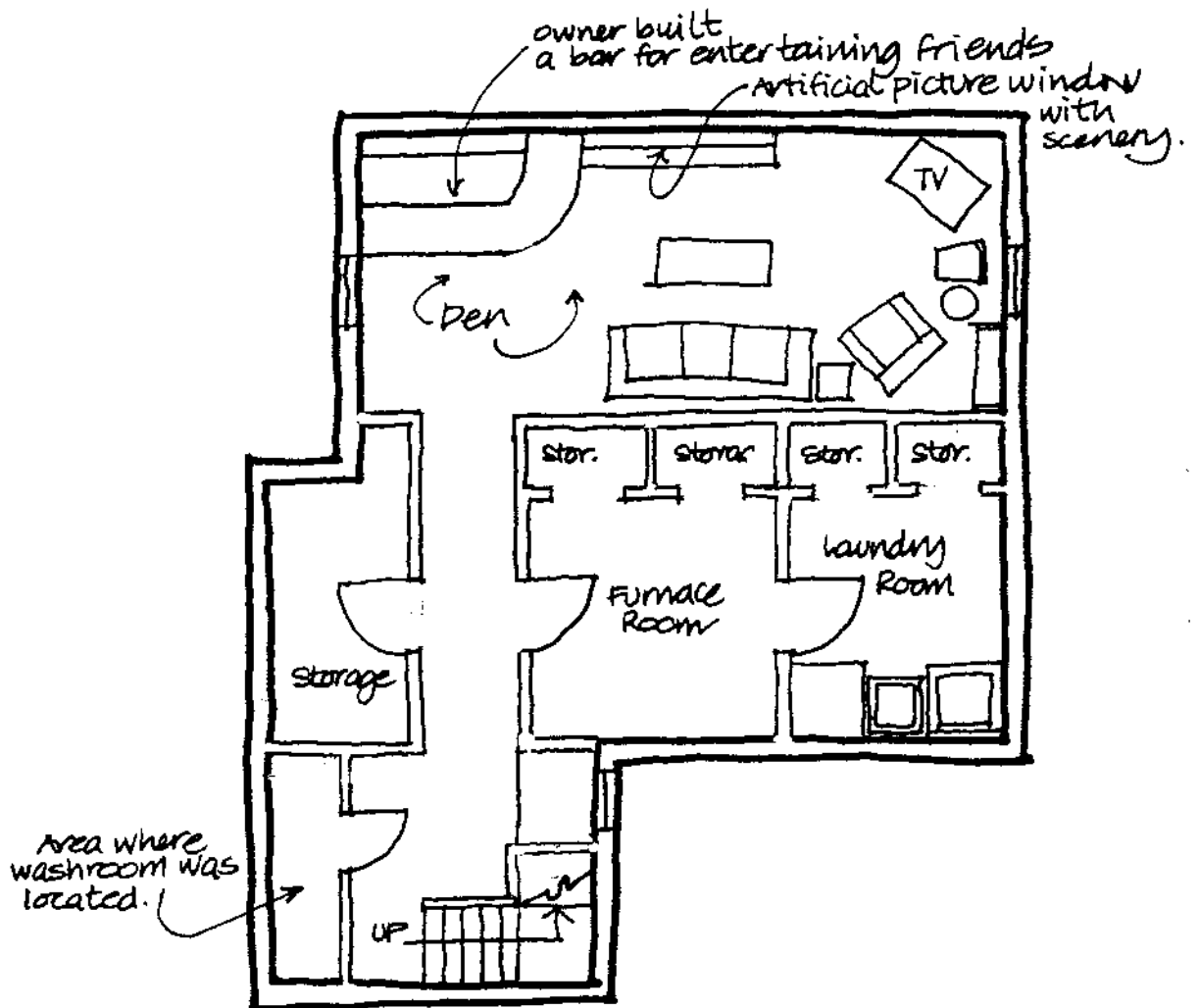


30. Photo of Cabot Basement, by Josée Lamothe.

Fig. 2.



31. Plan of Illaszewicz Basement, drawn by Maria Pantelopoulos.



32. Plan of Nuttal Basement, drawn by Maria Pantelopoulos.

building carousel horses;⁹⁶ the Dawsons built a hobby room for doing calligraphy; and Teresa Illaszewicz set up an artist's studio in her basement (Figs. 33 and 34; see Fig. 31).⁹⁷

Workshops were also common, as they became the renovation centres for work being done in the rest of the house (Fig. 35).

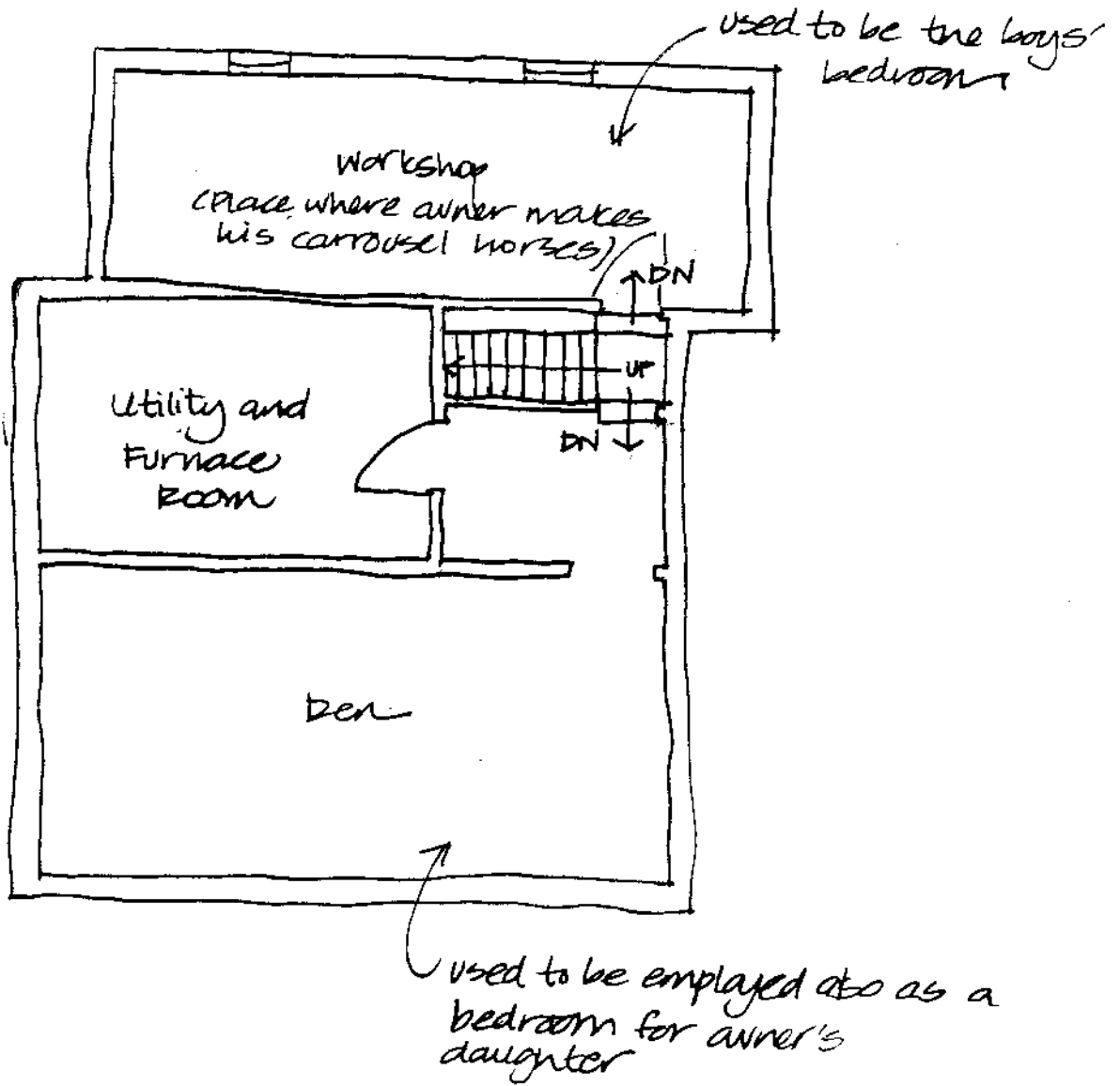
At the time the basements were installed, many residents had no idea of the extent to which they would be appropriated and eventually accommodate finished, functional rooms. Two owners, Kemp and Bonnema, wished at the time of our interview that they had foreseen this basement phenomena and made their ceilings higher.⁹⁸ Madge Kemp felt they should have raised the foundation wall by four instead of three concrete blocks in order to offset what was lost in finishing the ceiling. In another case, the stairs awkwardly arrive in the basement facing an outside wall, because they were designed with the main floor layout in mind and not the eventual basement expansion (Fig. 36). In most cases, owners were able to locate laundry areas conveniently at the bottom of the stairs.

