



## ARCHITECTURAL FEASIBILITY STUDY

### A New Housing Hub

A Community-Informed Feasibility Study

for:



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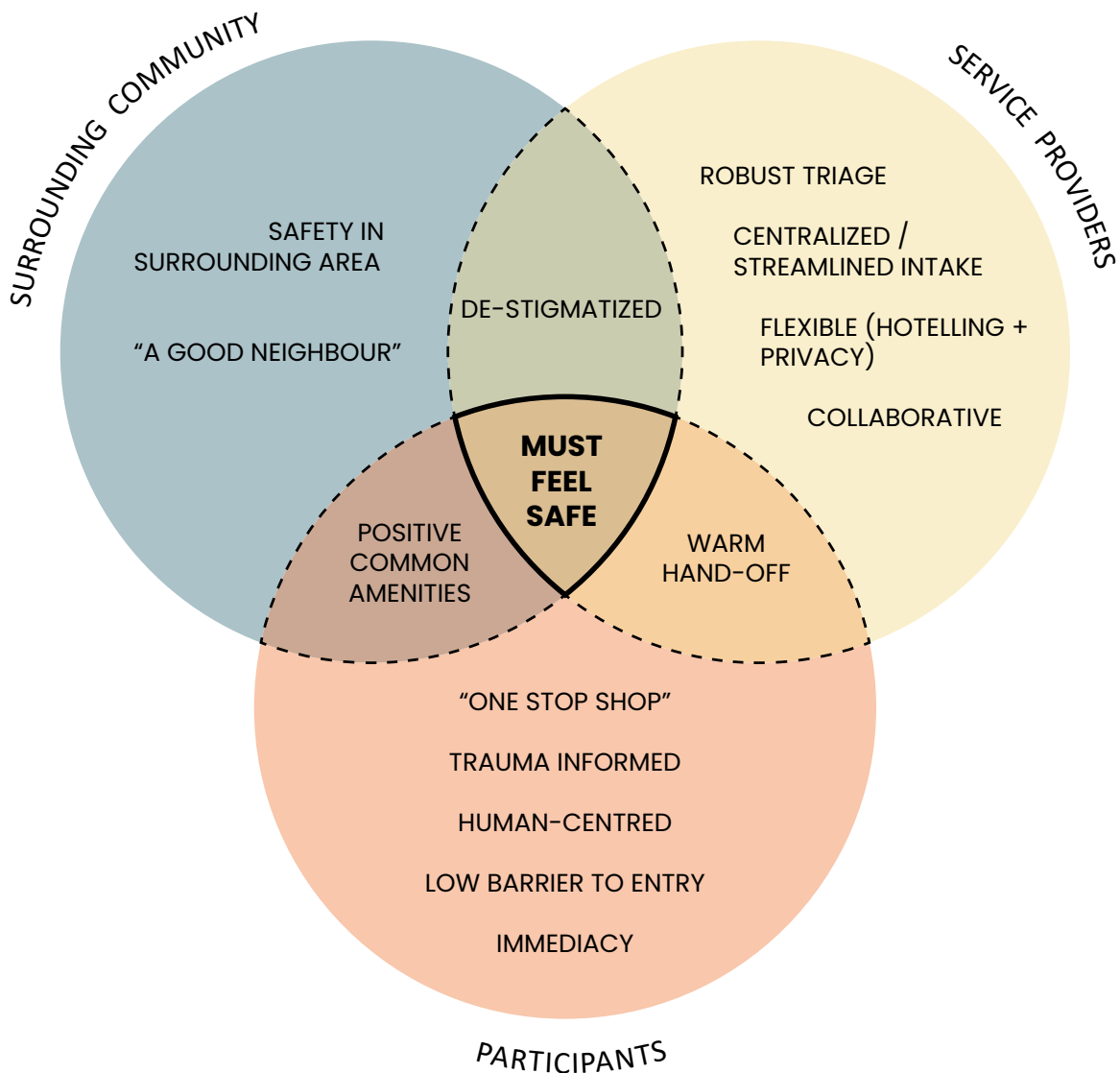


# 1 CONTEXT

This Architectural Feasibility Study operates as an extension of the What We Heard Report prepared by Glos Arch + Eng in March 2022.

