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Battle Fort 3

At the starting point of the valley between Arnhem and Nijmegen Battle Fort 3 is located. A location where a new battle is fought. A battle against the elements. Athletes have dominion over the dikes, sand, mud, water, and their base, Fort Pannerden itself.

The current fort Pannerden, built in 1872, is very limited in use. It's only opened a few days a year. Those days are organized by volunteers. The survival of the fort is now dependent on subsidies.

The plan Battle Fort 3 provides for the use of the entire fort and its surroundings, seven days a week. It will be used for an upcoming method of sports. One that feeds the primal feeling. It is a combination of outdoor fitness, survival, strength training and cardio fitness, using and fighting against the elements. And that fits entirely with the fort. The fort and its surrounding area offers a perfect setting to accommodate this form of recreation.

Besides getting instructions and clinics and consuming healthy meals in the fort, the hotel rooms offer a solution for athletes or groups of athletes who want to accomplish several days of training.

The athletes can choose different types of luxury. A minimum of luxury, where they sleep in the hammocks of the escarp gallery. Average luxury, where they sleep in a private room and have access to a private bathroom. Luxury: a spacious studio with a nice view on the area.

The fort will also be open daily for tourists who want to know more about the fort itself, the Dutch Waterlines and ballistics.

'Battle' 1 & 2

Defending the bifurcation of the Rhine into Pannerdensh Channel and the Waal.

1. Defending the Linge Acces against damming it. This would dry out the New Dutch Water Line.

2. Defending the Pannerdensh Channel against damming it. This would dry out the IJssel Line.

Other tasks:

- managing the shipping on the Rhine and Waal
- alloying troops



Obstacles

- 1 running through loose sand (but also grass, mud & asphalt)
- 2 swimming trail
- 3 running/crawling through mud
- 4 overcome slopes
- 5 monkeybars & rope walls (teambuilding)
- 6 crawling under reintroduced barbed wire

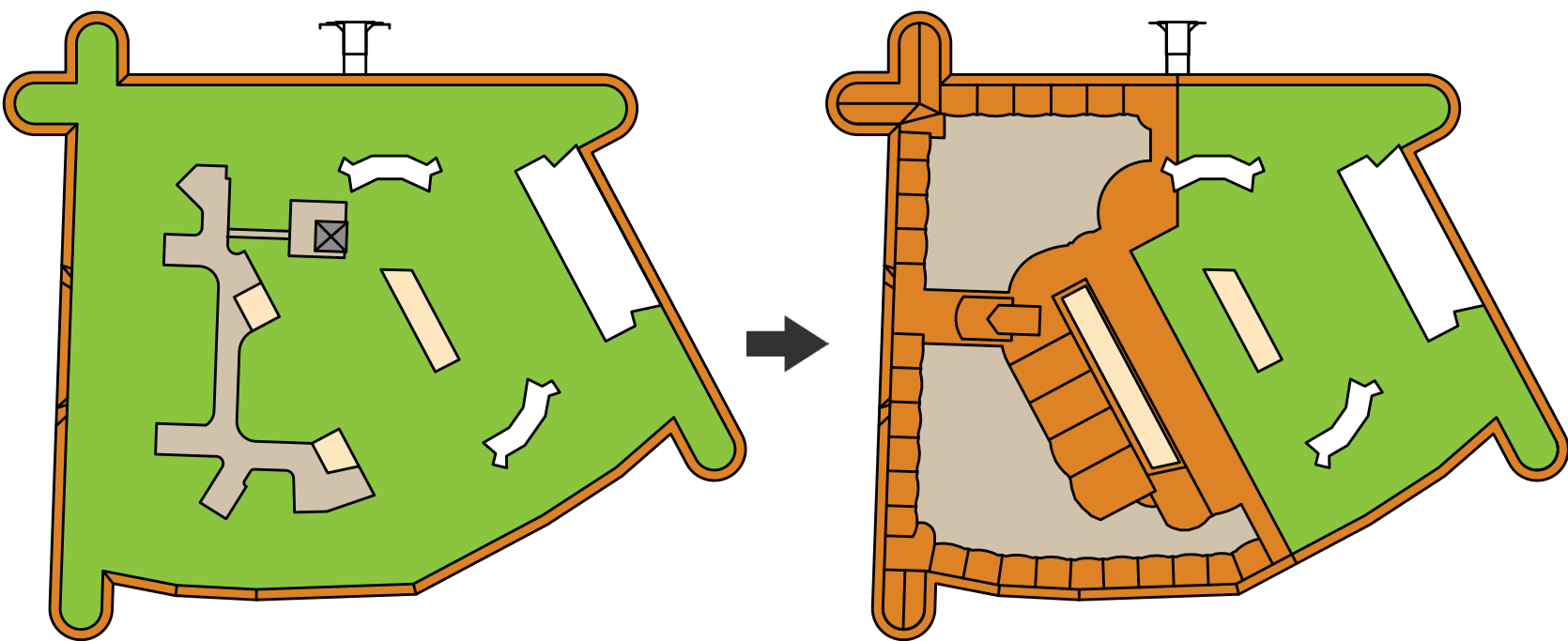
4. slope

Interventions area

- 1 reintroduce canal for mooring boats
- 2 use the excavated soil to increase the dike
- 3 reintroduce barbed wire

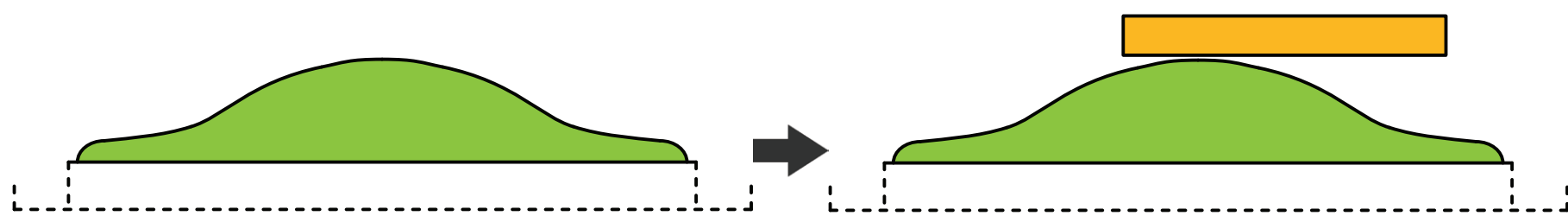
Spatial concepts

1st.: 1/2 - 1/2 (show the fort)



By excavating the land, the construction of the fort becomes visible. Given the symmetry of the building you can see the fort imaginary as a whole. In its entirety with a ground cover and the structure in its entirety. Unlike other forts and without drawings or scale models the visitors get an insight into the robust construction of the fort. One can walk around in a 1:1 scale model and experience how the created spaces can be used.

