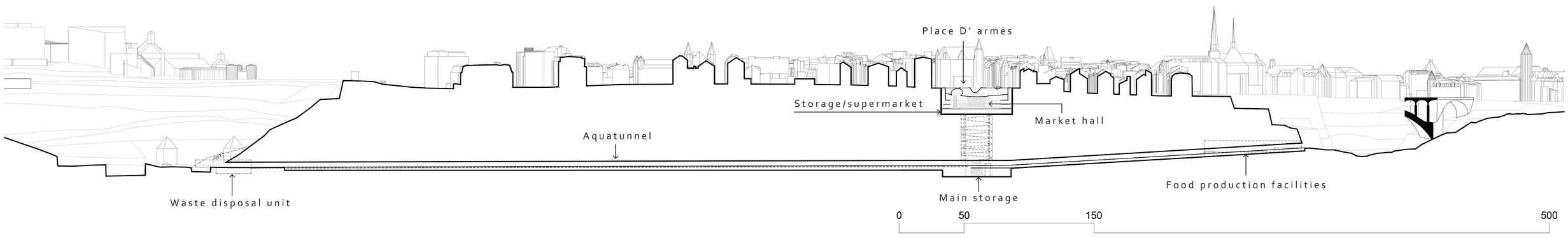
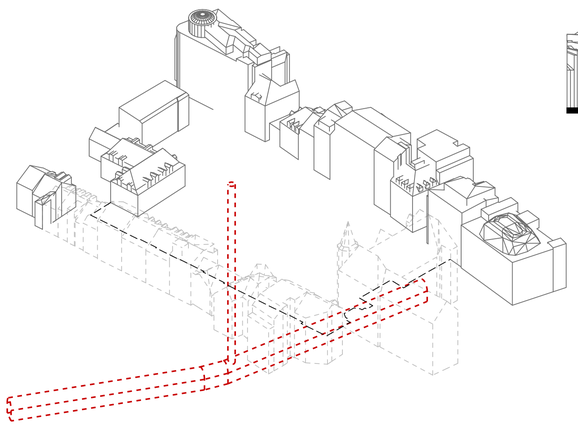
THE ELEVATOR DIAGRAM

A food hub for Luxembourg city

SITE PLAN
scale 1:1500

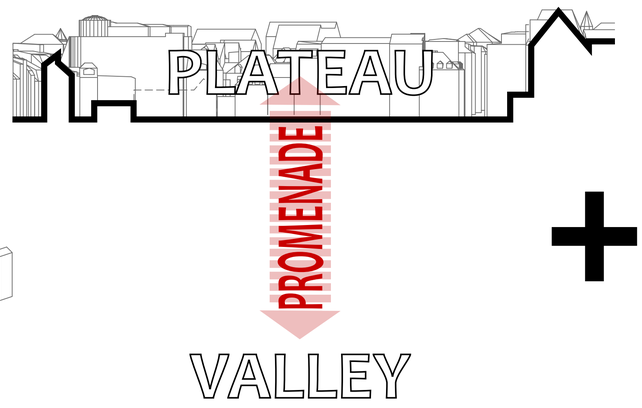


SITE SECTION PLAN
scale 1:1500



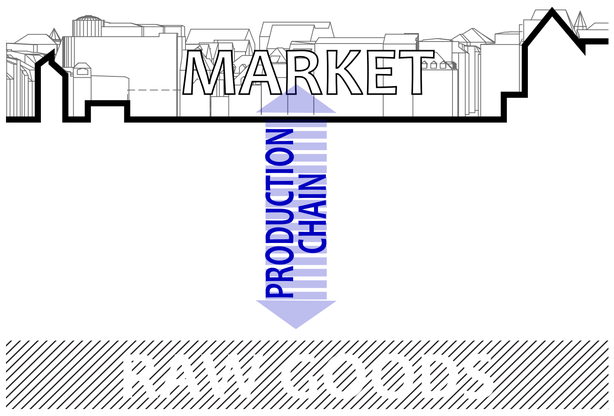
CONNECTION

The 'aquatunnel' connects through the underground the valleys around the city center plateau and it also has two vertical connections originally made for ventilation. This creates a link between the city center and the valley.



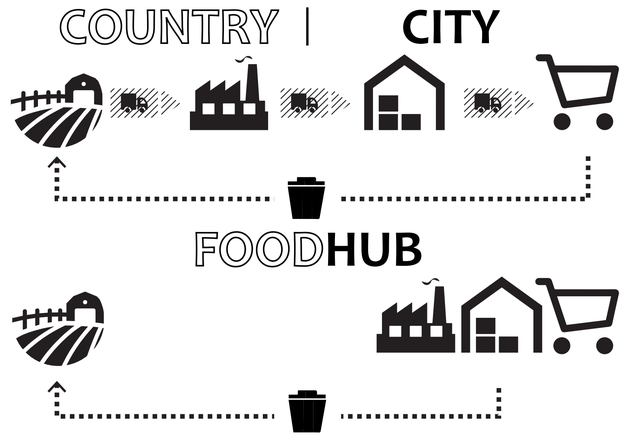
PROMENADE

This vertical connection to the tunnel and later to the valley represents a radical point, it creates a direct connection from the city center to the 'periphery' of the city. The connection is, therefore, a promenade to the valley.



PROGRAM/ANALOGY

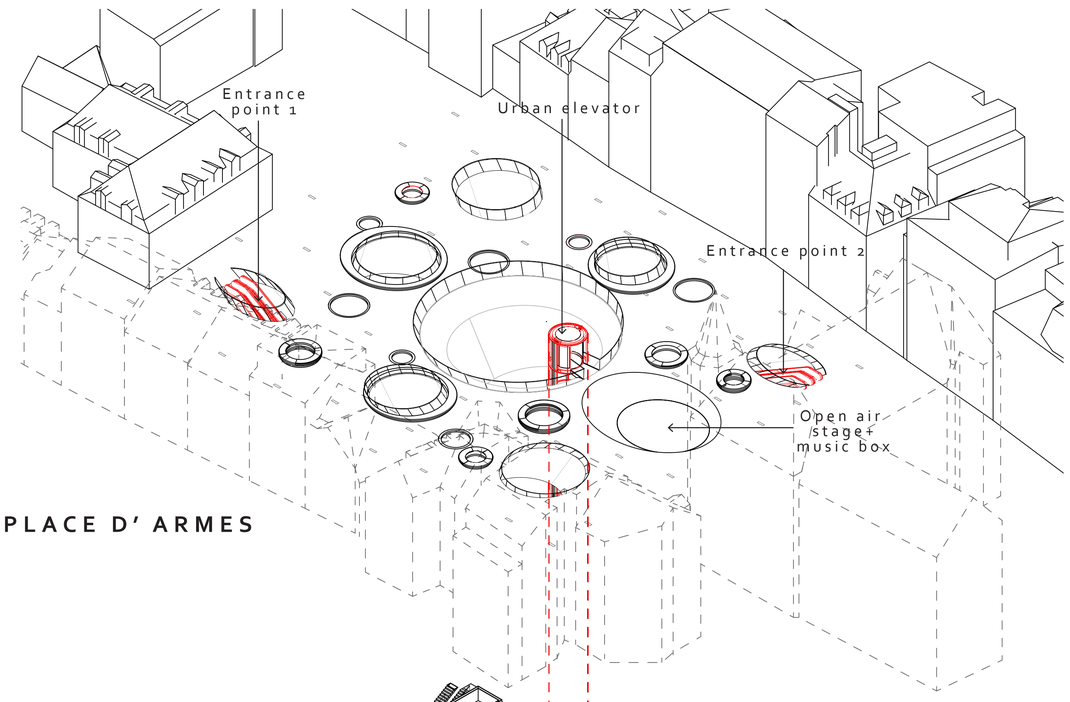
In order to relate the idea of this connection with an architectural intervention and based on the linearity of the promenade, the chosen program is a linear process. The food production also introduces a metaphor on how food is produced from the soil and taken to the surface.



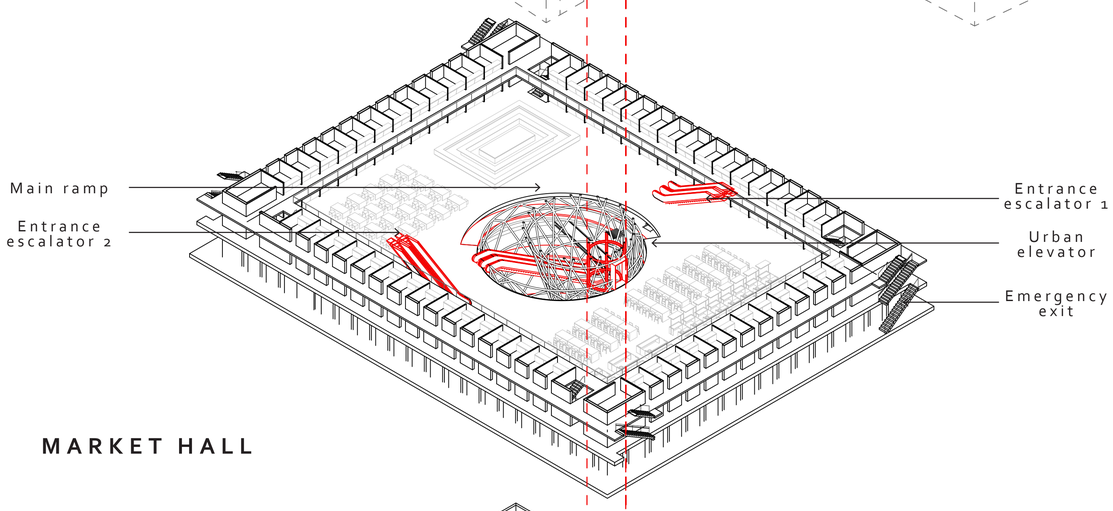
NEW SCHEME

The food hub presents an alternative to the current food production chain, reduces economic and environmental costs by eliminating the transportation between middle-man entities including distributors, processors, and retailers.

