

WARTIME HOUSING AND ARCHITECTURAL CHANGE, 1942-1992¹

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At first glance, the tree-lined streets of Ville St-Laurent, Quebec, resemble most other North American postwar suburbs (Fig. 1). 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.² 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 factory workers during World War II (Fig. 2). The original inhabitants of these tiny houses worked not in Montreal, but in the nearby Canadair factory, which produced Catalina war planes for the Allied Forces.³ Few of the early inhabitants owned cars.

The first residents of Ville St-Laurent, in fact, describe their neighbourhood as "out in the boondocks," "in the middle of nowhere," and "resembling an army camp."⁴ Narrow roads without sidewalks were largely defined by the ditches which ran alongside them. There were no trees. Makeshift bridges shared between two families provided access to each house. "The project," as residents still call it, was nicknamed "Mudville."

1. The authors gratefully acknowledge the support of the Canada Mortgage and Housing Corporation and the assistance of Josee Lamothe and Maria Pantelopoulos. We would also like to thank our 25 case-study families, who allowed us to document their homes. A version of this paper was presented at the annual meeting of the Society for the Study of Architecture in Canada, June 1994.

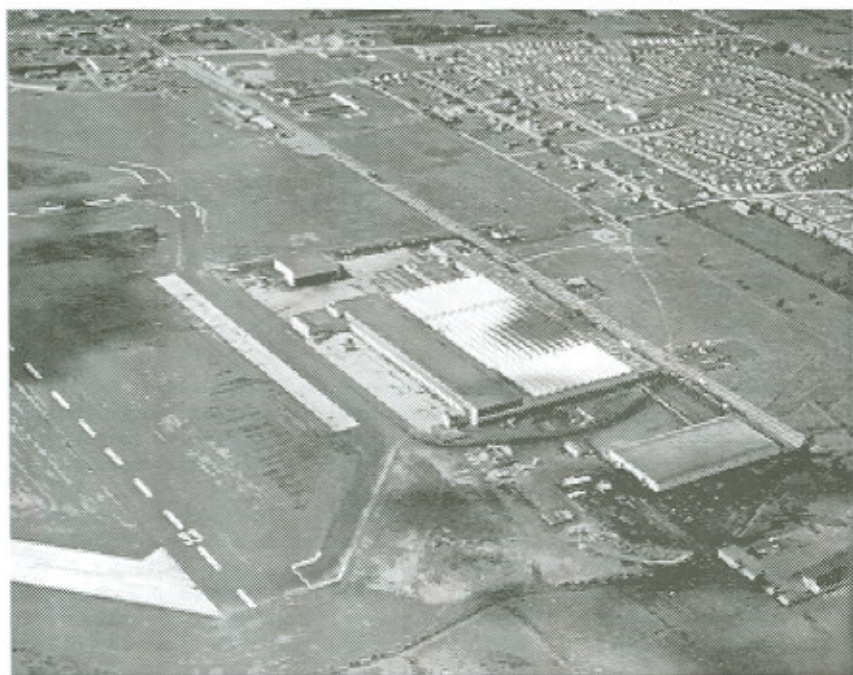
2. Ville St-Laurent was originally settled by three brothers named Descaries in the late seventeenth century. For a general history of the area, see Rumilly, Robert, 1970. *Histoire de Saint-Laurent*, Montreal. The city nearly doubled its size during World War II; see Snyder, B.J. Jr. 1950. Marked Expansion in Industrial and Residential Saint-Laurent, *The Monitor*, 21 September.

3. The role of Canadair in the development of aeronautical engineering was the subject of the exhibition, "Genie en vol: 50 ans d'évolution aéronautique," at the Musée d'art de Saint-Laurent.

4. Interviews which include such comments are Alford and Kemp.



Typical street in Ville St-Laurent today, photograph A. Adams.



Aerial view of Ville St-Laurent.

