OLDgrace
Housing Cooperative Ltd.

Our Logo

Our new logo is designed to represent the character of Wolseley with the pitched roofs, the diversity of the community members with font of different colours and style, the sustainable & environmental goals with the use of hues of green. The main forms of the logo rest on the strong foundation of the "Housing Cooperative" representing the community strength and commitment.

We are also looking for name suggestions for this project!

> **"An inter-generational, mixed-income, architecturally distinctive and sustainable co-operative housing project in the heart of Wolseley."**

About Us / What is a Co-op?

We are a continually growing group planning to build sustainable, non-profit, mixed income, multi-generational co-operative housing in the heart of Wolseley. Our aim is a stable, intentional community that integrates seamlessly into the existing neighbourhood.

We range in age from our 30s to our 80s. We are passionate about living in Wolseley—many of us have lived here for decades. We have worked hard and consulted broadly to build a proposal that fits the neighbourhood while meeting our needs.

OGHC members have a broad range of experiences and skills (organizational and project management, neighbourhood planning, communications, education, financial and accounting skills and much more) equipping us to plan and implement a project like this. We are active volunteers in a wide range of community organizations, and have contributed hundreds of hours to developing our co-op, selecting and overseeing consultants, and obtaining input and feedback from the Wolseley community.

ABOUT CO-OPs: A co-operative is an autonomous association of persons united voluntarily to meet their common economic, social, and cultural needs and aspirations through a jointly-owned and democratically-controlled enterprise.

The International Co-operative Alliance (ICA): Housing co-ops have existed in Manitoba since the 1960's, although there is a much longer history of co-ops on the Prairies. They are governed by The Cooperatives Act.

OGHC operates in accordance with the principles adopted by the Co-operative Housing Federation of Canada:

- Voluntary and Open Membership
- Democratic Member Control
- Members' Economic Participation
- Autonomy and Independence
- Education, Training and Information
- Co-operation among Co-operatives
- Concern for Community.

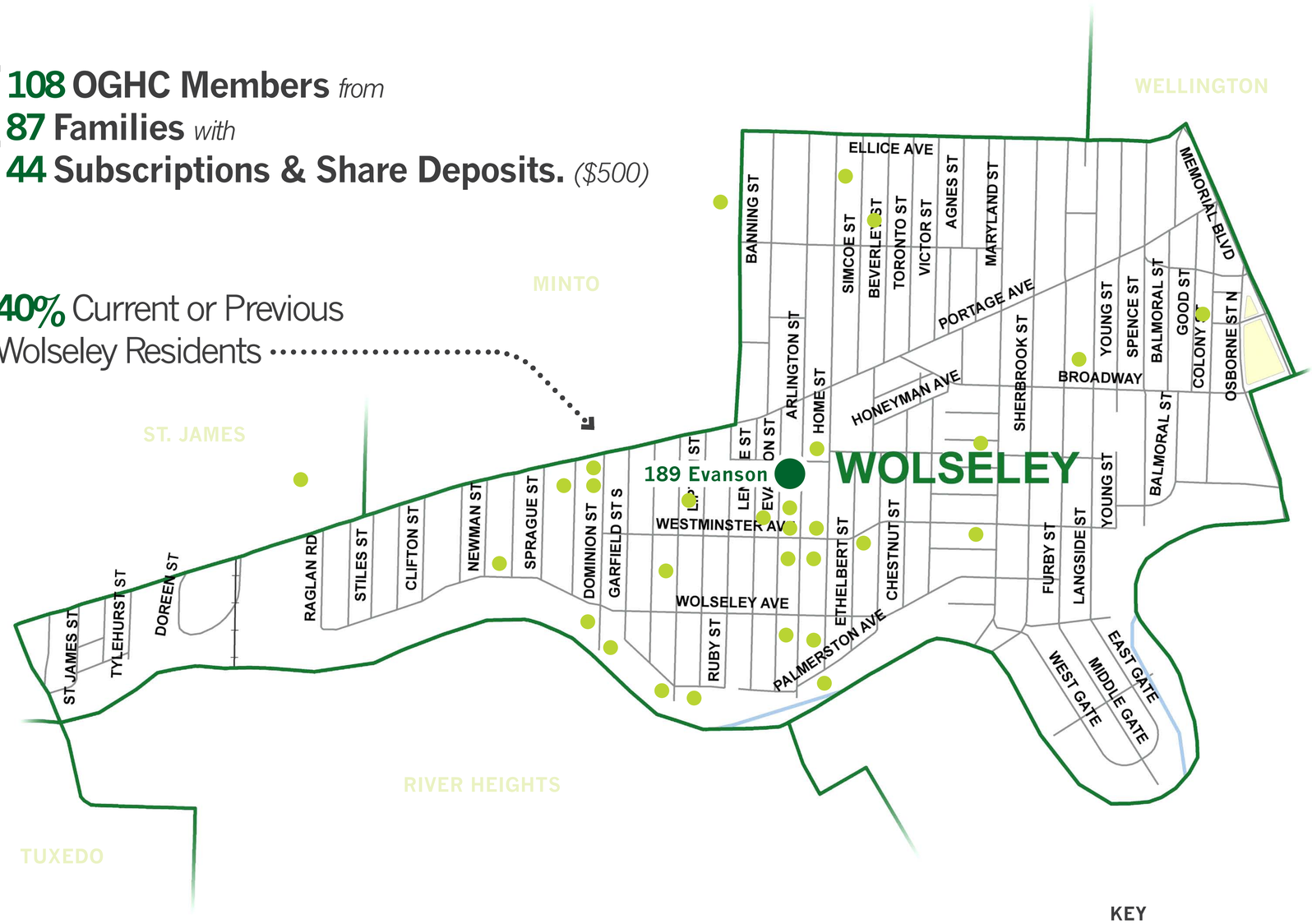
Our Mission

Our community...

- Welcomes members from different cultures, ages, and family compositions, with differing degrees of mobility.
- Provides affordable homes in a variety of sizes, with both equity and subsidy opportunities to suit members' financial circumstances.
- Supports member independence, but encourages interdependence through use of shared amenities and participation in community activities.
- Accords all members an equal voice, and an equal opportunity to get involved in community decision making.
- Enables members to age in place, moving to smaller units, adapted units or assisted living as their personal needs change.
- Offers an attractively-landscaped, pedestrian-friendly environment that encourages resident interaction.
- Comprises buildings that fit the urban scale and character of the surrounding neighbourhood.
- Demonstrates members' commitment to environmental sustainability, in both building construction and operation.

