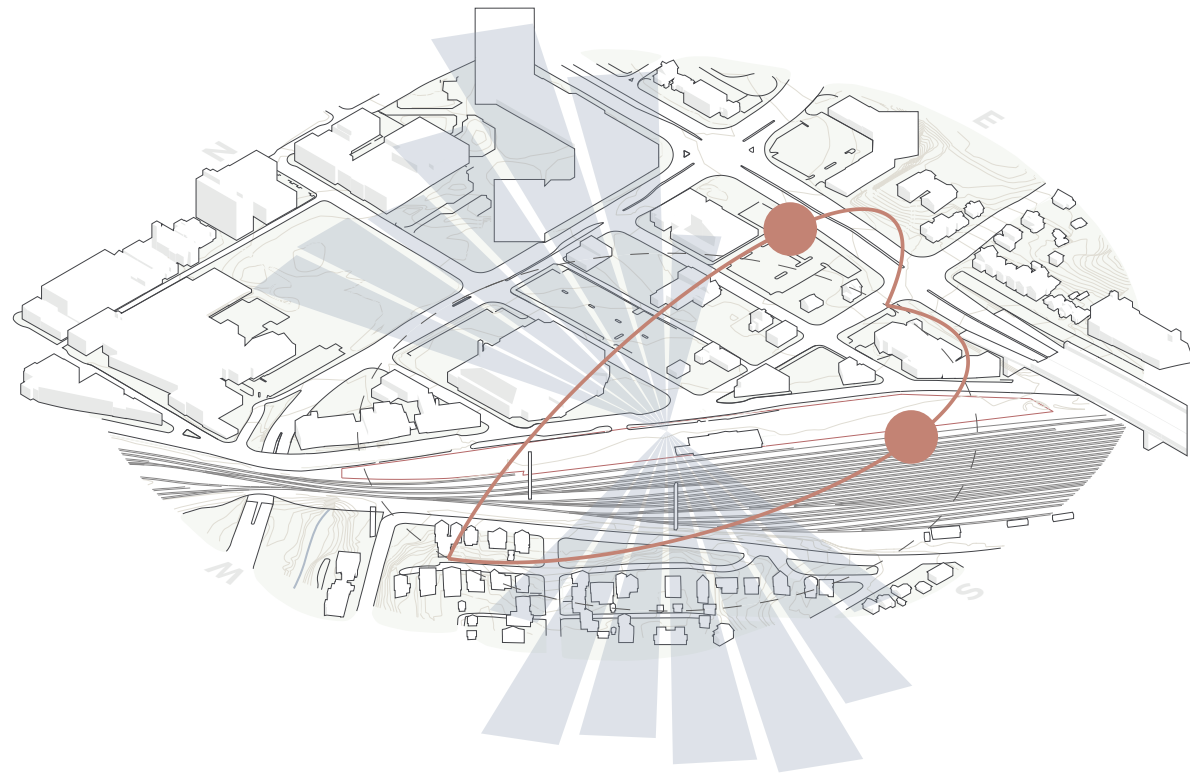


arch 4505
assmt 2c
roch belair
12 / 16 / 2019

a tempered junction.

braeden martel + sarah wetteskind

site analysis // the city



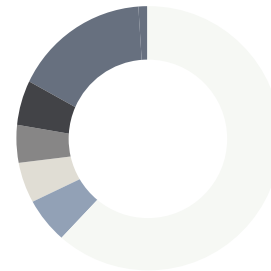
wind // sun



- average cost of rent in greater sudbury
- studio - 641
 - 1 bedroom - 855
 - 2 bedroom - 1052
 - 3+ bedroom - 1204



- age groups of population (city of sudbury)
- 0 - 19 - 20%
 - 20 - 29 - 14%
 - 30 - 59 - 39%
 - 60 - 79 - 21%
 - 80 + - 6%



- types of dwellings (greater sudbury) (68805)
- single detached household - 42485
 - apartment >5 storeys - 4445
 - semi - detached house - 3270
 - row house - 2870
 - duplex - 4235
 - apartment <5 storeys - 11100



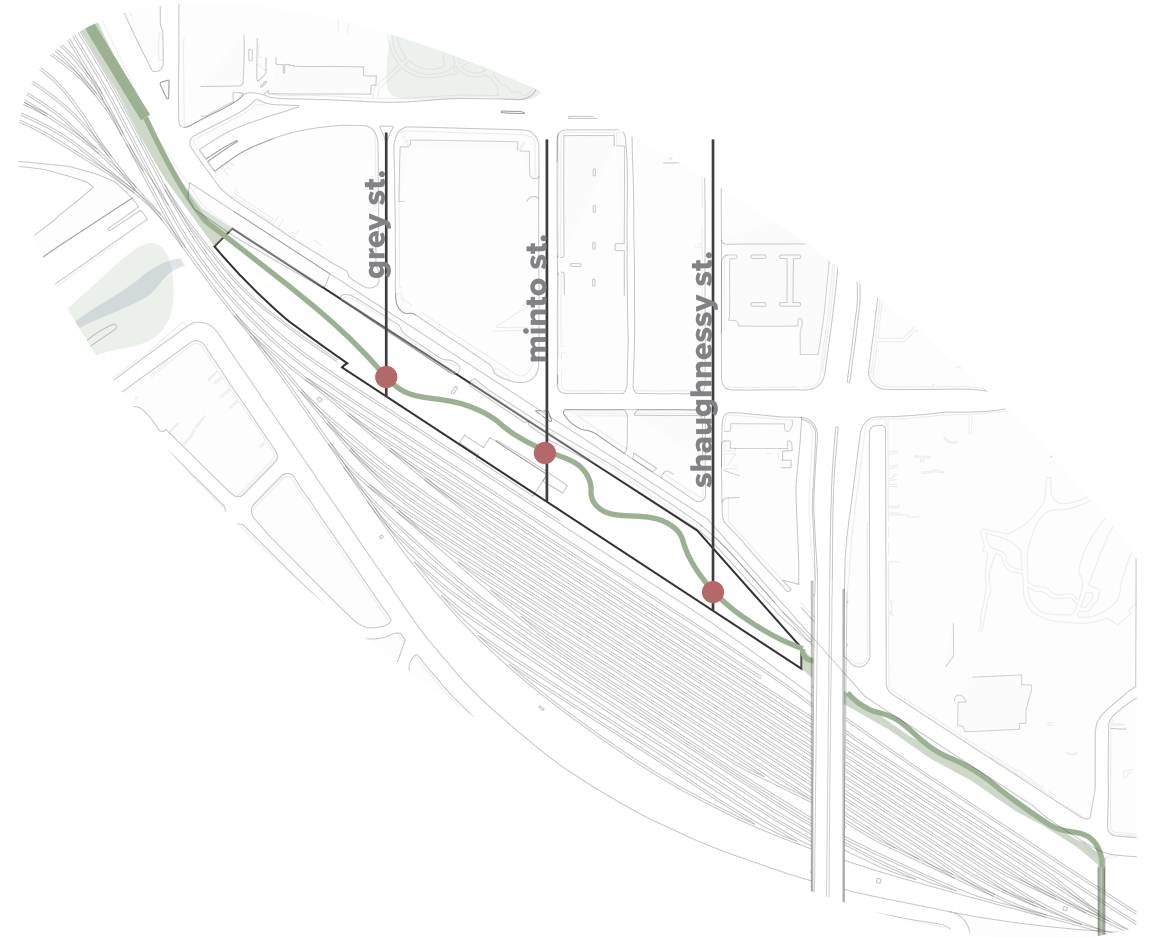
- types of dwellings (downtown) (3605)
- single detached household - 1420
 - apartment >5 storeys - 395
 - semi - detached house - 75
 - row house - 20
 - duplex - 465
 - apartment <5 storeys - 1230

demographic diagrams

site analysis // the site



cpr station intersections



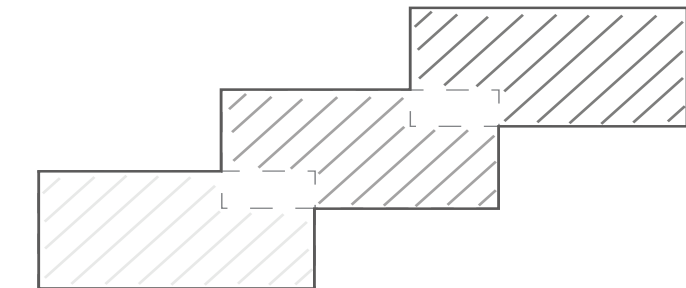
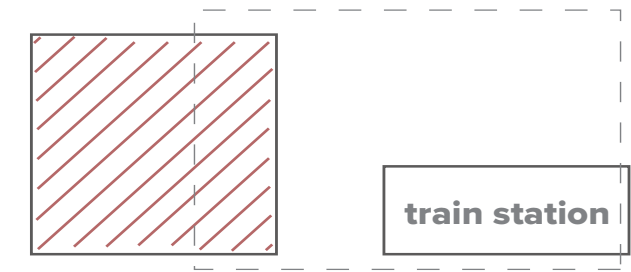
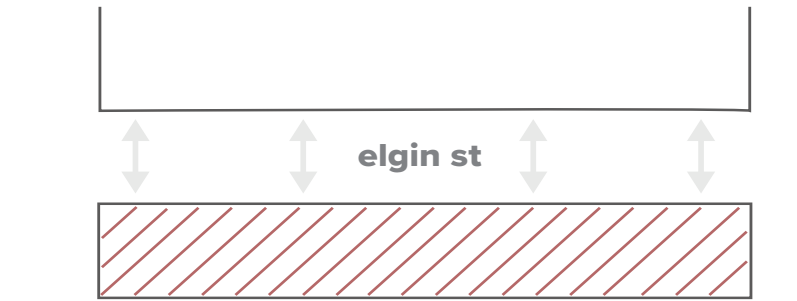
urban connection opportunities

thesis

Given the transient nature of the downtown core our project aims to bring residential diversity and permanence back where it once was.

This will be done through:

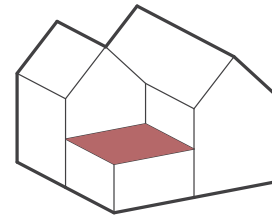
- Offering public + semi - private space
- Housing at the scale of mid-rise cohousing
- Opportunities for personal + financial growth
- A sense of privacy + pride
- A greenway that acts as a residential street for shared activity
- A unique urban residential relationship through the overlapping of programs



