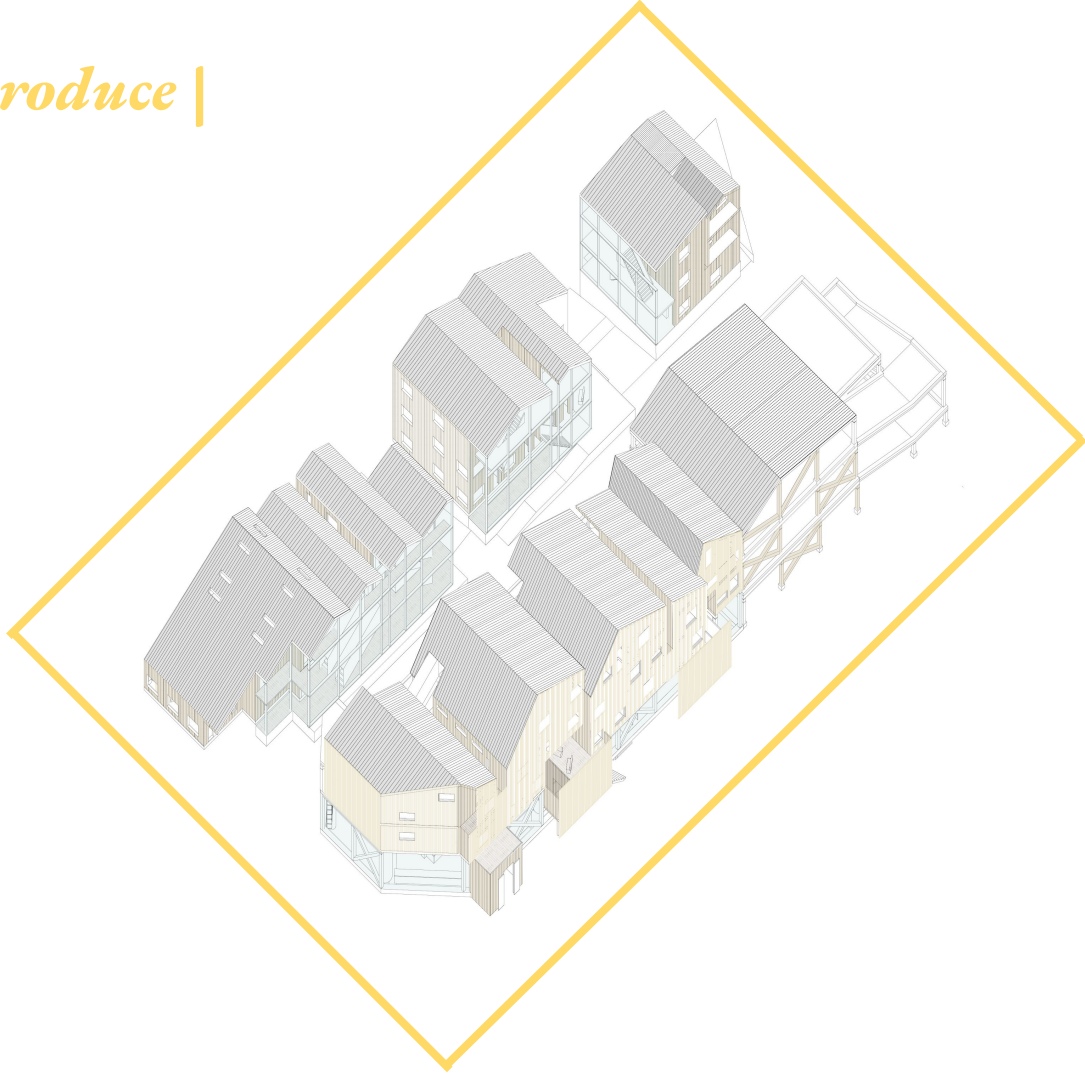


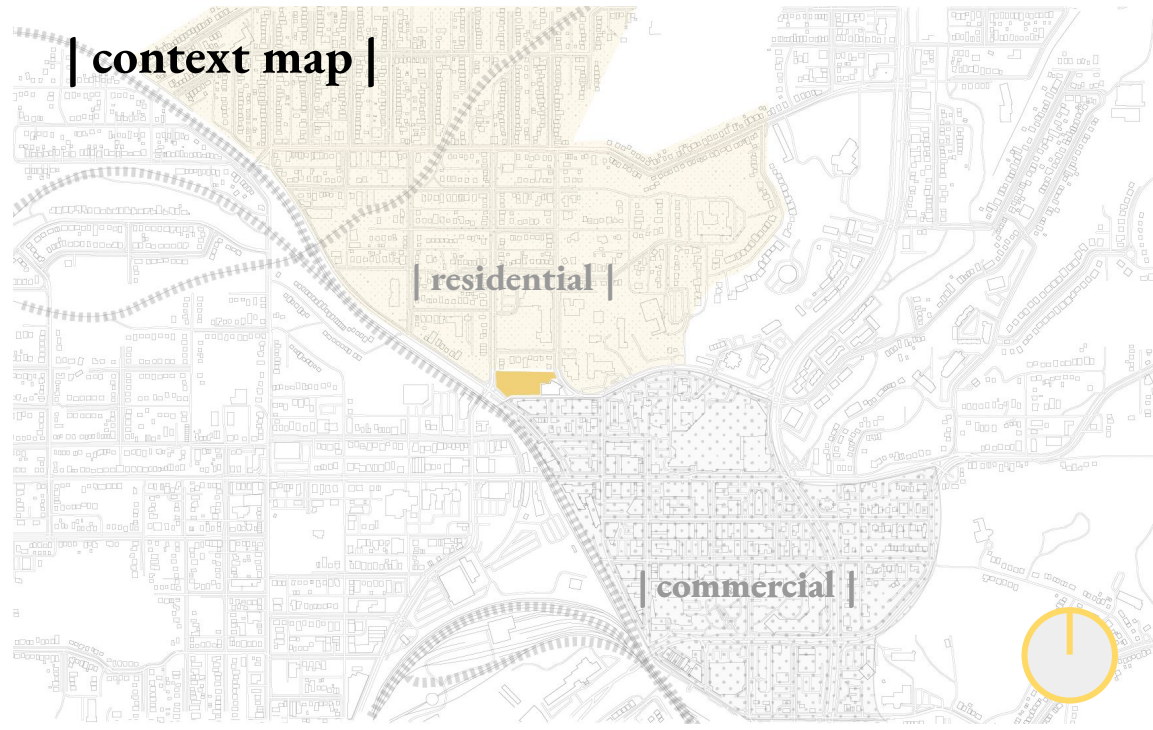
| produce *produce* |



| topics |

- **Site**
- **Site analysis**
- **Concept of threshold // program**
- **Thresholds at the urban, site, building, and individual scales**
- **Public programming**
- **Unit layouts**
- **Passive strategies**
- **Structure**

| context map |

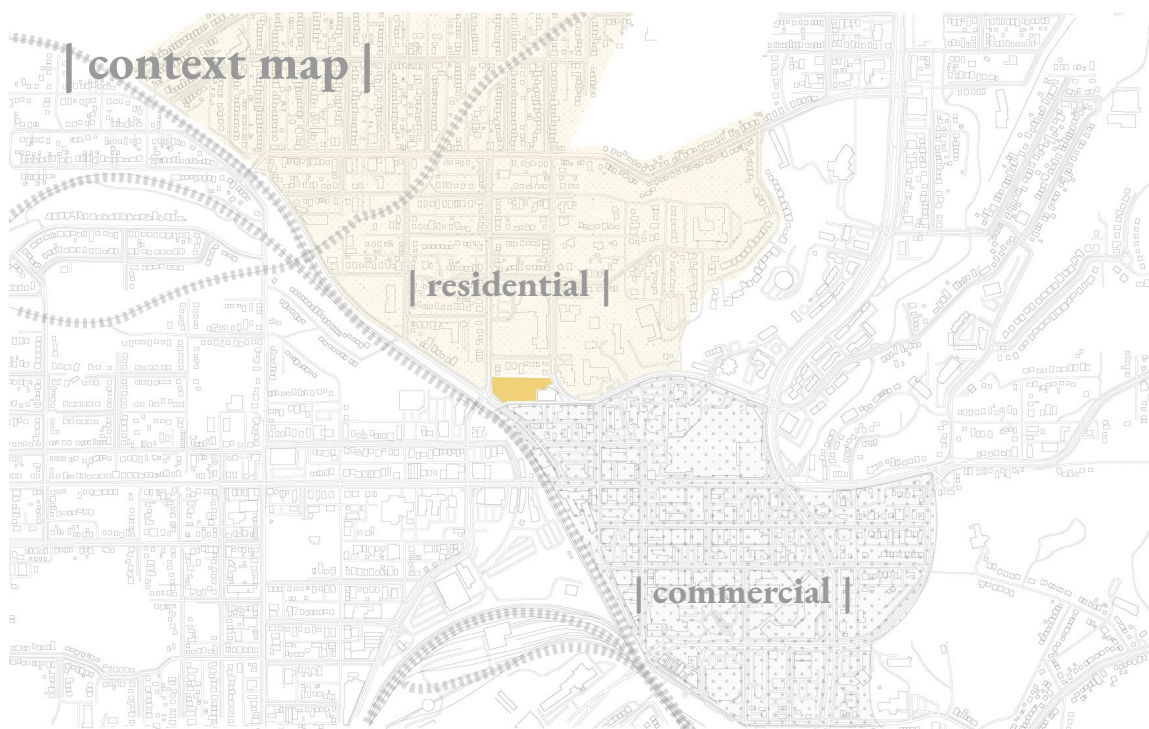


| residential |

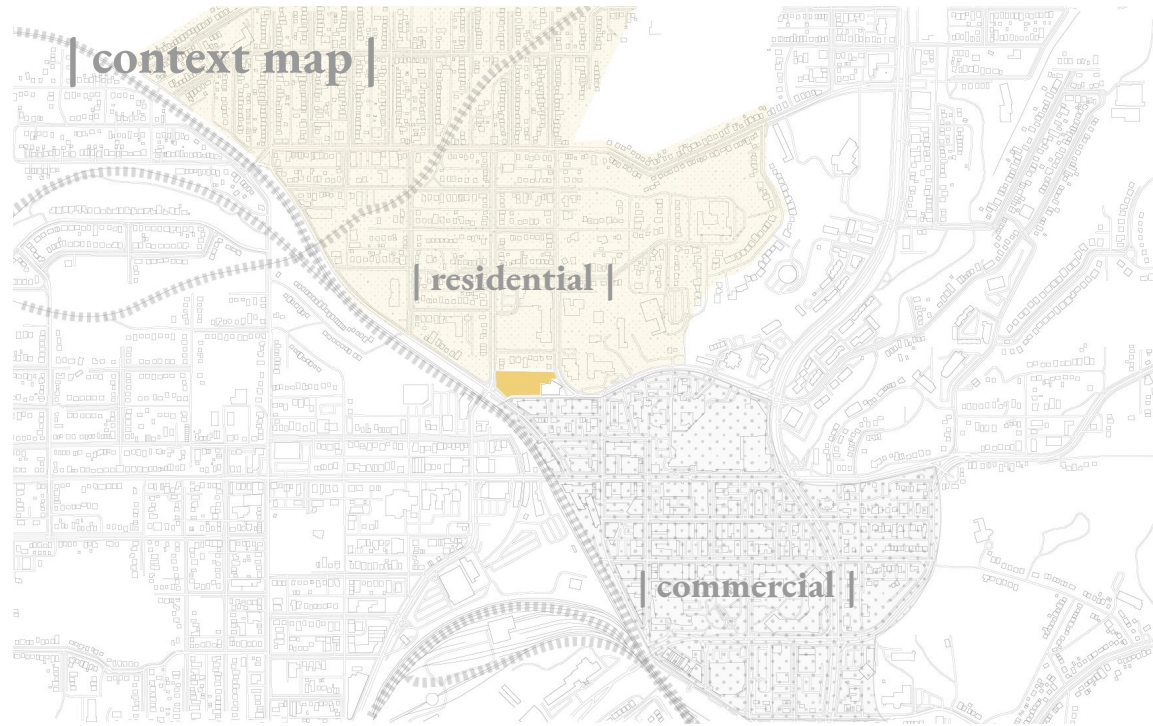
| commercial |



| threshold of values |

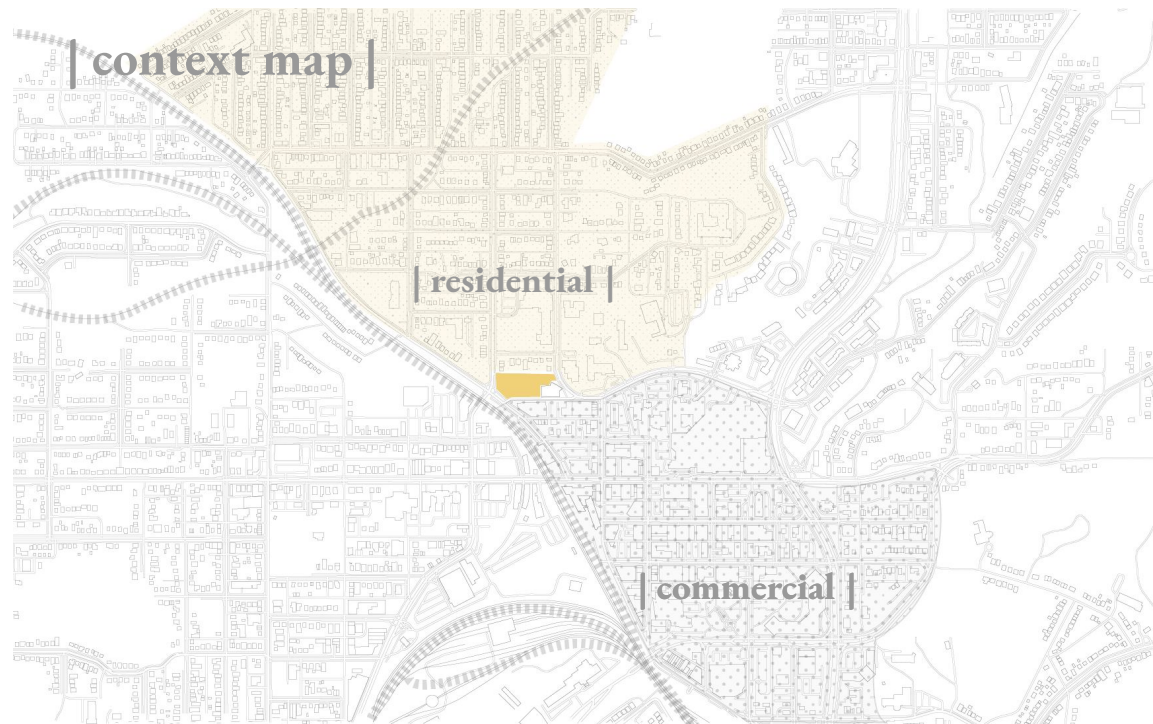


| threshold of values |



- 135 homes built before 1961
- 120 households make less than \$20,000
- \$28,000 median income (after tax)

| threshold as connections |



| context map |

residential

commercial



site

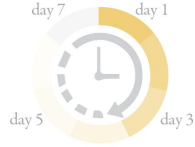
| threshold as capacity |



sudbury produces less than 10% of its own food

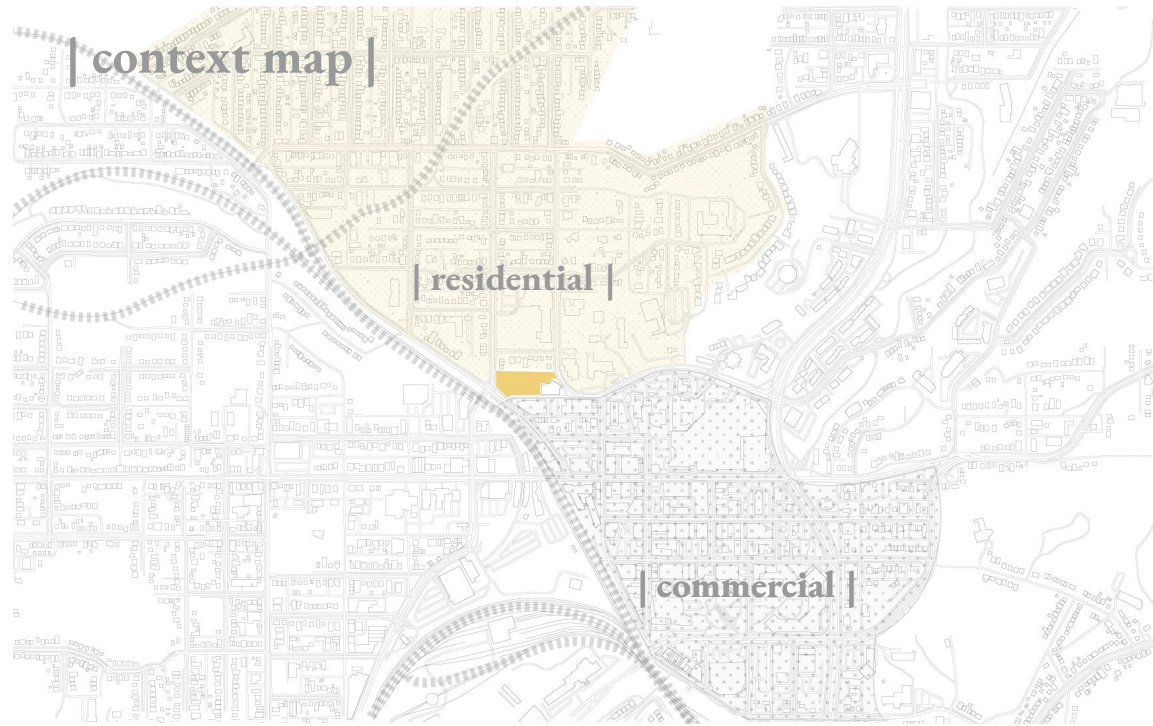


there is no official plan in place if the city experiences a food emergency



If routes of trade into sudbury closed the city would run out of edible resources within 7 days

