This article studies three exemplary urban design projects in Montreal completed between 1966 and 2004, in order to identify the theoretical and methodological bases of their conception and assess the impact of their realization on the morphology of the city. These major projects, feted and featured in academic journals, were constructed following the establishment of the first municipal Urban Planning Department in Montreal and represent true experimentation and improvement laboratories for urban design as an approach adapted to the design of a large-scale object: the city. The postwar context, the major upheavals of urban form marked by the influence of international trends, and an emerging awareness, as of the 1980s, of modes of structuring the historical urban fabric’s morphology would have a decisive impact on the definition of contemporary urban design practice in Montreal.

In theoretical and methodological terms, this compels us to reflect upon the disciplines of urban history (why) and urban morphology (how) in order to offer an in-depth analysis of this body of achievements around three research objectives: to develop knowledge as regards useful expertise for those who are called upon to design urban fabric and building complexes; to intervene with respect to existing urban fabric and typologies in a context of heritage awareness and sustainable development; and to develop more specific knowledge as regards urban design in terms of the conception and then the execution of physical arrangements enabling the mastery of the formal organization of urban growth through both permanence and change.

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We analyzed the execution of these complexes through field surveys and the use of a morphological evaluation grid, making it possible to unbundle the planned urban fabric in subcomponents: site configuration, street network, plot subdivision, built environment, and open spaces. Such breakdown into strata facilitates the understanding of the projects’ overall spatial organization. We also analyzed how the built environment has been implanted so as to establish the relationship between the typology of buildings and the morphology of the planned fabric, that is, the relationship of the built environment to the implantation site, street network, plots, and open spaces. The third part concerns the critical reception of the projects in architecture and urban planning journals throughout Quebec, the rest of Canada, and North America. The article concludes with a comparison of how these three fabrics are organized in order to retrace the evolution of the relationship of these planned fabrics to the morphology of Montreal.

A study of reports filed by designers at the documentation centre of Montreal city’s Service d’urbanisme has made it possible to retrace the development concept of the Îlots Saint-Martin, a complex designed from 1966 to 1968 following a modernist approach (figs. 1-2); of the Bois-Franc neighbourhood, built between 1988 and 1993 following a postmodernist approach (figs. 3-4); and of the Quartier international de Montréal, inaugurated in 2004 and illustrating an approach linked to the reconstruction of the city (figs. 5-6).

The Modernist City: Îlots Saint-Martin (1966-1968)

Design Concept

In 1966, the Service de l’urbanisme de la Ville de Montréal designated Petite-Bourgogne, a working-class neighbourhood located in southwest Montreal, as an urban renewal zone in order to improve living conditions in a district experiencing de-industrialization and decline. The freshly minted Service de l’habitation was tasked with restructuring two city blocks for the purpose of building one hundred and forty-two subsidized housing units. To do so, it enlisted the services of the firm Ouellet, Reeves et Alain Architectes to develop the comprehensive plan. This project reflects the progressive ideology of the Athens Charter and its design principles, which were still firmly rooted in
the ideas of architects trained in Quebec’s schools of architecture in the 1960s. The designers’ arguments are largely based on an analysis of local socioeconomic data and field observations. In their report, the architects concluded that rental prices in the sector took up too great a share of available household income. From this perspective, the new housing units represented a solution conceived by public authorities to counter poverty and the perceived physical deterioration of the neighbourhood. Subsidized housing was therefore needed, indeed to financially assist households, but also to improve the living conditions of Petite-Bourgogne’s residents. As such, the State took on the mission of alleviating social disparities and the impoverishment of the population in the industrial decline phase of that neighbourhood. Despite the destructive nature of this operation, with all the required expropriations and demolitions, the project was the precursor of a certain heritage sensitivity as it integrated four existing rows of neighbourhood-style row houses into a comprehensive project with a social vocation. This concern for heritage is explained by the field survey carried out during the conceptual phase, which enabled the architects to identify homogeneous building complexes with a renovation potential.