Research Objectives

This paper comprises the intermediate 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. Modelled on 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.⁵ In-depth interviews with longtime occupants of the wartime neighbourhood and a comprehensive photographic survey of the area—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.⁶

More interesting, perhaps, are our three current working 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.⁷ 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. Instead of focusing on formal analysis, that is, this project assumes architecture as a dynamic process and grants building users agency in the shaping of their own spaces.⁸ Architecture as imagined or constructed by its designers is only a starting point for such analyses.

5. Boudon, Philippe. 1969. *Lived-in Architecture: Le Corbusier's Pessac Revisited*. Cambridge: MIT Press; Gans, Herbert J. 1967. *The Levittowners: Ways of Life and Politics in a New Suburban Community*. New York: Pantheon.
6. Following the interviews, detailed plans were drawn of each residence, accompanied by photographs of individual rooms. The case-study houses were chosen from both external evidence of extensive renovation and a conscious attempt to include original owners of wartime houses.
7. Galloway, Mary B. 1978. *User Adaptations of Wartime Housing*. M.A. thesis, University of Calgary; Marchand, Denys. 1983. *Wartime Housing Ltd.: 40 ans de transformation*. Montreal: Université de Montreal; Sijpkes, Pieter. 1983. "Wartime Housing in Canada: Variations on a Theme," paper presented at the annual meeting of the Association of Collegiate Schools of Architecture, Washington, DC.
8. 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*. 1995. ed. Elizabeth Cromley and Carter L. Hudgins, pp.236-258. Knoxville: University of Tennessee Press; On this "functional" approach to vernacular architecture, see Upton, Dell and

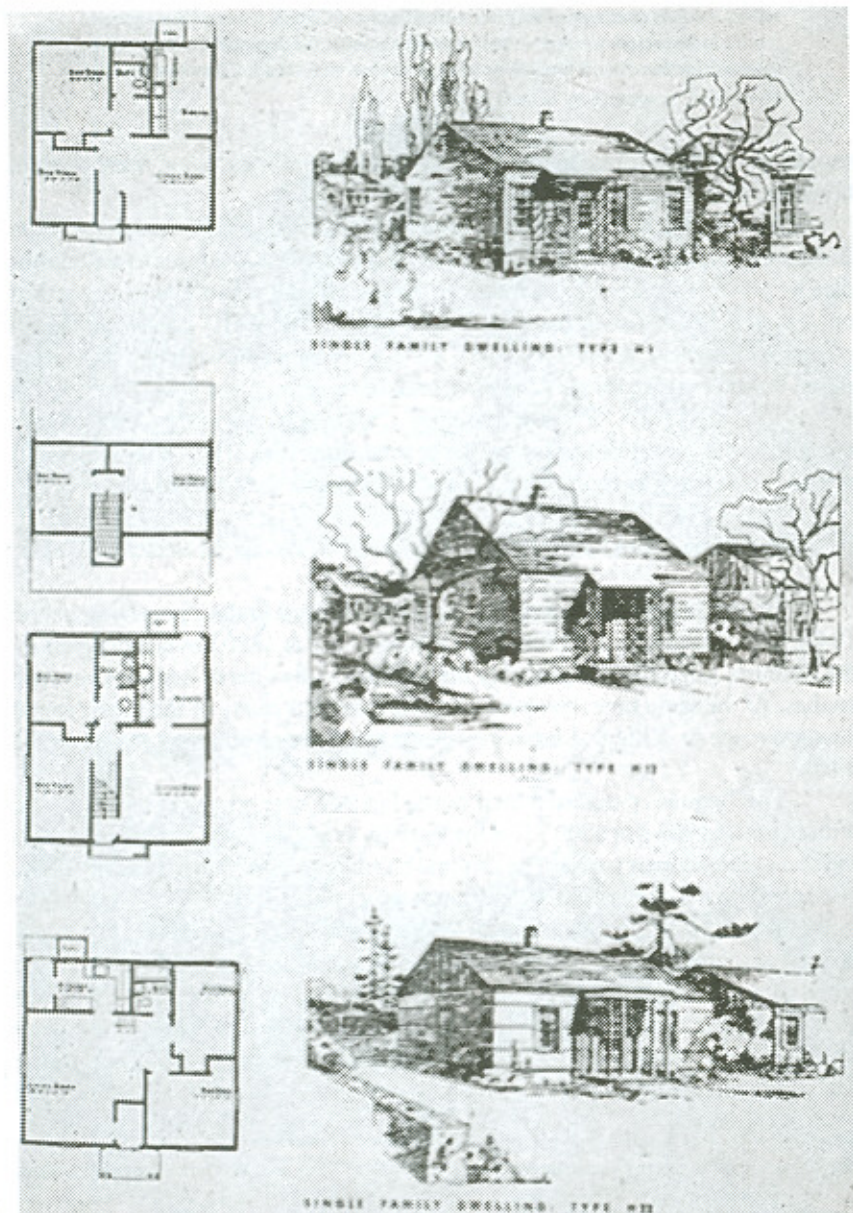
Folklorist Michael Ann Williams has described this methodology (particularly the use of oral testimony) in the study of domestic space as a "reinhabitation of the house through narrative" and has suggested that the richness of this case-study approach may call into question the usefulness of studying buildings as artifacts.⁹ Following this thinking, we hope our research contributes to a growing understanding of the do-it-yourself home improvement industry in Canada, and, more generally, to the study of vernacular architecture.