| context map |



| threshold as connections |



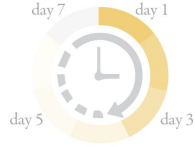
| threshold as capacity |



sudbury produces less than 10% of its own food



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If routes of trade into sudbury closed the city would run out of edible resources within 7 days

| threshold as transitions |

cultivating recovery



step 1
safety & security

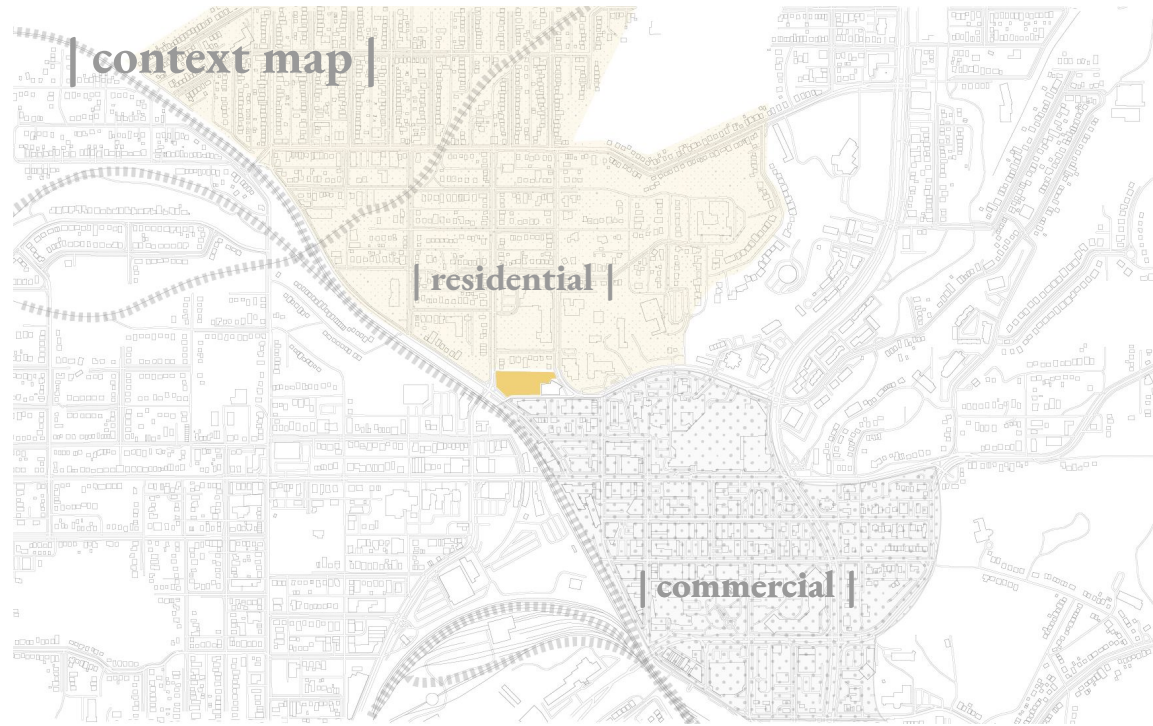


step 2
privacy & control



step 3
comfort & growth

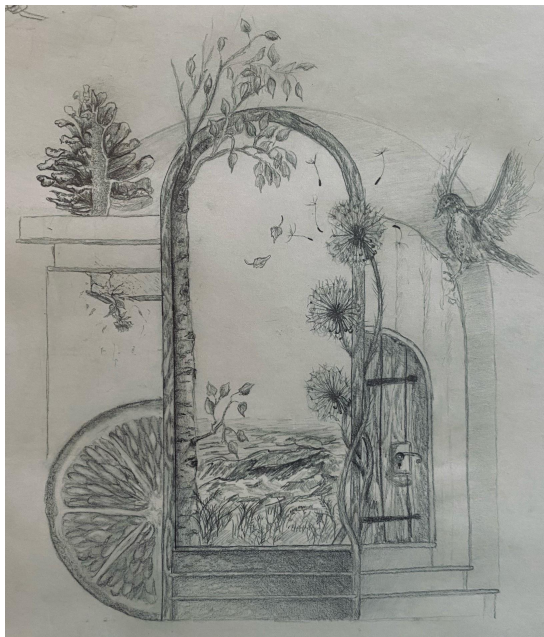
| context map |



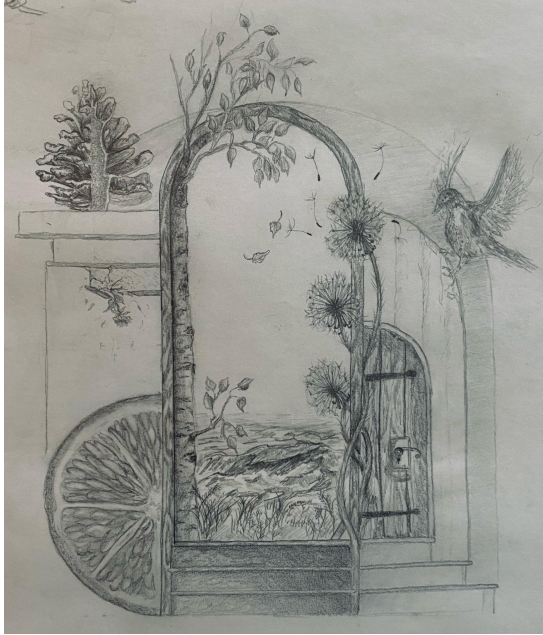
| threshold as connections |



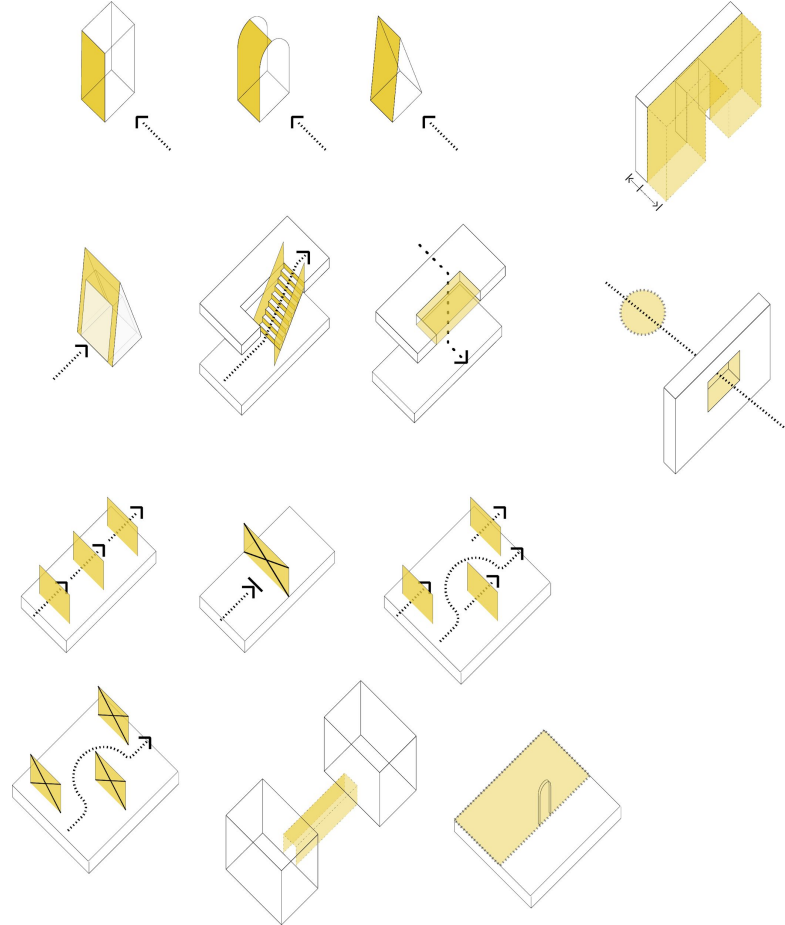
| threshold as experience |



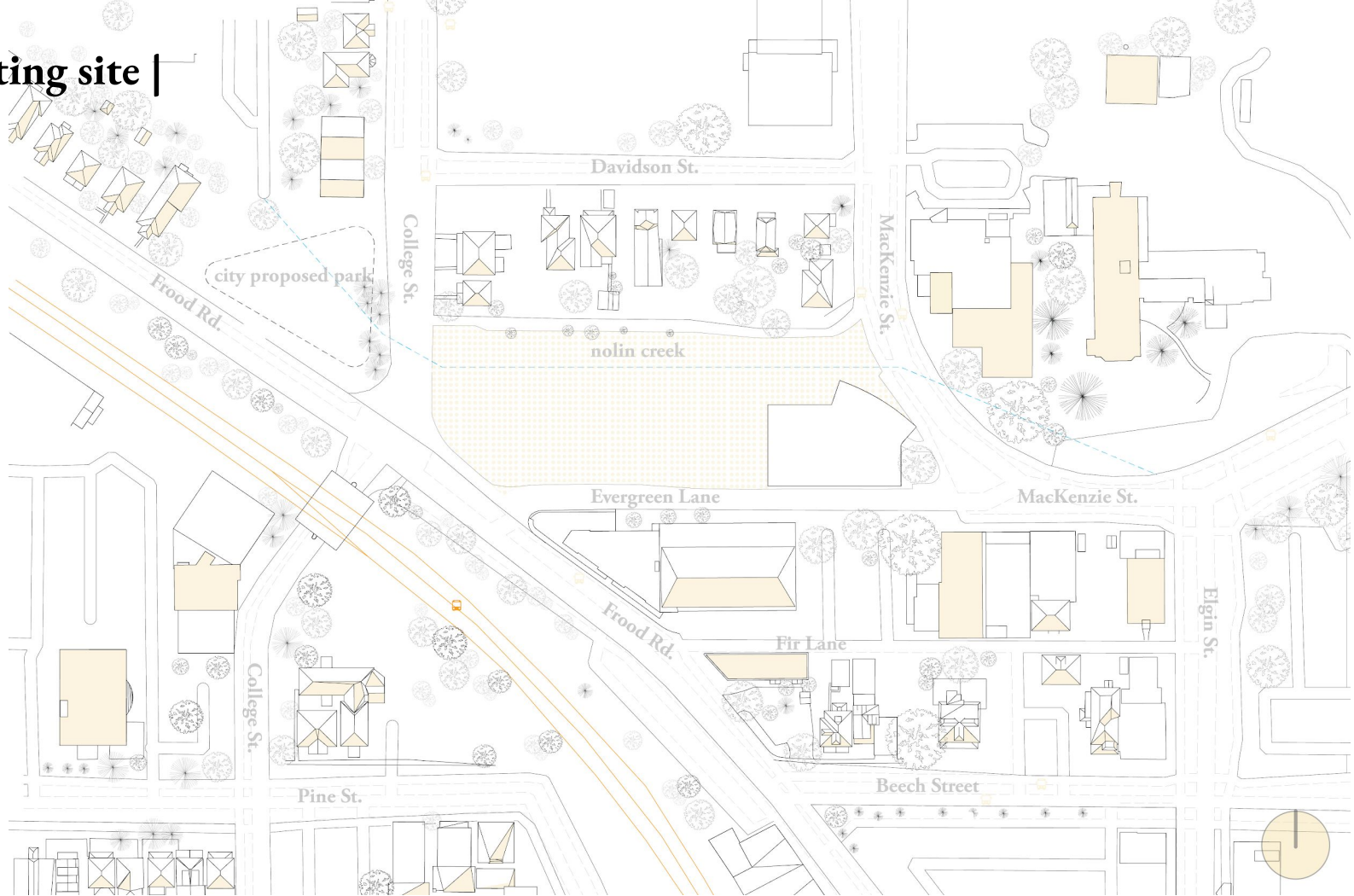
| threshold as experience |



| conceptual development |



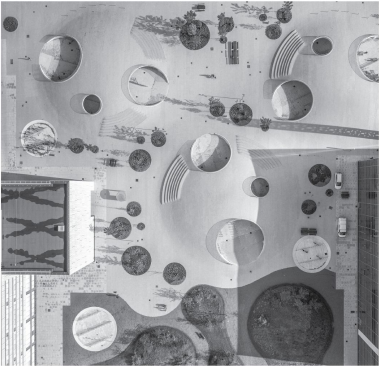
| existing site |



| urban design |

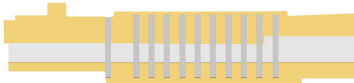
**Karen Blixen Flats
Copenhagen, DK**

Cobe Architects



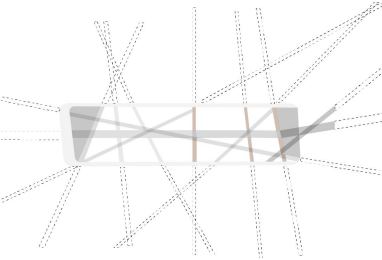
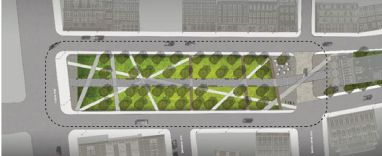
**St. George st.
Toronto, On.**