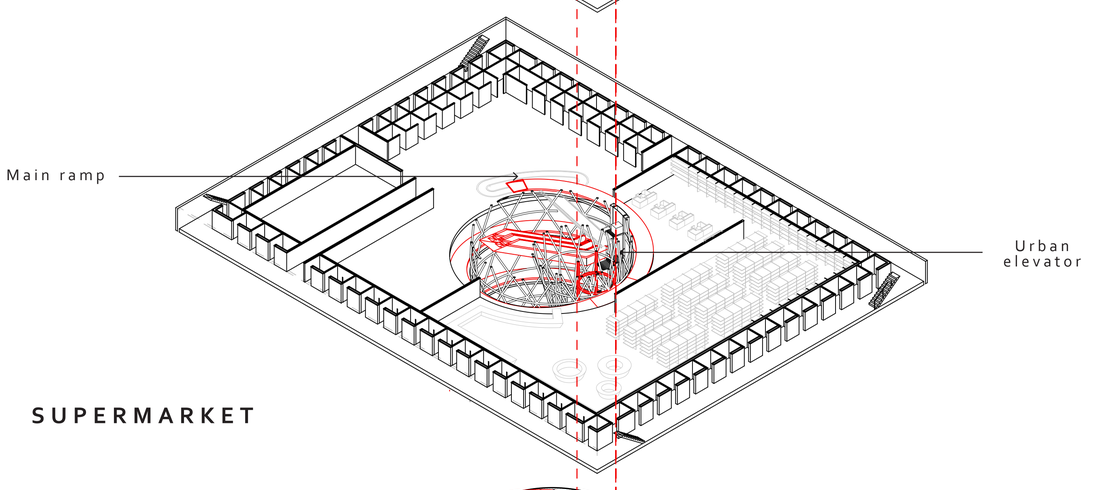
PROMENADE



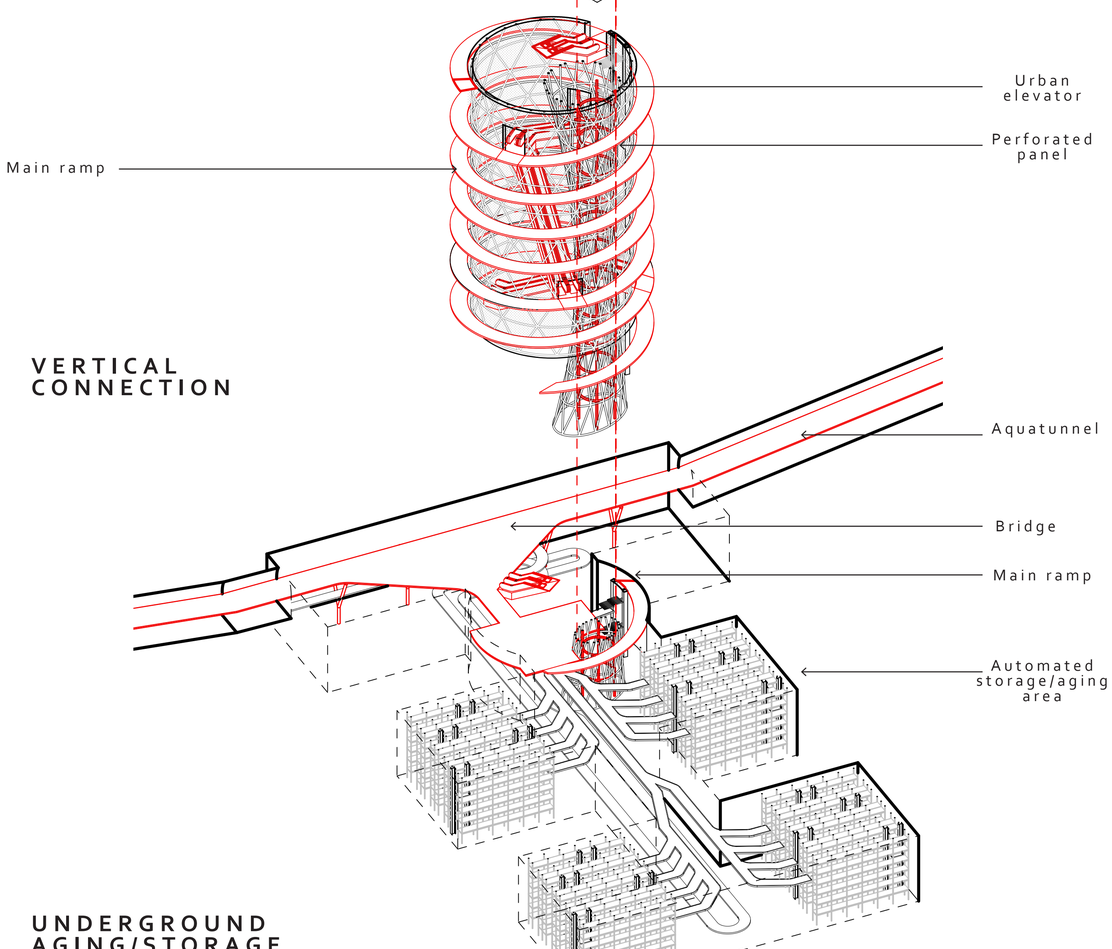
PLACE D' ARMES



MARKET HALL

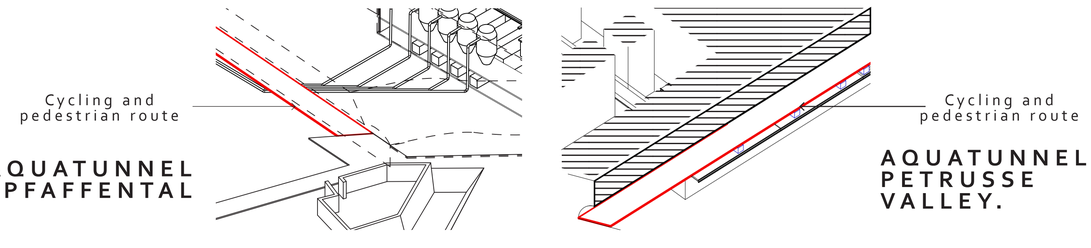


SUPERMARKET



VERTICAL CONNECTION

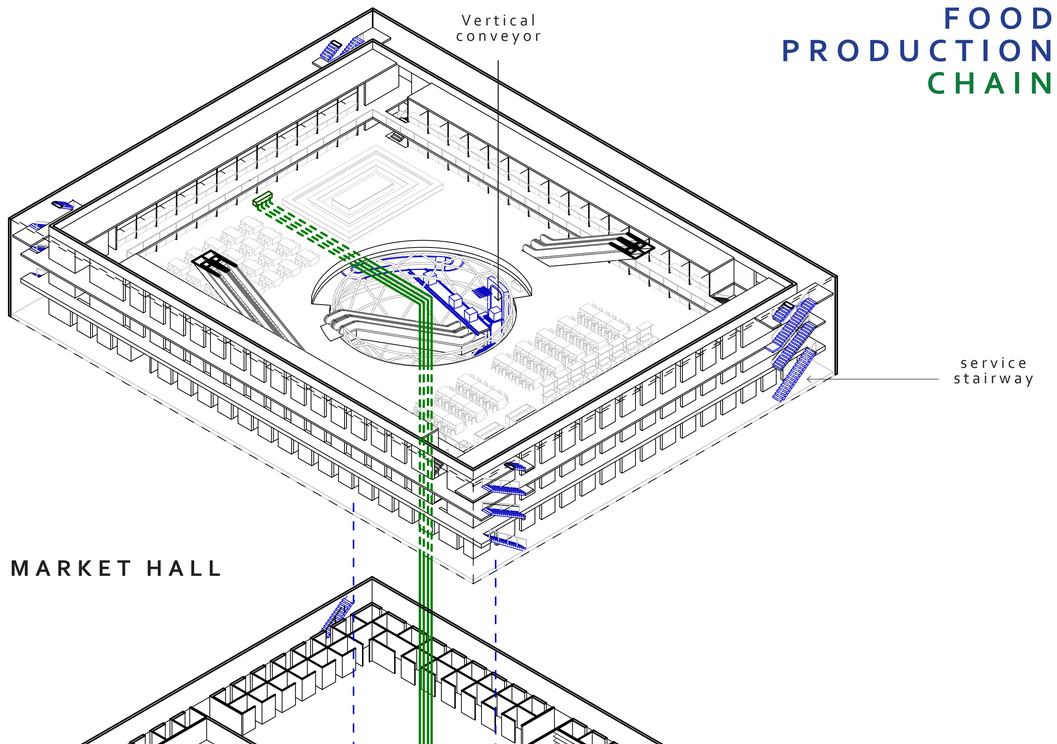
UNDERGROUND AGING/STORAGE



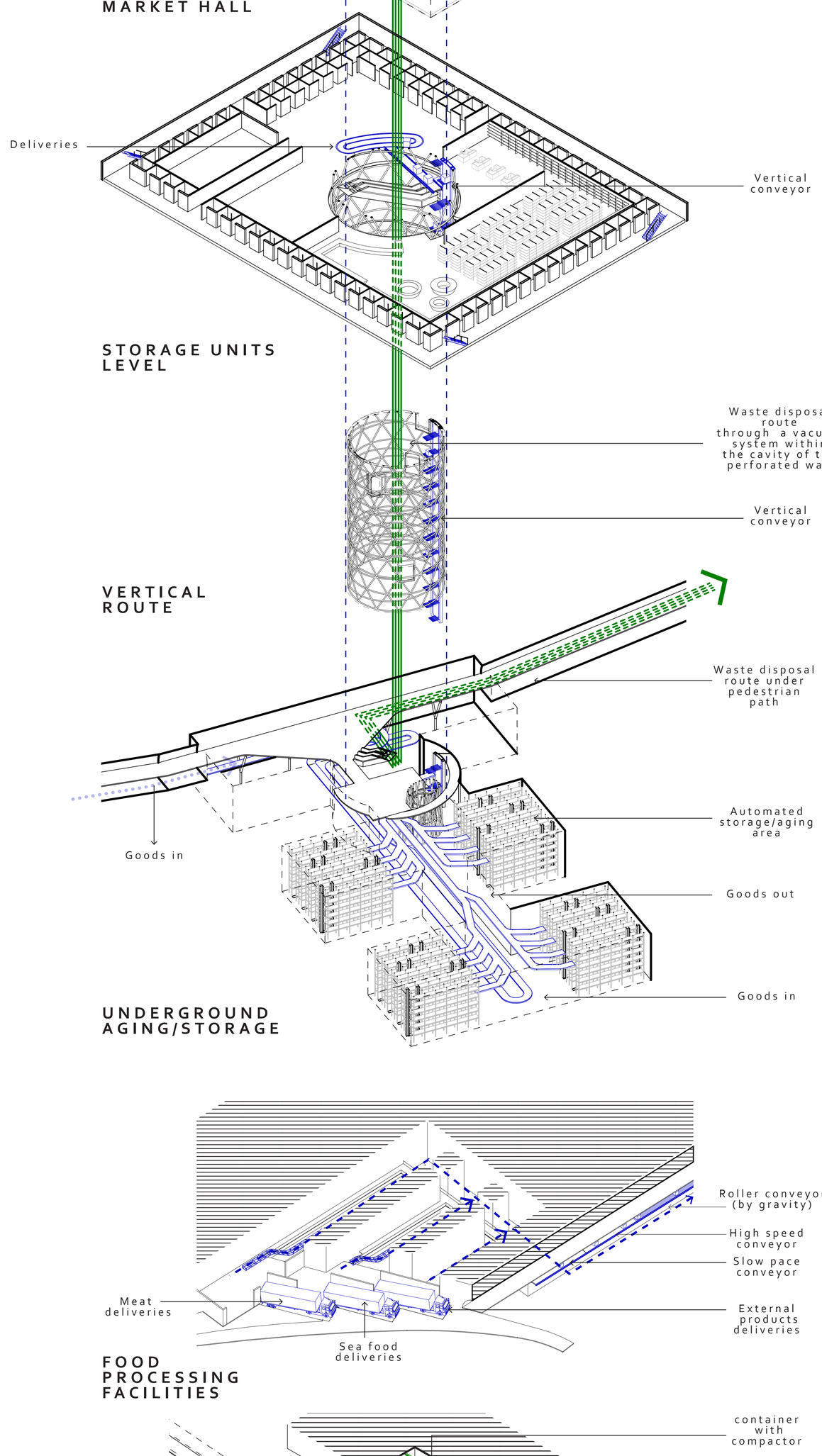
AQUATUNNEL PFAFFENTAL

AQUATUNNEL PETRUSSE VALLEY.