The design process was also based on a study of the make-up of the neighbourhood’s households and identification of their needs. This approach is a clear reflection of the era’s modernist vision, where housing is one of the primary components of the functionalist city and “machine for living” required for the population’s well-being. The proposed housing types included row houses, apartment buildings (offering one-, two- and three-bedroom units), and four- or five-bedroom units on two floors (the ground floor and basement). The organization of the comprehensive plan reflects a desire to ensure a certain continuity with the character of the sector, firstly by integrating into the project buildings typical of such neighbourhoods deemed by the architects as having sufficient architectural value, and secondly by preserving a former community bathhouse and a community centre. Other factors of continuity include respect of the street network and the space of an existing square. The architects sought a certain architectural kinship between the scale of the neighbourhood’s preserved row-house typologies and the architectural design of the new constructions (continuity of image and two- to three-storey template). Moreover, the survey used to define the restoration potential for existing buildings enabled the designers to acquaint themselves with the composition of the built vernacular. This interpretation of the composition mode for the existing built framework, especially at the level of the building crowns’ architectural language, remained superficial, however, since the closed figure of the “urban island” and the parcelling of lots was erased by a desire to attribute a more collective status to the project’s free spaces.

At the architectural language level, we note a new approach as regards interventions touching the existing built
environment, where the restoration of the neighbourhood’s row houses meant giving the qualities of modern comfort to the built vernacular. For new constructions, the designers drew upon the image of vernacular architecture, especially as regards the false mansard crowns, to justify the demolitions required in order to impose a new spatial order on Montreal’s existing urban fabric. This desired morphological continuity was based on a reinterpretation of the image of the built environment (volume measurement, horizontal and vertical cuts, materials, etc.) and not on the analysis of the morphology characterizing the fabric of Montreal’s neighbourhoods.

Project Execution Analysis

The architects drew up a comprehensive plan for a free and open area with paths, grassy areas, and trees (fig. 7), despite the fact that the neighbourhood’s existing road network intersected it (fig. 8). The buildings’ layout was justified by an effort to optimize the level of sunshine for each unit by aligning with the orientation of Montreal’s orthogonal grid, although an east-west alignment was favoured, which, according to the architects, would provide more sunshine to housing units with double orientation. This free implementation of buildings was possible because all the former lots were owned by a single governmental agency, the Office municipal d’habitation du Québec (fig. 9). The hygienist vision of space is also reflected in the arrangement of the houses’ courtyards to provide maximum sunshine. According to the tenets of functionalist urbanism, architects prefer to avoid the systematic implantation of housing units along streets. A number of buildings are instead oriented along passageways and six semi-public interior courtyards, or over concrete slabs (fig. 10). The presence on the site of former row houses on dead-end streets can explain the use of this type of organization to service off-street buildings. The
A comprehensive plan is characterized by a separation of spaces set aside for pedestrian traffic and those reserved for cars (figs. 11-12). This functional segregation of traffic has created an internal network of courtyards, passageways, and footpaths throughout each block and an above-the-street urban design in the northern and southern parts of the project (cars below; pedestrians above) (figs. 13-14).

Reception of the Project in Periodicals and Publications

In 1970, the Îlots Saint-Martin was awarded the Massey Medal, one of the highest honours in Canadian architecture. Architect Raymond Affleck, in his August 1971 article published in Canadian Architect, notes however that in the execution of the project there is a contradiction between architectural excellence and a total negation of the notion of place. In a special issue of the journal ARQ : Architecture Québec focusing on the work of architect Jean Ouellet, urban planner Michel Barcelo talks about the revolutionary nature of the Îlots Saint-Martin as a downtown social housing project. He does, however, point out that this design results in an urban composition where street buildings alternate with perpendicular off-street buildings, on new roadways and public pedestrian areas, which are quite difficult to recognize or identify. For him, there is a shortcoming in this urban design project insofar as the movement of pedestrian traffic on the street and inside the project itself was not conceived as part of the same network. In spite of efforts to bring in certain adaptations to the precepts of modernist urban planning, this first urban design and social housing project carried out by the Service de l’habitation embodies the values of modernity, comfort, and sunlight typical of the functionalist approach, values that remain ill fitted to the syntax of an inherited urban fabric.