Using the What We Heard Report as a rubric for understanding the project’s core needs, this study explores various assessment criteria for site typologies in order to test architectural opportunities, limitations & risks. This analysis is intended to demonstrate strengths, weaknesses and potential in order to inform next steps for The Housing Hub.

Any site or architectural strategy should be assessed in relation to the critical needs below:





## 2 PROGRAM ASSESSMENT

The programmatic needs of a wrap-around service hub facility (The Housing Hub) have been established in the What We Heard Report, prepared by Glos Arch + Eng in March 2022. A high level summary of programmatic needs are shown below:

### SERVICE HUB

Reception

Support Services

- collaborative office space organized by sector
- flex-use private offices by sector
  - Housing Services
  - Financial Services
  - Legal & Justice
  - Counselling
  - Health
  - Socio-Cultural
    - spiritual
    - gender & sexuality
    - culture & language
    - Indigenous supports
- multi-purpose rooms
  - Education & Employment
  - Group Counselling
  - Flexible use for programming & workshops

Amenities

- washrooms & showers
- laundry
- lockers
- sleeping room
- kitchen & cafeteria
- social lounge space & outdoor space

Storage

- food bank
- clothing bank
- donation storage
- short-term household contents storage
- daily-use storage for bikes, belongings, backpacks, etc.

Staff Space

Utilities

**MINIMUM SPACE NEEDED = 42,000 sf**

## PROGRAMMATIC ASSESSMENT

### HOUSING

Flex-Housing

(to be used as Transitional or Permanent Supportive Housing as needed)

- High & Complex Needs  
(high acuity participants)
  - 15-30 units
  - secure & separate entry
  - on-floor staffing & offices
  - dedicated laundry
  - dedicated common lounge
- Vulnerable & Underserved  
Populations  
(low/mid-acuity participants)
  - 40-60 units
  - secure & separate entry
  - on-floor staffing & offices
  - dedicated laundry
  - dedicated common lounge