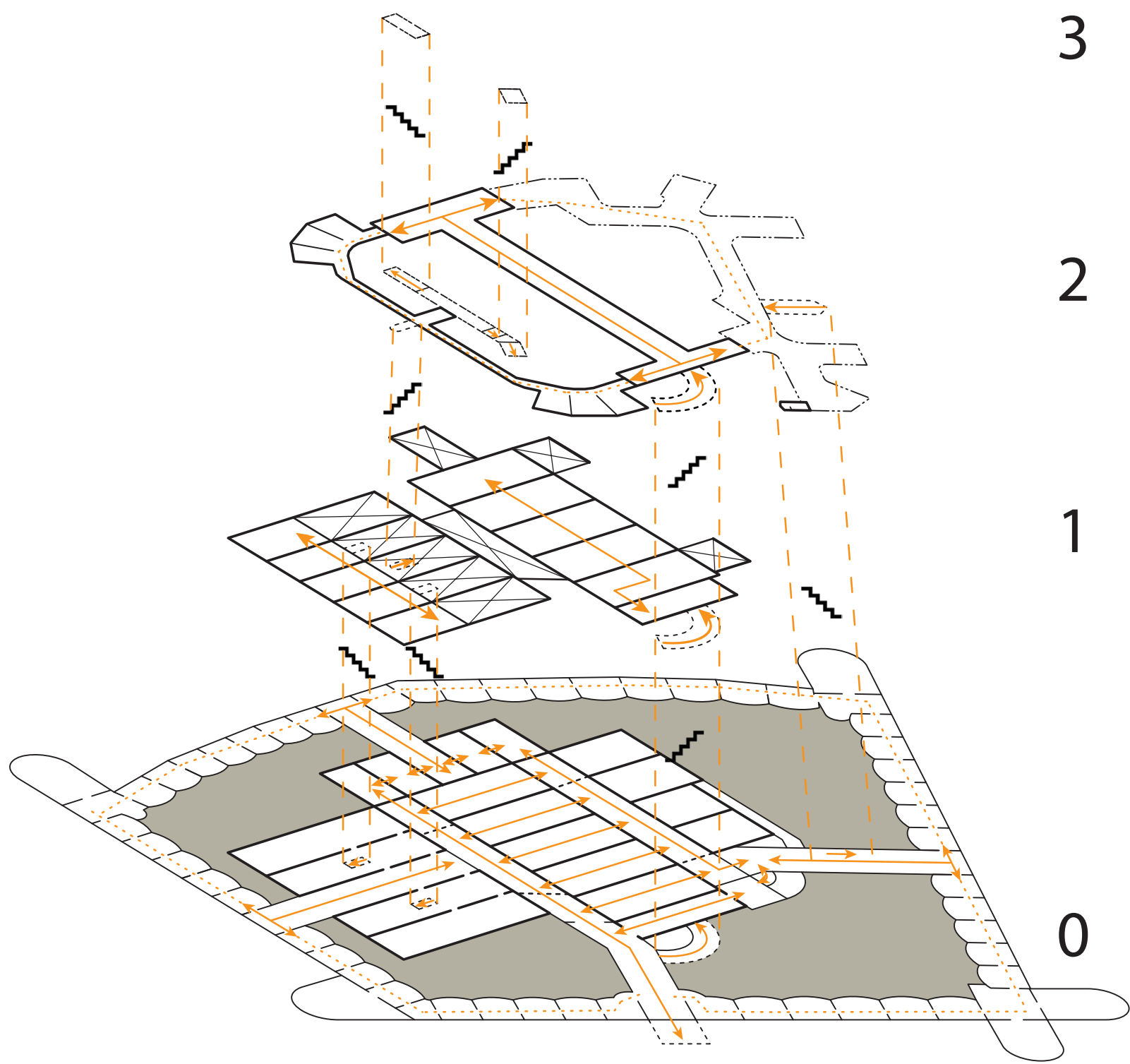
2nd.: Aureool (show the fort)



The fort is barely visible in the landscape. Sailing on the Rhine from Germany it is no more than a green molehill. And that was the intention. It had to be the least visible. But not anymore. On the contrary, the fort just wants more attention and thus attract people. This in a way that the original ground camouflaging cover on the main defense side does not change.

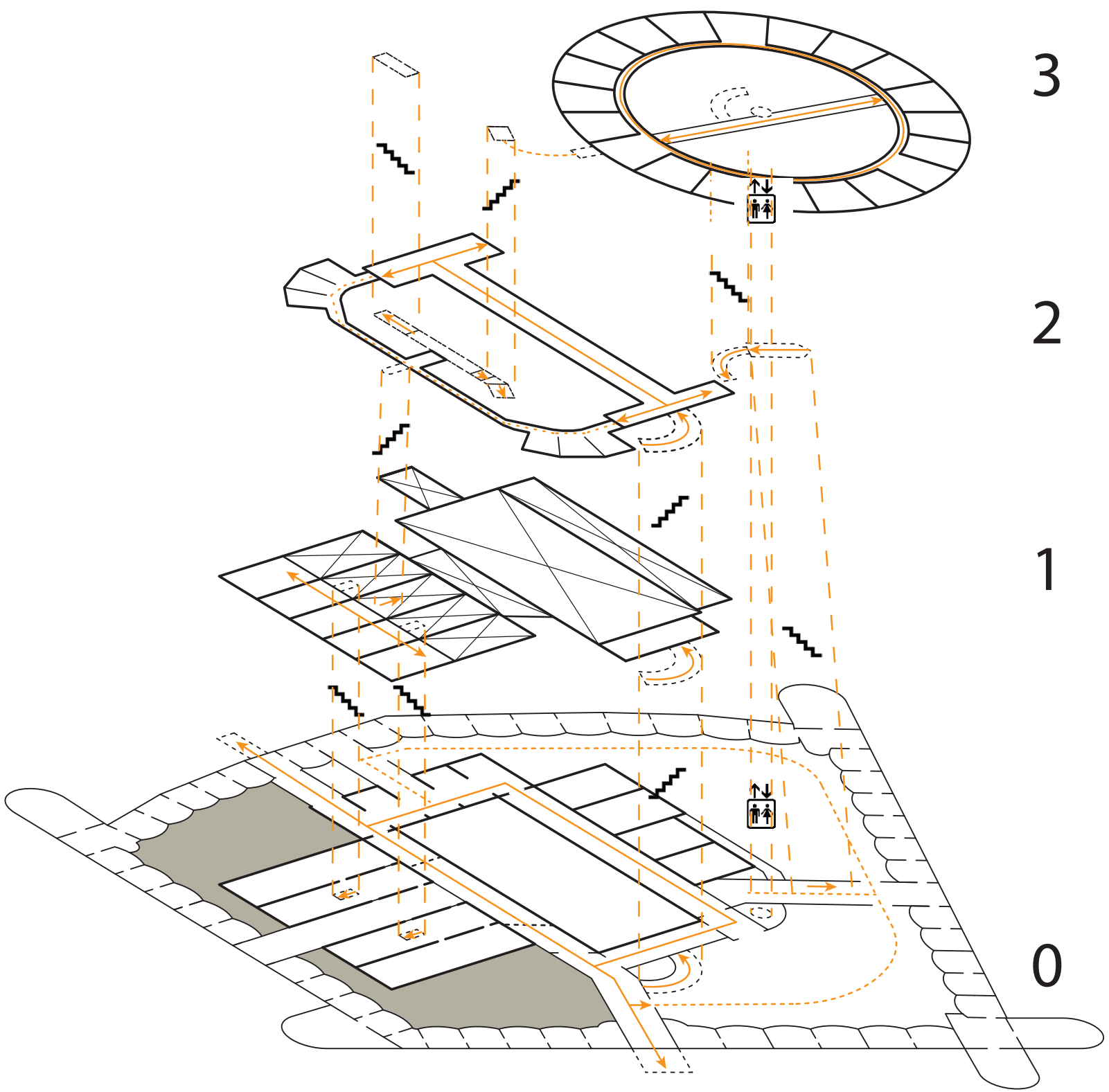
The 'halo' can accommodate 36 guests and has 3 view spots so visitors can view the entire environment. The athletes who rent a room also experience this spectacular view of course. Like the shot holes in the escarp gallery the rooms offer panoramic views.

Routing



current routing

The current routing is quite unclear to visitors. One can go anywhere but, unfortunately, they can or have to go through all rooms in the heart of the complex. That routing, in combination with the accessibility of the full escarp gallery through a total of eight accesses, make it a maze.

