

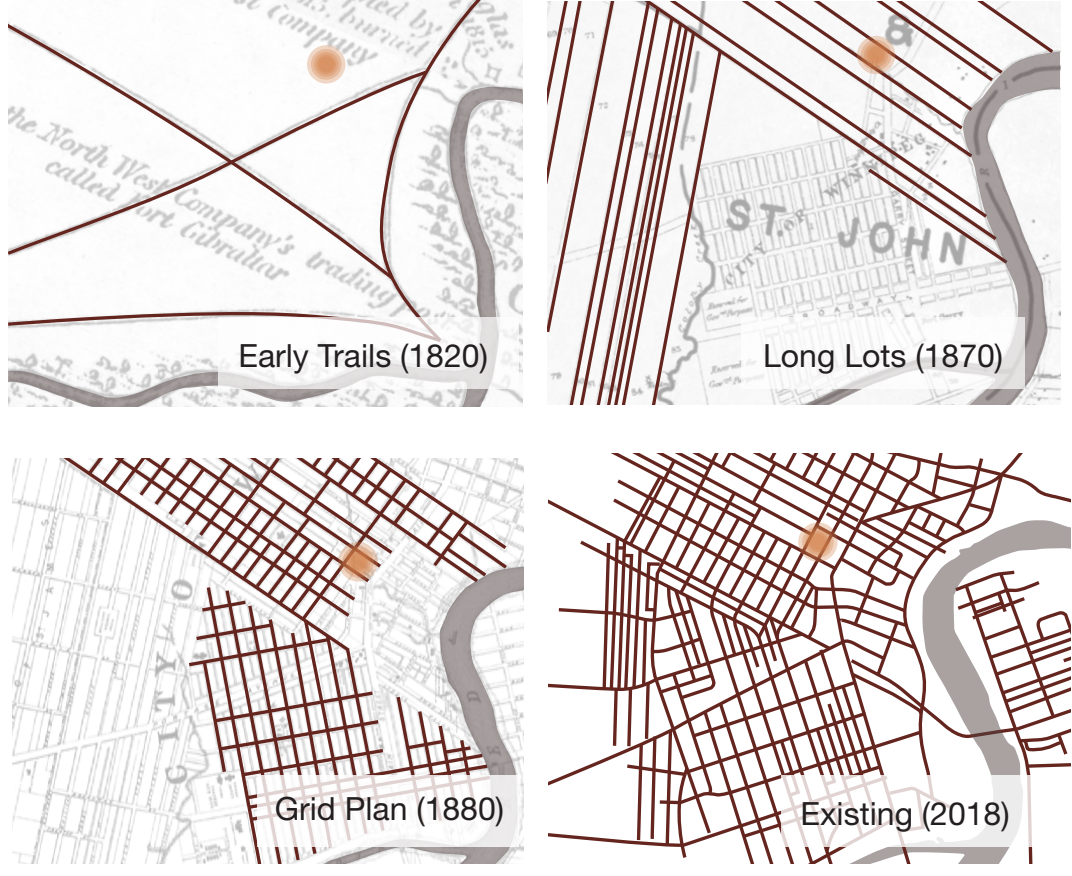
New Light and Life in the Exchange District

The creative hub is a distinct public space typology designed to complement and reinforce the function of other adjacent parks and open spaces in the area, providing a new all-season destination for food, arts and culture in Winnipeg.

The Urban Design strategies for transforming Market Lands into a unique, inspiring urban place with a strong sense of belonging focus on:

- Reflecting the long-lots, the meandering Red River, the historic Brown's Creek, the early Indigenous trails and the evolution of Winnipeg's historic street patterns that contribute to the 'Image of the Place'.
- Positioning the Market Hall along the visual and historic axis of Old Market Square, creating a new visual terminus and gateway into Market Lands.