FOOD PRODUCTION CHAIN



MARKET HALL

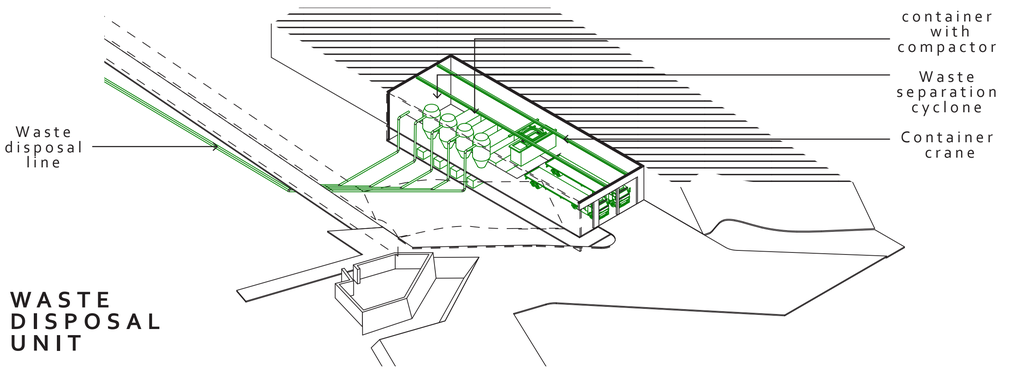


STORAGE UNITS LEVEL

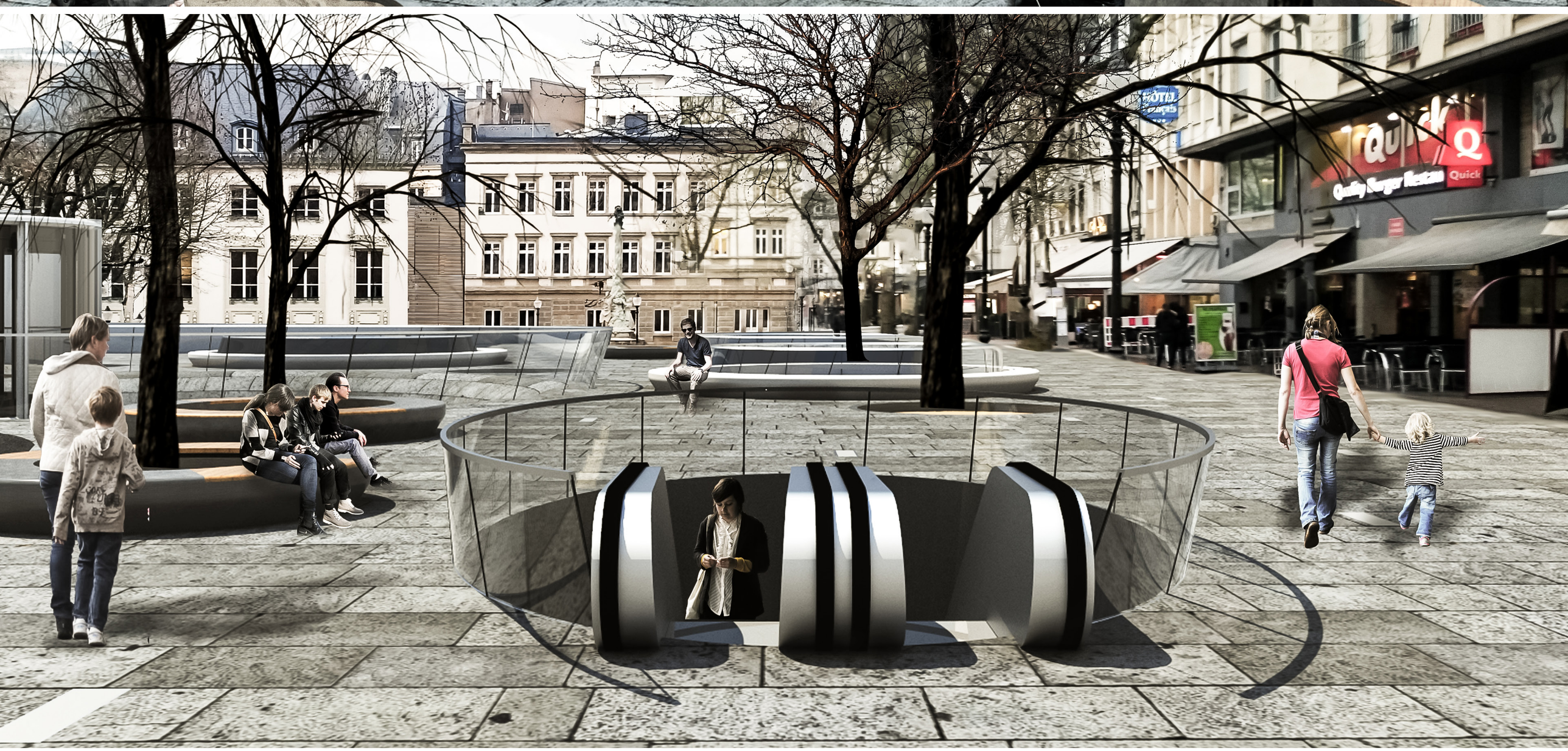
VERTICAL ROUTE

UNDERGROUND AGING/STORAGE

FOOD PROCESSING FACILITIES



WASTE DISPOSAL UNIT



Rue Genistre

Rue des Capucins

Rue Genistre

Entrance 1

Urban elevator

Cercle Cité Luxembourg

Square Jan palach

A

Music box

A

Cour des Comptes

Entrance 2

Rue du Cure

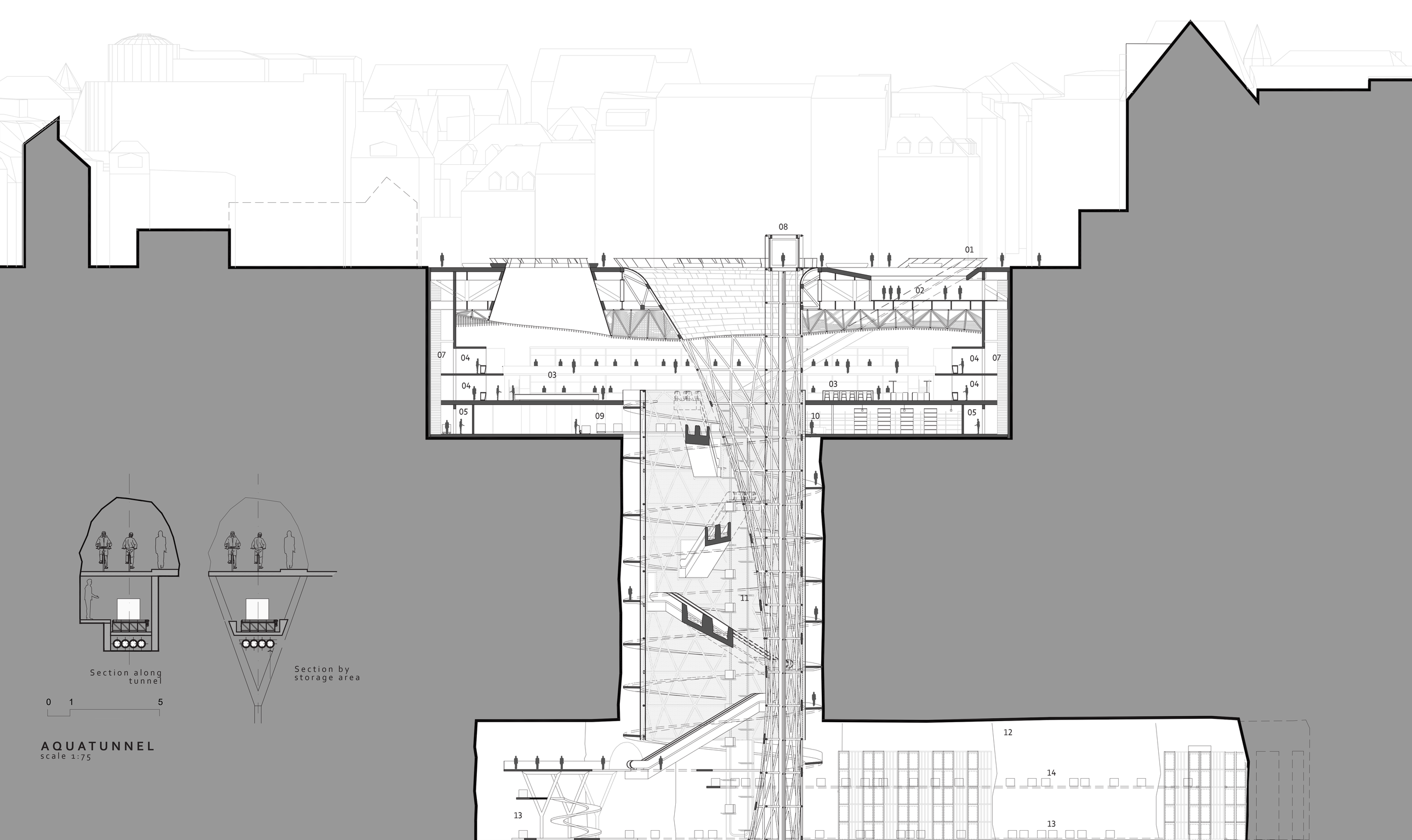
Place D' Armes

Avenue Monterrey

Rue Chimay

0 5 15 50

PLACE D' ARMES PLAN
scale 1:200



Section along tunnel

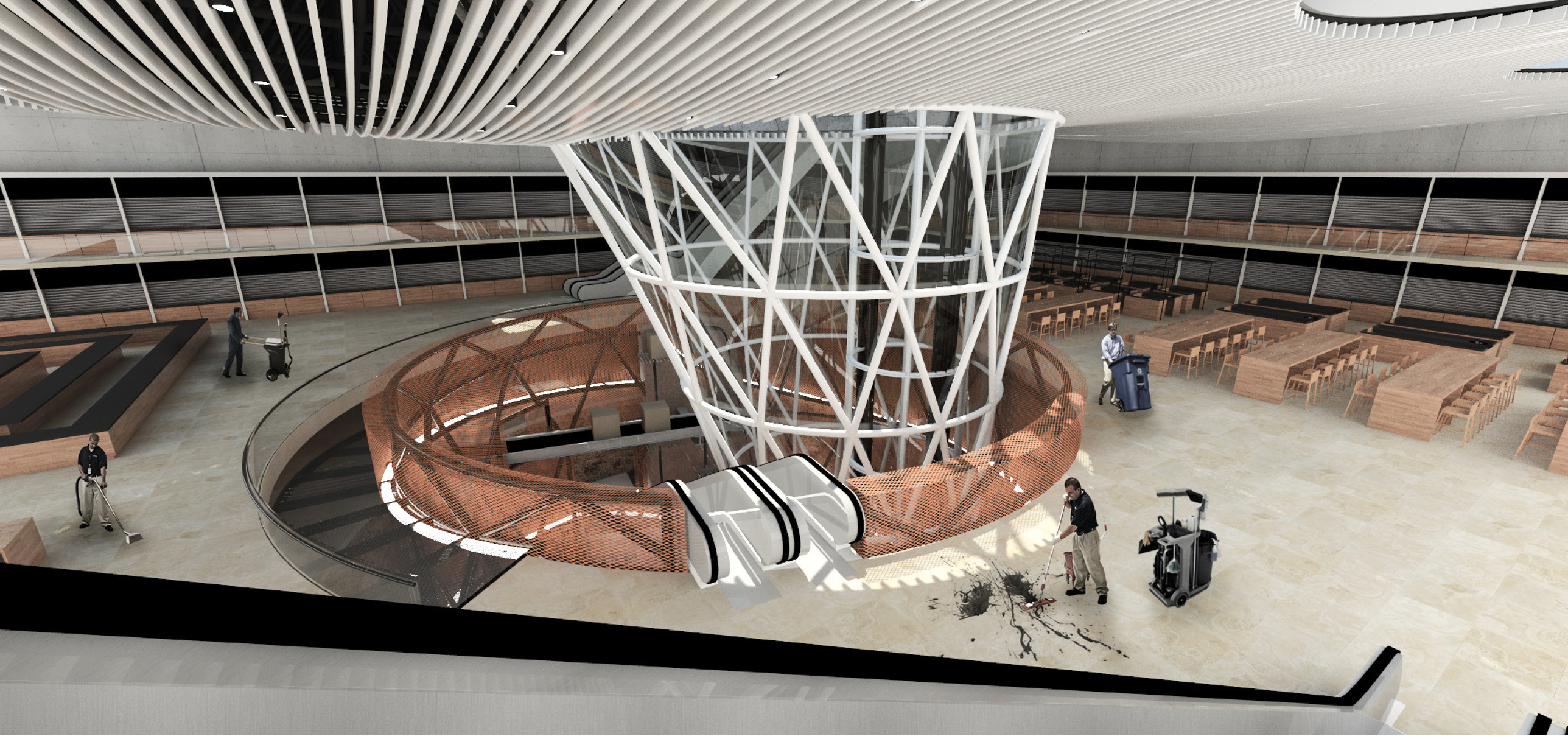
Section by storage area

0 1 5

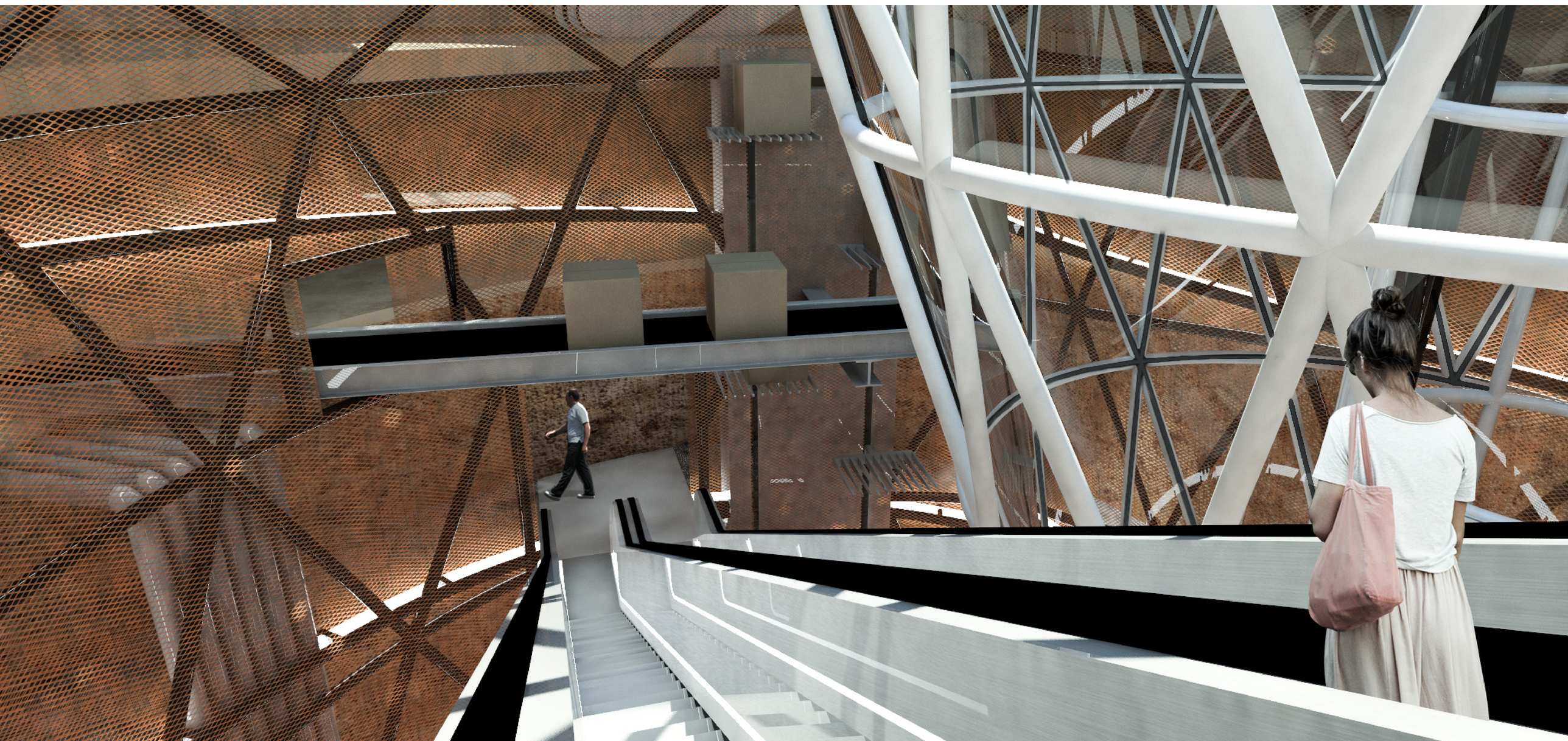
AQUATUNNEL
scale 1:75

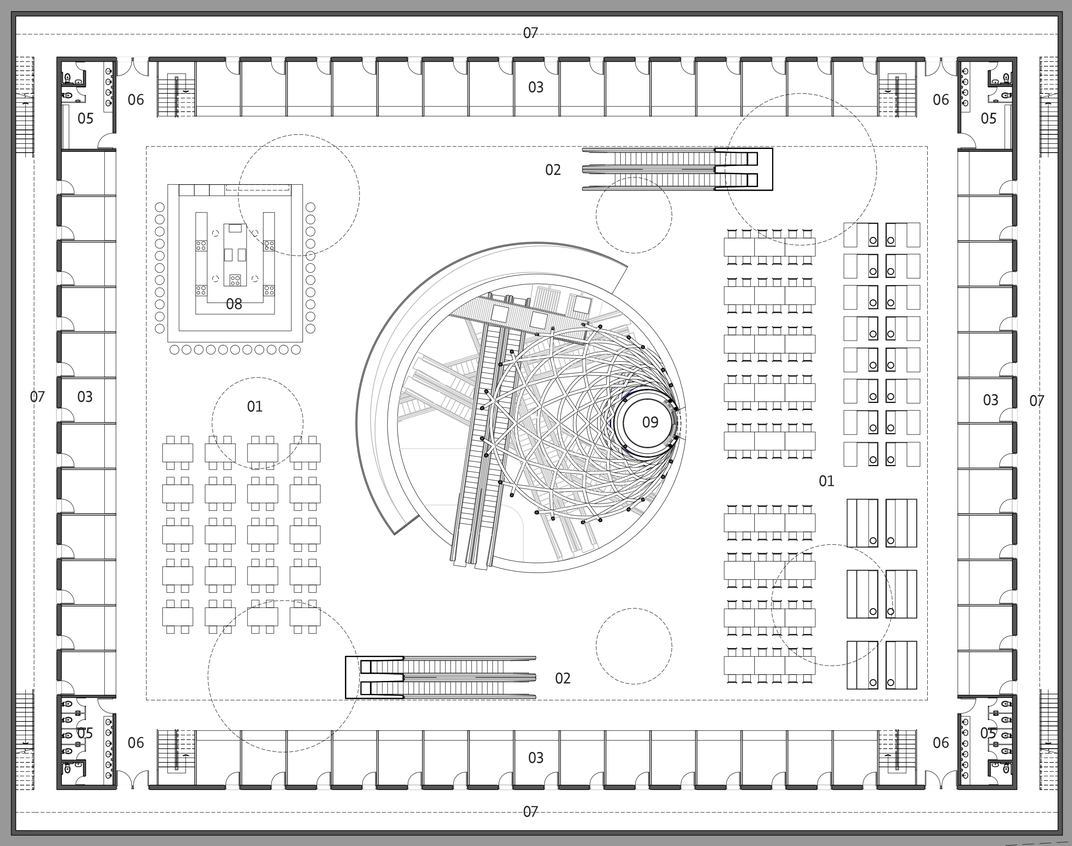
SECTION AA
scale 1:200

01. Place D' Armes main entrance
02. Music box
03. Food court
04. Stalls
05. Private storage rooms
06. Supermarket
07. Techical/ventilation void
08. Urban elevator
09. Deliveries
10. Supermarket
11. Goods vertical route
12. Storage Level
13. Goods-in route
14. Goods-out route




SEA ME
HENRIQUE SA PESSOA
MIGUEL CASTRO E SILVA
MARLENE VIEIRA

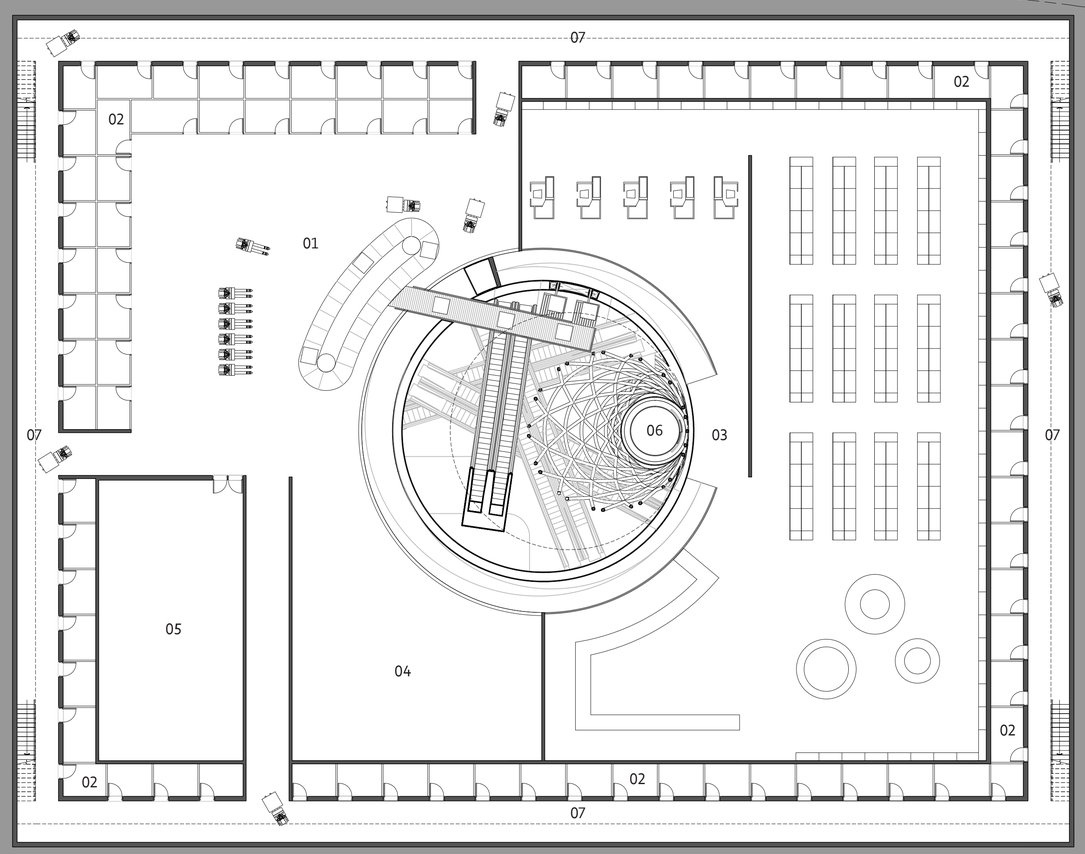




01. Food court
02. Main entrances
03. Stalls level 1
04. Stalls level 0
05. Toilets
06. Emergency exit
07. Techical/ventilation void
08. Open kitchen
09. Urban elevator

0 5 15 50

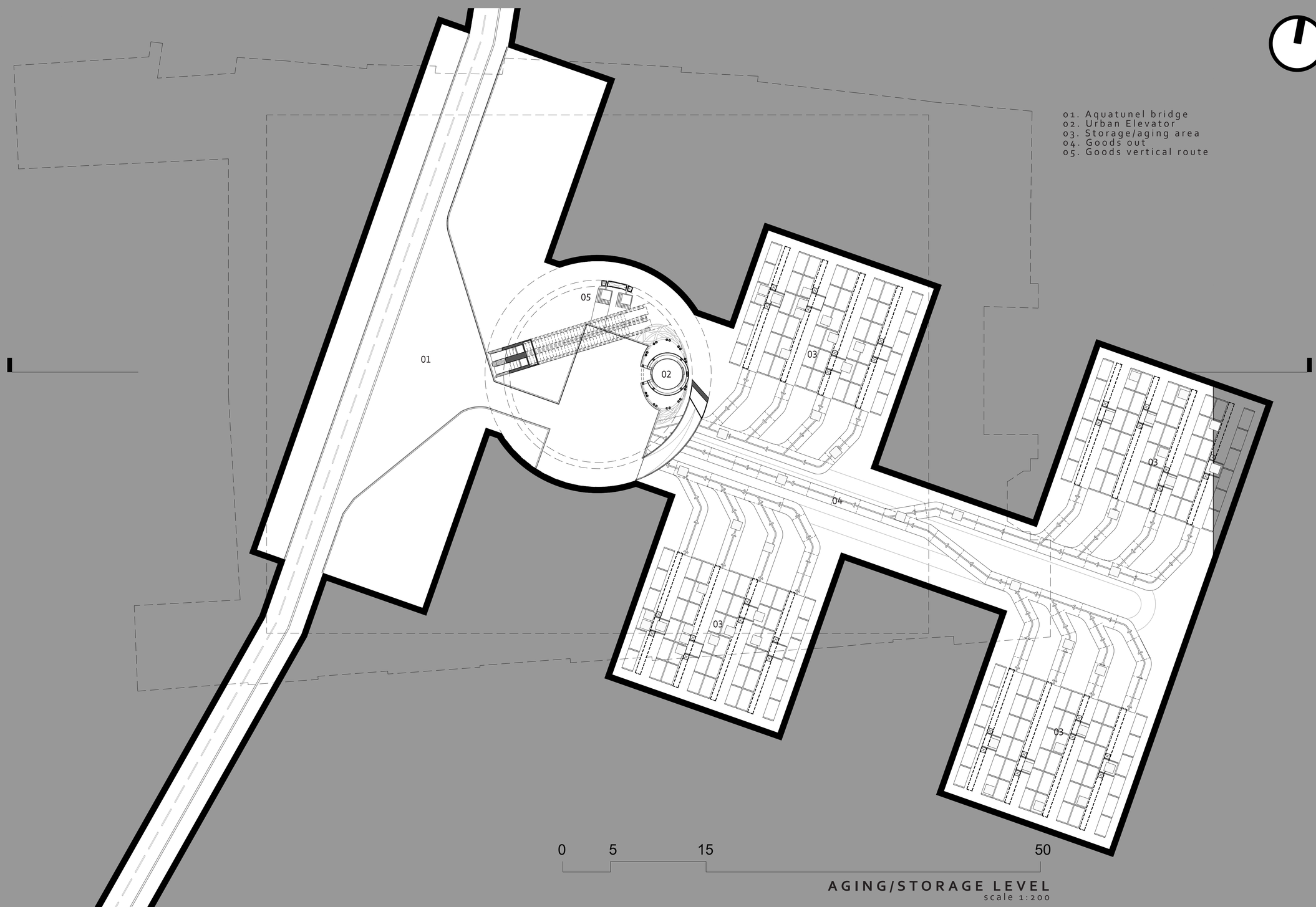
MARKET HALL LEVEL
scale 1:200



01. Deliveries
02. Private storage units
03. Supermarket
04. Supermarket storage
05. Employees area
06. Urban elevator
07. Distribution route