In the two-storey homes, patterns of change were different. The spare bedroom/dining room conversion was an equally common and convenient alteration (see Morin, Wiggins, Mofford, and Poozhikala case studies). However, the coal shed-turned-bedroom was also a possible place to locate the laundry area for those

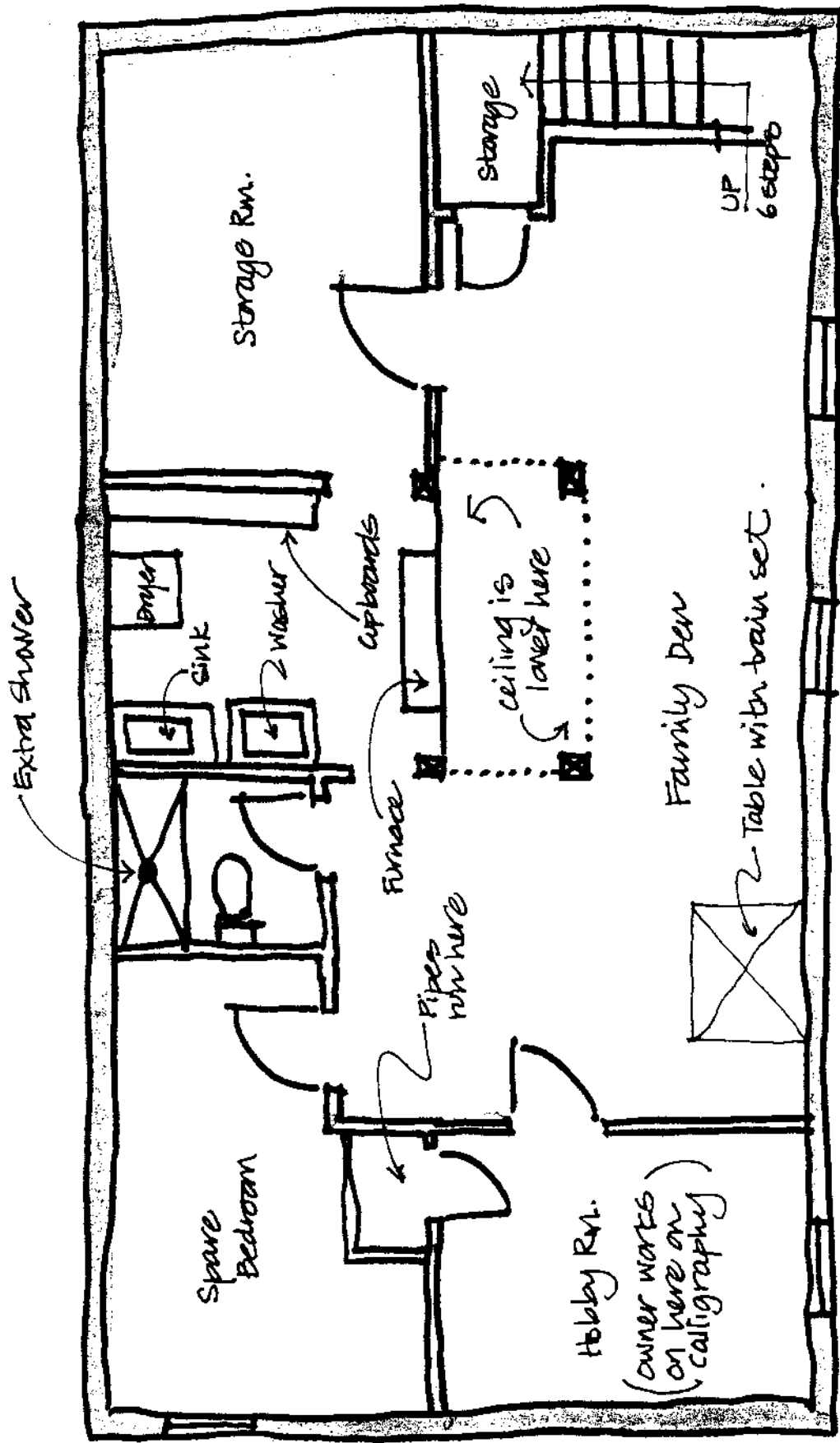
⁹⁶ Cabot interview.

⁹⁷ Cabot, Dawson, and Illaszewicz interviews.

⁹⁸ Kemp and Bonnema interviews.

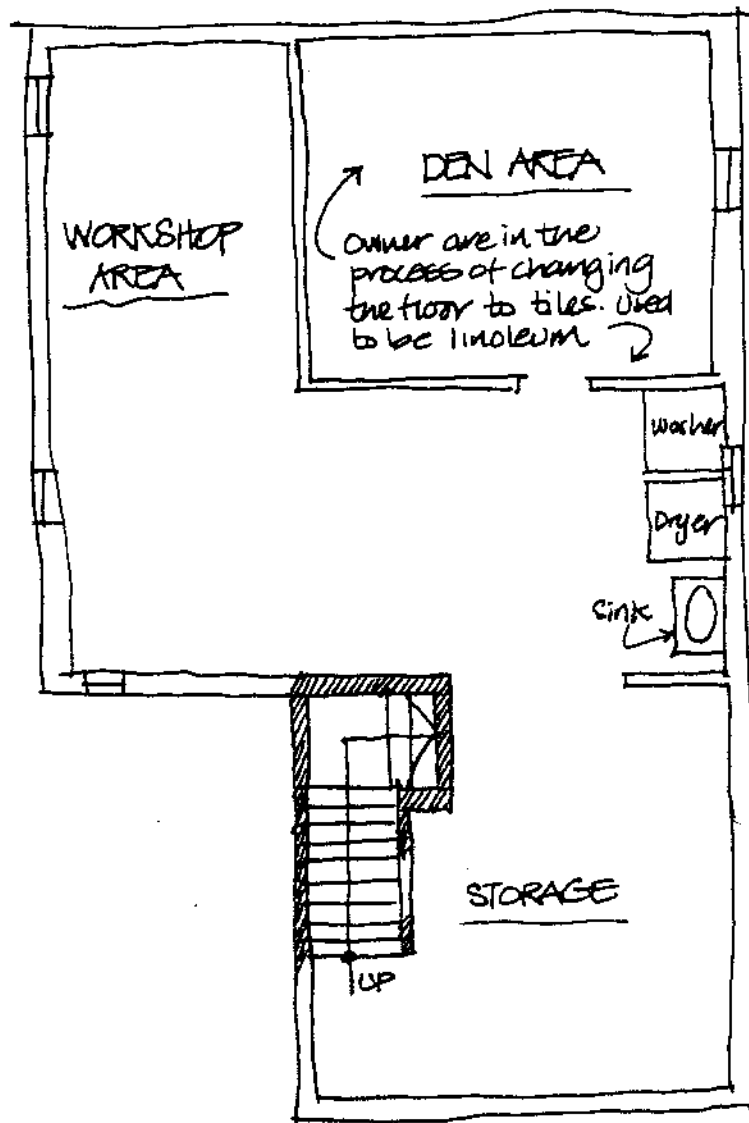


Basement A case study 10
(Schematic Plan)