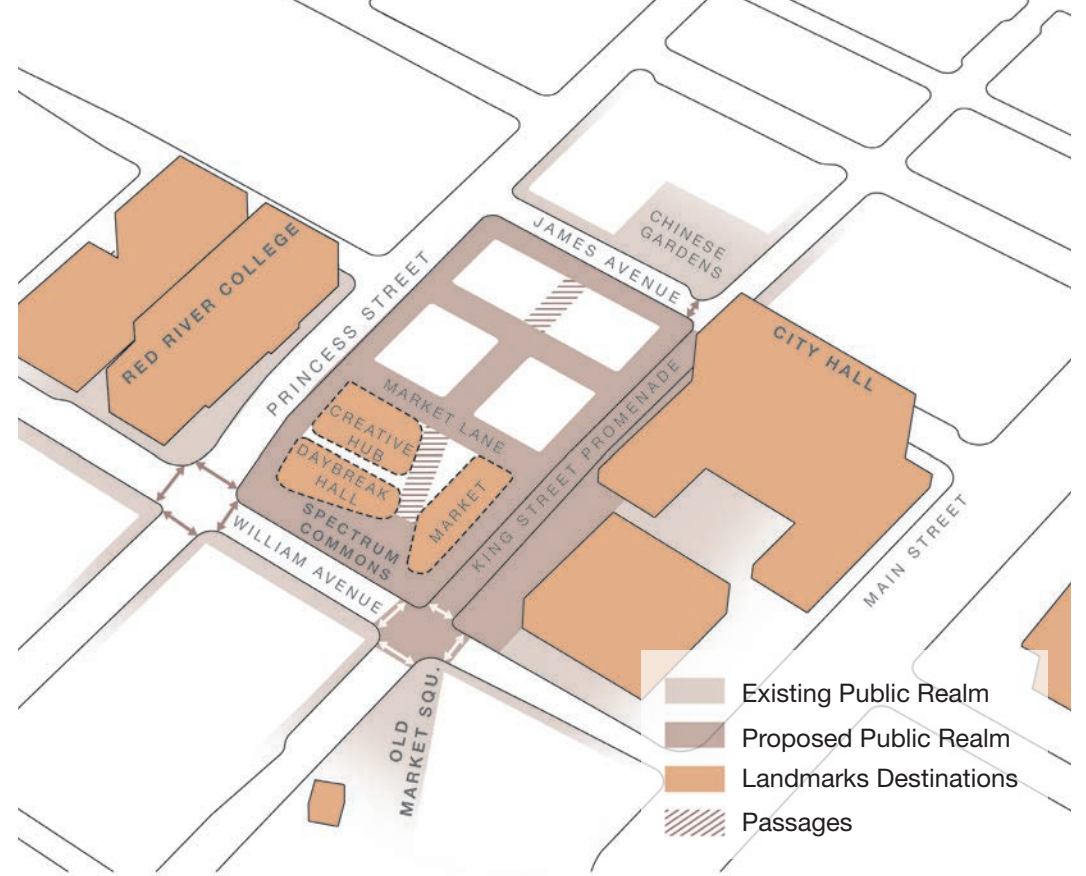
- Establishing a new **creative hub** composed of the Daybreak Hall, Urban Shaman Gallery, Spectrum Commons, Market Hall and Spectrum Passage, all working together to create a flexible indoor/outdoor venue for a wide range of daily or seasonal activities and events.
- Reinforcing connections** to adjacent neighbourhoods through the introduction of an interconnected network of pedestrian priority lanes and improved sidewalks.
- Massing a new development so it transitions in scale gently northward providing **optimum solar access** onto the public realm of the entire district.
- Providing for three buildings within the northern parcel that are designed as mixed-use buildings to support of range of potential future uses, and that together total **30,000 m² of new development** to invigorate the northern edge of the Exchange.



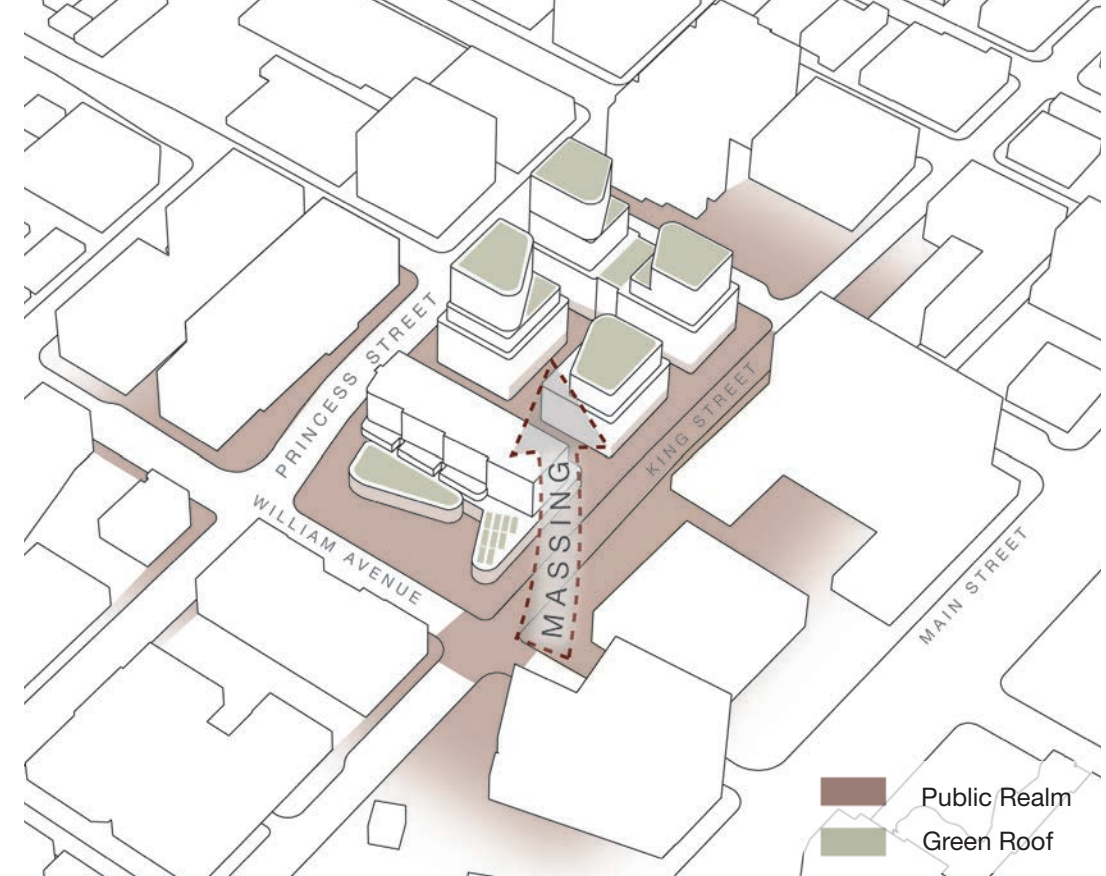
Gathering Place of the Past and the Future