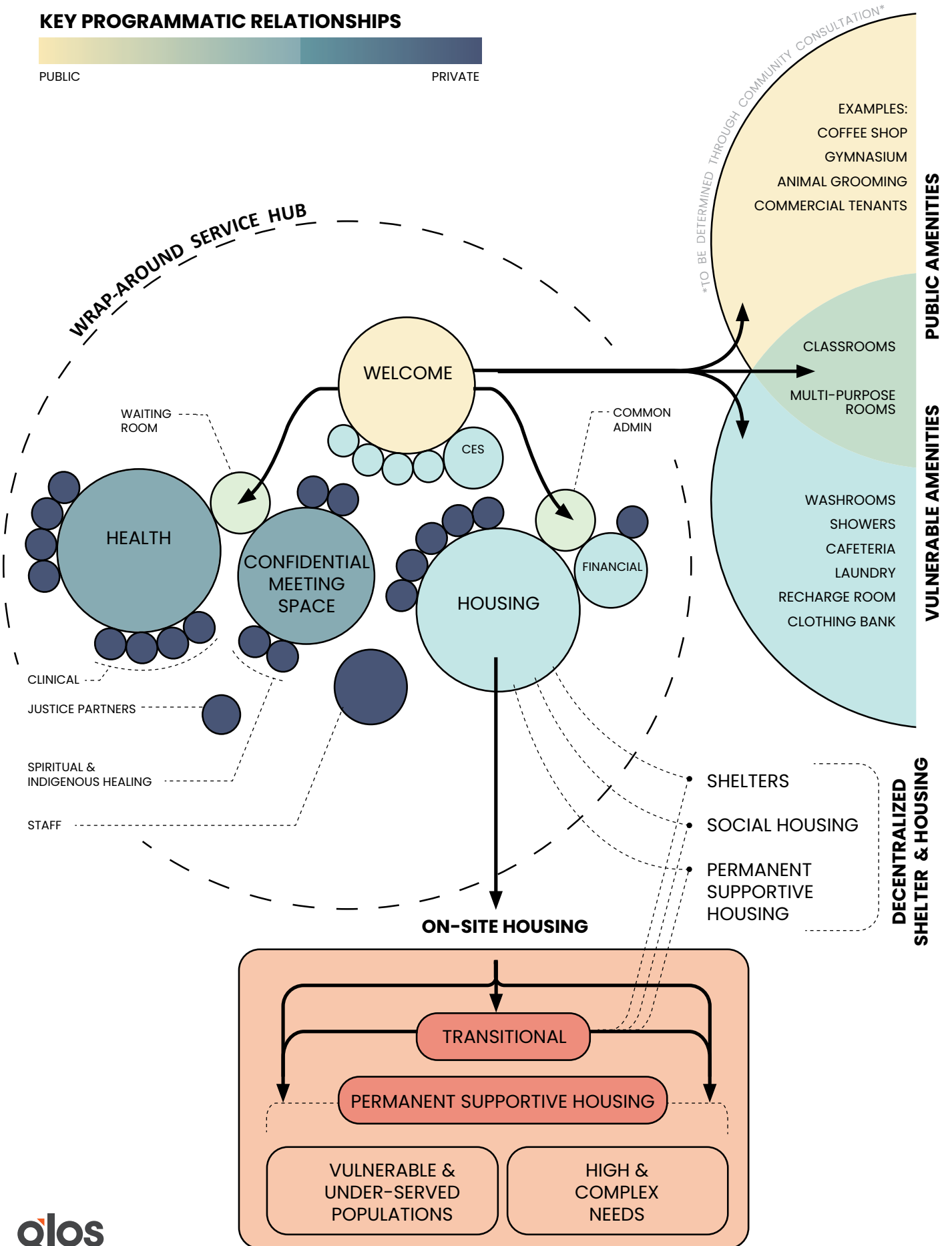
**MINIMUM SPACE NEEDED = 42,000 sf**

### OPTIONAL

#### CONSIDERATIONS

- Future Phases of Housing
- Community-Bridging Programming

**KEY PROGRAMMATIC RELATIONSHIPS**



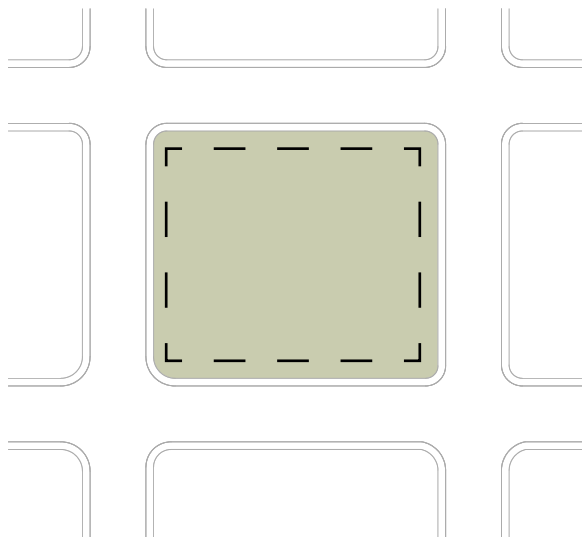


### 3 LOT SIZE ASSESSMENT

Lot sizes were considered in relation to the building’s programmatic needs in order to determine feasibility, flexibility and potential for future growth.

SMALL	< 40,000sf	NOT FEASIBLE
MEDIUM	40,000sf – 80,000sf	FEASIBLE + INFLEXIBLE
LARGE	80,000sf – 120,000sf	FEASIBLE + FLEXIBLE
EXTRA-LARGE	> 120,000sf	FEASIBLE + FLEXIBLE + EXPANDABLE