Brown and Storey
Architects

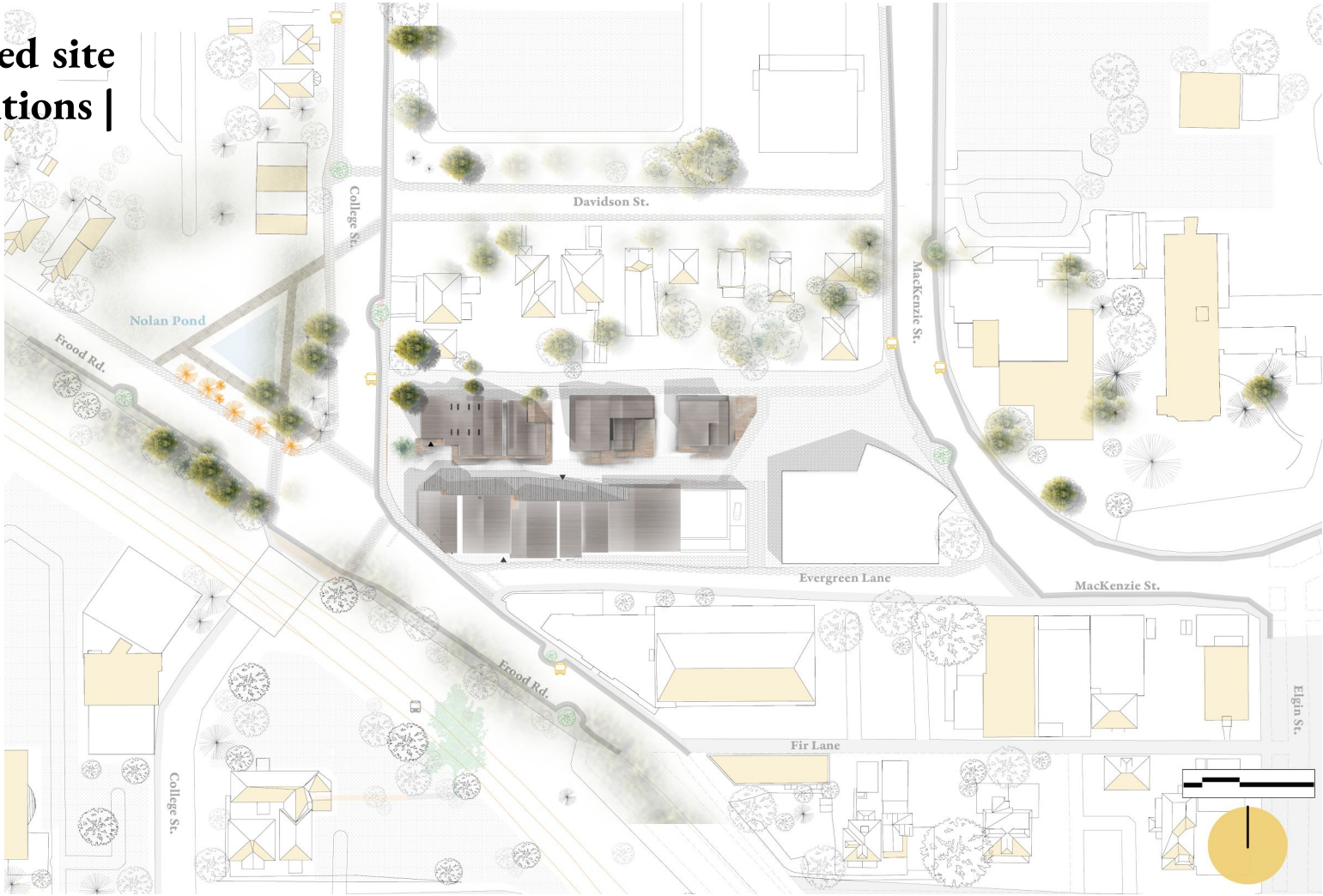


**Place d'Youville
Montreal, Qc**

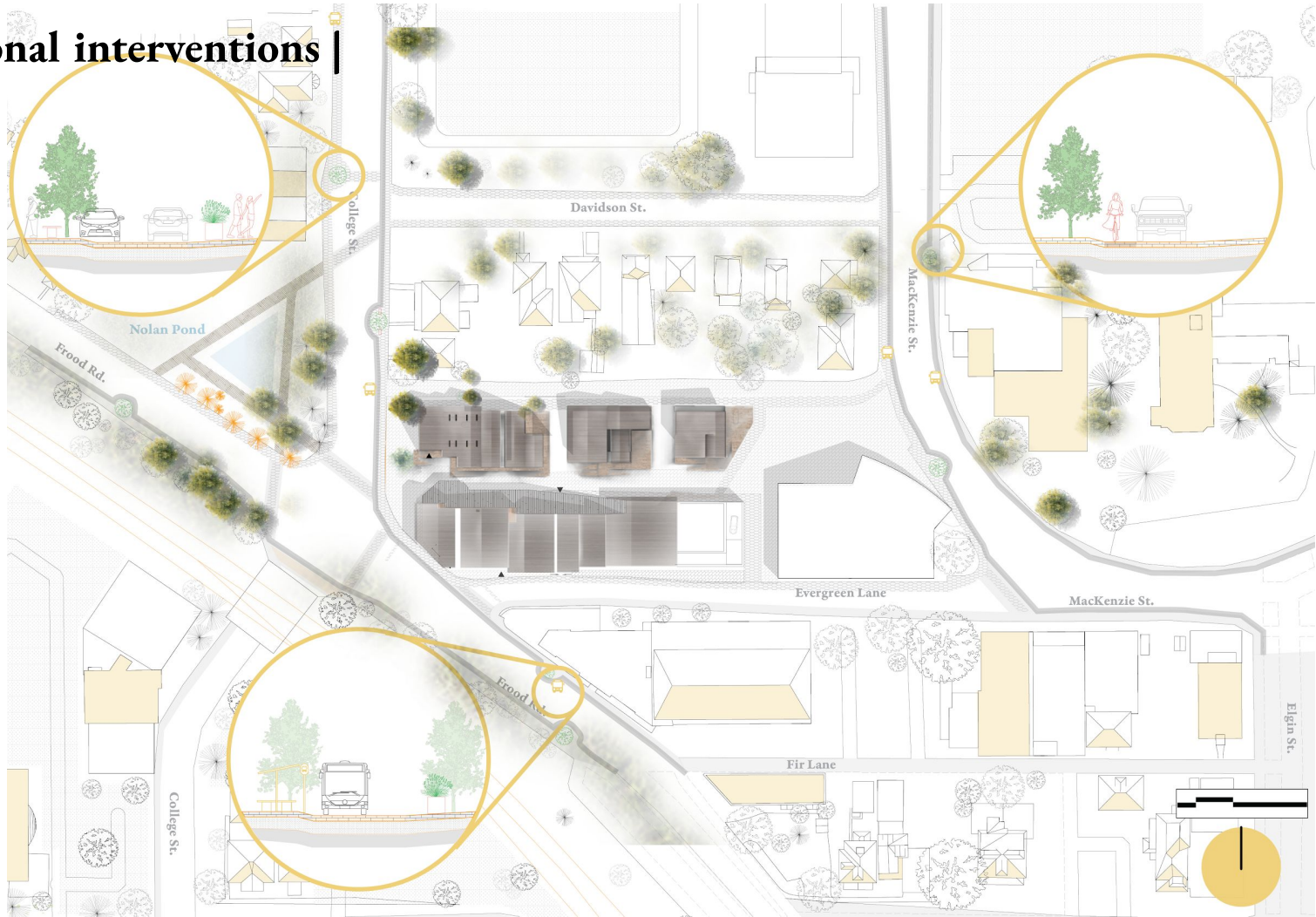
Claude Cormier &
Associates



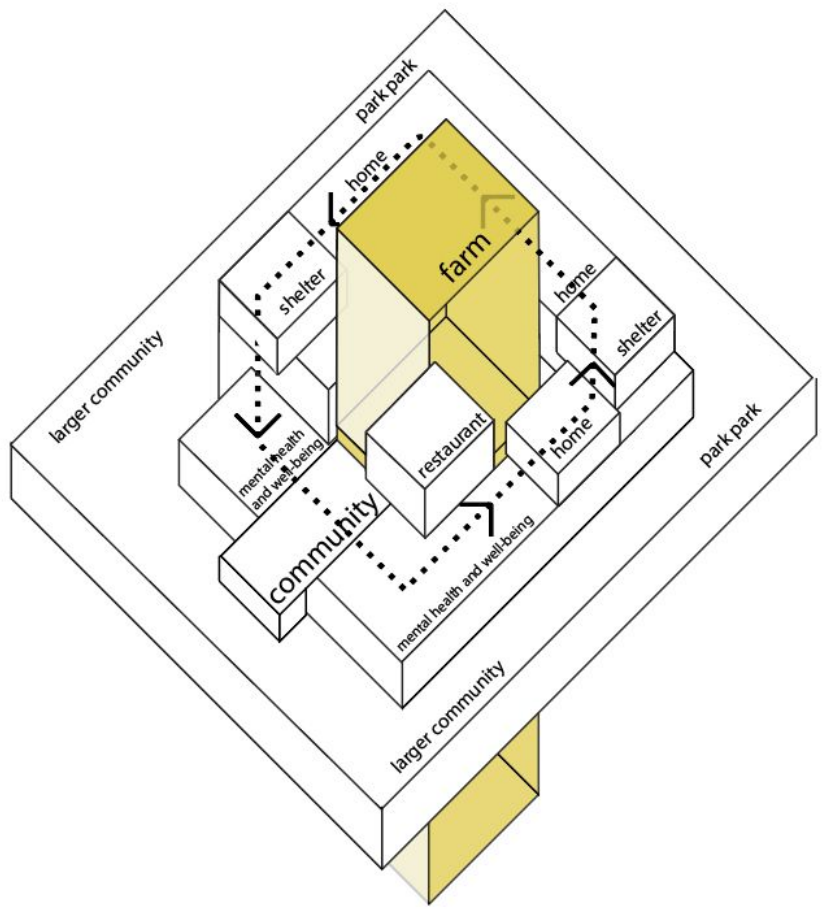
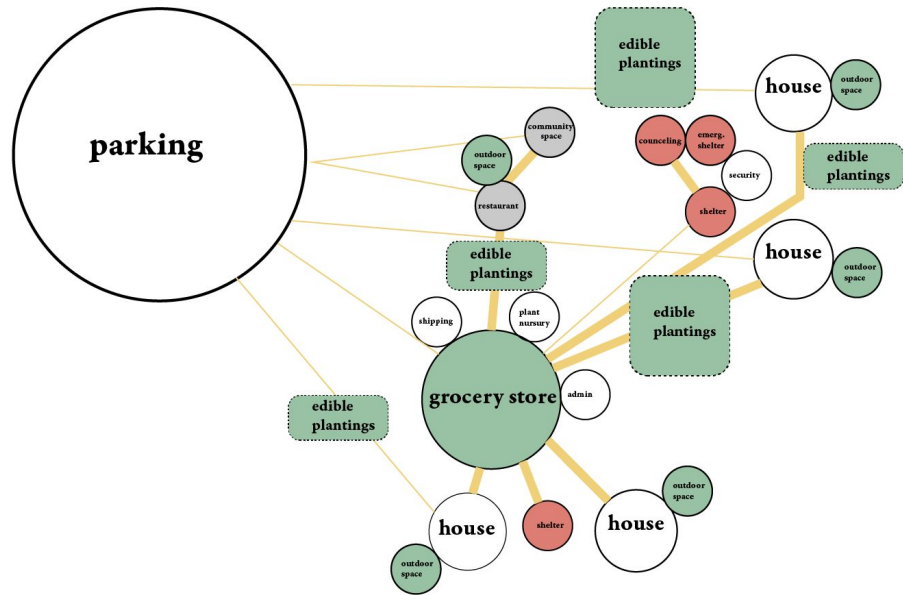
| proposed site interventions |



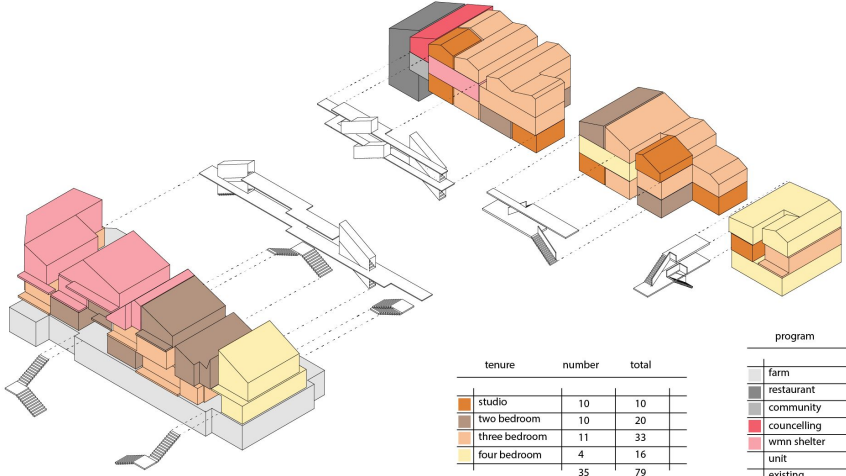
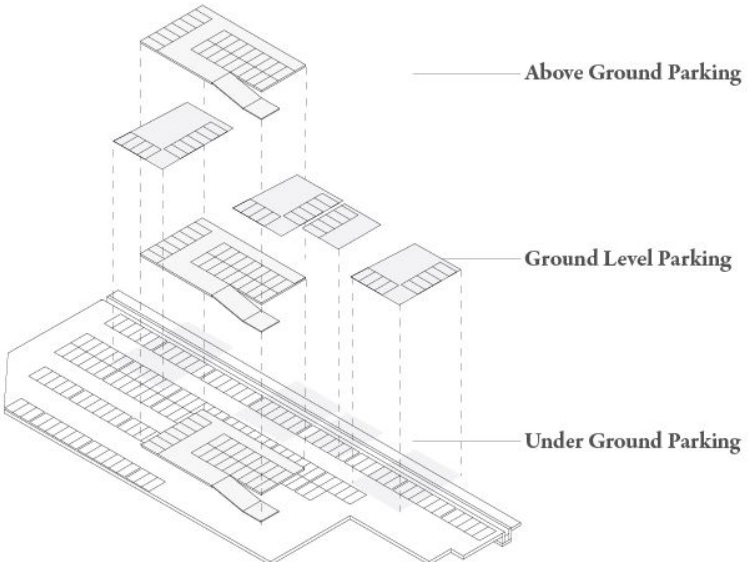
| additional interventions |



| spatial relations + programming |



| unit stacking + spatial relations + program choices |



tenure	number	total
studio	10	10
two bedroom	10	20
three bedroom	11	33
four bedroom	4	16
	35	79

program	m2	parking
farm	700	35
restaurant	210	10.5
community	70	3.5
counselling	70	3.5
wmn shelter	5	5
unit		35
existing		180
		272

second floor plan

- 2a - emergency shelter
- 2b - rent to own
- 2c - rent to own
- 2d - socialized housing
- 2e - socialized housing
- 2f - rent to own
- 2g - socialized housing
- 2h - socialized housing
- 2i - rent to own
- 2j - socialized housing
- 2k - rent to own
- 2l - rent to own
- 2m - rent to own

third floor plan

- 3a - socialized housing
- 3b - rent to own
- 3c - rent to own
- 3d - socialized housing
- 3e - rent to own
- 3f - socialized housing
- 3g - rent to own
- 3h - socialized housing
- 3i - socialized housing
- 3j - socialized housing
- 3k - rent to own
- 3l - rent to own

fourth floor plan

- 4a - ladies shelter
- 4b - ladies shelter
- 4c - socialized housing



| edible plantings |



Jerusalem Artichoke (*Helianthus tuberosus*)

An edible tuber that also provides food for pollinators later in the season than most plants. An important food source for indigenous people, keeping well in the ground throughout the winter.



Thyme (*Thymus serpyllum*)

Creeping Thyme is a groundcover that attracts pollinators. The leaves and flowers are edible.



Rhubarb (*Rheum rhabarbarum*)

Rhubarb is easy to grow. Once established, a rhubarb plant can produce for many years.



Asparagus (*Asparagus officinalis*)

Once established, asparagus will produce for decades and can be harvested every second day from early May to early July.



Good King Henry (*Chenopodium bonus-henricus*)

In the same family as spinach and all parts of the plant are edible. Its leaves may be used in much the same way as spinach. The shoots can be harvested and prepared just like asparagus, and the flower buds like broccolis.



Plum (*Prunus salicina*)

Cold-hardy varieties of Toka and Bronsgold.



Apple (*Malus pumila*)

Developed at the University of Saskatchewan and are hardy to -40°C. First planted in Sudbury in 2012-14 and have already begun producing fruit.



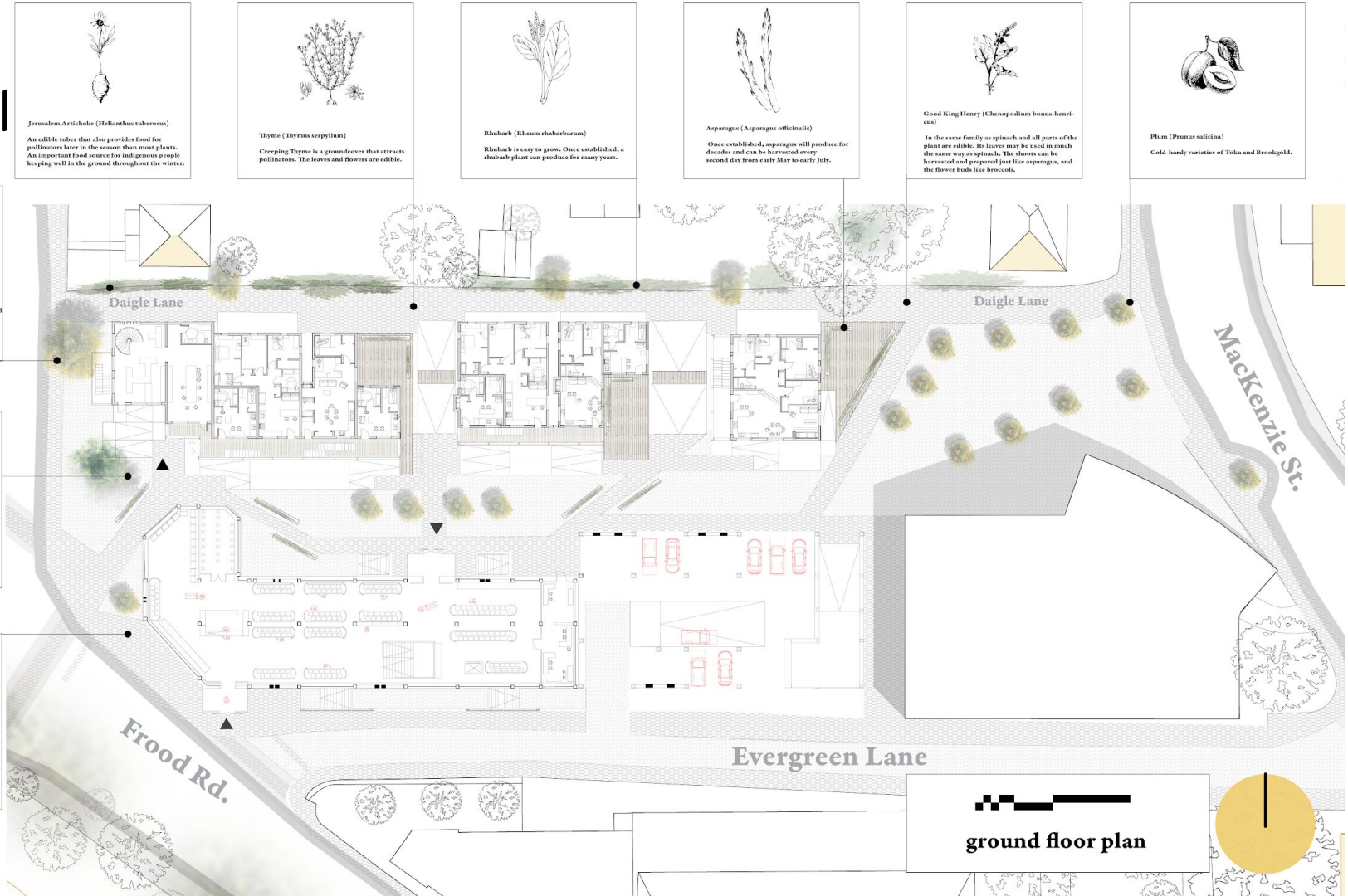
Gooseberry (*Ribes hirtellum*)

A shrub native to Northern Ontario that is high in vitamin C and good for juice and smoothies.