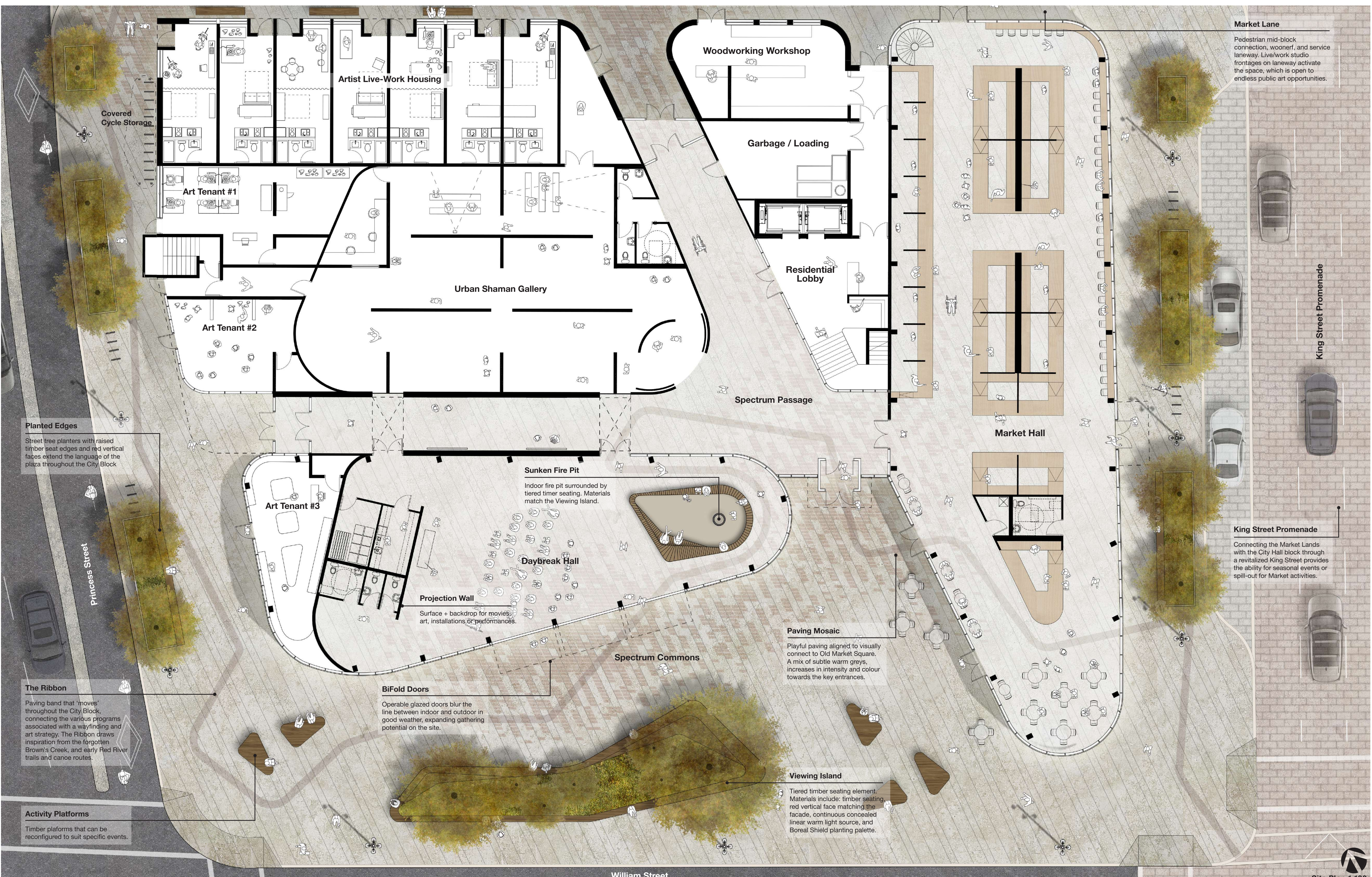
Making Connections



Public Places



New Buildings



Market Lane

Pedestrian mid-block connection, woonerf, and service laneway. Live/work studio frontages on laneway activate the space, which is open to endless public art opportunities.

King Street Promenade

Connecting the Market Lands with the City Hall block through a revitalized King Street provides the ability for seasonal events or spill-out for Market activities.