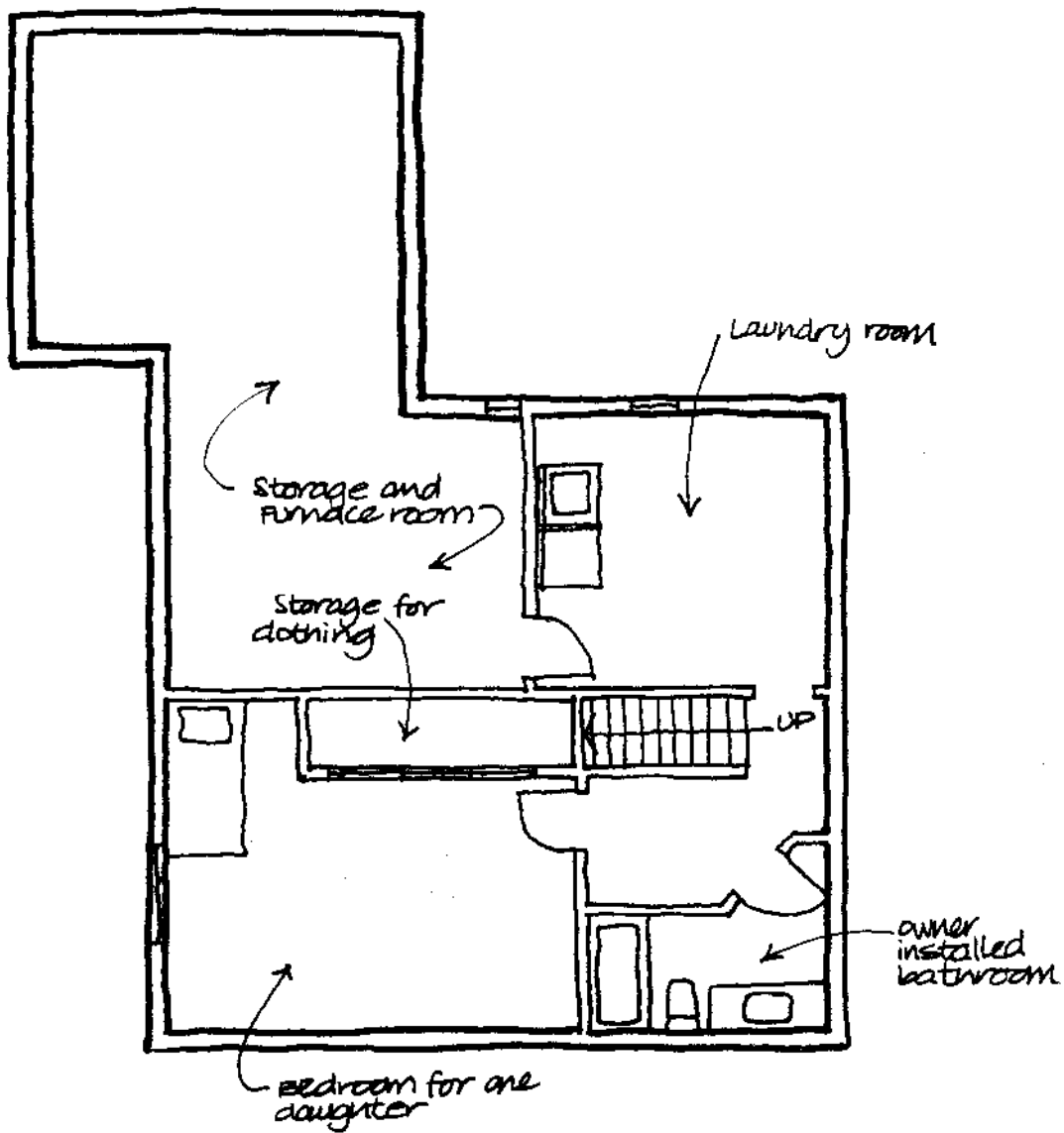


34. Plan of Dawson Basement, drawn by Maria Pantelopoulos.

—basement—



35. Plan of Murphy Basement, drawn by Maria Pantelopoulos.



36. Plan of Elliot Basement, drawn by Maria Pantelopoulos.

families who did not have basements (Gelineau, Robinson). In these cases, freed-up bedrooms also became dens/t.v. rooms (see Wiggins, Gelineau case studies). Unlike the home owners with basements, they did not have the advantage of locating dens and laundry areas downstairs.

4. The Renovation Process: Errors and Achievements

As the WHL houses were intended to be in place only for the duration of the war, they lacked fundamental amenities. Foundations were only temporary, and the finishes and wiring were also substandard. The original closets and kitchen cabinets had no doors; light bulbs were illuminated by draw strings. Many new home owners faced the arduous job of installing basements, undertaken fairly early-on in most cases, and many upgraded their tentest ceilings and rock-wool insulated walls in the 1950s. During the immediate postwar era, many families added a garage to their home. There was also the myriad of alterations and additions to be done, as outlined previously, to meet the growing families' needs, as well as general maintenance, up-keep and upgrading.

The following tables outline the various renovations undertaken and who performed them.

Table 1: Major Changes to the Foundation, Basement, Mechanical Systems

Excavation of the Basement	Number	Percentage
Owner	7	58
Owner with family/friends	1	8
Hired Help	2	17
Contractor	2	17
Total	12	100

Constructing the Foundation		
Owner	3	25
Contractor	9	75
Total	2	100

Finishing the Basement		
Owner	9	69
Owner with help from family/friends	1	8
Hired Help	1	8
Contractor	2	15
Total	13	100

Installation of a new heating system		
Owner	2	11
Contractor	17	89
Total	19	100

Table 2: Major Changes to Interior Finishes/Systems

Expansion of the Kitchen	Number	Percentage
Owner	5	38
Owner with help from family/friends	1	8
Hired Help	1	8
Contractor	6	46
Total	13	100

Addition of Bedrooms		
Owner	6	50
Owner with help from family/friends	1	8
Hired Help	1	8
Contractor	4	34
Total	12	100

Upgrade of Bathroom/Kitchen Plumbing		
Owner	5	29
Owner with help from family/friends	4	24
Hired Help	2	12
Contractor	6	35
Total	12	100

Change of Kitchen Cabinets/Addition of Storage Space	Number	Percentage
Owner	12	56
Owner with help from family/friends	1	4
Hired Help	1	4
Contractor	8	36
Total	22	100

Replacement of Kitchen Floor	a	
Owner	17	68
Owner with help from family/friends	1	4
Hired Help	2	1
Contractor	5	20
Total	25	100

Replacement of Interior Finishes	a	
Owner	15	83
Hired Help	2	11
Contractor	1	6
Total	18	100

a=Includes cases where this modification has been performed twice.

Table 3: Changes Made to the Roof and Exterior Facade

Replacement of Roof Materials	Number^a	Percentage
Owner	4	17
Owner with help from family/friends	1	4
Hired Help	1	4
Contractor	18	75
Total	24	100

Replacement of Facade Materials	n	
Owner	2	10
Contractor	18	90
Total	20	100

Replacement of Windows		
Owner	0	0
Contractor	21	100
Total	21	100

Extension of Eaves	n	
Owner	5	38
Hired Help	1	8
Contractor	7	54
Total	24	100

Change of Roof Structure		
Owner	2	29
Owner with help from family/friends	1	14
Contractor	4	57
Total	7	100

a=Includes cases where this modification has been performed twice.

Table 4: Major Changes to the Site

Enclosure of the Front Porch	Number	Percentage
Owner	3	75
Owner with help from family/friends	1	25
Total	4	100

Addition of a Driveway/Carport	a	
Owner	7	39
Owner with help from family/friends	1	6
Contractor	10	55
Total	18	100

Addition of a Fence around Property		
Owner	5	50
Hired Help	1	10
Contractor	4	40
Total	10	100

Addition of a Garage		
Owner	2	100
Contractor	0	0
Total	2	100

a=Includes cases where this modification has been performed twice.

Discussion of Tables

Case-study findings show that, in general, the majority of renovations contracted out were those requiring above average technical skills. This included pouring foundations for a basement; modernizing the heating system; changing the roofing materials; adding a new facade; and replacing the windows. Changes which required less expertise, such as upgrading interior finishes, were often done by the owners. However, one particularly self-reliant owner even added hot water heating and aluminum siding to the home without help.

In general, the case studies reveal that while long-time residents tended to undertake many changes without professional help, more recent home owners, all single women in this case, frequently sought out professional help or involved friends and family.”

Self-help Renovations

Jobs done by owners themselves, like applying finishes and finishing basements, were often on-going projects. Since they were frequently executed at night, after work, on weekends and during holidays, self-executed renovation work often took a long time to complete. Mr. Nuttal described residents installing styrofoam sheets as insulation, popular at the time:

They'd take one room at a time and on the outside walls,

” Coleman, Illaszewicz, and Moger interviews.

they just tear it all down but it's one mess.¹⁰⁰

Edward Robinson discussed his neighbours' ongoing effort to install insulation on the inside of his home. This involved tearing out the wallboard to install the insulation:

This is ongoing: you buy four sheets of gyproc and make a mess of the house, swear you'll never do it again and get it eventually cleaned-up and then start again.¹⁰¹

Several owners mentioned the gradual changing of wall panelling, windows and even larger projects that were accomplished in stages.

Despite the intrusiveness, families stayed at home and endured the renovations. During Curtis Ingerville's bathroom renovation, the old cast-iron tub was hooked up to a hose and moved back and forth from the corridor to the bathroom at the end of every day so family members could wash.¹⁰² This was one job in a series of many upgrades that this owner made to his home. After installing a second bathroom in his basement, when his daughter was a child, he came back to renovate the first one several years later.

The Kemps, who did much of the work themselves, summed up the sometimes frustrating aspect of the self-help process:

You get to the point where you're absolutely sick and tired of this being brought down and that being built up. It just seems it goes on constantly; there's always work being done

¹⁰⁰ Nuttal interview.

¹⁰¹ Robinson interview.

¹⁰² Ingerville interview.

in this house.¹⁰³

Madge Kemp expressed a common sentiment among residents:

As you try to renovate, it seems you do one thing but you're creating another job, so it just seems it's never ending.¹⁰⁴

While owners generally found designing their own homes to be a rewarding and creative process, anecdotes from the interviews describe the round-about, and sometimes distressing design process that often occurred due to an owner's lack of design experience or training. Angelo Dimatteo's case provides an example of the continuous process of evaluation and design that took place in his home. In 1982, he constructed a large concrete deck lengthwise across the rear of the house. He remembers his impression of it after it was built:

I couldn't stay on the gallery because it was too warm. The sun reflected the stucco and the cement was very hot. I couldn't stand it. I was really sensitive with my eyes. I said, 'Let me build one tree'...I took a seed and there I made a tree.¹⁰⁵

Years later, he enjoyed the ample shade of this well-placed tree while sitting on his deck. In this case, as in many others, residents were not always able to anticipate the problems or situations that the next step would entail. Rather, they often reacted to each new set of problems or opportunities as they evolved.

Some residents, on the other hand, were very skilled at

¹⁰³ Madge Kemp interview.

¹⁰⁴ Madge Kemp interview.