0 5 15 50

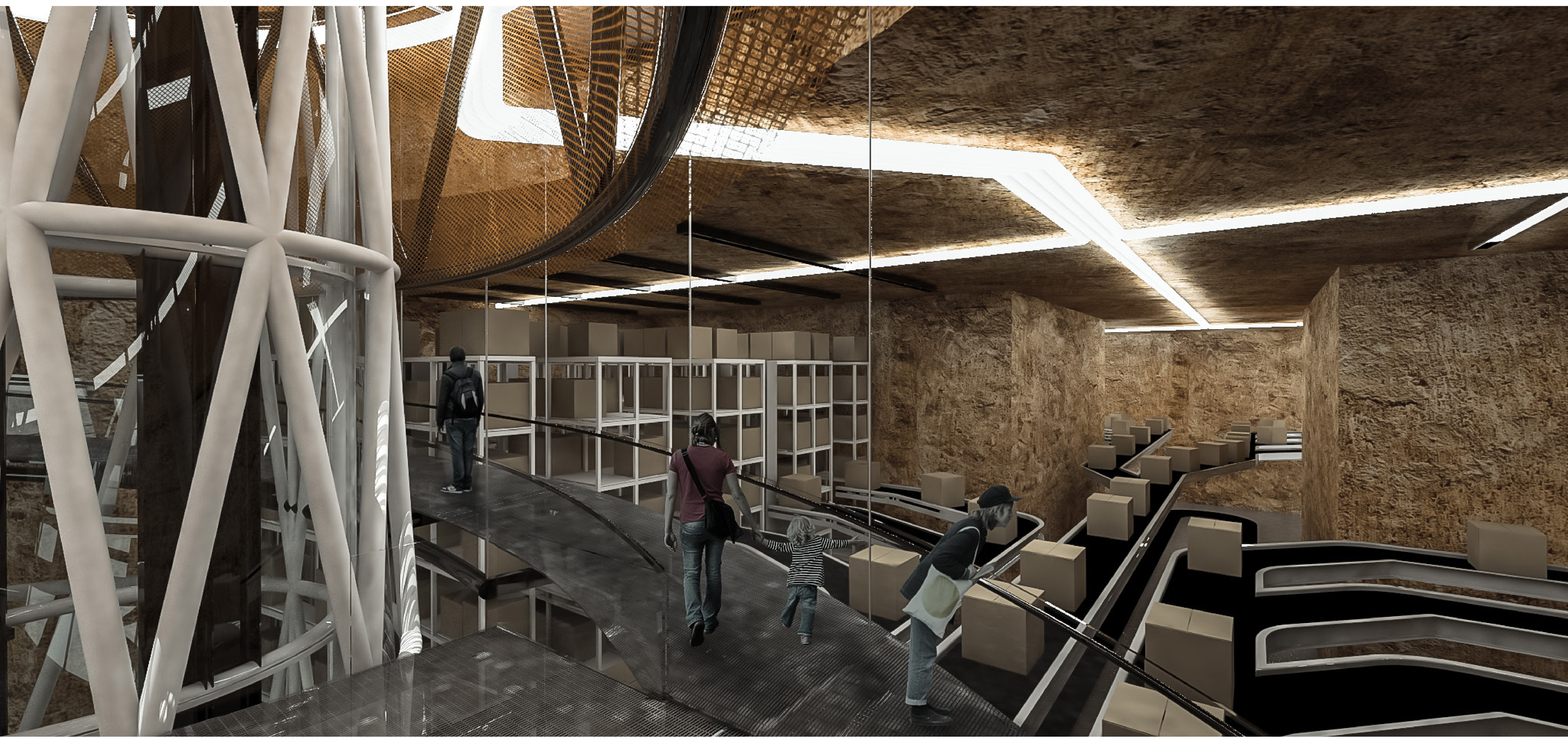
SUPERMARKET & STORAGE LEVEL
scale 1:200

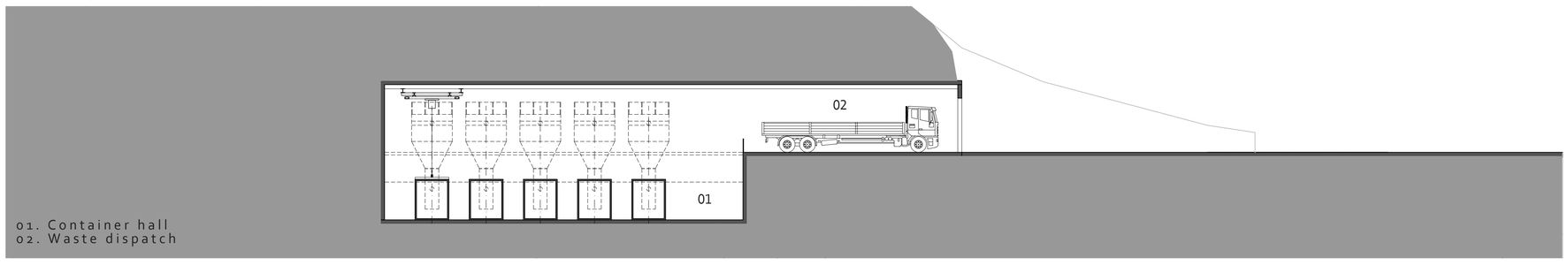


01. Aquatunel bridge
02. Urban Elevator
03. Storage/aging area
04. Goods out
05. Goods vertical route

0 5 15 50

AGING/STORAGE LEVEL
scale 1:200

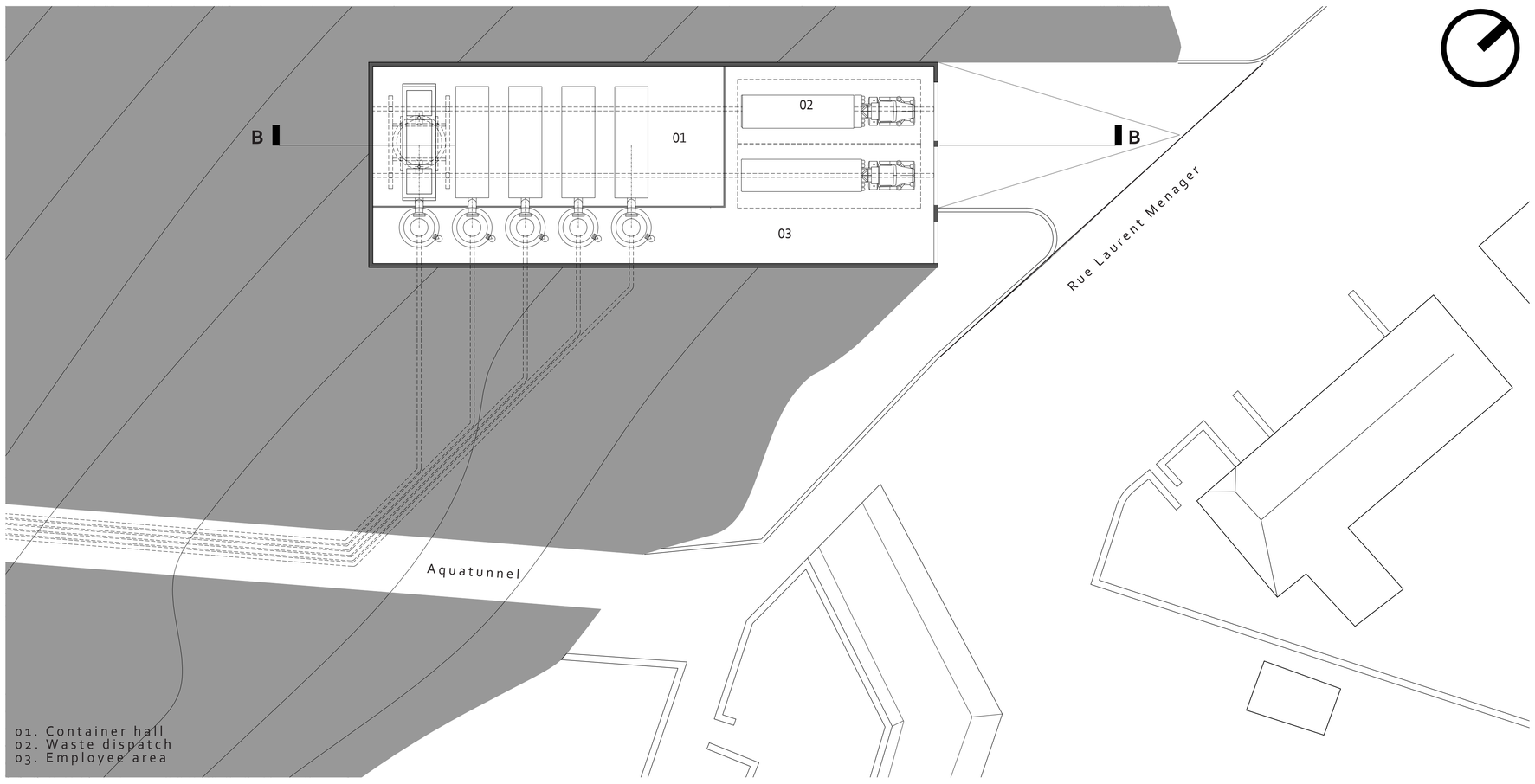




01. Container hall
02. Waste dispatch

0 5 15 50

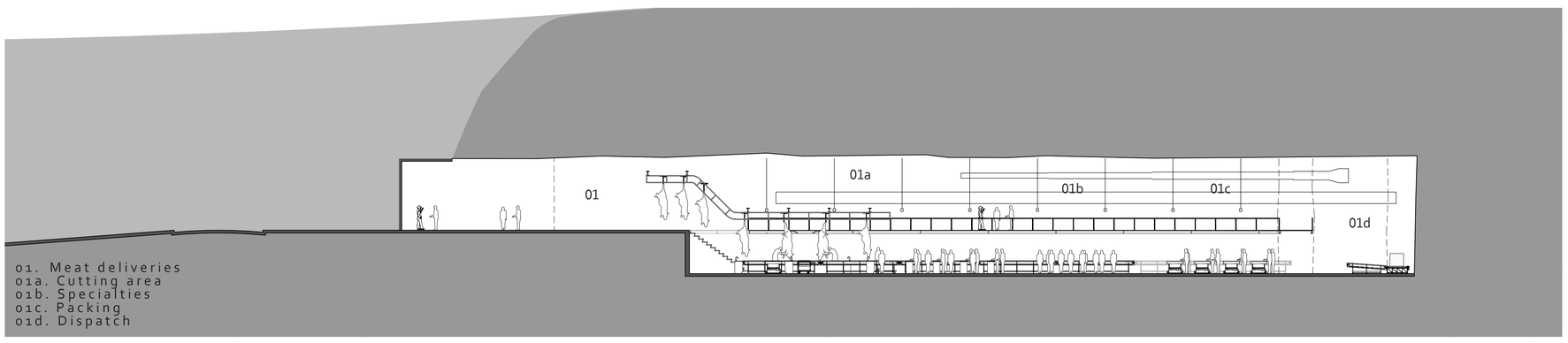
SECTION BB
scale 1:200



01. Container hall
02. Waste dispatch
03. Employee area

0 5 15 50

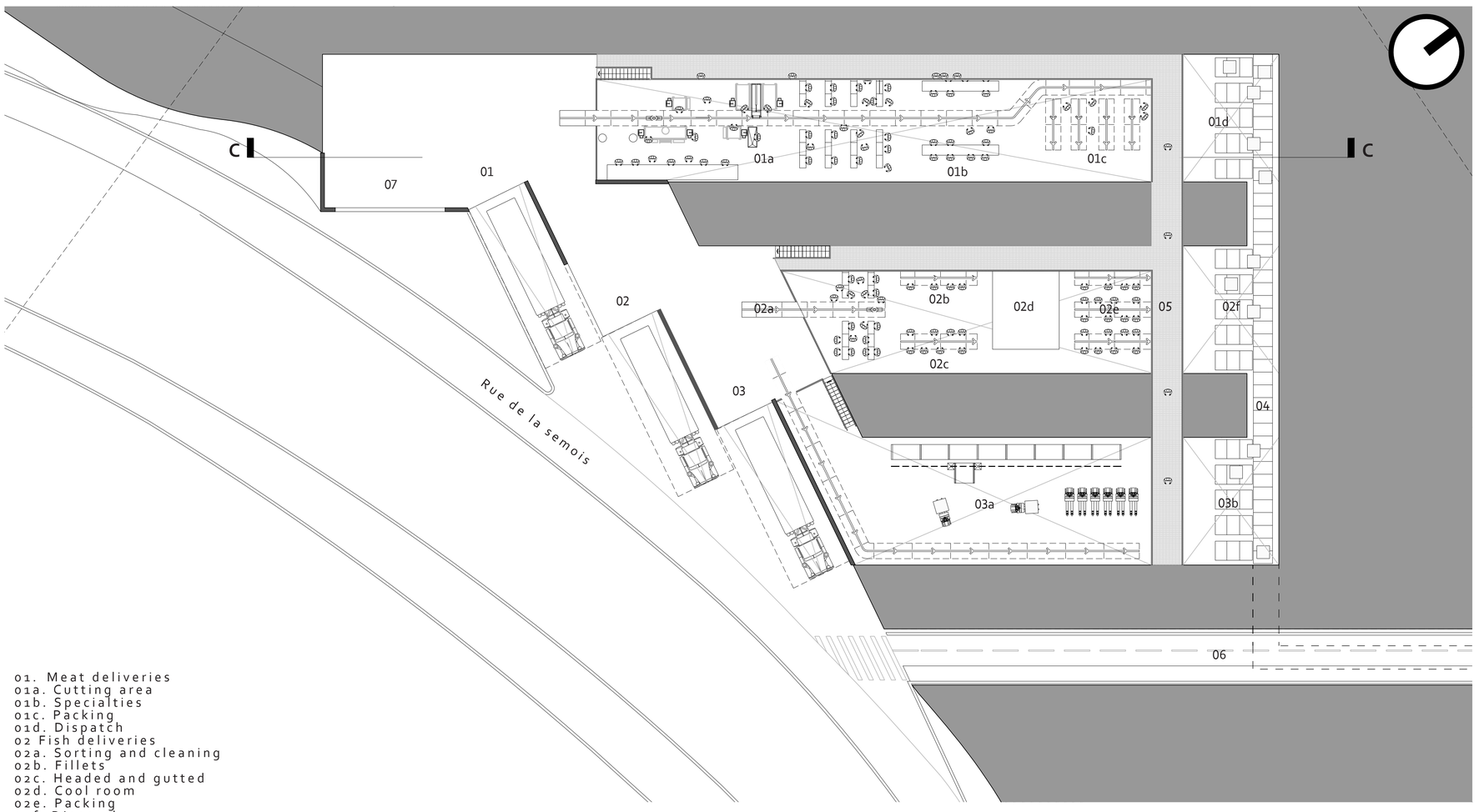
WASTE DISPOSAL STATION PLAN
scale 1:200



01. Meat deliveries
01a. Cutting area
01b. Specialties
01c. Packing
01d. Dispatch

0 5 15 50

SECTION CC
scale 1:200



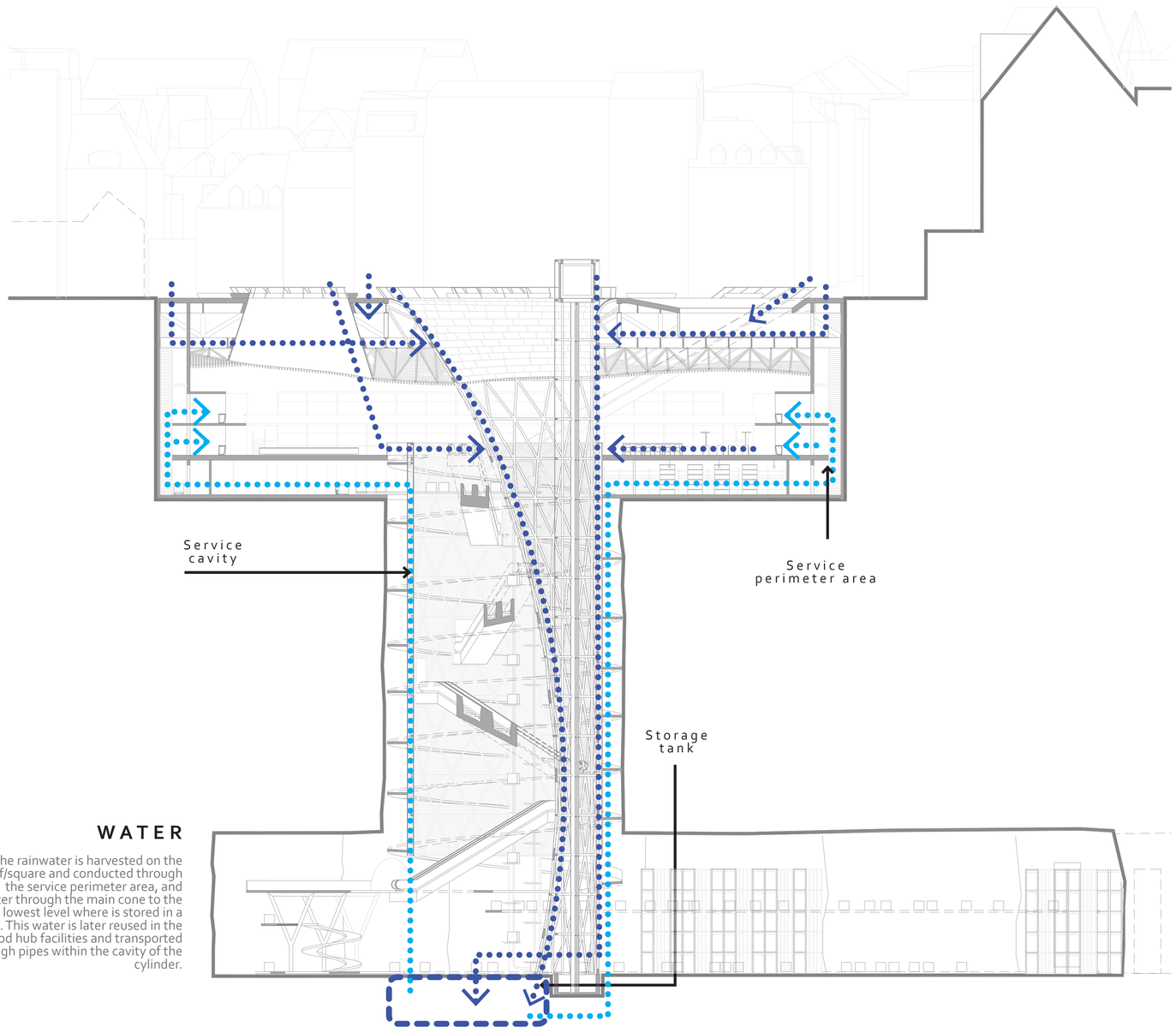
01. Meat deliveries
01a. Cutting area
01b. Specialties
01c. Packing
01d. Dispatch
02 Fish deliveries
02a. Sorting and cleaning
02b. Fillets
02c. Headed and gutted
02d. Cool room
02e. Packing
02f. Dispatch
