



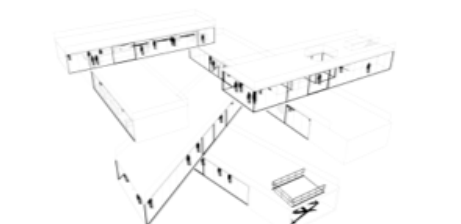
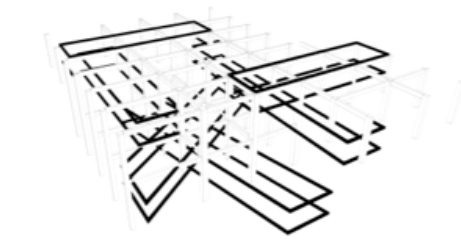
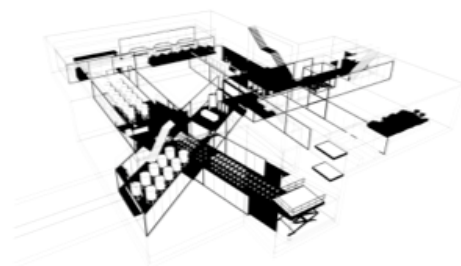
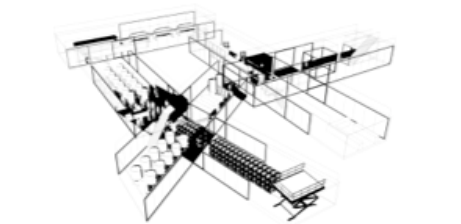
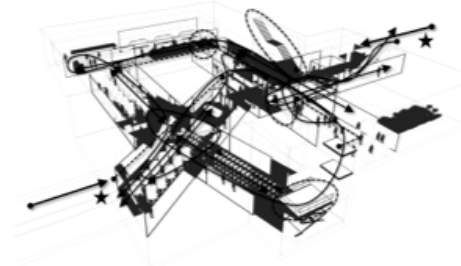
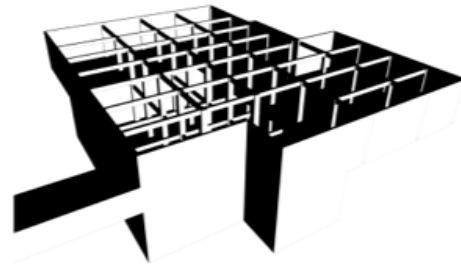
GROUNDED

multi layered wine industry Heerlen

ROEL DERKX · 23 JUNE 2017 · FONTYS MA+U
JAN WILLEM VAN KULENBURG · PIETER FEENSTRA · MARC MAURER · JAN WILLEM TER STEEGE



EXPLODED VIEW
multi layered winery



LIFE SOURCE
Caumerbeek



NEW ICON
fertile production ground



VACANT HERITAGE
housing new industry's



WINE
public production program



THE PEOPLE
public interaction . social hub



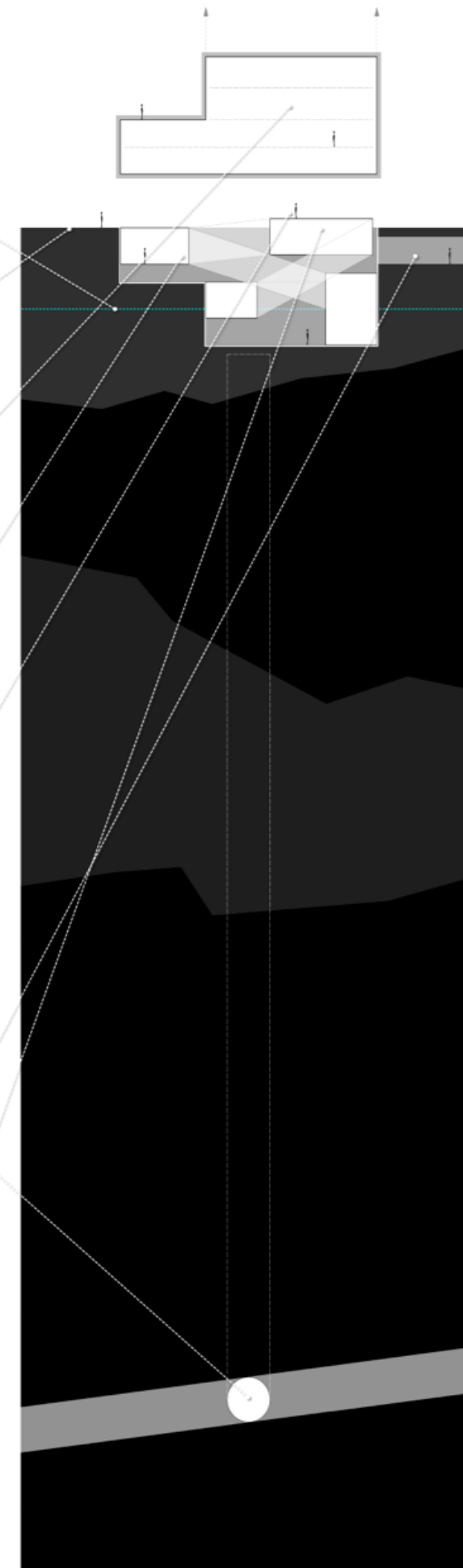
THERMAL SYSTEM
reincarnated mines



SUB ZERO
underground structures

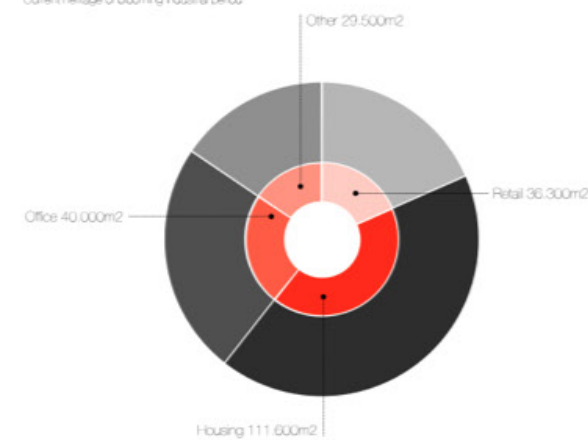


INTERVENTION
experience the new world

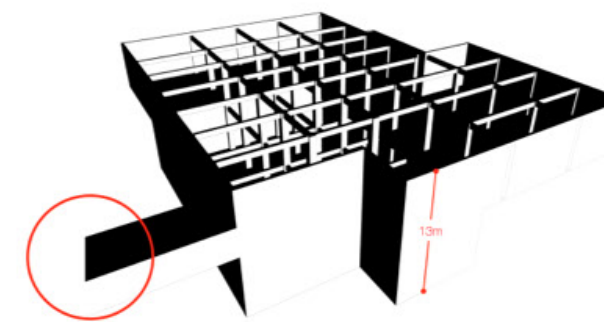




Inventory vacant property
High rate of vacancy. No demolition in the last 40 years.
Current heritage of booming industrial period.

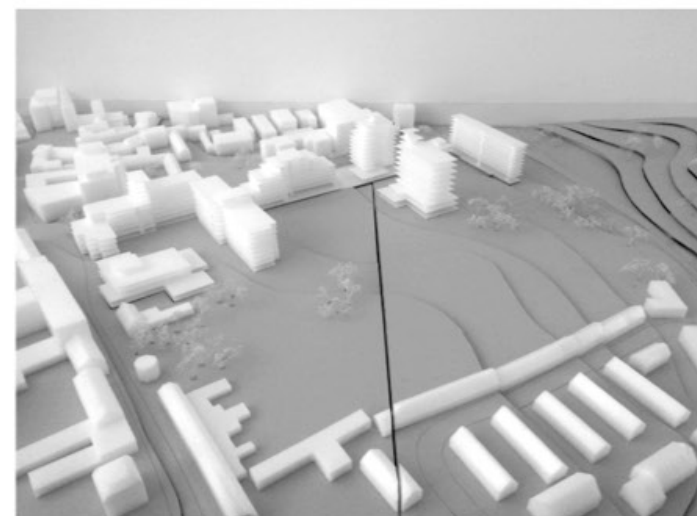


Ambition
Government ambition is to reduce 50% of the current vacancy (215,000m²)
part of the local transformation 'back to green'.

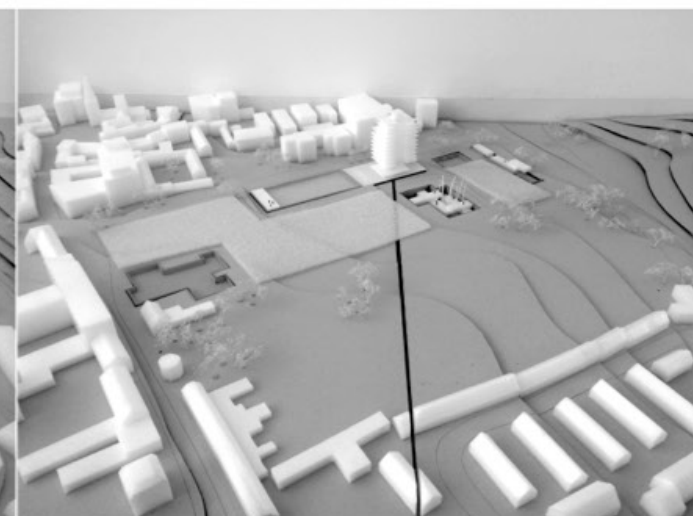


Building site
The hospital's former 'ketchus' a basement with a depth of 13 meter.
With an existing tunnel connection to the former Redhouse.

€ **Transformation costs**
 (buildings surface of plot) 27,600m² + 10,550m² + 2,100m² + 8,900m² + 7,750m²
 = 56,900 m² x 23,- euro/m² = 1.3 million euro
 + Stripping to 'bare' structure is + price of 570,000 euro
 + costs to realise vineyard (vine = 5,- 11m² x 3ha = 150,000 euro) 300,000 to first harvest
 + transformation costs (greenhouse) > 7,000m² x 47,- euro/m² = 330,000 euro



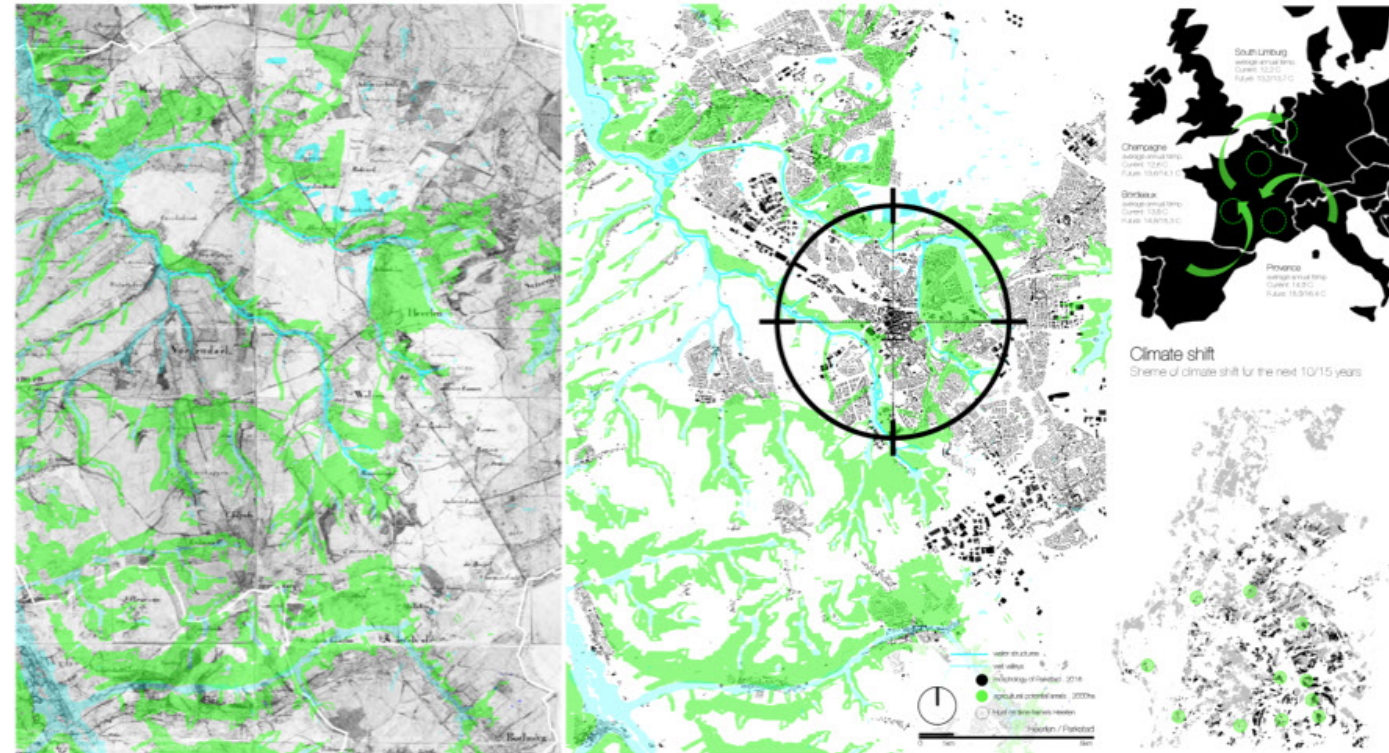
Current site
Large scale (mostly) vacant building blocks.
Blocking the relation and view with the new courtyard (vineyard).



New industry
Integration land, water structures and vacant building parts.
Non-reusable buildings are replaced with production and > vines.



NEW ICON production land . (urban) vineyards



1840 Heerlen . Match of formula

Formula for wine industry: wet valleys, streams, soil quality, orientation/sun and climate
3000 ha of vineyards present during Roman period

2040 Heerlen . Urban target

Wine region Parkstad-Heerlen with an potential ground surface of 2000ha (Rural 1400ha & Urban 600ha)
Current use is 90ha - with 240.000 bottles >>> economical potential (2000ha) of 72 million euro/year

Wine region south Limburg

Largest amount of vineyards in NL (60ha)
Higher temperatures, natural hills and fertile ground



Wineregion Ahr (D)

Most northern wine region in the world, dominated by red grapes
70% of Germany's red wine production



Urban Vineyard Montmartre (F)

Private vineyard of city of Paris, representative with annual wine fest
More climate from urban walls buildings



Intervention

The humble subterranean architecture, leaves room
for the vines to fulfil the leading role as new icon

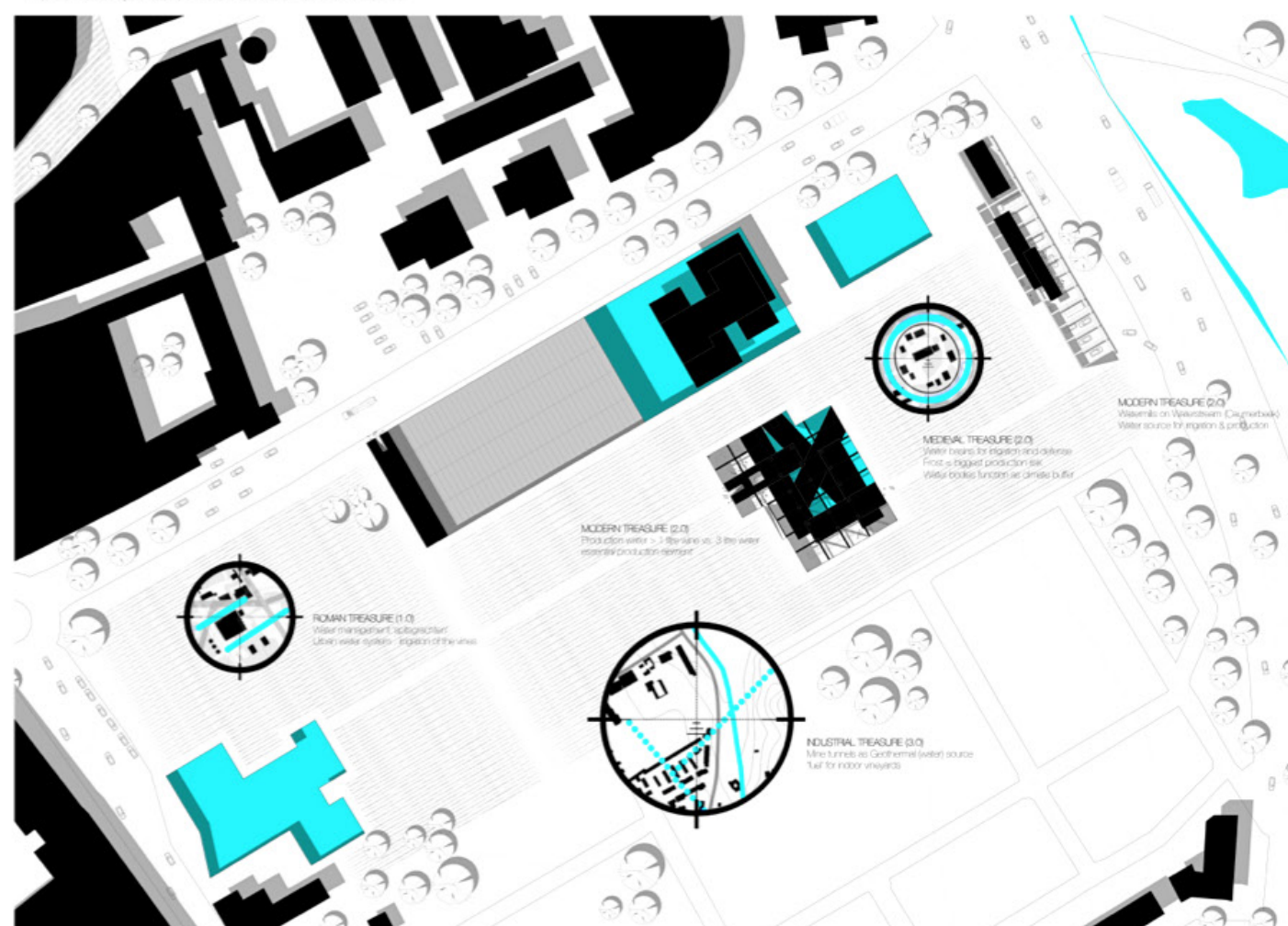


Master Plan Productionland connecting the surrounding urban context to the valley