¹⁰⁵ Dimatteo interview.

responding to this. Mr. Cabot, who moved to Ville St-Laurent in the 1950s, made elaborate architectural models to test his design ideas, much the way a professional architect would do.¹⁰⁶ He was a mechanic in production at Canadair. Cabot made a 1/2" model of his new bathroom in 1992 and also made a precise model of the entire house in the early 1980s to test the appearance of a new window (Fig. 37).¹⁰⁷

Not all owners were this skilled or experienced, however, and some desperately needed advice on spatial planning. In certain cases, the consequences of design decisions were very uncomfortable to live with and sometimes very expensive to fix.

The saga of the Kemp's solarium is a good illustration of the circuitous and costly design process experienced by many residents who had never been home owners before. Madge Kemp was wary when her husband installed the stairs accessing the new basement:

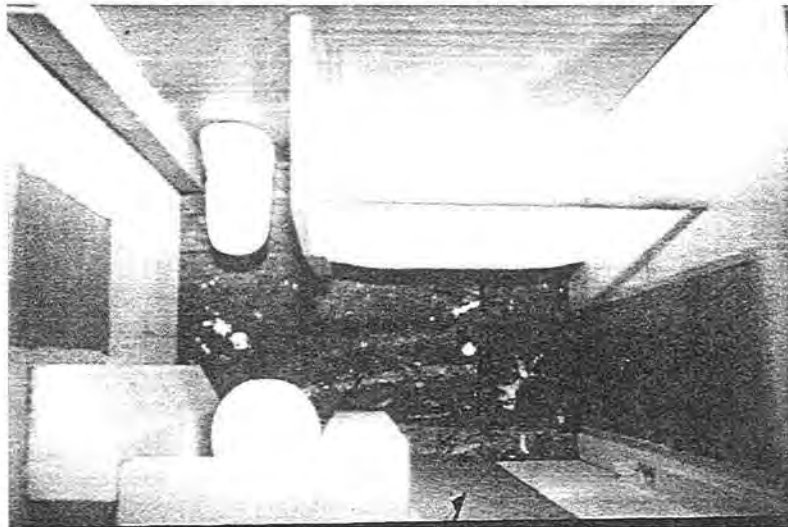
He insisted on building stairs outside to go down to the basement, and although I wasn't a Canadian, I said I didn't think in this climate you could have an outside entrance...It filled up with snow and you'd have to shovel snow out and as the snow's piling up higher and higher at the top of the stairs, you just couldn't ...We used to get big icicles coming off the roof, dripping down...so the stairs were always ...slippery!¹⁰⁸

Subsequently, Mrs. Kemp's husband extended the roof over the stairs so that they were inside the house and protected from the

¹⁰⁶ Cabot interview.

¹⁰⁷ Cabot interview.

¹⁰⁸ Kemp interview.



37. Photo of John Cabot's 1/2" bathroom model, by Josée Lamothe.

elements. This new addition became their solarium. The Kemps soon discovered their new room brought a new set of problems: the foundation was improperly installed so the floor heaved and the roof was incorrectly detailed so it leaked (see Kemp case study).

Notwithstanding, poor planning was the source of some of the most costly errors. Madge Kemp regretted placing her sink facing a wall instead of a window when her kitchen was remodelled. Only realizing her error after it was already built, it was too late to change and too costly an error to fix. The family simply had to live with the sink where it was.¹⁰⁹

Ida and Edward Robinson were also frustrated by their expensive mistakes. They added a second storey to their 4-1/2 room house shortly after buying it and installed stairs in a seemingly appropriate spot. Unfortunately, when they later wanted to enlarge the kitchen, they felt they had no choice but to move the stairs to yet another location. At that point, they felt that the series of alterations to their home could have been better planned (see Robinson case study). Mr. Robinson felt strongly that some sort of guidance and information would have been invaluable:

If Central Mortgage had given us information, let's say...if you want to renovate or re-build to expand a four room house, these are the possibilities:..., it would have helped us tremendously. We went in with absolutely no research...we just decided and built. It would have been invaluable to all of us here if someone had offered advice. We have done a lot of mistakes...If somebody had said, Pay an architect or somebody that can give you four programs to carry-

¹⁰⁹ Kemp interview.

out...and this program has to be carried out first even if you think it doesn't look nice, this has got to be done first!¹¹⁰

Although some owners were confident and self-sufficient in the renovation process, others echoed a common sentiment that support and guidance would have been important and integral to the self-help process (ie. guidelines for a handful of design options). This is, of course, true for all residential construction, but particularly so for the WHL homes because there were so few original standard types. Many owners faced the same initial design conditions, but instead, had only to learn through their own or their neighbours' achievements and mistakes.

Contracted Renovations: The Process

The self-help process previously described is a marked contrast to the contracted, design and build process. Unlike the additive changes made by owners themselves, the "demolish and rebuild" approach was almost always undertaken by contractors.

The manner in which renovations were carried out was often determined by the type of financing involved as well as by the persons executing the work. A large, contracted job involved a big investment, one that might require a loan, whereas a series of smaller renovations allocated over several years and carried out by owners might amount to the same expense but result in a series of more moderate and often less obtrusive renovations.

Several owners described the comprehensive renovation work

¹¹⁰ Robinson interview.

contractors had executed in their homes. Mrs. Nuttal's old kitchen was "gutted" by contractors from the company "Montreal Kitchens." These kitchen specialists then built an addition onto the house, and enlarged and redesigned her new kitchen. Mrs. Nuttal was able to boast that "at that time, this kitchen was very good--the latest thing..."¹¹¹ Other comprehensive projects included the Cabot's \$5,000 kitchen by "Cuisi Designs" (also enlarged by adding to the house),¹¹² the Alford's \$15-20,000 designer solarium,¹¹³ and the Elliot's \$28,000 basement renovation complete with new bathroom, laundry room, and heating.¹¹⁴ In these cases, professionals planned, executed and coordinated relatively radical design solutions compared to those executed by owners themselves.

The largest singular project was Mary Moger's \$52,500 addition in which all rear interior walls were gutted and a new concept plan was suggested and sketched by the contractor (see Moger case study).¹¹⁵ Comparing the radically-altered Moger plan to the Demine house reveals the marked difference between the two renovation processes.

The original Demine home is barely recognizable on the exterior, buried within the shell of the original structure. The

¹¹¹ Nuttal interview.

¹¹² Cabot interview.

¹¹³ Alford interview.

¹¹⁴ Elliot interview.

¹¹⁵ Moger interview.

Demines added a garage in the late 1950s, and between 1967-71, they built on an enormous front room, a living room bay window and rear bedroom.¹¹⁶ The size of the corner house is double its original size after 50 years of renovations, however, the original ground-floor plan is scrupulously intact. None of the original walls have been altered despite many successive phases of adding space to the house and changing the way spaces were used. The dining room occupies what was once the living room and the original front vestibule was preserved and appropriated as a linen closet (see Demine case study). The two homes reflect two very different design processes: one evolving gradually over time, the other changing radically over the course of one job.

Misunderstandings and Errors

Acquiring professional help entailed a different set of difficulties for home owners. Although most of the owners who hired professional help did not encounter any problems, three owners reported serious problems which stemmed from communication discrepancies. In these cases, contractors misunderstood how renovations were to be executed, in part, because owners had little or no previous design experience and/or lacked the tools to communicate their ideas properly.

Some owners were quite skilled at responding to this need. Mr. Cabot's detailed architectural models, previously described,

¹¹⁶ Demine interview.

not only helped him test his own design ideas but also succeeded in effectively communicating his ideas to others. In 1992, he made a 1/2" model of his new bathroom in order to show the contractor how they wanted the room to look.¹¹⁷ Not all owners were this skilled or experienced, however.

One owner¹¹⁸ hired a contractor to build a concrete porch at the rear of the house, and faced great disappointment when it did not look like what he had anticipated. Instead of a porch, the contractor had built an elevated area lacking a foundation and accessible via an iron staircase. The cavity created by the cement block superstructure was filled with earth and surfaced with layers of grass. Since this was clearly not the owner's intention, he refused to pay until the contractor returned to build the porch properly. Nothing was done and the porch deteriorated after one year. They ended up in court. As the owner said: "I couldn't do anything more... He didn't receive any money, the only thing I spent was a lot of my time."

Another conflict which arose from miscommunication between owner and contractor involved concrete steps at a front entrance.¹¹⁹ They were poured incorrectly, despite numerous discussions between owner and contractor.

Inexperience in dealing with renovation work also led owners into other predicaments. Many were unaware that they might need

¹¹⁷ Cabot interview.

¹¹⁸ Robinson interview.

¹¹⁹ Moger interview.

to protect themselves legally in case agreements were not met. By spelling out the details of a project in some form of written agreement or architectural drawings, contractors would face a binding contract that they were bound to honour.

This was the case with one owner who had new heating pipes installed in his home.¹²⁰ The company refused to extend the pipes into a newly built addition, despite the owner's claims that the work had been part of the original verbal agreement. As this had not been specified on paper, the owner had no means of recourse. He completed the job himself rather than pay more for the additional work.