Oregano (*Origanum* species)

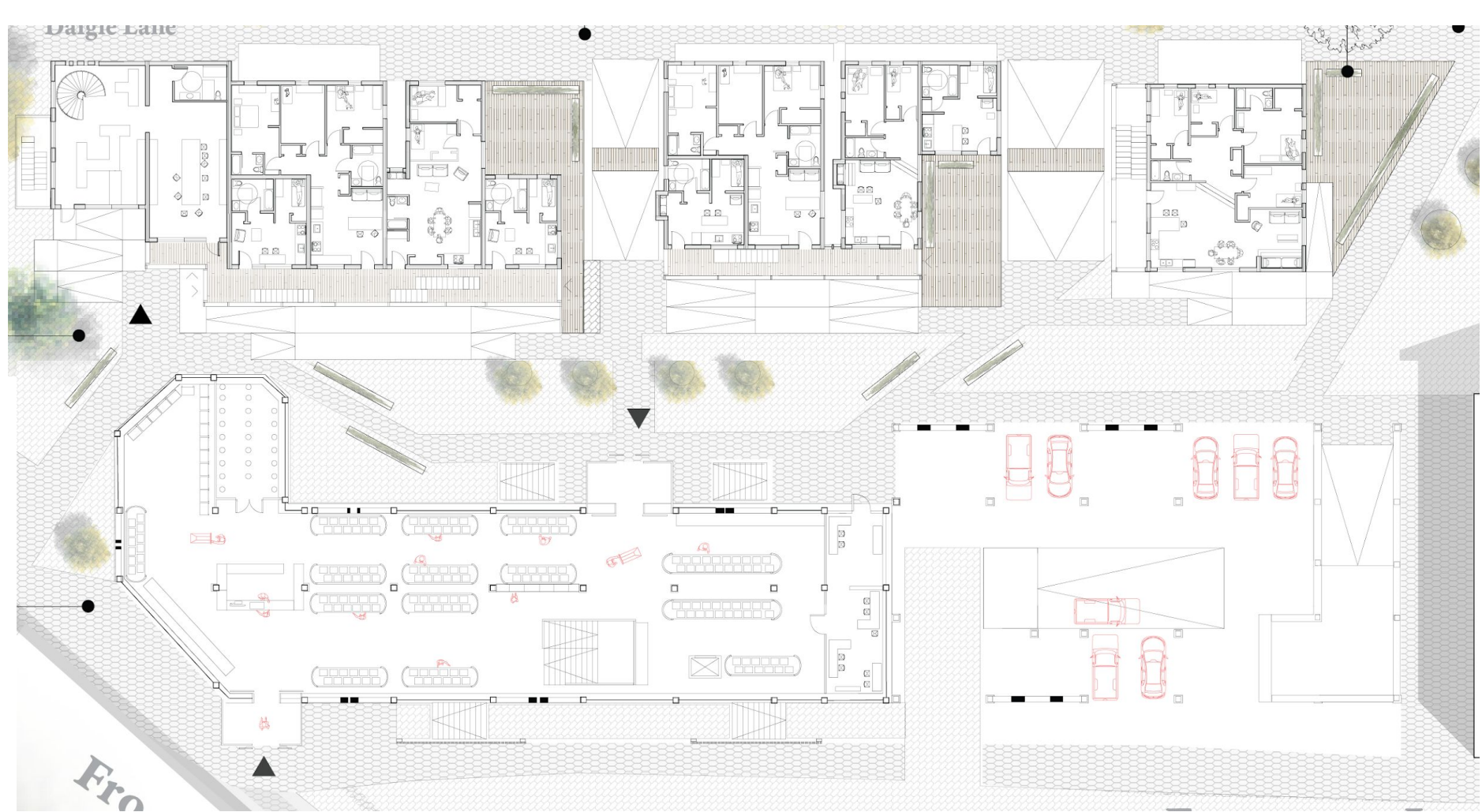
Cold-hardy oregano plants for the food forest. Oregano may be harvested when the stems are at least 4 inches tall, by cutting back up to two-thirds of the plant. The flowers are also edible.



ground floor plan

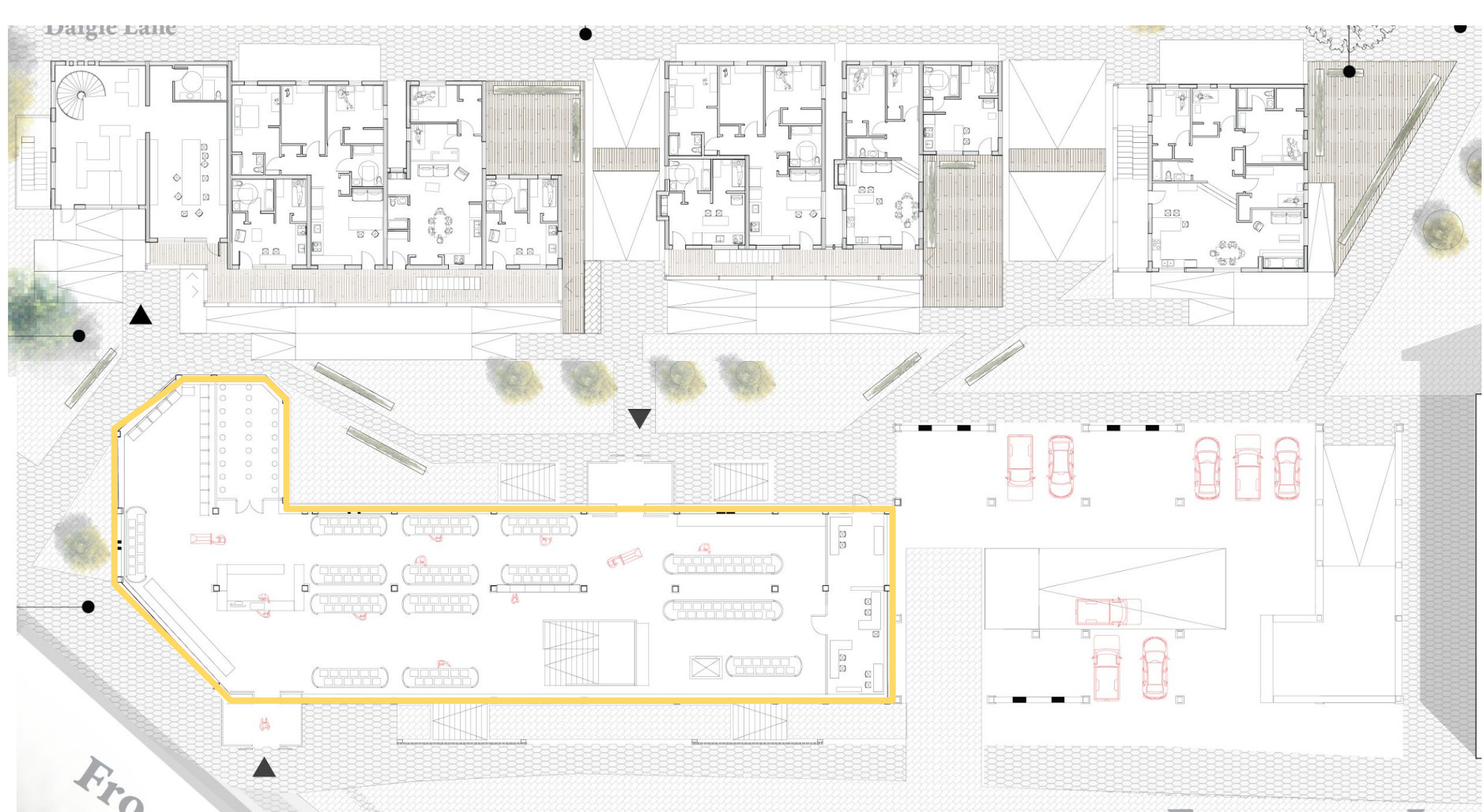
Dalgic Lane

Fro



Darig Lane

Fro



produce produce

Day 1



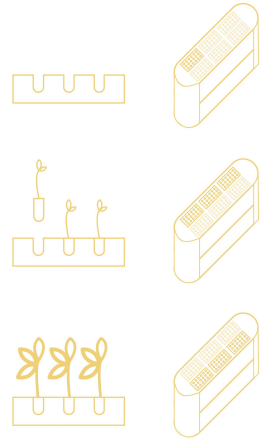
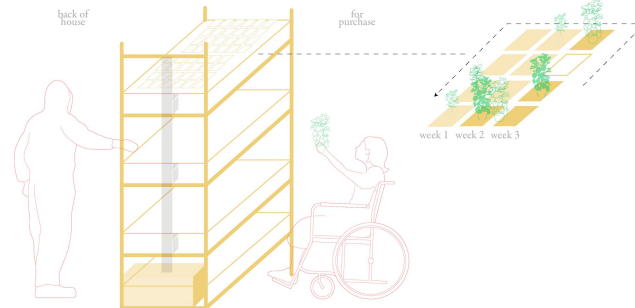
Day 4