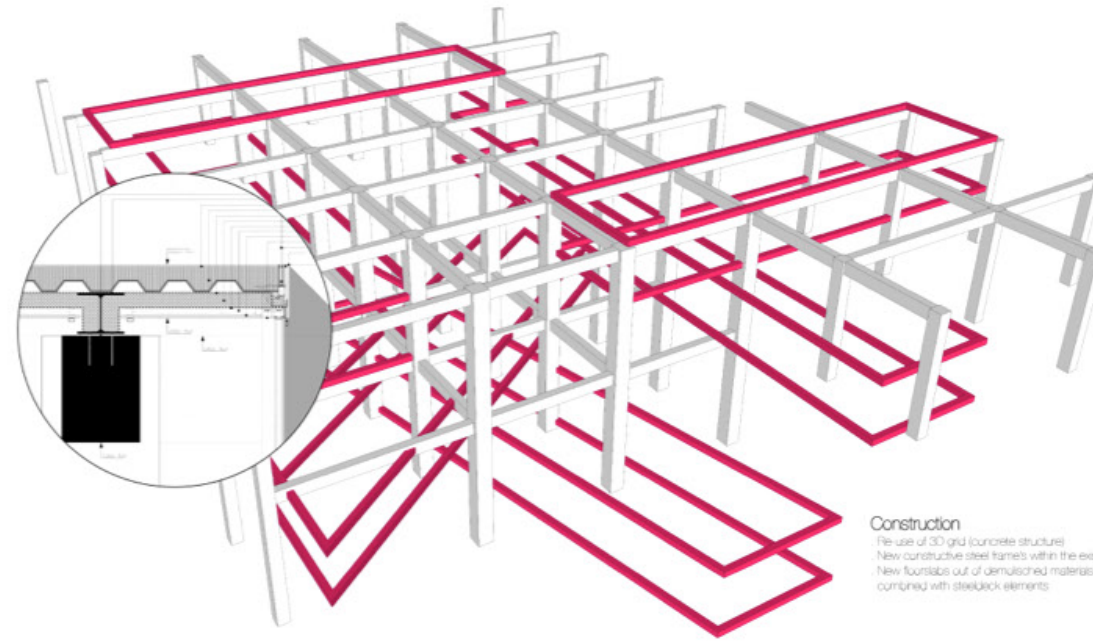
Water plan

Implemented watersystem based on discovered treasures from former times



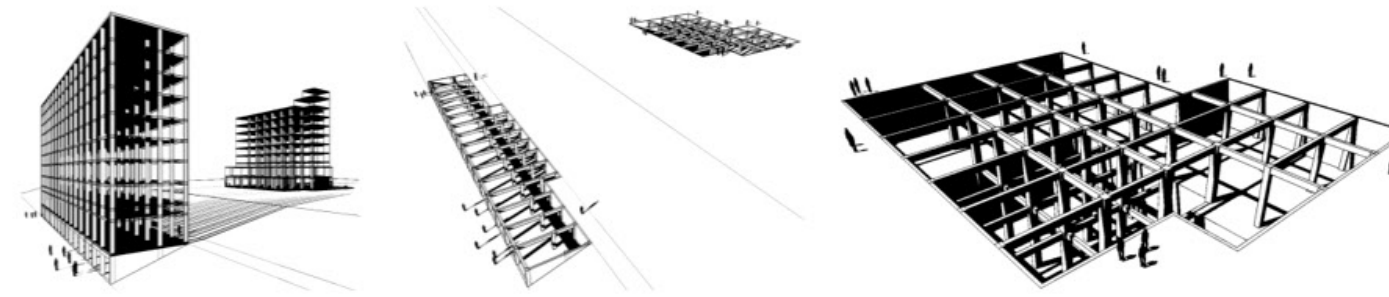


SUB ZERO underground structures . construction



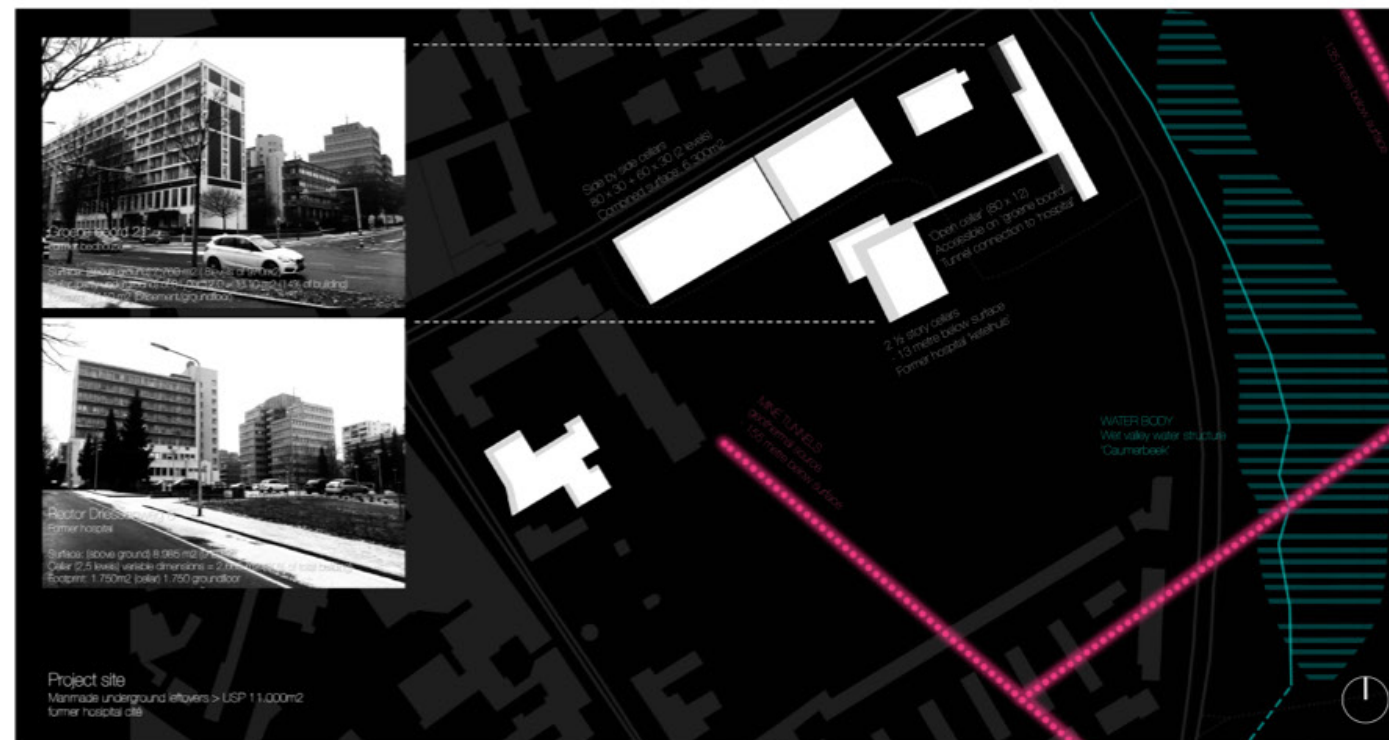
Construction

The use of 3D grid (concrete structure)
New constructive steel frames within the existing grid
New floors out of demolished materials
combined with steeldeck elements



Transformation

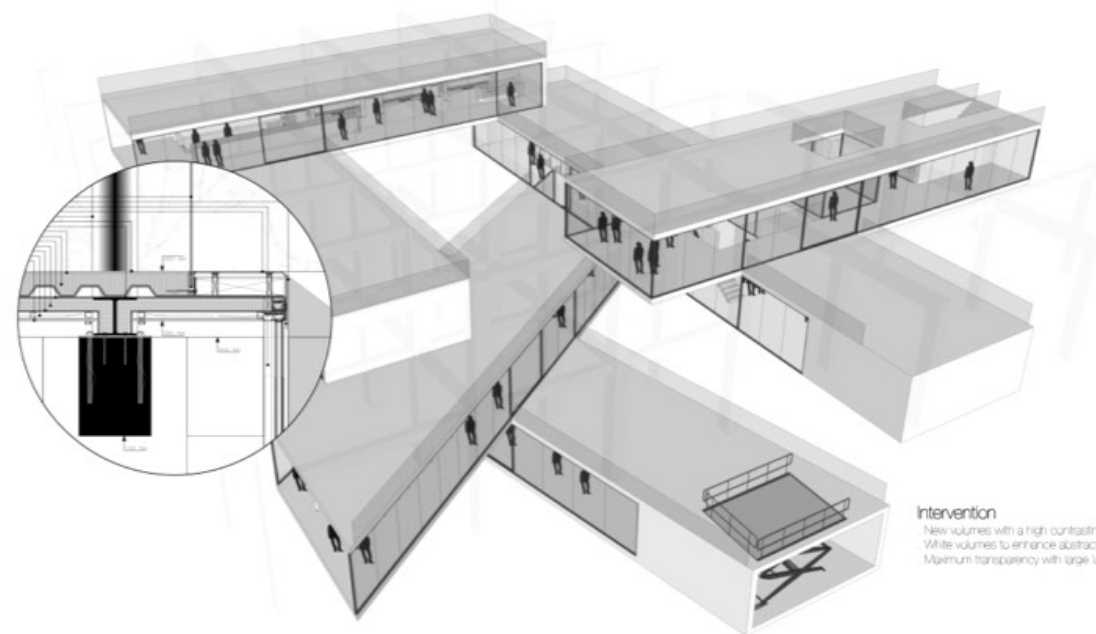
transformation of former hospital, fully vacant - in state of decay
clearing the ground surface to create vitals - reuse of underground volumes
existing tunnel connection as production element - part of public entrance



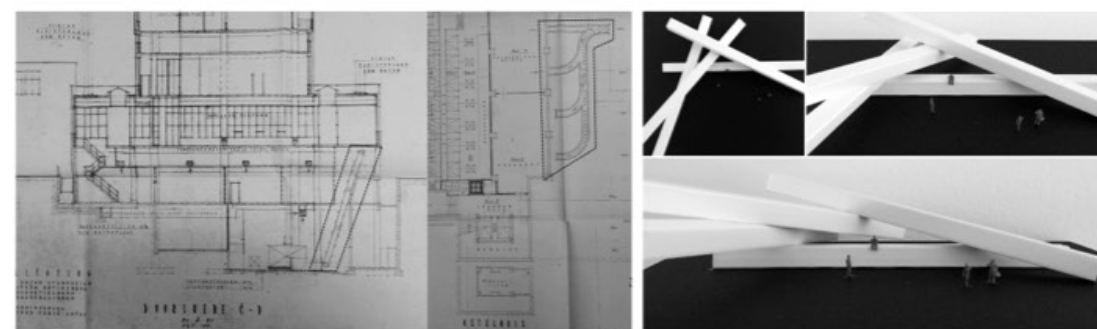


INTERVENTION

concept . materials . experience



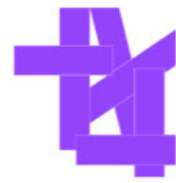
Intervention
New volumes with a high contrasting glass facade (fragile vs. Brutel)
White volumes to enhance abstraction and lightness
Maximum transparency with large 'open facades' (light & interaction)



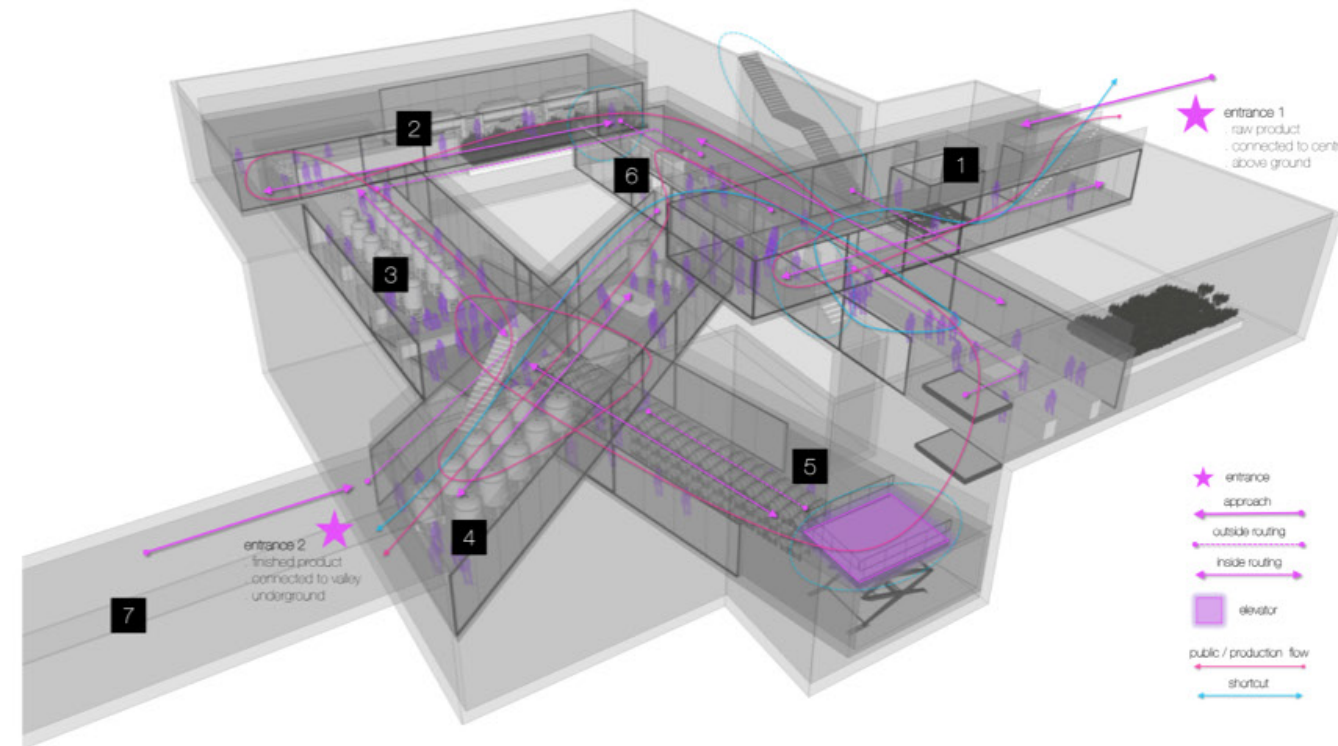
Concept
Product lines as new intervention
Related to former 'Kaleidos' with distribution belts
New production/social connective volumes merging
with the existing 3D grid structure



Merging experiences
The spatial relationships define the merge between
social and production zones, as well as
volumes within the rugged architectural element



WINE production program & public routing



Flow

Raw product (urban entrance) vs. Finished product (valley entrance)
Continuous flow with implemented shortcuts
Entrance on centre of winery (hart)

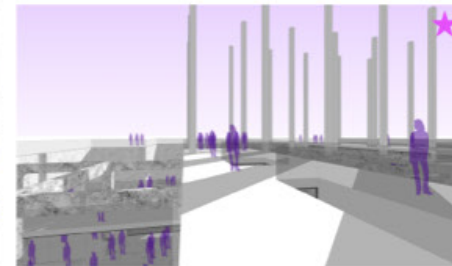
Production

Production phases divided in separate 'productionlines'
Using natural decline in the process
Combined with public programs

1. Grape selection 200m²
start of production (raw product) - connected to vineyard



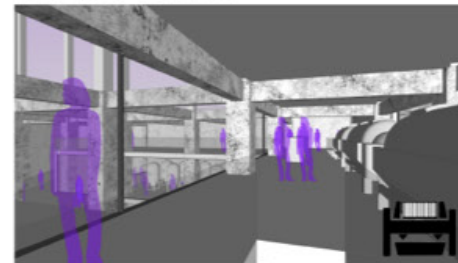
Entrance 1
start of production (raw product) - connected to vineyard



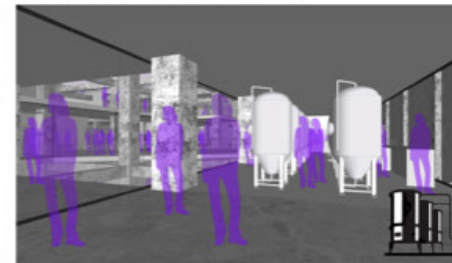
Entrance 2
end of production (finished product) - connected to valley and infrastructure



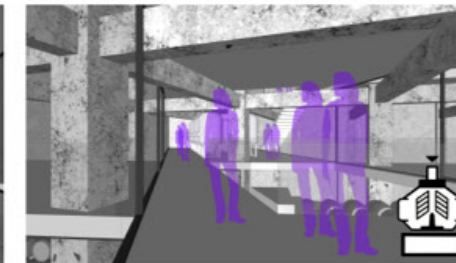
2. Grape presses 200m²
1st stage in production - grape juice (juice)