#### SMALL SITES < 40,000sf

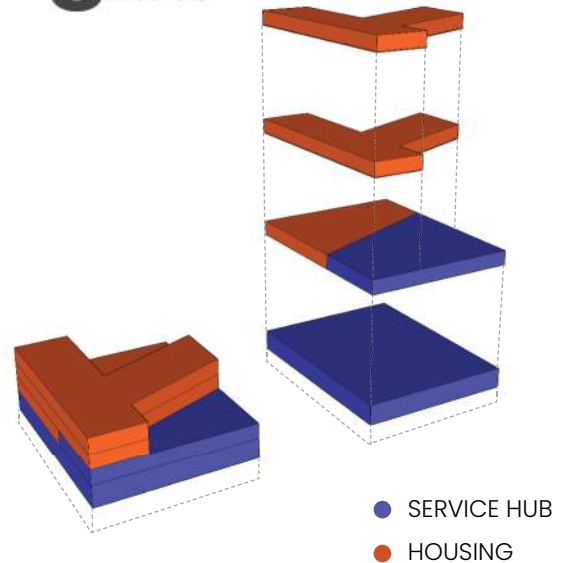
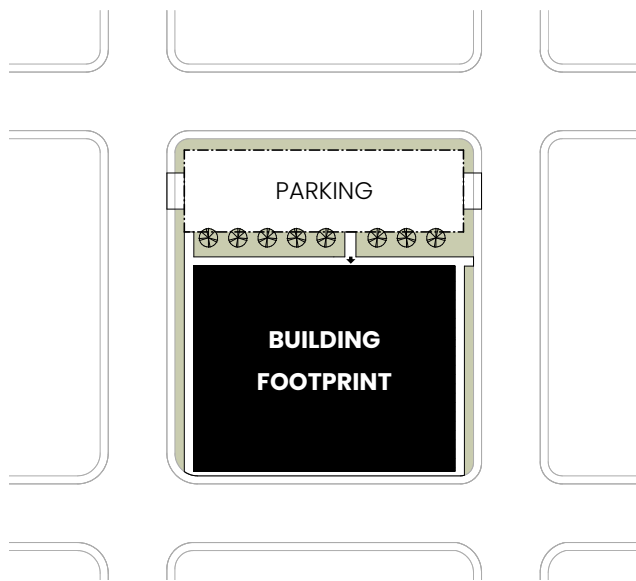


It was determined that any site under 40,000sf should not be considered for this project. The resulting buildable area is not large enough to capture the programmatic needs without stacking multiple public floors vertically, which greatly compromises safety, security and operational efficiency.

 FEASIBLE (fits all program)

## LOT SIZE ASSESSMENT

**MEDIUM SITES** 40,000sf - 80,000sf



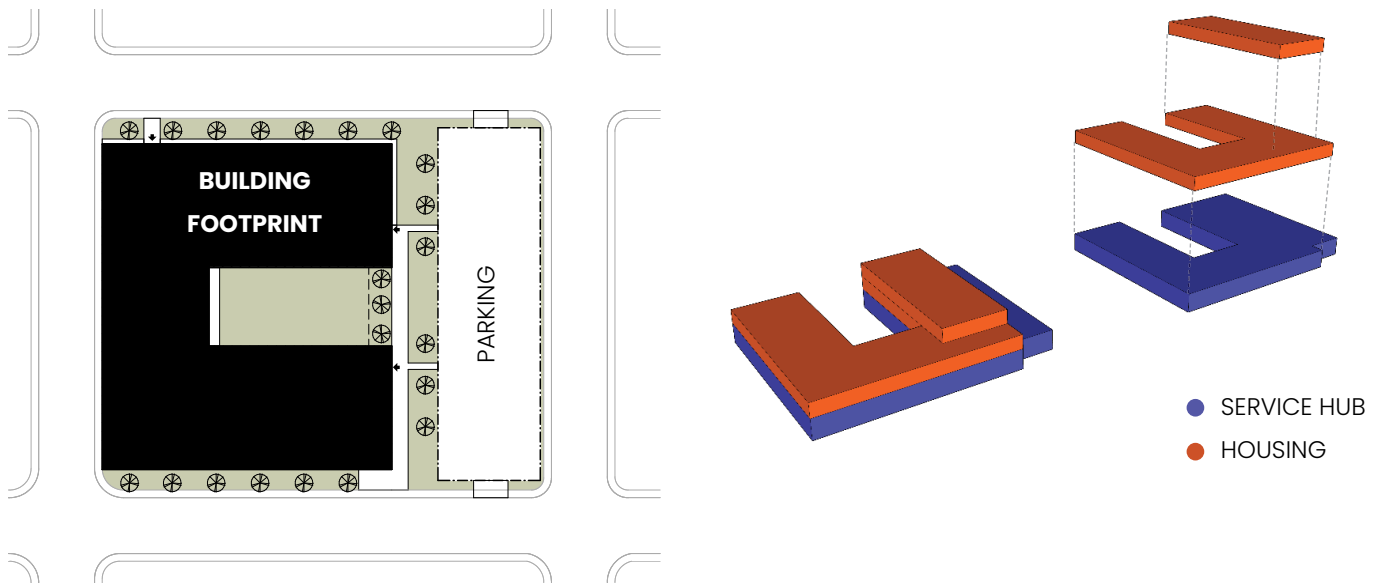
Sites between 40,000-80,000sf should be considered the minimum viable sites for this project. A site in this range will accommodate the required program, while maintaining most of the critical public facing program on the ground floor. Sites on the lower end of this range will need to consider moving some of the public facing amenity onto the second floor (ie. classrooms or multi-purpose space).

