Montreal Urban Community Sustainment  
Project Design Studies

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McGill University, School of Architecture

Abstract
This presentation explores a sustainable development project proposal for an existing surface parking lot owned by Queen Elizabeth Health Complex (QEHC) in the Notre-Dame-de-Grâce neighbourhood in Montreal, not far from the MUHC Glen Yards site. The proposed development would have: (1) a maximum 4-story level height; (2) a green rooftop; (3) shared community subterranean car and bicycle parking; (4) 70% floor-to-area ratio (FAR) building coverage in relation to site; (5) universal accessibility; and (6) a drop off delivery zone. The development is intended to be a model mixed use cooperative. The projects two main components include (1) community housing, or residential space for co-housing, affordable homeownership, and mixed-income co-operative housing, as well as housing adapted to the needs of specific populations; and (2) community space, or commercial space for offices, meeting rooms, kitchen and dining areas, performance spaces, workshop spaces, and so on to meet the need of community groups and the surrounding neighbourhood. The goals are to foster community health and sustainability by transforming a parking lot into an ecological building that includes housing, businesses, and gathering places for diversity of residents and community organizations.

Cite as

More reports and working papers at www.mcgill.ca/urbanplanning/mpc/research/reports
• Expand MUCS onto an existing surface parking lot owned by Queen Elizabeth Health Complex (QEHC)
• Maximum 4-story level height
• Green rooftop
• Shared community subterranean car + bicycle parking
• 70% FAR building coverage in relation to site
• Universal accessibility
• Drop off delivery zone
• Model of a mixed use cooperative

Project Consists of Two Parts:
• Community Housing
• Community Space

Proposed Building Use/Program:

Community Housing:
The Project will include residential space for co-housing, affordable home-ownership, and mixed-income co-operative housing, as well as housing adapted to the needs of specific populations.

Community Space:
The Project will include commercial space for offices, meeting rooms, kitchen and dining areas, performance spaces, workshop spaces, etc... to meet the needs of community groups and the surrounding neighbourhood.
Figure 4.9: Montréal (RMM) Urban Land Growth

(MVRA, 2001)

Figure 4.10: Trends in Household Numbers in the Ville de Montréal and the CMA by Census Year

(Ville de Montréal, Master Plan, 2004)
MUCS: Community Design Project

Project Vision

The Community Design Project will foster community health and sustainability by transforming a parking lot into an ecological building including housing, businesses, and gathering spaces for a diversity of residents and community organizations.

Objectives

Ecology: Regenerate a healthy urban environment through a high-performance green building.

Health: Enable and empower the community to be responsible for their own health and wellness by connecting community members with preventative and holistic health resources.

Education: Model and encourage more healthy, local, and sustainable living and working environments.

Community: Encourage community building between residents and collaboration between organizations by providing shared community spaces and resources.

Housing: Build a range of housing models including universally accessible community housing for a diversity of residents and income levels.

*Vision & objectives were defined by community organizations & participants from the charrette held on December 8th, 2008.

Projected Building Program

General:
- Mix use building with underground parking
- Ratio between commercial & residential is to be determined.

Residential:
- Several cohousing options: 
  - Leased/owned
  - Private units
  - Shared common spaces
- Adapted housing for people with limited mobility
- Affordable/subsidized housing
- Diverse ownership models including rent, owning & co-ownership

Commercial:
- Community organizations
- Social economic businesses
- Health related

Shared Spaces:
- Shared common spaces for commercial & residential spaces which are defined by the users.
- Can include:
  - Kitchen
  - Meeting rooms
  - Reception & admin services
  - Lounge/dining room
  - Daycare, library

Type of uses

- Community Organizations
- Social Economic Businesses
- Residential
- Informal lounge
- Green Space
- Administrative
- Storage
- Boardroom/meeting room

shared spaces exploration exercise: charrette January 21, 2009
Introduction:

With the incoming MUHC on the neighbouring Glen Yards and the construction of multi-use building, traffic flows surrounding the site will change. The following report tries to outline the main challenges and opportunities arising from such a scenario.

Preiminary Cost:

Each car requires approximately 425 sq.ft. in an underground parking (figure include circulation space for cars) at approximately $69.47 per sq.ft. These figures seem to include excavation costs (to be confirmed).