Edward Robinson realized this necessity early in the renovation process of his home. He insisted on written agreements detailing every aspect of the work in order to facilitate communication and to make sure the work was completed:

Dealings with contractors have not all been positive...anything by word-of-mouth today is not worth much...we had a little problem where they [the contractors] mentioned they did the flashing...they took the chimney down and said they would replace the wood in the area of the hole of the chimney. But their replacement in the chimney hole was just putting these two little pieces of wood...so I had them write it specifically on the contract.¹²¹

Several owners complained of dealing with unqualified contractors more so than conflicts arising from misunderstandings with them. Simply finding a suitable contractor was, to some owners, a daunting experience in itself because they had little

¹²⁰ Kemp interview.

¹²¹ Robinson interview.

or no knowledge of the building industry.

Mary Moger had planned to spend \$52,500 on renovation work to her home that included increasing its size, improving the exterior walls and reroofing.¹²² She had never hired a contractor before and had no idea that a contractor's qualifications and activities were regulated by any governing bodies. Her strategy for finding a contractor was to ask family and friends for the names of contractors who had done work for them. This led to a renovation nightmare.

A \$10,000 down payment was made, demolition was started and the addition was well underway before she discovered that the contractor was not certified to perform large-scale residential renovations and that he did not know what he was doing. His specialty was, in fact, windows. Workers on the job pointed out several important design flaws in the contractor's plans: that the drawings of the upper floor indicated ceiling heights of less than 7 feet; and that the structural framework for the rear extension was thought to be inadequate by the carpenter.

After a time, the workers walked off the job because they were no longer getting paid. Months went by waiting for work to resume. Eventually she tried to sue the contractor in an effort to recoup the \$10,000 down payment:

When he gave me the estimate and we signed the contract he didn't realize what he was getting himself into. I think he wasn't going to make the money that he wanted to make.¹²³

¹²² Moger interview.

¹²³ Moger interview.

After consulting a lawyer, an architect, and a second contractor, she realized that all she could do was hire another contractor to finish the job with the money left from the loan. Both owners who renovated on their own and those who sought professional help expressed frustration regarding the availability of information. "Self-help" owners, whose regret was not that they had not hired a professional, pointed out that there was no place where they could receive information about the renovation process. Similarly, those owners who did hire professionals had limited knowledge of how to hire, deal with, and protect themselves from contractors. Despite these hardships, owners tended to be philosophical about their experiences:

Because of inexperience, live and let learn...and pay to learn! We have learned a lot since we have bought this house about contractors and contracting.¹²⁴

How many people like me who are inexperienced go through renovations...the majority of people it's once in a lifetime...it can't be more than once in a lifetime to go through the hell [of renovating], unless you actually know what you are doing and what they are doing.¹²⁵

¹²⁴ Robinson interview.

¹²⁵ Moger interview.

Copy-Cat Renovations

Another aspect of the renovation process is the "copy-cat" phenomena of which numerous examples were found throughout the WHL community. These neighbourhood trends were found in all aspects of architectural changes ranging from the choice of exterior cladding materials to design ideas.

Curtis Ingerville explained what happened when he made alterations to his roof line in 1963,

At the same time, I did the one next door because the neighbour wanted the same thing done. That's why the two houses look alike. He insisted I did his the same way I did mine.¹²⁶

Some copy-cat projects were motivated by cost. John Cabot, described how he managed to get a "good bargain" on a new asphalt driveway, in the late 1950s, because several of his neighbours were putting them in.¹²⁷ Another owner described the decision to install aluminum siding on her home in 1986, after she and her husband had noticed it on their neighbour's house: "The contractor came around with this aluminum siding," remembers Madeleine McMenamin, "it was over stock they wanted to move. If you go down our street, you will see quite a few with white and green siding."¹²⁸ This process was quite typical of postwar renovations in general, particularly with sheathing and driveway jobs. A salesman would make one sale, drop the price and make

¹²⁶ Ingerville interview.

¹²⁷ Cabot interview.

¹²⁸ McMenamin interview.

sure the job ran smoothly; he would then sit back and the neighbours would come to him, at which time he might raise the cost and lower the standards.

Equally revealing of the residents' propensity to copy their neighbours was the coincidence of similar projects in the same area. The flurry of activity surrounding the installation of postwar basements is probably the most obvious early example of this phenomena, as was the trend of adding upper floors to the homes in the years after they were purchased.

One enigmatic owner, Ernie Brown, became known as a local "expert" in home renovation. His participation in so many of the projects undoubtedly had some contribution to the "copy-cat" trends. Brown was a plumber by profession and a long-time resident of the St-Laurent wartime neighbourhood. After digging out his own basement in the late 1940s, and identifying the problems associated with it, he went on to excavate fifty-two basements in the neighbourhood until the 1970s. He also helped several neighbours add upper floors to their homes at night.¹²⁹

Other trends included the popularity of "utility" rooms with the increased use of washers and dryers beginning in the 1950s and the introduction of special rooms for televisions in the late 1960s. As discussed earlier, nearly all of the homes included areas or rooms for these purposes by the time the case studies were documented in 1993.

Choices of finishing materials in the postwar period also

¹²⁹ Brown/McMenamin interview.

followed fairly predictable cycles of "fashion". This was best described by one resident who spoke about the wall-board in her living room:

Wood panelling was very popular...it was a fad at the time. Everybody wanted wallboard. Some had mahogany. Some had beige...oh, God, when I think of it now...now that's finished so we covered it with wallpaper. Now that's just about finished.¹³⁰

The Elliots also installed panelling in the late 1960s, which they began replacing with drywall (in the living room) in 1991: "wood panelling was popular so we went in for that."¹³¹ Many homes still had panelled rooms and basements in 1993 (see Fig. 30).¹³²

It is important to mention how a public event, Expo '67, motivated a number of the case-study families to tackle home improvement projects in 1967. The Dimatteo family were expecting relatives from abroad,

Oh my God, now we have to do something! ...and I couldn't find the men (to do the renovations) because so many jobs were around.¹³³

They nonetheless managed to add a carport, an addition off the side of their kitchen, a new stone, brick and stucco facade, a wine cellar and new bathroom. Households prepared for receiving visitors to the city, or were simply caught up in the excitement of the times. They zealously renovated their homes, and

¹³⁰ Nuttal interview.

¹³¹ Elliot interview.

¹³² Eight case-study basements still had wood panelled walls.

¹³³ Dimatteo interview.

especially, their bathrooms. Mr. Alford remembered,

In 1967, we did the bathroom...it was our centennial project!¹³⁴

One other family, the Ingervilles, also had a new bathroom, while the Nuttals had a new kitchen and side addition and yet another made bedroom alterations (Gelineau). The Ingerville family summed-up the contagious sentiment of the time,

Everybody wanted a project for Expo year. It was a slogan then, 'What's your project for Expo?'¹³⁵

The Role of Women

Another observation is scantily documented in the literature on Canadian architecture, although it certainly has been acknowledged by the advertising industry for years. A large number of house renovations are initiated, undertaken, and/or supervised by women. Our case studies include at least five good examples of this.

In terms of labour, many husbands and wives worked together in the process. James and Joan Murphy laid the tiles in their bathrooms;¹³⁶ the Gelineaus replaced the shingles on their roof in 1956, even though Mrs. Gelineau was pregnant at the time.¹³⁷ Madge Kemp trowelled their basement floor at night on her hands and knees in 1948, while her husband mixed and dumped cement from

¹³⁴ Alford interview.

¹³⁵ Ingerville interview.

¹³⁶ Murphy interview.

¹³⁷ Gelineau interview.

a borrowed mixer in 4 foot strips.¹³⁸

The case studies reveal that many women found their wartime or postwar houses shockingly primitive, which may have inspired their active participation in its alteration process. When the Kemps moved into their four-room house in 1948, Madge Kemp was dismayed at the conditions. "I came from a nice home in England," she recalls. "My father was a police man and we had lived in some gorgeous police flats. When I first came out here in 1946, I wondered what on earth I had come to. It was quite a drastic change for me coming out here-- getting used to the winter-- getting used to the houses."¹³⁹

Indeed, many young war brides made conscious efforts to alter their houses to resemble their former family homes; Norah Alford, for example, who hailed from Lethbridge Alberta, grew corn in her back garden to recall her prairie farmhouse.¹⁴⁰

By far the most common role for women in the renovation of wartime housing, however, was managing contractors and finances. This became evident in the interviewing process in the readiness with which women, relative to men, could remember dates, costs, and contractors' names. Several women also recounted stories of relatively fierce battles with contractors who had not fulfilled their expectations.

Again, these were often skills exercised by residents at

¹³⁸ Kemp interview.

¹³⁹ Kemp interview.

¹⁴⁰ Alford interview.

home which were acquired at work. While both men and women were employed at Canadair and hence learned about construction, as we have seen, many women in the project worked in offices as clerks or secretaries, where they organized large jobs and contracts.

Recycled Products

Business connections were also important in several of our case studies for the acquiring of building materials at cost. Bill Gelineau, for example, was a laboratory designer for hospitals, universities and schools; this position gave him access to manufacturers who provided the material for the extensive renovations made to his house since 1953. This is also true of several women residents of Ville St-Laurent.