108 OGHC Members *from*
87 Families *with*
44 Subscriptions & Share Deposits. *($500)*

40% Current or Previous Wolseley Residents



KEY
● = Project Location
● = OGHC Member

COMMUNITY SPIRIT LIVES HERE.

PROJECT

The Project Proposal

OGHC is proposing an intergenerational, mixed-income, architecturally distinctive and sustainable co-operative housing project for the former site of the Old Grace Hospital at 189 Evanson Street. This project would be an asset to the unique neighbourhood of Wolseley and to the Manitoba co-operative movement.

The Old Grace Housing Co-op proposal is...

- **Designed to establish a stable and intentional community (good neighbours).**
- **Architecturally distinctive and compatible with the neighbourhood.**
- **Respectful of the natural environment.**
- **Sustainable and energy efficient.**
- **Intergenerational – a mix of 1,2,3 and 4 bedroom units.**
- **Mixed-income, incorporating social, affordable, and market housing.**
- **Phased to reduce construction impact on surrounding streets.**
- **Planned for accessibility and visitability.**
- **Planned to incorporate off-street parking and car co-op vehicles.**
- **Moderately priced – refundable member shares plus moderate monthly occupancy costs.**

The Project Team

OGHC has assembled an experienced and award winning design team. This team has assisted with the successful development of over 45 multi-unit housing projects, representing over 1700 units with total capital budgets in excess of two hundred million dollars.

Our team is:

- DSI Tandem Co-op Resources Ltd.
- Prairie Architects Inc.
- HTFC Planning & Design
- Transsolar Climate Engineering
- Engineering, Quality & Cost Control Consultants
- Legal and Appraisal Services

We have 3 financial institutions willing to partner with us on financing; and 2 agencies (SEED Winnipeg and Jubilee Fund) willing to work with us to assist with member share cost loans.

COMMUNITY APPROACH & UNDERSTANDING

^ Photos from CDP Sessions, workshops, and presentations.

> **The membership of the co-operative have worked diligently over the last two years to build their organization, their membership, and to work with community partners in discerning the vision for housing. They invited our participation in the design process.**
> *(St. Margaret's Anglican Church)*

Reaching Out to the Community

OGHC has an active and sustained outreach effort. Since 2012 we have met and consulted with dozens of organizations and individuals including:

- The Wolseley Residents Association (WRA)
- Neighbours of Old Grace (NOOG)
- Local businesses
- Churches
- Environmental groups
- Many individual Wolseley residents,
- Local businesses, churches and institutions;
- Fellow co-operative and co-housing groups
- Social service agencies with housing responsibilities
- Community economic development agencies

We shared our plans and, equally importantly, listened to feedback and concerns, incorporating them as much as possible in our plans.

As a result of these efforts, we have gathered many letters of support – now 75 letters from individuals, families, local businesses and community-based organizations.

Reflecting Community Culture

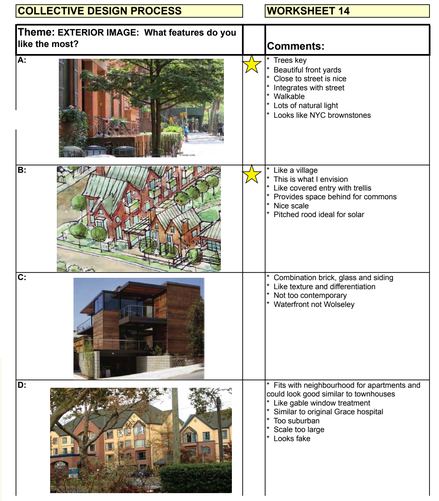
Since the decision to close the Old Grace Hospital was announced significant consultation has been done in the Wolseley community, including the 2006 Old Grace Hospital Site Charette (conducted by OGHC consulting partner HTFC Planning and Design).

OGHC has developed its plans using the Charette as a foundation, and subsequently adopted a charette-style approach to inviting community and neighbour input into our design. In November 2014 we hosted a Collective Design Process (CDP) workshop for OGHC members and interested community members to work together and start to build a consensus on preferences for the project design.

From the information collected from the workshop, and additional direction from OGHC members, our architects developed our design proposal.

The proposal features:

- Scale and details which fit into the fabric of Wolseley including front yards, porches, compatible materials and garden features.
- Preservation of existing mature trees.
- Consideration to chimney swift habitats.
- Openness to the neighbouring streets.
- Green infrastructure, low energy design and practical sustainability features like gardens and orchards, using roofs, and creating pleasant micro-climates.
- Off-street parking and car co-op vehicles.
- Potential for child care facility in future phases.



COLLECTIVE DESIGN PROCESS — WORKSHEET 14

Theme: EXTERIOR IMAGE: What features do you like the most?

Comments:

A:
- Trees key
- Beautiful front yards
- Close to street is nice
- Integrates with street
- Walkable
- Lots of natural light
- Looks like NYC brownstones

B:
- Like a village
- This is what I envision
- Like covered entry with trellis
- Provides space behind for commons
- Nice scale
- Pitched rood ideal for solar

C:
- Combination brick, glass and siding
- Like texture and differentiation
- Not too contemporary
- Waterfront not Wolseley

D:
- Fits with neighbourhood for apartments and could look good similar to townhouses
- Like gable window treatment
- Similar to original Grace hospital
- Too suburban
- Scale too large
- Looks fake

^ Sample page from the Collective Design Process workbook.

^ Final schematic floor plan resulting from workshops and CDP sessions.

Project Timeline

2006 — Site design charette conducted by HTFC Planning & Design.

2012 — Incorporation of OGHC as an official housing co-operative.

JANUARY / 2015 — Request for Expression of Interest.

MAY / 2015 — Request for Proposals

AUGUST / 2015 — Award Construction Contract

NOVEMBER / 2015 — Construction Start

The Future / What is Next?

We will be working with our members, old and new, over the summer to refine the design of the project. We are hopeful that, with the support of the community, MHRC will issue a conditional approval in August and that all funding approvals will be in place by October. We believe a construction start in 2015 is still possible.

PHASE 1 SUMMARY

^ Full development site plan with building and landscape features highlighted. (* Not all features are labelled: L, Q)

Building Info & Features

GENERAL INFO:

Common Spaces:
- **Main Floor:** Library, large commons with attached serving kitchen, exterior public courtyard & patio with kitchen gardens, gardens, and orchard.
- **2nd Floor:** 2 enclosed lounges, a guest suite, and laundry room.
- **3rd Floor:** Enclosed lounge, a guest suite, laundry room, and roof deck and garden.
- **4th Floor / Roof:** Open roof deck and garden.
- **Basement:** Storage & Bike Storage.