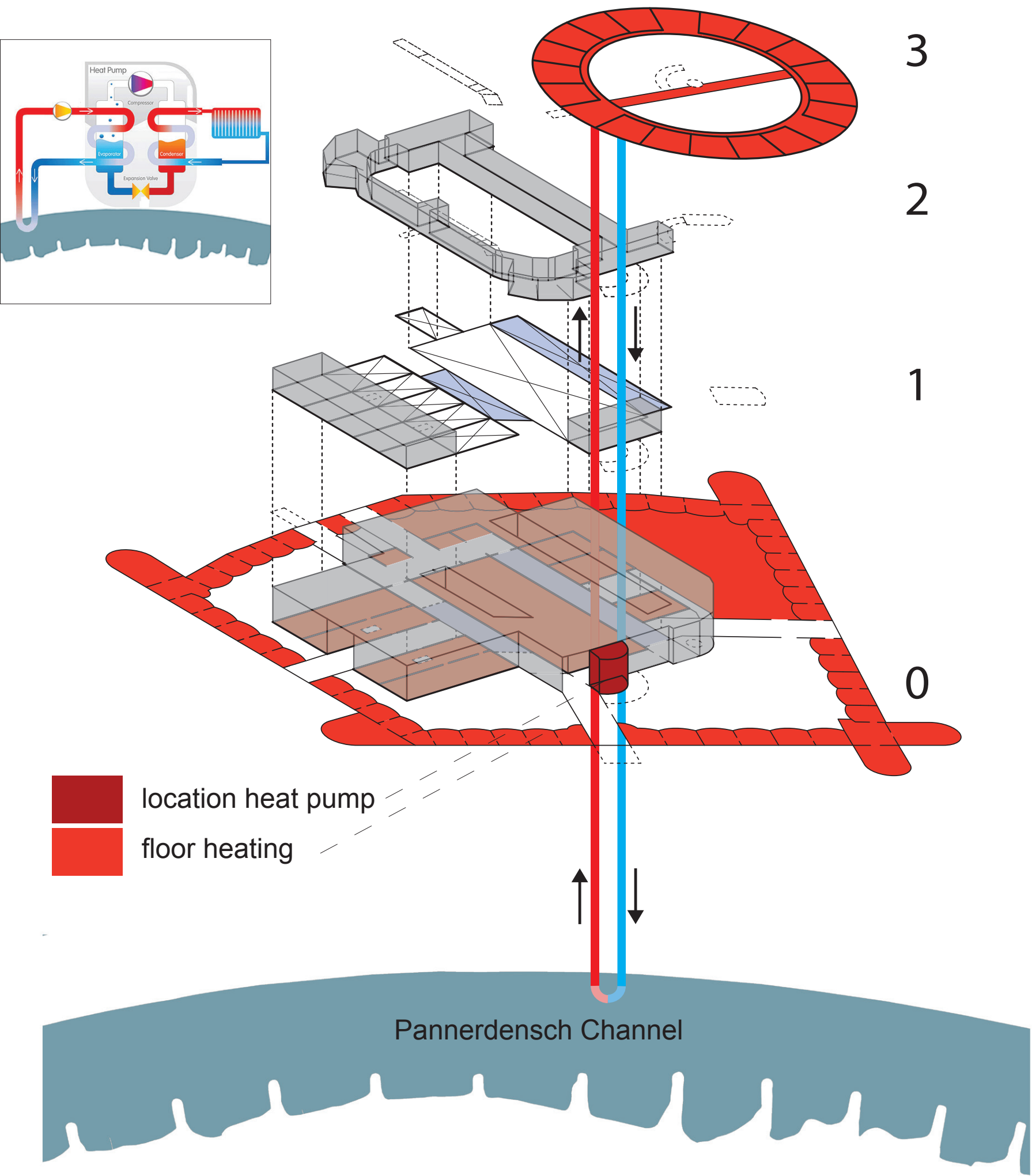


new routing

In the new situation, there is an additional opening / exit on the other side. This creates an extended main artery through the fort. In addition, the small rooms and passageways in the core are replaced by a spacious restaurant. The routing circulates through the two inner streets around it. All functions, besides the hotel rooms, are located on this circulating route. Through a line lighting in the middle of the floor it is clear when you are on the circulating route.

