



## Les Habitations St-Ambroise

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### The Eclectic Nature of Practise

The practise of architecture, of building, and of urban housing in particular, even in the most optimistic of circumstances, is a complex and fragile process which requires the collaboration of many individuals with different types and degrees of skill and expertise. Eclecticism is the philosophical position that enables such collaboration—freely choosing and reconciling diverse points of view.

### Introduction

Les Habitations St-Ambroise is a four unit housing project built on a vacant lot in St-Henri, a traditional working-class neighbourhood in Montreal. The site is located at the south end of an unusual triangular block with a street frontage on three sides facing the Atwater Market to the east, the Lachine Canal to the south and a typical residential street to the west.

This project forms a part of our ongoing pre-occupation with urban housing previously explored in a variety of theoretical, academic and otherwise



aborted projects. Working directly in tandem with the developers of the project, we initiated the conception of the project, participated in arranging the financing, prepared the design, supervised the construction, marketed the units and were principal players in the final sale of the units.

The conception of the project is largely based upon a process of "hybridization" resulting from the reconciliation of conflicting circumstances, impulses and objectives. The hybrid arises out of a process of design that addresses three areas of concern: the urban project (physical circumstances), the domestic environment (market impulses) and the sustainability of residential construction (economic, technical and environmental objectives).

### The Urban Project

The project is at once "fabric"—a complementary part of the surrounding residential context of St-Henri—and "figure"—a freestanding object marking the corner of both the block and the neighbourhood, responding to the public nature of the surrounding urban landscape of Atwater Market and the Lachine Canal.

This hybrid condition of "figure/fabric" is expressed architecturally in the two distinct orientations present in the plan. Taken literally from the triangular form of the block and then translated into the reflection of a broader urban condition, each geometry corresponds to a pair of units that share common programmes and architectural characteristics—spatial, sectional, elevational and organizational strategies.

The "figure" is a shear wall with generous fenestration and a sculpted roofline facing the Market. The two units contained therein are first lifted off the street level to create a studio and garage below, and then lifted again placing the principal living spaces on the top floor and roof terraces above, benefiting from the exaggerated height of this space as well as the panoramic view of Mount Royal and the city skyline in the distance.

The "fabric" is expressed in the more diminutive scale of the block facing the residential street to the west. These two units are carefully scaled in profile to the traditional housing of the neighbourhood and share a common sectional relationship to the street. The gap created on the sidestreet consciously recalls the traditional *tête d'îlot* condition, transforming it into an entrance garden for two of the units.

The hybridization of these two conditions and their corresponding house types is expressed not as a collage of their distinctions, but as a true hybrid—a new entity that emerges out of these particular circumstances. The hybrid is expressed in the singular expression of materials for the whole (brick base and white stucco) as well as a common approach to details and fenestration (green and red metal).

### The Domestic Environment

The conventional duplex and triplex abundantly available in the city, for all their benefits, dictate both a certain degree of repetition in plan and demand a degree of tolerance acoustically between neighbours. As a domestic environment, we were anxious to realize a unit type that provided the greatest possible autonomy and flexibility for the individual resident's lifestyle within a dense urban environment. The project is based upon a symbiotic relationship between the expression of the whole and the autonomy of the individual units; between the urban and domestic characters of the project.

The urban project gave rise to the creation of two paired units with distinct characteristics. The conception of the individual units is based upon a vertical organization of the domestic programme that is similar for each of the paired units. Living and sleeping spaces are organized on separate levels. In one case, the living spaces are above to take advantage of the view and stairs are isolated in order to maintain privacy of the sleeping spaces. In the other, the living spaces are located below to benefit from a ground relationship, and the stair becomes a freestanding screen delimiting spaces.

In order to broaden the definition of the domestic programme, we decided to elevate both the living and sleeping spaces above the ground plane. The ground floor, clad consistently in brick, is typically composed of one large space with a high ceiling and smaller rooms in a split level relationship to that room. The intention was to provide for the possibility of a variety of situations; a home studio/office in one scenario; a separate apartment for an extended family or rental in another; or simply a garage and a guest room.