Building Heights: Building heights vary and range from 28 ft to 35 ft.
Useable Roof Area: The building has a total of 3700 s.f. of useable roof space.
Accessible Design Features: An accessible sidewalk provides access on both the east and west sides of the site in order to allow universal access to the raised interior courtyard and gardens. This then allows ground level access to all main floor suites. A ramp is also located within the surface parking to allow access from the south. An elevator allows universal access to all floors of the building as well as the open roof decks and gardens.
See Board 7 - Phase 1 Plans for unit specific accessibility information.
Green Features: See Board 8 - Sustainable Approach & Green Features for detailed info.

FEATURES:

A. Cluster of three building pods around a courtyard.
B. The three clusters are connected by corridor links and open garden roof decks
C. U-shaped building mass open to south and west
D. Public openness in NE corner along Arlington, near Preston
E. Commons at heart of building, opening into courtyard (main floor)
F. Zen entrance through gateway from east located inside courtyard
G. Access from Evanson through gateway across courtyard
H. Plaza inside courtyard and outside to east onto Arlington
I. Living room / Library as public interface at east of Common House
J. South facing serving kitchen/MPR in common house (main floor)
K. A grass lawn for play, gardens, and orchards.
L. Height at north with lower units to south
M. Independent 4-bedroom suites along Evanson to with exterior courtyard access.
N. Open exterior deck access to units on upper level east wing
O. Exterior surface parking along south lane
P. Additional parking access on Parcel B to accommodate contractor/trades parking during construction
Q. Courtyard/plaza up 3 feet sloped to exterior grade to facilitate grade access for main floor units
R. Roof of north building to have elevator access and to be flat for urban gardening
S. Phase 2, Parcel B building to have covered parking with 3 storey, tiered building with 8 units of housing and/or childcare.

Unit Breakdown

	1 Bed	2 Bed	3 Bed	4 Bed	Total
Main	4	8	3	2	17
2nd	6	9	2	2	19
3rd	6	8	2	-	16
Sub-Total	16	25	7	4	52

Gross Building Area (s.f.)

	Bsmt	Main	2nd	3rd	Total
1 Bed		2,376	3,564	3,564	9,504
2 Bed		6,232	7,011	6,232	19,475
3 Bed		2,880	1,920	1,920	6,720
4 Bed		2,260	2,260	-	4,520
Total Res.		13,748	14,755	11,716	40,219
Circulation	1,545	2,610	2,898	1,863	8,916
Service	2,110	115	202	202	2,629
Amenity	-	2,282	623	455	3,360
Total Non-Res.	3,655	13,748	3,723	2,520	14,905
				Sub-Total	55,124
				+ Additional Gross Up	55,971

Parking Breakdown - Phase 1

	Visitor	CarShare	Standard	Accessible	Total
Parcel A	6	2	19	3	30
Parcel B	0	0	20	0	20
Sub-Total	6	2	39	3	50

> **Old Grace Housing Co-operative is full of people who are passionate about living in Wolseley and working hard for that privilege. We are committed to our communities, to our environment, and to each other.**

Car Share & Parking

- Old Grace Housing Co-operative projects, based on member surveys, that 35-40 parking stalls will meet our parking requirements. This proposal includes 50 stalls in Phase 1 including 2 Car Share stalls. This exceeds the City of Winnipeg parking requirements.

A BEAUTIFUL FIT WITH WOLSELEY

> **The proposed site plan and building massing is respectful to the fabric of the community and the attributes most valued by residents; front yards, porches, gardens...**

Concept, Form, Community Fit

Largely initiated by current and former Wolseley residents, the project concept shares the same vision expressed in the 2007 Old Grace Hospital Site Charette. This vision included:

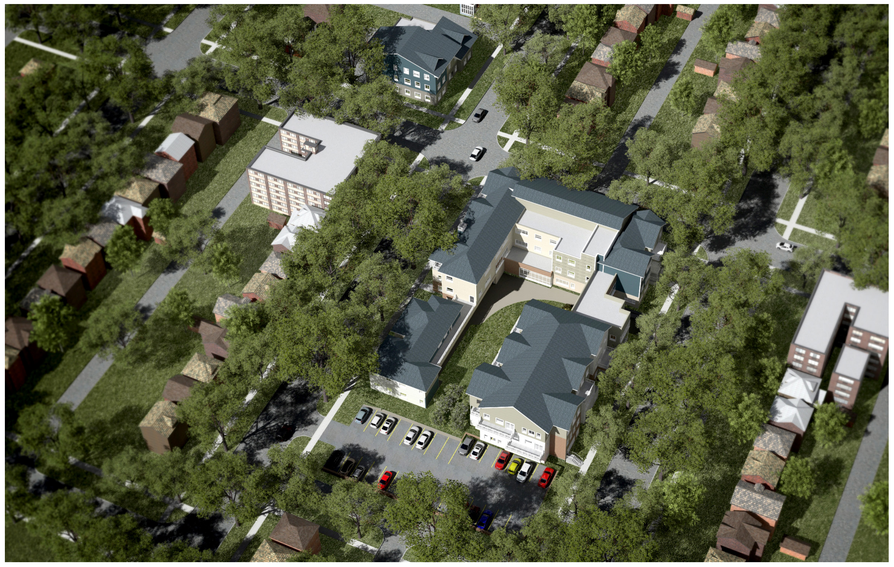
- Structures and plantings in character with the Wolseley neighbourhood
- Housing (multi-family and seniors) with the potential for some mixed-use
- Attractive green spaces, gardens and pedestrian paths
- Sustainable building practices
- Adequate on-site parking for residents and visitors, and
- Community consultation as development proceeded.