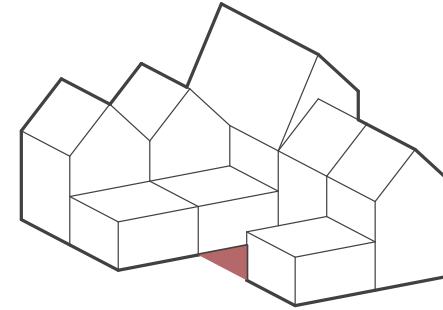
precedents

semi private outdoor spaces

elevation of home from street



villa ask
rra



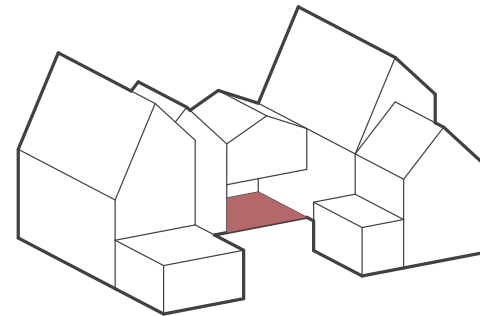
puukivisto
oopeaa

courtyards

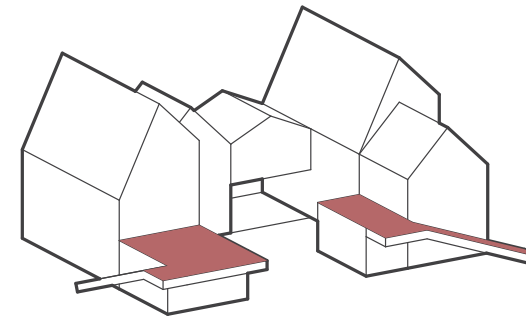
eyes of the street // safety

transparent first storey

commercial below residential



obos fornebu
rra



icc sydney
hassell

public green space elevation
change

street and backyard facades

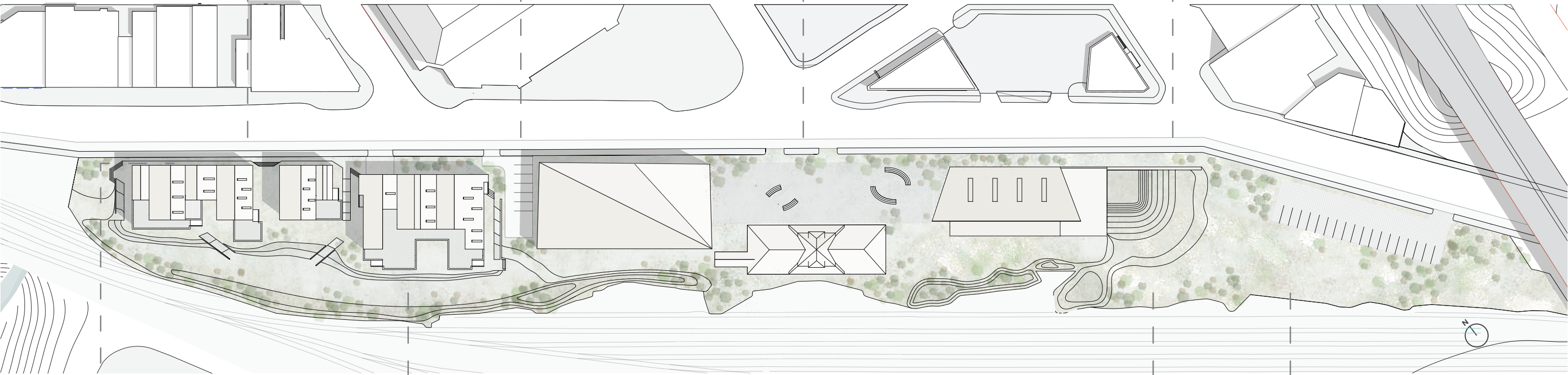
urban strategy

elevated residential

market loading
+ parking

pedestrian hub
connection to three programs

widened sidewalk
+ new bike lane



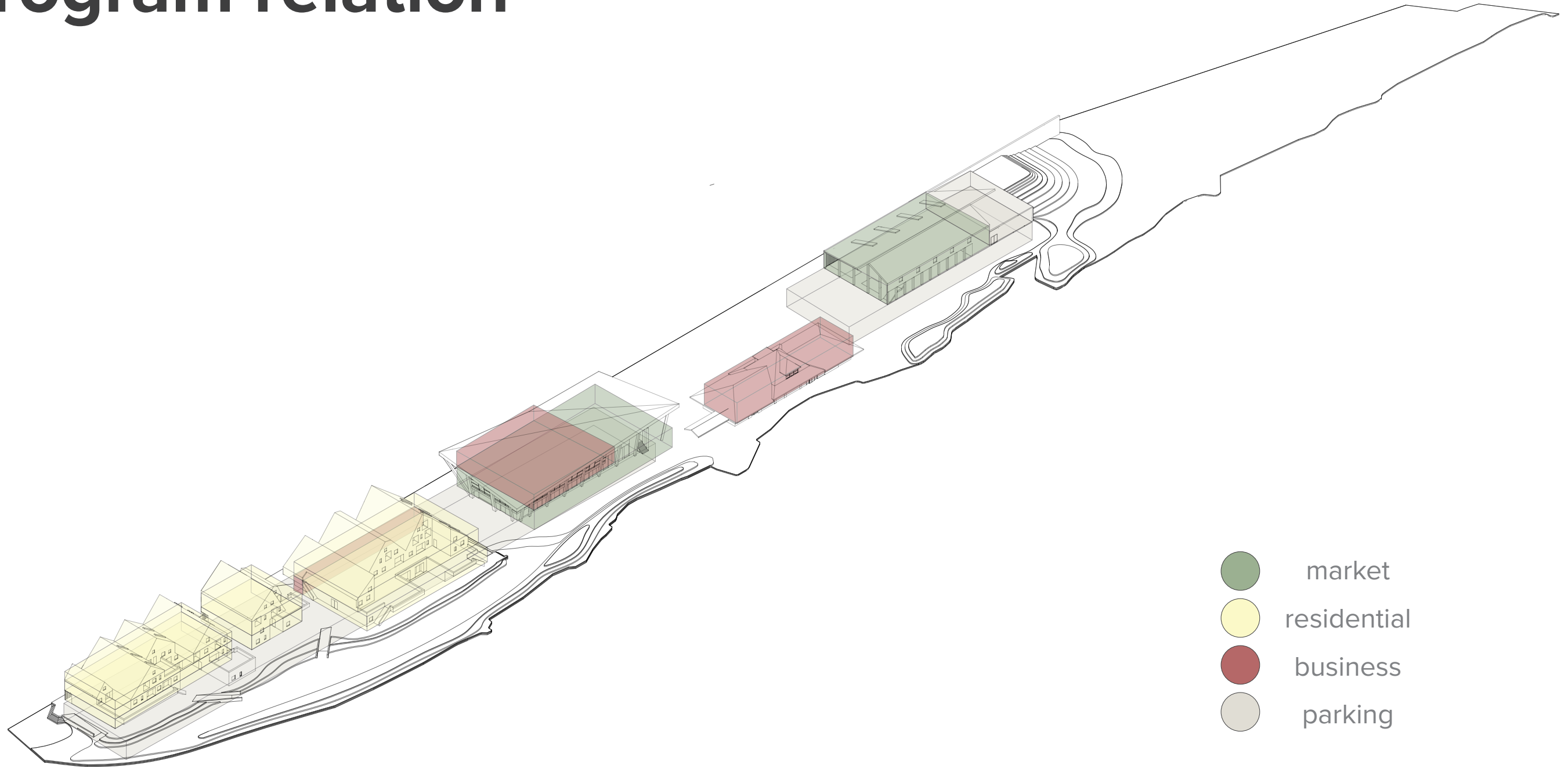
frontyard //
backyard

public greenway 'path'
marked with berming

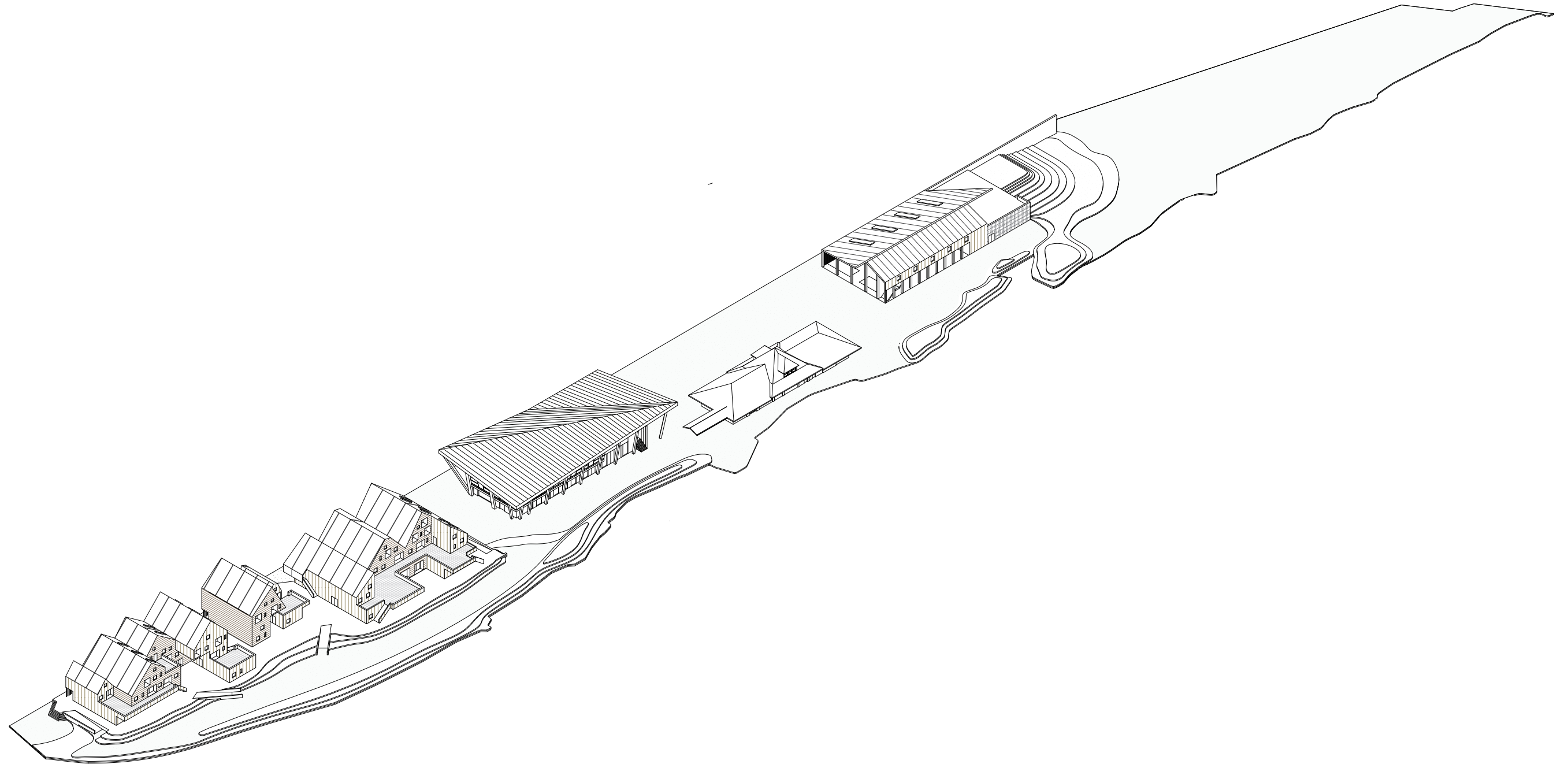
sliding hill //
elevated public playspace

permeable parking

program relation



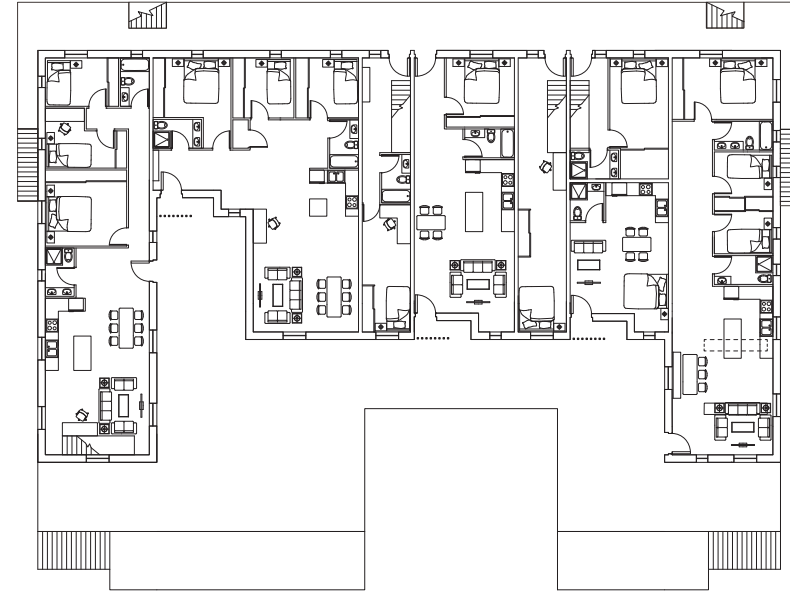
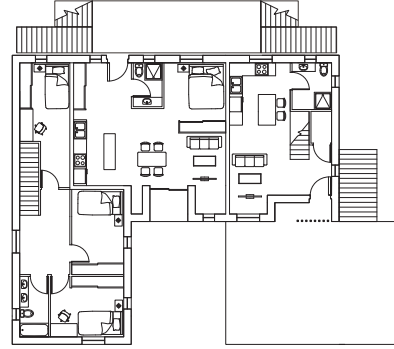
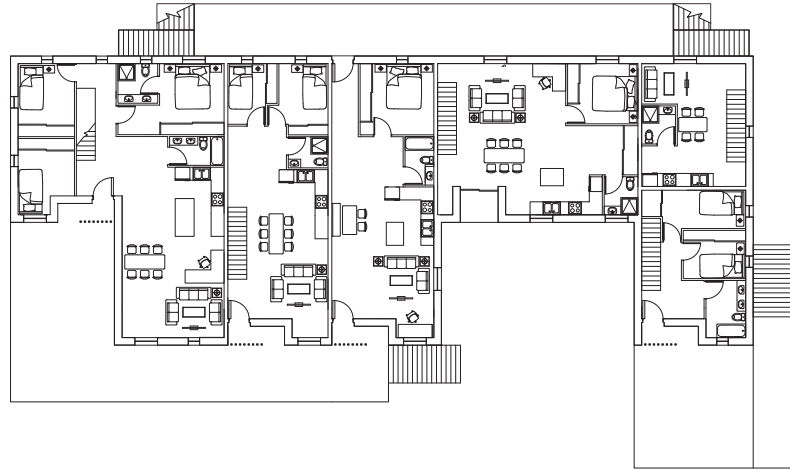
site axonometric



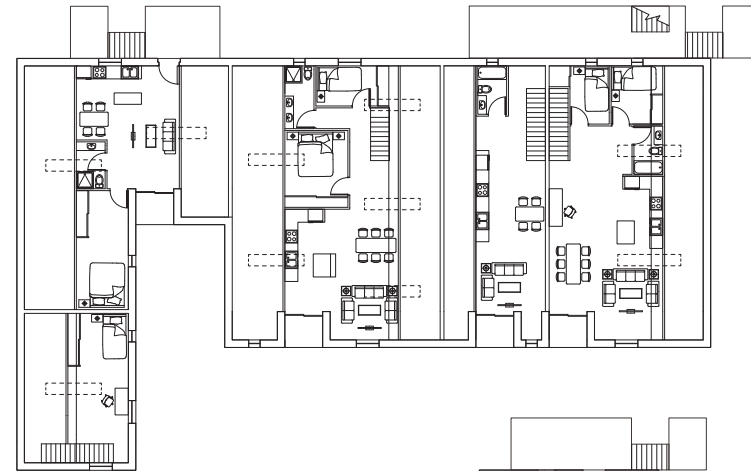
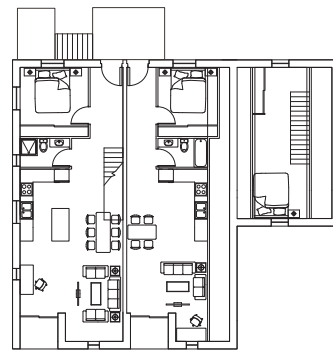
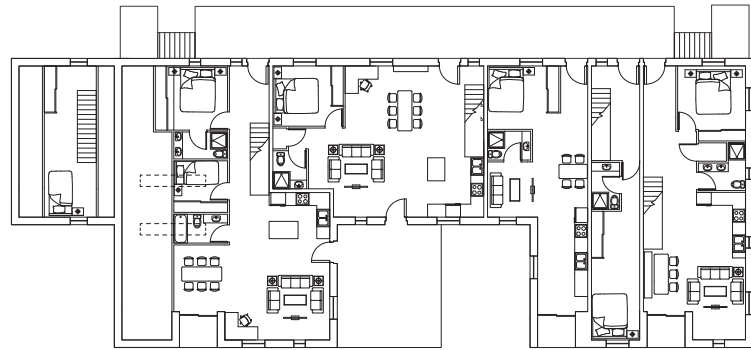
residential // plans