Each unit is intended to give the impression of a freestanding house. This autonomy is expressed in the individuality and remoteness of each of the entrances as well as the emphasis on corner windows

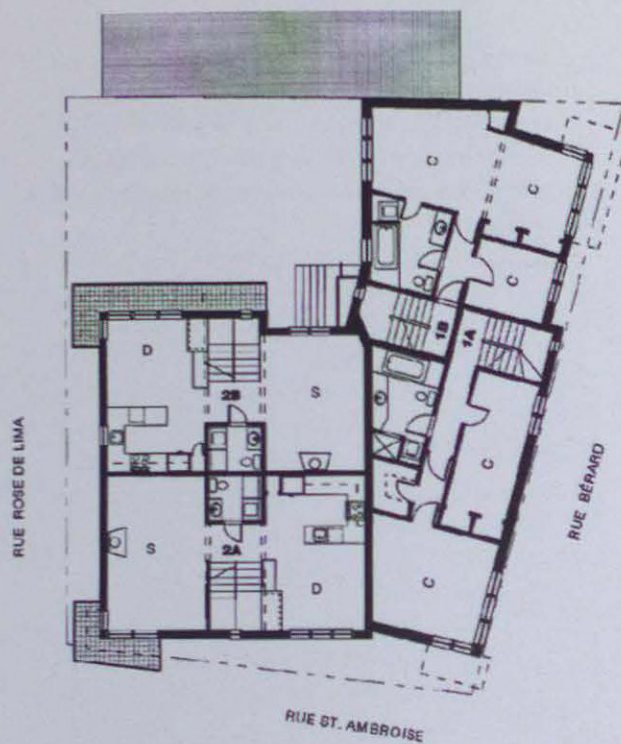




PLAN REZ-DE-CHAUSSEE

0' 5' 10' 20'

A ATELIER  
G GARAGE  
A/G ATELIER / GARAGE  
C/B CHAMBRE / BUREAU

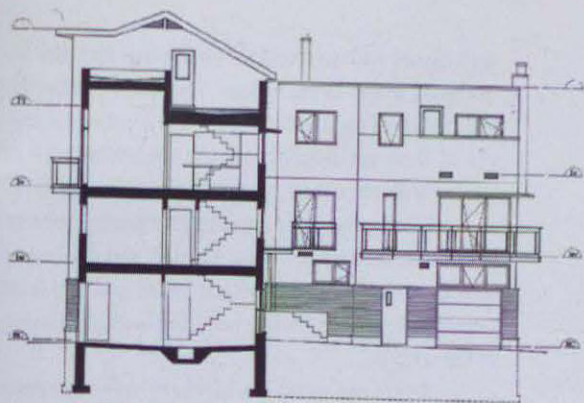


PLAN PREMIER ETAGE

0' 5' 10' 20'

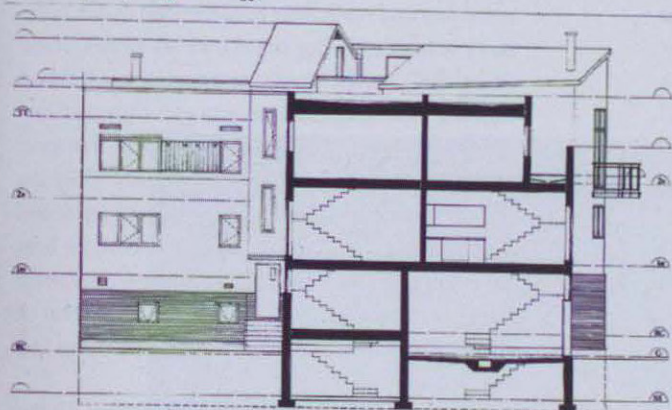
D SALLE A DINER  
S SALON  
C CHAMBRE





COUPE EST - OUEST

0' 5' 10' 20'



COUPE NORD - SUD

0' 5' 10' 20'





and corner balconies, giving a broad perspective out of the unit to the urban landscape.