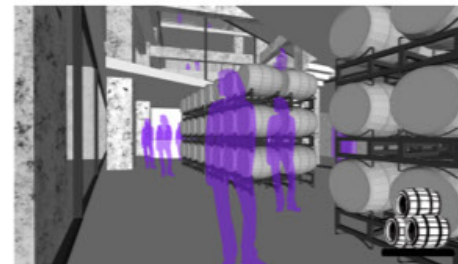
3. Fermentation 200m²
2nd stage of production - monitoring by barrels and vats



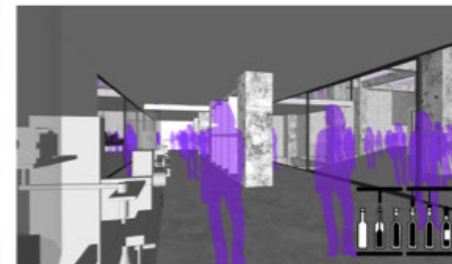
4. Filtering 200m²
3th stage in production - filtering + watersystem (middle of productionline)



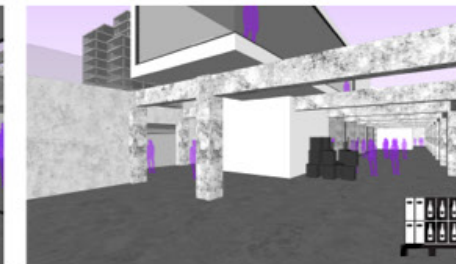
5. Maturing/cellar 250m²
1st stage of production - maturing on lowest level (climate)



6. Bottling/labeling 250m²
end of production - connected to tunnel (distribution)



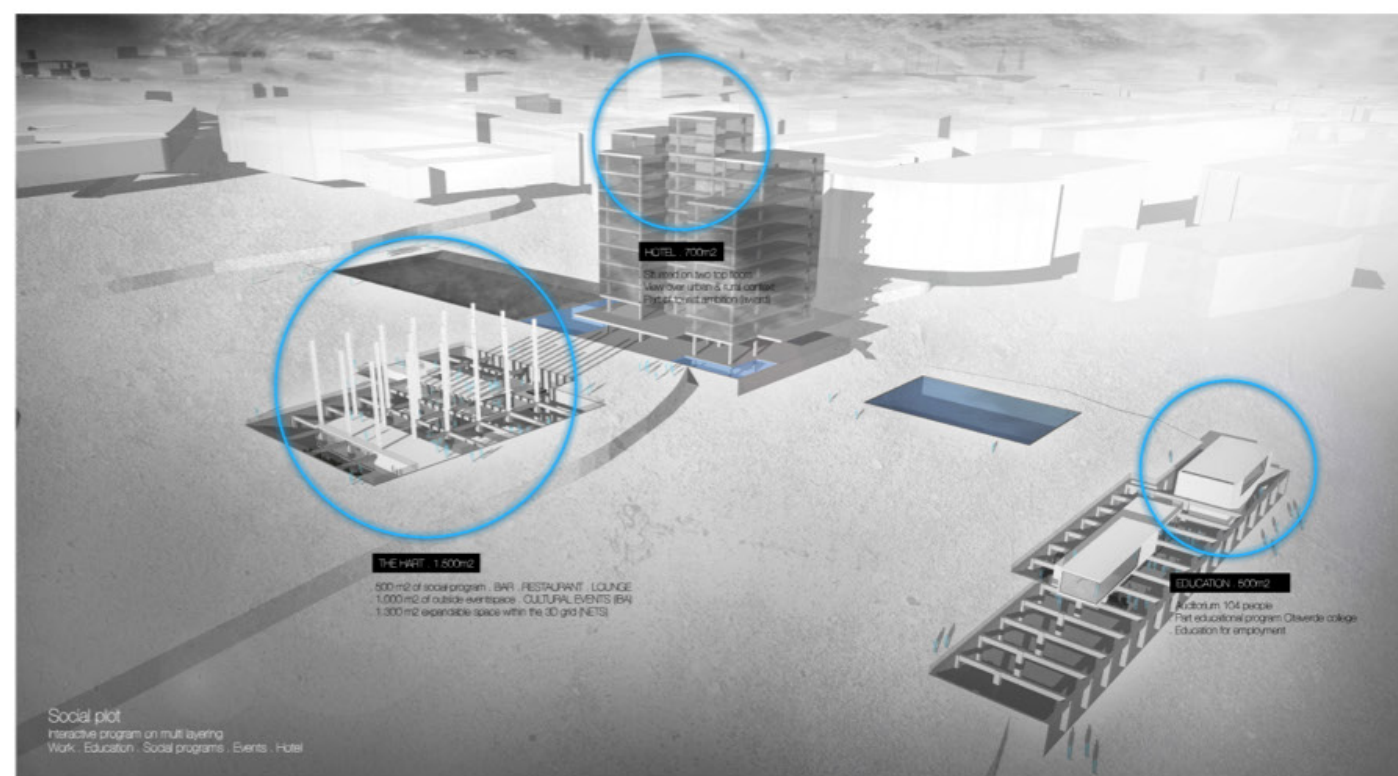
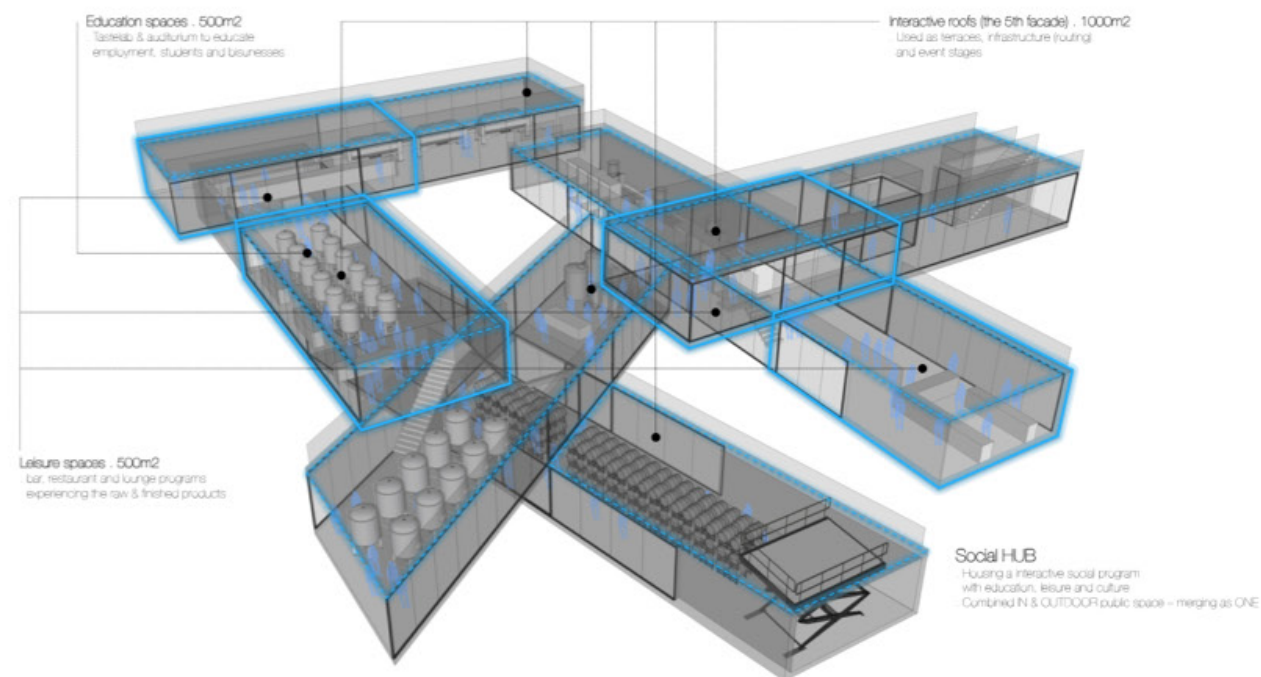
7. Distribution 250m²
distribution centre - located besides Gruene board (train infrastructure)