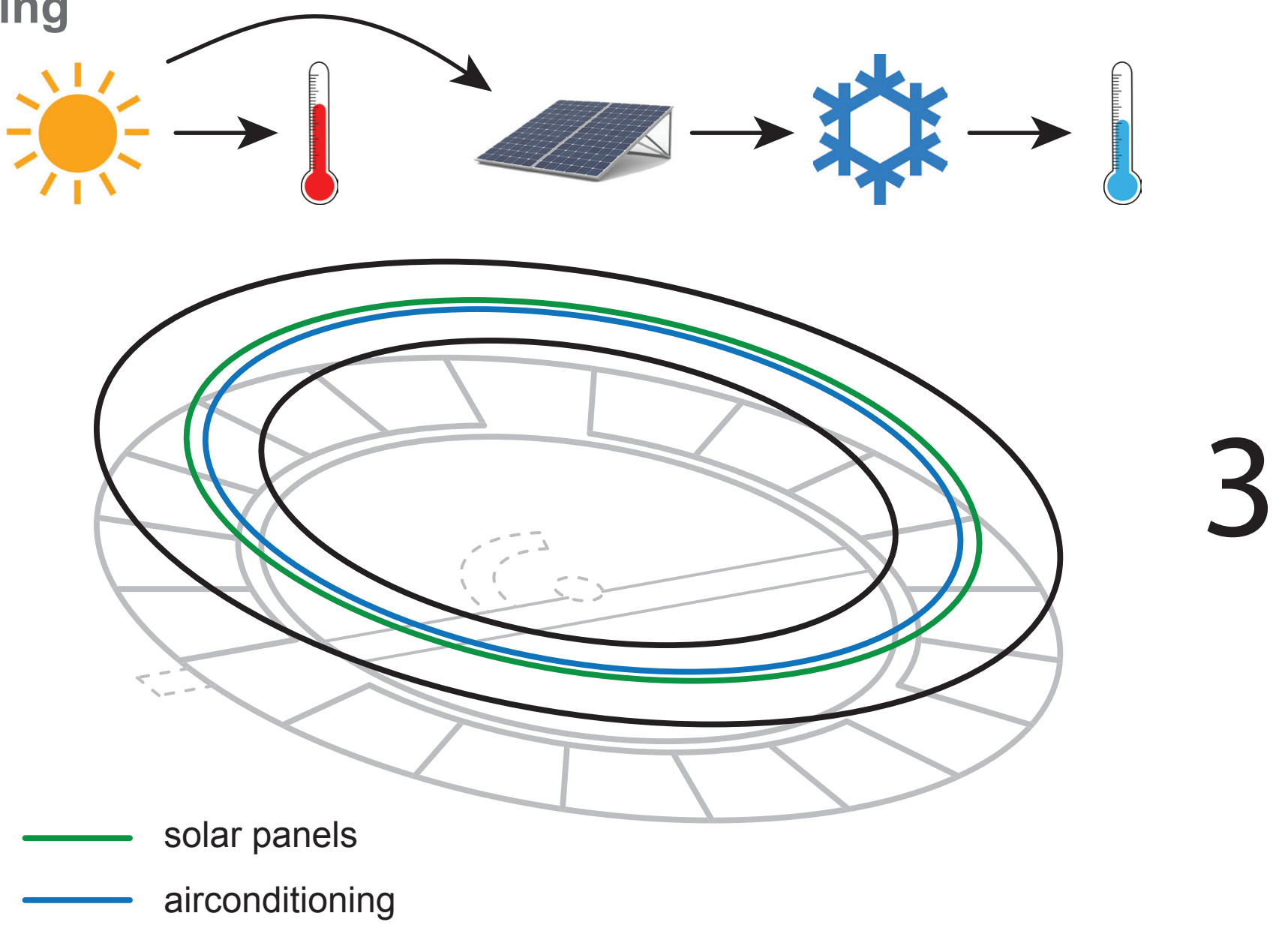
Climate

Heating

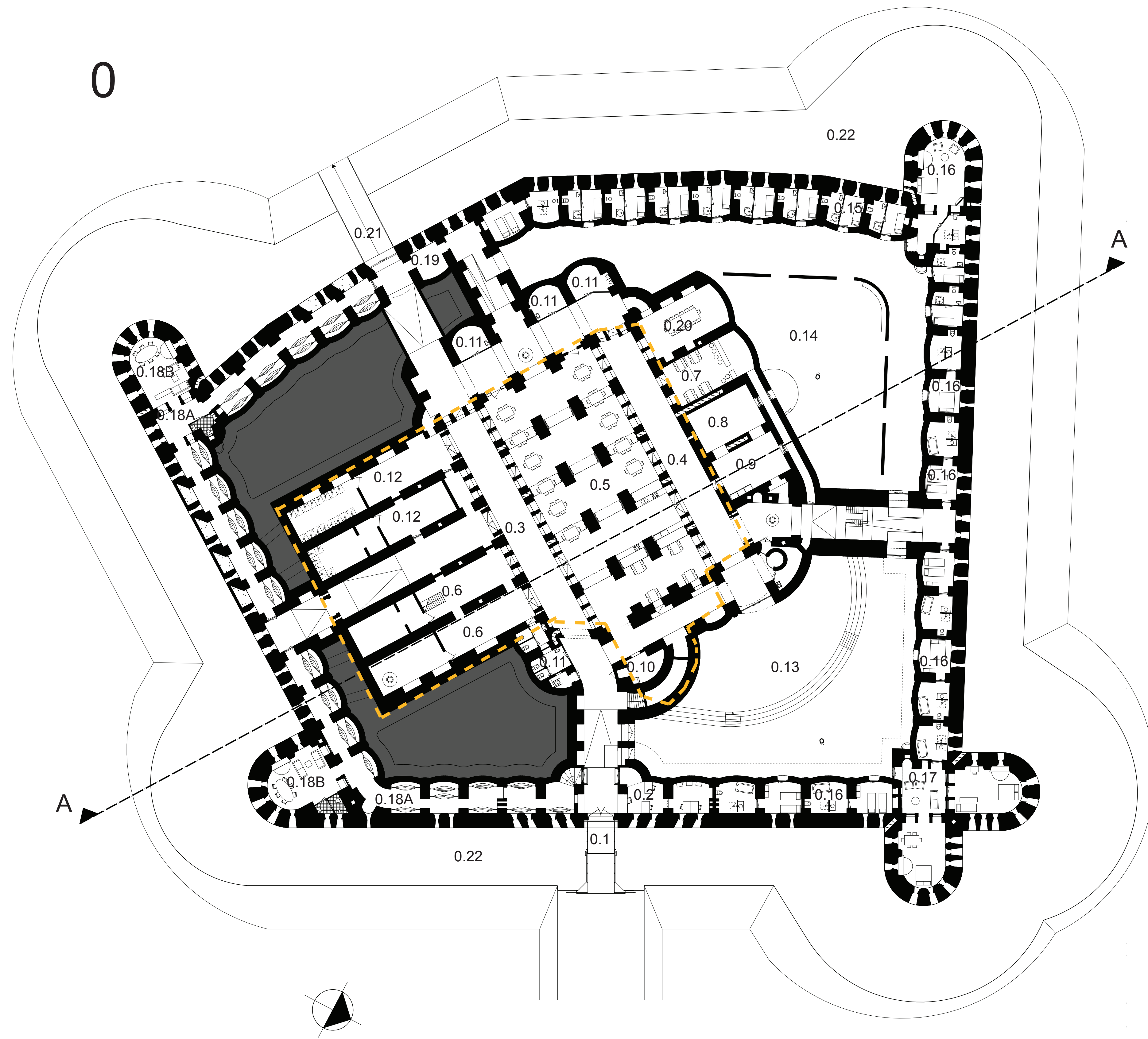


Since 1908 the average temperature of the Rhine has increased with almost 4 degrees. 1/3 is due to climate change, 2/3 is due to the discharge of cooling water. This makes it more interesting to use the river for heating the fort. Also, if applied on a larger scale, it can be the warm-up counter.

Cooling



The old fort has a high accumulation capacity. As a result, the temperature remains fairly constant, and air conditioning is not necessary. At the new hotel rooms on the 3rd floor the chance of heating is slightly larger, in spite of good insulation and overhangs. In addition, hotel guests probably expect air conditioning there. Solar panels provide the needed energy for this part. The ventilation channels are integrated in the ring beam.



0 Multiple Functions

- 0.1 MAIN ENTRANCE
- 0.2 RECEPTION & OFFICE
- 0.3 INSTREET EAST
- 0.4 INSTREET WEST
- 0.5 RESTAURANT & KITCHEN
- 0.6 EXPOSITION WATER LINE & FORT
- 0.7 PUB
- 0.8 STORAGE SPORT MATERIALS
- 0.9 FOOD & DRINKS STOCK
- 0.10 HEATING PUMP
- 0.11 TOILETS
- 0.12 SHOWERS
- 0.13 COURTYARD WITH STAGE
- 0.14 INSIDE SQUARE
- 0.15 1 PERSONS HOTELROOMS
- 0.16 2 PERSON HOTELROOMS
- 0.17 4 PERSON HOTELROOMS
- 0.18A 18-20 PERSONS HOSTEL
- 0.18B JOINT LIVING HOSTEL
- 0.19 FIRST AID & FYSIO
- 0.20 CONFERENCE ROOM
- 0.21 NEW EXIT/ENTRANCE ATHLETES
- 0.22 MOAT