Design Concept

The Bois-Franc neighbourhood, located in the northwestern portion of the Island of Montreal, was elaborated in the era of postmodern urban planning, a period during which the modernist heritage and the functionalist movement in architecture were rejected. The Bois-Franc project was made possible by the decommissioning of an airport property of the multinational company Bombardier. Bombardier Immobilier hired the firm Daniel Arbour & Associates for the urban design of the project, and its project manager was Louis Sauer, renowned American architect and urban designer, architectural practitioner, researcher and teacher. Chair of Carnegie Mellon University in Pittsburgh, Sauer concluded his career in Montreal.

When establishing the comprehensive development plan for the neighbourhood, two factors were taken into consideration. First of all, a regulatory constraint imposed by municipal authorities forced the designers to ensure rainwater retention on the site of the project itself. The solution chosen by Sauer and his team was to design a basin system. Created from scratch, this water system became one of the strongest structuring elements of both the plan as a whole and its various components. Just like the
canals of Venice and Amsterdam, these basins (linked to a network of public spaces) must give a centrality to the new neighbourhood.16 Secondly, the absence of an on-site ordering element provided Sauer with the opportunity to draw his references from an urban ideal, that is, Savannah, established in 1733 in Georgia. This archetype served as a reference for a system of urban blocks structured around public squares. The rediscovery of the historic form of the city, a tradition from which the designers drew freely,17 clearly illustrates the influence of the postmodern movement.

The European city served as a model, as did North American cities, given that these forms had re-established a certain pedigree.18 We see here the relevance of this choice for Montreal, where the tradition of squares belongs to the morphology of the borough fabric established at the end of the nineteenth century and beginning of the twentieth. These urban blocks provided a concrete benchmark for the basic stitches of the planned urban fabric formed by neighbourhood units of four hundred to six hundred individuals. The repetition of this pattern at the Bois-Franc site, stopping at the edge of the basins, ensures a compromise between the regularity of the design and the distortions caused by the geometric shapes of the basins along with the irregular limits of the site. In the proposed comprehensive plan, north-south streets link the various squares and lead to the group of central basins. The east-west links are set out in series, thus ensuring privacy for the neighbourhood units as well deterring transit traffic, thus integrating functionalist considerations into the project. The comprehensive plan includes a vast array of city features, such as promenades, esplanades, squares, and parks, an eclecticism that illustrates the gropings of the postmodernist phase. Only the southern part of the allocated land was completed by adhering closely to Sauer’s master plan (fig. 15). Subsequent development phases gradually strayed further from the comprehensive plan, as Bombardier Immobilier transferred the land to other developers.

**Project Execution Analysis**

An interesting aspect of the comprehensive development plan is the importance given to the role of the built environment in defining street, avenue, boulevard, and public-square spaces (fig. 16). The choice of built type was also based on the hierarchical level of a given road. Sectional studies of the template of each of the roads were carried out, leading to a certain distribution of space reserved for cars, bicycles, pedestrians, and roadside trees within the public right-of-way. This design work reflects a desire to establish a hierarchical road network similar to that of the traditional city: arterial roads (peripheral), collector roads (boulevards, esplanades and avenues), local streets (servicing urban blocks), small squares, and private streets. Unfortunately the inner network of avenues and boulevards is discontinuous, making the road hierarchy harder to follow. A strong connection between built and free spaces is ensured by building semi-detached housing and by the link between the plot subdivisions, the building types (townhouse, plex housing, apartment buildings, etc.) (fig. 17), and both the streets and the adjoining open spaces (figs. 18-22).

**Reception of the Project in Periodicals and Publications**

The Bois-Franc neighbourhood received no awards or distinctions, although a 1998 article in the *Québec Habitation*
journal highlighted the quality and diversity of the seven hundred units built since the launching of the real-estate project. Other elements underscored included the remarkable basin achievement, the sophisticated red brick architecture influenced by Neo-Victorian and Neo-Classical styles, and the closeness of the neighbourhood to major arterial roads, buses, subway stations, and suburban trains. In a 2002 edition of the same publication, the author points out that notwithstanding its three thousand and two hundred completed units, the neighbourhood squares remain the project’s most important components. Another aspect is highlighted: the reduced volume of car traffic, thus improving the quality of pedestrian activity.