Planted Edges

Street tree planters with raised timber seat edges and red vertical faces extend the language of the plaza throughout the City Block

The Ribbon

Paving band that 'moves' throughout the City Block, connecting the various programs associated with a wayfinding and art strategy. The Ribbon draws inspiration from the forgotten Brown's Creek, and early Red River trails and canoe routes.

Activity Platforms

Timber platforms that can be reconfigured to suit specific events.

Paving Mosaic

Playful paving aligned to visually connect to Old Market Square. A mix of subtle warm greys, increases in intensity and colour towards the key entrances.

Viewing Island

Tiered timber seating element. Materials include: timber seating, red vertical face matching the facade, continuous concealed linear warm light source, and Boreal Shield planting palette.

Sunken Fire Pit

Indoor fire pit surrounded by tiered timber seating. Materials match the Viewing Island.

Projection Wall

Surface + backdrop for movies, art, installations, or performances.

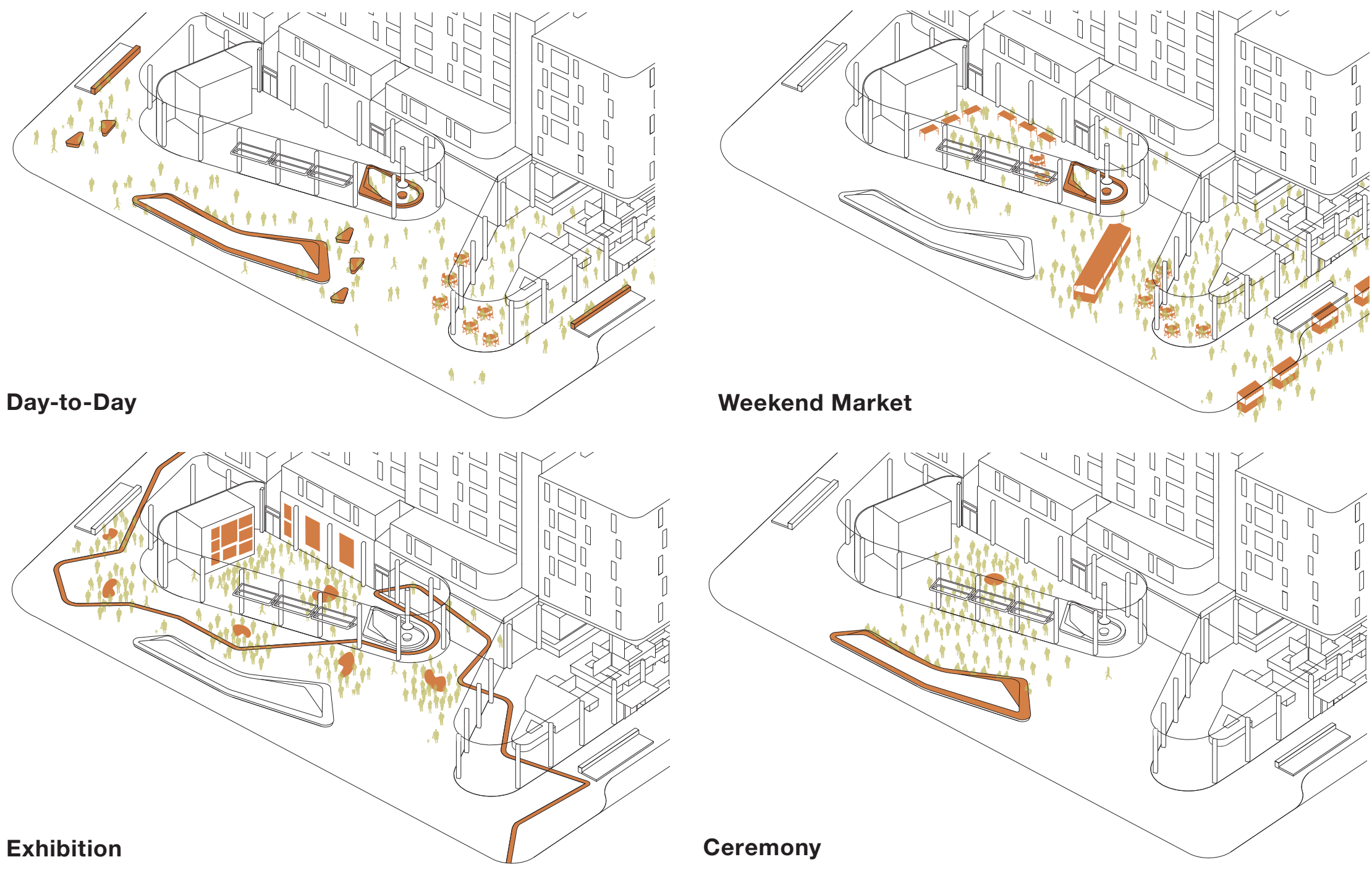
BiFold Doors

Operable glazed doors blur the line between indoor and outdoor in good weather, expanding gathering potential on the site.