Upon the outbreak of World War II, Canada became a major supplier of armaments to the Allied forces. It was therefore necessary not only to build new factories all over the country (which were often located where land was available, rather than near existing housing stock) but thousands of new housing units for workers as well. At the beginning of the war, this new housing was financed under Part I of the National Housing Act of 1938, but it soon became obvious that this act, which stipulated that the federal government would guarantee part of the new house mortgage, did not fulfill the vast need for houses across Canada.¹⁰ In 1941, an Order in Council was passed, establishing Wartime Housing Limited (WHL).¹¹

WHL was empowered to contract out the building of emergency housing across Canada. The units were wholly financed by the federal government and rented to the occupants. In the case of Ville St-Laurent, monthly rent ranged from \$22-30. The buildings were designed to be prefabricated and "demobilized" after the war in order to ensure a high salvage value for the materials employed.¹² The charter stated that

John Michael Vlach, eds. 1986. *Common Places: Readings in American Vernacular Architecture*, pp. xviii-xx, 219-78, Athens: University of Georgia Press and Upton, Dell. 1991. *Form and User: Style, Mode, Fashion, and the Artifact, Living in a Material World: Canadian and American Approaches to Material Culture*, pp. 156-169, ed. Gerald L. Pocius. St. John's: ISER.

9. 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: Williams, M.A. 1991. *Homeplace: The Social Use and Meaning of the Folk Dwelling in Southwestern North Carolina*. pp. 1-20. Athens: University of Georgia Press.
10. The crisis was acknowledged at a meeting held in Montreal by the Canadian Federation of Mayors in January, 1941. See "The Wartime Housing Problem," Canadian Federation of Mayors and Municipalities, Montreal, January, 1941.
11. The process of setting up WHL was described in Knott, Leonard L. War Housing Boom. *Canadian Business* 14(8):16-24, 68-70. a history is offered in Wade, Catherine Jill, *Wartime Housing Limited, 1941-1947: An Overview and Evaluation of Canada's First National Housing Corporation*. Vancouver: University of British Columbia.
12. Both the prefabrication of the houses and their temporary nature were the subjects of fierce debates at the time. Speed and economy were the justifications for both issues. See Boulbee, Horace, 1942. The Question of Wartime vs Long-time Housing, *Saturday Night*, pp. 26-28; Knott, Leonard L. 1943. Prefabrication and the Post-war House, *Canadian Business*, 16(9): 46-51, 136, 138, 140, 142, 144, 146. E.G. Faludi, who wrote extensively on the subject of prefabricated housing, described WHL housing as "a kind of semi-prefabricated house." See Faludi, E.G. 1941. Prefabricated Houses, *The Canadian Forum*, pp. 174-76. He used the term "demobilized" on p. 175.