The OGHC has identified several compatible additional objectives

- Non-profit housing cooperative form of tenure
- Integration and interchangeability of market and affordable units
- Well-designed interior and exterior common (amenity) spaces
- Inclusion of accessible units.
- Address potential financial barriers to co-op partnership.
- Ongoing community outreach.

materials

- Wood frame with high-mass structural floor between units to maximize acoustic separation with concrete topping
- High acoustic demising walls between units to be concrete block or structural metal stud framing or double stud with acoustic insulation to STC 55
- Main floor on 900 mm grade beams with conditioned crawlspace on concrete slurry
- Roof framing at gables to be combination of timber and stud framing
- Non-structural framing walls to be wood studs or structural metal stud framing Exterior walls to be a combination of brick, stucco and fibre-cement panels/ siding
- Exterior walls to be fiberglass/roxul/rigid insulation to meet new energy code and/ or R40
- Roof to have 30 year asphalt shingles with R60 exterior insulation
- Soffits, fascia and eavestroughs to be prefinished metal
- Interior walls typically 5/8" Type X drywall
- Windows to be triple glazed fiberglass c/w openers
- Entrance doors to be insulated fibreglass in thermally broken aluminum/wood frames
- Suite doors to be solid core wood door in wood frame with commercial hardware
- Ceilings to be ACT or suspended drywall
- All painting to be low VOC
- Floor finishes to be slate tile in public entrance areas, marmoleum other public (under consideration)



1 ^ Aerial view of the development, looking north-west. Showing both phase 1 and phase 2.

2 ^ Looking south-west into the courtyard central to the development of parcel a. The commons space is to the right.

3 ^ Looking south-east along the Evanson St. face of the development on parcel A. The front porches, yards, and gardens, along with the massing of the units allow the development to be sensitive to the existing neighbourhood.

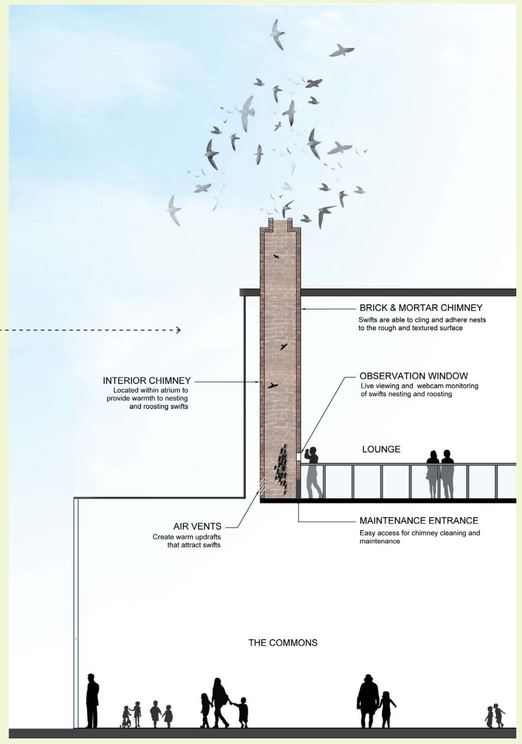
OLDgrace Housing Cooperative Ltd.

LANDSCAPE FEATURES

General Site Development Concepts

- The Old Grace Housing Co-op site development concept is responsible and respectful and responds to the existing neighbourhood fabric and its natural beauty. Greenspace, site water management, wildlife habitat, climatic responsive design, and individual and community wellness are incorporated into the plan.

The site design respects and accommodates neighbours, recognizing that most of the residents are already neighbours in the community. A walk through the site mid block from Evanson to Arlington, provides an intersection for residents and the community.



Chimney Swift Habitat

- Recalling the previous abandoned hospital chimney, a newly designed chimney will serve as a perfect habitat to attract nesting Chimney Swift birds.

Productive Rooftop / Garden Features

- Green and productive roofs provide more opportunity for growing food on-site and gardening.

On Site Storm Water Management

- Managing water on site and using every drop is considered through the design of permascapes, raingardens and rain barrels.

Climatic Responsive Design & Play Spaces

- Climatically responsive design responds to the location, offering outdoor comfort and a celebration of the seasons. Imagine enjoying a sun-filled courtyard in late March.

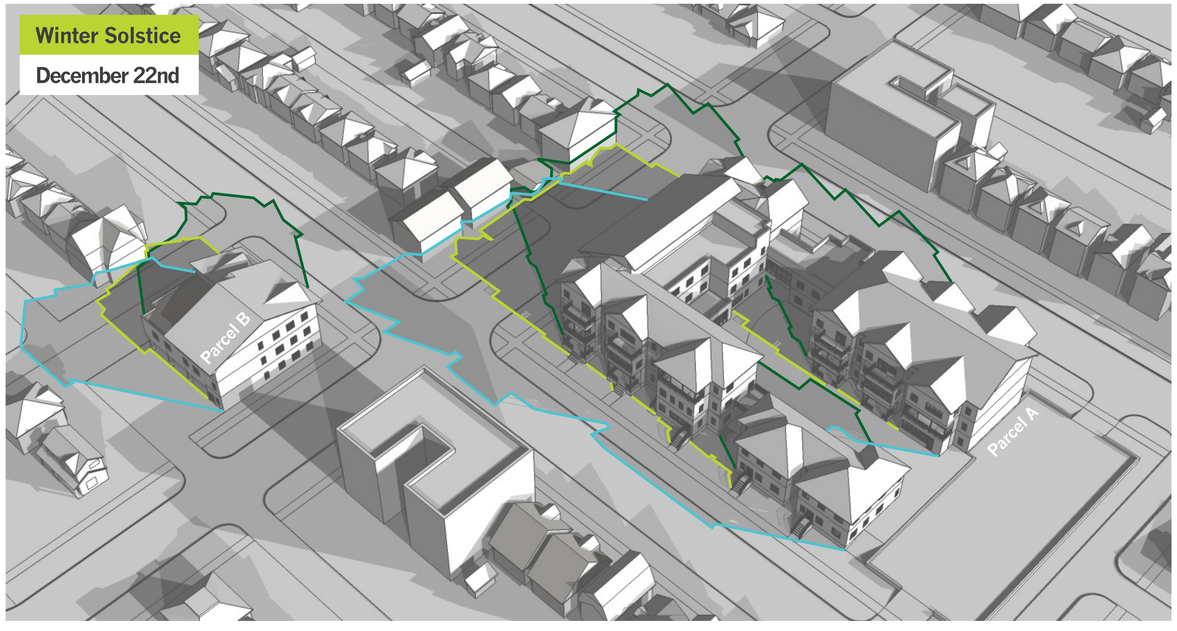
Social life is celebrated with the design of interior courtyards to host neighbourhood events and a big back yard for children and families for gatherings or play.

Front Yards & Boulevards, Street Tree Protection

- Wolseley is a tapestry of artful and eclectic front yards and boulevards. The design features similar front yards to continue this expression. Street trees will be saved with the highest standards of protection during construction. Perennial gardens and orchards offer beauty, fruits and winter interest.