1 Ballistics

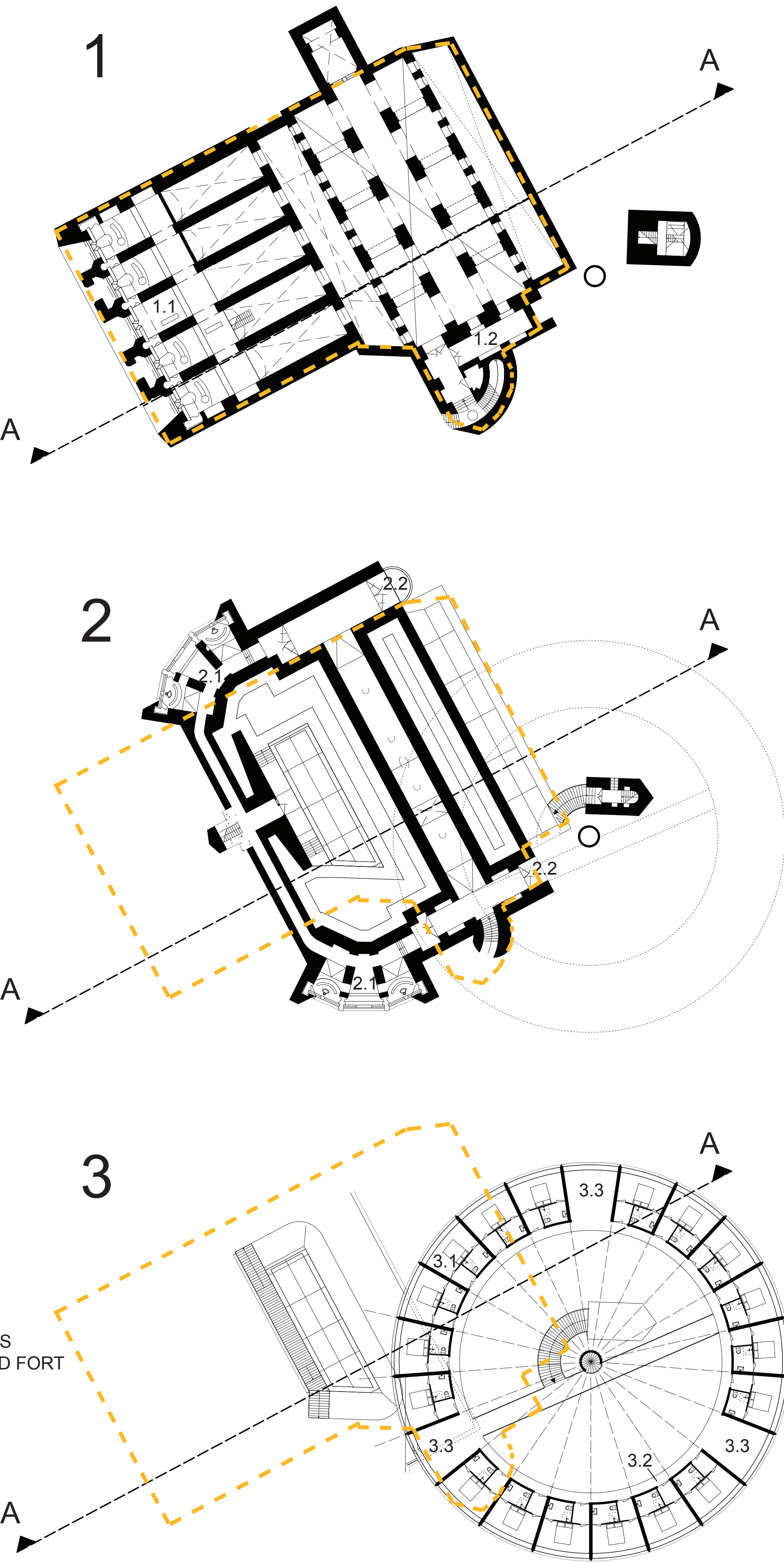
- 1.1 EXPOSITION BALLISTICS
- 1.2 STORAGE SPORT MATERIALS

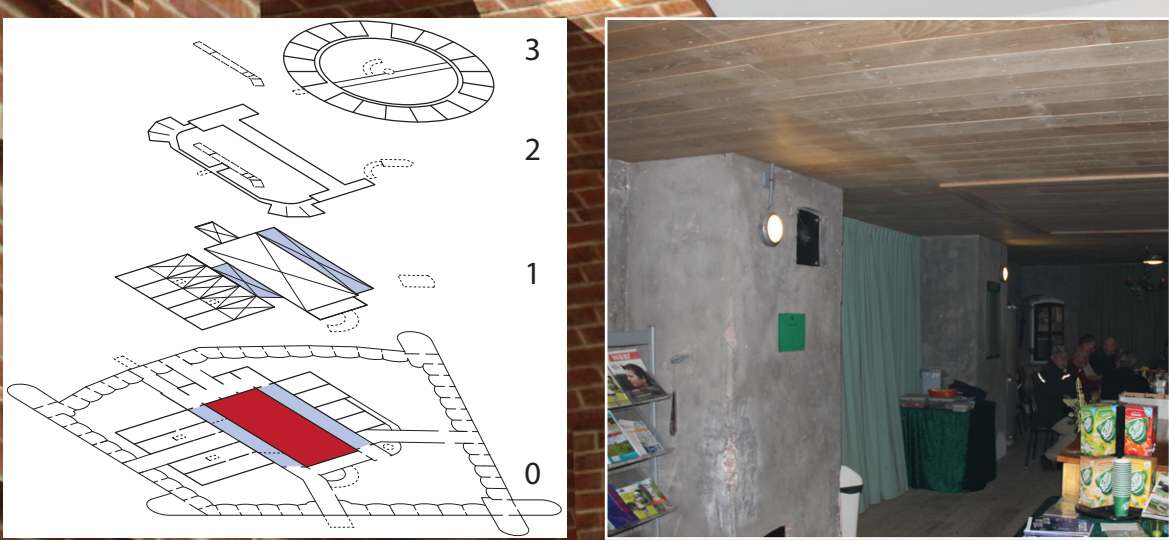
2 Ballistics

- 2.1 EXPOSITION BALLISTICS
- 2.2 VIEW ON THE UNEARTHED FORT

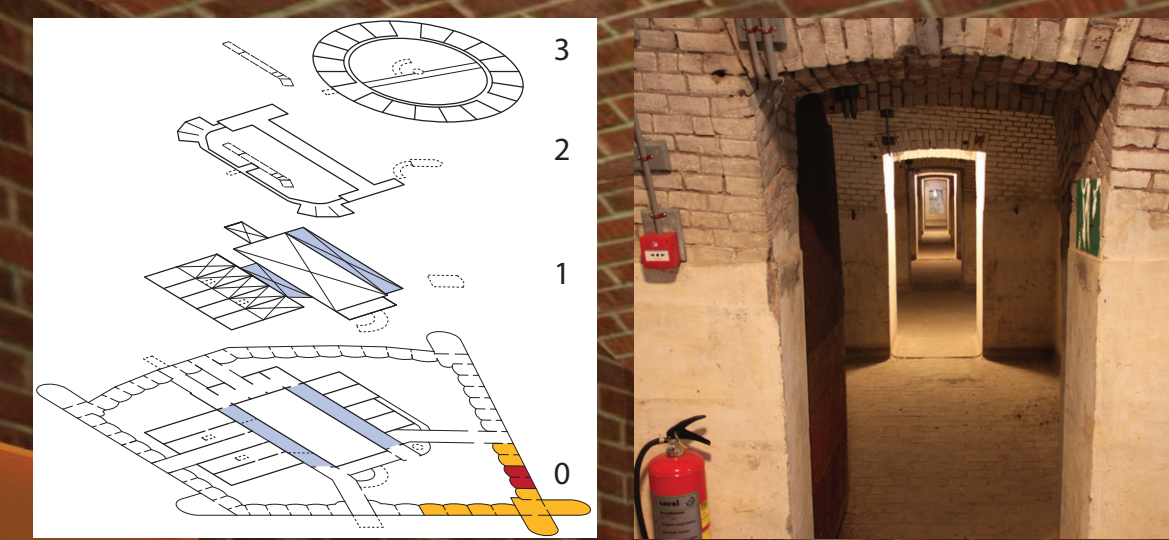
3 Hotel & Views

- 3.1 2 PERSONS HOTELROOMS
- 3.2 VIEW ON THE UNEARTHED FORT
- 3.3 VIEW ON THE AREA

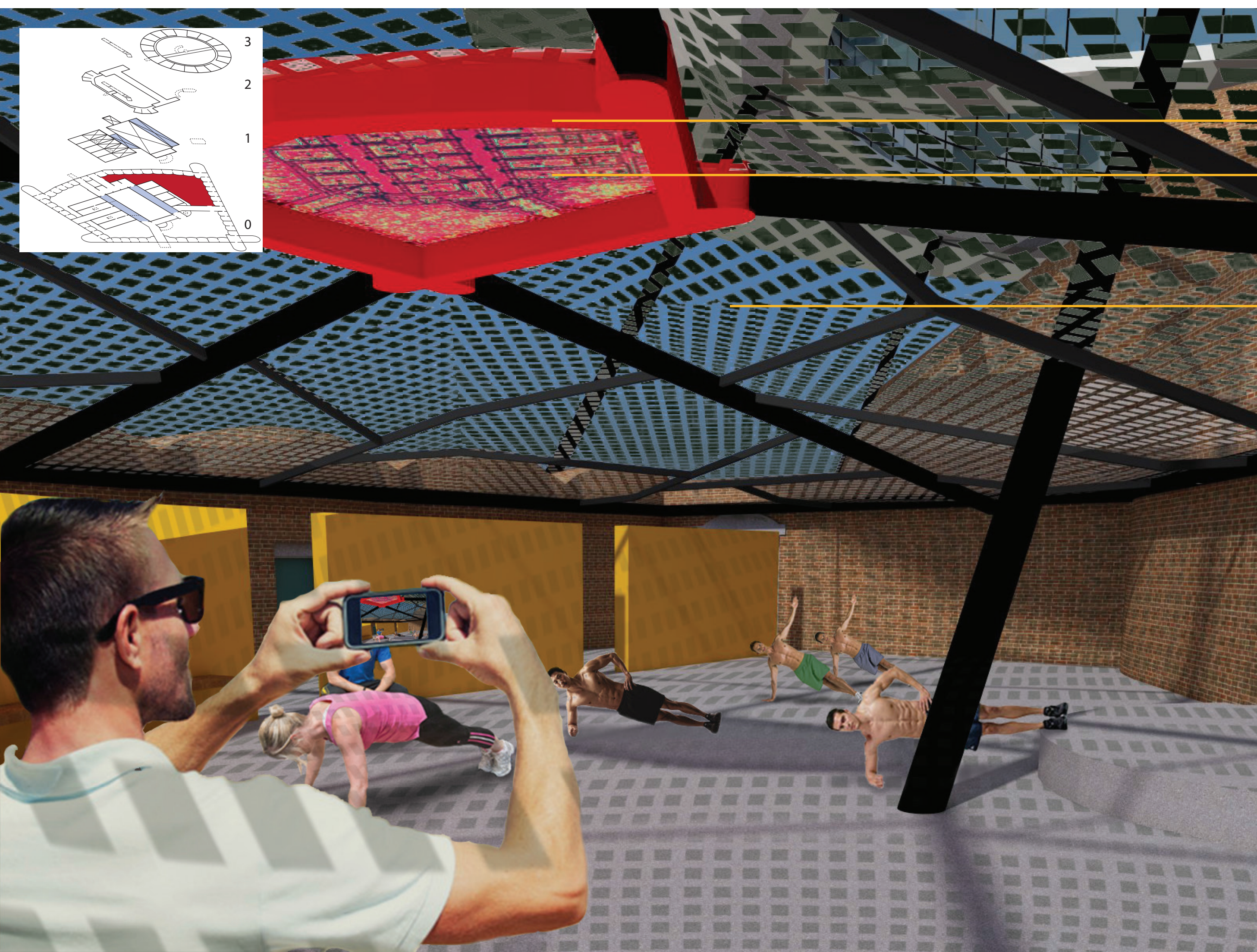
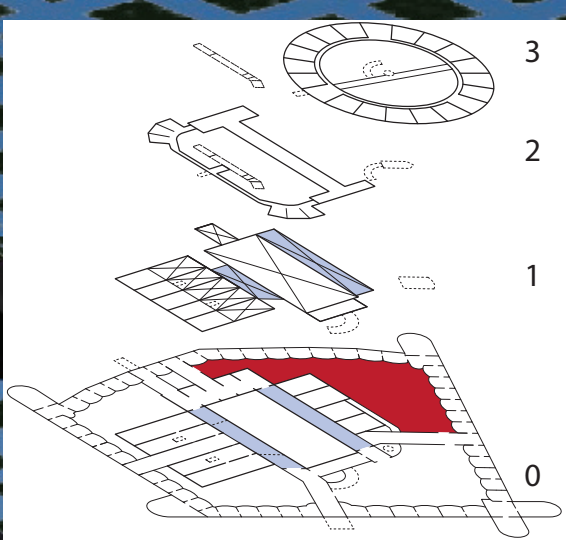




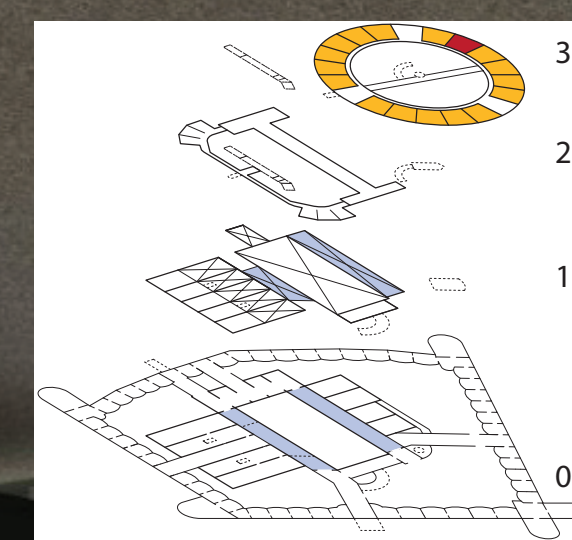
- steel beams supporting the old construction. the plane yellow stucco fire covering represents the new construction