03. External products delivery
03a. Handling and packing
03b. Dispatch
04. Conveyor belt to tunnel
05. Supervision catwalk
06. Aquatunel
07. Employee entrance

0 5 15 50

FOOD PRODUCTION FACILITIES PLAN
scale 1:200

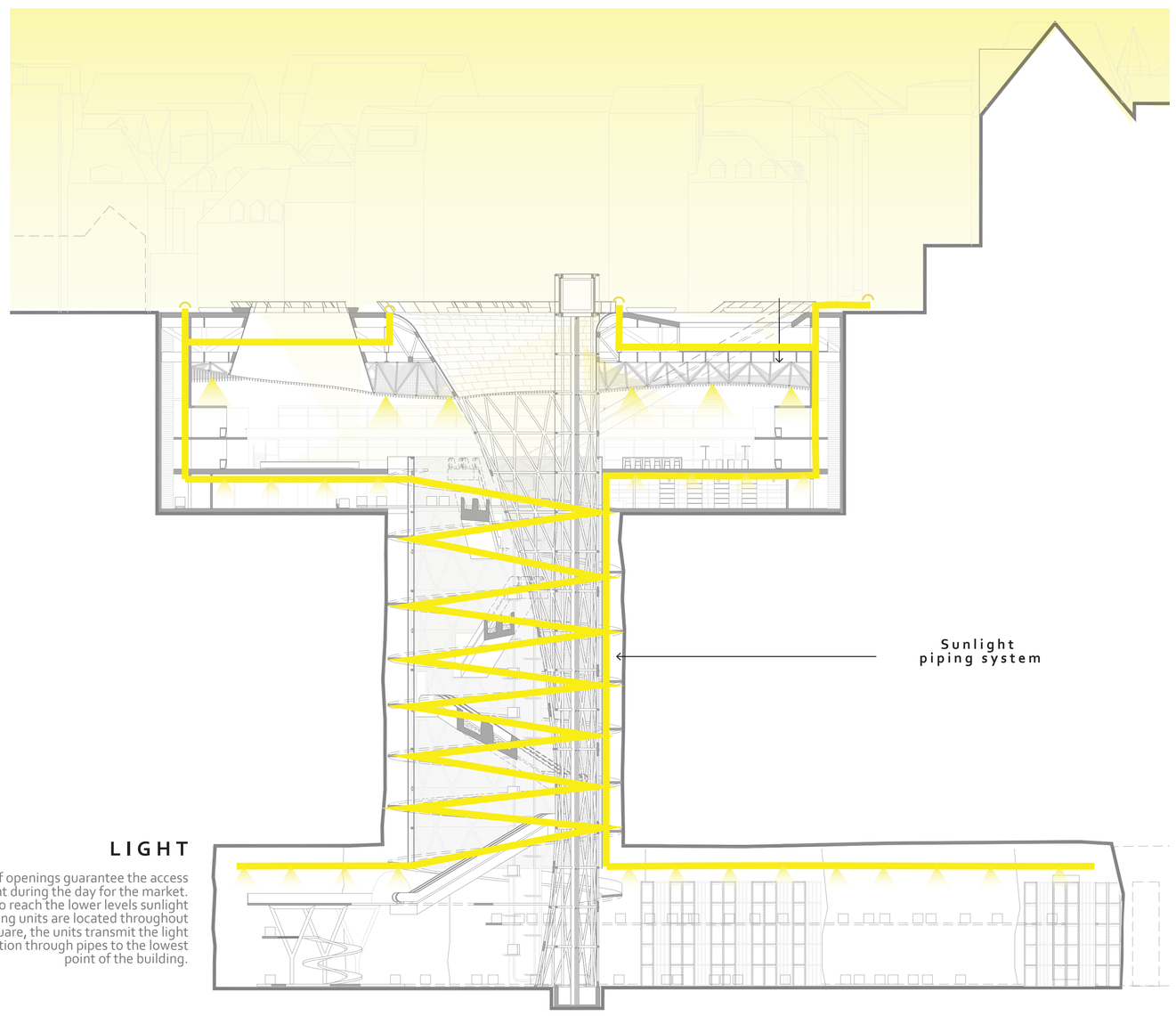

centre-ville
1
2
3


centre-ville



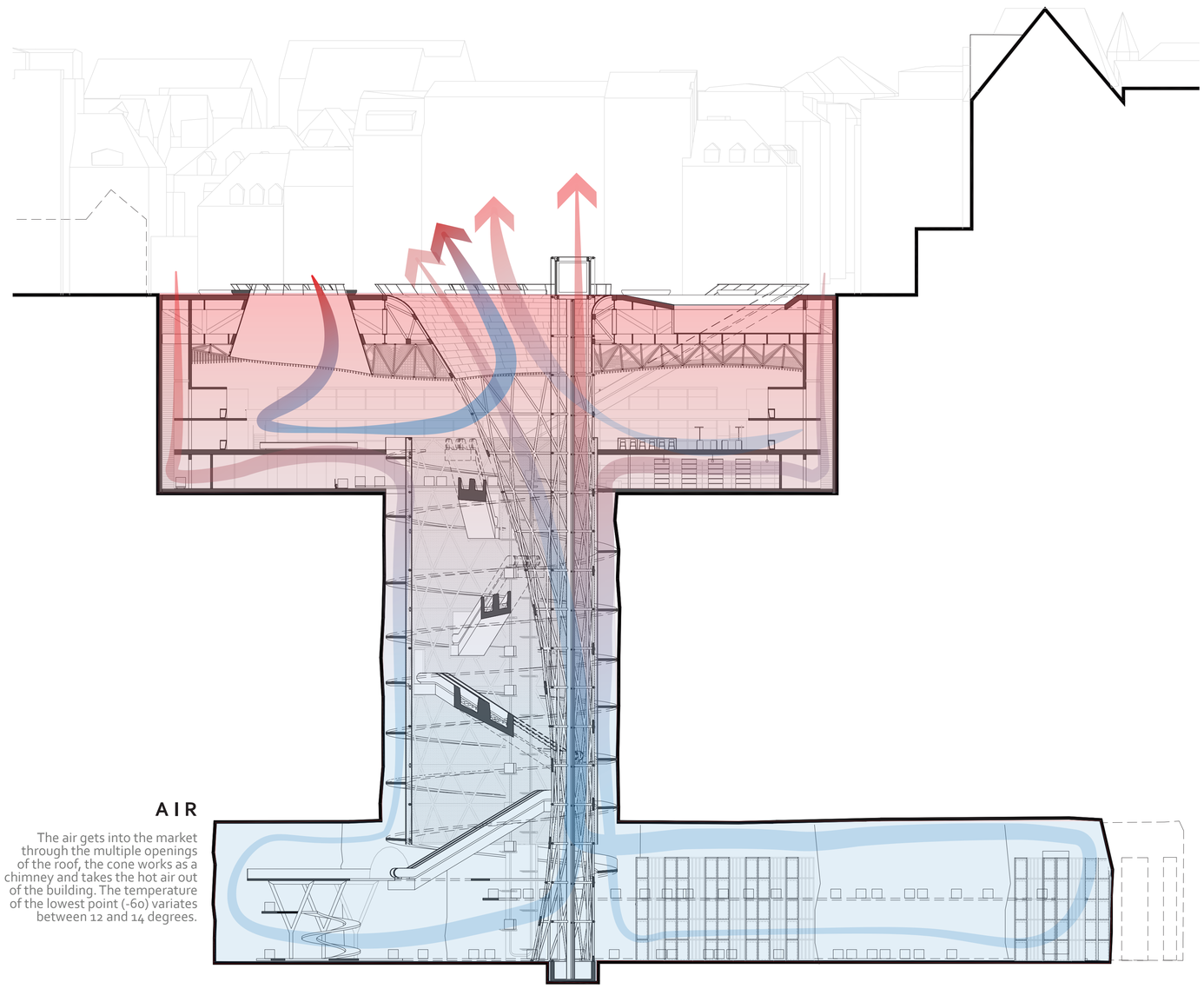
WATER

The rainwater is harvested on the roof/square and conducted through the service perimeter area, and later through the main cone to the lowest level where is stored in a tank. This water is later reused in the food hub facilities and transported through pipes within the cavity of the cylinder.



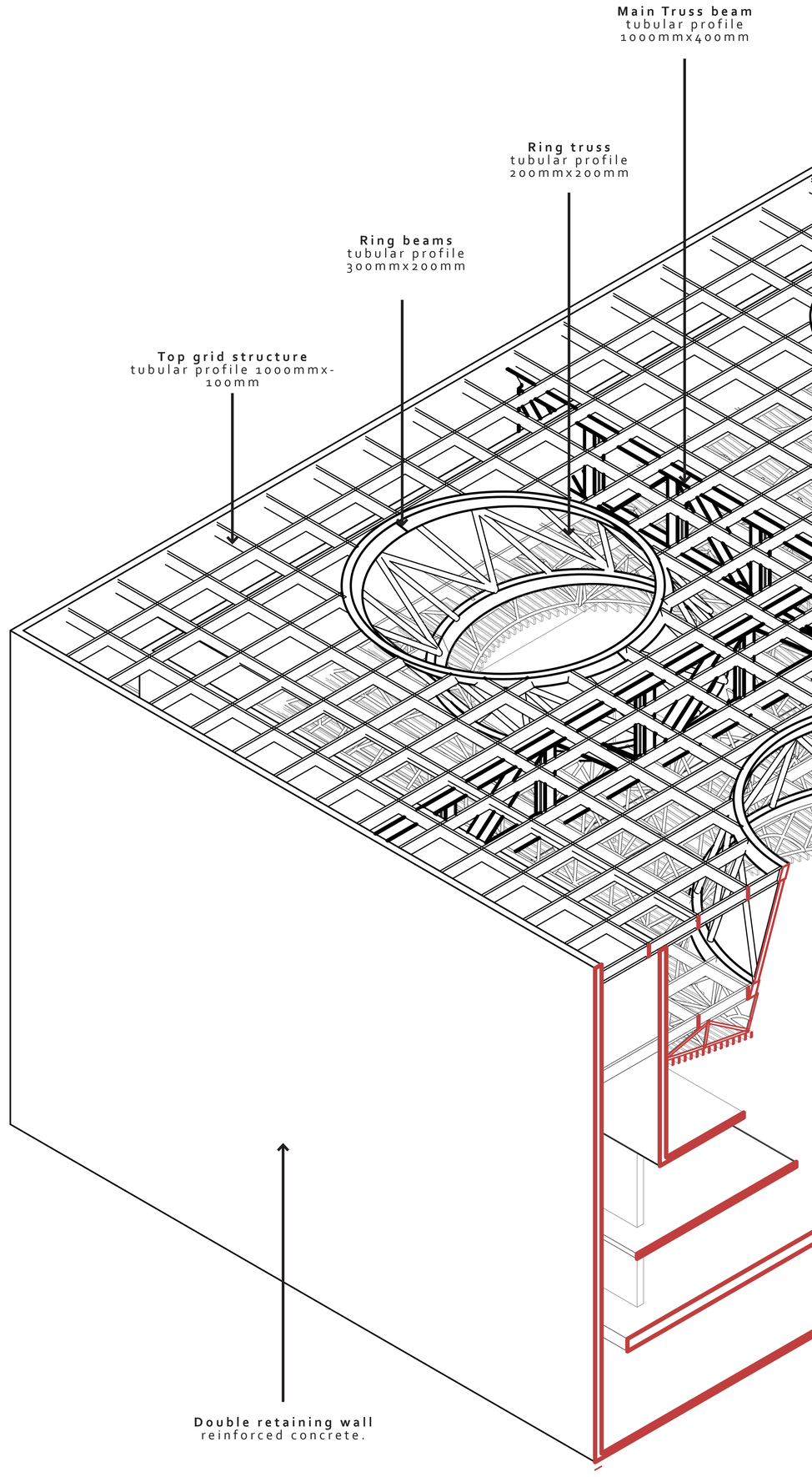
LIGHT

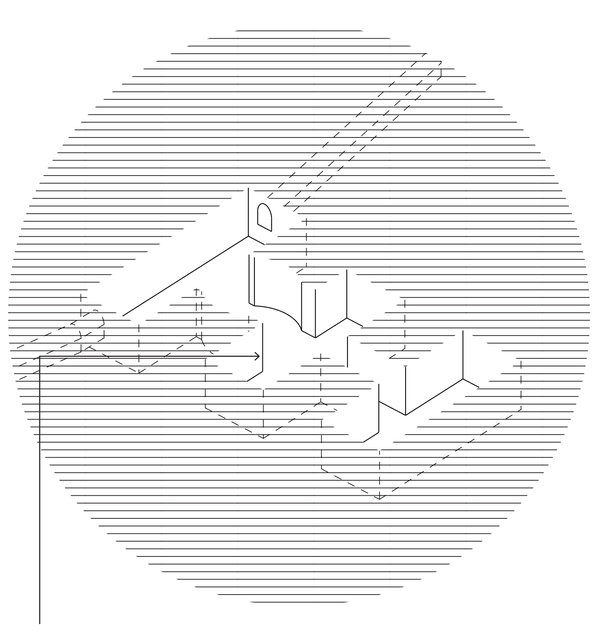
The roof openings guarantee the access of light during the day for the market. To reach the lower levels sunlight harvesting units are located throughout the square, the units transmit the light by reflection through pipes to the lowest point of the building.