William Street



Vibrant Indoor / Outdoor Public realm for All Seasons

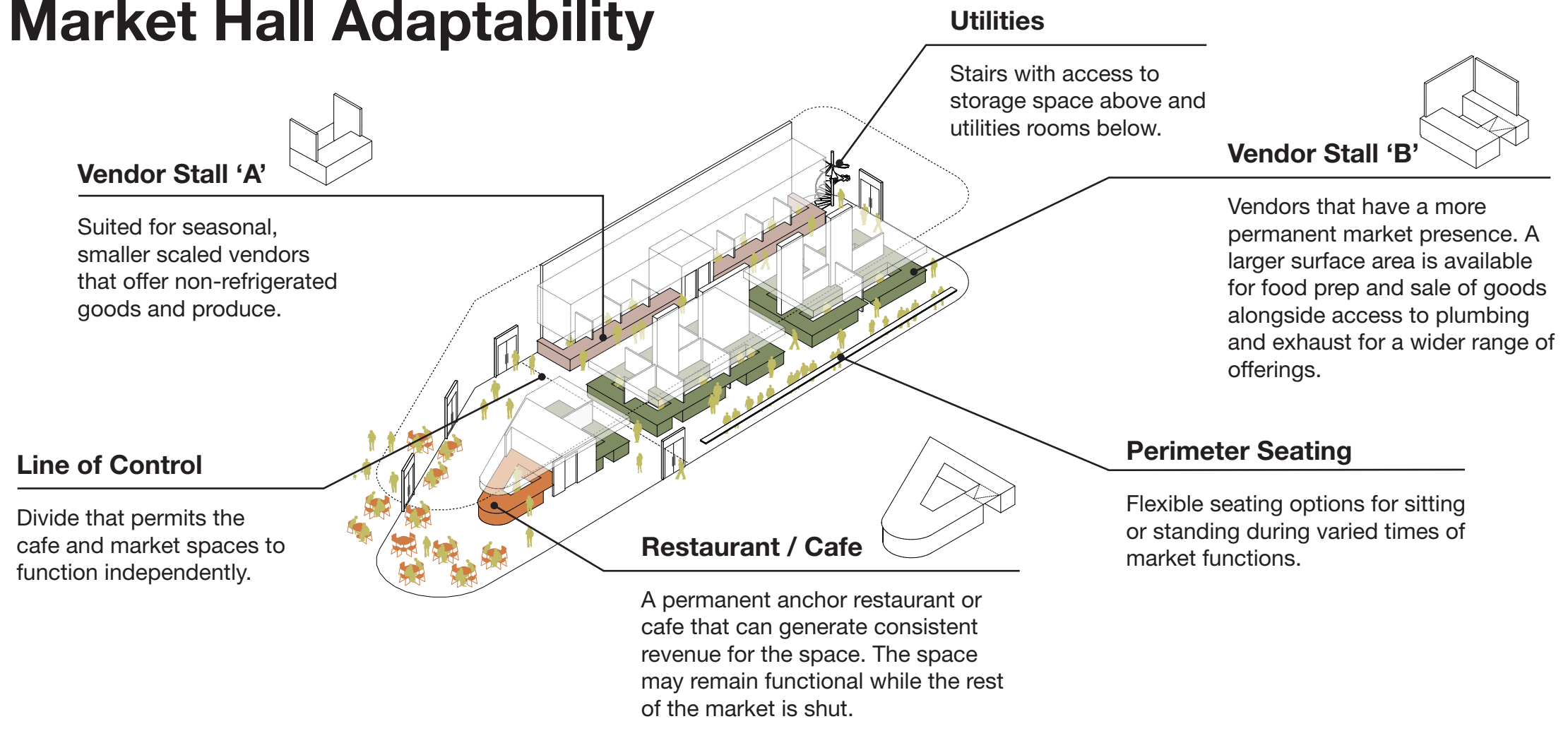


Spectrum Commons, Market Hall, and Daybreak Hall all work together to create the creative hub: a flexible indoor/outdoor venue for a wide range of day-to-day and seasonal activities. For special occasions, the design has inherent flexibility for larger celebrations and community events. The amphitheatre-like Viewing Island and Sunken Fire Pit can be used as passive seating, or as an active learning or performance spaces. Benches encircling the Viewing Island provide the opportunity for people to face the activity within the plaza or towards the street beyond. Movable tables, chairs, and activity platforms can be reconfigured within the space to suit the scale and theme of each event.