- a modern cable duct for electricity points and lighting, hanging on the new construction parts
- fragments of the old wall can be seen



- restore plaster up to 1300+ white, lower 100 mm black
- frosted glass door
- power floated concrete floor, insulated + floor heating



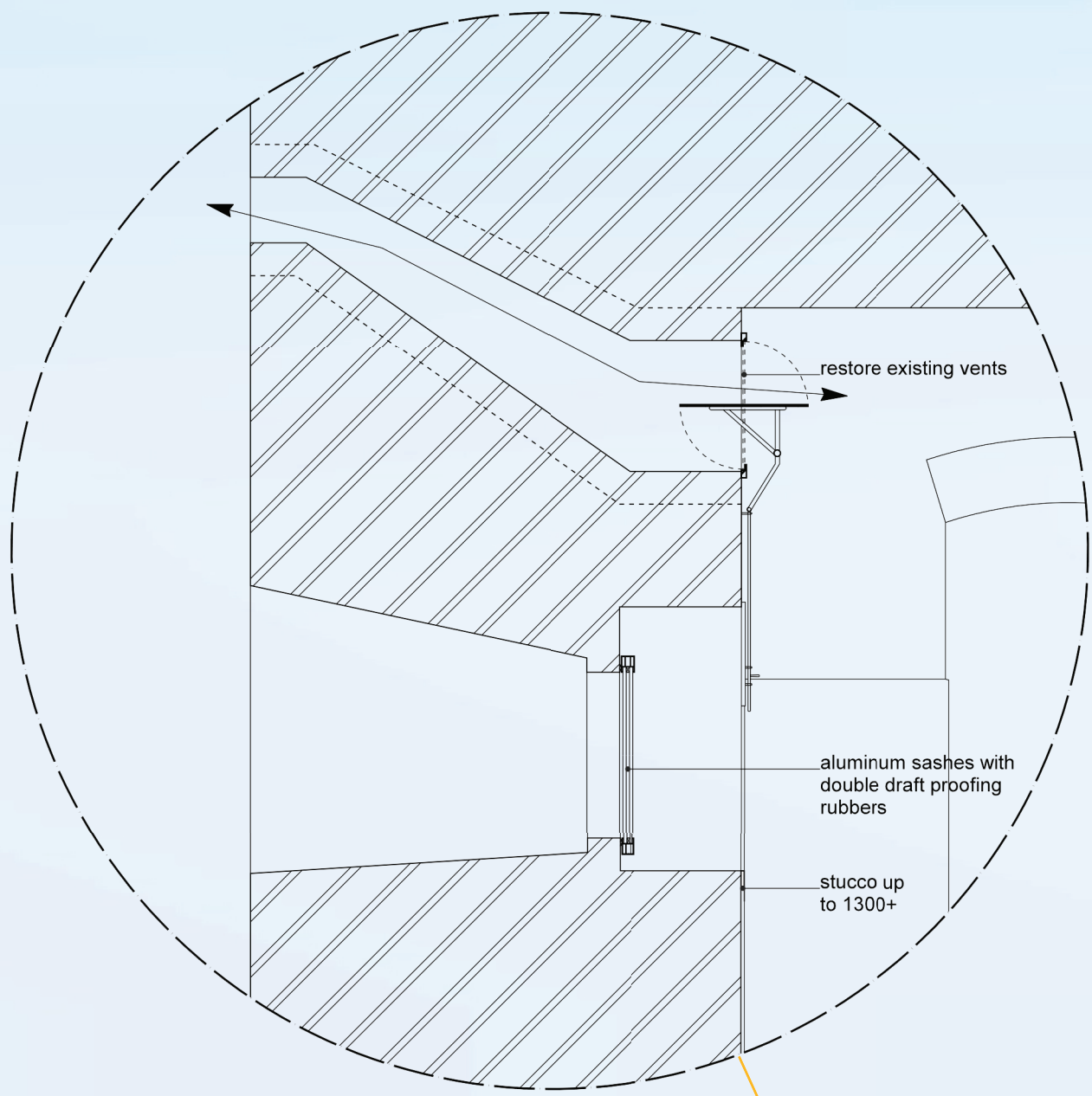
- fort window as the strong base structure; the glass can be opened (lifted) electrically.
- glass with ceramic printed image of the fort, translucent
- glass with pv cells
 - less warmth
 - energy producing
 - nice shadow effect
 - contemporary camouflage net