> **It is genuinely a community-based initiative. We like the fact that the proponents are local, that the process has been consultative, that the project will be inter-generational and will include a mix of incomes and abilities, and that green measures are prominently featured.** *(Ruby Street resident)*

PHASING & SHADOW STUDIES



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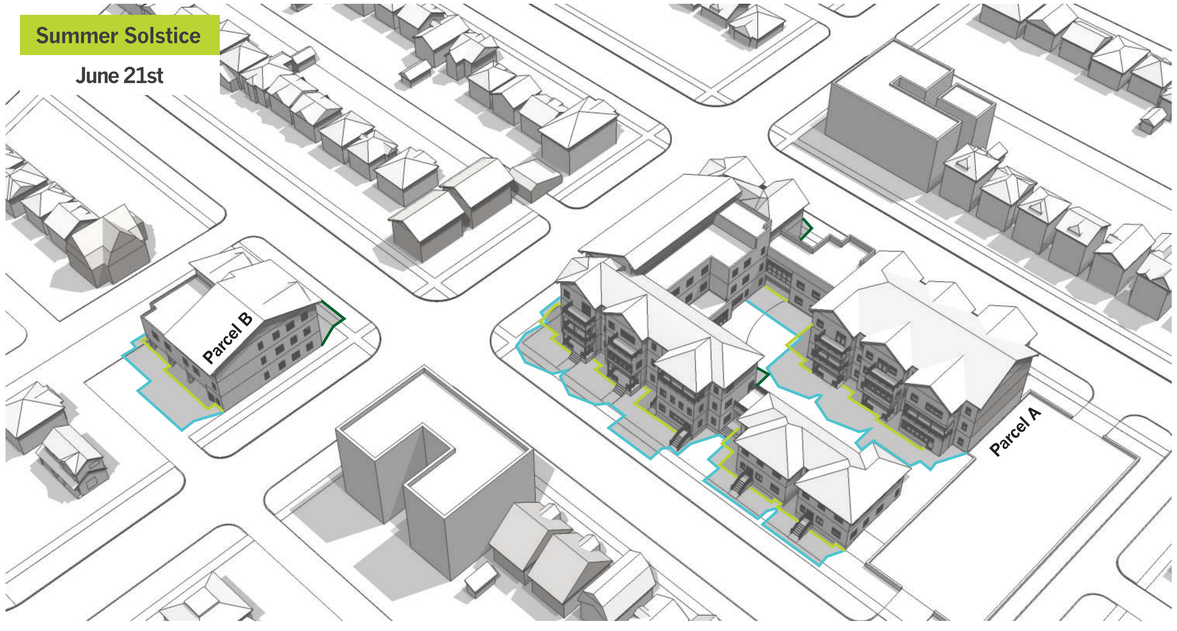

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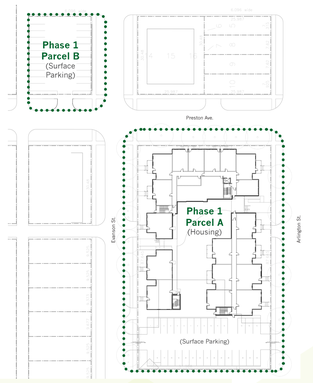
PROJECT PHASING

Phase 1

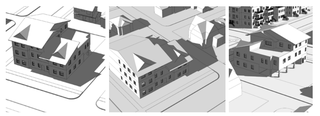
^ 09/21 - 10 AM Parcel A ^ 09/21 - 10 AM Parcel B



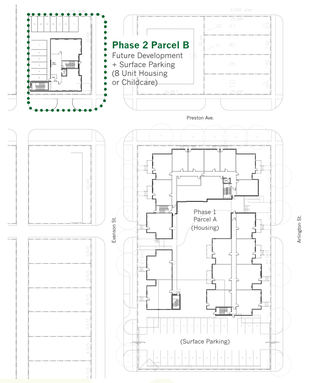
(Phase 1) PARKING: By keeping Parcel B as parking in Phase 1, construction parking, staging, and congestion will be accommodated and will have minimal impact on the community.

Staging: It is recognized that locating staging areas may be difficult. In order to minimize the impact on the community, it was decided to reduce the density on Parcel A in Phase 1.

Phase 2



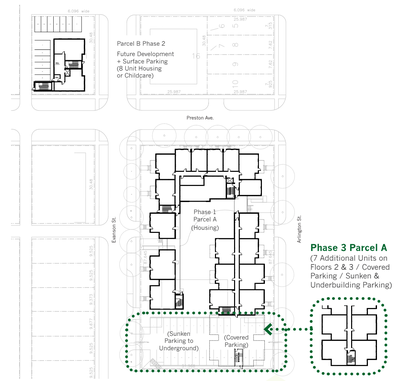
^ 09/21 - 12 PM Parcel B ^ 12/21 - 12 PM Parcel B ^ 12/21 - 3 PM Parcel B



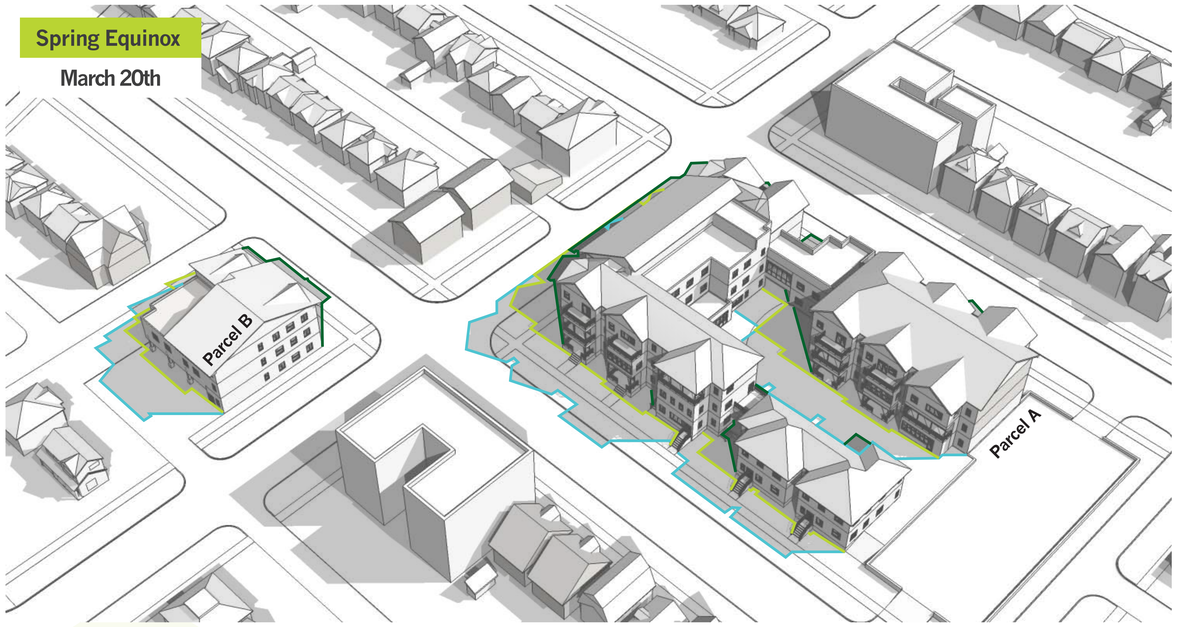
(Phase 2) CHILDCARE / HOUSING: OGHC is actively pursuing the inclusion of childcare in the project, but at this time, is unable to provide the necessary commitment and level of detailed investigation. With Parcel B available for Phase 2, the inclusion of the childcare and / or up to 8 additional units could be a reality.