1 parking spot = approx. $29,524.75
200 car spots = approx. $5,904,950

<table>
<thead>
<tr>
<th>Objective</th>
<th>Means</th>
<th>Phase 1</th>
<th>Phase 2</th>
<th>Phase 3</th>
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<td>A. Borough Documents</td>
<td>A. Metro route and depth</td>
<td>C. Cost approximation</td>
<td>G. Special needs for building partners</td>
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<tr>
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<td>C. Research + E. Research</td>
<td>F. Reconversion possibilities</td>
<td>F. Research precedents</td>
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<td>F. Research precedents</td>
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<td>I. Soil + Environmental Assessment</td>
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<td>G. CDP Process / Meetings</td>
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<td>J. Profitability study</td>
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<td>I. 1957 Report + Dessau Soprin studies</td>
<td>I. Coordination with CDP &amp; QEHC</td>
<td>L. Coordination with CDP &amp; QEHC</td>
<td>M. Zoning</td>
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<td>K. MUHC Parking Plan</td>
<td>K. Research / McGill Planning Office Docs</td>
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<td>L. Parking need assessment</td>
<td>L. PM Team / JD</td>
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<td>N. Parking need assessment</td>
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PROJECT OBJECTIVES:

Components for a liveable community at the neighbourhood scale

Design considerations to achieve a more sustainable building
# LEED for Neighborhood Development Pilot

## Draft Project Checklist

### Project Totals (Pre-Certification Estimates) | 106 Points

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### Smart Location & Linkage | 30 Points

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<td>Proximity to Water and Wastewater Infrastructure</td>
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<td>3</td>
<td>Impacted Species and Ecological Communities</td>
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<td>Wetland and Water Body Conservation</td>
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<td>Farmland Conservation</td>
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<td>Floodplain Assurance</td>
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<td>Reduced Automobile Dependence</td>
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<td>Bicycle Network</td>
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<td>Housing and Jobs Proximity</td>
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### Neighborhood Pattern & Design | 39 Points

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<td>Diversity of Uses</td>
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<td>Density of Housing Types</td>
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<td>Affordable Rental Housing</td>
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<td>Pedestrian Footprint</td>
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<td>Transportation Flow and Management</td>
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<td>Access to Active Public Spaces</td>
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<td>Universal Accessibility</td>
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<td>15</td>
<td>Community Outreach and Involvement</td>
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<td>Local Food Production</td>
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### Green Construction & Technology | 31 Points

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<td>Energy Efficiency in Buildings</td>
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<td>Reduced Water Use</td>
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<td>Comprehensive Waste Management</td>
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<td>Light Pollution Reduction</td>
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### Innovation & Design Process | 5 Points

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<tr>
<td>2</td>
<td>LEED© Accredited Professional</td>
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LEED for Neighbourhood Development Examples:

Green roofs reduce the heat island effect, offers areas to grow food, and encourage outdoor activities

Improve Equity & Opportunity

In “Yorkville” Toronto, Canada, various retail stores with housing above allow community members to feel integrated with one another.

Habitat for Humanity brings in great numbers of volunteers every year to build simple and affordable homes for low-income families across the world.
MUCS: Community Design Project

LEED for Neighbourhood Development Examples:

Reinforce walkability and well being

King Street East in Hamilton, Ontario provides continuous ground floor retail with parking in back.

Navigation, Networks & Flow

Kiosks in Downtown LA include walking maps with points of interest. This encourages pedestrian activity and improves navigation.

A landscaped mid-block pedestrian path in Portland connects to public open space and encourages circulation.
MUCS: Community Design Project

ORBNI Chez Soi Benny Farm
L’O.E.U.F. – Pearl Poddubik et associés architectes
NDG, Montreal

-Non-profit rental housing for seniors

-Financed by Logements abordables - Québec (a joint federal, provincial and municipal program).

-6 story concrete new construction

-91 apartments, mostly one bedroom and dining facilities.

-nombreuses espaces communs, d’une cafétéria et d’un stationnement de près de 40 espaces au sous-sol.

-Chez Soi is one of the four housing projects sharing the environmental infrastructure Green Energy Benny Farm, a prototype for community-driven sustainability-housing.

-CBIP certification in progress

-Novoclimat certification in progress

-LEED certification in progress, Chez-soi is designed to hopefully attain a LEED GOLD rating.

-Ce bâtiment se compose d’une charpente de béton sur fondations conventionnelles, parement de brique extérieur jumelé aux finis d’acrylique sur béton léger et de revêtement métallique peint.

-récupération des eaux grises, murs de pré-chauffement solaire, chauffage radiante dans les dalles de béton, etc.

-south orientation for heat gain and natural lighting
MUCS: Community Design Project

Brère, Gilbert + associés, architectes

COOPÉRATIVE AU-PIED-DU-COURANT Montréal,Québec

NOUVELLE CONSTRUCTION DE 17 UNITÉS DE LOGEMENTS A FAIBLE REVENU
MUCS: Community Design Project

**Site Photos**

- **Existing Site:** Surface parking lot
- **Entry to Existing Site:** Surface parking lot
- **Existing MUCS building next to site**
- **Queen Elizabeth Hospital across from site**
MUCS: Community Design Project

**Current Site Info**

**Owner:**
Queen Elizabeth Health Complex located across the street from the site.

**Current use:**
Zoned at 140 parking spots for the use of visiting clients to the hospital, employees & CHSLD (centre hospitalier de soin longue durée).