Types of wartime housing, from RAIC Journal.

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 duty in such war¹³

should be given priority in the leasing of the dwellings; most were rented, however, to factory employees.

In 1942, the newly conglomerated Noorduyn Vickers (Canadair) of Ville St-Laurent requested of WHL the construction of some 400 houses to accommodate its growing workforce. As planned, the prefab components were assembled on the sites.¹⁴ Ville St-Laurent houses (and other WHL neighbourhoods) comprised four basic models: Type H1, a one-story 24' x 24' dwelling with a living room, two bedrooms, kitchen and bath, and the reverse of this plan, Type H22, a lightly larger, 24 1/2' x 28' version of Type 1, and H12, a two-story 24' x 28' unit containing additional bedrooms on the second floor (Fig. 3). The residents still refer to these types as four-room, big four-room, and six-room houses.

I Wartime Work

Of our 25 case-study families, seven have lived in their houses since the 1940s and eight since the 1950s. The Demine house at 1880 Laval, occupied by the Demines since 1943, is probably the most radically altered house of our case studies. At the same time, however, the house reflects many of the most typical changes made by Ville St-Laurent residents since their initial occupation in the 1940s.

The Demines purchased their house in 1949 after renting it for six years, with an initial deposit of \$500. Over the last fifty years, the Demines have doubled the size of their corner house. The original building is barely recognizable today, buried within the shell of the much-larger structure (Fig. 4).

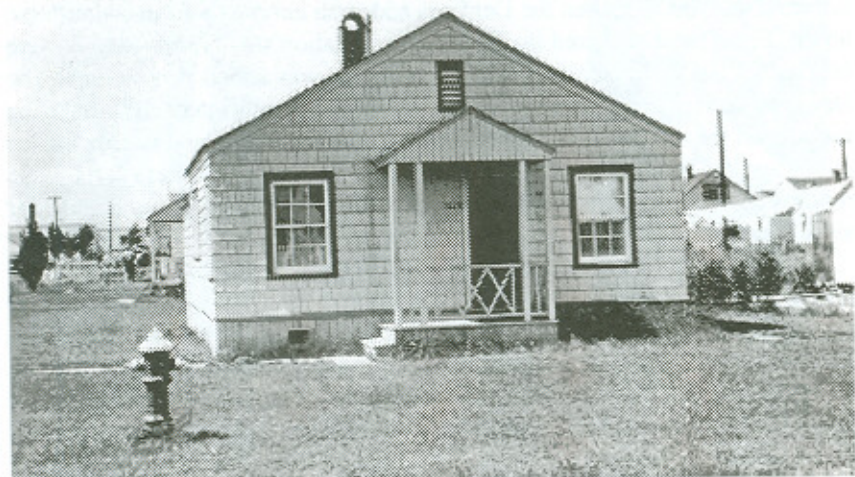
They dug their own basement soon after purchasing the house, like many of their neighbours.¹⁵ Also typical was their purchase of an oil furnace in the early 1950s. The original WHL house came equipped with a coal-fired "space heater," which most residents found inadequate. Because the houses were intended to be temporary, finishes and wiring were also substandard. Many residents, therefore, also upgraded their tented ceilings and rock-wool insulated walls in the 1950s.¹⁶

13. Agreement between Ville St-Laurent, His Majesty the King, and Wartime Housing Limited, 1945, Ville St-Laurent Archives.

14. The process of building the houses is best illustrated in the National Film Board's 1942 production, *La chasse aux logis/Wartime Housing*. On the relationship of the houses to their immediate surroundings, see Somerville, W.L. 1942. Site Planning for Wartime Housing. *RAIC Journal* XIX(6):129-31.