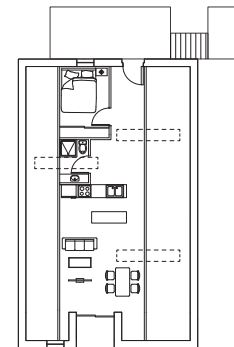
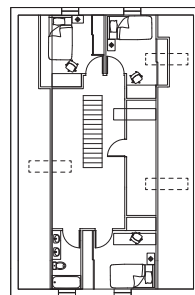
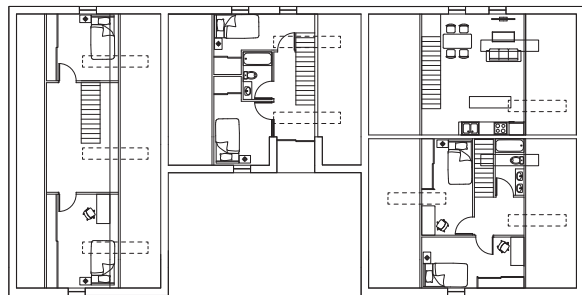
residential // plans



+1

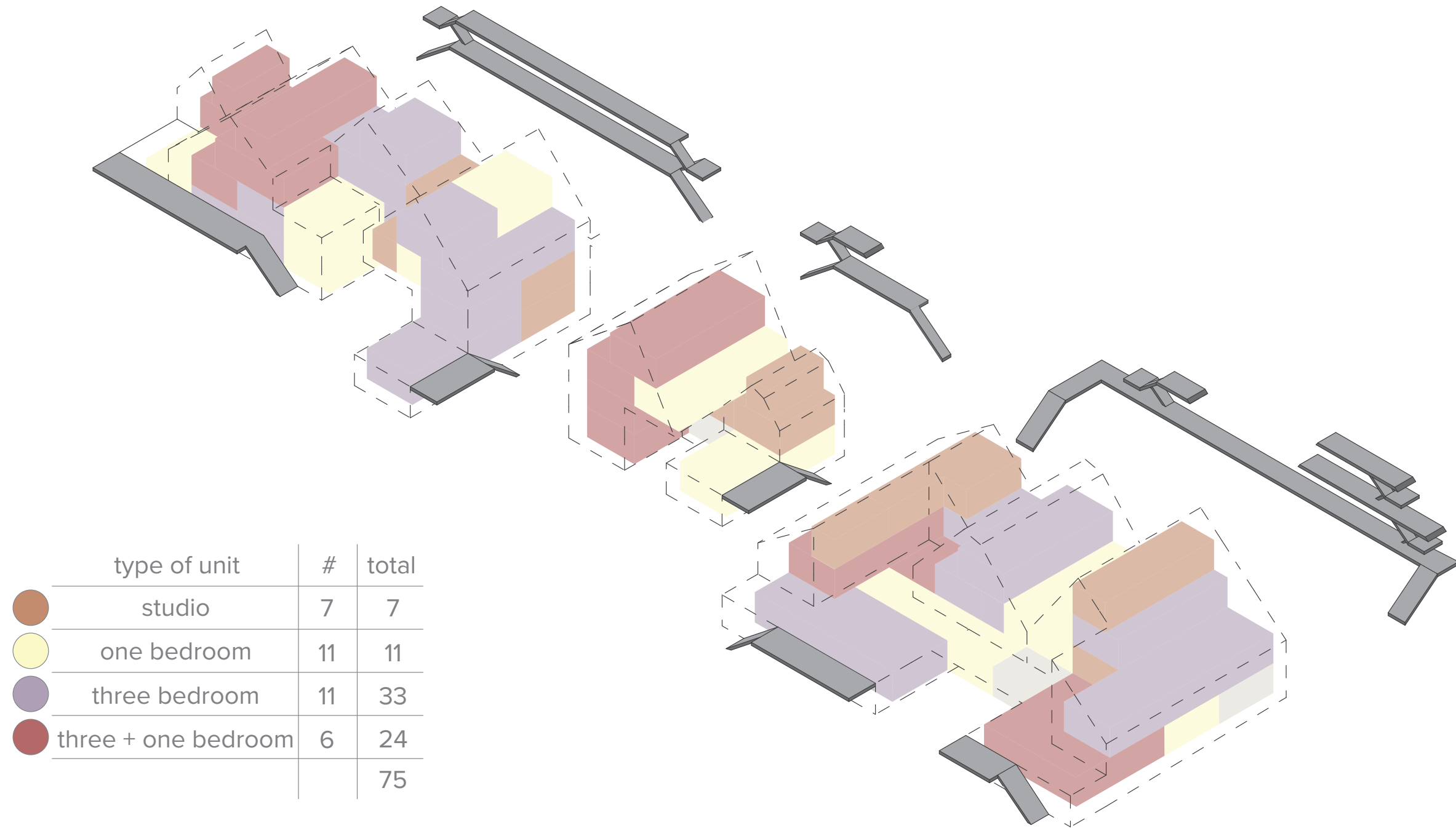


+2

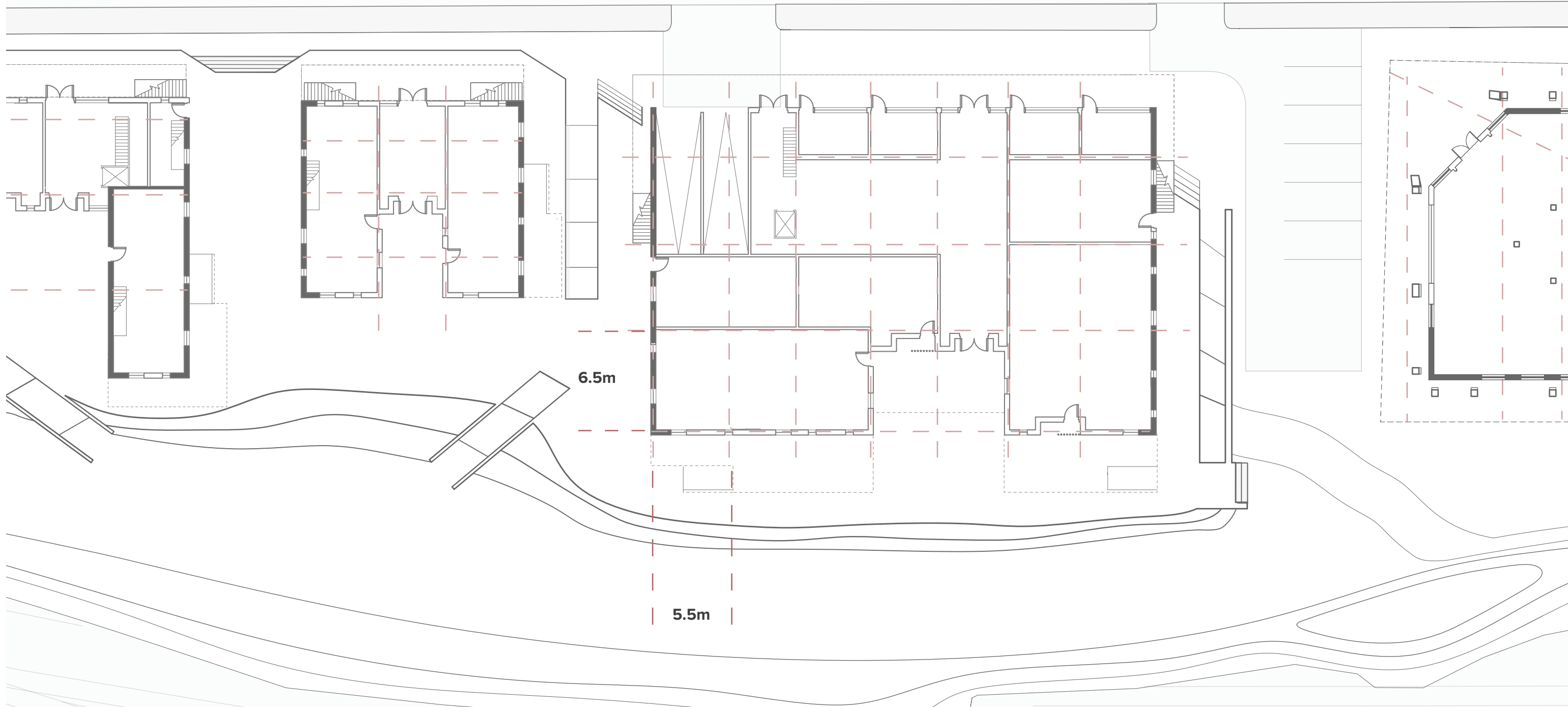


+3

residential // unit distribution



residential // structure plans



residential // elevation



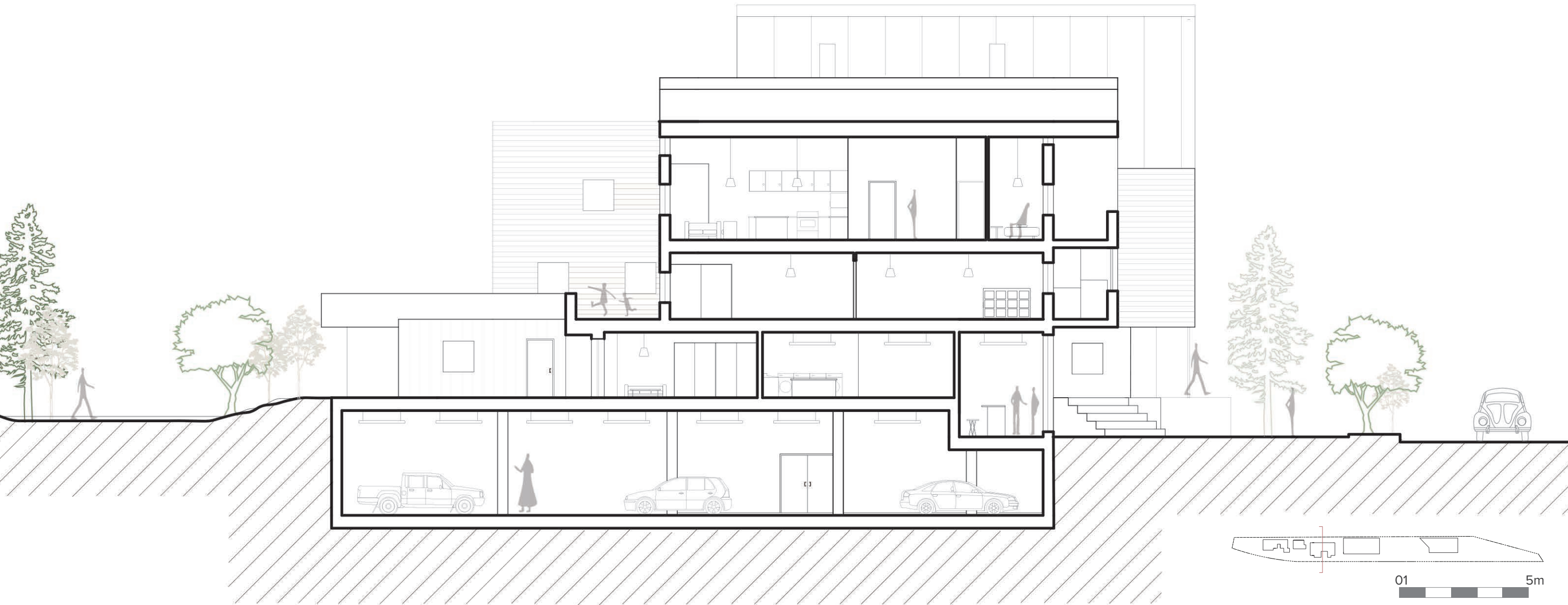
north



south



residential // section



residential // structure axonometric

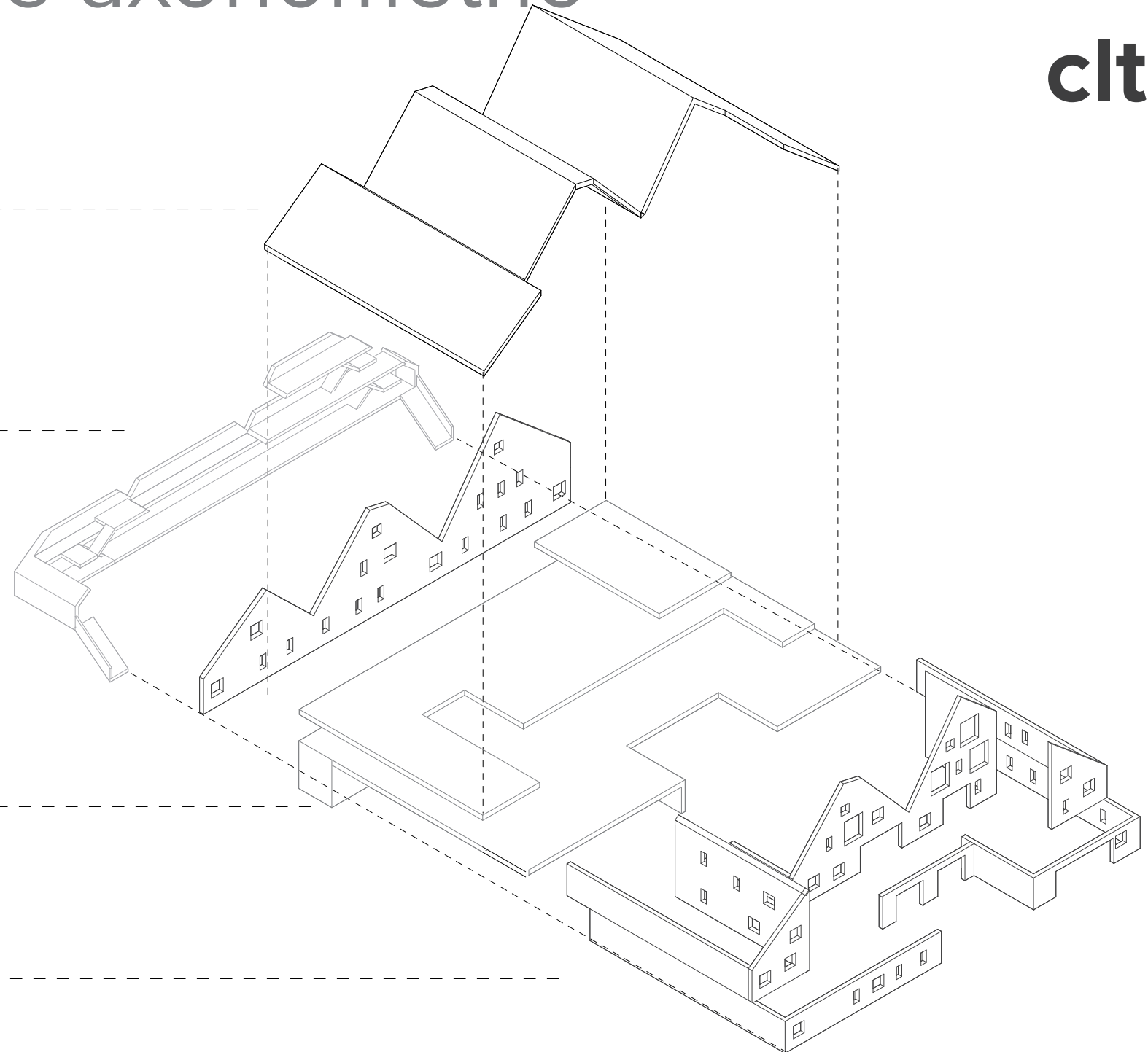