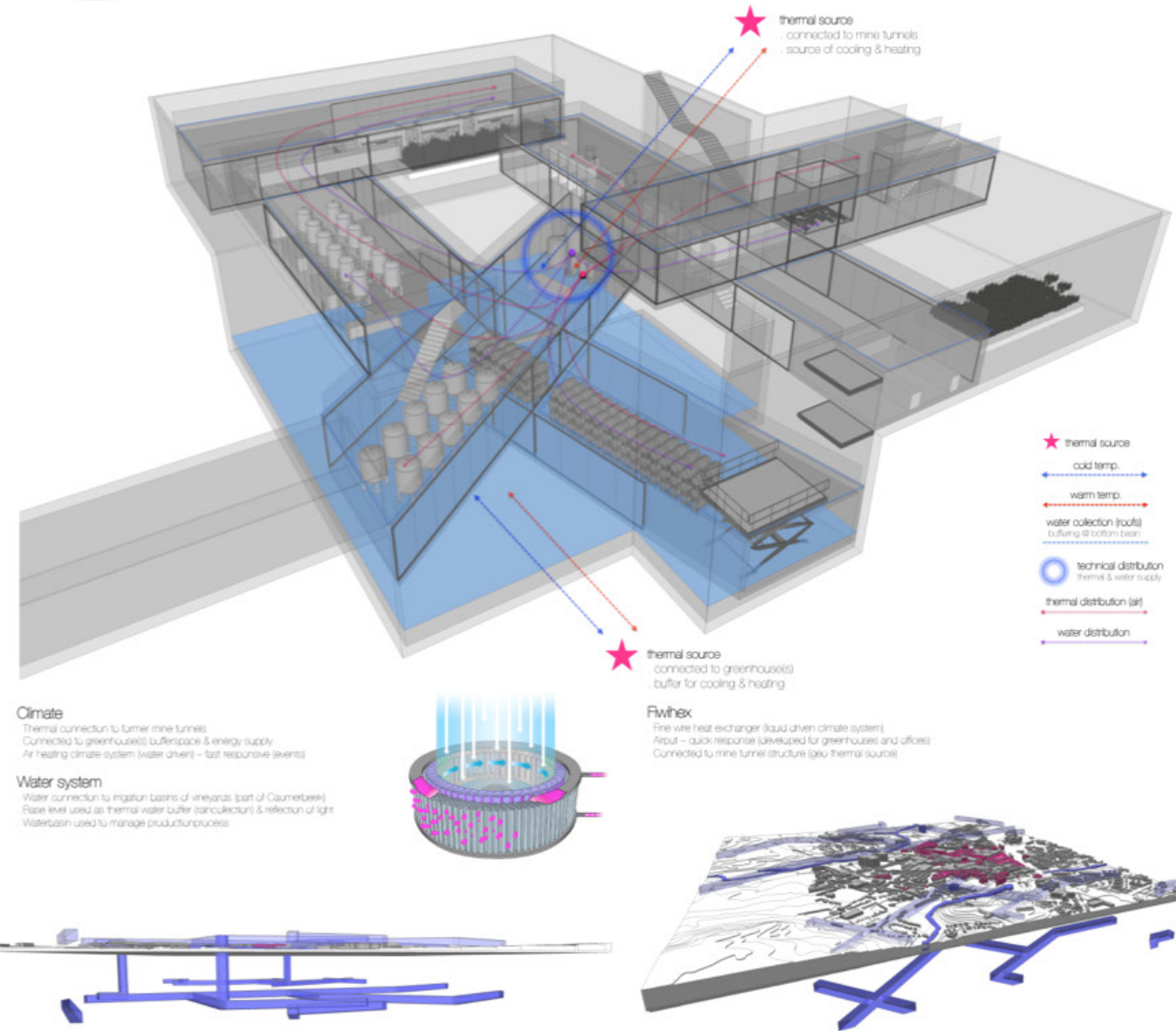
THE PEOPLE

work . culture . tourism . education . leisure





THERMAL SYSTEM region . urban . building

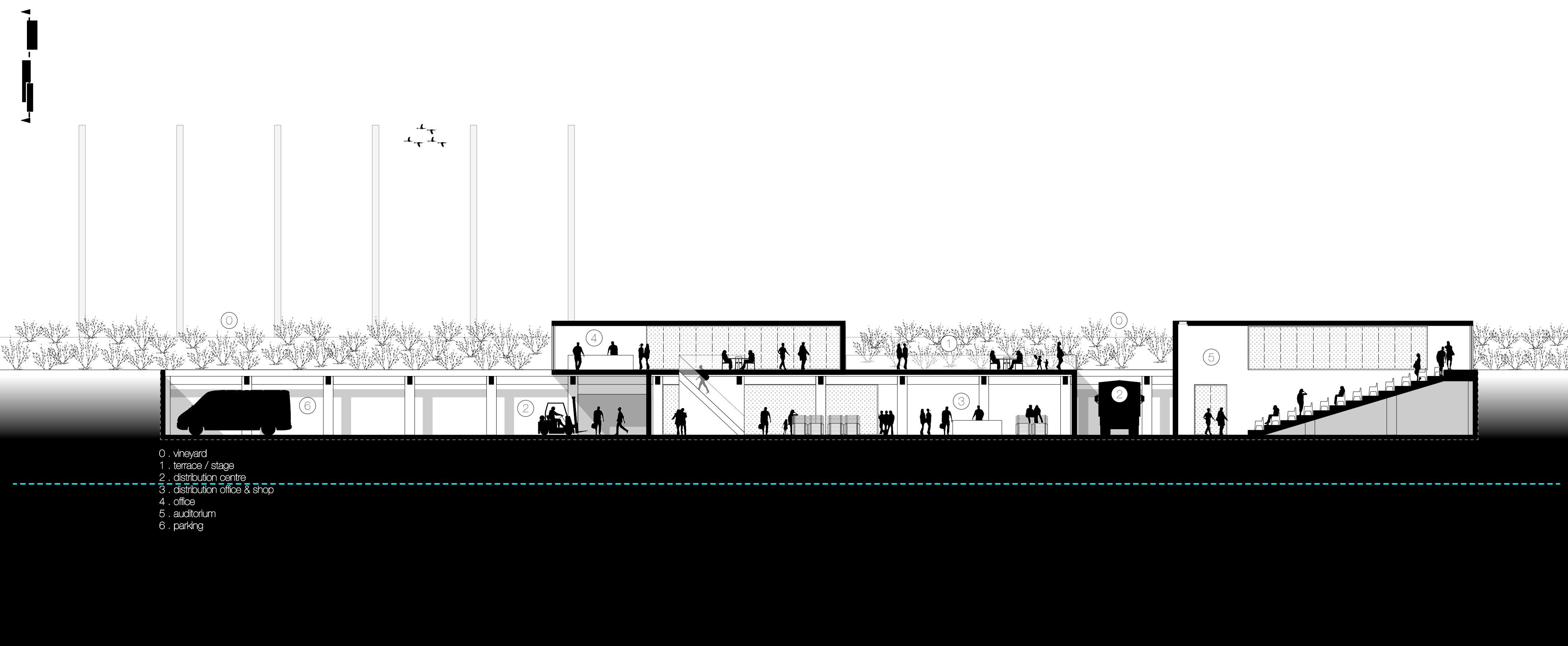
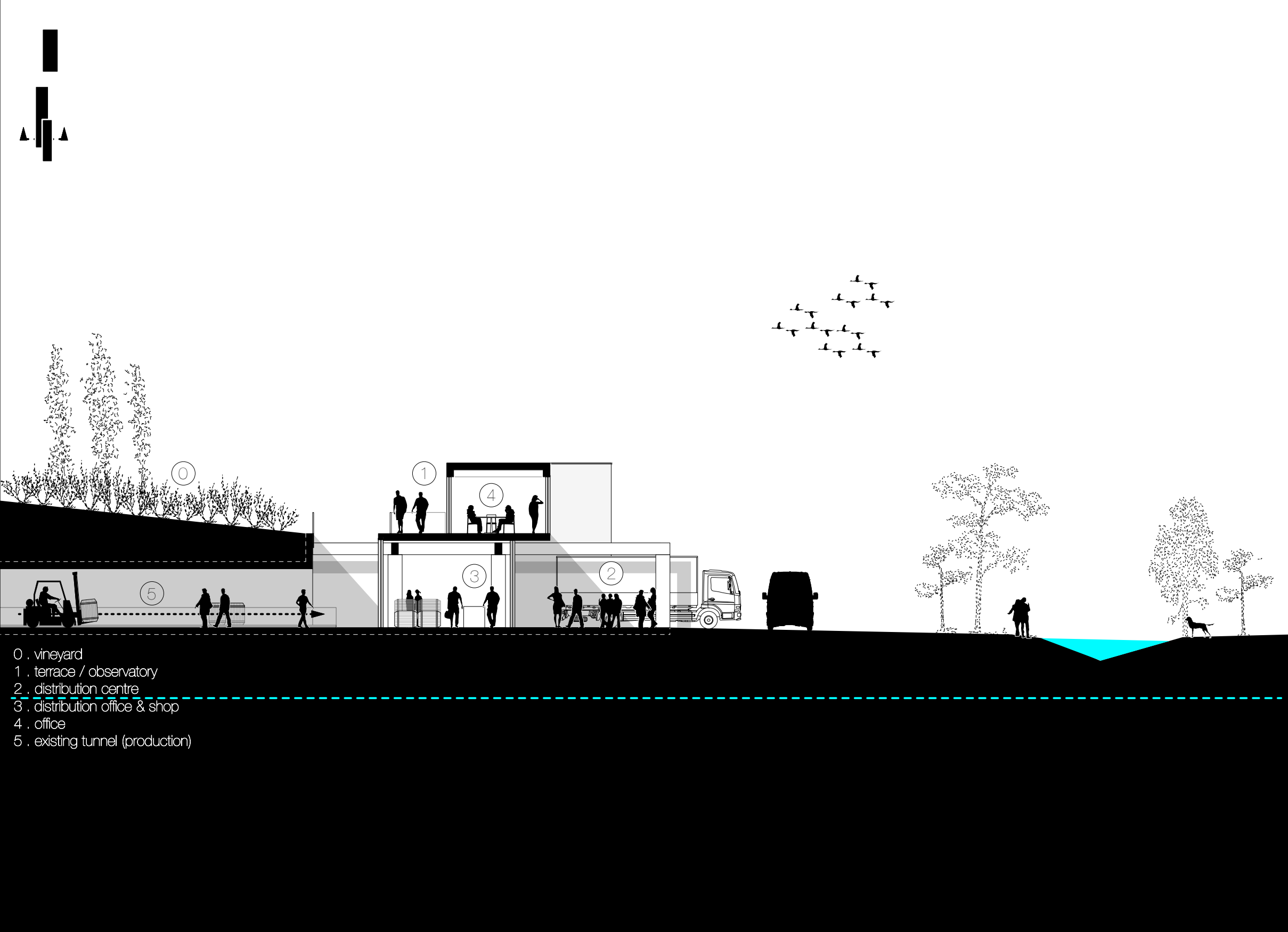