Phase 3

^ 09/21 - 10 AM Parcel A ^ 09/21 - 10 AM Parcel A



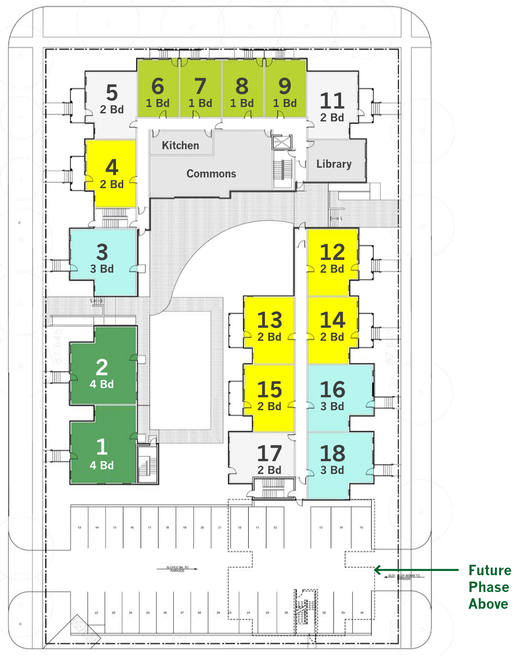
(Phase 3) MORE UNITS / COVERED PARKING: Within Phase 3, the 7 units, that were removed from Phase 1 to reduce the construction impact on the community, could be added back onto the project. These units would be added to the 2nd and 3rd floors at the south end of the east building and would provide cover for the parking underneath. There is also the option to add underbuilding parking.



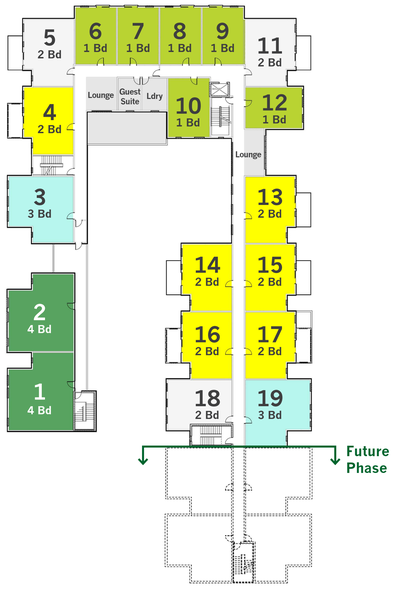
10:00 AM | 12:00 PM | 2:00 PM

PHASE 1 PLANS

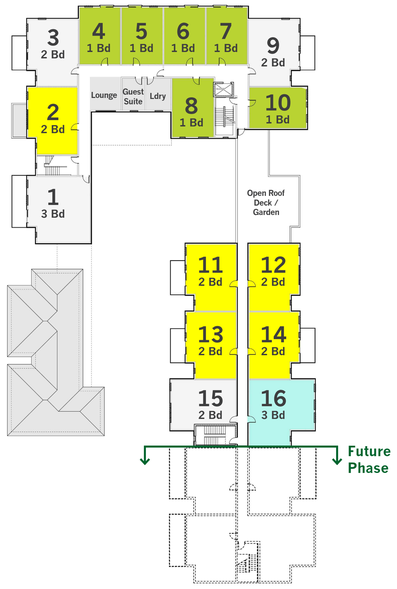
> **The cooperative values of the housing model and the supportive community it will foster will be a huge asset to Winnipeg for decades to come. We very much hope to have OGHC as our neighbours in the near future.** *(Arlington Street resident)*



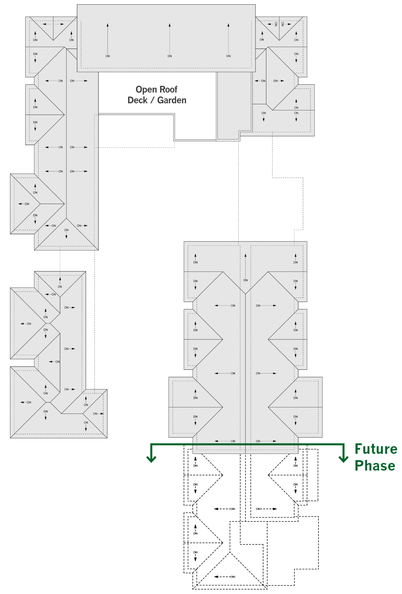
Main Floor Parcel A 0m 5 10 15



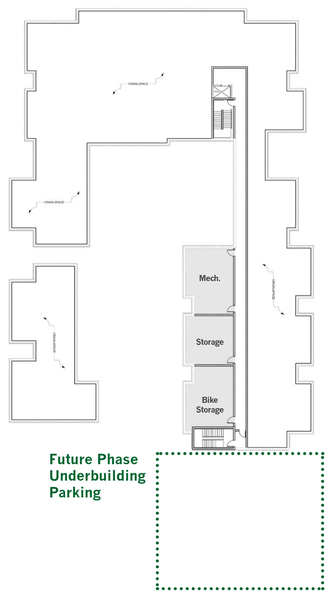
2nd Floor Parcel A 0m 5 10 15



3rd Floor Parcel A 0m 5 10 15



Roof Plan Parcel A 0m 5 10 15



Basement Parcel A 0m 5 10 15

Phase 1 Development

- Following the Class C Cost Estimates provided by the Quantity Surveyor, OGHC adjusted the Parcel A (larger lot) component by reducing the number of units from 59 to 52, and converting the parking structure to ground level parking. These changes result in 50 parking stalls (including 2 stalls for car co-op cars) in the first phase. This number exceeds the 35-40 parking stalls the City of Winnipeg would require for resident and visitor parking. Subsequent phases would include housing on Parcel B (smaller lot) and the potential addition of more units to the Parcel A structure.