### Sustainability of Residential Construction

In order to develop a project within a depressed residential market, we were acutely aware throughout the process of the need to satisfy a demand for affordable, innovative, efficient and sustainable housing. The method of construction and the choice of materials and systems were based upon reconciling financial and market considerations with sound environmental practise.

In order to maintain the affordability of the product, the project is based upon conventional wood frame construction. With the introduction of OSB joists and rafters, as well as steel and exposed heavy timber members at certain specific locations, we were able to nearly eliminate the need for any lumber larger than 2X4 throughout the construction.

Exterior cladding consists of a combination of brick and acrylic stucco on expanded polystyrene insulation over an exterior grade recycled cellulose/gypsum sheathing. Roof terraces are finished with a recycled plastic and wood fibre decking.

The project is built to R2000 standards for energy efficiency. A sophisticated system of controls for humidity, temperature, fresh air, recirculation, exhaust and lighting has been integrated (to different degrees) into all of the units. Given the air tightness of such construction, particular attention has been paid to three areas of concern.

First of all, off-gasing of toxic contaminants to the interior of the units over time has been reduced or eliminated by a careful selection and specification of building and finishing materials including exterior sheathing (recycled cellulose/gypsum panels), insulation (mineral wool), paint (zero VOC latex and acrylic epoxy), flooring (linoleum installed with a non toxic glue) and cabinetry (formaldehyde reduced [0.015%] composite wood panels and non-toxic glues for assembly).

Secondly, fresh air is supplied and stale air is exhausted through the use of a heat recovery ventilator (HRV). In one of the units the system introduces fresh air pre-heated through a *solarwall* panel (during heating season) integrated into the courtyard elevation and through a second cooler inlet (during summer months). Before bathroom exhaust air is removed, the heat energy is recovered to preheat the incoming air. The fresh air is then dehumidified when neces-

sary, mixed with recirculated air, filtered and then introduced to the living spaces. The result of combining a *solarwall* panel with an HRV is a continuous supply of fresh air even during the coldest months of winter with almost no energy cost.

Finally, the planning of units reflects a concern to contain specific zones for heating and cooling as well as to isolate spaces located below grade to limit potential air contamination resulting from off-gassing of the soil.

Bright red metal sun blockers have been used to control solar heat gain at certain windows. Large glazed surfaces opening towards particular views oriented east and north have been justified by the proximity of high efficiency cereal burning stoves. These 54,000 BTU stoves, similar in appearance to wood burning stoves, operate on automatically fed low grade cereal grain available at the cost of transport and packaging, utilizing reject stock only. They are the principal source of heat in two of the units and are integrated with the recirculation branch of the heat recovery ventilator system to balance heating throughout the unit. A low cost back up system of electric baseboards has been provided for extreme low temperature conditions.

Conservation of resources was addressed in the selection of water saving toilets and energy efficient light sources—high pressure sodium for the exterior and a combination of compact fluorescent and halogen ALR for the interior.

### Conclusion

While attempting to develop our own niche, we have chosen to learn by trial-and-error versus the more traditional academic routes. *Social Activism* has been our vehicle of preference to explore a language of architecture that is capable of embracing social and political issues. As collaborators and fellow professionals, we both share a concern for the fabric of housing and its role in the evolution and daily rituals of urban experience. As both a conscious and subconscious act, housing is the ideal reflection, in architectural terms, of the values and aspirations of a culture. Our work over the years has attempted to embrace this vision.





*In 1992 Daniel Pearl and Mark Poddubiuk co-founded L'O.E.U.F. The office works principally in the field of urban housing, residential and commercial renovation, but we are also deeply involved in research, teaching, criticism, theory and civic activism.*