AIR

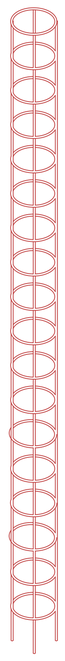
The air gets into the market through the multiple openings of the roof, the cone works as a chimney and takes the hot air out of the building. The temperature of the lowest point (-60) variates between 12 and 14 degrees.





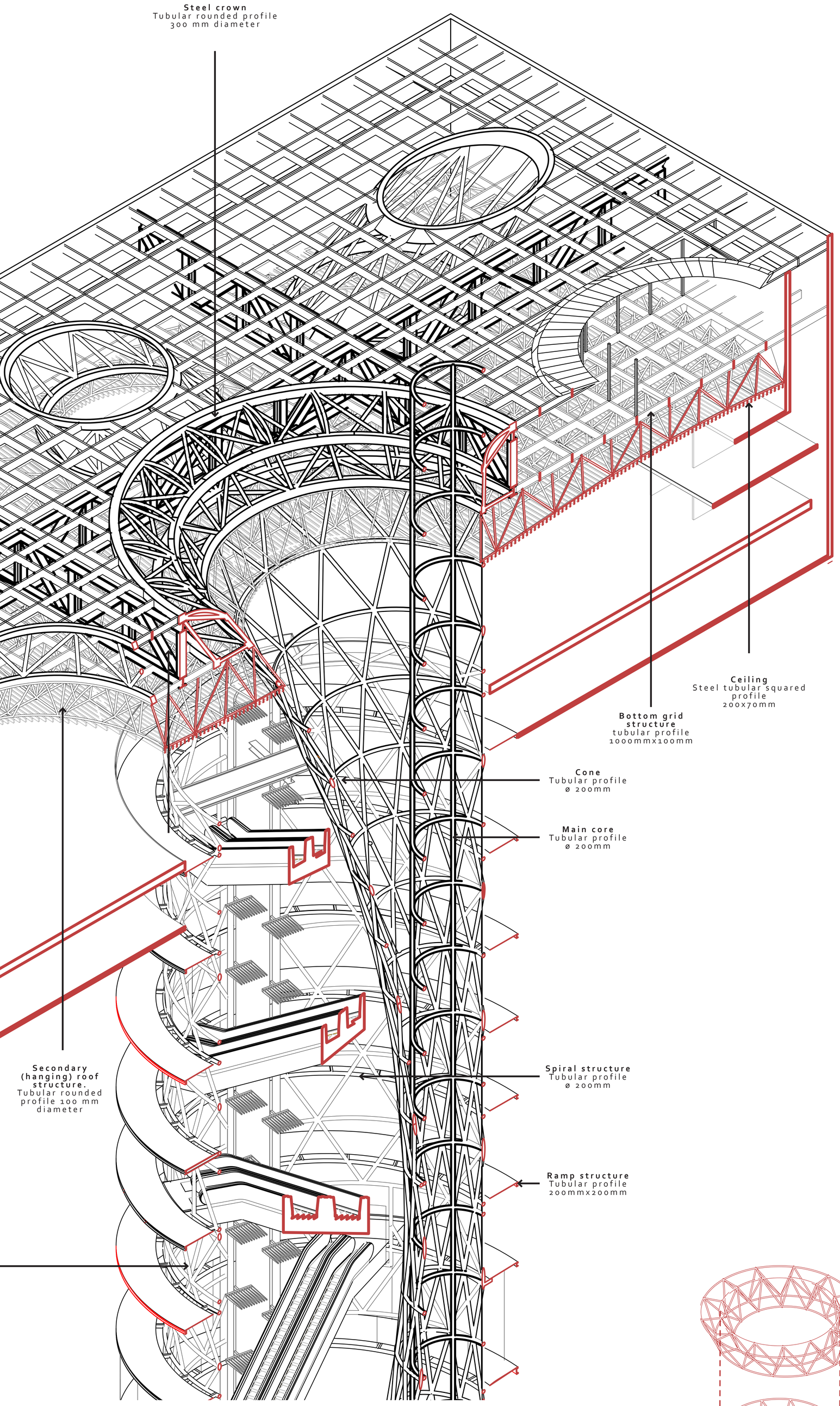
THE UNDERGROUND

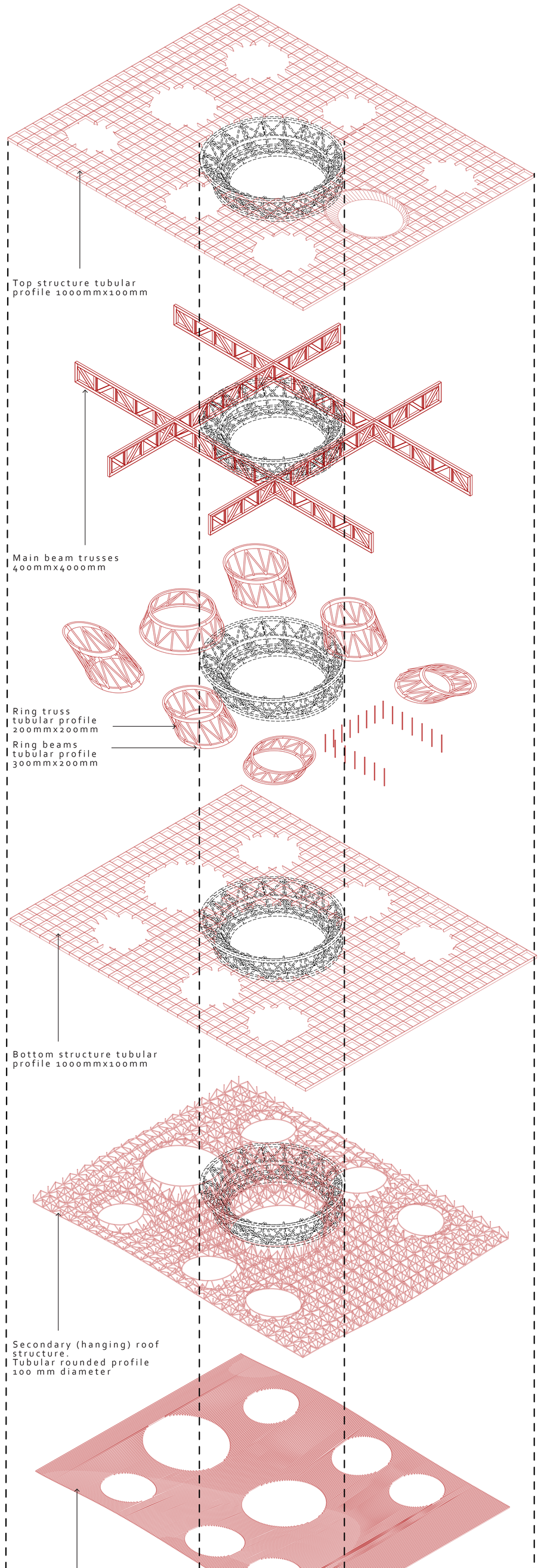
The underground structures are supported by a technique used in mining called Room and pillar, where the "pillars" of untouched material are left to support the roof overburden, and open areas or "rooms" are extracted underground;

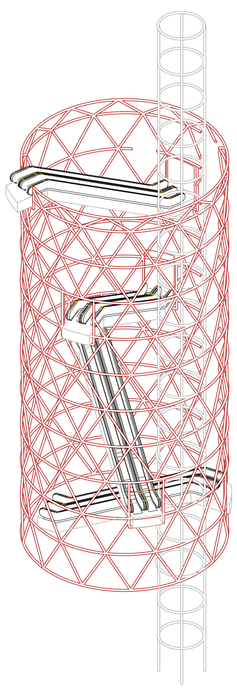


THE CORE

The elevator´s structure is the main structural element and starting point.

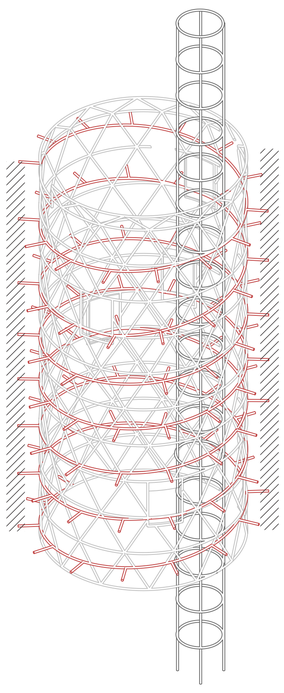






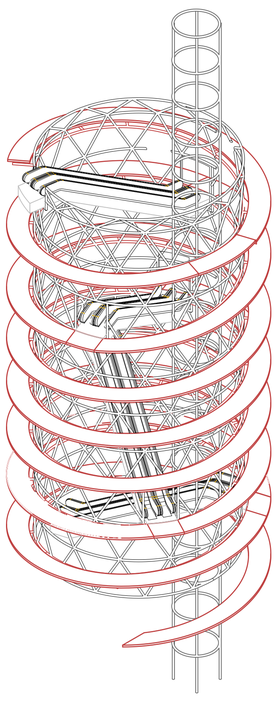
THE CYLINDER

A secondary structure is attached to the core to support the landings of the escalators, and create a visible gap between the main cylinder and the sandstone.



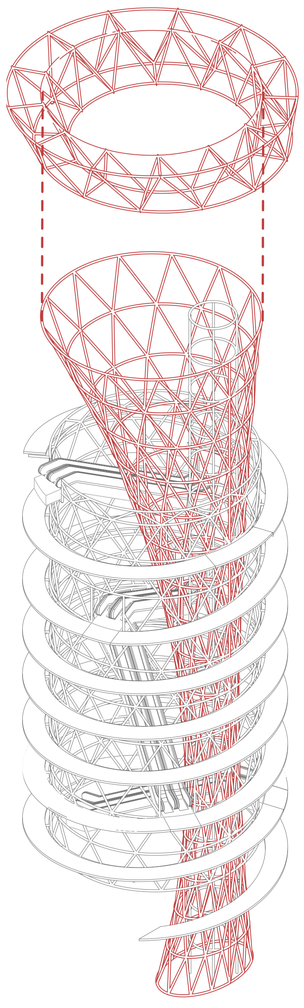
THE SPIRAL

A tubular spiral wraps the cylinder and attaches it to the underground sandstone by small perpendicular beams.



THE RAMP

The ramp lies on top of the beams coming from the spiral and also works as a structural element.

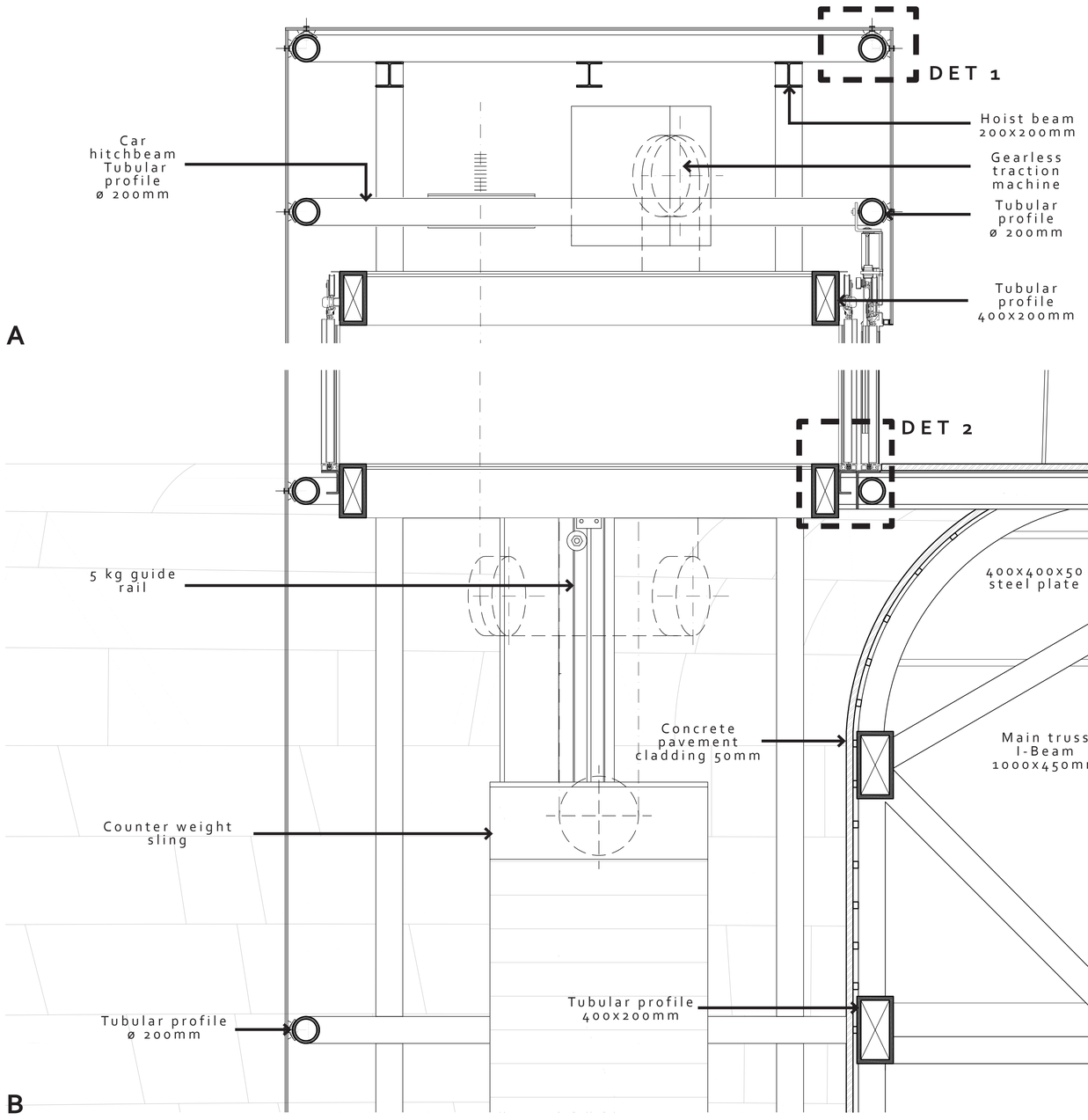


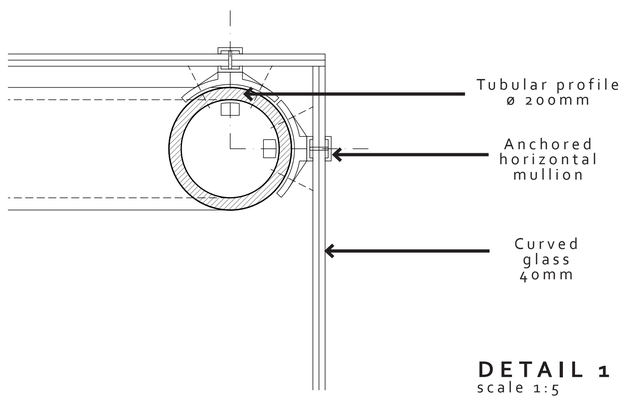
THE CONE

The conical shape also wraps the core and the cylinder providing extra stiffness and it extends to the top of the square where is surrounded by a crown that works as an interface between it and the roof.