clt

steel embedded moment connection

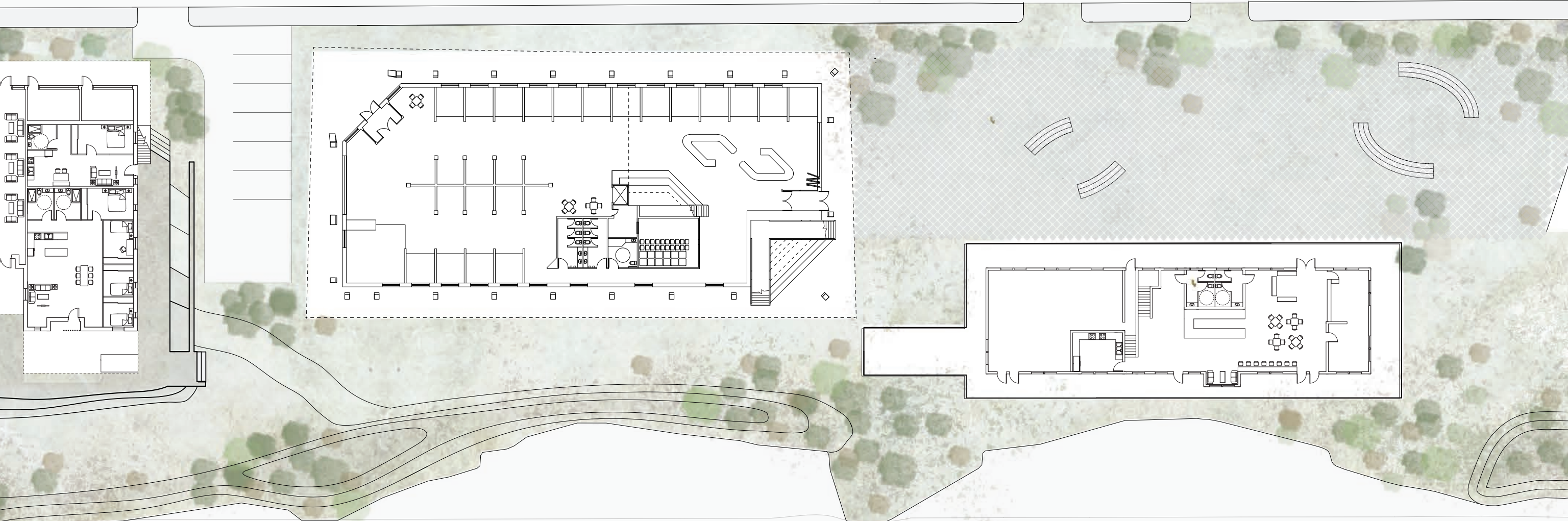
north circulation

concrete // shear

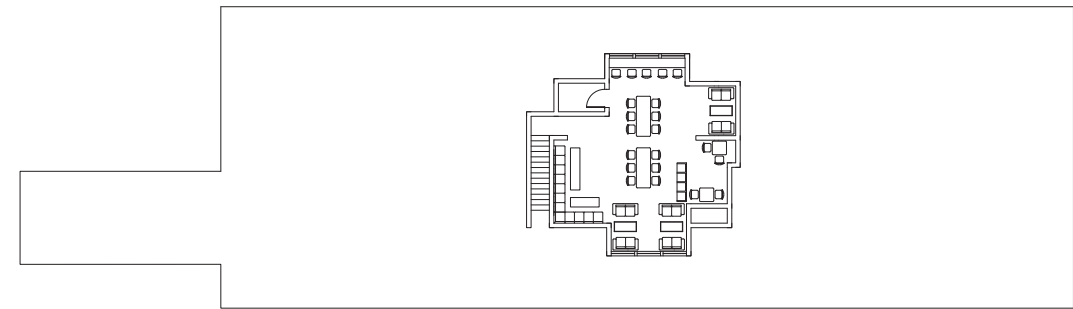
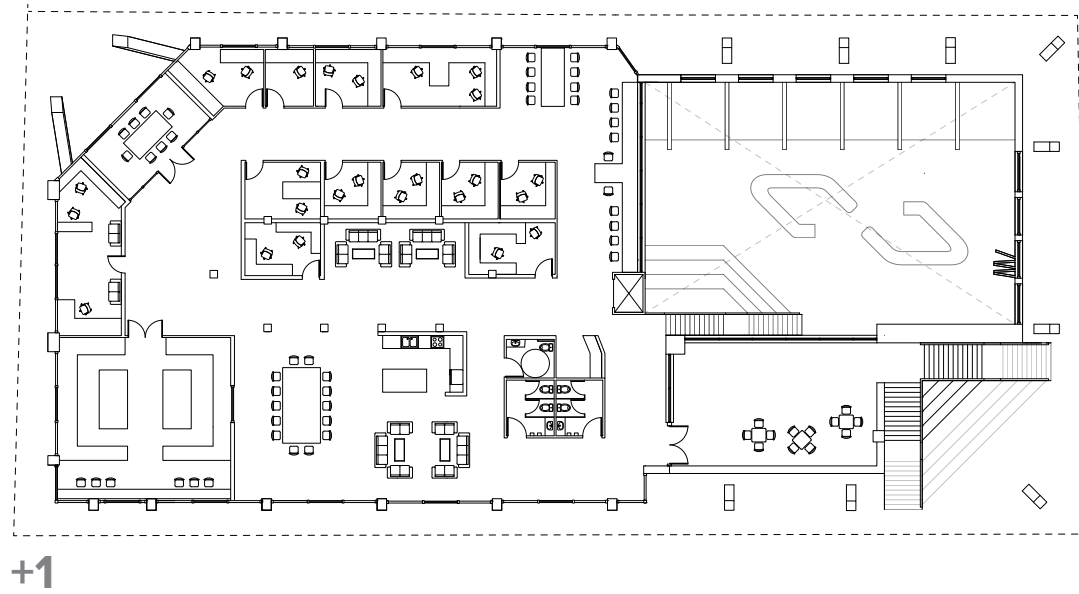
clt walls // load bearing



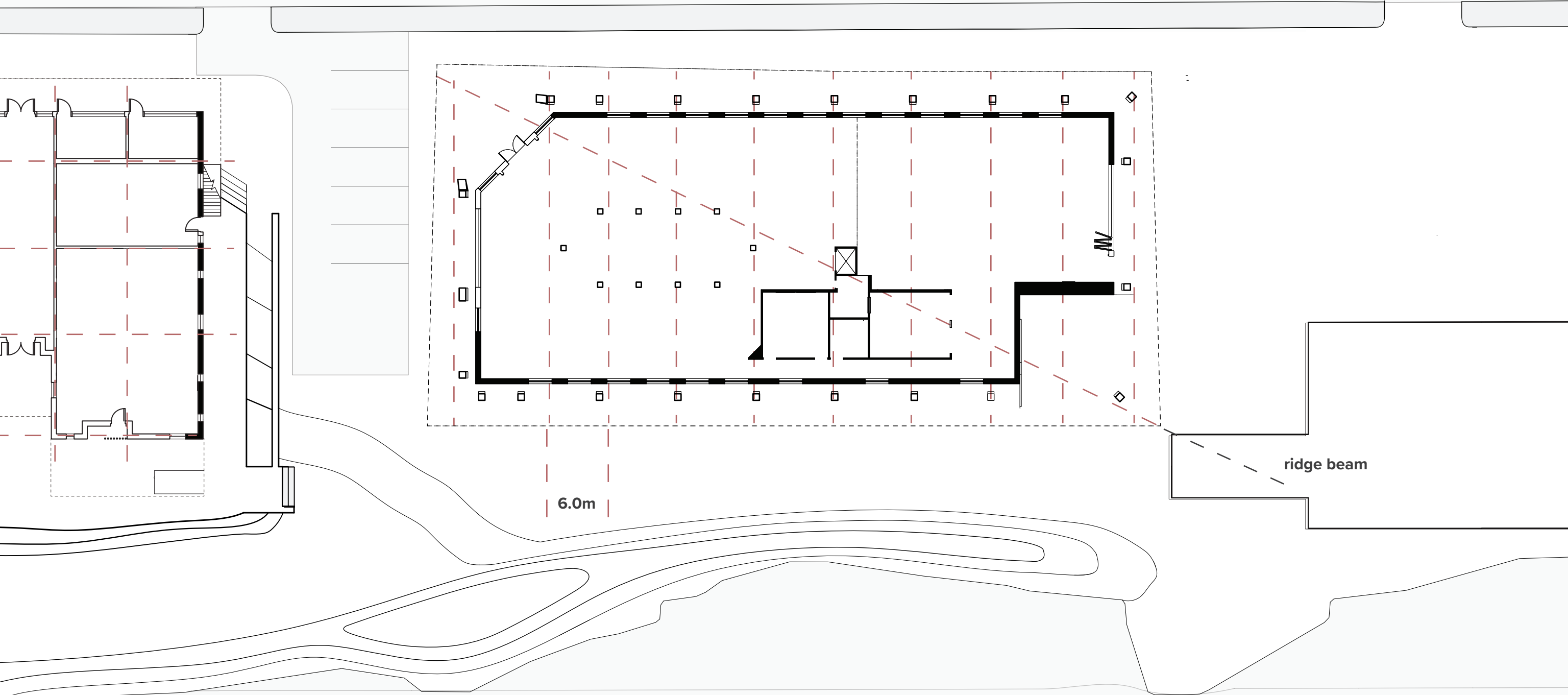
market + coworking // plans



market + coworking // plans



market + coworking // structure plans



market + coworking // elevation

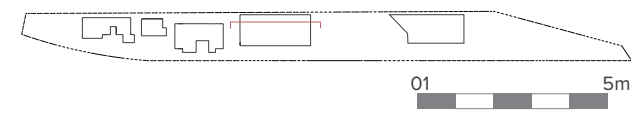
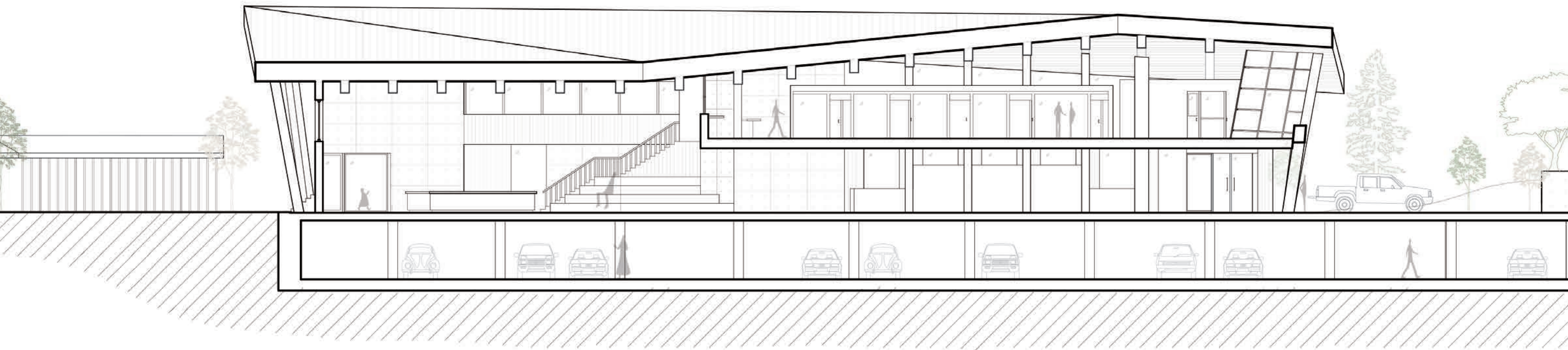