15. Demine interview, 30 June 1993.

16. A description of the building materials commonly used in WHL houses was published in Ernest Ingles, 1941. Wartime Housing Limited, "Canadian Congress Journal, XX(6):15-16.



The original Demine house, from Demine album.



Demine house today, photograph Josée Lamothe.

Like many other families in the immediate postwar era, the Demines added a garage to their home in the 1950s. The majority of their efforts, however, occurred in 1969-71, when the Demines added an enormous front room to the house (Fig. 5) and veneered the building in imitation stone (most houses were originally clad with asbestos); a back bedroom was added at this time. The Demines' current dining room occupies the space originally intended as the living room, with the addition of a bay window; the original vestibule is now a linen closet and the kitchen boasts a table with built-in seating. These large-scale renovations and additions are particularly common in houses occupying corner sites, whose generous size provided more opportunities for addition.

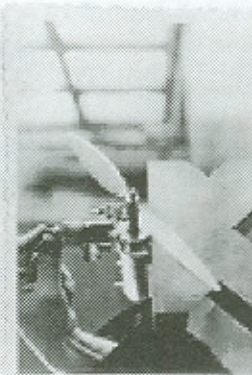
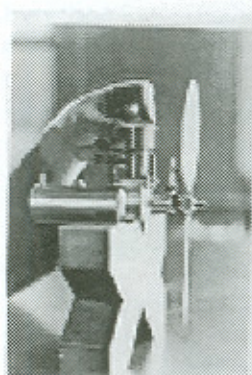
In the Demine case, like many others, the personal background of the residents was extremely relevant and much information was gleaned from their personal photograph albums, which they allowed us to borrow and copy. Montrealer Willy Demine returned from mining in Timmins, Ontario, in 1936, where he had met his wife, Cecile. He took courses at the Montreal Technical School in drafting and ICS course in aeronautical engineering. During the war years, however, it was difficult to get the lessons from England. In 1938, Demine went to work for Canadian Vickers, first in its east Montreal location and later at St. Hubert, south of Montreal. At Canadair, transferred to Ville St-Laurent, he was a crew chief and co-pilot, positions whose responsibilities included maintaining new aircraft.

The connections of factory production and domestic renovation are clear in the Demines' photo album. A typical page (Fig. 6) includes two views of a micro-aircraft engine (a "V4," which Mr. Demines made with his father while attending the Technical School) and an unidentified measuring device, above four photographs featuring automobiles. These photographs of machines are interspersed throughout the album with numerous shots of the house (Fig. 7) and of Mr. Demine's father with his cars. Indeed, Mr. Demine credits much of his mechanical ability to his father, who emigrated to Canada from Belgium in 1905, and was a chauffeur to L.H. Timmins in Westmount. "He did everything there," remembers Mr. Demine of the Timmins residents, "he took care of the cars, he checked the engines, he was a very good mechanic."¹⁷

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," commented one interviewee. There is also plenty of evidence to suggest that much informal advice about home renovation was gained from colleagues at Canadair.¹⁸

17. Telephone interview with Willy Demine, 8 June 1994.

18. An example of this is a story recounted by Madge Kemp about how to hook up a TV antenna; Kemp interview, 4 Aug. 1993.



Page of photos of machines, etc., from Demine album.



Assorted photos of the Demine house, from Demine album.

Mr. Cabot, for example, who moved to Ville St-Laurent in 1951 and still lives there today (Figs. 8 and 9), made elaborate architectural models to test his design ideas, much the way a professional architect would do.¹⁹ He was a mechanic in production at Canadair. Cabot made a 1/2" model of his new bathroom in 1992 (Fig. 10) in order to show the contractor how they wanted the room to look. Cabot also made a precise model of the entire house in the early 1980s to test the appearance of the new window.²⁰

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."²¹

The process of do-it-yourself renovations endeared houses to their residents. Bill Gelineau calls his house "a super house,"²² and stories prevail of families who wanted their houses back after living elsewhere. Mr. Boysen, 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."²³ Mr. Alford called his house a "handyman's dream." "There's always something to be done," he adds.²⁴

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. The houses today generally sell for about \$100,000; most of the original wartime tenants purchased them for just under \$3,000.