In both contracted and self-renovated jobs, examples of recycled or off-the-market materials are frequent. James Murphy had access to plumbing and heating materials as he was in the plumbing trade.¹⁴¹ Edward Robinson had a harder time of it. He remembers how scarce it was to find lumber when he decided to add another floor to his home,

We bought salvage beams 3x7 thirty-two feet long. We got 12 of them for 25 bucks, hand-hewn. At the time when I spotted these it was on Cote-de-Liesse Road and they were taking an old farmhouse apart and these things were out in the yard... 'course they were as crooked as a dog's tail... but you were glad enough to get the wood... they weighed a ton and the neighbours all come and help me to shove them up onto the roof when we took the roof off...¹⁴²

¹⁴¹ Murphy interview.

¹⁴² Robinson interview.

Other salvaged materials include the kitchen cabinets used by John Boysen. They originated from his employer's kitchen, Mr. Piazza Tomasso, in the Town of Mount Royal.¹⁴³

The advent of contractors also introduced a new means of access to products: Edward Robinson installed four 38-inch hospital doors in his upstairs bedrooms because they saved him money. They were sold to him by a contractor as a "real deal". According to Mr. Robinson, these heavy "monster doors" were far from ideal:

When my daughter got a huff on she'd go upstairs and slam that door and the house would rattle for about five minutes.¹⁴⁴

Mary Moger also took advantage of deals that her general contractor presented to her. Both the pedestal sink in her new basement bathroom and the bay window she had installed in her living room were leftovers from her contractor's previous jobs. The window had been custom-made for a previous client, who in the end had decided not to use it.¹⁴⁵ In all these cases, the products were not what the owners preferred, but rather, what they were willing to settle for because it saved them money.

¹⁴³ Boysen interview.

¹⁴⁴ Robinson interview.

¹⁴⁵ Moger interview.

Factory Production and Domestic Renovation

The connection of factory production and domestic renovation is clear in the Demine family photo album (see Demine case study). Photographs of machines are interspersed throughout the album with numerous shots of their WHL house. Other case-study houses are equally revealing of this connection between building construction and mechanical production. "After working in the war factory many of us acquired the skills. . . if you can build an airplane you can certainly build a house," remembers one interviewee.¹⁴⁶ There is plenty of evidence to suggest that much informal advice about home renovation was gained from colleagues at Canadair.

The ability to fix things, the high level of understanding of building construction, and the willingness or confidence to try was part of society's expectations of men in general during the war, but especially of those involved in factory production. "People have changed," recounts Curtis Ingerville. "My generation could do things; people were more self-sufficient then. Many of us had little previous experience with house renovation, but were not afraid. We had lots of energy but not much money. Back then you didn't have to study to do things."¹⁴⁷

New Products

The owners of the wartime homes were, to some extent, test

¹⁴⁶ Kemp interview.

¹⁴⁷ Ingerville interview.

cases for the assortment of newly-manufactured products available on the market. Some of them would later be improved upon and become standard building practice, while others would eventually become obsolete in the buyer's market.

One owner, Angelo Dimatteo, had an early encounter with a new type of wallboard material. His experience illustrates the spirit of innovation that existed among the residents in the early years of home ownership, which was not to be hindered by a lack of technical knowledge:

Instead of removing the tentest, I said, 'Why not put the gyproc on top'...It took longer nails, and I did it myself. It was a hard job. My wife used to help me and sometimes (a friend) used to come and help me...I never knew there was this kind of material. A friend told me (about it). It was new to me. It was new to the market, too.¹⁴⁸

While gyproc was to become a staple construction material in the years that followed, not all products proved as successful. Mr. Alford discussed the ever-changing improvements to insulation and the great frustrations this caused him:

The rock-wool: that was going to save you all tons of money. You weren't going to have to use a heater in the house. So everybody jumped on the ball and put in rock-wool. In a few years time, the rock-wool's no good...

But you did something you weren't supposed to do at the time: you packed it in. We only had that little space where the 2x4 is, pushing it down... naturally it rotted...we didn't have any airspace.

Then the next thing was the styrofoam. The white styrofoam came out. Oh, that was so much better than the rock-wool. I put the white styrofoam in the shed...and it ended upstairs here, too...And then the next thing you know that's no damn good! The fibreglass came out, the pink fibreglass. Oh, this is super! So I finished all the ceiling here...with the fibreglass...then the latest was the blue styrofoam. That was the supreme. So we got four

¹⁴⁸ Dimatteo interview.

different kinds of insulation and every couple of years they came out with something superseding the other one.¹⁴⁹

¹⁴⁹ Alford interview.

5. Conclusions: Wartime Housing Today

While the WHL project is a successful example of the process of homeownership, the fundamental differences between the reality of 1941 and 1995 should be kept in mind. Whereas the national mandate of Wartime Housing Limited was to provide accommodation for thousands of workers and their families across the country as fast and as economically as possible, the current housing demand is a much more variable issue. Nonetheless, the strong general demand for affordable housing still exists. Empowering owners by making homes affordable enough for them to buy and not rent is a timely concern. "Starting small" and growing under the owner's own steam, self-help, are aspects of the wartime housing experience that are certainly applicable today.

House design: Starting Small

Is the minimalist approach followed by WHL one that might be followed in current building practice, with the aim to bring down initial costs? What does "starting small" imply today? The notion of starting small in the original WHL homes implied settling for a minimum number of rooms. A priority of rooms was established for WHL owners. Basic rooms for starter families included: kitchen, living room, bedrooms, bathroom. Secondary areas added in subsequent years included enclosed porches, utility/laundry room, separate dining room, den or t.v. room, rec-room, guest bedroom, office, and outdoor accessible storage and were accommodated in either additions, or upstairs/basement

expansion.

Whether a similar, basic starter home would be sufficient in today's standards is worth some consideration. While the two-storey home was basically adequate as a starter home fifty years ago, it may not be now. One young family, the Moffords, were living in a WHL two-storey home at the time of the study, that had been expanded both in the back and with dormers. They chose to use extra downstairs rooms as playroom, dining, and laundry/storage, at the expense of sharing tiny, upstairs bedrooms. These common rooms should not be eliminated in any new starter home, especially when a large family is involved. As mentioned before, the Moffords found their (already expanded) first home to be too small. They would have appreciated more bedrooms and more space upstairs.¹⁵⁰

Starting with these main rooms might still be an option for small families today. However, re-evaluating the sizes of these starter rooms would be an important first step. The proliferation of extensions made to existing rooms in the one-storey house attests to their inadequate original size. An extra few feet in one direction would have made a great deal of difference to the original inhabitants while not increasing the cost tremendously at the time of construction. While it might be expected that a family may want to build an addition they should not have to go through the process of renovation to gain a few extra feet in an existing room. Kitchens, in particular, would

¹⁵⁰ Mofford interview.

need to be considerably larger to begin with.

The stairs in the H-15 house established an 8-foot wide room dimension, which is so small it consequently limits its variety of uses. Starting with a minimum 10-foot width would allow much more flexibility. Since the original WHL houses were built, a laundry area has become a standard feature of housing, like providing some measure of suitable external airlock should also be included in any new scheme. The small vestibules included in the WHL homes were largely unsuccessful, since they were too small.

Levels of Completion

The WHL homes were built with the barest of amenities: there were no closet nor cupboard doors, no proper lighting fixtures, and no permanent foundations. It would, of course, be unrealistic to omit these amenities in today's market. But based on the WHL record, it is realistic to expect owners to be able to do some work themselves, entailing a minimum cost of materials. While installing a permanent basement was beyond the scope of most residents, most of them undertook to finish the interior themselves. Designating an unfinished basement as a space for future expansion is a viable option especially if a plumbing hook-up is provided for an eventual bathroom or laundry area. Eight of the WHL case-study owners eventually installed bathrooms, either in the basement or on the second floor (if they had one).

Since finishes and simple plan alterations, such as enlarging an opening, or re-orienting an entry were also undertaken by owners, leaving some partitions up to the owner's discretion is also a possible cost saver. Dividing the upstairs into separate bedrooms, as family size requires, is one example. As mentioned previously, the H-15 house had upstairs windows that were conducive to partitioning one large bedroom into two smaller ones. Designing windows to anticipate this type of change will be useful in future projects.

It should be mentioned that some WHL owners felt reluctant to invest more money in their homes, as it would not increase their market value.¹⁵¹ As mentioned before, George Poozhikala decided not to add dormers to his second floor because he felt "no matter how much you put in, the area has a value, so (the house) doesn't appreciate more than that. So maybe if this house were in a different place, it would be more valuable."¹⁵² Realizing this limitation should thus also be factored into any planning decision.

Permanent Foundations

As for the omission of permanent foundations, it would be very difficult today to produce houses for sale without providing the proper foundations. Most municipalities, banks and the CMHC will not consider approving the construction of dwelling that

¹⁵¹ Nuttal and Mofford interviews.