north
0 5m



south
0 5m

market + coworking // section



market + coworking // structure axonometric

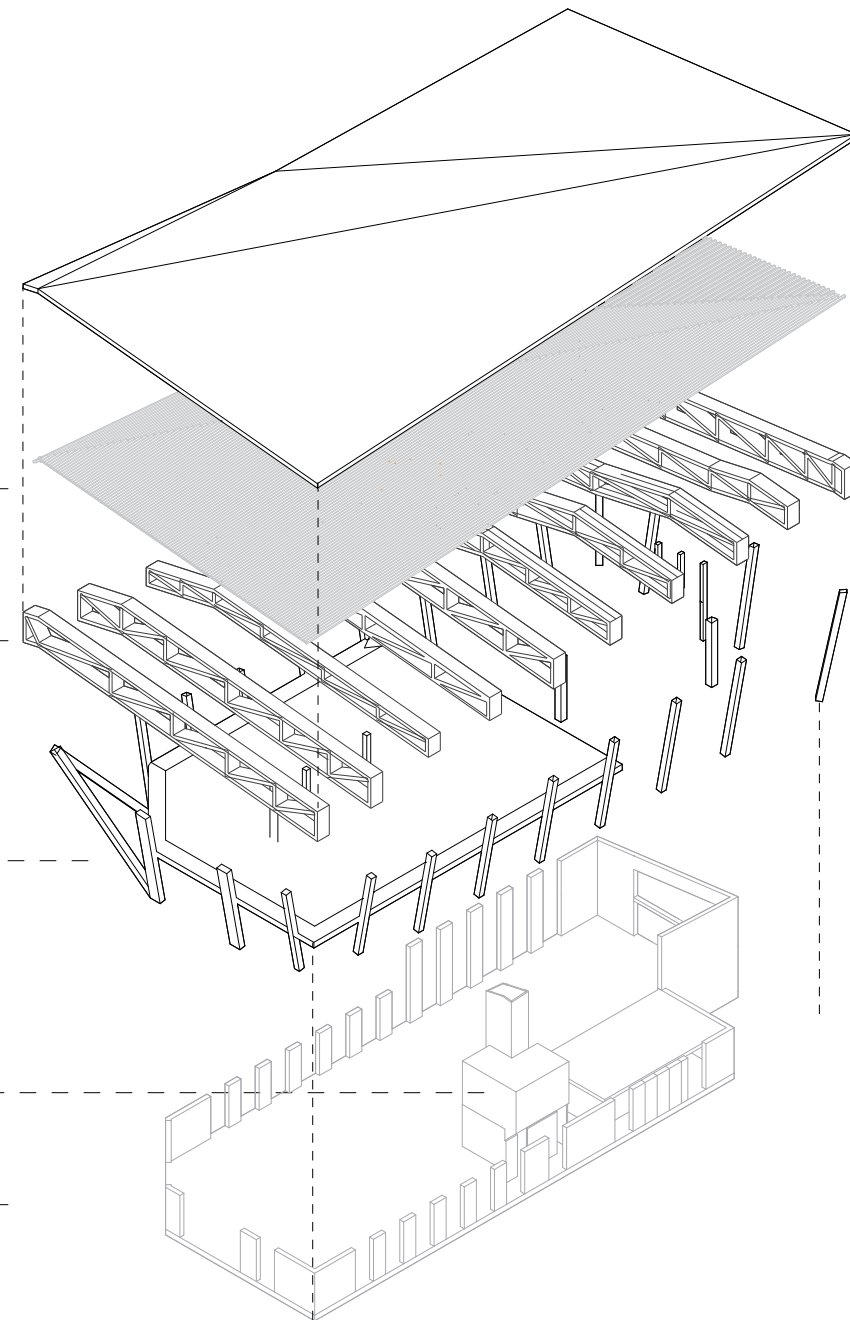
decking // bracing

trusses

columns // load bearing

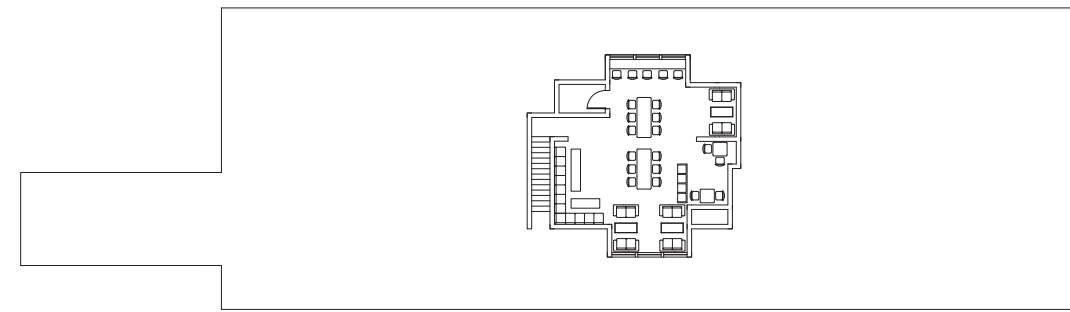
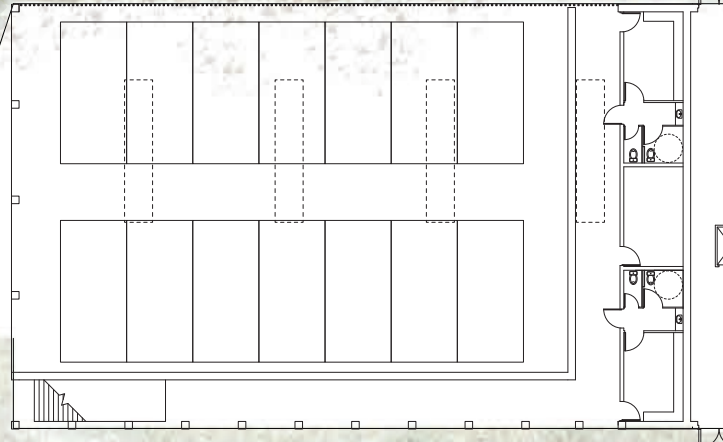
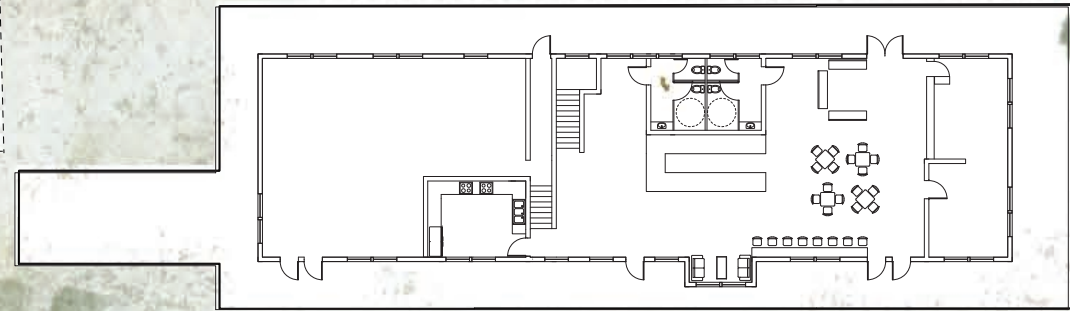
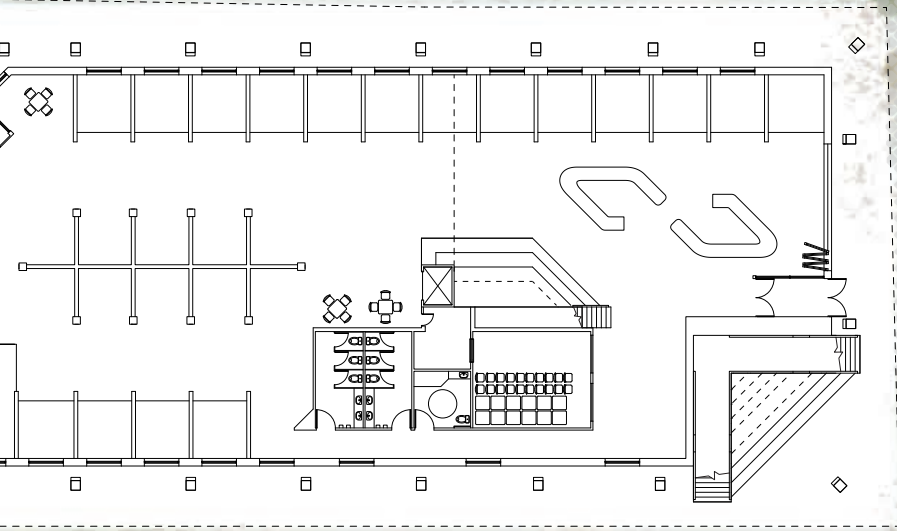
concrete core // shear

clt panels // loading bearing

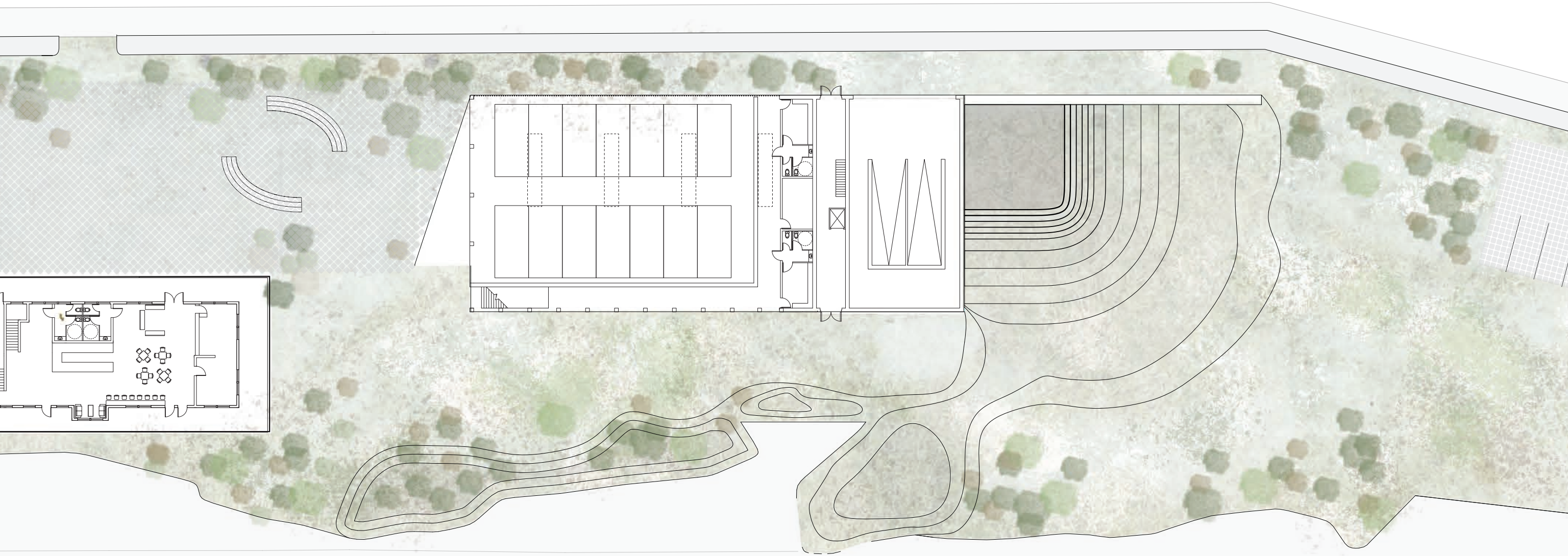


clt

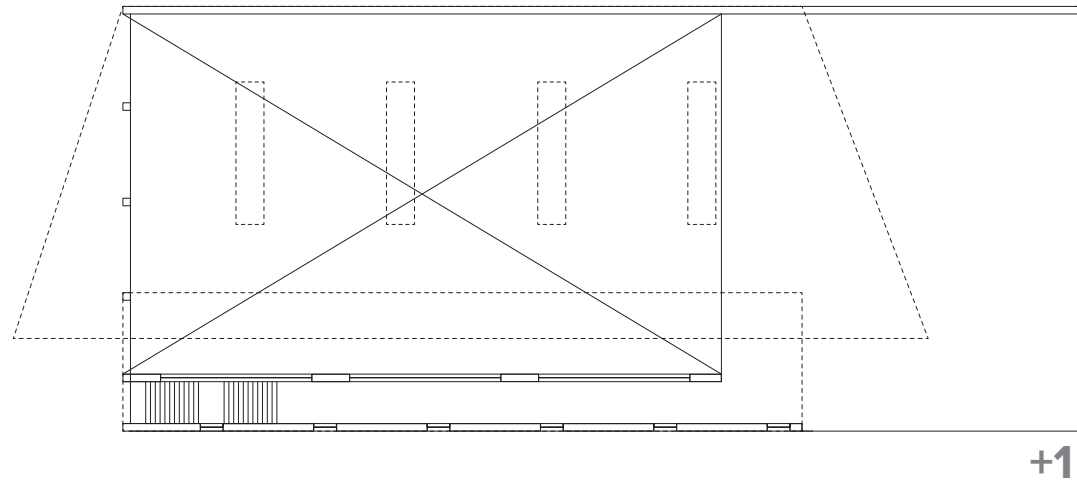
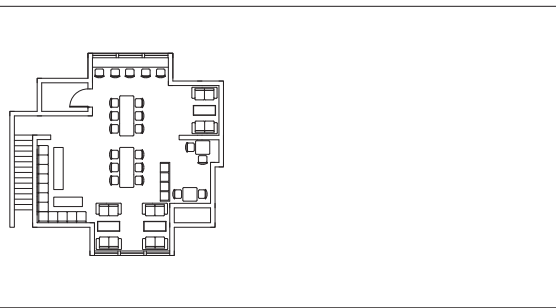
cpr // plans