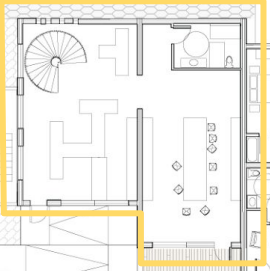
Day 7



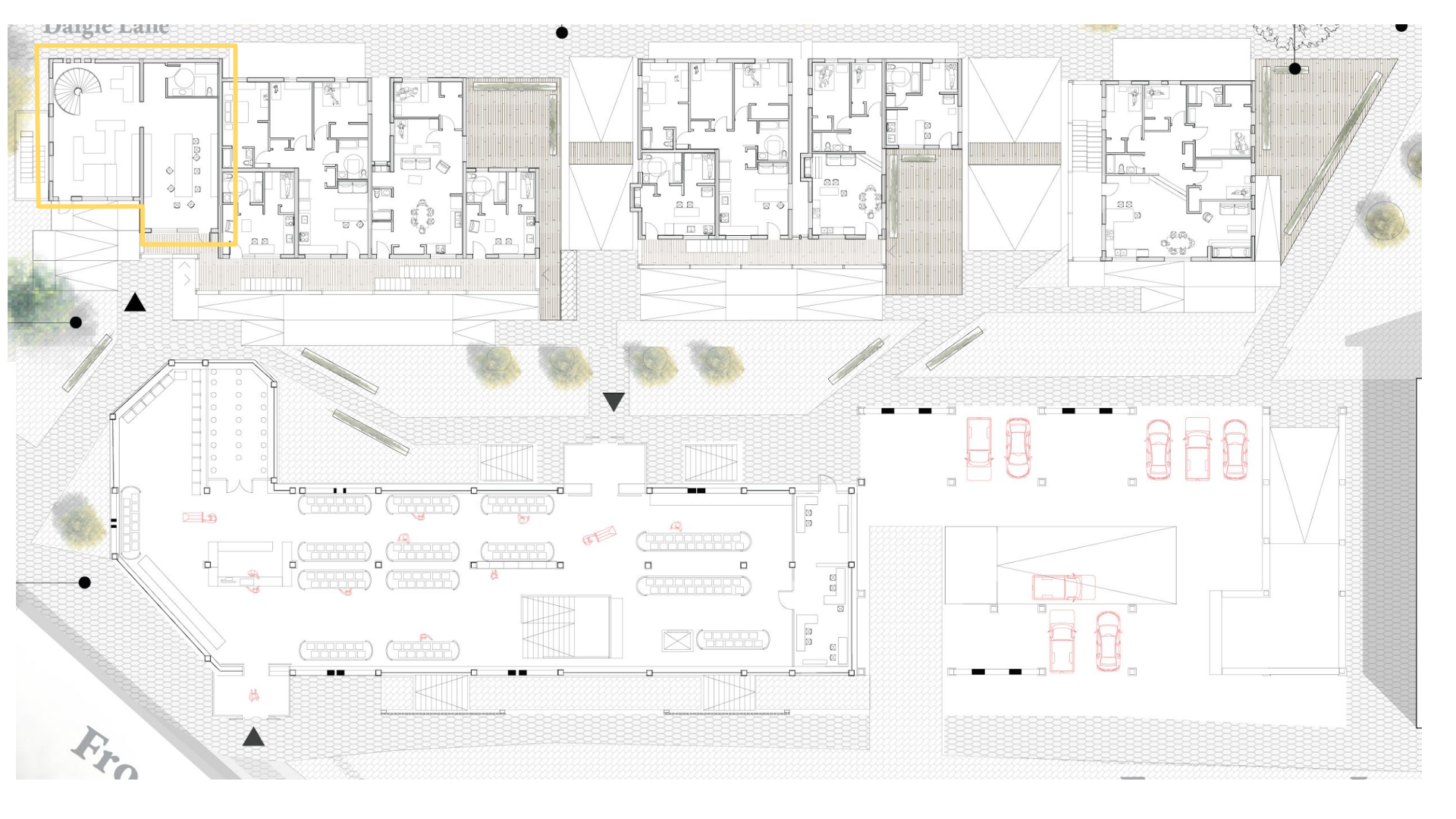
Hydroponic farming



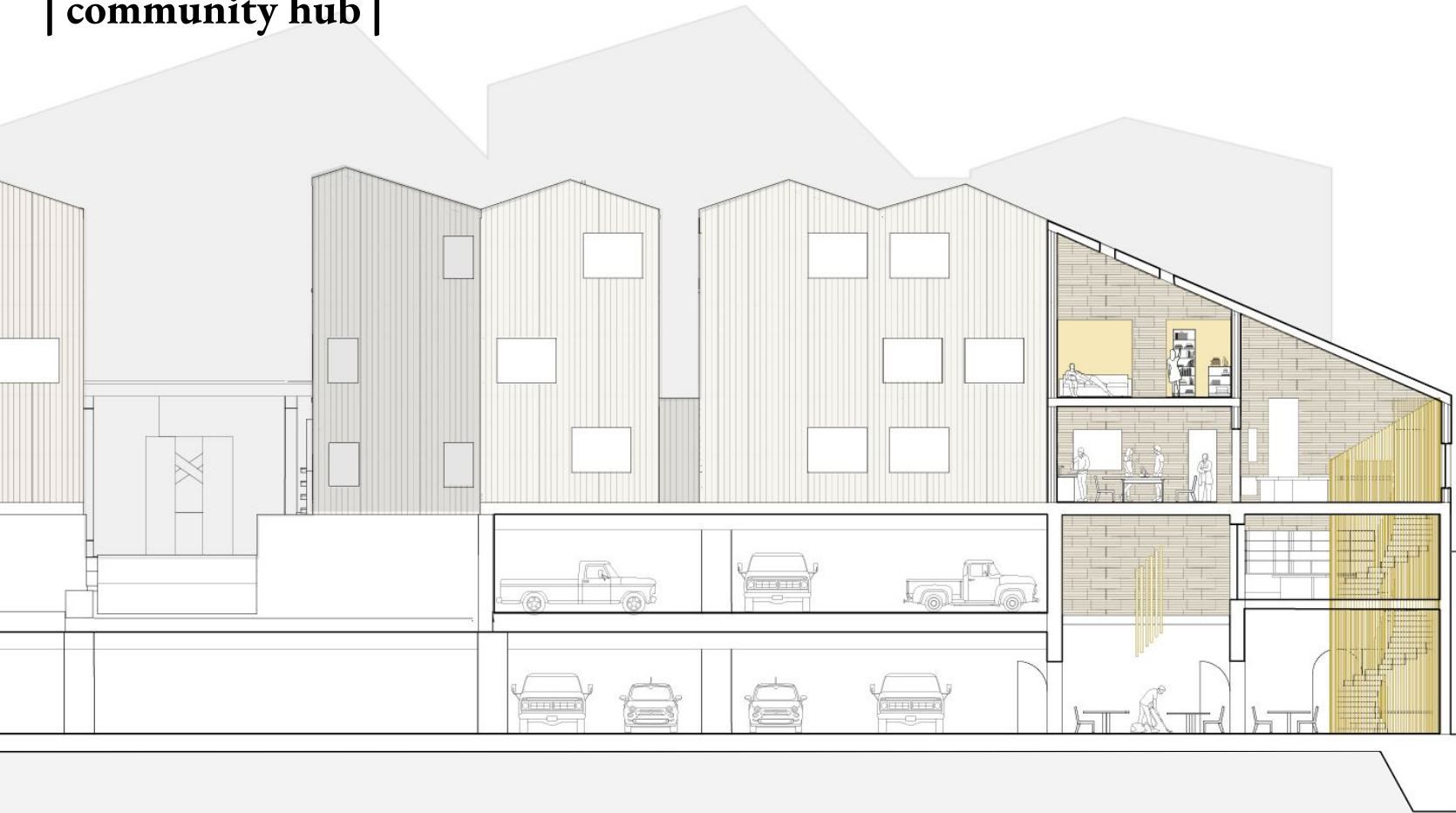
Daigle Lane



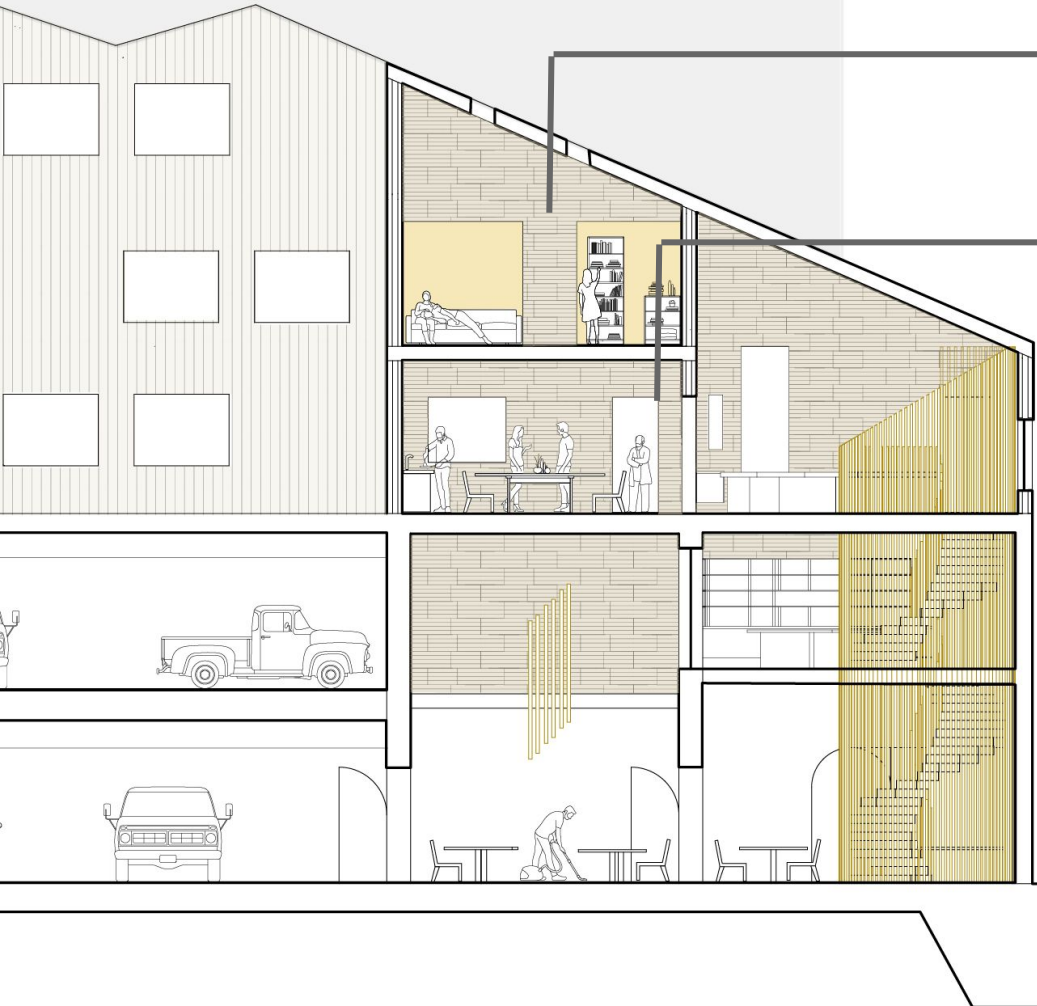
Fro



| community hub |



| community hub |

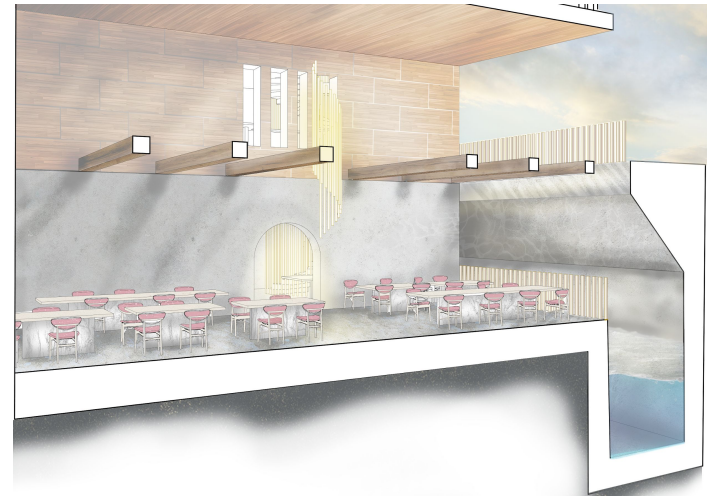


counseling services

community event space

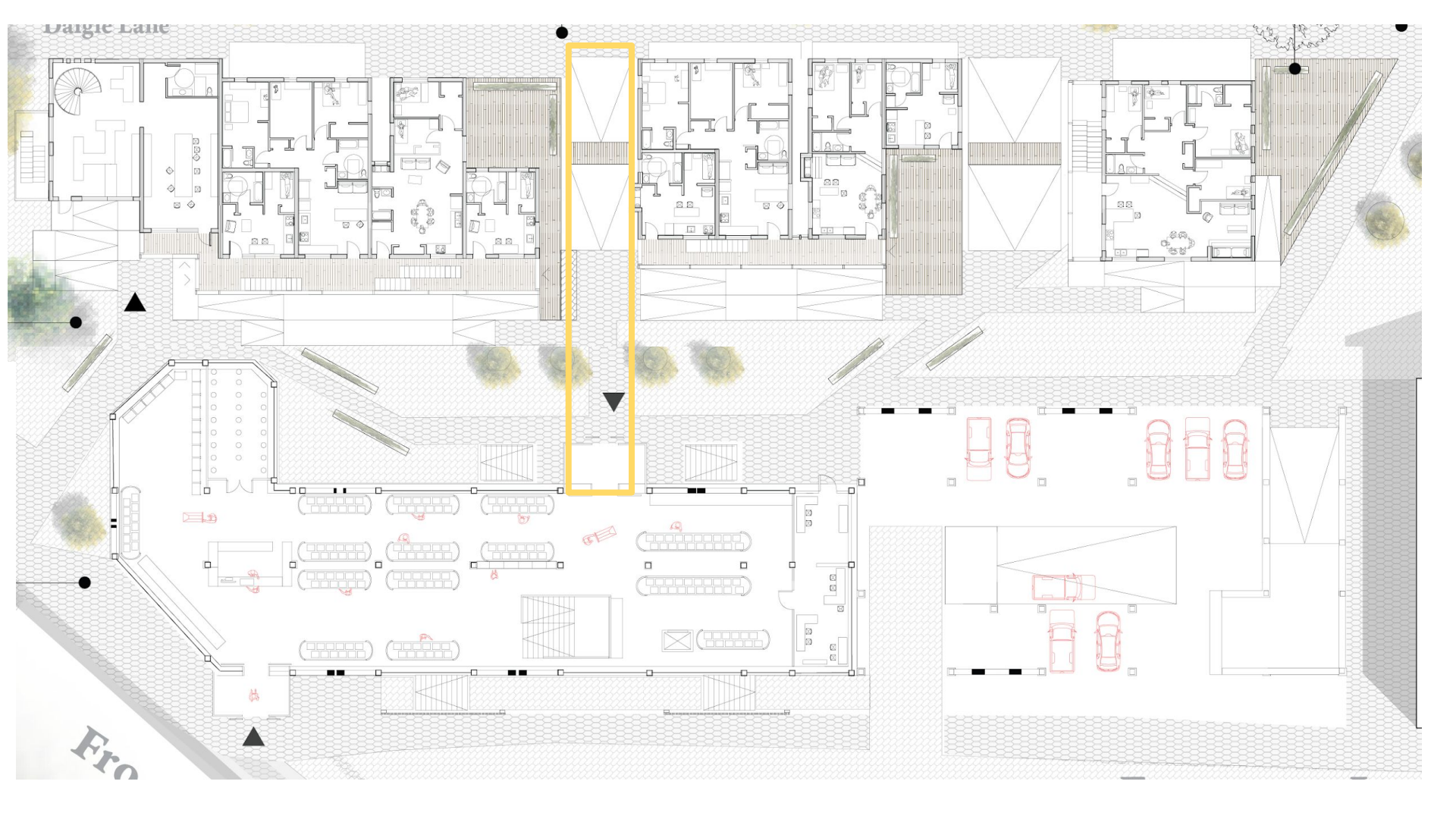
restaurant

| open air patio |



Dargie Lane

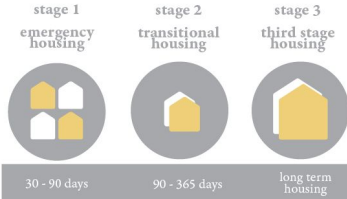
Fro



| urban thresholds |



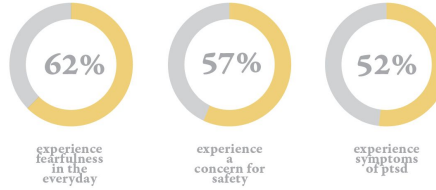
| specific housing needs |



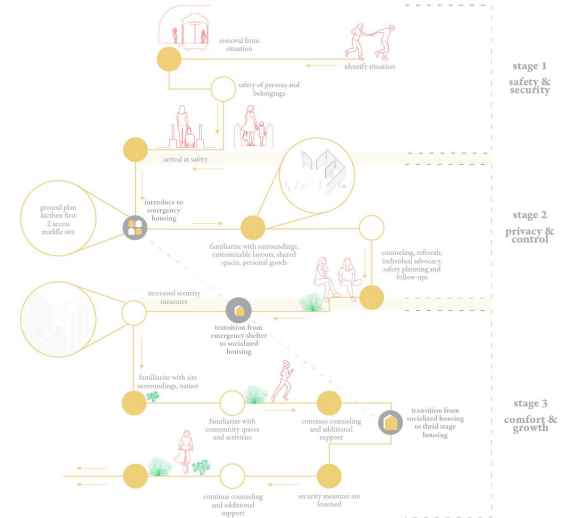
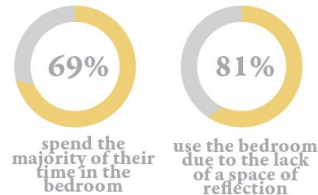
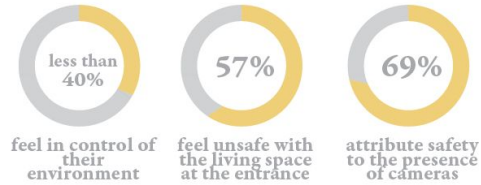
	stage 1 emergency housing 30 - 90 days	stage 2 transitional housing 90 - 365 days	stage 3 third stage housing long term housing
location	second floor - accessible	upper units above grocer	upper units above grocer
proximity to programming and security	direct access to counseling - eyes on the street	increased security - view points - private balcony - among other site residents - light and view control	decreased security - among other site residents - light and view control
specific conditions	less flexible living conditions depending on needs at time of residents	more flexible living conditions	more flexible living conditions
threshold: transition	transitioned into shelter emergency housing program	transitioned into shelter housing program	potential to transition into non-shelter based socialized housing

shelter housing program breakdown

understanding the specific needs of residents



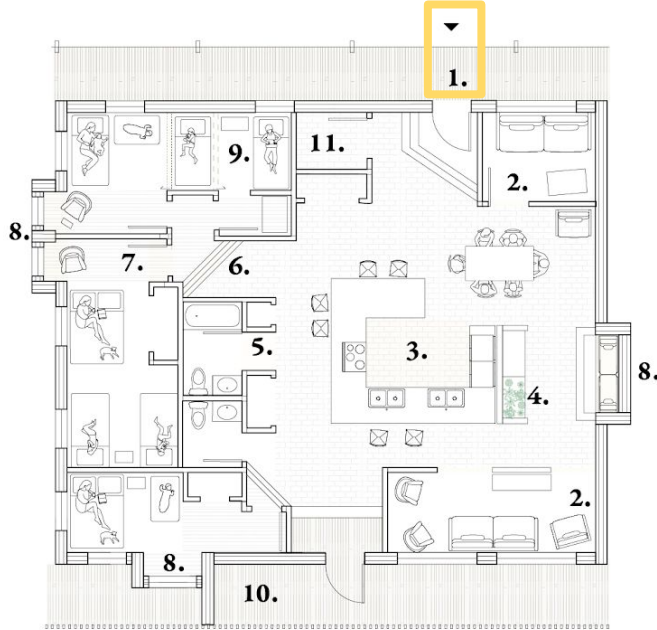
critiques made by anonymous shelter residents



Joshi, Rutali. "Understanding the Built Environment of Shelter Homes for Survivors of Domestic Violence." Thesis, Clemson University, 2017.

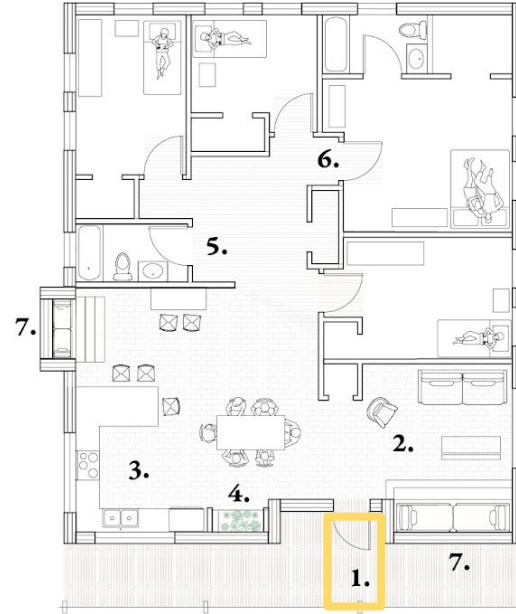
| typical unit layout |

women's shelter



1. front entrance is secure from public & offers immediate transition
2. double living spaces offer additional protection and privacy
3. kitchen serves as core functioning space
4. hydroponic growing within the unit to encourage growth and healthy living
5. additional washroom with added sense of security and storage
6. transition to bedroom areas through slight elevation change
7. threshold extended into bedrooms to provide additional sense of security, privacy, and offer room for contemplation
8. window seats offer opportunities for further separation within personal areas
9. flexible room size for case by case need
10. exterior balcony enclosed to provide sense of security and privacy
11. additional storage for everyday basics to be provided by shelter
12. proximity to counseling services based on intake

rent to own



1. front entrance is secure from public & offers transition from outside to in
2. living space near entrance and open
3. kitchen onlooking the street
4. hydroponic growing within the unit to encourage growth and healthy living
5. washroom with added sense of privacy from public space
6. threshold extended into bedrooms through additional storage
7. window seats extending thresholds with skylight

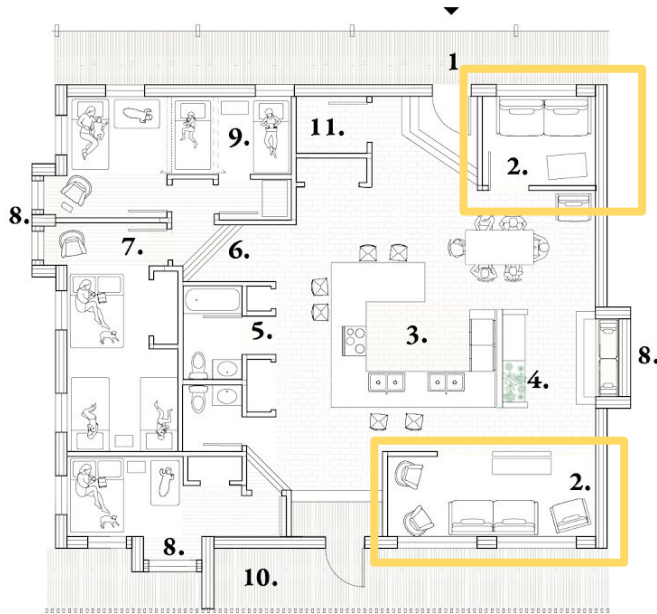
understanding the specific needs of residents



Johns, Beah. "Understanding the Built Environment of Shelter Homes for Survivors of Domestic Violence." Thesis, Clemson University, 2017.

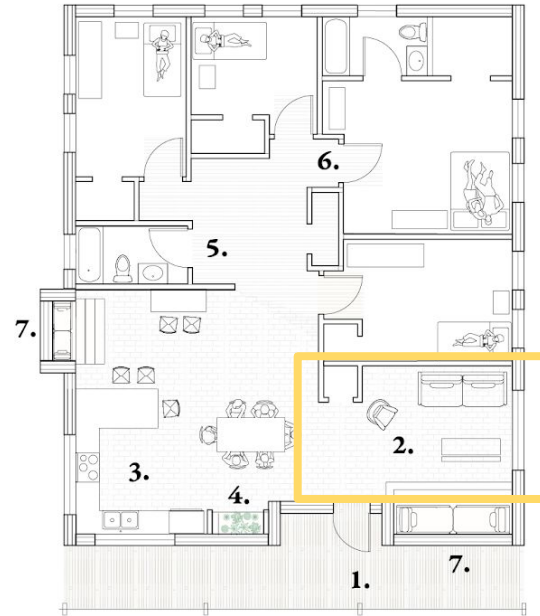
| typical unit layout |

women's shelter



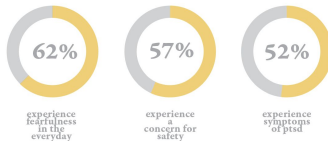
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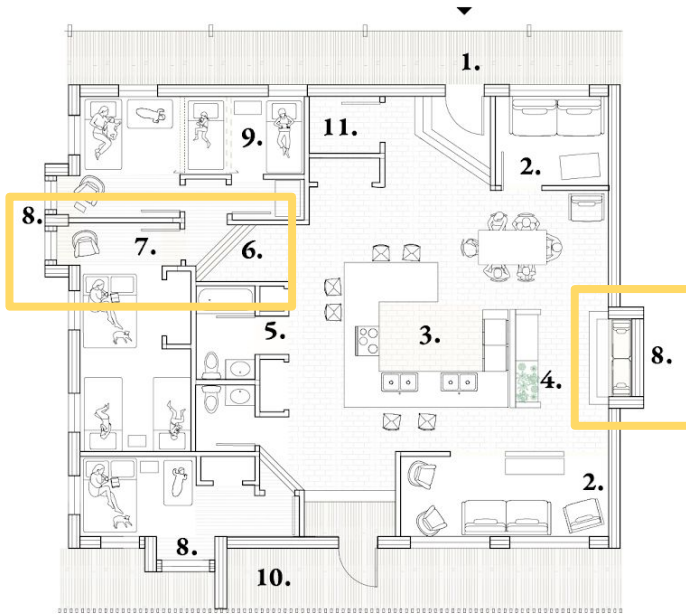
understanding the specific needs of residents



John Reath, "Understanding the Built Environment of Shelter Homes for Survivors of Domestic Violence" Thesis, Clemson University, 2017.