- aluminium window frames , anthracite, glass balcony railing, 1200+ floor
- ceiling, walls and floor of cencrete



1:20

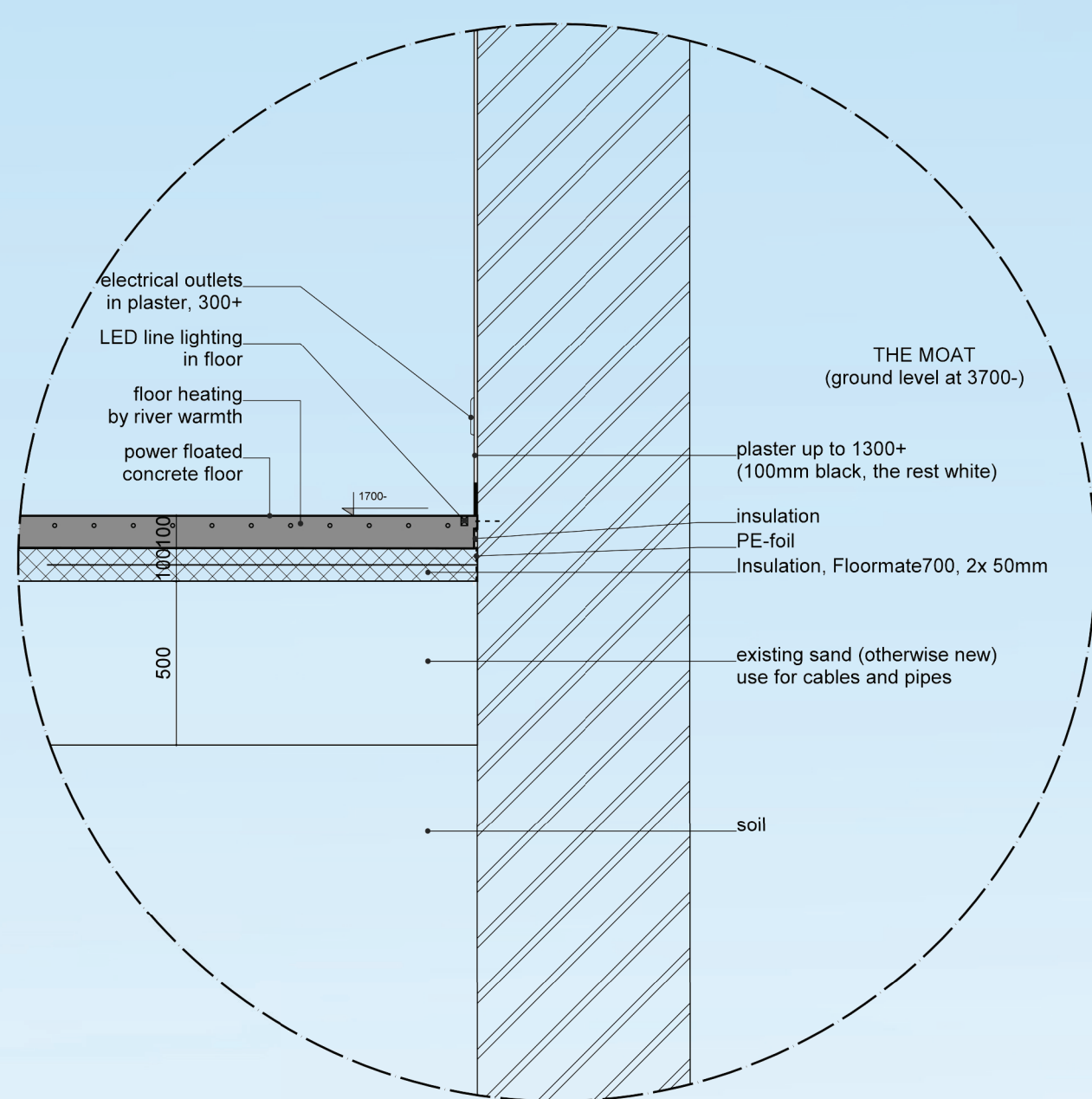


restore existing vents

aluminum sashes with double draft proofing rubbers

stucco up to 1300+

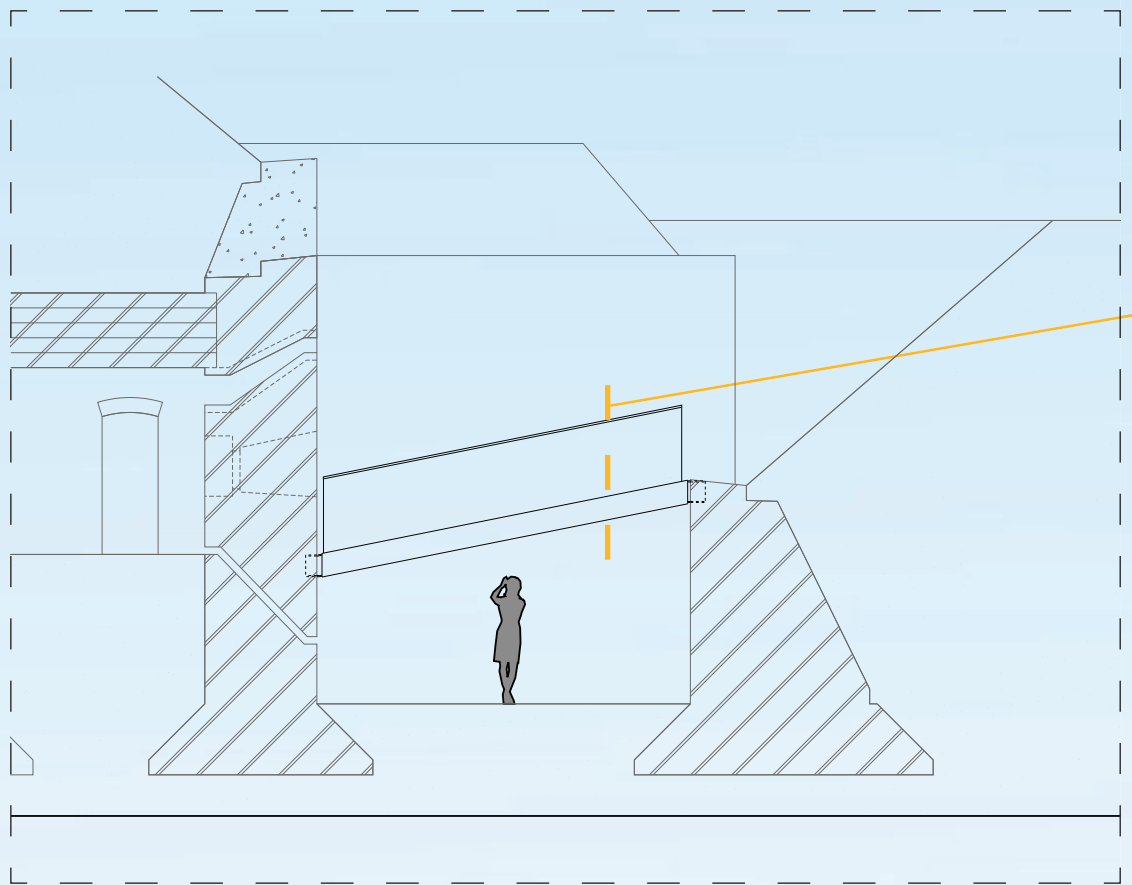
1:20



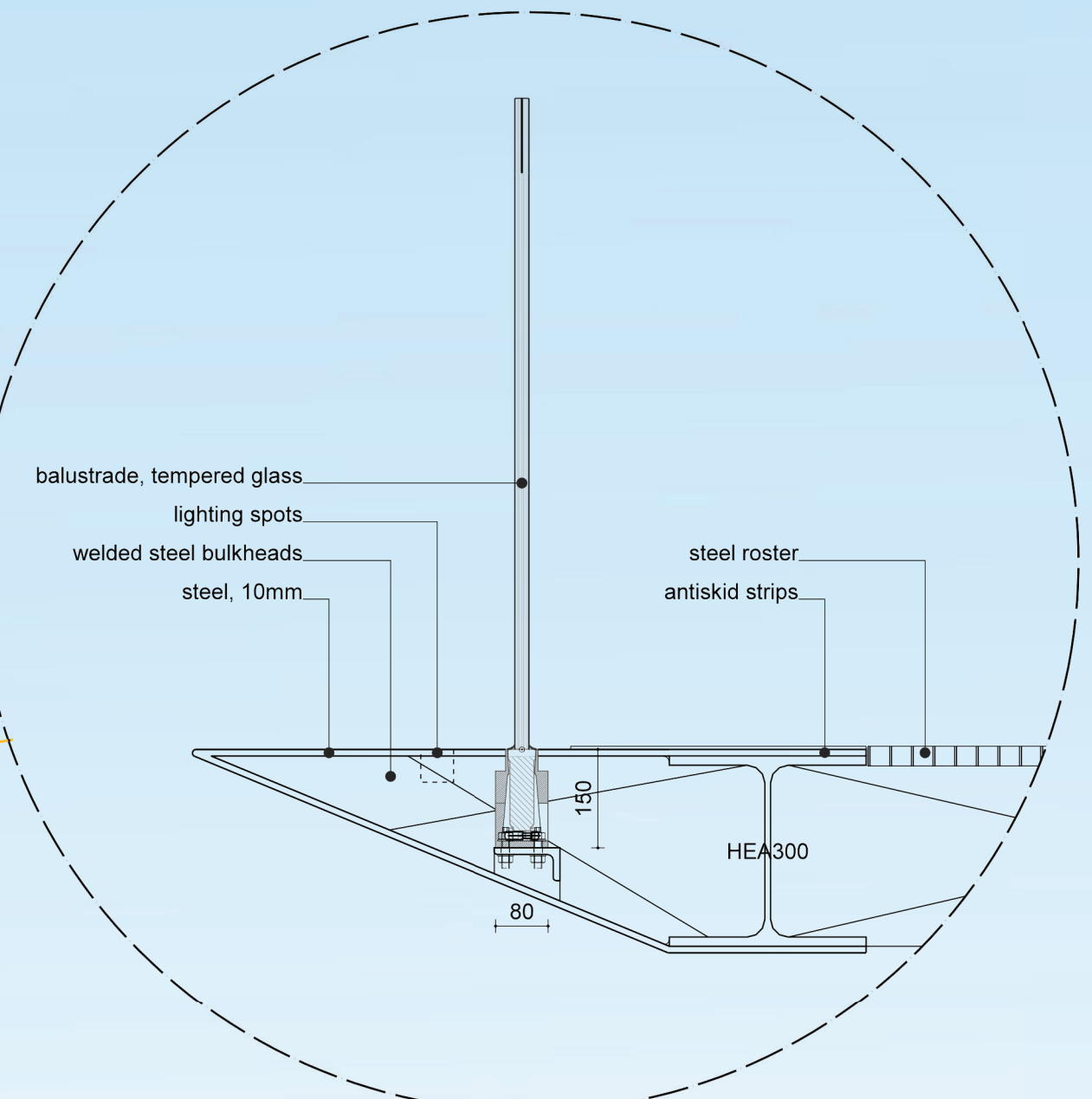
electrical outlets, in plaster, 300+
LED line lighting, in floor