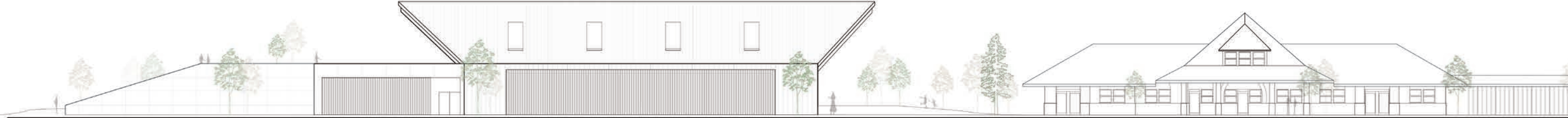
temp. market + arena // plans



temp. market + arena // plans



temp. market + arena // elevation



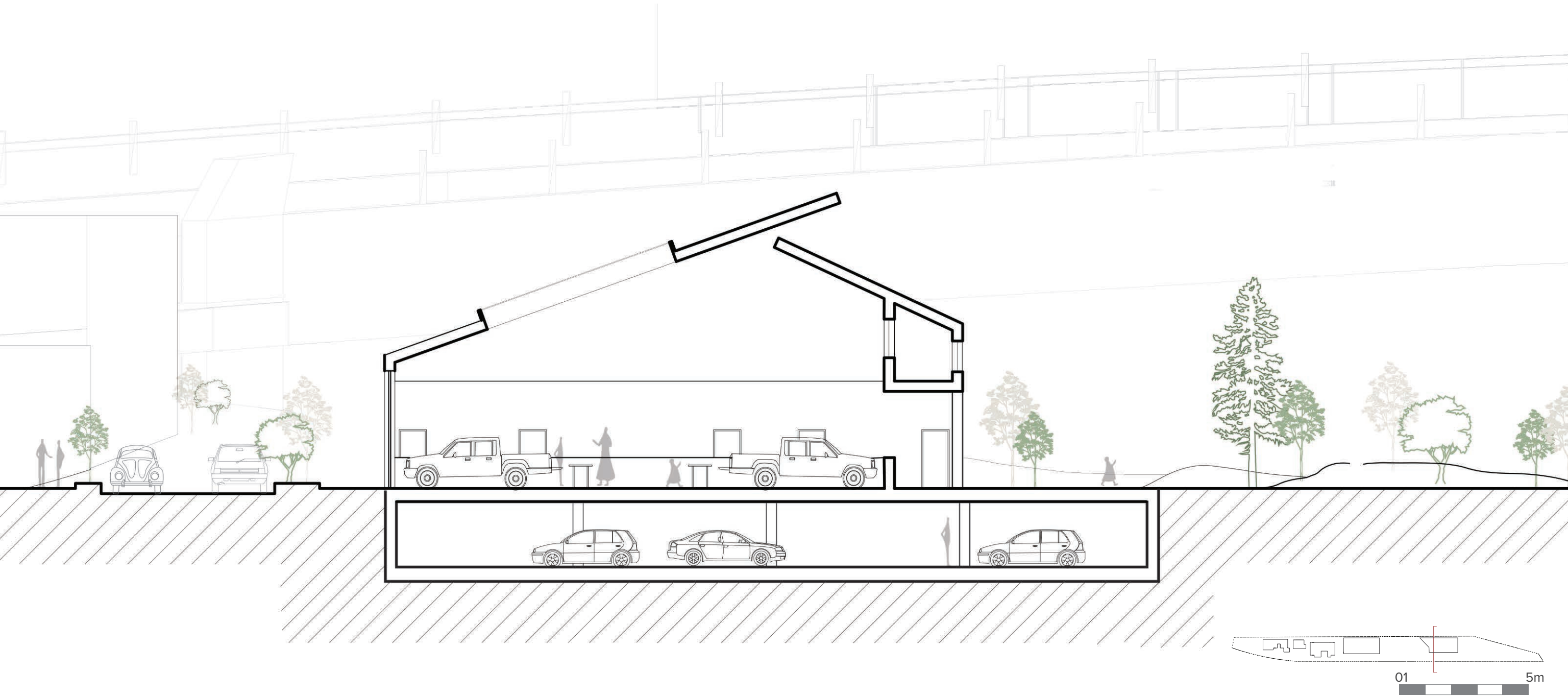
north



south



temp. market + arena // section



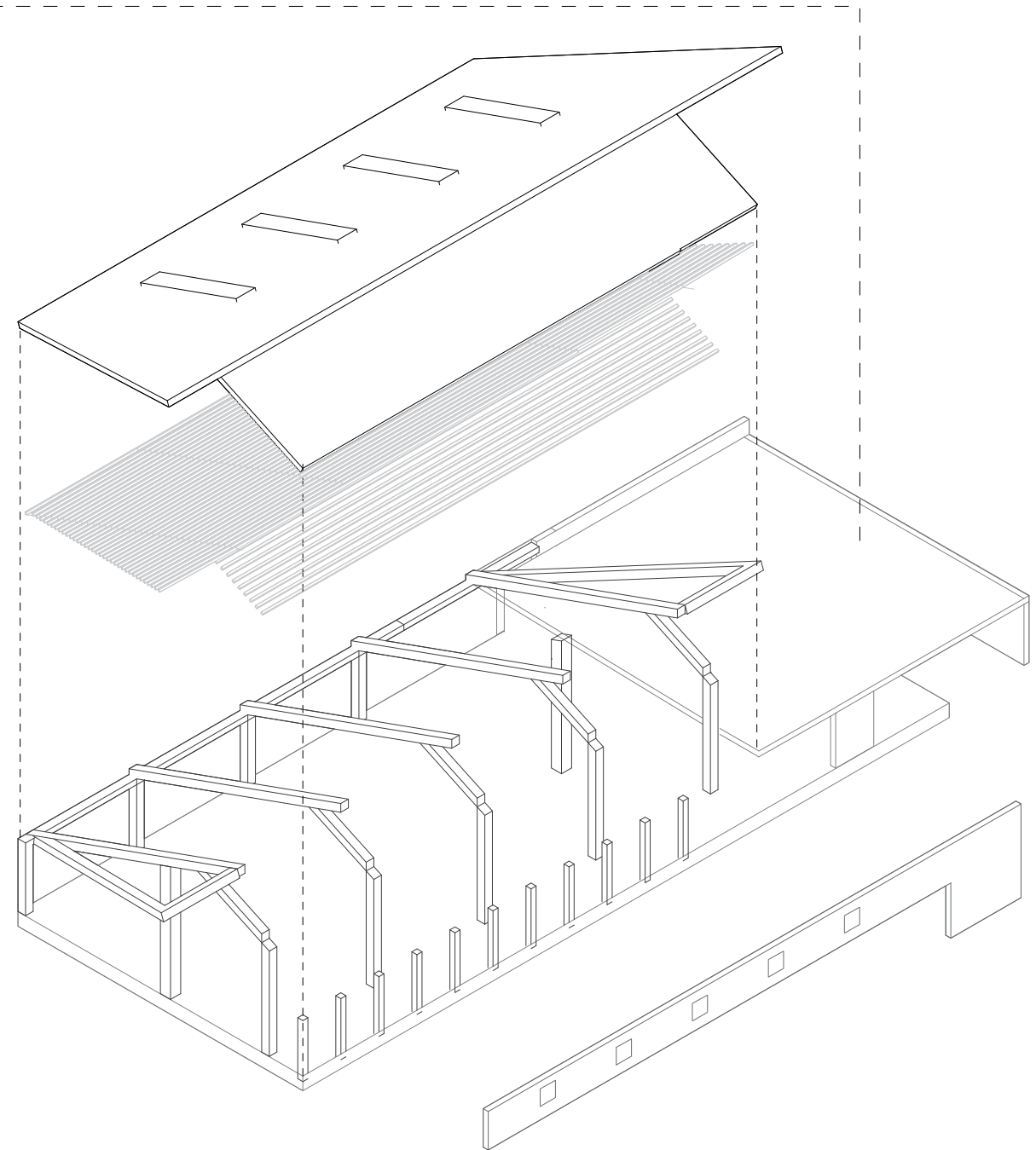
temp. market + arena // structure axonometric