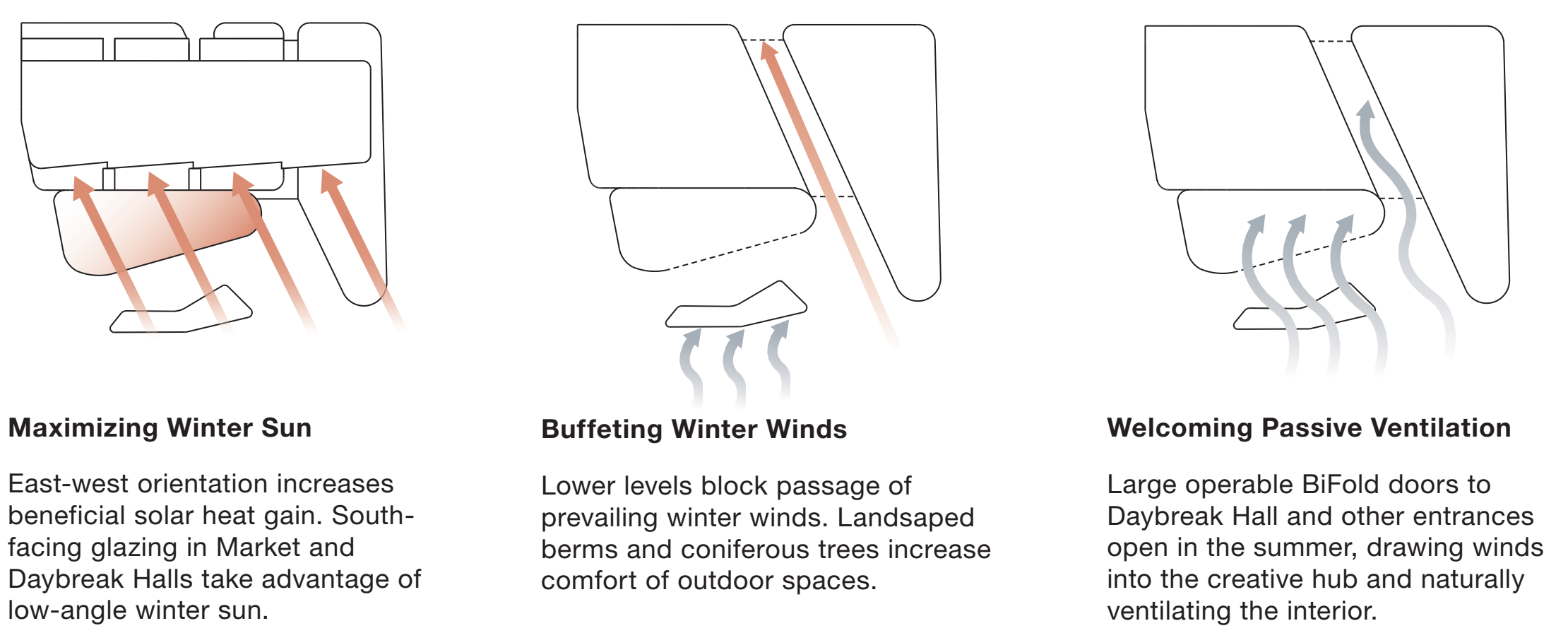
The Ribbon, inspired by lost rivers and old canoe routes, acts as both wayfinding and art paving feature that winds through the City Block. As wayfinding, it guides visitors in a subtle way through connecting complementary elements: the Market Hall, Spectrum Commons, Daybreak Hall, Spectrum Passage, Urban Shaman Gallery, Market Lane, and future mixed-use developments on the north parcel. As art paving, it has the opportunity to act as a discovery public art trail where various installations are found along The Ribbon, and in itself it offers the opportunity for public artists to be engaged to turn The Ribbon into integrated art by engraving poetry, illustrations, or other features into the paving.



Market Hall Adaptability



Passive Design Strategies - Creative Hub



Integrated Uses = Inspired Users

Artists and their Families at the Heart of the Project

The building is organized to maximise connectivity between the arts and its audience, food merchants and foodies, residents and their city.

Market Hall and Daybreak Hall each powerfully address the street and the sun to create welcoming, vibrant public spaces that are comfortable year-round.

An artist cluster established on the ground floor and mezzanine combine live/work studios with galleries, a workshop, fume room and wash-up area, and connect directly to the main lounge and laundry areas supporting the additional housing above.

Level 2 is designed as a family-floor, where the largest housing units are clustered with amenities including communal dining and rooftop gardening facilities over the Market Hall roof.

The typical housing floors 3-6 are designed to be inclusive, flexible, and comfortable for a diverse range of tenants. As wide-shallow units, they maximize access to light and views within a compact form designed to meet Passive House standards.

All corridors are daylight and all stairs offer views to the landscape beyond.

Photovoltaics on the roof and geothermal systems below efficiently power, heat, and cool the building, achieving net-zero energy and net-zero carbon targets.

- Market Hall
- Daybreak Hall
- Urban Shaman Gallery
- Arts Tenant
- Residential / Live-Work
- Residential Amenity