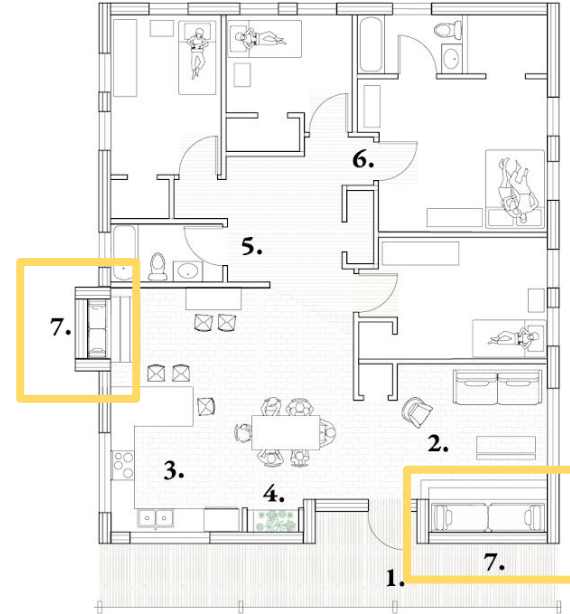
| typical unit layout |

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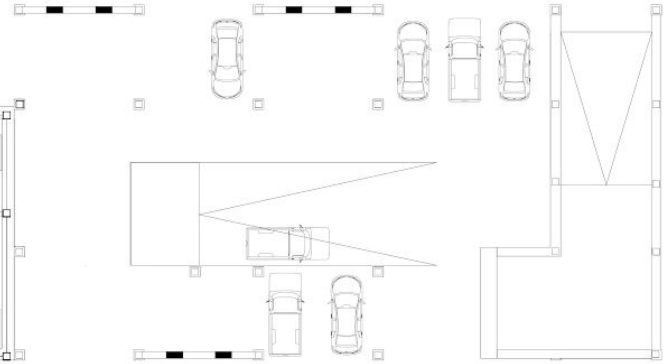
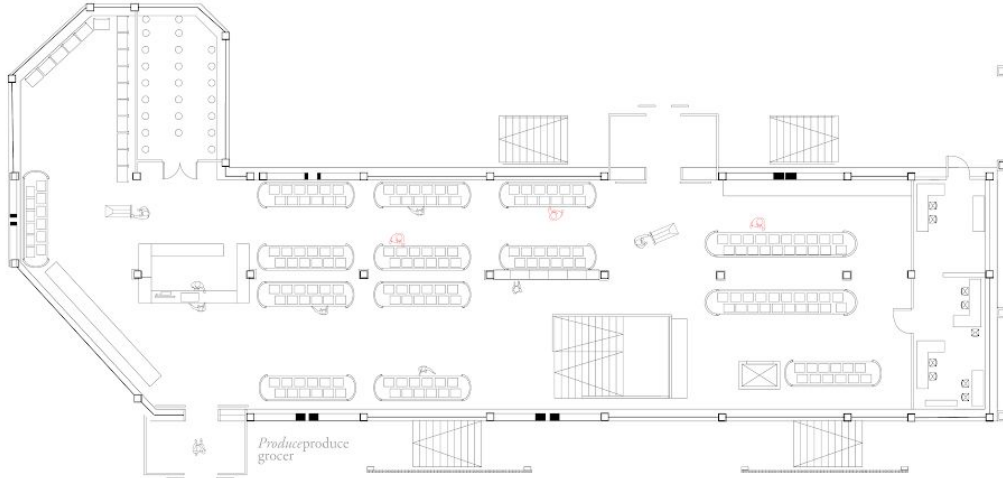
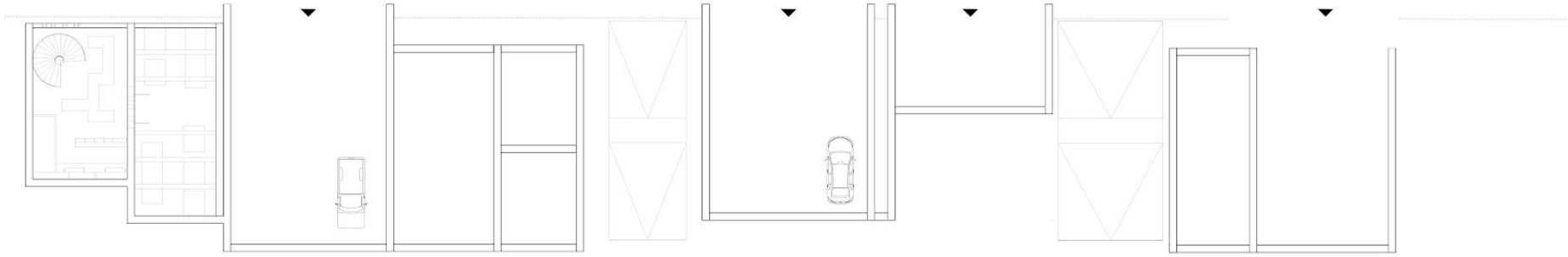
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understanding the specific needs of residents

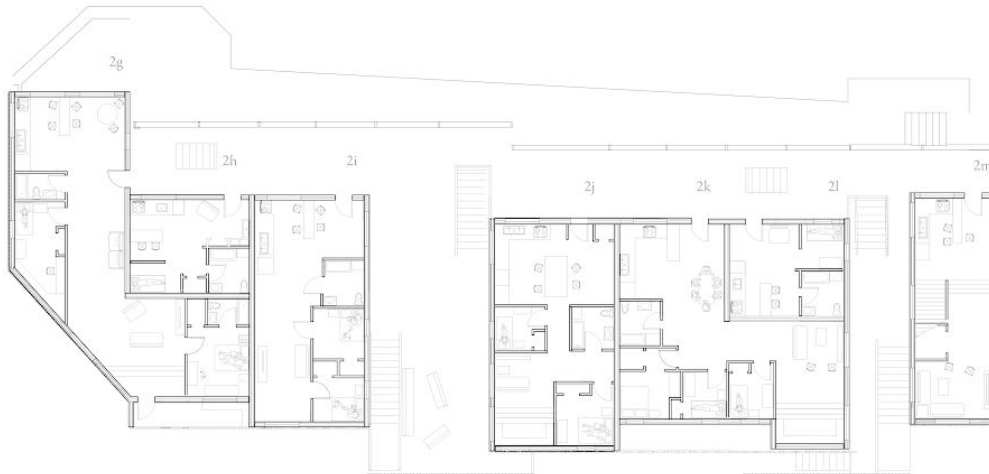
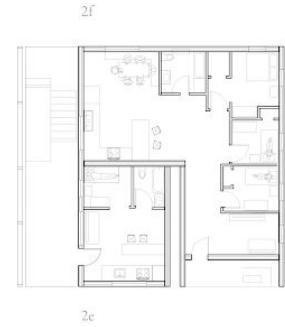


John, Reed. "Understanding the Built Environment of Shelter Homes for Survivors of Domestic Violence." Thesis, Clemson University, 2017.

| ground floor + half basement parking |



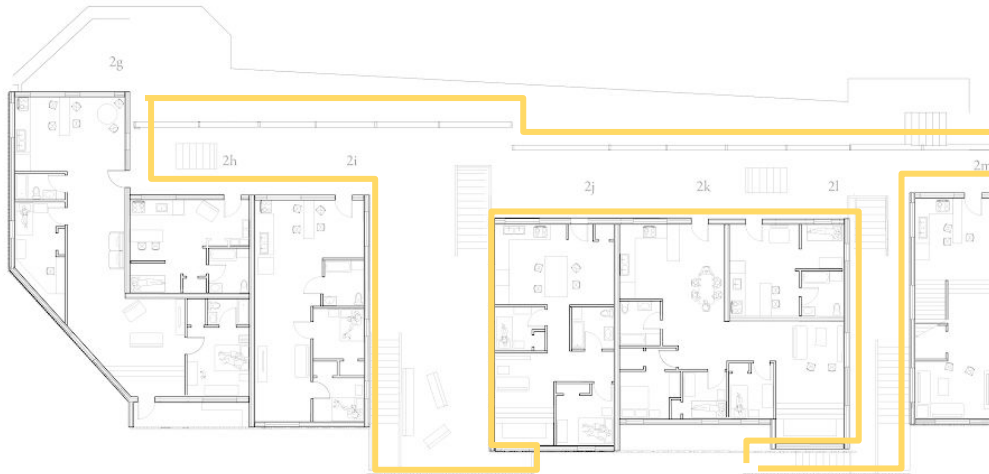
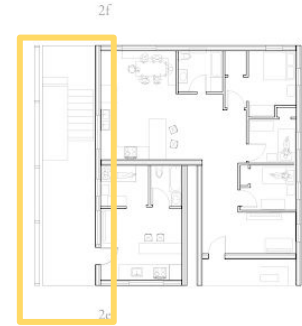
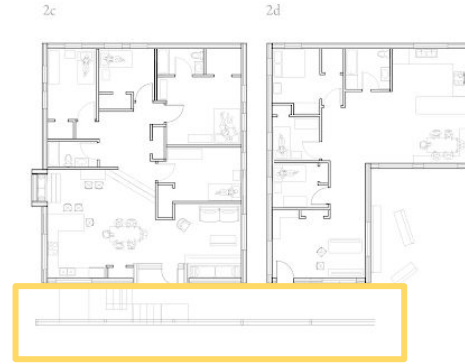
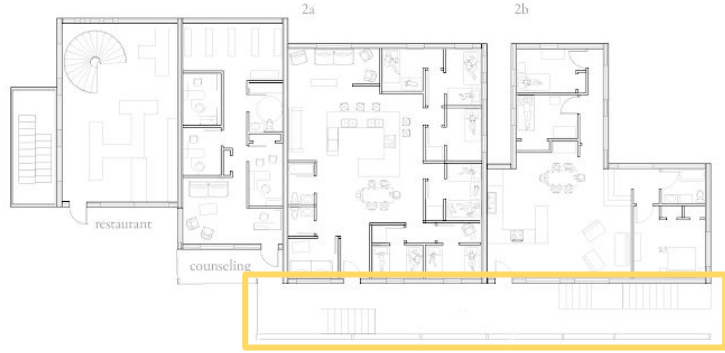
| second floor |



- 2a - emergency shelter
- 2b - rent to own
- 2c - rent to own
- 2d - socialized housing
- 2e - socialized housing
- 2f - rent to own
- 2g - socialized housing
- 2h - socialized housing
- 2i - rent to own
- 2j - socialized housing
- 2k - rent to own
- 2l - rent to own
- 2m - rent to own



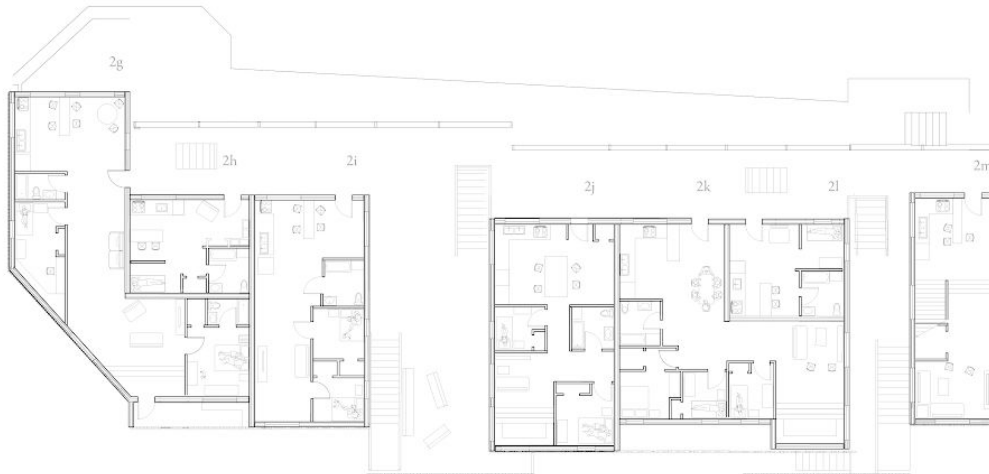
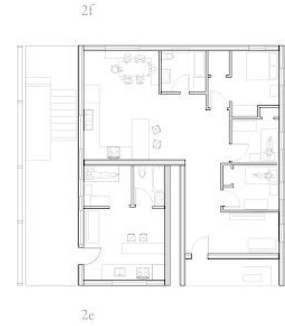
| second floor |



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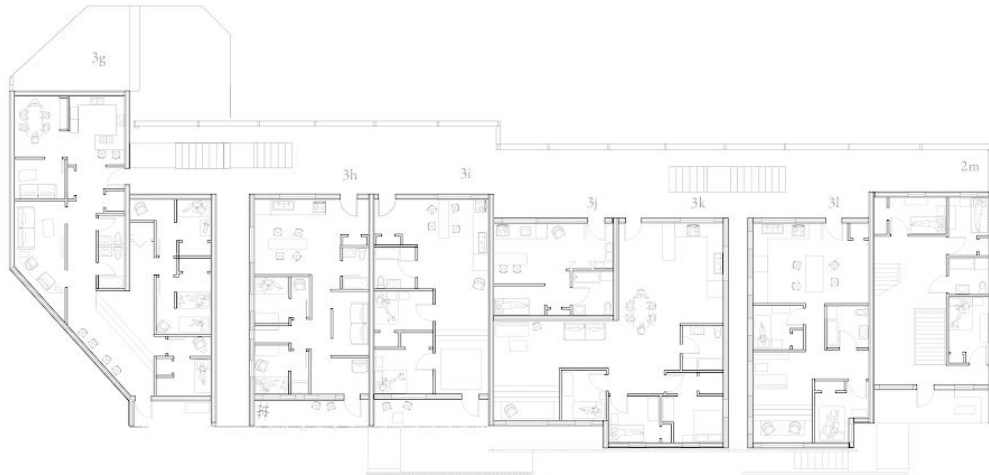
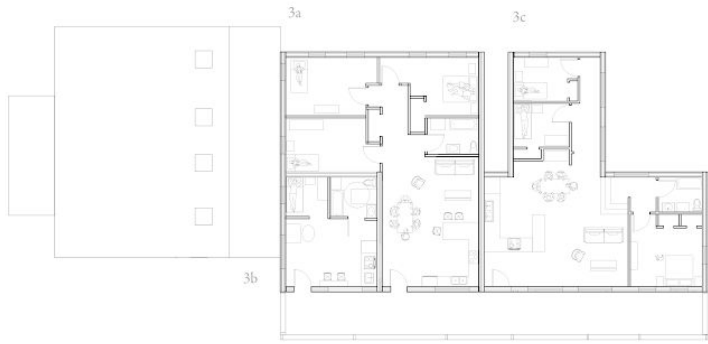
| second floor |



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| emergency shelter and counselling |

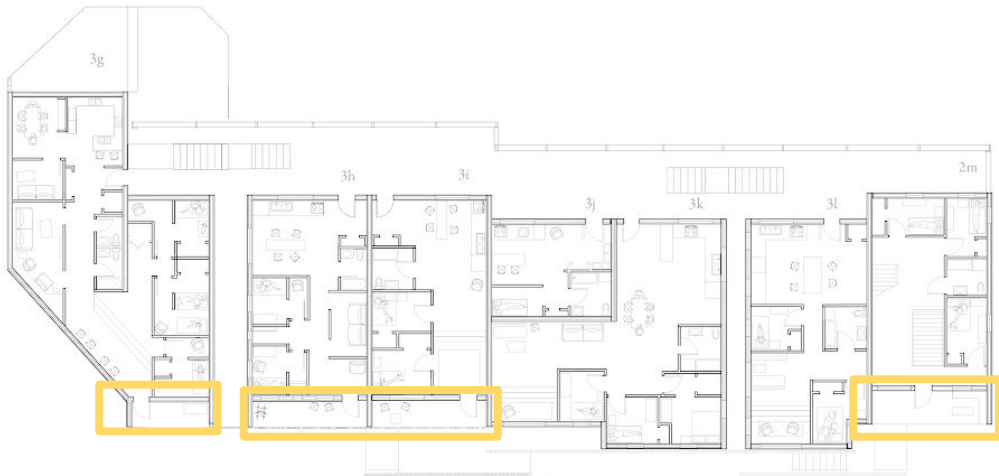
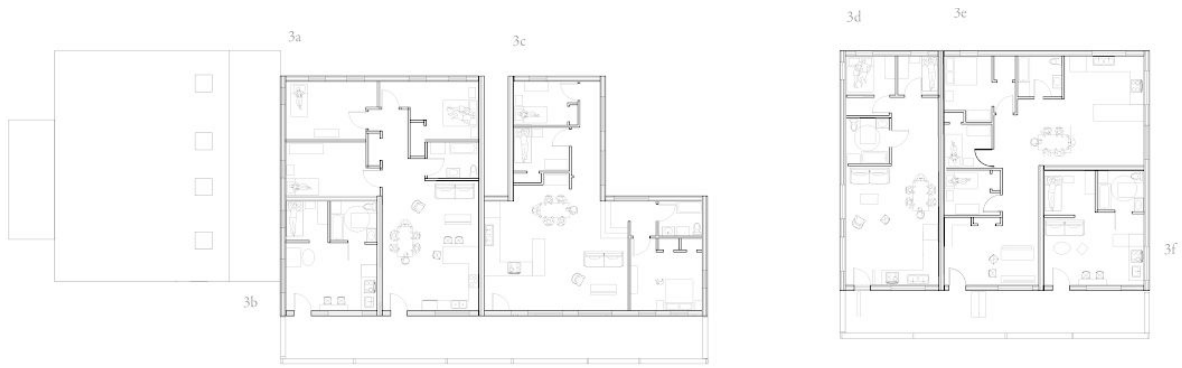