The foundations of wartime housing are of considerable interest in our exploration of "self-help" architecture; the original structures were built on temporary cedar posts, which were then covered in cedar planking, as shown on the original WHL elevation (Fig. 11). Although Central Mortgage and Housing installed foundations before the houses were actually purchased after the war in 1946, many owners would have preferred deeper foundations than those provided, permitting them to use the basement level. Only three owners, according to one of our interviewees, who "insisted hard enough" managed to get a full-size basement from CMHC. Others had to excavate their own full basements. Tenants of WHL housing, according to Curtis Ingerville, could even earn \$100 by digging

19. Cabot interview, 20 July 1993.

20. Cabot interview, 20 July 1993.

21. Ingerville interview, 16 July 1993.

22. Gelineau interview, 21 July 1993.

23. Boysen interview, 29 July 1993.

24. Alford interview, 16 July 1993.

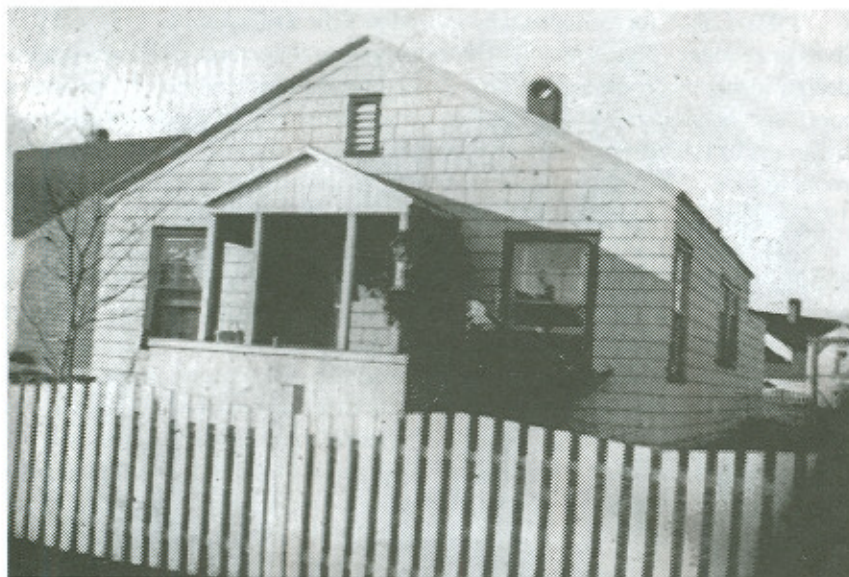


Photo of Cabot house, from Cabot album.



Photo of Cabot house today, by Josée Lamothe.