Roof / PV array

Levels 3 to 6

- (4) studios
- (10) one-bedrooms
- (3) two-bedrooms

Level 2

- resident dining room
- rooftop amenity
- (1) one-bedrooms
- (14) two-bedrooms

Mezzanine

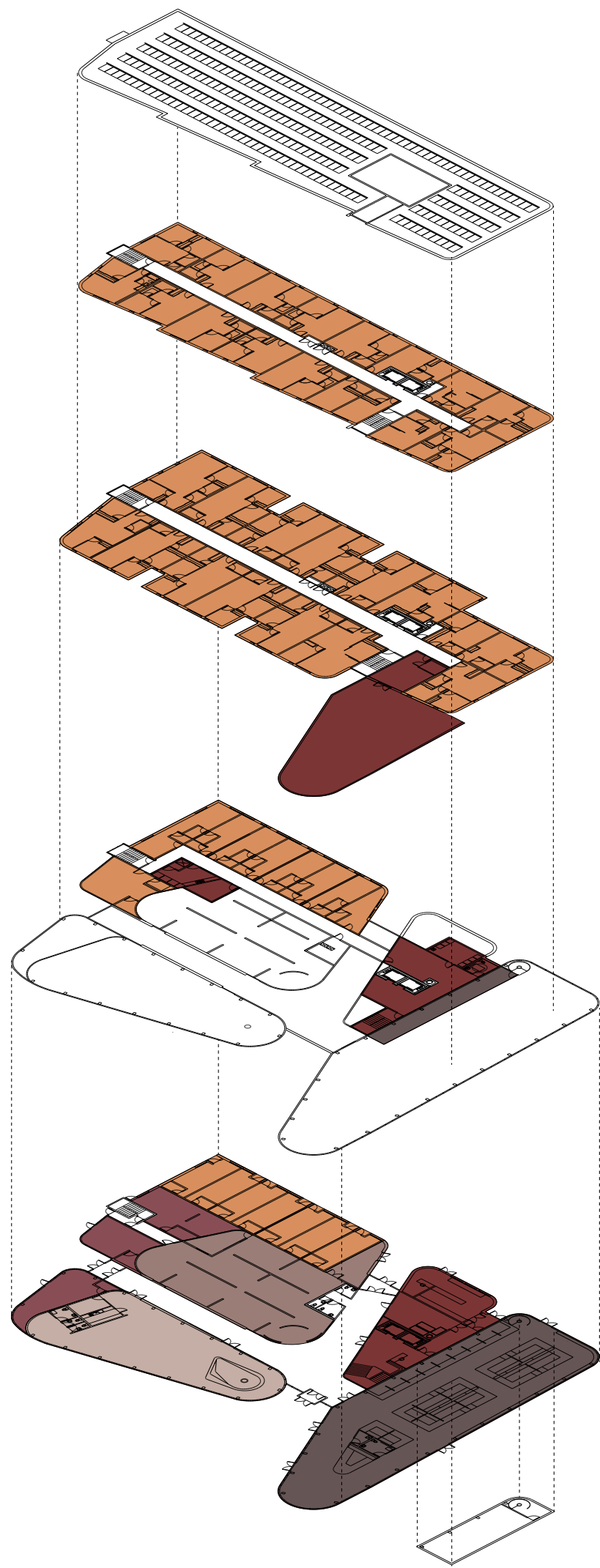
- resident laundry
- resident lounge
- artist washup facility
- artist fume room
- (9) live/work units
- storage / utilities

Ground Floor

- Market Hall
- Daybreak Hall
- Urban Shaman Gallery
- residential lobby
- artist workshop
- (3) arts storefronts
- (7) live/work units
- garbage / loading areas

Basement

- utilities / geothermal



Residential Unit Adaptability

Live/Work + Studios

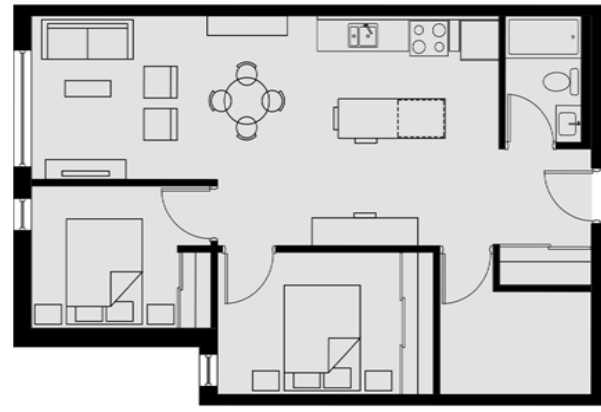
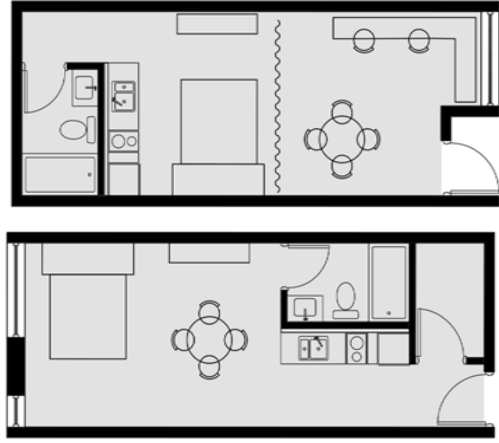
- designed to maximize work area
- 7 live/work units at grade with direct access to Market Lane; additional mezzanine units could double as artist-in-residence suites

One-Bedroom Suites

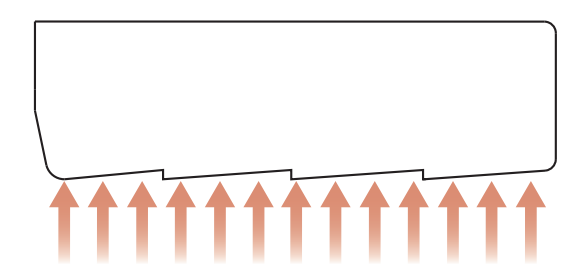
- shallow-wide units with good window access and living area
- optional kitchen island to support entire living area conversion into work studio