Phase 1 Unit Breakdown

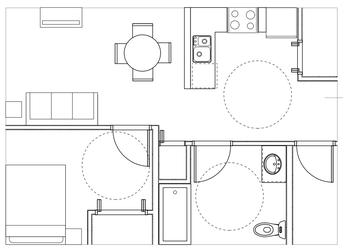
1 Bedroom: 16 Units **2 Bedroom:** 25 Units
3 Bedroom: 6 Units **4 Bedroom:** 4 Units

Unit Diversity and Design

- All suites have been designed to conform to modesty guidelines as per the RFP. The co-op has defined a desired mix of 18 · 1 bedroom, 32 · 2 bedroom, 13 · 3 bedroom, and 4 · 4 bedroom units after the final phase (phase 3) of the development. As the majority of the residences are for 2 bedroom units, this has become the base unit design. This design is based on a unit width of 32 feet with a front porch width of 24 feet and an alcove width of 8 feet. The overall area defines the depth of the unit. The base 2 bedroom unit has been designed without using porch space for an area of 779 sf. In order to evolve to a three bedroom unit, the 181 sf porch / verandah space is added for an area of 960 sf. This design allows the 2 and 3 bedroom units to be interchangeable. All units are designed to modesty guidelines, to be visitable, and the development includes several fully accessible suites.

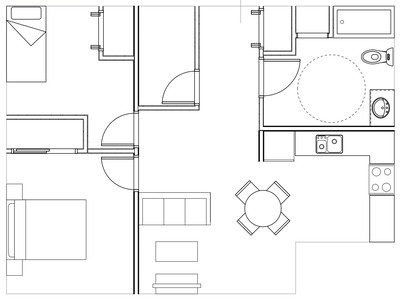
PHASE 1 UNIT SAMPLING

UNIT A ACCESSIBLE 1 BEDROOM SUITE



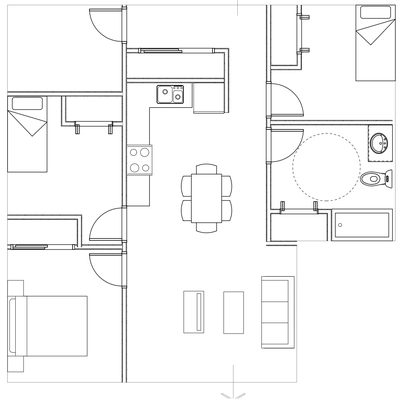
1:50 **653 s.f.**

UNIT B 2 BEDROOM SUITE



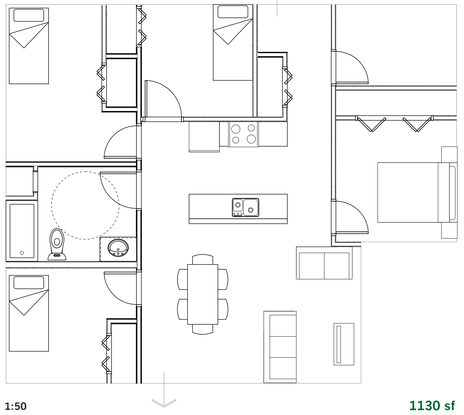
1:50 **779 sf**

UNIT C 3 BEDROOM SUITE



1:50 **960 sf**

UNIT D 4 BEDROOM SUITE



1:50 **1130 sf**

Unit Features

- Compact & efficient floor plans
- Superior acoustic / sound separations in floors and walls to mitigate noise transfer from suite to suite and from common spaces. (Achieved with concrete floor toppings, acoustic batt insulation and resilient channels).
- Fire sprinklers throughout entire building, including suites.
- In suite storage.
- Pressurized corridors for air/odour separation.
- Intercom and buzzer security from main entry to each suite.
- Fully accessible doors/washrooms in all units
- Porch, balcony, or sunroom access on most suites.
- Sustainable materials and finishes used throughout with focus on finishes with no to low emitting VOCs and off-gassing, zero use of urea-formeldehydes, and high percentage of recycled content.

Accessible Design

- All units as well as the common house are accessible by ramp or elevator and are designed to be visitable with accessible door clearances and washrooms. In addition, there will be 5 fully accessible suites. Existing suite designs can be converted to fully accessible.

Target Share Price

- **1 Bedroom:** $75,000
- **2 Bedroom:** $90,000
- **3 Bedroom:** $115,000
- **4 Bedroom:** $130,000 (If Available)

SUSTAINABLE APPROACH & GREEN FEATURES

> **...green infrastructure, low energy design and practical sustainability features like preserving trees, building gardens and orchards, and using roofs to create pleasant micro-climates...**

The Sustainable Approach

The approach to sustainability for the Old Grace Housing Co-operative starts with creating goals and targets along with a path to guarantee they are met. Targets are established by defining priorities for the client group. Ensuring all parties (designers, consultants, owners, funding authorities) are on the same page regarding sustainability goals is a critical first step when designing a high-performance and sustainable building. From initiation to completion, the team needs to work together in an integrated fashion.

It was found that using a third-party certification is paramount to ensuring sustainability targets are documented with calculations and explanations from all team members. The rigorous process associated with the LEED® Rating system is one that confirms all "green" claims have evidence to support them. The benefits of the PassivHaus Rating System compliance are also being explored. There is a commitment to exceeding the Manitoba Green Building Program Form 3 requirements in the development of the project.

Site Design

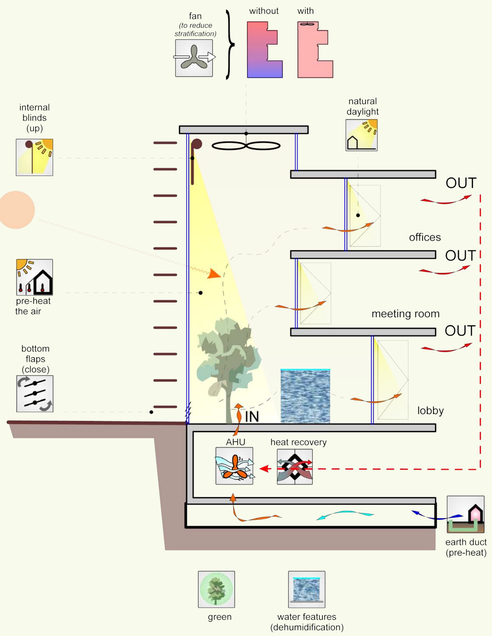
A project's orientation on a site needs to be carefully assessed to offer the greatest potential for solar exposure but to reduce negative impacts on the HVAC system. For example, if passive strategies are desired, it will be very important not to over-heat spaces with too much south-facing glazing. The design of any building should compliment the surrounding neighbourhood while maximizing vegetative space for biodiversity and residents alike.