In a 1996 edition of the journal *ARQ: Architecture Québec*, Börkus Bergmann nevertheless argues that the Bombardier real-estate company opted for a conventional and commercial form of urbanity and architecture, hence missing out on a unique opportunity to develop an exemplary, forward-looking project. It should be noted here that Bergmann’s vision of what the project could have been reflects his rather progressive attitude, still linked to the work of Team X of the 1960s and 1970s. The implementation of this ambitious urban design project was hindered by the economic crisis and the complexity of the project’s design, which aimed to create distinctive neighbourhoods. The desired centrality exemplified by a collection of basins, leafy promenades, and high-rise towers never materialized. It is as though the plethora of images prevented the site from attaining a meaningful and structuring identity.

Design Concept

The project, initiated by the urban design firm Daoust Lestage and an architectural firm, Provencher Roy, was undertaken in 2000, by way of a public and private partnership called Quartier international de Montréal (or QIM). The approach developed by the designers first of all involved an analysis of the problems affecting the urban fabric of this central part of Montreal, that is, the rupture caused by the Ville-Marie Expressway, the many vacant lots and surface parking lots, and the presence of a large, extremely introverted building with few links to its immediate context, the Palais des congrès. These devalued urban spaces were leftovers, as it were, from the expropriation of the expressway. The approach also involved a formal and historical analysis of the area. To begin with, an analysis of its development and transformation revealed the presence of a network of spaces which, in the past, following the dismantling of the Old Montreal fortifications, embodied the transition between the old city and its first boroughs. Victoria Square, built in the nineteenth century, was part of this network. For designers, this was a rich historical fabric on which urban redevelopment could be based and it justified both a restructuring of the square and the building of a new public square: place Jean-Paul-Riopelle.
The strategy of the designers, marked by a desire to draw upon past rules of composition (historical emergence), made it possible to reconnect the north-south links severed by the expressway\(^24\). The approach used was primarily based on a definition of urban space as a backdrop for major real-estate investments. The quality of development of these public areas led to an increase in the value of adjacent lots. The construction of new buildings was meant to make funding of these new spaces possible by way of property taxes generated by the added value in the area. The project was characterized by a definition of urban voids as emerging forms of the city. The built environment was conceived as an essential complement to the contours of these recognizable public areas. As such, the project designers drew upon the building traditions of European cities.

**Project Execution Analysis**

The urban designers prepared a unified development strategy for increasing pedestrian access to the area’s streets by reducing street sizes and widening sidewalks, by systematically greening public squares and planting roadside trees, and by using high-quality materials and specific street furniture conceived by industrial designer Michel Dallaire (fig. 23). The major real-estate projects were carried out based on the comprehensive plan conceived by the urban designers with an emphasis on the north-south road network superimposed over the expressway (fig. 24).

The expansion of the Palais des congrès de Montréal, with the intention of giving the building an important entrance façade on a new public square, and the construction of a new head office for the Caisse de dépôt et placement du Québec, rising above the highway, establish a
set of new blocks giving form to public spaces. These operations often go beyond the scale of the “urban island” (fig. 25). Place Jean-Paul-Riopelle and Victoria Square re-establish the north-south public space network of this part of Montreal (figs. 26-30). An underground network was also marked out to link the two sections of Montreal’s underground city, connecting the shopping malls of the series of large buildings to subway stations and underground parking lots.

Reception of the Project in Periodicals and Publications

The Quartier international de Montréal received twenty Canadian and Quebec awards of excellence for its design and the quality of its implementation management. In a special edition of the journal Continuité (2005) dedicated to new urban spaces, Renée Daoust, project designer, states that this is the most important restructuring initiative in downtown Montreal. Further afield in North America, Rahul Mehrotra, writing about the project in Harvard Design Magazine, makes the following observation: “First, it challenges the role of the urban designer in the city... Second... it involves alteration, repair and preservation, additions—all working simultaneously but reinforcing cohesively the urban form of the place—and in that way it enriches the historic fabric of Montreal.” The project’s main asset thus lies in the urban designers’ capacity to cohesively structure the existing fragments of the city while creating an urban fabric which re-establishes the continuity between the old city centre of Montreal and its first boroughs.