- 3a - socialized housing
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- 3h - socialized housing
- 3i - socialized housing
- 3j - socialized housing
- 3k - rent to own
- 3l - rent to own

| third floor |

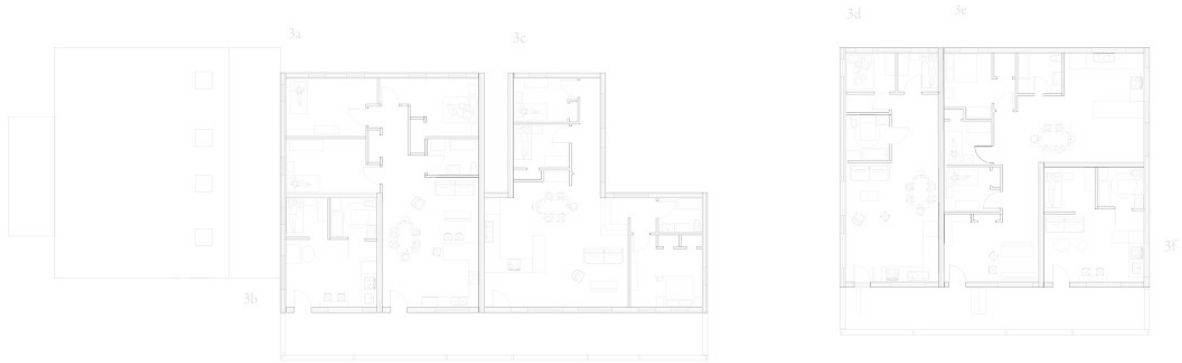




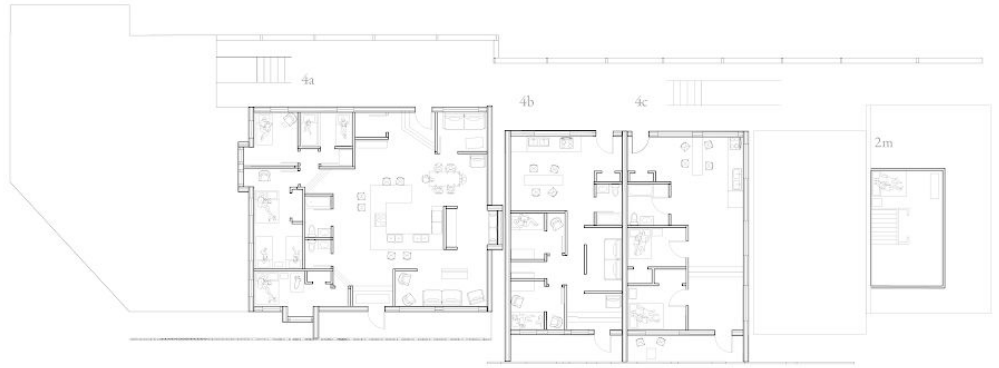
- 3a - socialized housing
- 3b - rent to own
- 3c - rent to own
- 3d - socialized housing
- 3e - rent to own
- 3f - socialized housing
- 3g - rent to own
- 3h - socialized housing
- 3i - socialized housing
- 3j - socialized housing
- 3k - rent to own
- 3l - rent to own

| third floor + extending the threshold |



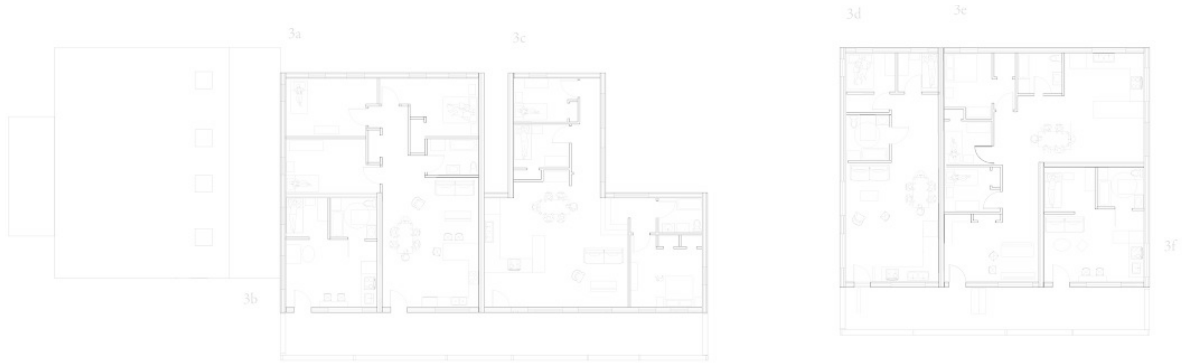


- 4a - ladies shelter
- 4b - ladies shelter
- 4c - socialized housing

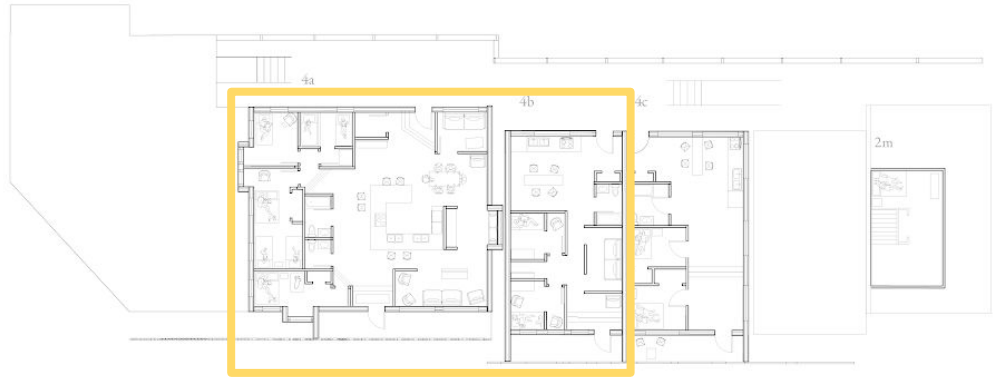


| fourth floor |





- 4a - ladies shelter
- 4b - ladies shelter
- 4c - socialized housing



| women's shelter |



| site axo |



additional above grade parking

passive shading along south facade

women's shelter top floor

axial links to neighbourhood

hexagonal smooth stone pavers for pedestrians throughout site and beyond

cobblestone pavers to slow traffic throughout site and beyond

softwood exterior cladding

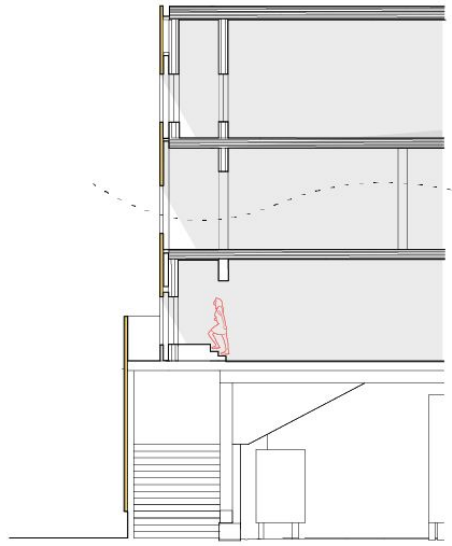
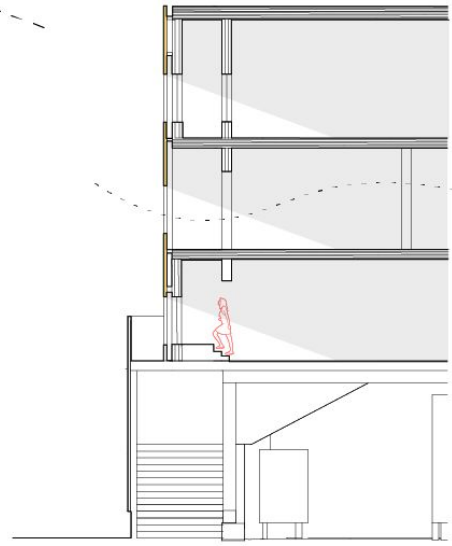
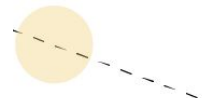
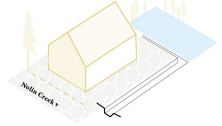
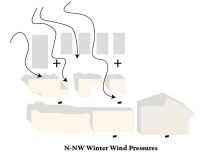
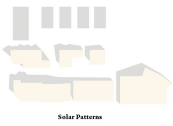
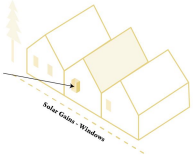
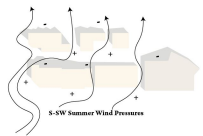
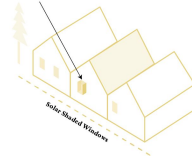
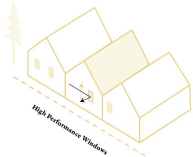
open air subterranean patio

half submerged under unit parking

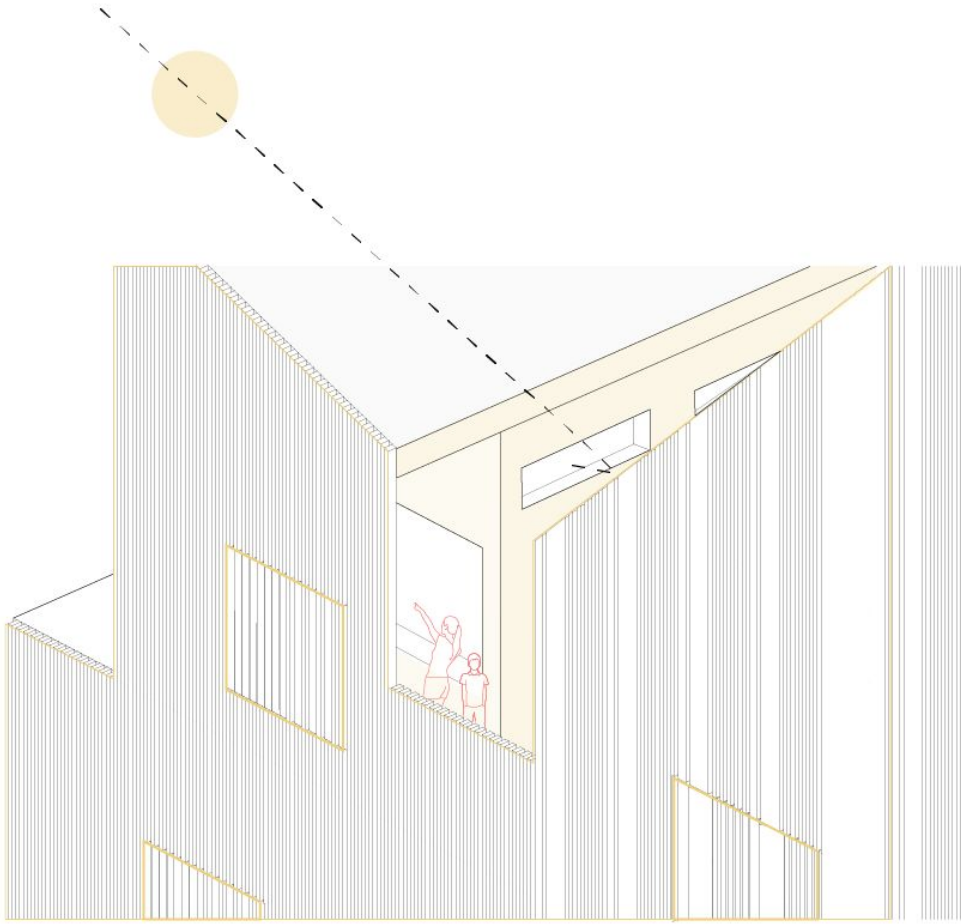
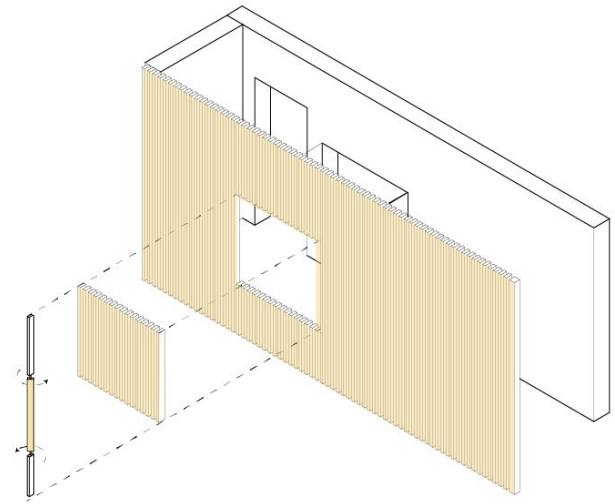
semi private outdoor gathering space

continue laneway connecting college and mackenzie streets

| passive strategies |

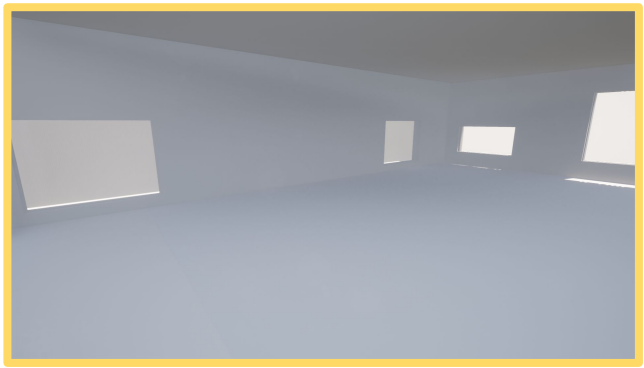


| daylighting |

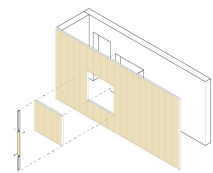
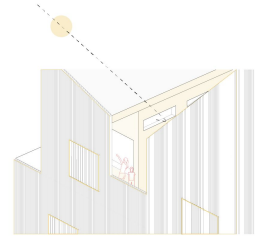
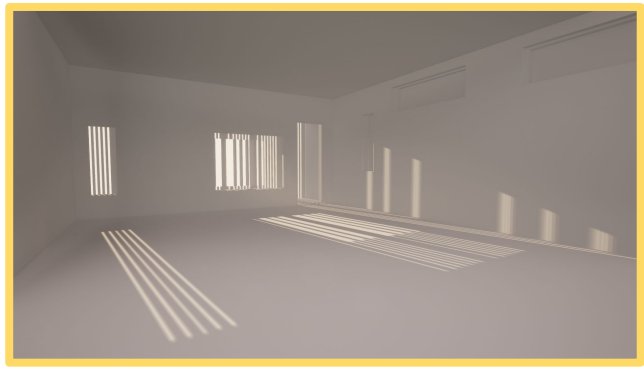