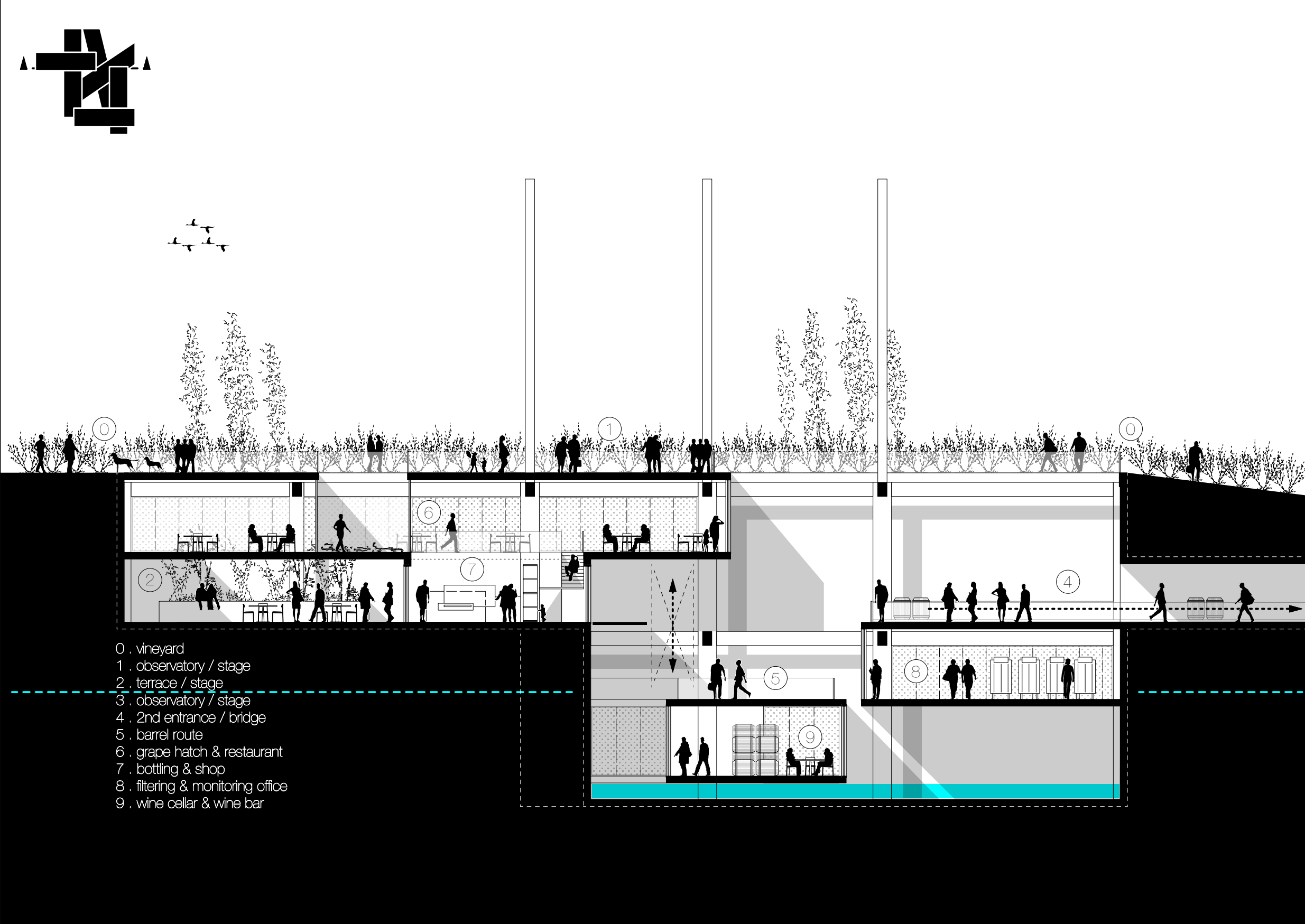
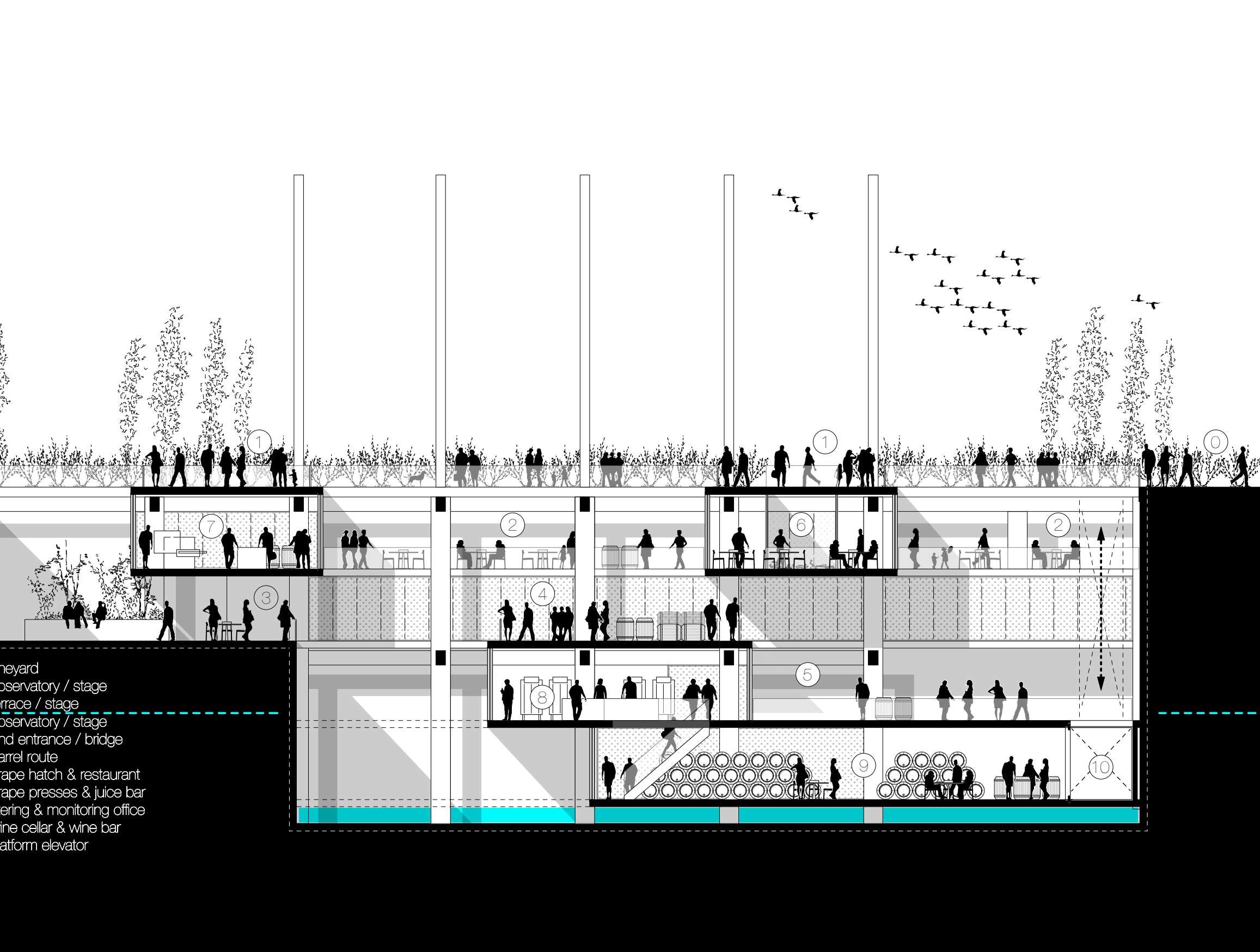
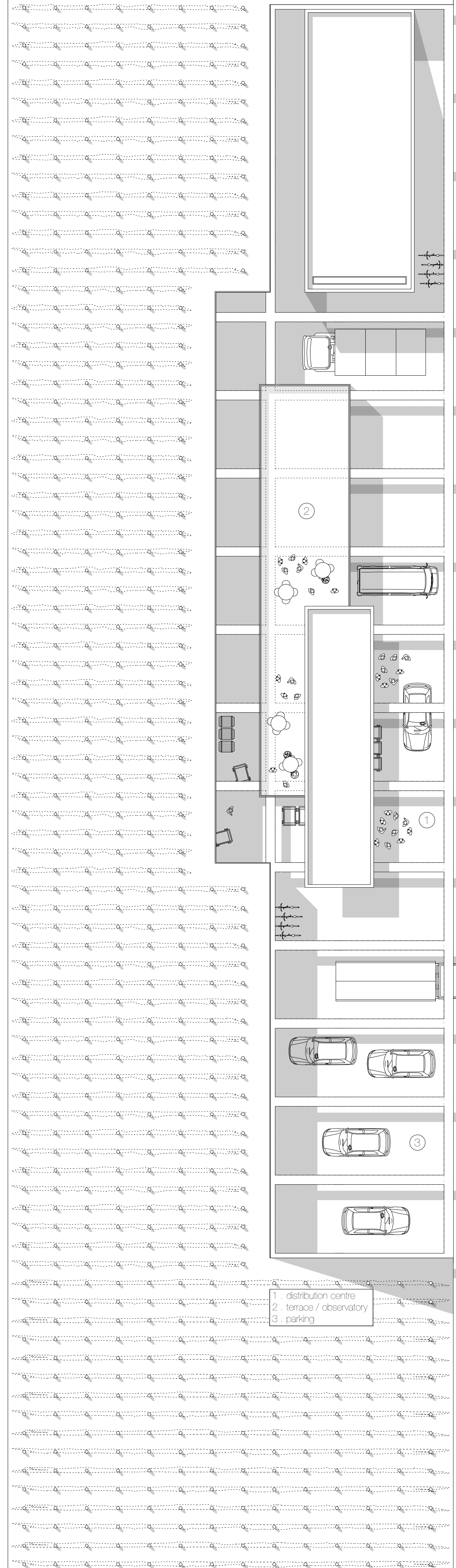
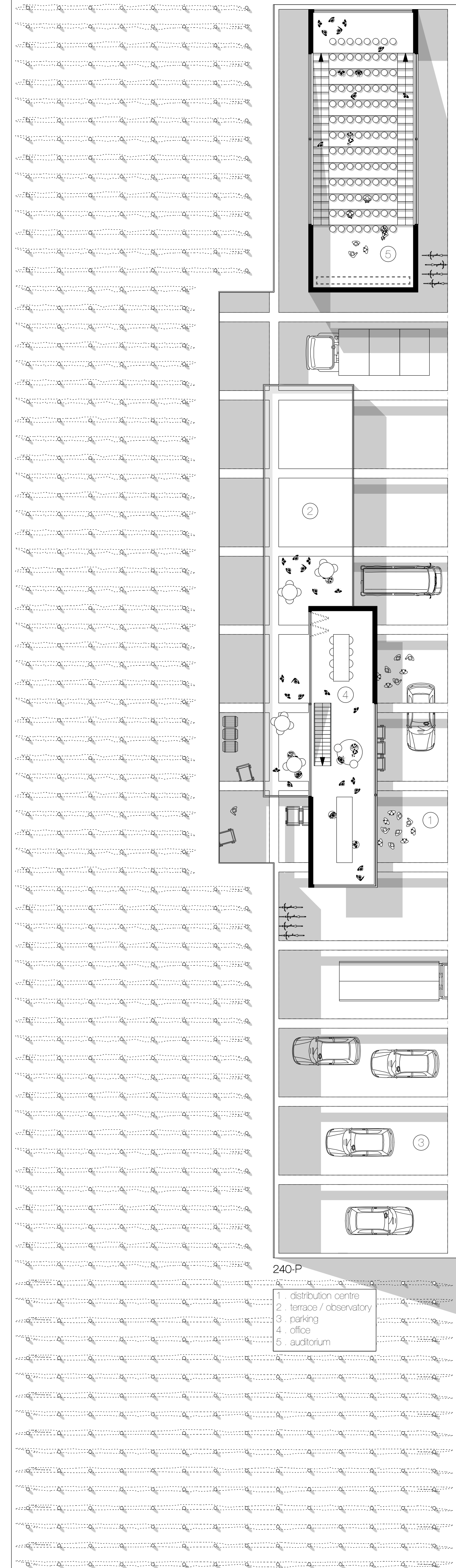
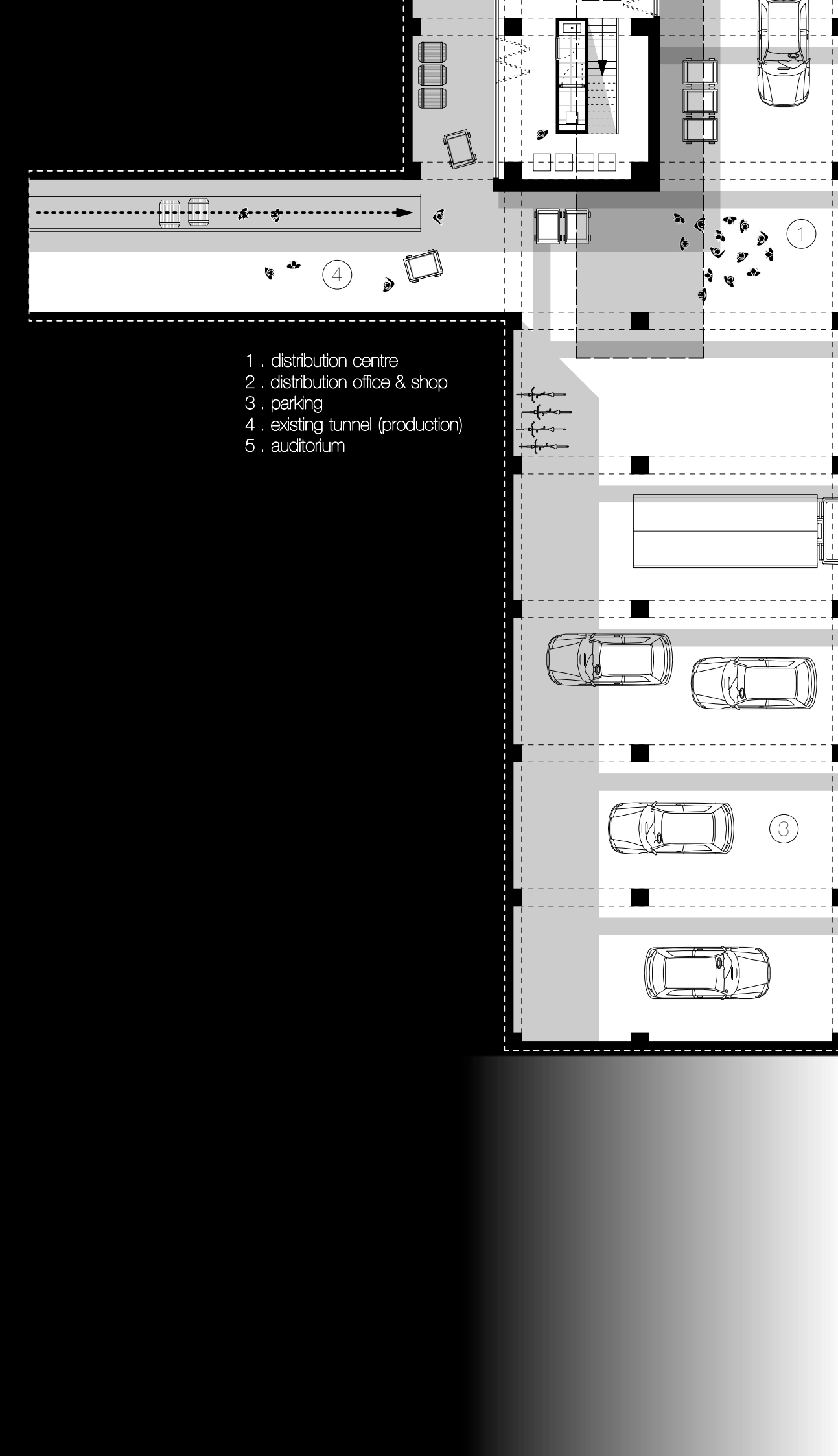
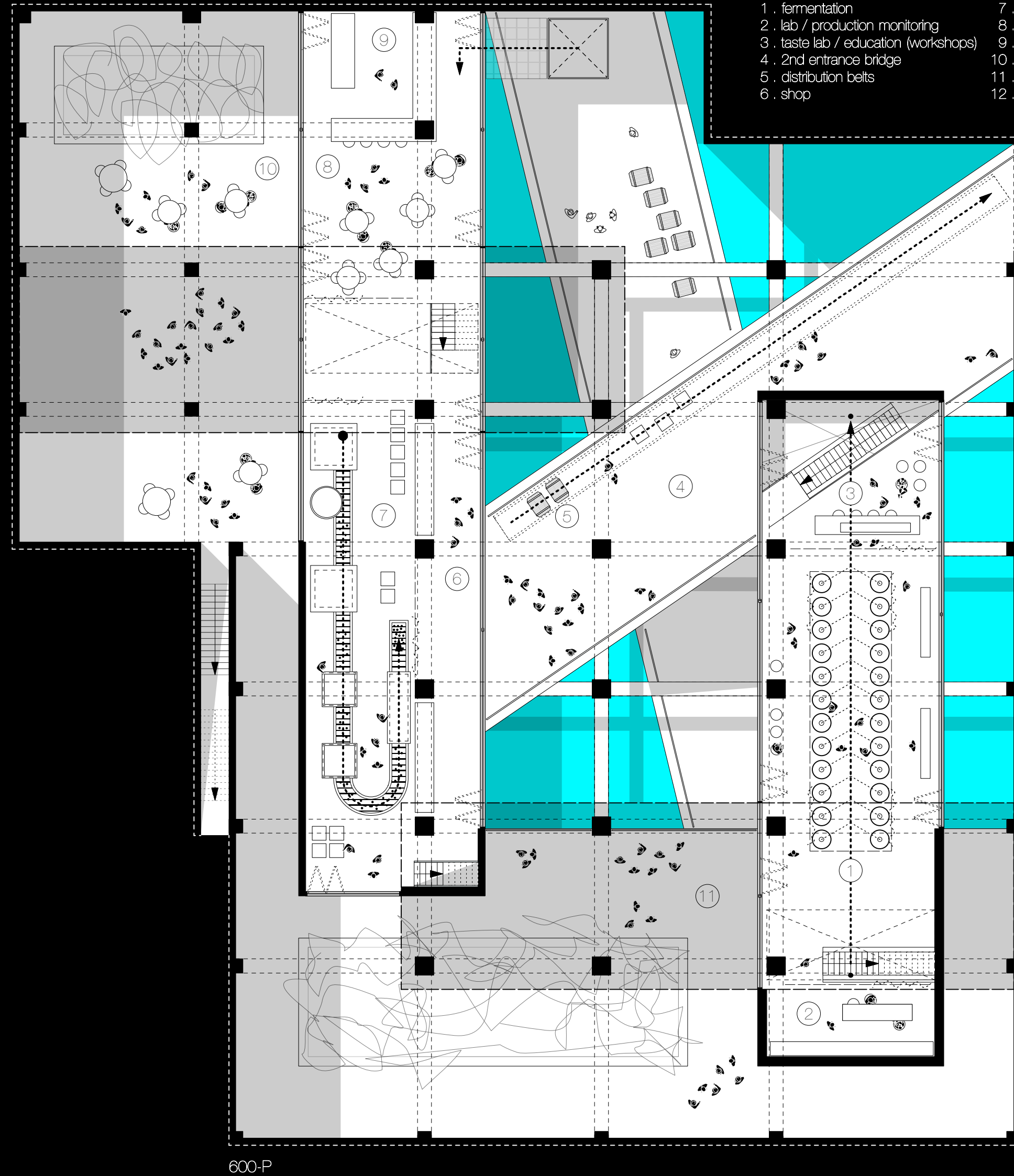