Water

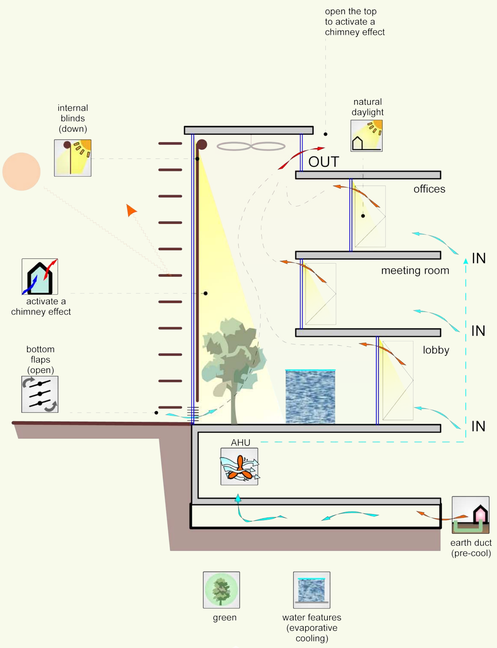
Efficient use of water in a building can minimize the demand on potable-water sources in the city as well as create operational cost savings. The use of low flow faucets and showers and dual-flush water-closets would be recommended on a project of this nature. Sustainable buildings also look to the outdoor environment and work to reduce water use through careful selection of drought-tolerant plants. Rainwater can also be collected to provide water for any gardens or can be used indoors for sewage conveyance.

PROPOSED ATRIA CONCEPT

An earlier schematic of the project included a greenhouse / atrium concept. It played a number of key roles to the central building. While the goal of OGHC is still to pursue feasibility of this option, the design is too early to be able to quantify the energy savings and present a substantive proposal based on the real metrics. The intent of OGHC is to continue to pursue the strategy as the design progresses and look for cost and energy efficient implementations.



WINTER STRATEGY: In winter, using a large glazed south facing facade, the atrium was to gather the significant Winnipeg passive solar gains preheating the air which would then be distributed to the guest suites, lounges and laundry areas. It was to humidify the air using the waterfall or other water features, and provide a comfortable gathering and interaction point for the community. A large fan was proposed in the space to ensure that temperatures across the space were the same.



SUMMER STRATEGY: In summer the atrium was to switch directions. The external shading was to block the high sun angles of the summer and let in the winter sun. An additional internal cloth shade would then help to reduce solar gains. Additionally, the atrium would act as a way to exhaust the summer air from the other areas and cross ventilate the spaces. Turning off the fan, the hottest air would rise and exhaust from the clerestory windows.

Energy Efficiency

Reducing the overall energy used in a building is critical to the future of the building. Key to the efficiency is increasing the thermal value of the envelope to maximize passive design and thermal mass. Simplicity is key - human control of passive systems needs to be balanced with the simplicity of mechanical parts and digital controls. Energy efficiency helps to reduce the operational costs for the life of the building and also makes future renewable energy sources such as wind and solar more economically feasible. During design an energy model will be developed to assess different options in order to provide the most energy efficient building possible. Measurement and verification tools such as metering equipment that is used post-occupancy can allow for further improvements as well as identify any areas of concern that can be addressed. Data provided through this equipment can be used as educational tools - highlighting the direct impact occupants have on the building's energy use or correlating energy trends with weather data. Occupant education plays a very large role in how energy efficient a building will actually be over years of operation.

Sustainable Materials

Materials for construction are carefully selected to match sustainable goals for the project and to maximize the durability of the structure to ensure a long-life building. For example, regional materials may require more intensive manufacturing processes than materials that are found slightly further from the project site. Products that are manufactured with recycled content or sustainably sourced materials reduce environmental impacts resulting from extraction and processing of virgin materials. There is also opportunity to investigate possibilities for using salvaged materials from other buildings being deconstructed. Key decisions regarding the overall concept of the building will determine whether masonry or frame structures provide best use of sustainable materials when compared to life cycle costs.

Recycling

During the construction process, it is our standard practice to ensure material will be diverted from the landfill whenever possible. Educating and working with contractors to identify diversion / salvage / recycling opportunities early in the construction process has proven to be a successful method in guaranteeing our diversion targets are met. The continual monitoring of construction sites that we undertake is required to ensure compliance. Identifying recycling facilities in the design will be key to ensuring long-term recycling opportunities for residents.

Healthy Indoor Environments

Creating a healthy indoor environment is one of the cornerstones of a sustainable space. Bringing natural daylight into spaces with views to the outdoors can have a positive effect on the body and mind as well as reduce the requirements for artificial lighting. Strategies such as displacement ventilation can be used to bring fresh air directly into the breathing zone. All materials used in a project should be evaluated for their off-gassing potential and substances such as volatile organic compounds and urea-formaldehyde limited or eliminated to improve the air that occupants will breath. In a sustainable building these factors are assessed and prioritized throughout the design and construction process to ensure the building is healthy when turned over to the owner and occupants.

Commissioning

Commissioning Agents are brought onto the project team at the beginning of design. They offer a third-party validation of mechanical and electrical systems to ensure that what is being designed and installed meets project goals, and that the equipment is functioning as per the design. We also take durability very seriously and have designated a Building Scientist in our office who conducts thorough design and construction reviews that are presented to all member of the team. The sustainability staff, using the LEED® Rating system, track data and documentation throughout design and construction to confirm adherence by all team members to specific sustainability targets.

Innovative Design

nnovation, while often thought of as incorporating the newest technology on a building, can be seen in many different ways. It might be doing something outside of the "norm" of current design or it could be doing something exceptionally well or taking a concept further than what code or rating systems dictate is minimum performance. It could also be incorporating specific and new principles in areas like Design for Active Occupants. Regardless of the strategy or idea, anything innovative will require all team members to expand their thinking, challenge boundaries, and work together to guarantee successful integration into the building and occupants' daily operations. It also means balancing 'innovation' with sensibility in order to ensure that new ideas really work and stand the test of time.