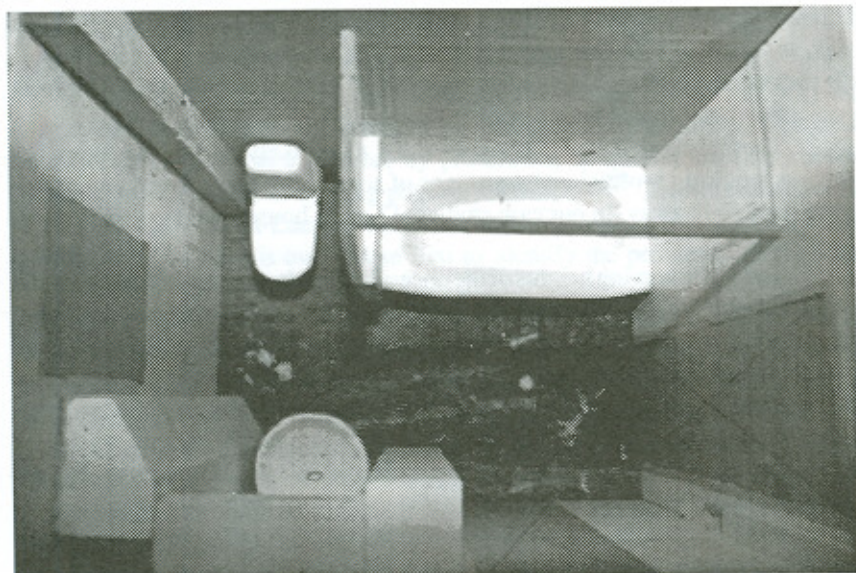
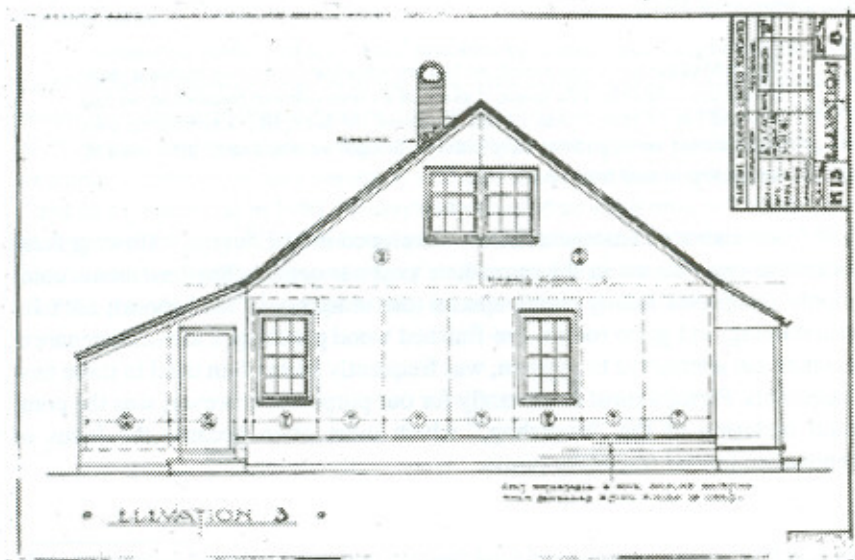


Photo of bathroom model by Cabot, by Josée Lamothe.



CMHC elevation, National Archives.

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 is 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."²⁵

These extended foundations were the most likely part of the alteration process requiring professional assistance of some degree, we found, and many were done right away. In our case studies, 13 of 25 households constructed full basements.

Today 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 of our interviewees described vividly the glow of lights beneath houses as people excavated their own basements. Perhaps because of the homogeneous character of the neighbourhood, a sense of community developed quickly, much of which centred on house renovation. The McMenamins, for example, helped Mr. Boysen to dig his basement in exchange for help building the extra floor on his home.

Most alterations, as mentioned above, were done by family members involved in mechanical production at Canadair. 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 basement. 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.²⁶

An elaborate basement culture developed in St-Laurent, following these extensive excavations in the immediate postwar period. The basements commonly comprised family living spaces (the ubiquitous "rec" room), bars for entertaining, and game rooms. Pre-finished wood paneling, a low-maintenance, economical alternative to gypsum, was frequently most often used in these new basements. Perhaps most importantly for our purposes, however, was the common inclusion of the "workshop," which most often became the focus of renovation for the rest of the house.

25. Ingerville interview, 16 July 1993.

26. Kemp interview, 4 Aug. 1993.

II Copy-cat Renovations

Ernie Brown, a longtime resident of the wartime neighbourhood, is a good example of our second point: the enigmatic role of the local "expert" in household renovation. Brown was a plumber by profession; he quickly became known, however, as an expert in digging postwar basements.²⁷ Brown excavated 52 houses in the Ville St-Laurent wartime neighbourhood, mostly from the late 1940s, when he did his own house first to identify the problems, through the 1970s.²⁸

Brown also helped several neighbours add upper floors to their houses at night, which undoubtedly contributed to the "copy-cat" mode of which we found evidence throughout the neighbourhood. The McMenamins, who bought the house from Brown in 1980, added aluminum siding to their house in 1986 after they had noticed it on a neighbour's house. "The contractor came around with this aluminum siding," remembers Madeleine McMenamin, "it was overstock they wanted to move. If you go down our street, you will see quite a few with white and green siding."²⁹

This process is extremely typical of postwar renovations in general, and sheathing and driveways in particular. A salesman would make one sale, drop the price and make sure that the job ran smoothly; he would then sit back and neighbours would come to him, at which time he might raise the price and lower the standards.