- ✓ FEASIBLE (fits all program)
- ! FLEXIBLE (multiple options for meeting all criteria and overcoming risks)
- ! BUILDING SECURITY (can keep public-facing program on one level with passive visibility)  
(can provide separate and secure entrances for 2 housing groups)
- ! PARKING (ability to meet basic and worst-case requirements)
- ✗ INTEGRATED OUTDOOR SPACE
- ✗ COMMUNITY BRIDGING PROGRAMMING
- ✗ FUTURE PHASES (ie. expansion or future phases of on-site housing)



## LOT SIZE ASSESSMENT

### LARGE SITES 80,000sf - 100,000sf

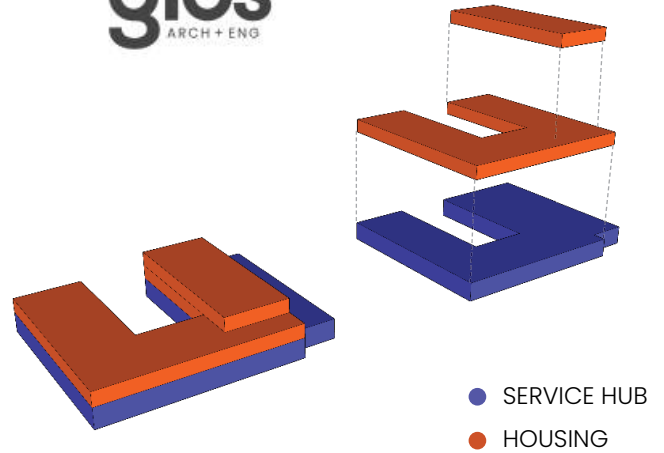
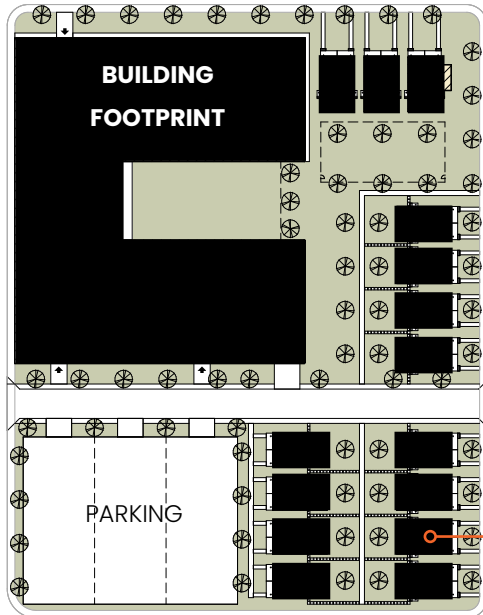


Sites between 80,000-100,000sf are considered ideal sites for this project. A site in this range will accommodate the required program while maintaining all of the public facing program on the ground floor. Sites in this range will offer flexibility to integrate outdoor space or community-bridging amenities as desired, which both have a tremendous impact on building safety and destigmatization. Other security benefits include the ability to create separate and secure entrances for 2 housing groups.