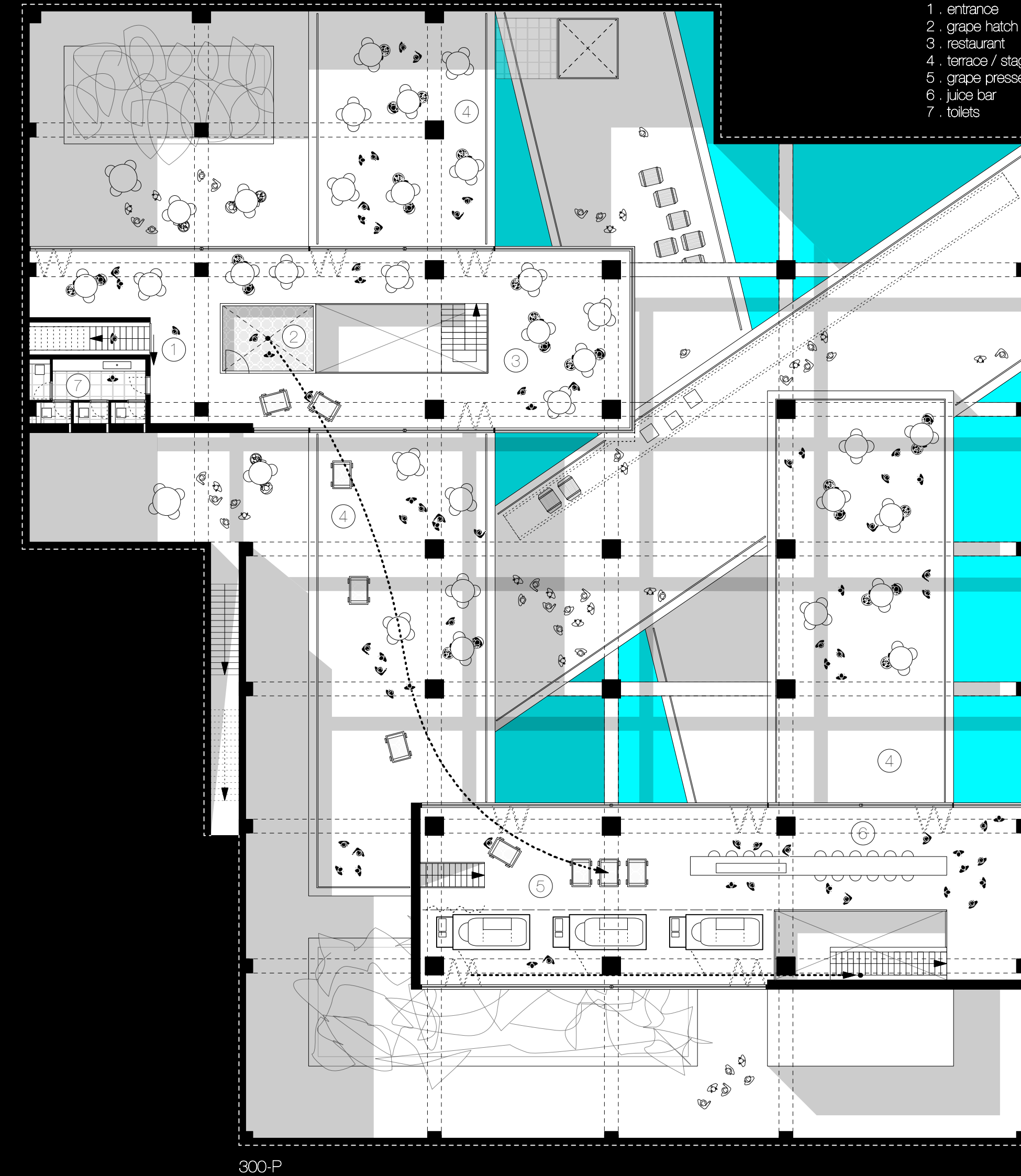
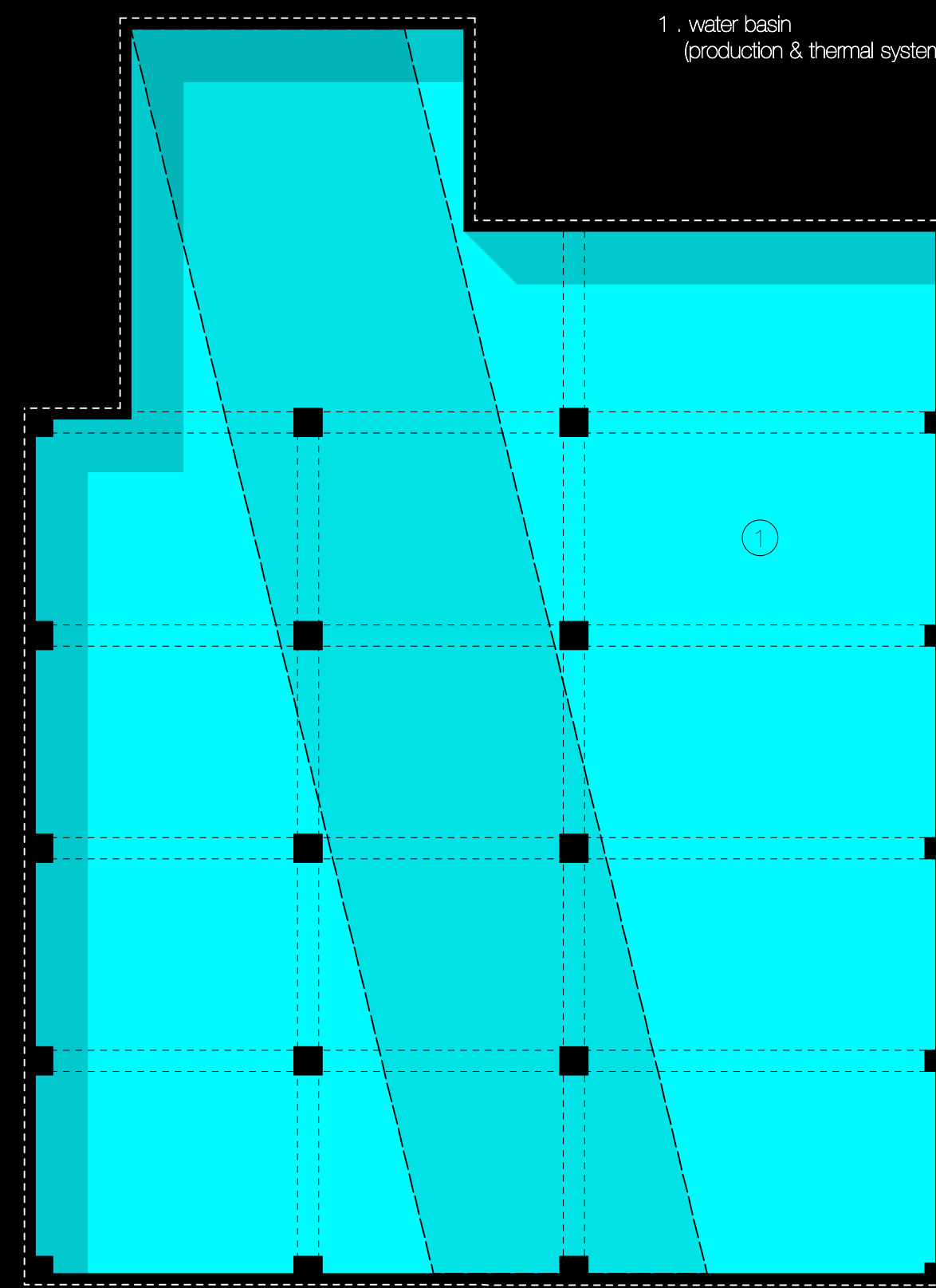
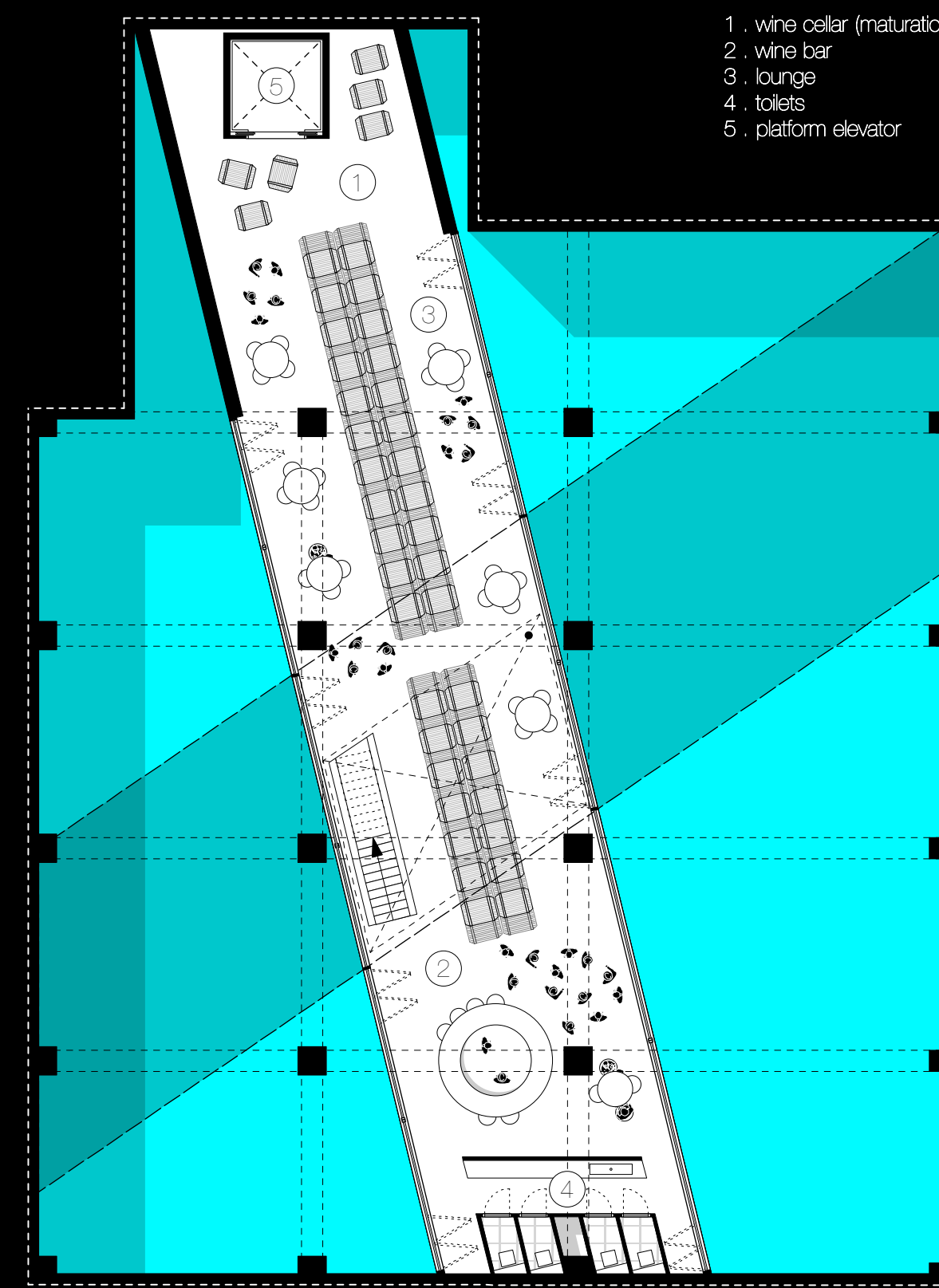
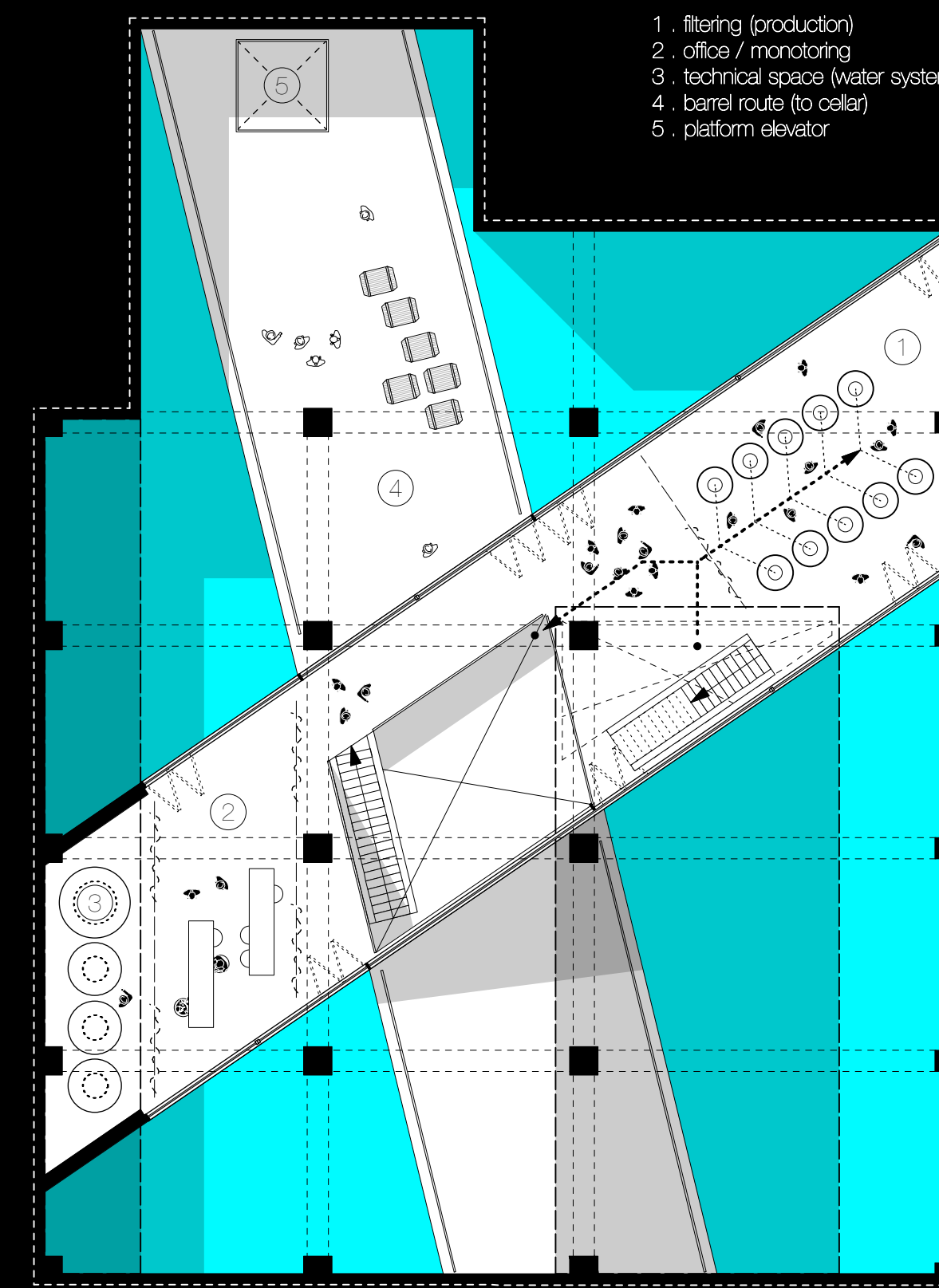
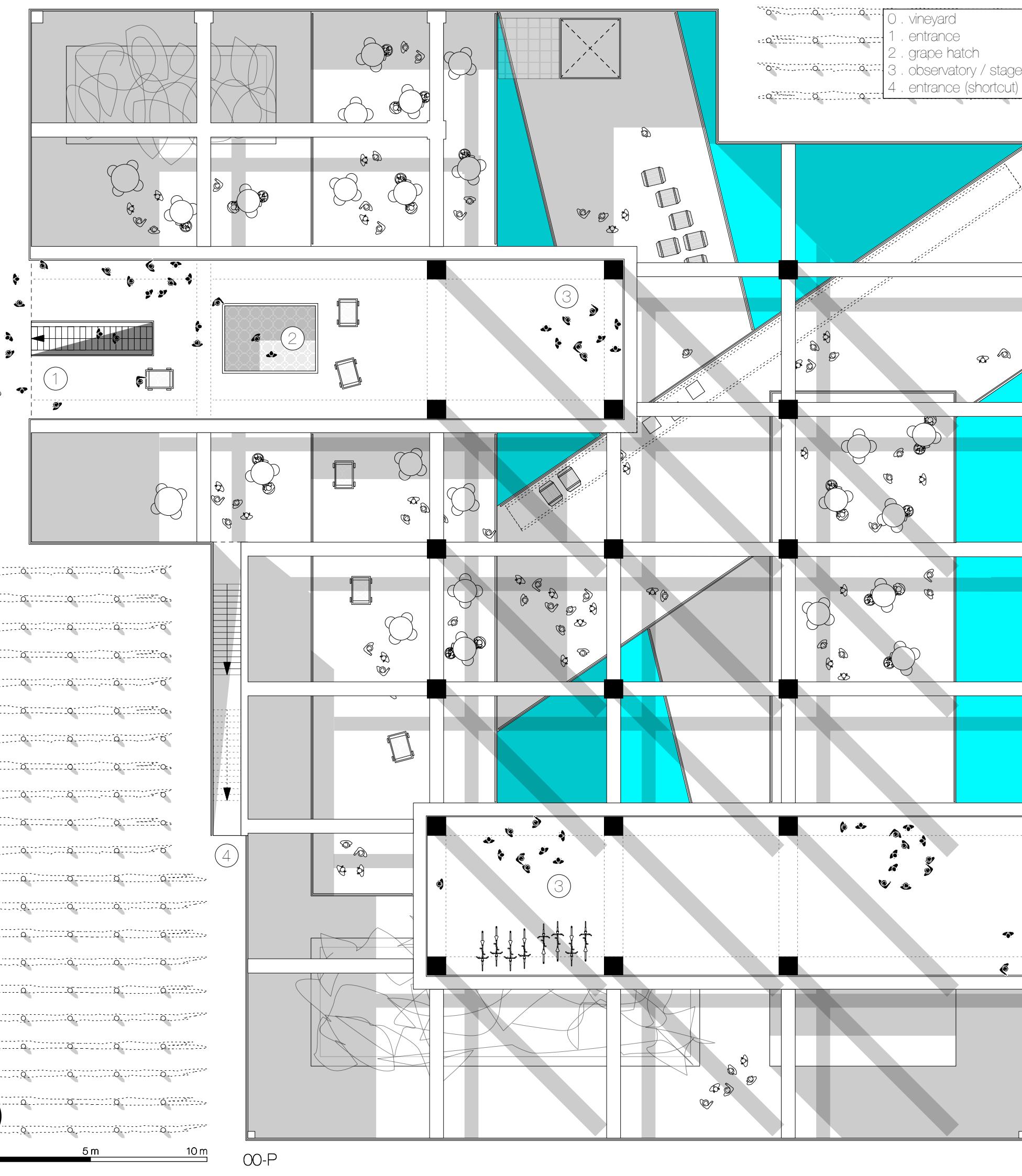