| daylighting |

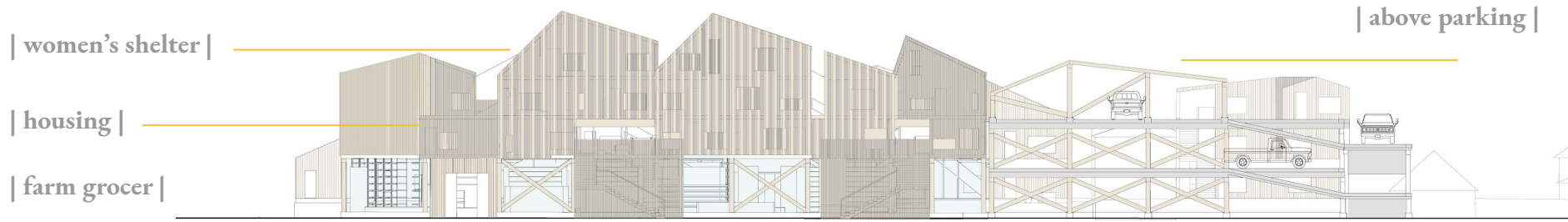
13:30
june 21st



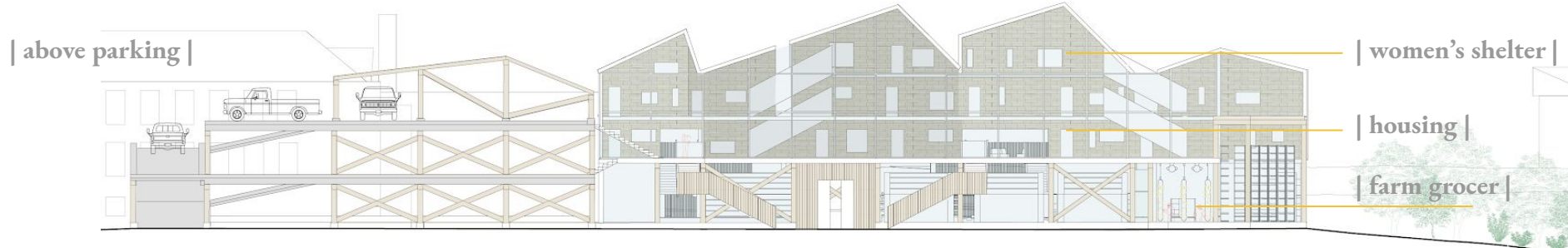
13:30
december 21st



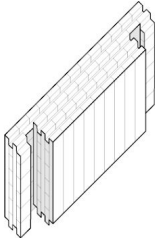
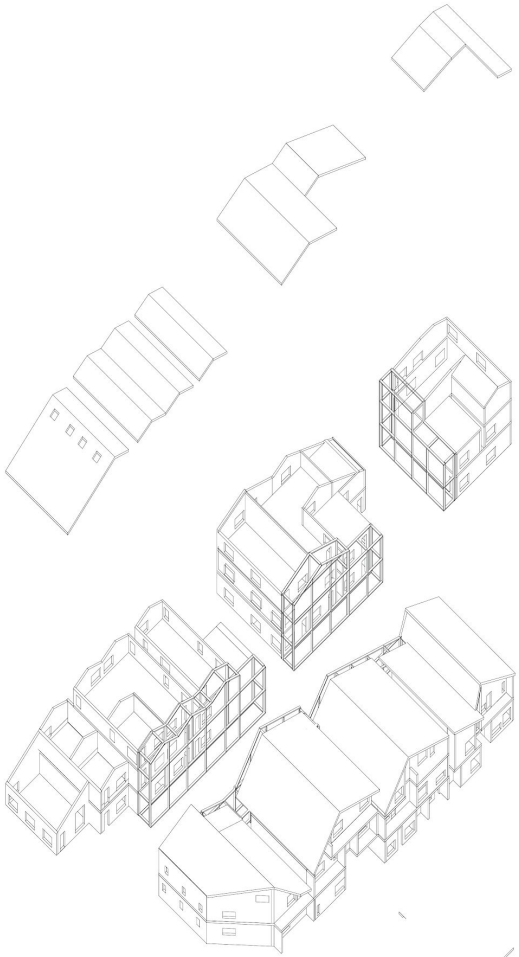
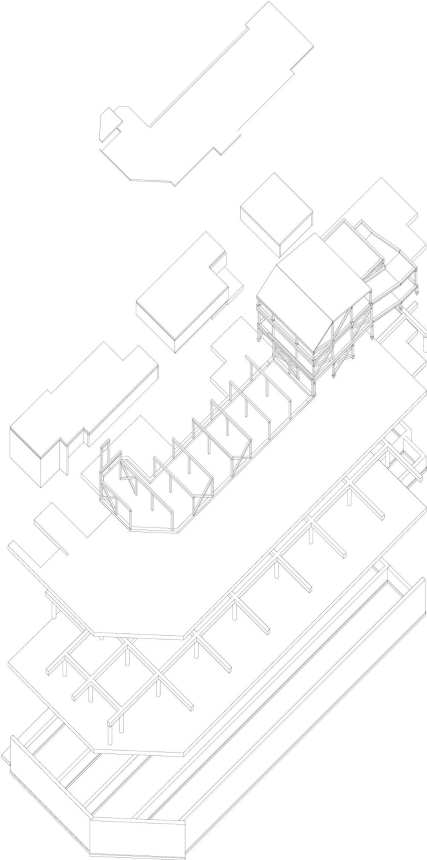
| grocery store south elevation |



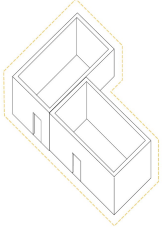
| grocery store courtyard north elevation |



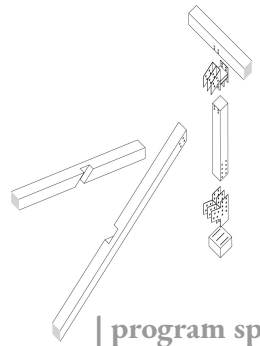
| structural systems |



| clt brick |



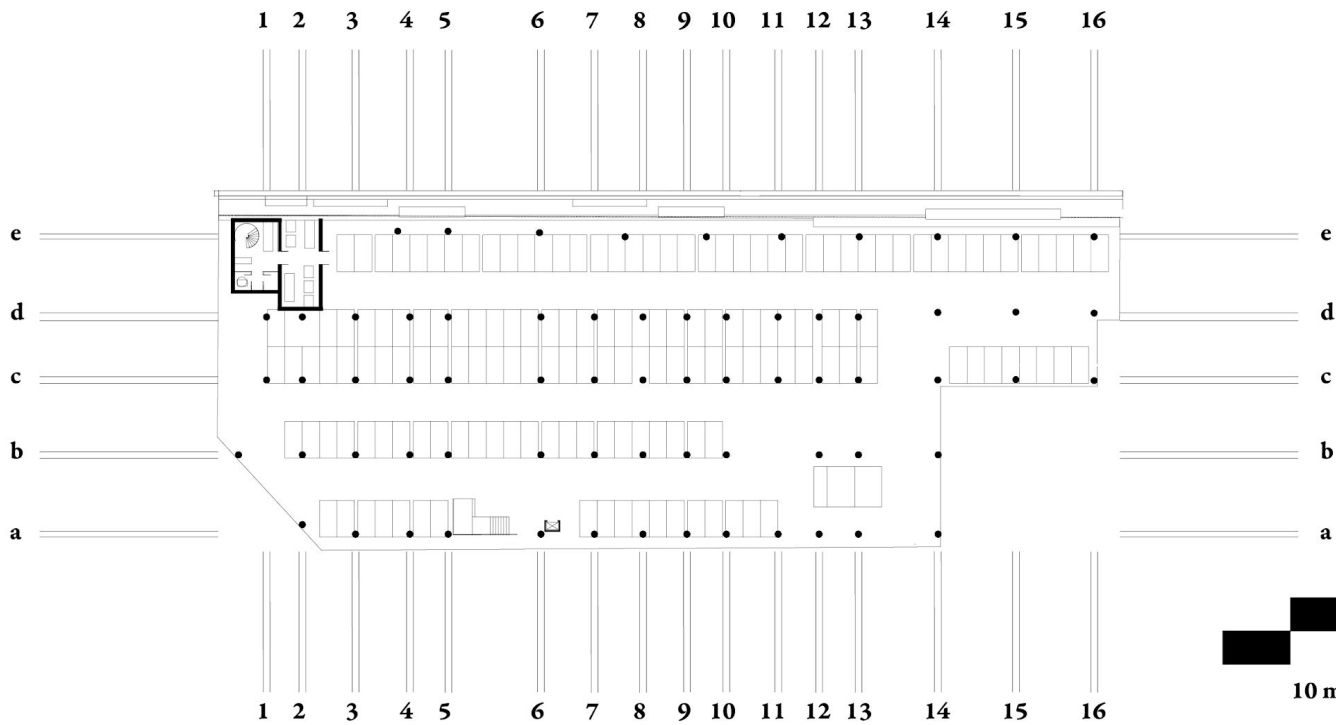
| lateral support |



| program specific |

| basement structure |

column grid dimensions (mm)

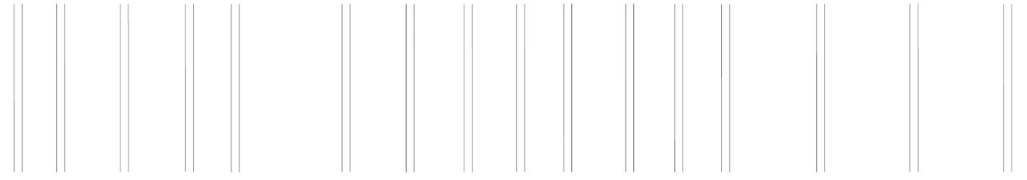


- 1-2: 4300
- 2-3: 7000
- 3-4: 7000
- 4-5: 4300
- 5-6: 12000
- 6-7: 7000
- 7-8: 7000
- 8-9: 4300
- 9-10: 4300
- 10-11: 7000
- 11-12: 4300
- 12-13: 4300
- 13-14: 11000
- 14-15: 11000
- 15-16: 11000
- a-b: 11000
- b-c: 11000
- c-d: 8000
- d-e: 11000



| first floor |

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16



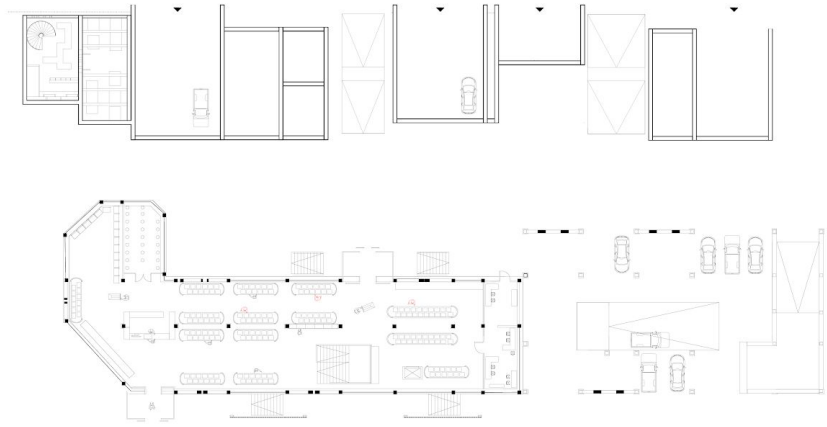
e

d

c

b

a



e

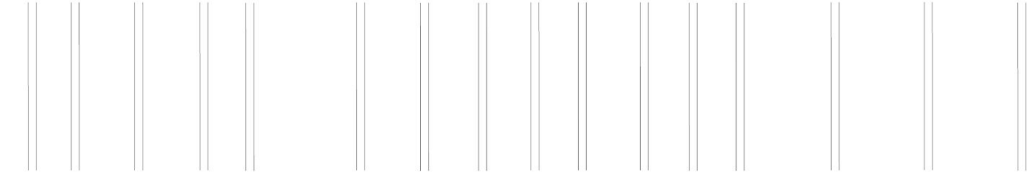
d

c

b

a

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16



| unit structure |

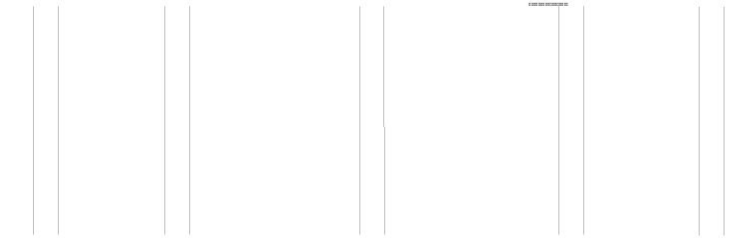
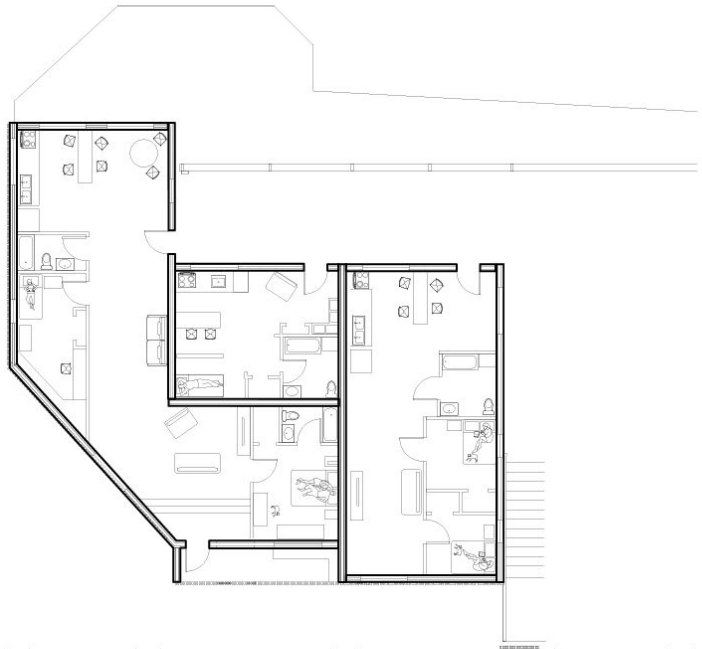
c



b

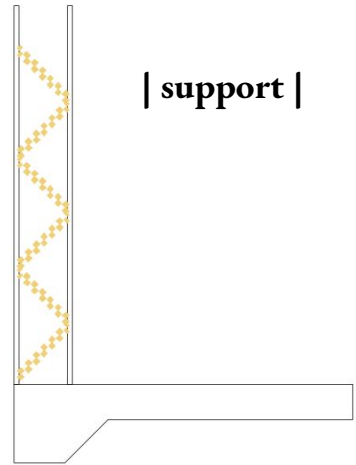
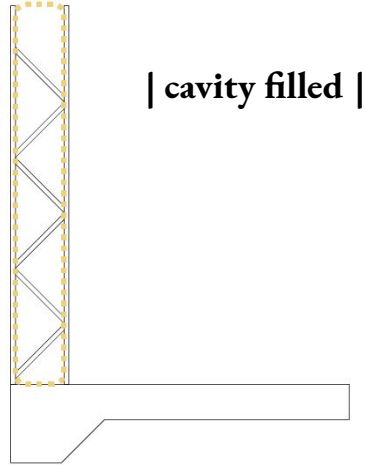
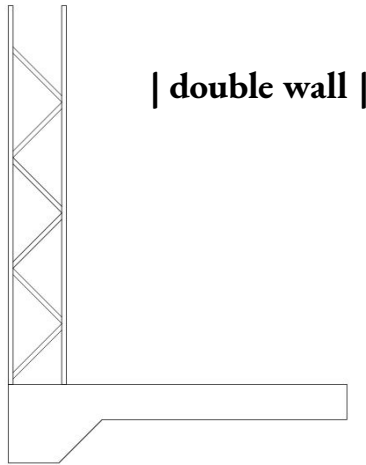


a



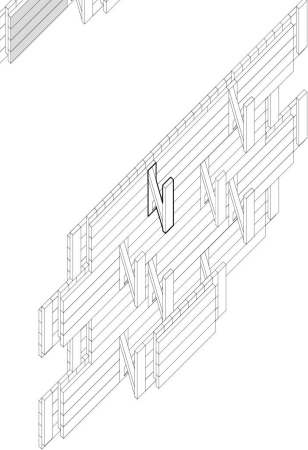
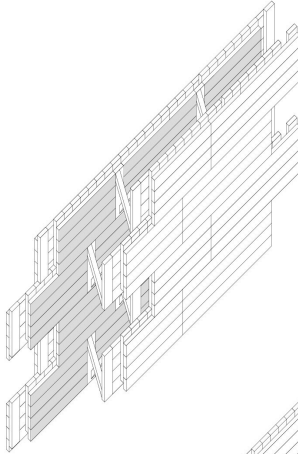
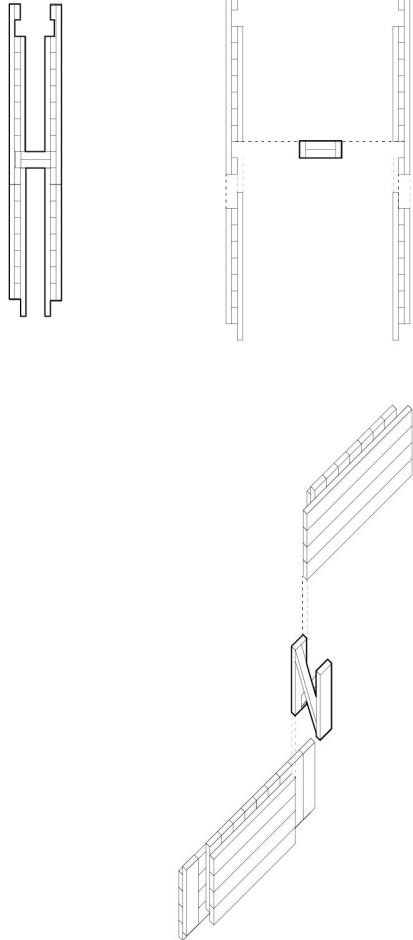
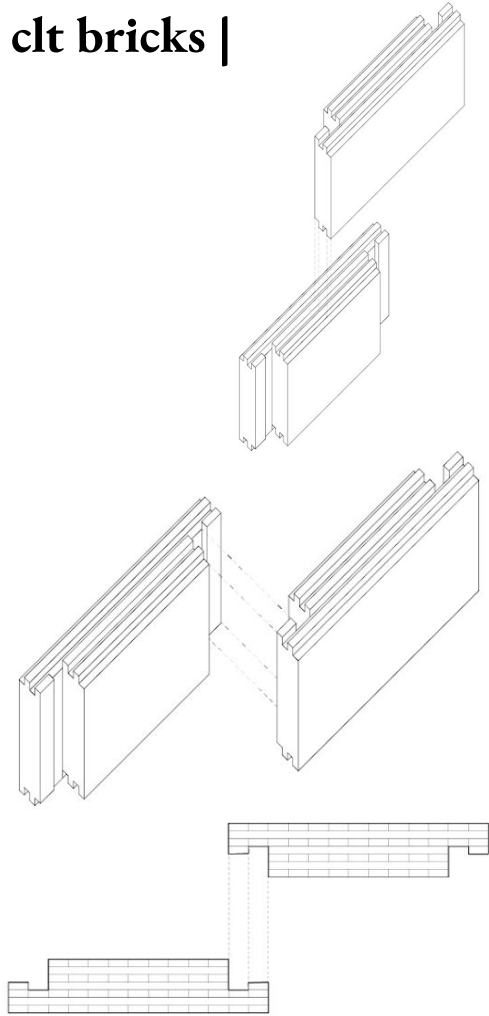
1 2 3 4 5

| structural precedent |



| UNBC Wood innovation centre | Stantec Architecture

| clt bricks |



**module size:
1000 x 400 x 90**

**module weight:
13kg**