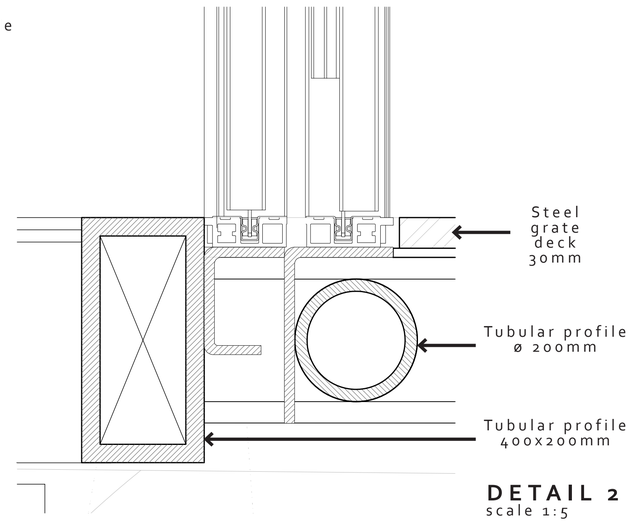
THE ROOF

The crown connects the cone with the main structure of the roof, a similar scheme is used for the other perforations, a secondary structure hangs from the main one as a ceiling from which a series of parallel profiles bend. The whole roof structure lies on the concrete walls that surround the market.





DETAIL 1
scale 1:5



DETAIL 2
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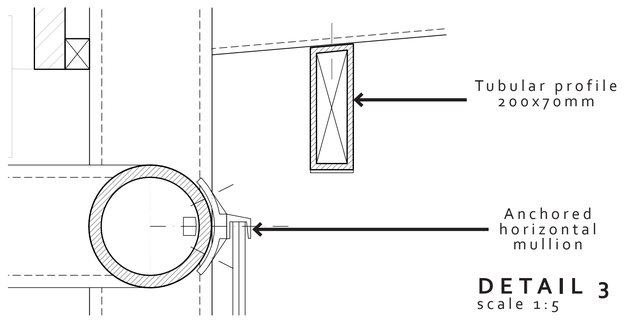

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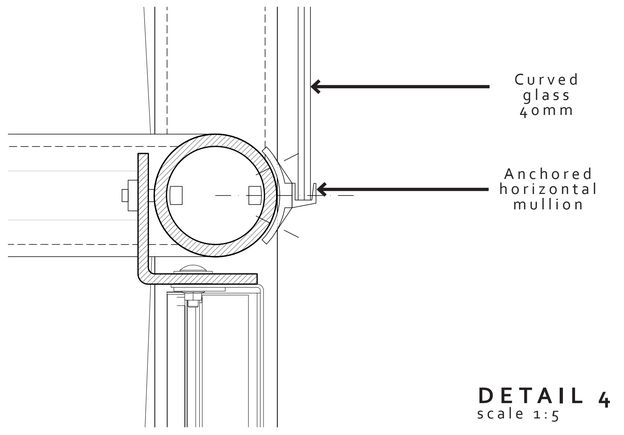

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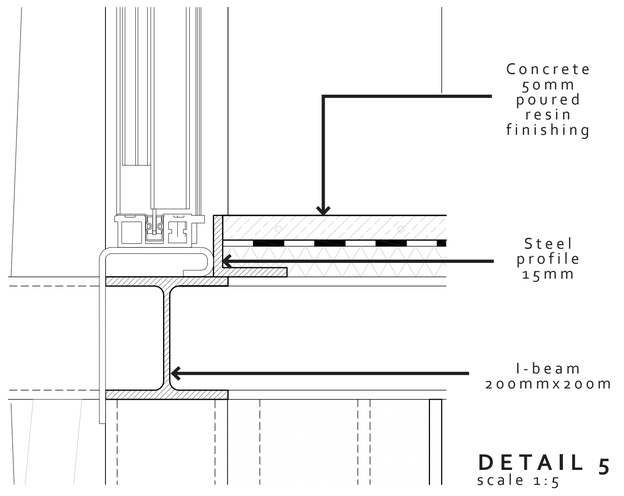

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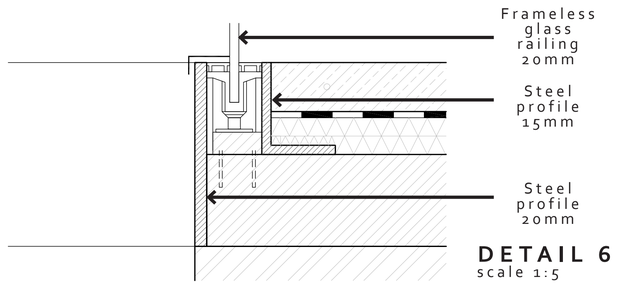

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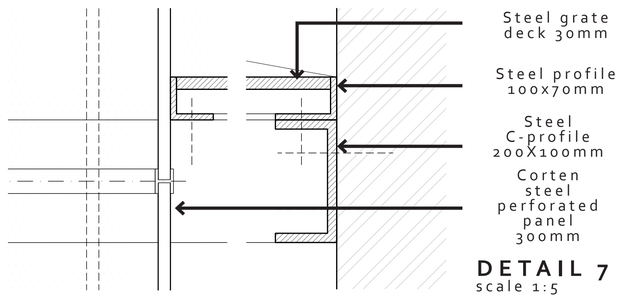

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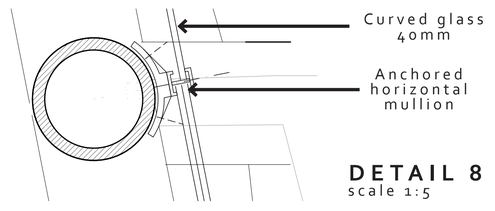
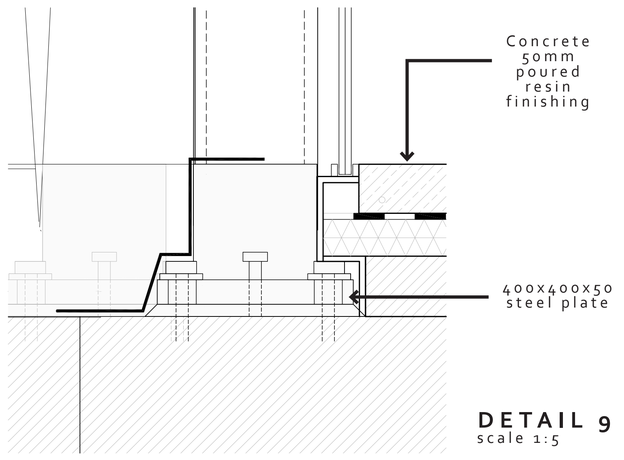


DETAIL 8
scale 1:5



DETAIL 9
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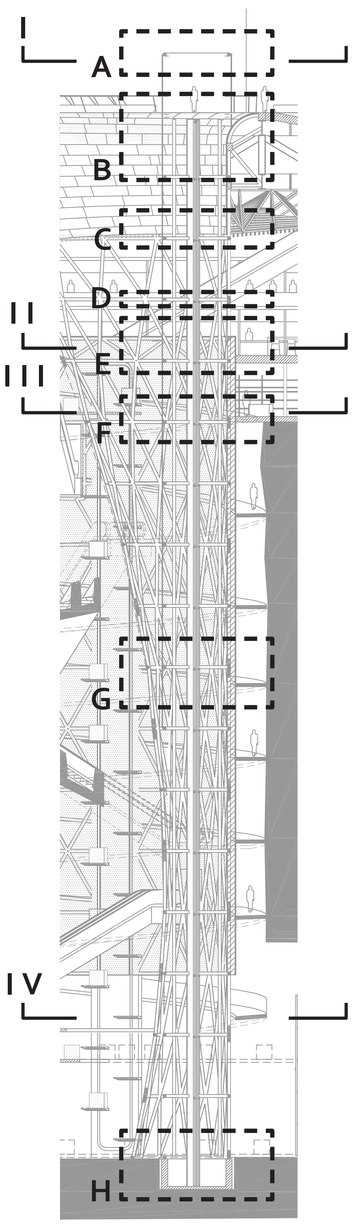
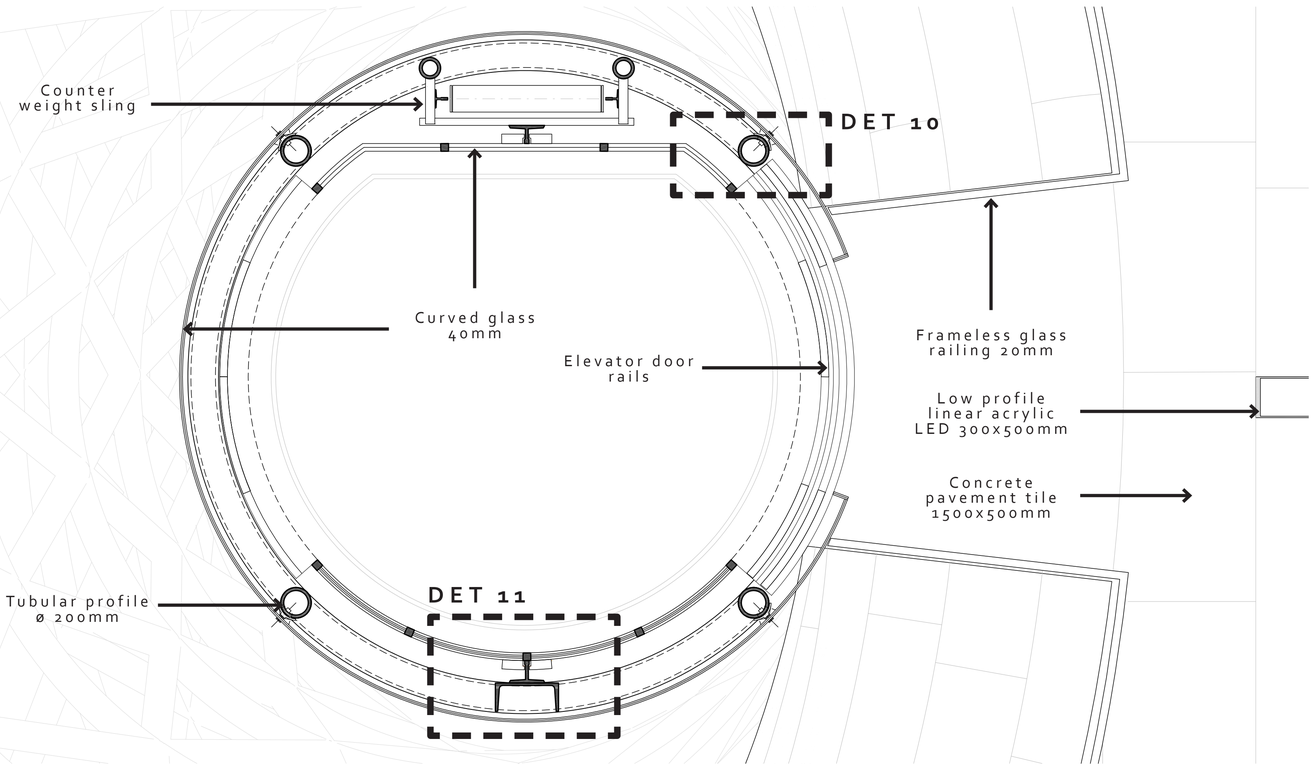


LOCATION OF ENLARGED PARTS
scale 1:200



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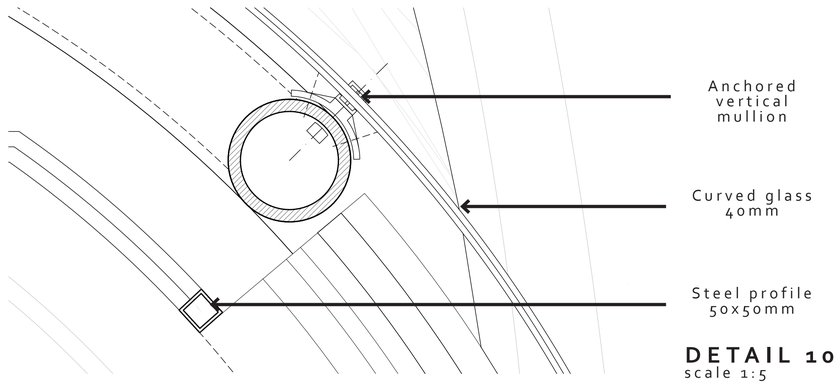
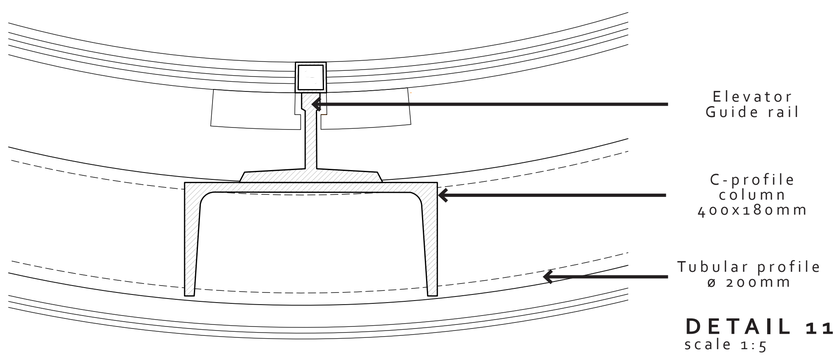