Two-Bedroom Suites

- both bedrooms provided window access
- large storage room provided
- furniture layout and use of rooms flexible to support range of use

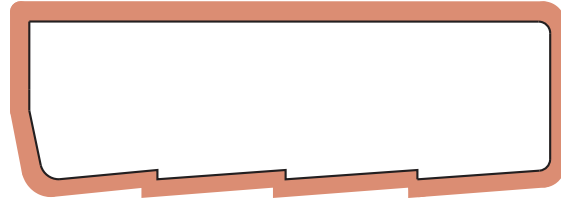


Passive Design Strategies - Housing



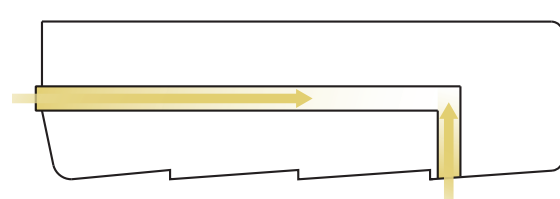
Maximizing Winter Sun

Sawtooth building facade orienting residential windows due-south.



High Insulation and AV Barrier Performance

R-40 wall assembly, passive-house detailing of air/vapour barrier and triple-glazed windows support high performance of building envelope.



Daylit Corridors and Desirable Stairs

Daylighting is provided within each residential corridor through glazed stairs, designed to encourage active living and reduce dependence on artificial lighting.



Typical Floor Plan 1:100

Material Palette



Facade



Glazing



Wood Scrim



Wood Millwork



Concrete



Green Roof



Paving



Landscape Elements

Establishing a comfortable microclimate and sustainable building design through solution-oriented innovation

Energy Systems

- 1

Geothermal Wells: Geothermal wells support a comprehensive heating and cooling strategy. The buildings' passive design features reduce peak heating loads which help balance the field and reduce its size and the required capital investment.
- 2

Central Heat Pumps: Manitoba's clean electricity grid makes heat pumps a logical choice for carbon neutral buildings. Heat pumps within the Creative Hub use electrical energy to efficiently move heat between the building and the geothermal field.
- 3

Variable Refrigerant Flow Systems: VRF technology supports efficiently moving energy around the residential portions of the building from spaces which require cooling to those which need heat. By combining VRF with geothermal heat pumps, the building can achieve higher levels of performance and carbon savings.
- 4

In-Suite Energy Recovery: In-suite ERVs provide a simple, cost-effective means of delivering outdoor air directly into each unit, improving indoor air quality while reducing heating, cooling and humidification/dehumidification energy.
- 5

Hot Water Trench Heaters: Large areas of glazing in the Market Hall and Daybreak Hall are heated with a hot water system fed from geothermal heat pumps, preventing cold drafts and improving occupant comfort.
- 6

LED Lighting: LED lighting with occupancy and daylight sensors reduce energy use.
- 7

Energy Star Appliances: Plug and equipment loads are dominate uses of energy. Energy Star Certified refrigerators and cooking equipment help reduce plug loads.
- 8

Photovoltaics: A 150 kW roof-mounted PV array will produce 130,000 kWh per year, providing nearly 40% of the building's energy needs.

Water Systems

- 1

Green Roofs: Green roofs planted with drought-tolerant native species enhance the connection with nature while reducing the need for landscape irrigation and improving stormwater management.
- 2

Low Flow Fixtures: Ultra-low-flow faucets and showers reduce potable water consumption.
- 3

Condensing Dryers + Heat Recovery: Condensing dryers provide a more energy-efficient alternative to direct vented dryers which use more energy and create thermal bridges in the insulated envelope.
- 4

Domestic Hot Water Heat Pumps: Geothermal heat pumps provide a much more energy efficient means of heating domestic hot water for the Residential and Creative Hub.
- 5

Drainwater Heat Recovery: Capturing energy from shower drains reduces domestic hot water heating demand.

LEED® Targets

Platinum LEED v4 BD+C	80/110
Integrative Process	1/1
Location and Transportation	13/16
Sustainable Sites	5/10
Water Efficiency	7/11
Energy and Atmosphere	27/33
Materials and Resources	5/13
Indoor Environmental Quality	12/16
Innovation	5/5
Regional Priority	4/4

Results

The innovation behind the sustainable design strategy at BEAM is rooted in simple, effective solutions. Instead of using overly complex and expensive technologies, off-the-shelf technologies are assembled into a state of art integration that plays to the strength of the local climate, energy grid, and project budget. This results in a design that is not only highly

energy efficient, durable, and environmentally sustainable, but is also easy to build, operate, and maintain. In turn, this strategy also creates opportunities for local manufacturers, trades people, and contractors to be engaged in the construction, positively contributing to Winnipeg's economy and skilled-trades capacity.