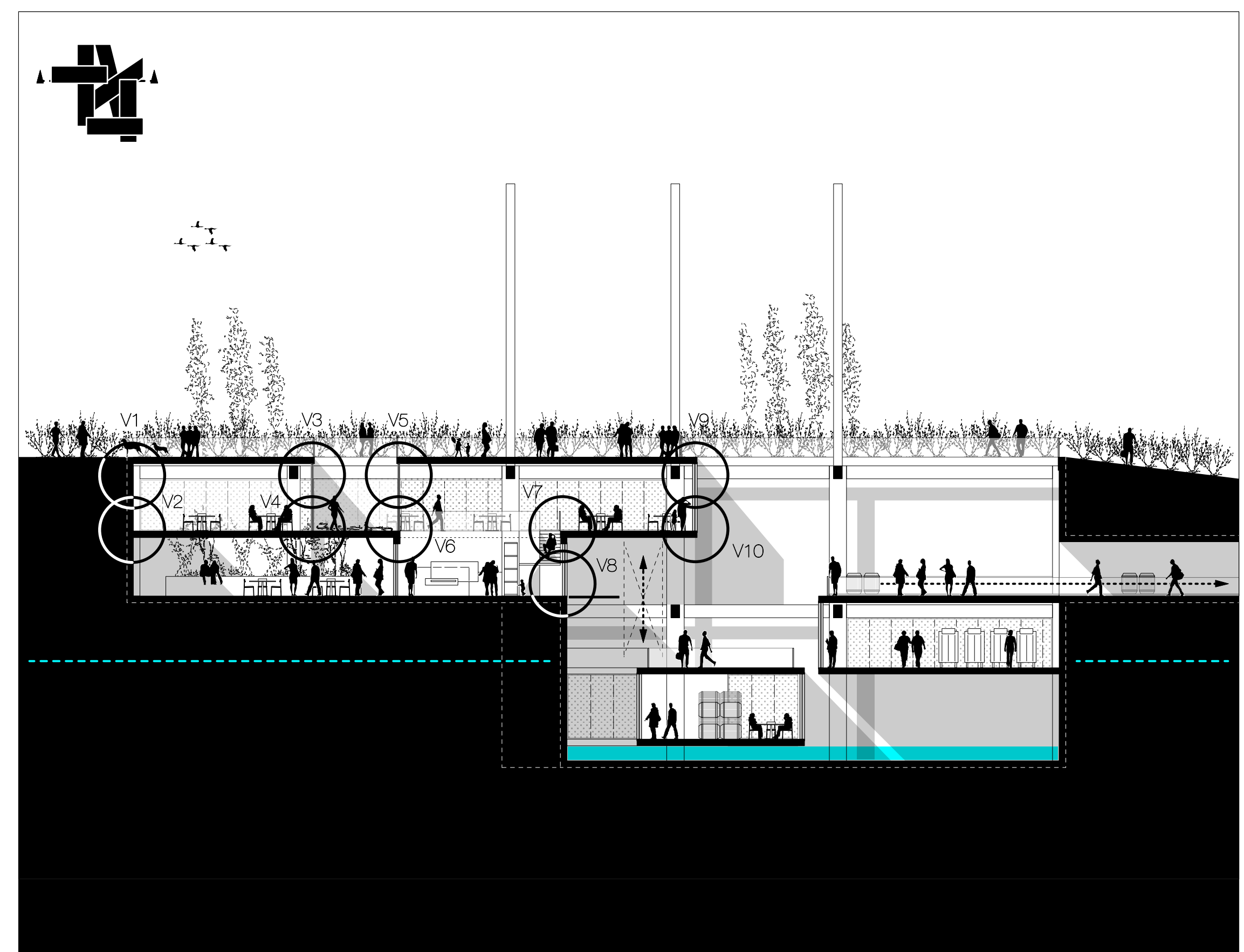
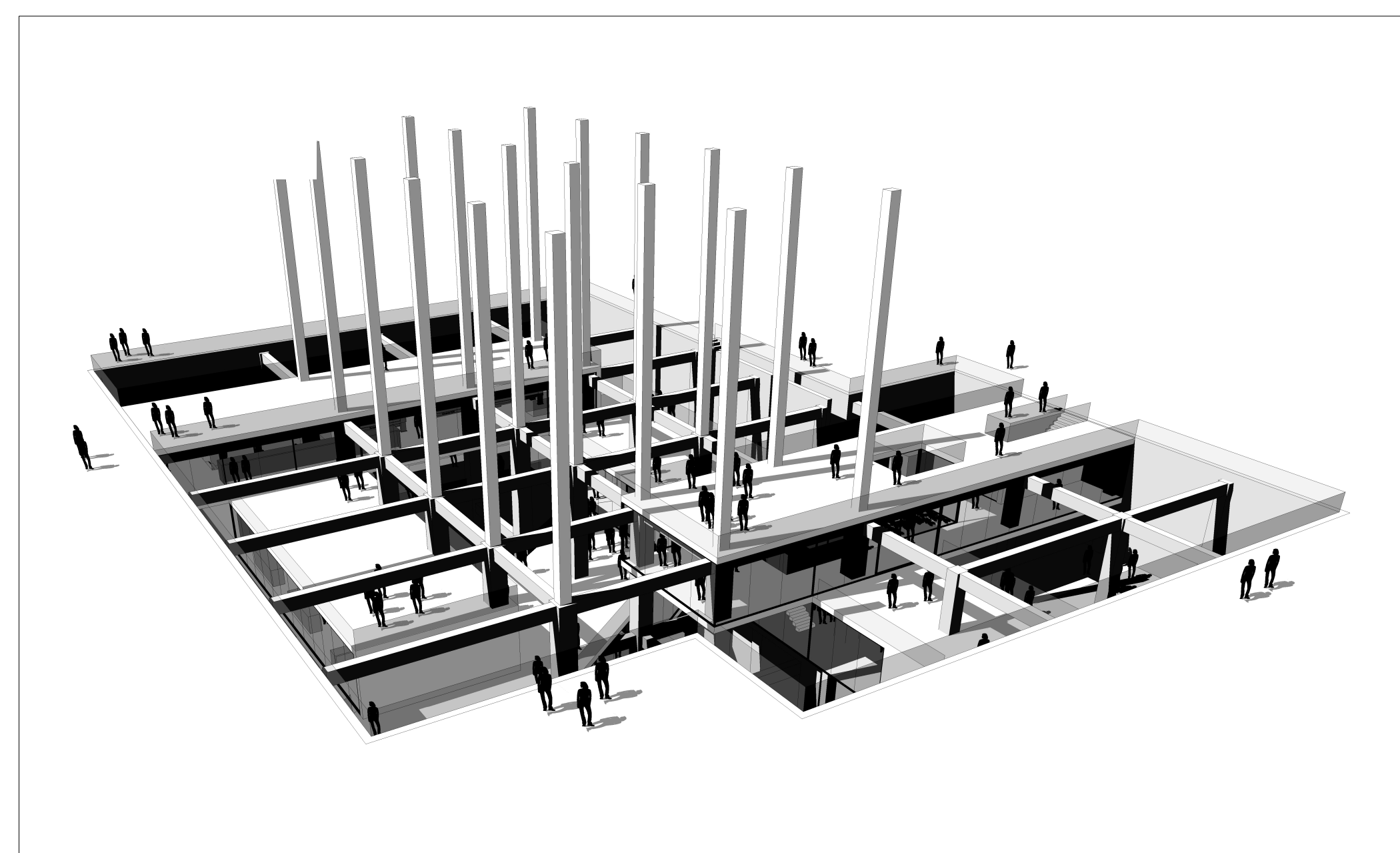
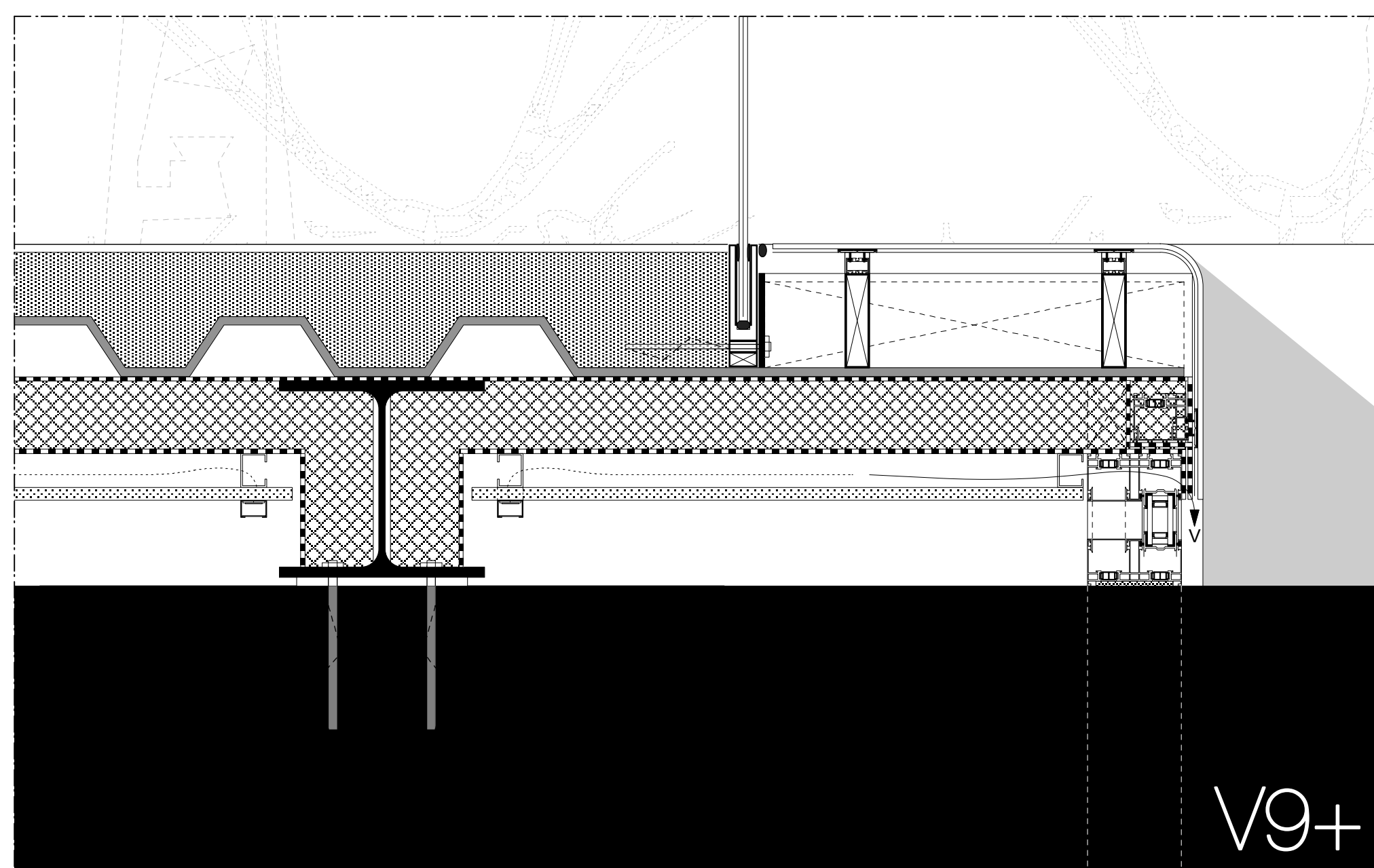
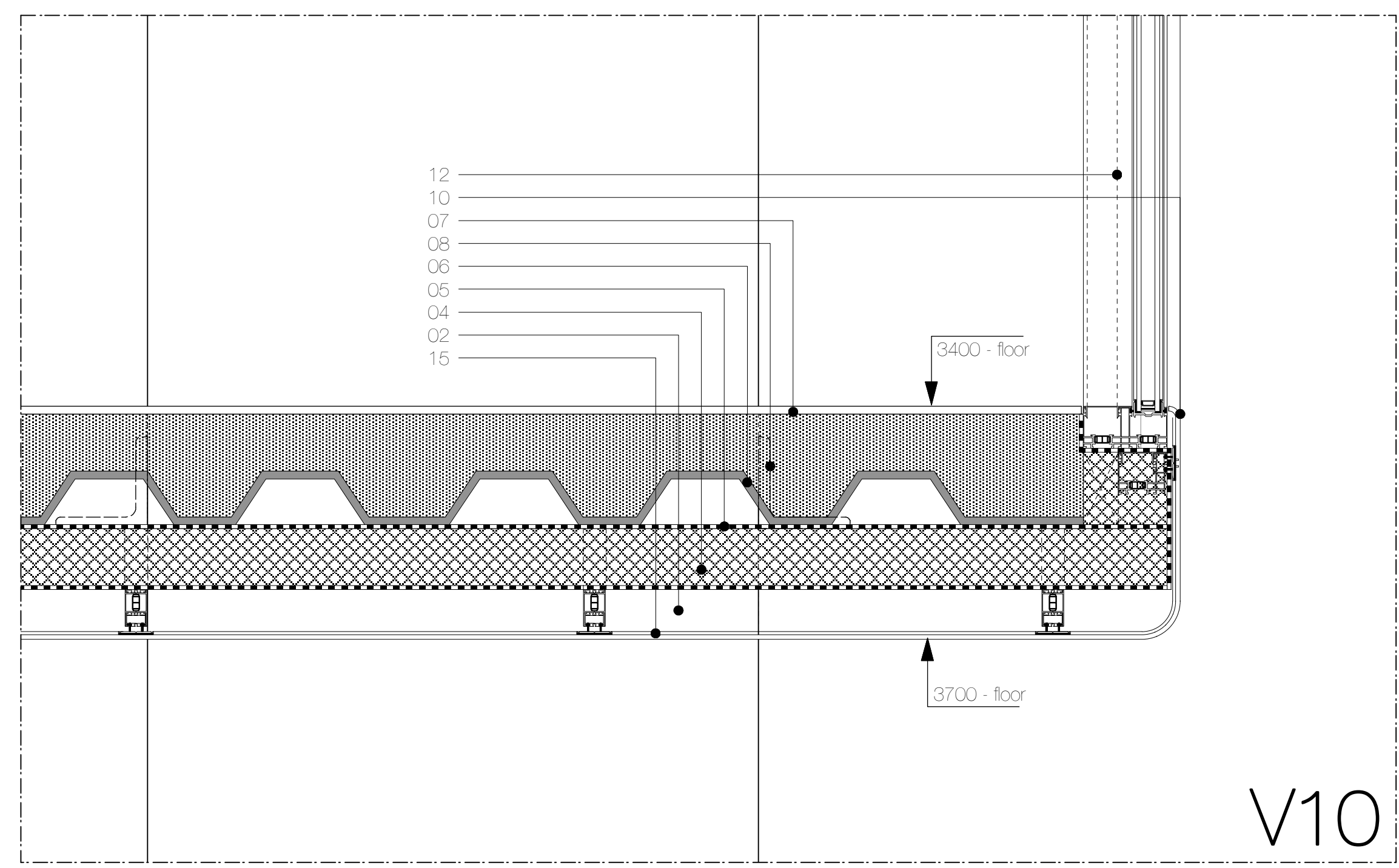
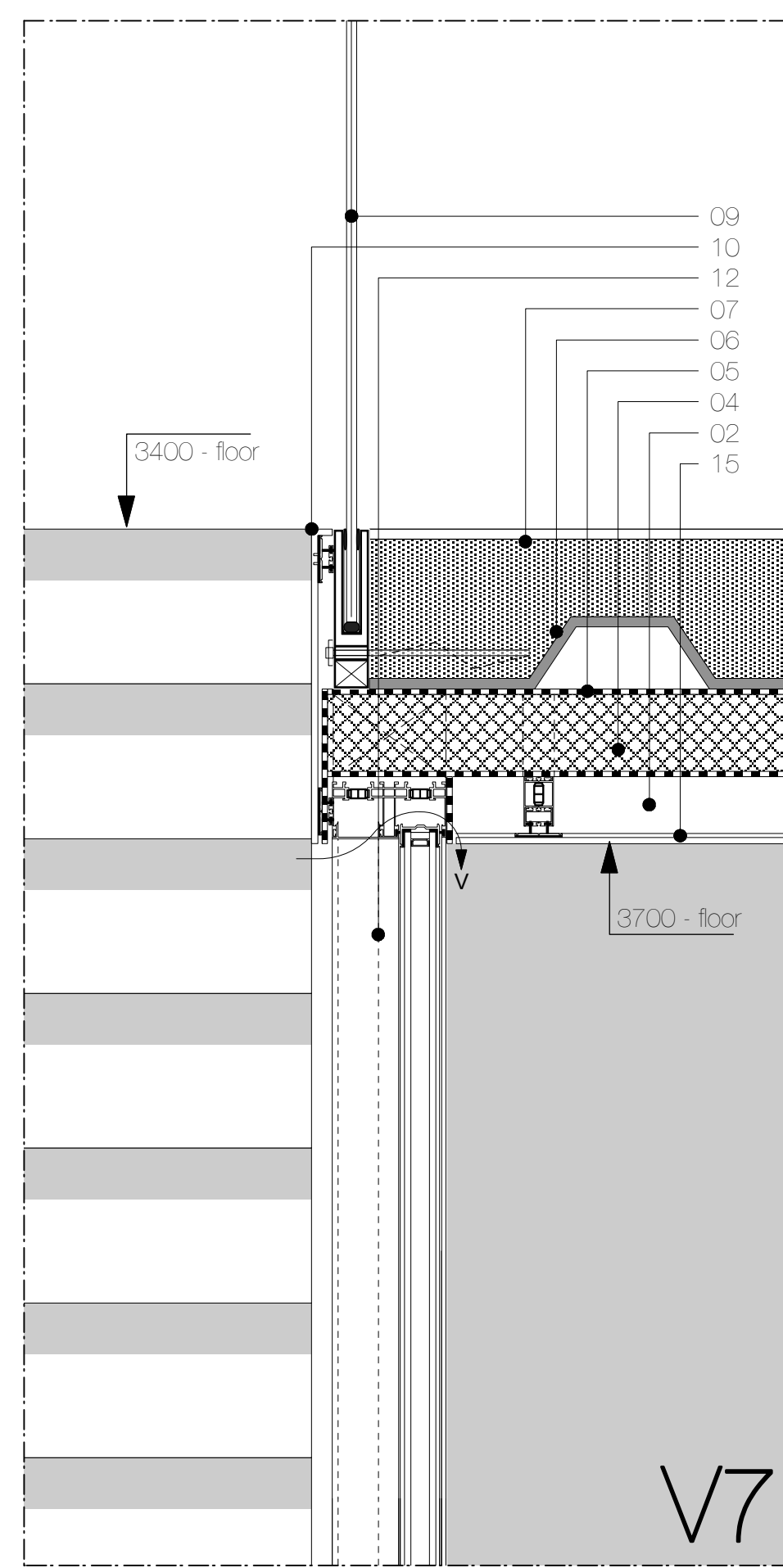
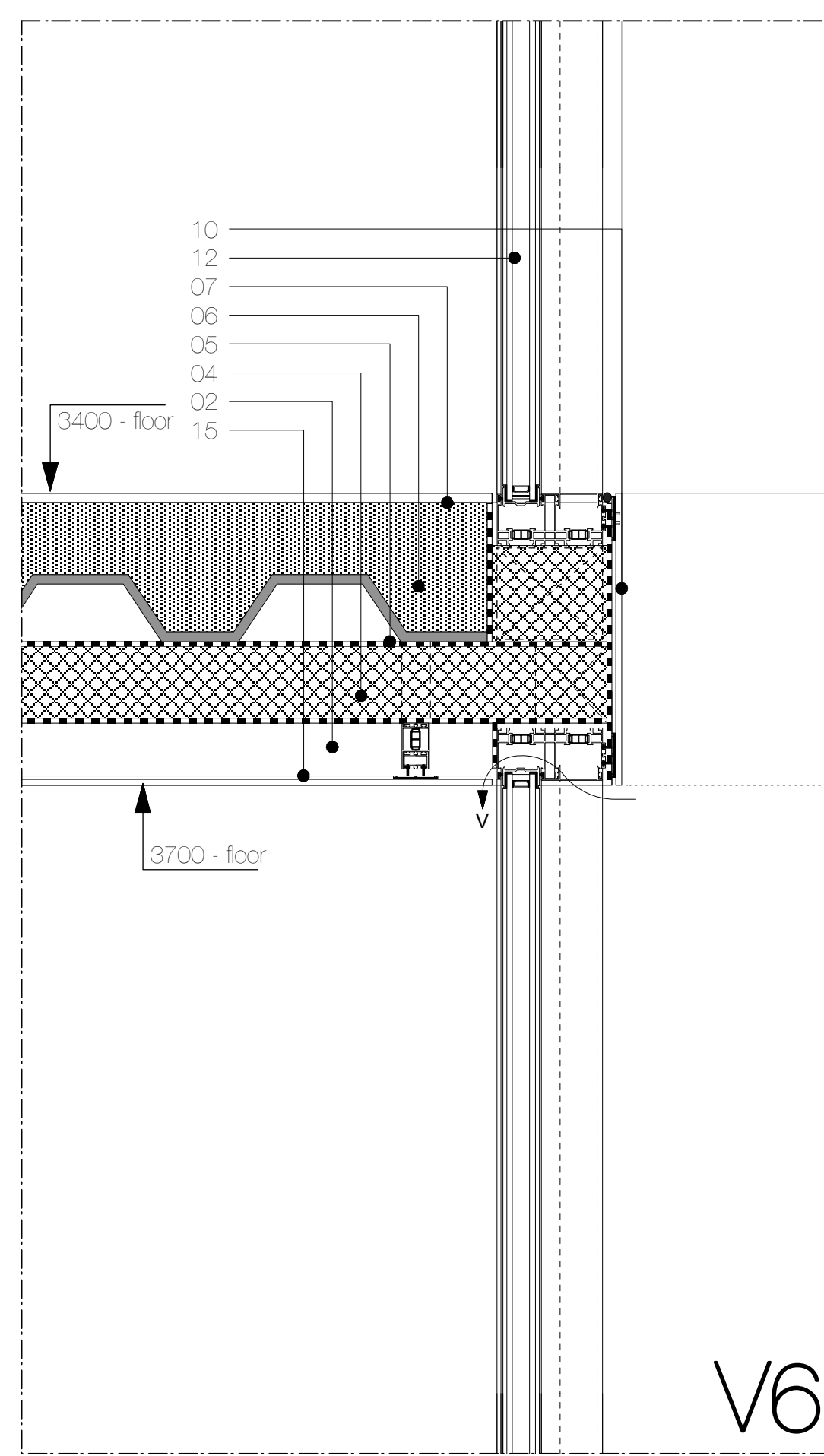
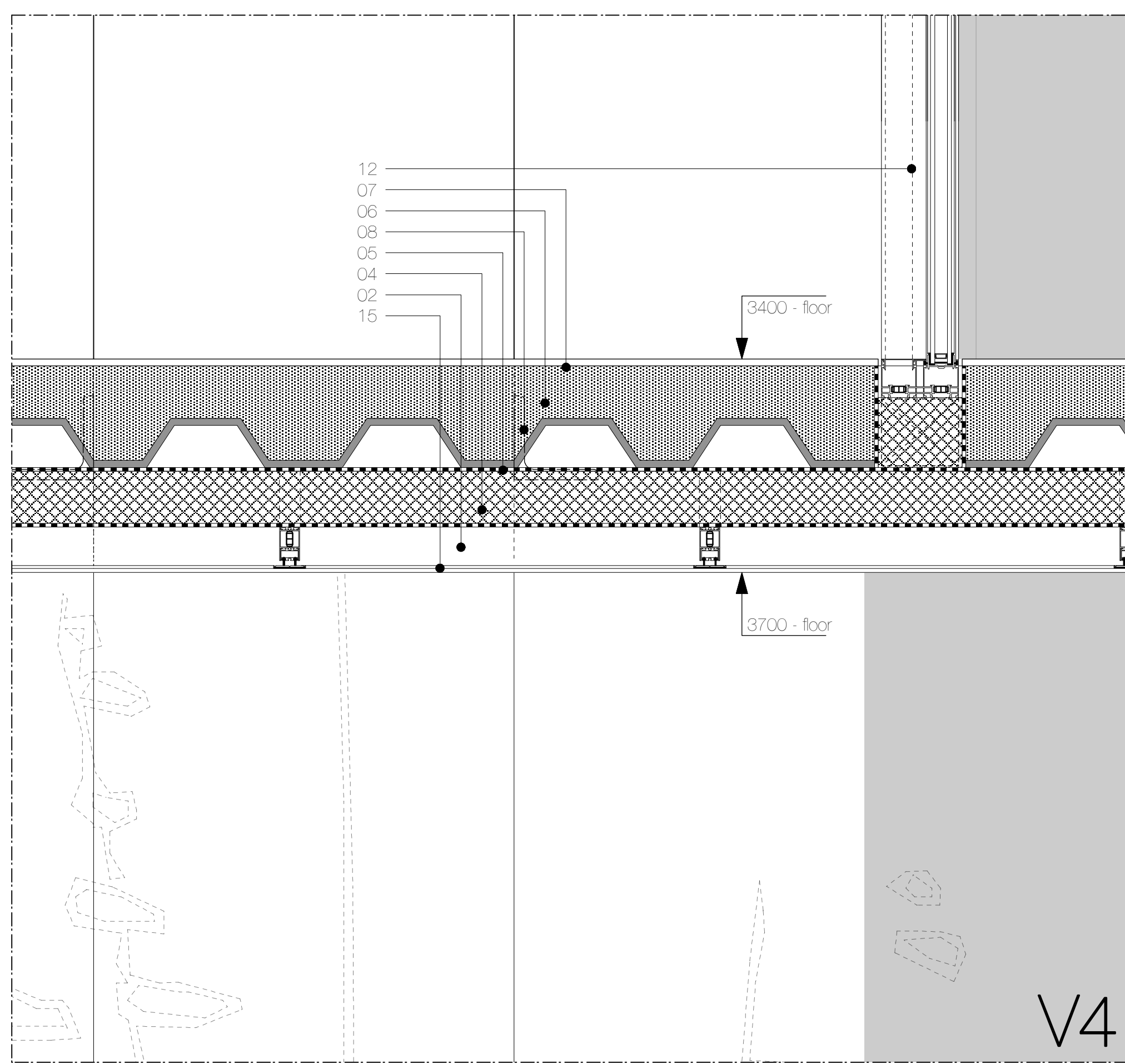
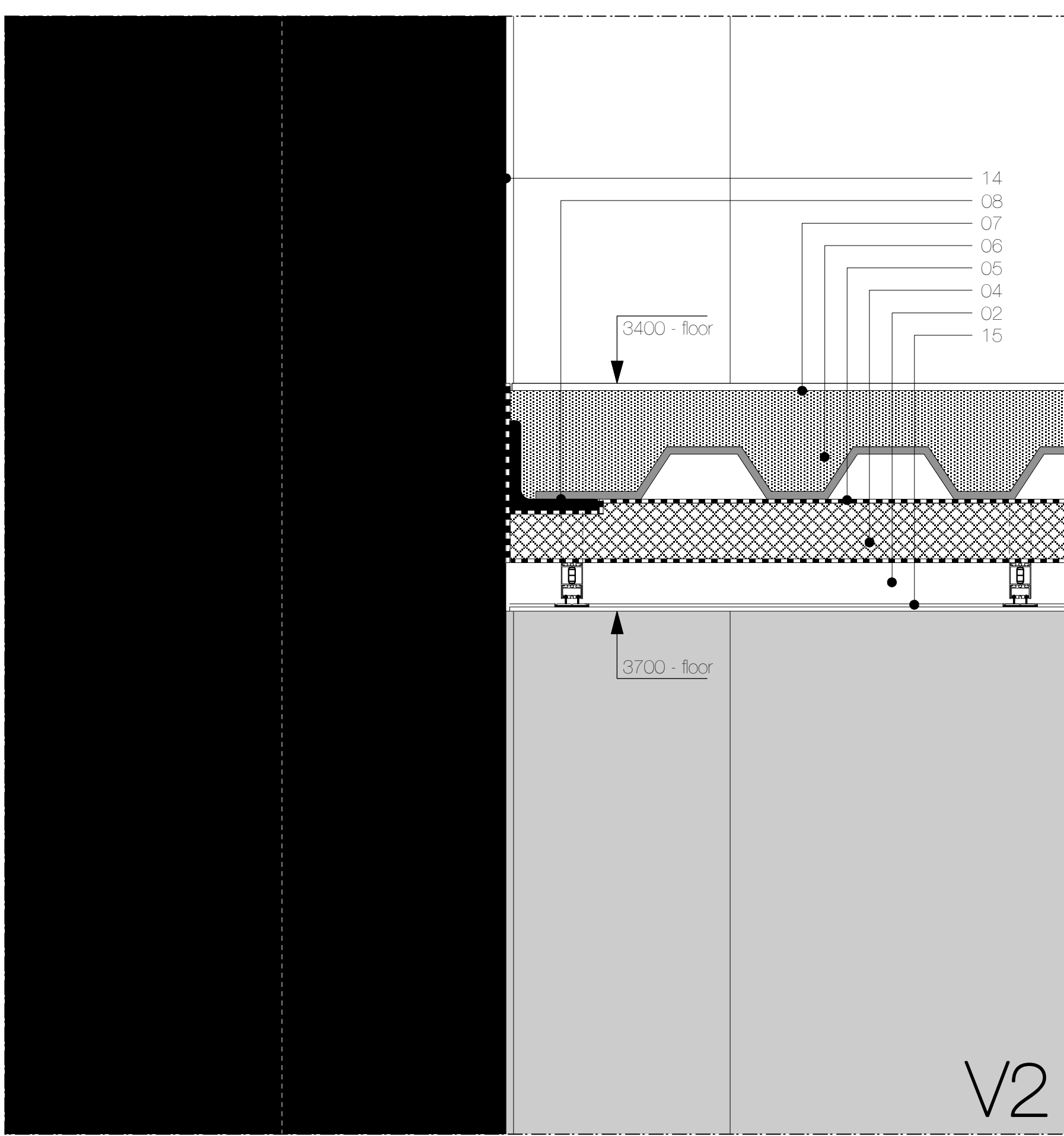
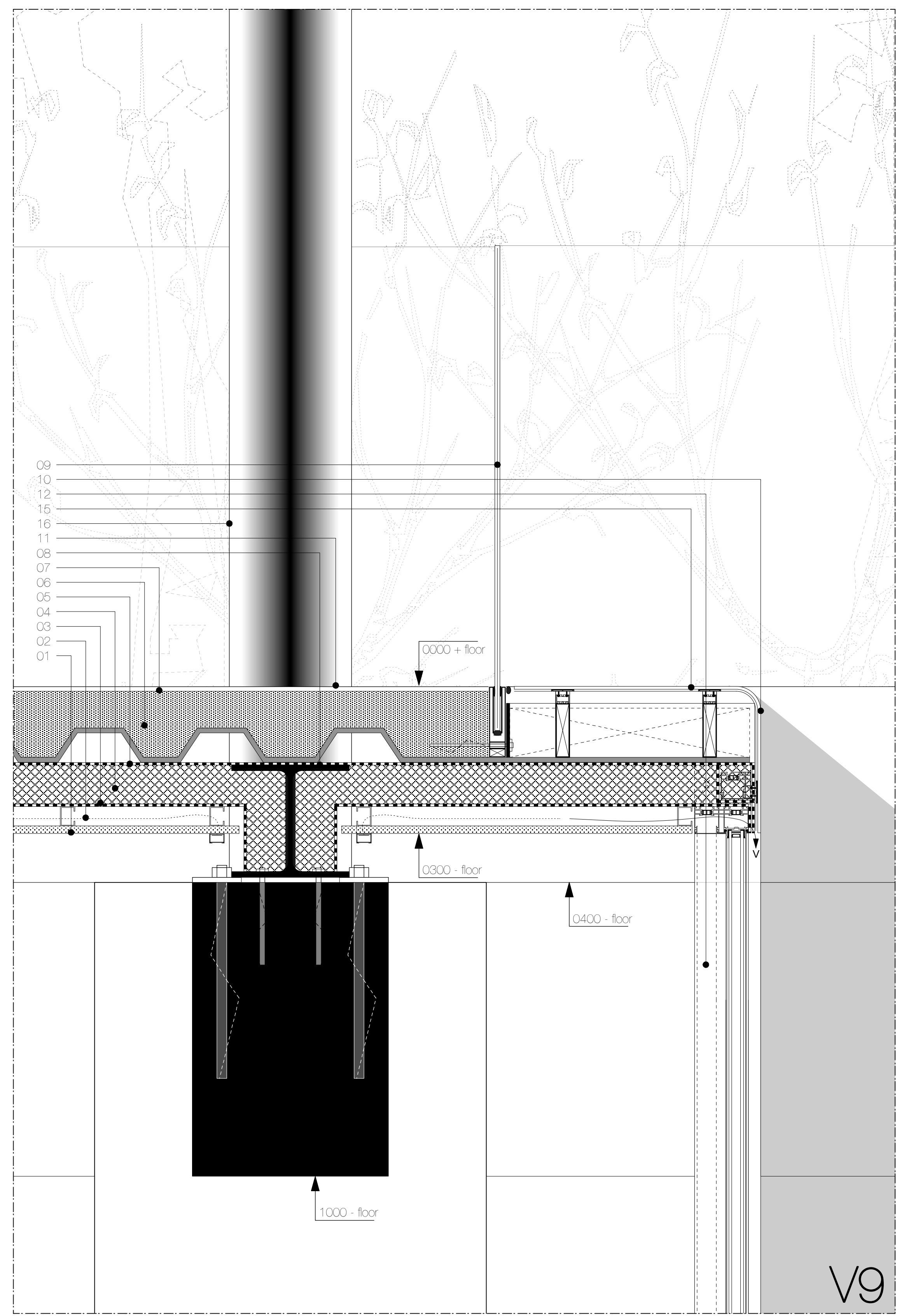
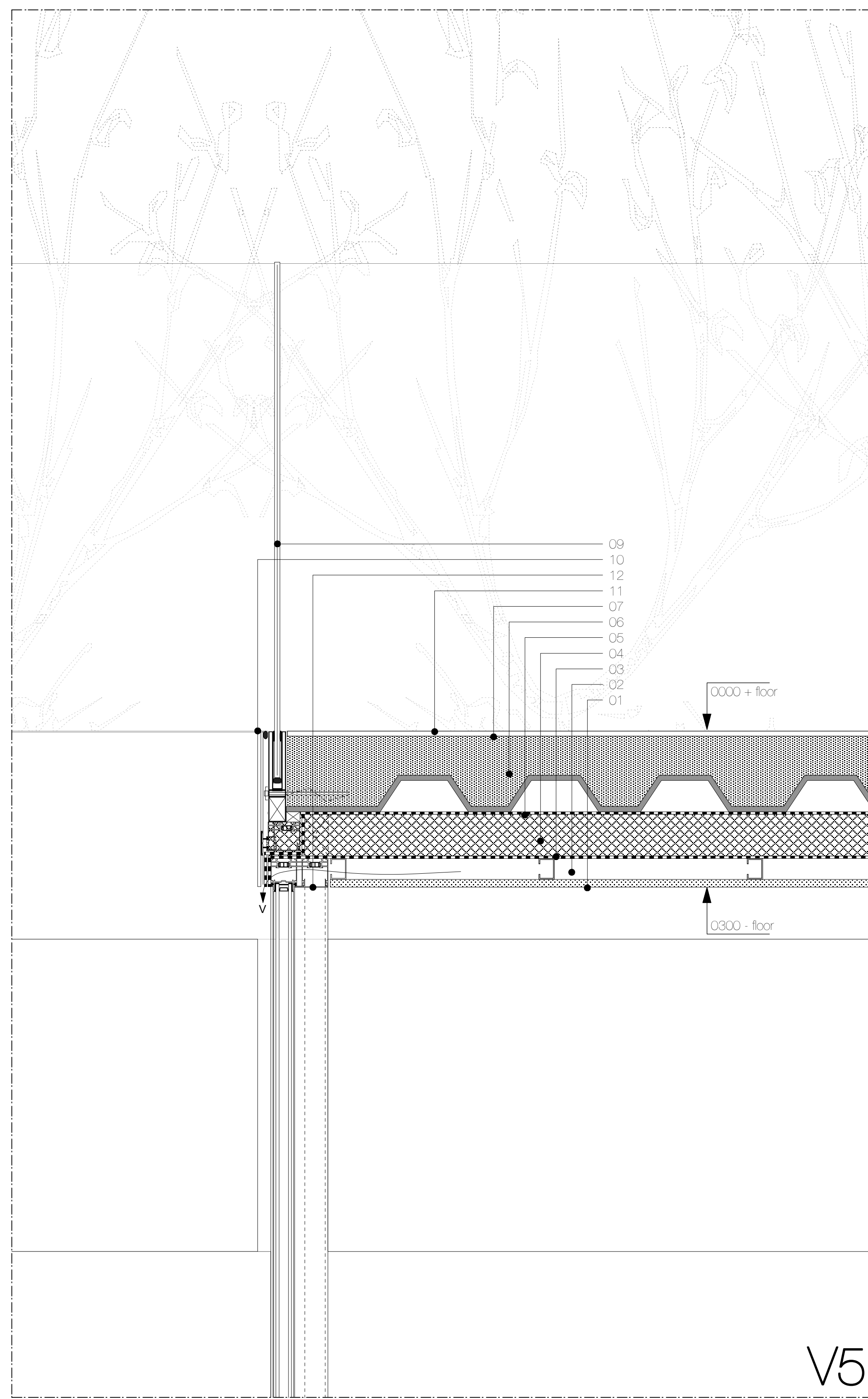
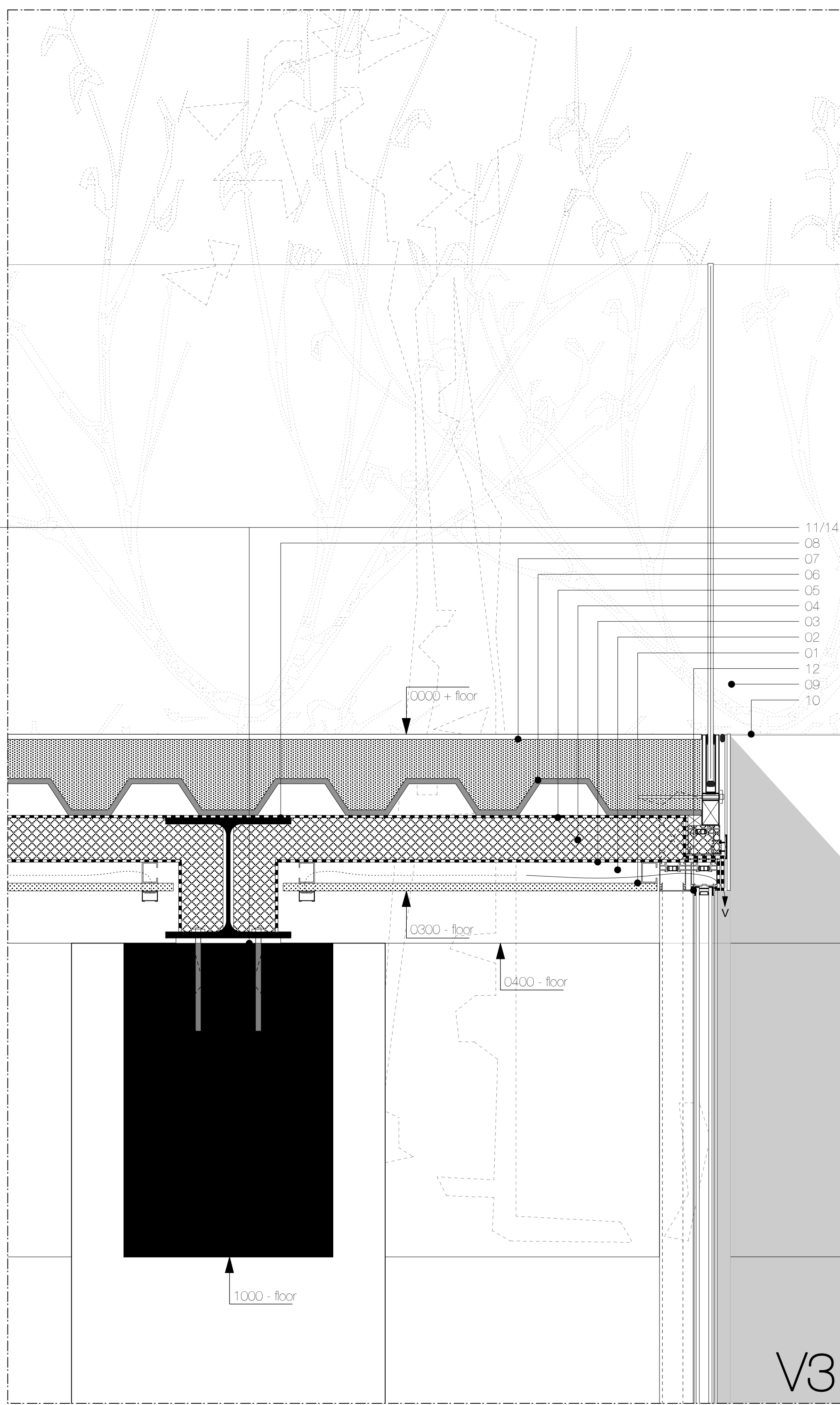
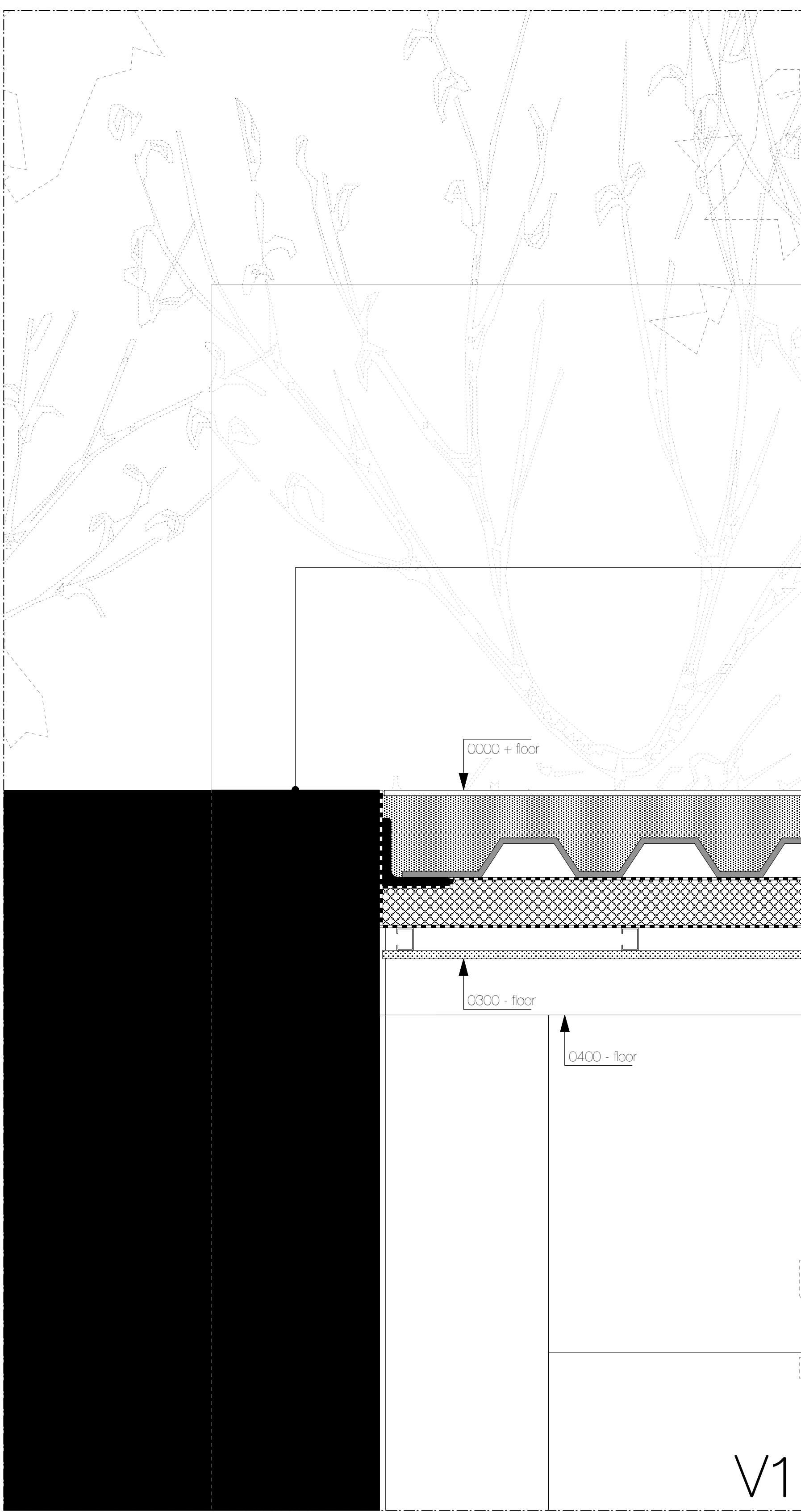


GROUNDED

multi-layered winery by archaeoloture

TONY'S MAU, JAN VILLEM VAN KULENBURG, PETER FEENSTRA, MARCO MAURER, POEL DERIX, 23 JUNE 2017





materials

- 01 . plasterboard 15mm
- 02 . conduit recess . 50mm
- 03 . vapor barrier foil
- 04 . insulation 80mm
- 05 . epdm waterproofing foil
- 06 . steeldeck floor . reused 150mm
- 07 . Epoxy coating . white 10mm
- 08 . new steel frame
- 09 . glass baluster
- 10 . glass panels (V) - coated white
- 11 . existing grid structure
- 12 . thermal glass/windows
- 13 . existing columns
- 14 . existing basement
- 15 . glass panels - coated white
- 16 . new steel columns

GROUND

multi layered winery by archaeoloture

FORTIS MAU - JAN WILLEM VAN KULENBURG - PETER FEENSTRA
MARC MAURER - ROEL DERIX - 23 JUNE 2017