CONCLUSION

Each of the projects that we analyzed has its own urban design approach related to the theories and schools of thought that have developed in the field of urban design since 1956. The îlots Saint-Martin ensemble shows a modernist approach with a nascent sensitivity to the heritage of the traditional city, with an internal network aligned in part with the street and featuring above-the-street urban planning. The Bois-Franc neighbourhood is representative of a postmodernist approach to urban design with references borrowed from the urban tradition of North American cities. The organization of this planned fabric is characterized by the meshing of the built environment with the streets and squares. The QIM is the product of a contemporary approach related to the Movement for the Reconstruction of the European City, incorporating a study of existing morphology, continuation of the grid, and consolidation of and addition to Montreal’s existing network of public spaces. These three projects represent three different approaches to urban design, taking into account the site’s configuration to design a road network, determine a plot subdivision system, and create built forms with their own specific implementation modes and open space systems.

The modern ensemble of îlots Saint-Martin is related to the urban form of Montreal at the level of the general road system and at the scale of its built environment. This project reflects a desire to ensure the continuity of existing streets and spaces of the typical orthogonal grid characterizing the outskirts of Montreal. In this respect, the project constitutes a positive evolution in relation to the intent of the designers of Habitations Jeanne-Mance, a social housing project designed...
in 1957 and financed by the Canadian Mortgage and Housing Corporation (CMHC). For the general design of built forms, the designers of Îlots Saint-Martin selected the typology of the apartment block, incorporating and reinterpreting the row-house template of the Petite-Bourgogne neighbourhood. This is their way of establishing a link to the scale and architectural language of the context. As for the relationship to the immediate context, Îlots Saint-Martin is connected to the road system, and it helps maintain existing urban spaces. However, the whole is completely detached from the context in terms of the buildings’ implementation mode and the structure of open spaces.

Concerning the Bois-Franc neighbourhood, an ensemble influenced by post-modernism, the urban design scheme is related to the urban morphology of The linked Quartier through the way in which the buildings relate to the road hierarchy and to the plot subdivision system. The built environment also reinterprets the typologies usually found in the urban fabric of Montreal. This reflects a decision to use plot subdivision as a way of organizing the built form, an approach that is typical of the morphology of urban forms in general and of Montreal’s organization, characterized by seven-and-a-half-metre-wide lots. The Bois-Franc neighbourhood represents an attempt to recover the types of cities, plexes, row houses, semi-detached houses, and apartment buildings typical of Montreal’s built environment of the nineteenth and twentieth centuries. This design option is also a way to promote a sense of community and urbanity of the project, which is a leitmotif of New Urbanism. The Bois-Franc urban design represents an attempt to reinterpret the figures of the street and the square typical of Montreal’s nineteenth- and twentieth-century urban forms, but fails to establish any relationship with its immediate context. The contribution of this project is more at the level of Montreal’s urban pattern as a whole (e.g., the block-and-street system, average lot size, etc.) than in the establishment of any spatial continuity with the context located around the Bois-Franc neighbourhood.

The contribution of the QIM to the city’s urban morphology lies at the level of general site configuration, the road network, open spaces, and the relationship of buildings to the site and to existing open spaces. The designers chose to re-establish the historical configuration of the site before the construction of the underground highway. Daoust Lestage worked on the topography to avoid a disjuncture between the ground-floor level and streets and squares. They also chose to reinstate both a formal (Victoria Square) and informal (Place Riopelle) urban landscape. The place international provides continuation of the peripheral context.
and orthogonal grid of Montreal’s road network. This option erases the barrier resulting from the Ville-Marie underground highway. The creation of the urban spaces of the QIM project is based on the restructuring of Victoria Square and reuse of this figure to create a new square. Here the urban morphology of Montreal is rigorously reinterpreted.

A fundamental realization emerged from our research: a desire to restore the decisive role of architectural form as a structuring agent of urban space and an engine for constituting a planned urban fabric for Montreal. This has taken into account changes in the method of organizing the planned fabric, increasingly based on a rigorous interpretation of the morphology of Montreal’s urban form, thus helping to structure the urban fabric with an eye to promoting morphological and spatial continuity. Our research shows that the value of spatial and morphological continuity has emerged as an important issue throughout the development phases of the urban design field in Montreal.

NOTES

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7. Id.

8. Legault, op. cit.


17. Ellin, op. cit.


24. Id.