concrete // shear

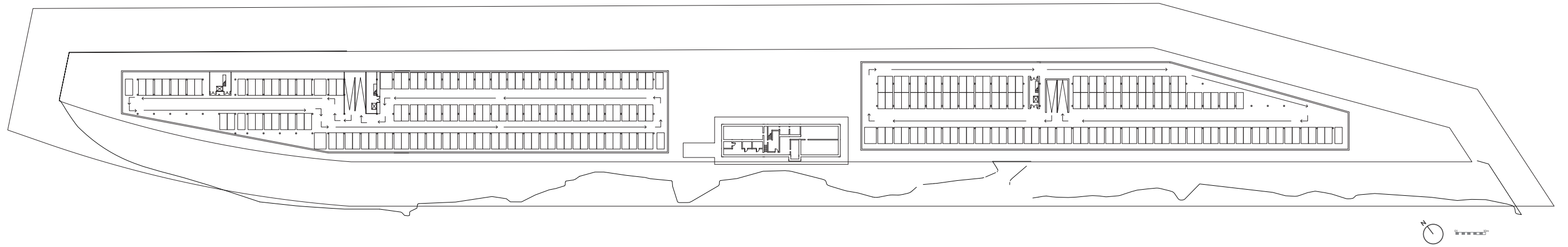
decking // bracing

columns // loading bearing

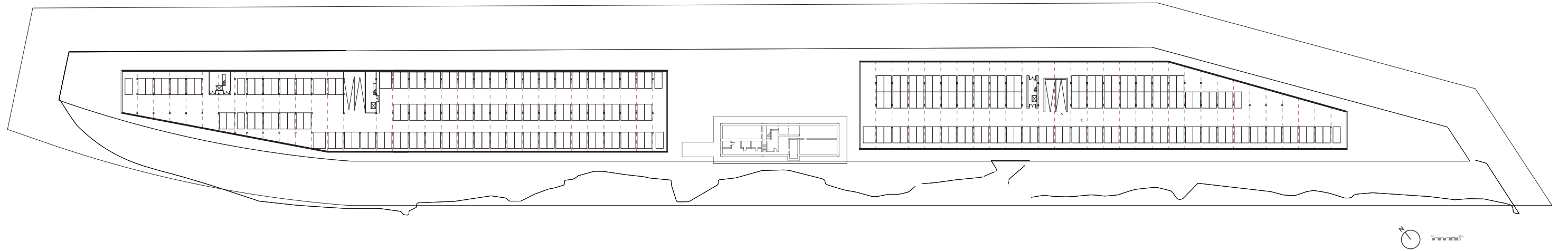
post + beam



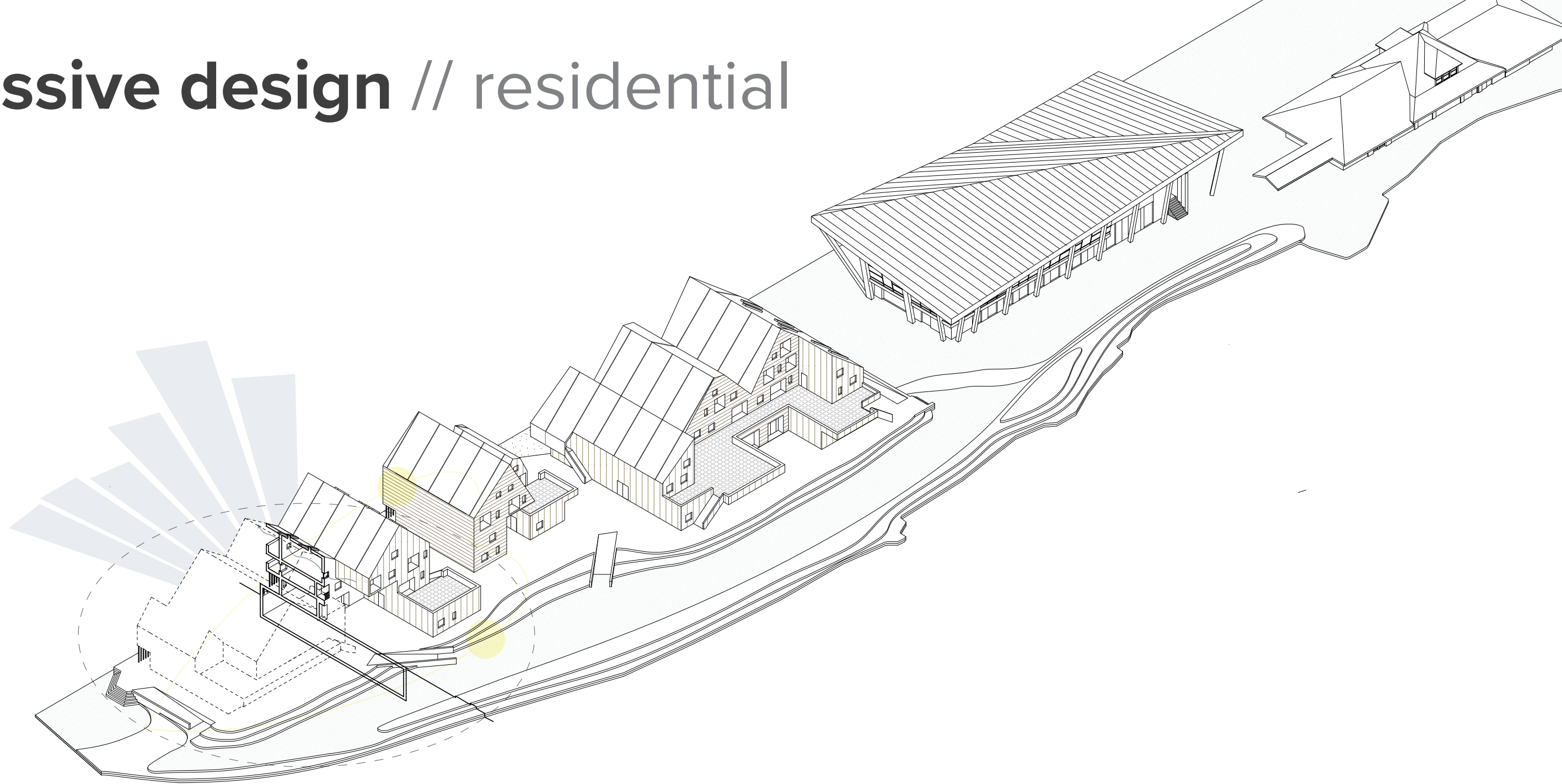
parking // plans



parking // structure plans



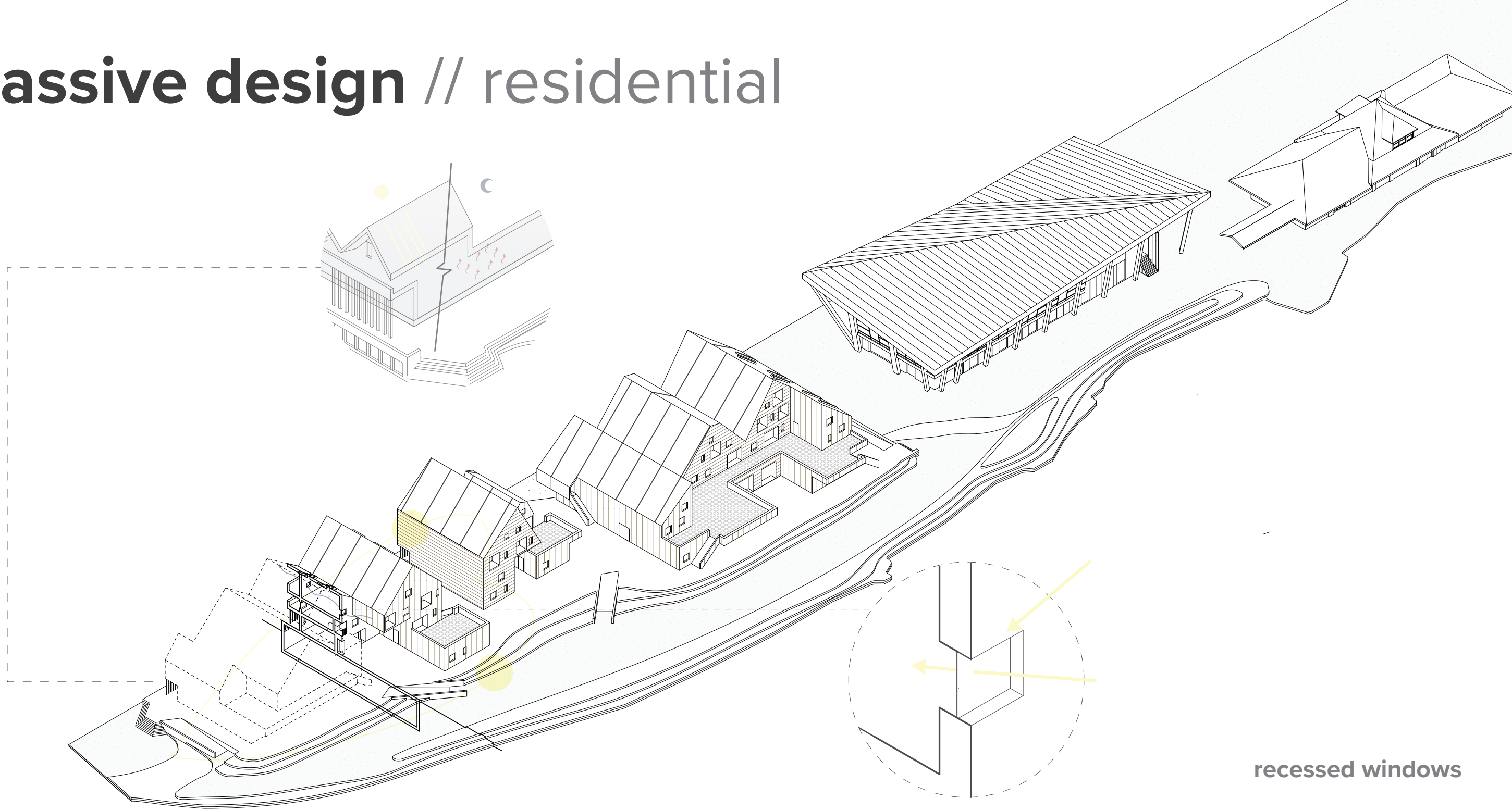
passive design // residential



play space shelter belt

maximize solar gain

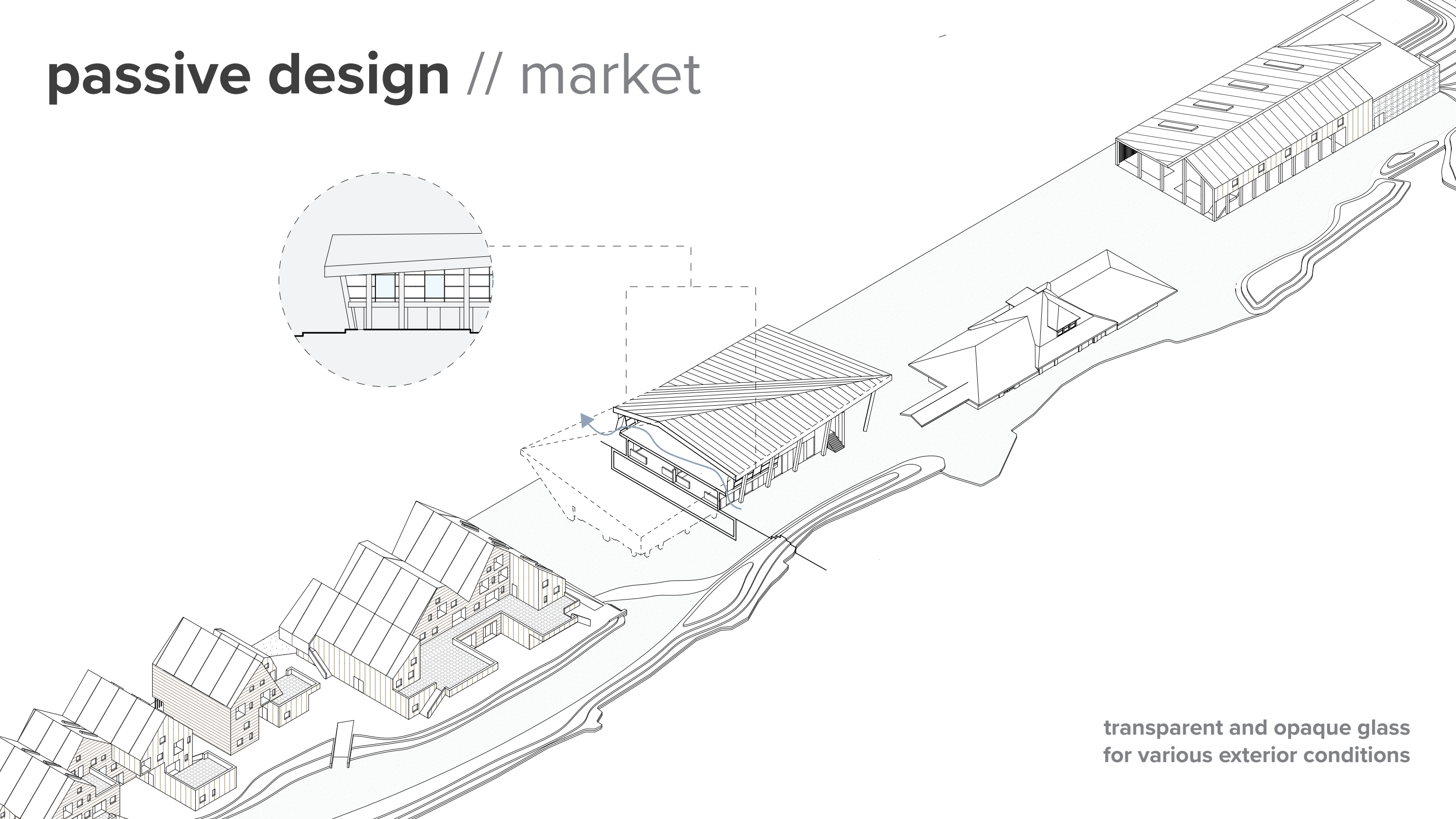
passive design // residential



recessed windows

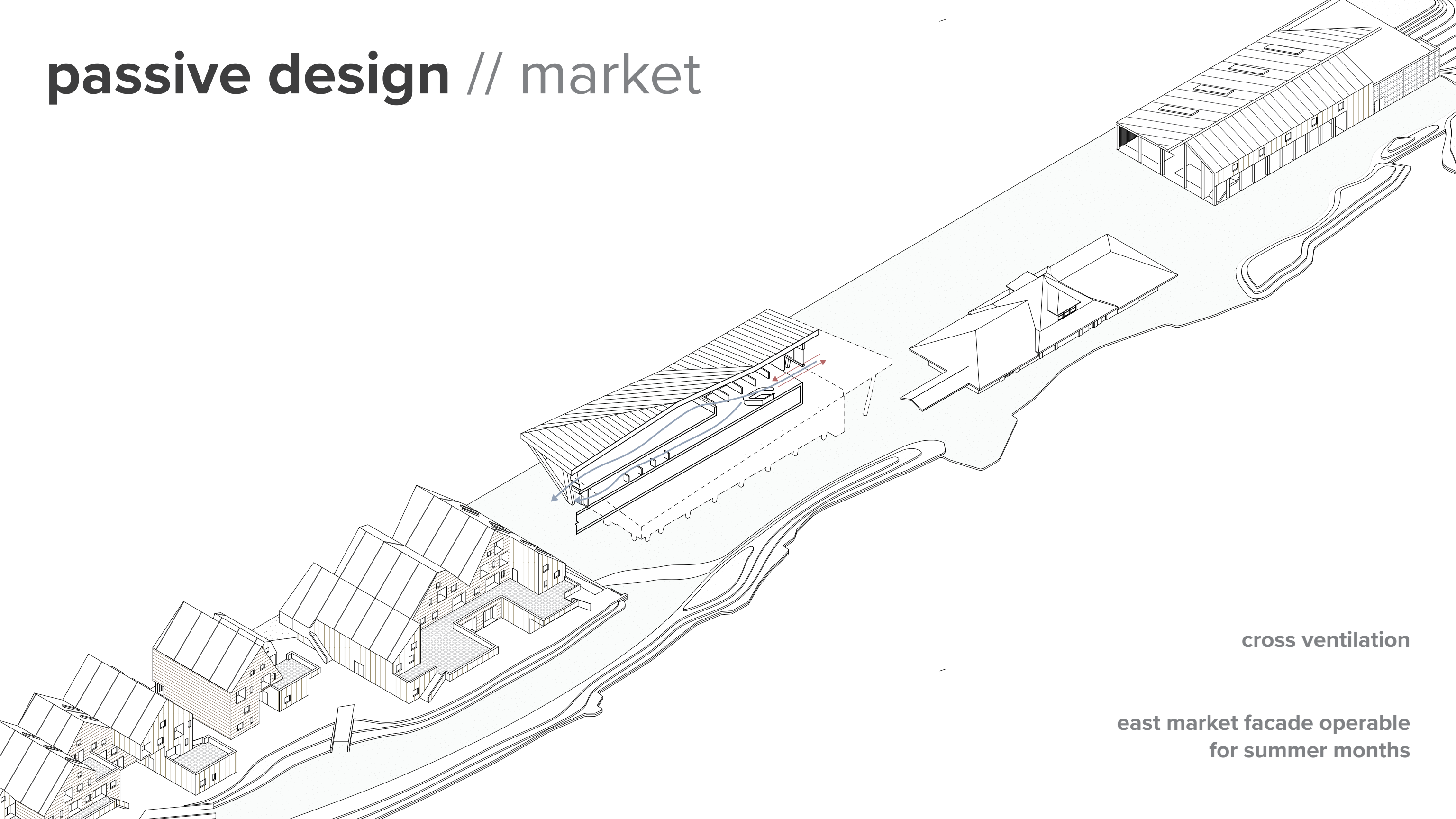
thermal mass

passive design // market



transparent and opaque glass
for various exterior conditions

passive design // market

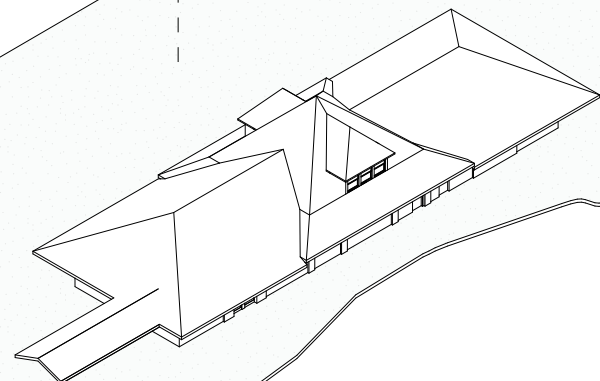
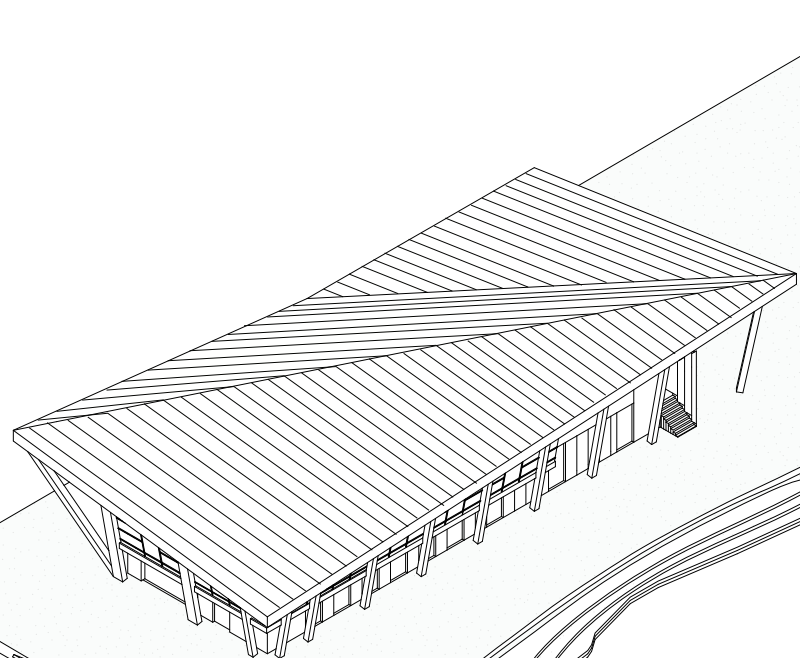
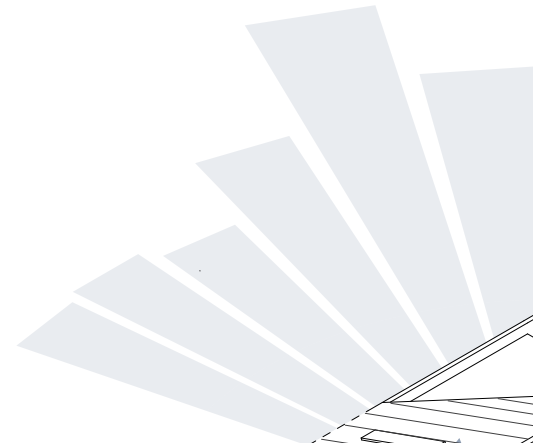
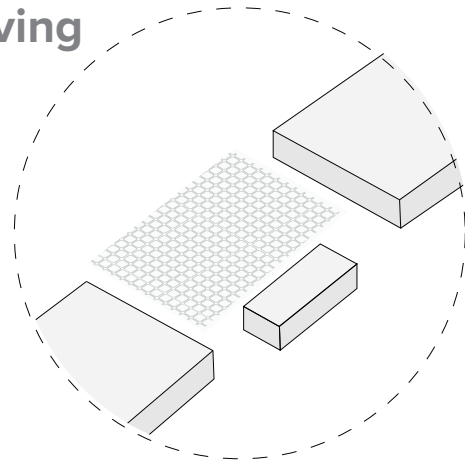