**History of site:**
Parking lot since 1982
Previously three residential triplexes on site & demolished in 1973

**Zoning current:**
-no of floor: max 2
-max building height total: 9 m
-ground coverage: min 35% max 50%
-rear setback distance (marge arrière latérale): min 3 m
-lateral setback (marge latérale): min 1.5 m
-zone surface: 4029 square meters

**Future Site Proposal**

**QEHC memorandum of understanding:**
-The proposed project must double the number of available parking spaces.
-The project must be revenue-generating for the QEHC.
-There must be a social component to the project which is in line with the mission of the Queen Elizabeth Health Complex and which is preferably health related.
-The proposal must foresee minimal disruption to the availability of parking at all times.
-The QEHC is to participate fully in the process of developing the proposal.
-There must be a timely start to the process of developing the feasibility study - 2-3 months was suggested.
-The full written proposal must be received by the QEHC within a year of the agreement.

**Projected zoning changes:**
-no of floor: 4-5
-building height range: 12-15 m
-ground coverage: min 60% max 80%
MUCS: Community Design Project

Traffic Circulation
MUWC: Community Design Project

Context Plan

Vendome
Metro
Station

3 story
Residential &
Commercial

Site

3 story
Residential &
Commercial

Existing Queen Elizabeth Hospital
### MUCS: Community Design Project

#### Community Organization Profiles & Spatial Needs

<table>
<thead>
<tr>
<th>Name</th>
<th>total sqft needed</th>
<th>Main uses</th>
<th>Shared Spaces</th>
<th>Current Pay for space</th>
<th>Rent vs. Own</th>
<th>Other</th>
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<tbody>
<tr>
<td>Chez Soi</td>
<td>40,000 sqft</td>
<td>housing, kitchen &amp; activity rooms</td>
<td>kitchen &amp; multi-purpose room</td>
<td>n/a</td>
<td>owning</td>
<td>are working towards providing all their activities in one building</td>
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<td>NDG Senior Citizen’s Council</td>
<td>3,000 sq ft</td>
<td>offices &amp; activity rooms</td>
<td>receptions, kitchen, board room, activity room (semi-shared)</td>
<td>$1800</td>
<td>rent but would be interested in owning if funding allows</td>
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<tr>
<td>Au Pois Chic</td>
<td>restaurant to feed 50 people &amp; offices</td>
<td>production space for meals, catering, community restaurant, offices</td>
<td>restaurant, meeting room, activity rooms, drop-in space</td>
<td>currently not paying for space</td>
<td>rent but interested in owning options</td>
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<tr>
<td>NDG Food Depot</td>
<td>n/a</td>
<td>serving meals &amp; food sorting &amp; storage</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
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<tr>
<td>Forward House</td>
<td>4700 sq ft</td>
<td>housing</td>
<td>no shared spaces</td>
<td>n/a</td>
<td>n/a</td>
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<tr>
<td>Head &amp; Hands</td>
<td>12,000 sq ft</td>
<td>office, drop-in, clinics, kitchen, meetings</td>
<td>board room, kitchen, activity rooms</td>
<td>$2800</td>
<td>owning</td>
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<td>Women on the Rise</td>
<td>4 private offices</td>
<td>meeting space, lounge, computer room, kitchen</td>
<td>kitchen, play room, meeting room, computer room</td>
<td>$500</td>
<td>renting but interested in owning</td>
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### Additional Information
- **Chez Soi:**
  - Currently situated in Benny Farm
  - Affordable housing for seniors

- **NDG Senior Citizen’s Council:**
  - Provide support to seniors so they can stay independent.

- **Au Pois Chic:**
  - Community kitchen
  - Looking to expand to catering & production of specialized food products.

- **NDG Food Depot:**
  - Food Bank
  - Feeds 250 families a week.
  - Runs cooking & pre-employability programs.

- **Contance Lethbridge Centre:**
  - Participant only
  - Rehabilitation Center & adaptable housing.

- **Forward House:**
  - Transitional group home for people diagnosed with mental illnesses.

- **Head & Hands:**
  - Promotes physical & mental well being
  - Young Mothers program
  - Youth programs

- **Women on the Rise:**
  - Provide services for parents with kids.
  - Have some educational activities, after-school activities, community cooking,
MUCS: Community Design Project

Two Possible Program Organization Schemes

[Diagram showing two schemes with color-coded spaces for Commercial/Business, Community Organization, Residential, Parking, Residential Rental, Commercial Lease, Residential Condo, Commercial condo, Self-Developed Commercial, Self-Developed Housing]
MUCS: Community Design Project

Parti System is to be replicated on site
MUCS: Community Design Project

Parti System is to be replicated on site
MUCS: Community Design Project

Enlarged Satellite Plan
MUCS: Community Design Project
MUCS: Community Design Project
MUCS: Community Design Project
Daylight Model

June 21 8:00 pm
Daylight Model

December 21 8:00 am