¹⁵² Poozhikala interview.

does not stand on firm foundations. From our interviews, the hardship experienced by the newly minted owners who wanted to provide their house with a full basement rather than the marginal foundation offered by CMHC as part of the sales package speaks against repeating this option in any future development. Several owners who settled for the simple foundation regretted not having a basement in later years. Of those who did get one, some lamented the low ceiling height they had installed, not anticipating their eventual incorporation into finished rooms. The advantages of savings in initial construction time and costs, and flexibility in deciding whether to include a full basement or not at some future date does not outweigh the difficulties that inserting a foundation under an existing house engenders. Besides, the mobile home industry already fill the market niche of affordable housing without foundations.

House design: Temporary Construction

Edward Robinson found the 'temporary' framing to be an advantage when he added the second storey to his four-room WHL house:

The roof section came in 4'x12' lengths and were bolted together, fortunately, so when we took the roof off and the sides...we laid it on the ground , built up the sides, picked-up the pieces...That last section must have weighed 5000 lbs. Pulling it up with the rope...We eventually got it up one section at a time...there was nobody here that day (to help).¹⁵³

The modular nature of the framing system, while perhaps

¹⁵³ Robinson interview.

beneficial to owners who demolished walls to build extensions, did not produce benefits beyond that modest scale.

The WHL panel system did not contribute to the new technologies in the housing industry, despite expectations by the originators of the WHL company that the experience would inevitably lead to advances in the prefabrication of houses. After the war, there was a return to traditional building methods, and the development of other prefab methods came much later on. In fact, the WHL unit was clearly more expensive than comparative single family houses built at the time. The explanation lay in the redundancies of the panel system, which required extra materials such as double members at joints, and large numbers of expensive fasteners. The system was successful in substantiating the politically-motivated claim of 'demountability' and it satisfied a certain speed of erection. But never was the most efficient option.

The one seeming advantage the WHL project had over typical construction was the large number of units required in most locations. The advantage of scale has since been recognized and applied in other aspects of the prefab industry. At the time, however, supplies were at a premium and there was little or no advantage to procuring supplies in bulk.

As for the framing itself, much of the deterioration seemed to be related to the lack of foundation. One owner mentioned that by the time the foundation came to be installed, the cedar piles and wooden framing had already begun to rot. He also

remembered that a coal shed, which had been left on its original piles, rotted through and had to be demolished entirely.¹⁵⁴

The second biggest problem was the decision to frame the roof using 2x4's instead of 2x6's. Mr. Robinson feels this economic measure, worsened by the use of green wood, explains the sagging found in most of the homes today. Other deterioration of the framing occurred because water had seeped in at the roof-wall joint.¹⁵⁵ Fortunately, eaves were installed in nearly all of the homes before this became detrimental. One resident felt that most of the eaves are sagging today because they were not anchored properly, a result that could have been avoided had they been integrated in the roof from the beginning.¹⁵⁶

One of the biggest lessons to be learned from the WHL houses is not to scrimp on construction quality. None of the WHL cost-savings were beneficial to the house and only served to create more costly problems in the long term.

House design: Aesthetics

The promise of 'demountability' was an attempt to quell opposition by those who looked with fear at slum conditions that had grown out of hasty housing projects in the United States. It was a fine sense of balance on the part of the architects to mediate the 'temporary' quality of the projects advertised by the

¹⁵⁴ Murphy interview.

¹⁵⁵ Robinson interview.

¹⁵⁶ Moger interview.

dismountable construction with a diametrically-opposed sense of rootedness that was desired by the workers and their families. There must have been some speculation, in the minds of the designers, on the unlikelihood of dismantelling perfectly-acceptable homes after the war.

This challenge of providing variety would be addressed several ways. The manipulation of the two simple plans, alternating roof orientations, the variation in cladding material, and the romantic site planning were all orchestrated to satisfy the contradictory demands of the WHL mandate.

Ironically, this divergent aspect of WHL design is the one most imitated in postwar years by private housing developers who planned communities with the aim of getting the most for the least: 'How to dress up essentially similar houses (which would cost less to make) so that they look different', 'how to make relatively similar houses seem solid and rooted and 'how to turn featureless, flat farmland into romantically meandering, lushly landscaped streets'. In this regard, the WHL provided an ideal precedent for the efficient, postwar, suburban house industry.

Site Considerations

Had the emphasis of WHL not been on the temporary nature of the projects, much higher densities and great economies might have been achieved by using standard Montreal rowhouse construction, with standard masonry mitoyen fire walls. The desire to provide plenty of fresh air and greenery to the workers

and their families, partly to offset the stigma of living in a demountable or temporary house, was a factor in the creation of the almost rural feel of the Norvic development.

Fortunately, the possibility of house expansion depended largely on the generous size of the Norvic lots. In the WHL community, the long lots fostered rear additions and unlike in the city, owners were not reluctant to abandon precious green space to house expansion. Mrs. Nuttal's WHL site is one of the shortest ones in the study at 86 feet long. She had already extended to the back and was considering extending more, until she reconsidered her backyard:

We have a very nice backyard and I could not see losing it to an (another larger) addition. We have a very short frontage (10 ft.), so we prefer the back.¹⁵⁷

Most lots are generous at both front and back ends, most being between 95-110 feet in length. At the Kemp residence, for example, they have as much as 44 feet of backyard beyond their rear addition.

Economies made at the site level included spartan communal amenities, no paved sidewalks, walkways or roads. Inverting the house plan for every second house allowed shared planked walkways and more efficient common plumbing hook-ups.

Landscaping cost-savers today could include combined walkways and gravel driveways. Most of the common entrance walkways are gone now. Driveways tend to double as walkways in most of the adapted WHL sites today. Paved driveways, carports

¹⁵⁷ Nuttal interview.

and indoor garages were installed by some residents as the years passed, but nearly all added some sort of rudimentary gravel driveway early on.¹⁵⁸

Economic Concerns

Several economic factors influenced the renovation process of the WHL homes. These include the means of financing the newly purchased homes, the accessibility of credit, and the property taxes imposed by the city of St-Laurent.

The Norvic project and WHL homes were an initial financial success because all tenants had steady, well-paying jobs. The WHL had fairly strict tenant policies and charged relatively steep rents (from \$22 to \$30 per month). The 'captive' tenants complied, as they could afford to, since the right to occupy a WHL home depended on employment in a wartime industry, and because alternative housing was often not available or was too far away to be a realistic option.

While the "Victory Gardens" planted by the Canadair workers and their families provide an example of tenants' efforts to landscape the surrounding grounds, evidence has shown that only limited upgrading was done to the homes during the rental period.¹⁵⁹ The real flurry of renovation activity began after

¹⁵⁸ Only three of the 25 homes had no driveway at the time of the study (Ingerville, Bonnema, Meyer).

¹⁵⁹ Interviews with several tenants describe the state of neglect of many rented WHL homes. These include: Morin, Boysen, Poozhikala, and Kemp.

the homes were purchased.

The means of financing the newly-purchased WHL homes was a critical factor in facilitating and shaping the self-help process. While tenant status and steep rental payments of the early years were prohibitive to home improvements, the status of owner combined with relatively low mortgage payments established around 1950, when the homes were sold, were incentives to modifications. The average mortgage of the wartime houses was twenty years with a fixed interest rate of 3%, payable to the Central Housing and Mortgage Corporation.¹⁶⁰ Most of the new owners could easily afford the mortgage payments and at the same time, they also managed to save enough to invest in home-renovations periodically.

Our case studies illustrate the typical financial arrangement. The purchase price of the Alford home was \$2,500 in 1951, and their mortgage was arranged in monthly instalments of \$30/month. By 1966, the payments had risen to \$46/month.¹⁶¹ Low interest rates on mortgages continued into the 1970s. The Illaszewicz family bought their home in 1973. Their mortgage payments began at \$76/month and rose to \$102/month by 1992, including taxes.¹⁶²

According to Teresa Illaszewicz, these low monthly payments

¹⁶⁰ Mr. Morin is former director and co-founder of the Caisse Populaire Notre-Dame du Bois Franc, which organized many of the mortgages of the Canadair employees.

¹⁶¹ Alford interview.

¹⁶² Illaszewicz interview.

gave her the financial freedom to renovate her house gradually as her accumulated savings allowed. Her successive home improvements, which were executed over twenty years time, have gradually amounted to over \$36,000. This series of small scale renovations would be different had they been executed all at once, but this would have required a considerable expense and entailed a loan that she might not have wanted or have been able to obtain.

Loans were not standard practice in the early postwar years when the homes were first purchased, and did not initially play a role in shaping the process of WHL home improvement. There was a general reluctance to borrow money during these years, probably as a result of the financial devastation experienced during the 1930s Depression.¹⁶³ Social welfare programs, such as medicare and unemployment benefits, were non-existent in Canada at that time and therefore families depended on savings for emergencies. In addition, the concept of credit was a new one to Canadians and was not widely used by consumers until the late 1960s.¹⁶⁴

Moreover, men and women who served overseas brought home with them a strong sense of independence and pride to "make it on one's own". One British war bride described the attitude, "In those days borrowing one hundred dollars from the bank was

¹⁶³ Information provided by Prof. Norbert Schoenauer, McGill University.