- ✓ FEASIBLE (fits all program)
- ✓ FLEXIBLE (multiple options for meeting all criteria and overcoming risks)
- ✓ BUILDING SECURITY (can keep public-facing program on one level with passive visibility)  
(can provide separate and secure entrances for 2 housing groups)
- ✓ PARKING (ability to meet basic and worst-case requirements)
- ✓ INTEGRATED OUTDOOR SPACE
- ✓ COMMUNITY BRIDGING PROGRAMMING
- ✗ FUTURE PHASES (ie. expansion or future phases of on-site housing)

LOT SIZE ASSESSMENT

**EXTRA LARGE SITES** > 100,000sf



**+ ADDITIONAL HOUSING**



Sites greater than 100,000sf would offer unique opportunities for this project. In addition to everything possible on a Large Site, they would also offer the potential of future on-site housing initiatives or further community-bridging resources. The opportunity to design the space beyond the service hub itself creates enormous potential for destigmatization and community support.

- ✓ FEASIBLE (fits all program)
- ✓ FLEXIBLE (multiple options for meeting all criteria and overcoming risks)
- ✓ BUILDING SECURITY (can keep public-facing program on one level with passive visibility)  
(can provide separate and secure entrances for 2 housing groups)
- ✓ PARKING (ability to meet basic and worst-case requirements)
- ✓ INTEGRATED OUTDOOR SPACE
- ✓ COMMUNITY BRIDGING PROGRAMMING
- ✓ FUTURE PHASES (ie. expansion or future phases of on-site housing)



## 4 CONTEXT ASSESSMENT

Any site under consideration raises a different combination of context-specific variables that directly impact the project's core goals. The criteria below can be used to assess potential sites through the lens of project needs:

### **POSITIVE COMMUNITY INTEGRATION + DESTIGMATIZATION**

These contextual relationships have a substantial impact on this project's ability to feel safe, to "be a good neighbour" and to mitigate a sense of stigma:

- Opportunities
  - ✔ location feels like an extension of a residential neighborhood
  - ✔ location is in close proximity to a variety of low-risk land uses
  - ✔ site is currently considered derelict or difficult to develop by private entities
- Risks
  - ⚠ location is embedded in a neighborhood of single family homes
  - ⚠ location is in close proximity to a pedestrian commercial district
  - ⚠ location is in close proximity to a school
  - ⚠ location is in close proximity to a park or children's playground
  - ⚠ location is in close proximity to high-risk or stigmatized services
  - ⚠ location is adjacent to loitering hotspots (eg. unsecured parking lot)
  - ⚠ location is adjacent to a laneway/alley
- Deal-Breakers
  - ✘ site is not within 2km of emergency shelters and core affiliated services
  - ✘ site is not easily accessible on foot

## CONTEXT ASSESSMENT

### SITE SAFETY

These contextual relationships have a significant impact on the safety and security of the facility – both for participants, staff and surrounding community.

- Opportunities
- ✔ site location & configuration allow for passive visibility throughout the site
  - ✔ site size & configuration allow for outdoor space integrated within the building (eg. courtyard or terraces)
  - ✔ site configuration supports a single secure point of entry for all participants
- Risks
- ! site configuration and surrounding urban context create blind-spots that obstruct passive visibility throughout and beyond the site
  - ! site is adjacent to loitering hotspots (ie. unsecured parking lots)
  - ! site is adjacent to a laneway/alley
  - ! site is adjacent to unsecured/open-air parking structures
  - ! site is adjacent to high-risk or highly stigmatized services
  - ! site configuration precludes creating a singular, secure point of entry (ie. multiple “front faces” requiring multiple entrance conditions)
- Deal-Breakers
- ✘ site-related visual obstructions should be removed wherever possible (eg. solid fencing, barriers or unsecured structures)
  - ✘ avoid sites where adjacent sites contain or create blind spots that would be out of the care & control of the site operator



## 5 ASSESSMENT OF EXISTING CONDITIONS

Most urban-infill properties have been developed in some way in the past. When considering a site, it is important to consider how the existing soil conditions, servicing and existing structures can impact the scope of work required.