cross ventilation

east market facade operable
for summer months

passive design // temp. market

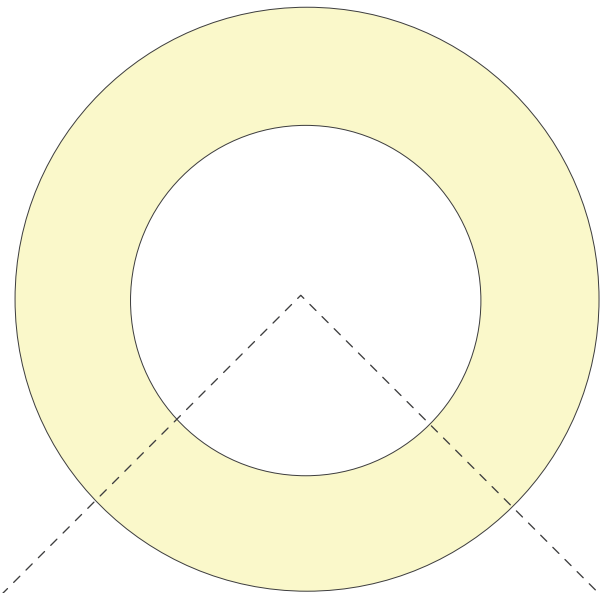
permeable paving



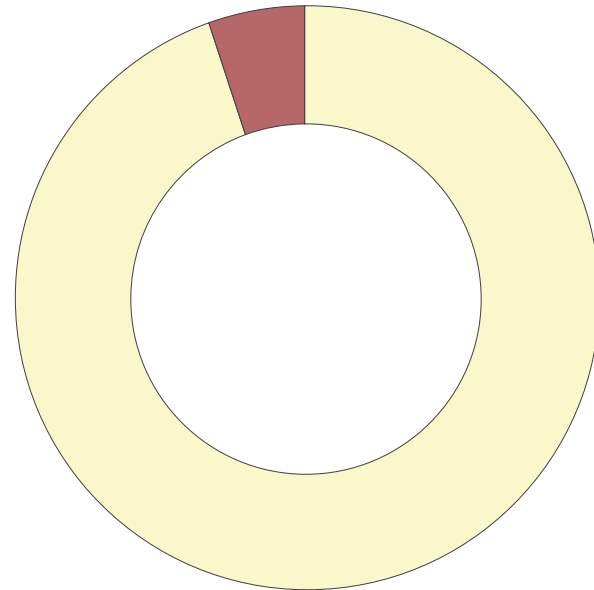
stack ventilation

shelter wall for greenway play

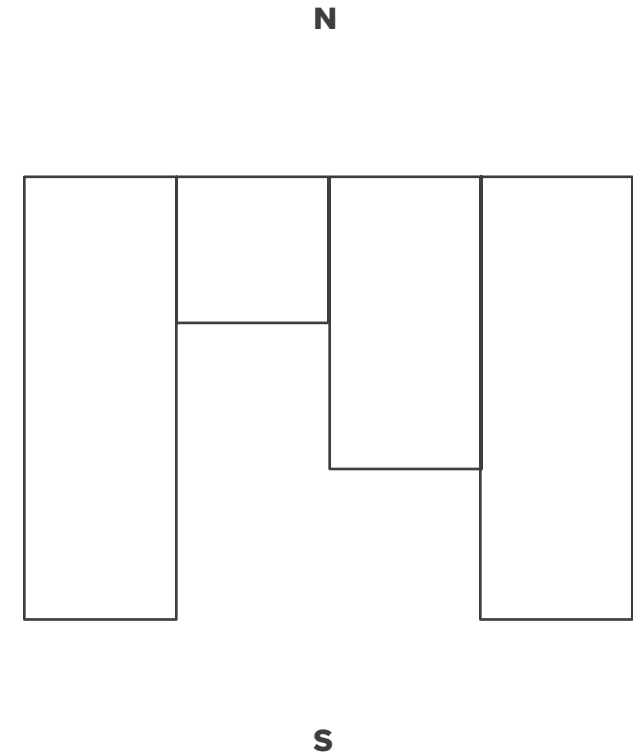
daylighting // site strategy



100%
units with SW - SE exposure

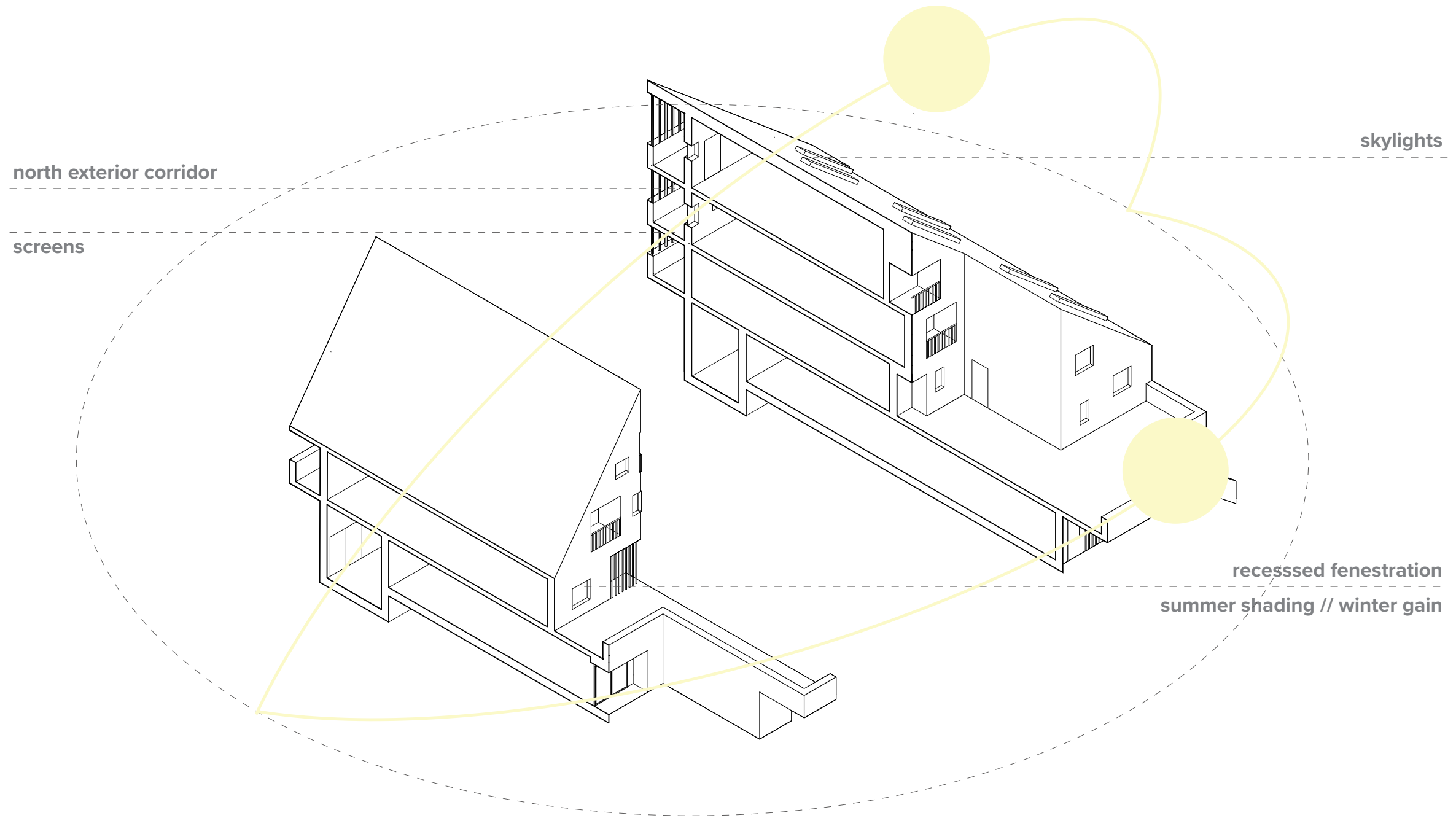


95%
units with direct SW - SE
exterior access

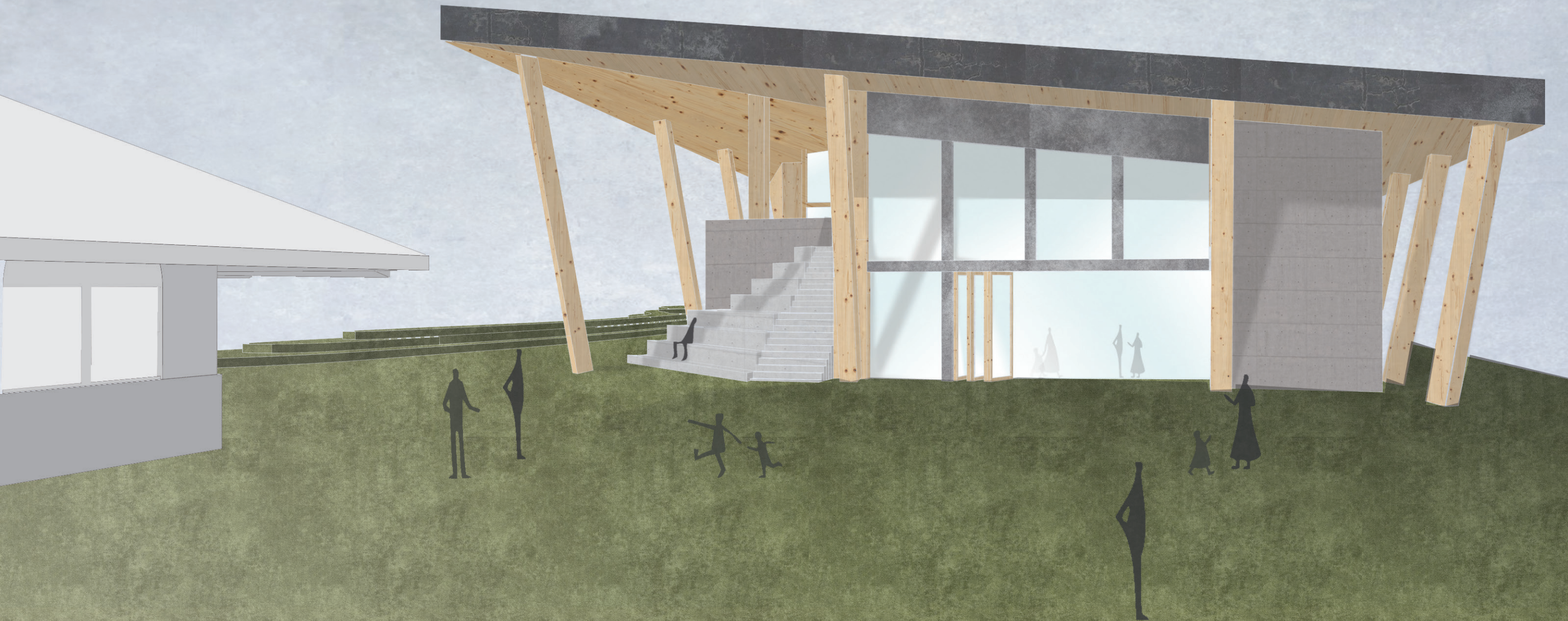


north south unit orientation

daylighting // building strategy



perspective // exterior market



perspective // interior market



perspective // interior residential



perspective // exterior residential



end.



"Downtown Community Profile" A Healthy Community Initiative. City of Greater Sudbury. Accessed October 20, 2019 <https://www.greatersudbury.ca/?LinkServID=D263BB00-E56F-F7EE-BD34E11AB5AE00F0>

"Housing Market Information Portal." Housing Market Information Portal. CMHC. Accessed October 20, 2019. <https://www03.cmhc-schl.gc.ca/hmip-pimh/en#Profile/2000/3/GreaterSudburyCMA>.

Statistics Canada. "Census Profile, 2016 Census Greater Sudbury [Census Metropolitan Area], Ontario and Saskatchewan [Province]." Census Profile, 2016 Census - Greater Sudbury [Census metropolitan area], Ontario and Saskatchewan [Province], August 9, 2019. <https://www12.statcan.gc.ca/census-recensement/2016/dp-pd/prof/details/page.cfm?Lang=E&Geo1=CMACA&Code1=580&Geo2=PR&Code2=47&Data=Count&SearchText=Greater+Sudbury&SearchType=Begins&SearchPR=01&B1=All&GeoLevel=PR&GeoCode=580&TABID=1>.

"Story Map Series." Demographic Data in the City of Greater Sudbury. City of Greater Sudbury. Accessed October 20, 2019. <https://sudbury.maps.arcgis.com/apps/MapSeries/index.html?appid=2624ebe80fcc435d993f446d66920f51>.

"Sun Calculator," SunCalc (Torsten Hoffman), accessed October 20, 2019, <https://www.suncalc.org/#/46.4877,-80.9918,16/2019.11.03/11:35/1/3>.

"Elgin Greenway: Overall Concept Plan," D2L ARCH 4505 (City of Greater Sudbury), accessed October 20, 2019, <https://d2l.laurentian.ca/d2l/le/content/134564/viewContent/1128253/View>.

"Puukivisto" OPEEAA, accessed December 15, 2019, <http://oopeaa.com/project/puukivisto/>.

"Villa Ask" RRA, accessed December 15, 2019, <http://www.reiulftramstadarchitects.com/villa-ask>.

"Obos Fornebu" RRA, accessed December 15, 2019, <http://www.reiulftramstadarchitects.com/obos-fornebu-94>.

"ICC Sydney" Populus, accessed December 15, 2019, <https://populous.com/project/international-convention-centre-sydney>.