¹⁶⁴ Canadian merchants adopted the first credit card in 1968, "BankAmericard" (changed to "Visa" in 1976). See Lewis Mandell, The Credit Card Industry: A History (Boston, Massachusetts: Twayne Publishers, 1990), xii-xv.

unheard of... no one knew whether we had the money to feed our children- we never asked anyone for help!"¹⁶⁵ For these reasons, WHL owners relied on savings for the financing of renovations. And, as we have seen, renovations were done gradually, as money became available, rather than all at once.

Nevertheless, one owner tried with some diligence to arrange for a loan.¹⁶⁶ His story is a telling record of how difficult this was at that time. Soon after purchasing an original WHL home in the early 1950s, Edward Robinson realized that the alterations needed to accommodate his large family would be costly and sought out a loan. As the owner of a 4-1/2 room house, he was limited to borrowing only \$500. This allowed him to build a second storey onto his single-storey home. Once this was done, his house then had enough rooms to qualify him to borrow another \$1000, which he then needed to complete the large-scale job.

As one resident mentioned, loans were not common practice during those years, and were "frowned upon" by banks and neighbours. Mr. Robinson was the only owner found to have arranged for one and can testify as to how difficult it was. After his initial experience with loans, Mr. Robinson followed a more moderate spending pattern, similar to the other new owners, and routinely invested year-end employment bonuses into upgrading his WHL house. This situation underlines the consequent

¹⁶⁵ Kemp interview.

¹⁶⁶ Robinson interview.

importance of building within one's means. It was the norm to complete projects as money became available and it set the stage for the self-help process of continual renovations to upgrade and adapt homes to suit changing family needs.

Even in recent years, very few owners procured loans to finance renovation projects. Mary Moger provides a contemporary example.¹⁶⁷ As described above, she made extensive changes to her home with a \$52,500 loan. From the case studies, it became evident that the type of financing greatly determined the renovation process. Moger's large scale changes involved intrusive demolition and construction, a contrast to the series of small scale renovations done gradually by Mrs. Illasciwicz.

The property taxes imposed by the City of St-Laurent also influenced, to some extent, the way in which renovation work was carried-out by owners. Renovation work of all kinds had to pass through a process of permits and approval from the City so that property evaluations could be raised and property taxes adjusted accordingly. This included building additions, any structural changes, changes of material, and interior renovations such as adding a bathroom or finishing a basement.

It is evident from the case studies that these further economic burdens both deterred architectural improvement¹⁶⁸ and/or forced people to work discretely. In both instances, this implied that the renovations would take longer, as owners tended

¹⁶⁷ Moger interview.

¹⁶⁸ Alford interview.

to do it themselves, after work, on weekends and during holidays.

The Government's Role in Planned Housing

The designers of Canadian wartime houses faced numerous challenges. There was barely a year between the first two thousand houses going up and the initiation of the project. They chose construction methods and set planning schedules flexible enough to accommodate conditions across Canada. This task was somewhat mitigated by the fact that the project was empowered by a broad national mandate and designed and built by an independent agency. This helped in getting around resource restrictions, eliminated processes like site acquisition and the obtaining of local building permits and accelerated the letting of building contracts. The fact that this WHL site straddled the boundary between Ville St-Laurent and Montreal illustrates the lack of concern to limit bureaucratic hurdles to a single municipality. Efficient town planning has often been at odds with local building bylaws, lacking the type of government endorsement of the WHL project.

Ownership vs. Tenantship

The first step in the self-help process was enabling the residents to purchase in the first place. One lesson to be learned from the WHL community is the difference that ownership versus tenantship can make. The condition of the homes when they were first purchased was described by several of the new owners

who were shocked to discover their poor condition after a few years of being lived-in by tenants.¹⁶⁹ Mr. Boysen said "the house was a mess" when he occupied it in 1950.¹⁷⁰ Madge Kemp described her new home:

When we first moved into this house, it was filthy dirty because they hadn't taken care of it because they weren't selling them. They weren't owners at that time.¹⁷¹

Another resident described the frenzy of activity in the months that proceeded the purchase of the homes. Mrs. Kemp and her husband stayed in their rented home while he worked on their new home to "make it liveable" :

He had all the floors sanded. They were a beautiful golden colour when we moved in. He had to work very hard on the toilet and the bathroom to get them all clean. But when we finally moved in here, it was just like moving into a new house. Of course, he had painted every room, it was spotless...He worked very hard on it.¹⁷²

The commitment to their homes was articulated by many of the owners, not only by the way they took care of the buildings, but also quite explicitly in their comments.

In the end, the process of do-it-yourself renovations endeared residents to their houses. Bill Gelineau called his house "a super house,"¹⁷³ and stories prevail of families who wanted their houses back after living elsewhere. John Boysen,

¹⁶⁹ The Morins also described this situation.

¹⁷⁰ Boysen interview.

¹⁷¹ Kemp interview.

¹⁷² Kemp interview.

¹⁷³ Gelineau interview.

the owner of Poppy's Villa, summed it all up, "I love this place because I did all the work myself," he said, "I dug out the basement myself...it was a labour of love."¹⁷⁴ Mr. Alford called his house a "handyman's dream" then added, "there's always something to be done."¹⁷⁵

We speculate that this opportunity (or necessity) for home renovation and the consequent labour invested in the house by residents themselves may account for the large number of longtime residents. Madge Kemp said she would have moved long ago, were it not for her husband, "he's done so much with the house, he doesn't want to leave it."

The main lesson of the Canadian wartime housing experience is that any measure that makes homeownership more accessible is a worthwhile effort. Even if the home is a minimalist structure in the beginning, its relatively low initial cost allows the maximum number of people to participate in the process of acquisition and adaptation.

¹⁷⁴ Boysen interview.

¹⁷⁵ Alford interview.

List of Illustrations

1. Aerial View of St-Laurent, 1929, Ville St-Laurent Archives.
2. Aerial View of St-Laurent, 1955, Ville St-Laurent Archives.
3. Photo of Canadair factory, Ville St-Laurent Archives.
4. Workmen erect prefabricated house for wartime workers near Halifax, Nova Scotia, National Film Board Collection, National Archives.
5. Dwelling Types. From RAIC Journal (January 1942), 3.
6. Aerial View of Norvic, Québec National Archives.
7. WHL plan submitted to the City of Montreal for street designation, City of Montreal Archives.
8. Map of Ville St-Laurent, 1949, Ville St-Laurent Archives.
9. Drawing of Original WHL Framing Plan, National Archives.
10. The H-12 Single-storey House, Main roof perpendicular to street, drawn by Jennifer Beardsley.
11. H-12 Single-storey Houses, Front Elevations (Murphy, Nuttal, Cabot, Dimatteo), drawn by Jennifer Beardsley.
12. The H-12 Single-storey House, Main roof parallel to street, drawn by Jennifer Beardsley.
13. H-12 Single-storey Houses, Side Elevations (Kemp and Ingerville), drawn by Jennifer Beardsley.
14. Photo of Gervais Entrance, by Josée Lamothe.
15. Photo of Ingerville Entrance, by Josée Lamothe.
16. Photo of Murphy Built-in Cupboard, by Josée Lamothe.
17. Photo of Cabot Stair Storage, by Josée Lamothe.
18. Photo of Cabot Closet/Vanity, by Josée Lamothe.
19. Plan of Demine house, drawn by Maria Pantelopoulos.
20. Plan of Ingerville house, drawn by Maria Pantelopoulos.
21. Original WHL Front Elevation, National Archives.

22. Original WHL Side Elevation, National Archives.
 23. H-15 house, all roofs parallel to street, drawn by Jennifer Beardsley.
 24. H-15 House with Gable Additions, Side Elevations (Moger, Poozhikala and Morin), drawn by Jennifer Beardsley.
 25. H-15 House with Shed Additions, Side Elevations (Gelineau, Wiggins and Bonnema), drawn by Jennifer Beardsley.
 26. H-15 house with Dormer Additions, Side Elevations (Meyer and Mofford), drawn by Jennifer Beardsley.
 27. Photo of Mrs. Wiggins Storage, by Josée Lamothe.
 28. Photo of Morin Shelves and Cupboards, by Josée Lamothe.
 29. Photo of Alford Storage, by Josée Lamothe.
 30. Photo of Cabot Basement, by Josée Lamothe.
 31. Plan of Illaszewicz Basement, drawn by Maria Pantelopoulos.
 32. Plan of Nuttal Basement, drawn by Maria Pantelopoulos.
 33. Plan of Cabot Basement, drawn by Maria Pantelopoulos.
 34. Plan of Dawson Basement, drawn by Maria Pantelopoulos.
 35. Plan of Murphy Basement, drawn by Maria Pantelopoulos.
 36. Plan of Elliot Basement, drawn by Maria Pantelopoulos.
 37. Photo of John Cabot's 1/2" bathroom model, by Josée Lamothe.
- All case-study photos were taken by Josée Lamothe, except Demine and Cabot front elevations which were taken by Jennifer Beardsley. All case-study drawings are by Jennifer Beardsley.

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