### SOIL + SUB-SOIL CONDITIONS

- ! Soil remediation could be required on any site — particularly if the site history indicates a previous industrial use. An Environmental Assessment should be pursued to determine the extent and nature of remediation required.
- ! On any urban infill property, there is a chance the sub-soil conditions include artifacts from previous site uses. Common examples include abandoned foundations, buried tanks, construction debris or historical artifacts. Geotechnical assessment and boreholes would be required to assess existing conditions in relation to project scope.

### EXISTING SERVICING

- ! Any site would need to be assessed to determine existing service capacity for the supply of gas, electrical, and water, as well as storm and sanitary drainage. If a site is unserviced, servicing would need to be included in the scope of work. If a site is serviced, consultants would need to assess if the servicing is adequate for the intended use, and determine the scope for upgrades required.

## ASSESSMENT OF EXISTING CONDITIONS

### EXISTING STRUCTURES

Acquiring a site with an existing structure demands an extra layer of consideration for how the particular structure may obstruct or foster the project's primary goals and functional needs.

#### ✔ SITE HAS NO EXISTING STRUCTURES

Facility can be built entirely as new construction.

- more predictable (costs, timeline, performance, construction detailing, etc.)
- easier to meet modern building codes
- easier to have full control over building performance and durability

Allows maximum flexibility over design and construction

#### ? SITE HAS EXISTING STRUCTURE

If the structure is a suitable size and configuration, the project could be built as a combination of renovation, retrofit and new construction. Whether this results in cost savings or cost premiums depends heavily on the nature, condition and suitability of the existing structure.

#### SPAN

- ✔ Long span structures (bays > 20ft) – very flexible to work around
- ! Short span structures (bays < 20ft) – challenging but possible to work around. Expect compromises to be made to key functional relationships & sight lines.

#### LOAD BEARING CONDITIONS

- ✔ Columns – very flexible to work around; limited impact on interior layout
- ! Exterior Walls – limited impact on interior layout; minor changes possible
- ✘ Interior Walls – inflexible; very costly to modify; obstructive to interior layout

#### CEILING HEIGHTS

- ✔ High Ceilings ( > 12ft ) – very flexible to work around & run new services
- ! Standard Ceilings (10ft–12ft) – challenging but possible to work around & run new services at a cost premium. Expect compromises to be made.
- ✘ Low Ceilings ( < 10ft ) – obstructive to the structural and service changes required to meet the project needs.

## ASSESSMENT OF EXISTING CONDITIONS

### EXISTING STRUCTURES

#### STRUCTURAL CONDITION

- ✓ Good Condition – structure can be relied on without remedial measures; maintenance only
- ! Fair Condition – structure can be relied on with minor remedial measures in addition to maintenance measures
- ✗ Bad Condition – structure requires significant remedial measures in addition to maintenance measures

#### FINISHES & FIXTURES

In order for any existing structure to be renovated to meet the needs of this project, it is unlikely that there would be any benefit to attempting to retain any substantive portion of interior finishes or fixtures. These are all items assumed to have the shortest lifespan in any building and should be assumed to be replaced.

#### EXISTING SERVICES

- Electrical – Any existing structure should be assessed to determine its current electrical servicing levels. Upgrading service may be required to meet the needs of this project. Removing and re-running electrical circuitry throughout the building (to suit the project's functional needs and to meet modern regulatory requirements) is extremely likely for any retrofit.
- Plumbing – Any existing structure should be assessed to determine its current water service and sanitary drainage capacity. Upgrading service may be required to meet the needs of this project. Demolishing and re-running plumbing lines throughout the building (to suit the project's functional needs and to meet modern regulatory requirements) is extremely likely for any retrofit.
- HVAC – Any existing structure should be assessed to determine its current heating, ventilation & air conditioning systems, their condition, and their capacity. Upgrading service may be required to meet the needs of this project. Demolishing and replacing HVAC systems throughout the building (to suit the project's functional needs and to meet modern regulatory requirements) is extremely likely for any retrofit.



## 6 NEXT STEPS

This information can be used to assess various site and location options, equipping the City with appropriate information for site acquisition. Sites deemed feasible could then be further assessed for opportunities and risks by pursuing schematic design studies and preliminary cost estimation.

If you have feedback for our team or would like to be added to the email list to receive future updates, please contact our project team directly:

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