DETAIL 10
scale 1:5



DETAIL 11
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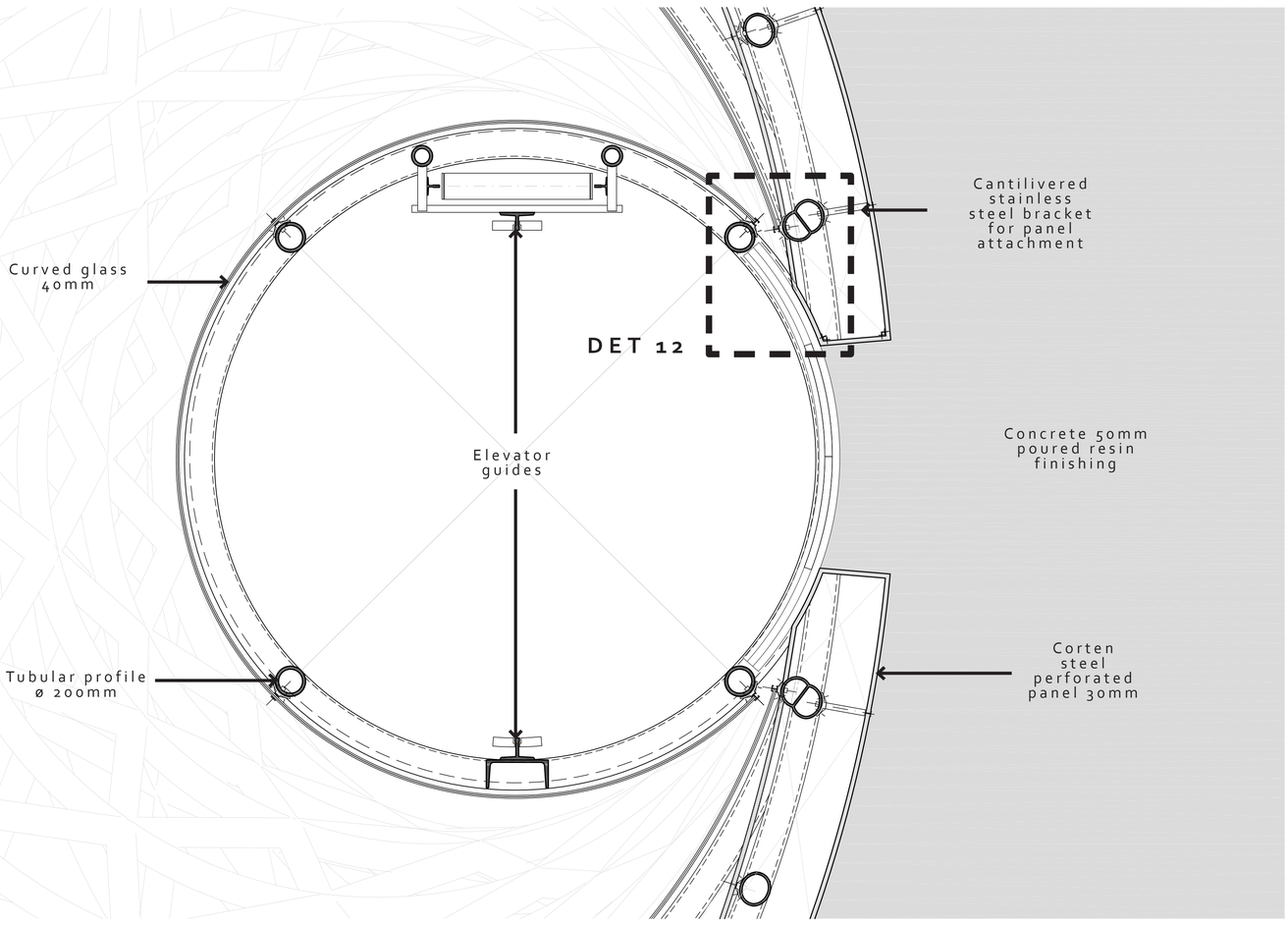
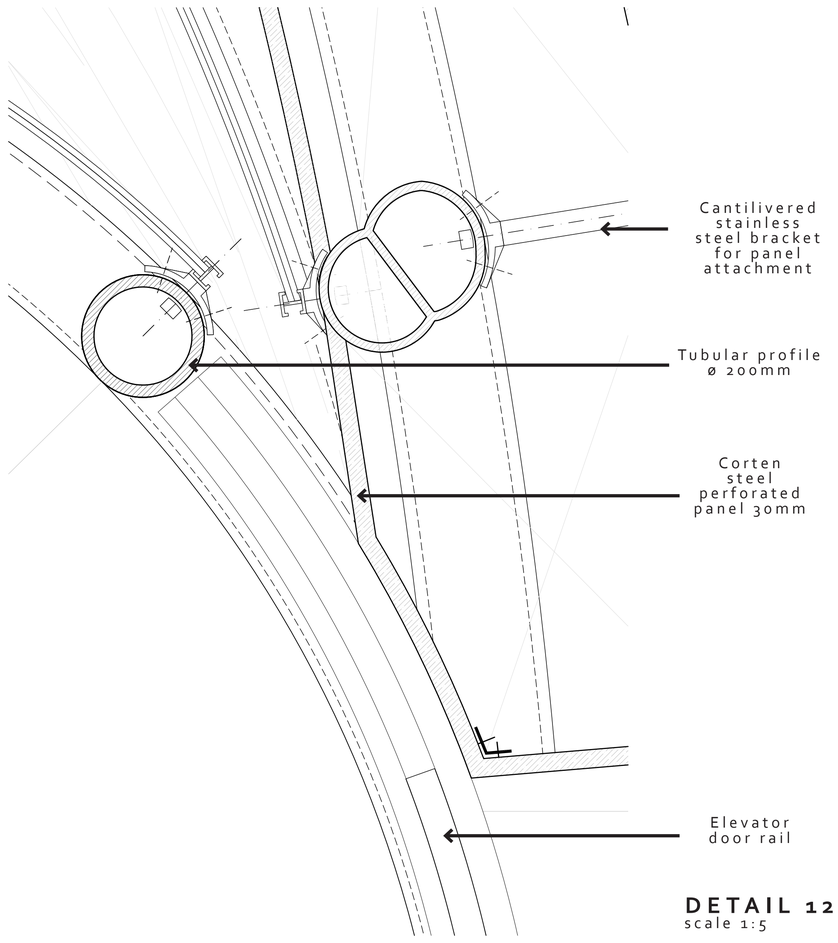


II



DETAIL 12
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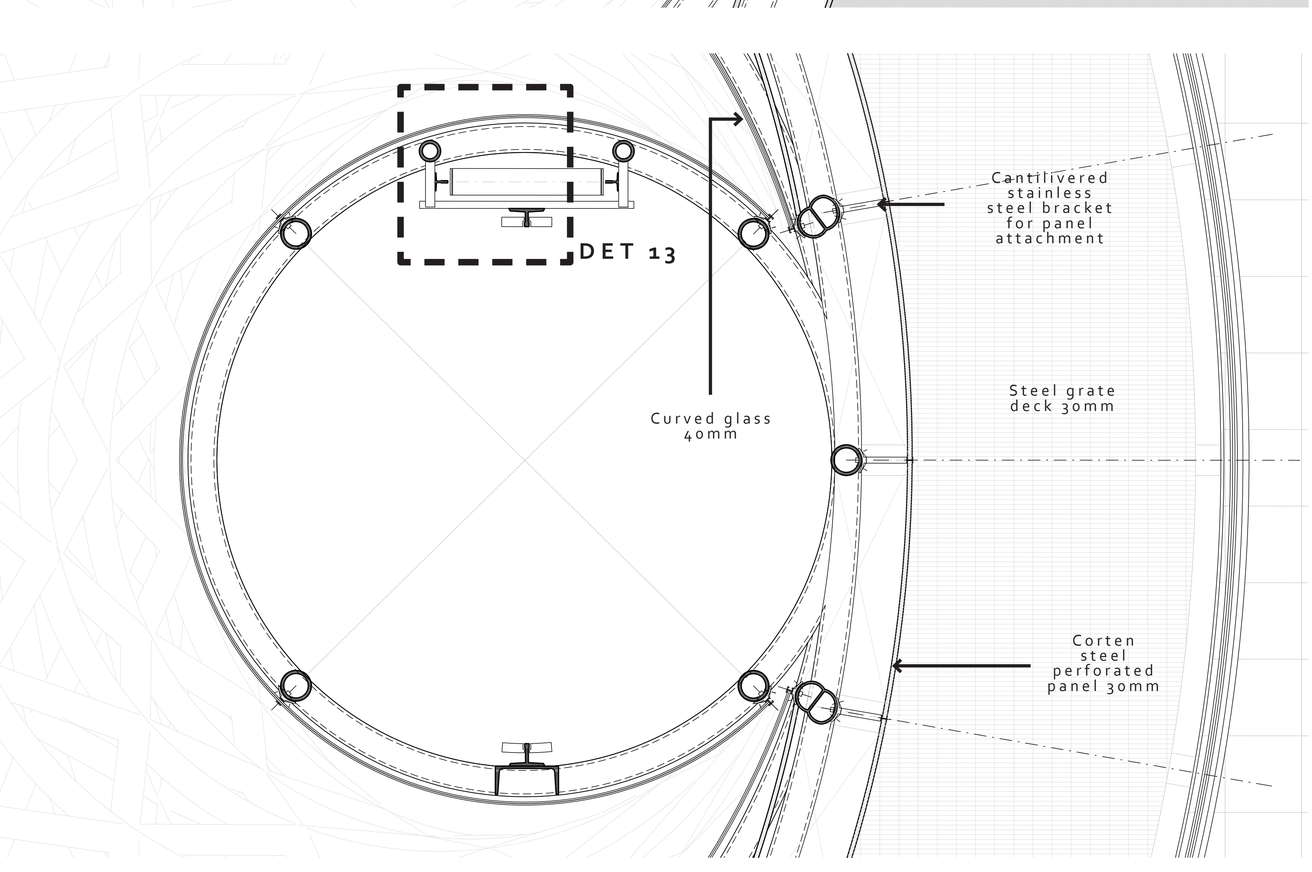
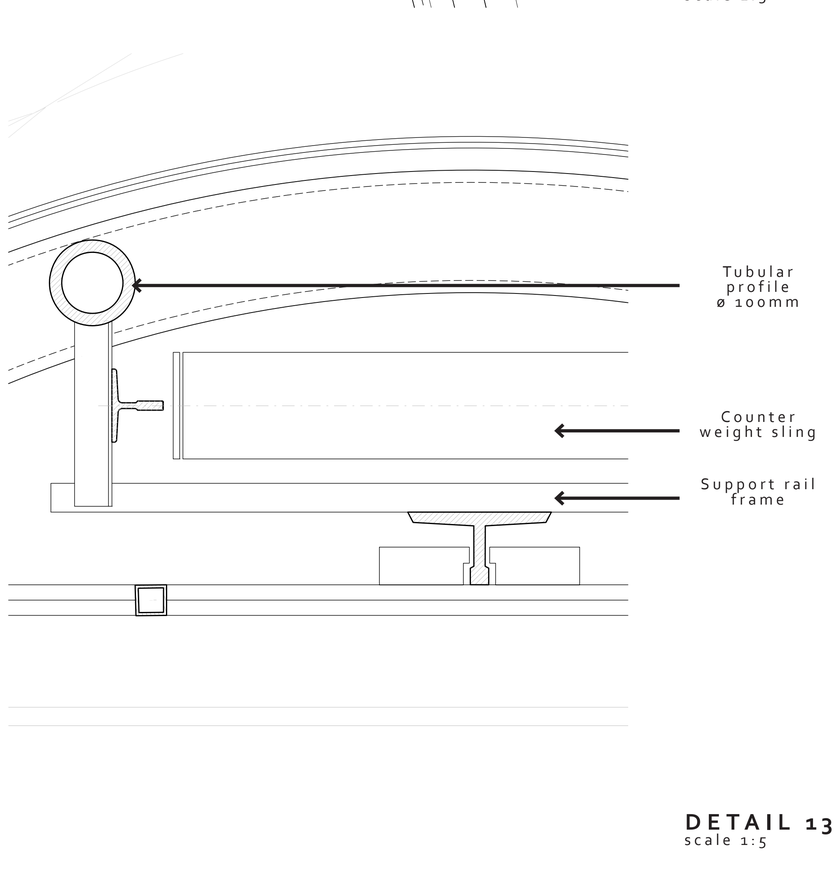


III



DETAIL 13
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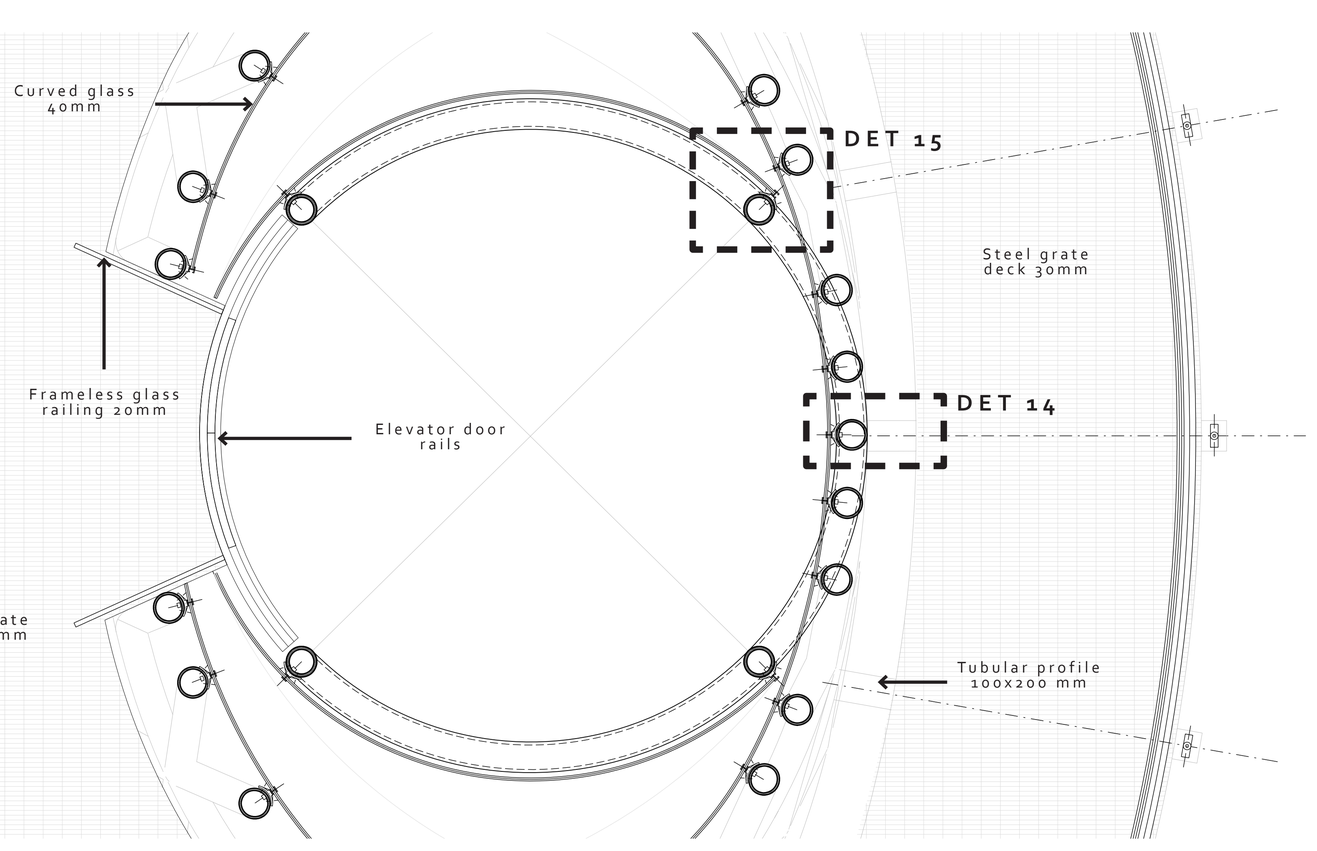
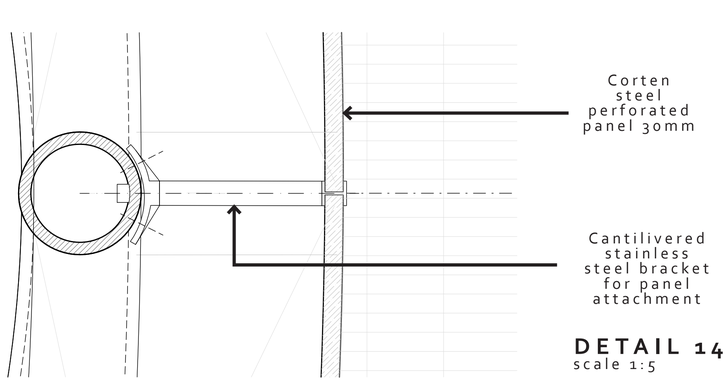


IV



DETAIL 14
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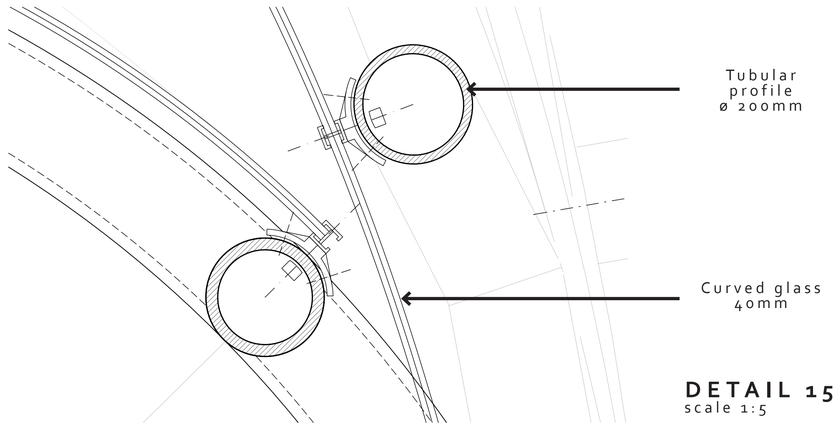

DETAIL 15
scale 1:5