Equally revealing of residents' propensity to copy their neighbours was the coincidence of similar projects in the area. This is most evident in the choices of building materials in the postwar period, which followed fairly predictable cycles of "fashion" and were also often affected by events in the public sphere; for example, a number of our case-study families renovated their bathrooms during Canada's Centennial in 1967. "Everybody wanted an expo project," remembers the Ingerville family.³⁰ Earlier examples would include the addition of "utilities" rooms with the increased popularity of washers and driers beginning in the 1950s and the introduction of special rooms for televisions in the 1960s.

27. An article on Brown's participation in an adult foster home program appeared in *The Gazette*, Montreal, 4 Aug. 1978: 31.

28. Brown/McMenamin interview, 25 Aug. 1993.

29. Brown/McMenamin interview, 25 Aug. 1993.

30. Ingerville interview, 16 July 1993.

III Women Supervisors

Our third 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 actual physical labour, many husbands and wives worked together in the process. Mr. and Mrs. Murphy laid the tiles in their bathrooms;³¹ the Gelineaus replaced the shingles on their first roof in 1956, even though Mrs. Gelineau was pregnant at the time.³² Madge Kemp trowelled their basement floor at night on her hands and knees in 1948, while her husband mixed and dumped cement from a borrowed mixer in 4' strips.³³

In recounting their participation, an extraordinary number of women associate their hard work on the house with various bodily injuries. "I'd work until my shoulder blades killed me," Madge Kemp remembers, "and I used to say I can't do it anymore."³⁴

Also obvious from our case studies is the fact that many women found their wartime or postwar houses shockingly primitive, which may have inspired their active participation in the alteration process. When the Kemps moved into their 4-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 policeman and we had lived in some gorgeous police flats. When I first came out here in 1946 I wondered what on earth have I come to. It was quite a drastic change for me coming out here—getting used to the winter—getting used to the houses."³⁵

Indeed, many young war brides made conscious efforts altering 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.³⁶

By far the most common role for women in the renovation of wartime housing, however, was that of 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.

31. Murphy interview, 20 July 1993.

32. Gelineau interview, 21 July 1993.

33. Kemp interview, 4 Aug. 1993.

34. Kemp interview, 4 Aug. 1993.

35. Kemp interview, 4 Aug. 1993.

36. Alford interview, 16 July 1993.

Again, these were often skills exercised by residents at 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. 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 the spirit of the 1994 celebration of the 50th anniversary of D-Day, we hope what is deduced from our study is not the detailed record of who did what when. It is, rather, the ironic fact that the biggest war in history, which caused untold misery, death, and destruction, actually improved working-class housing conditions in Canada. Despite the hardship endured by those at home—in this case factory workers—or perhaps because of it, the war actually created unmatched opportunities for householders to participate in the creation of their own environments.

Wars force processes we would normally never try; other fields, too, have benefited enormously from the wartime experience. Techniques in plastic surgery, for example, were advanced tremendously by the need for urgent care in the fires following the bombing of London. In general, the state intervened increasingly in people's lives during the war; recall the birth of unemployment insurance and family allowances or even the rationing of luxury goods like gas, liquor, and nylon stockings during the war.

In terms of the study of architecture, however, we hope that this research will underline the dangers of studying only design intentions, of considering buildings as they appear in architects' drawings, or of narrow topological housing studies. All buildings are dynamic systems and all people are active participants in their own spaces. World War II and its aftermath simply intensified the process.