floor heating, by river warmth
power floated, concrete floor

plaster up to 1300+
(100mm back, the rest white)
insulation, PE-foam
insulation, Floormate 700, 2x 50mm
existing sand (otherwise new)
use for cables and pipes
soil

THE MOAT
(ground level at 3700+)



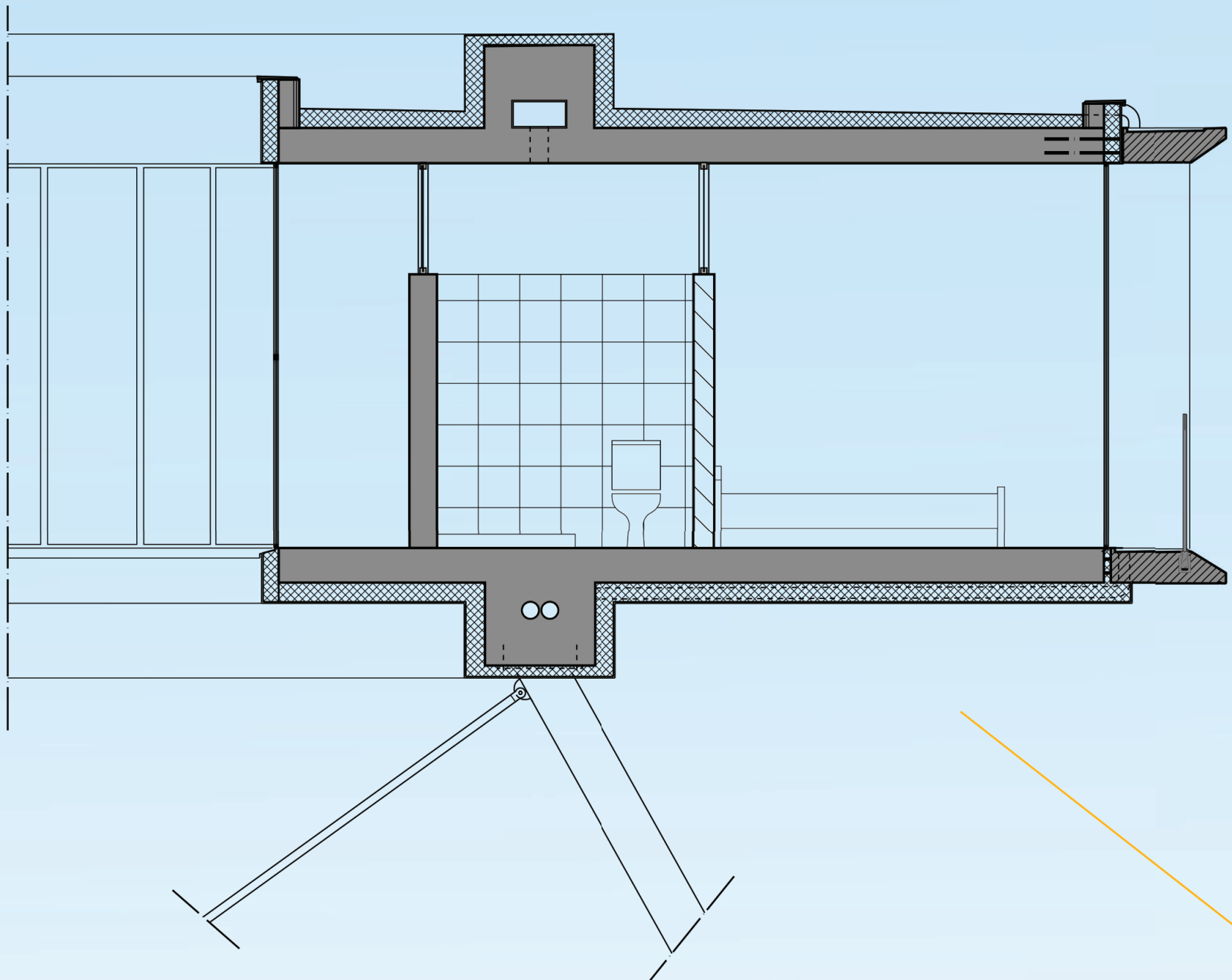
1:10



balustrade, tempered glass
lighting spots
welded steel bulkheads
steel, 10mm
steel roster
antiskid strips
HEA300

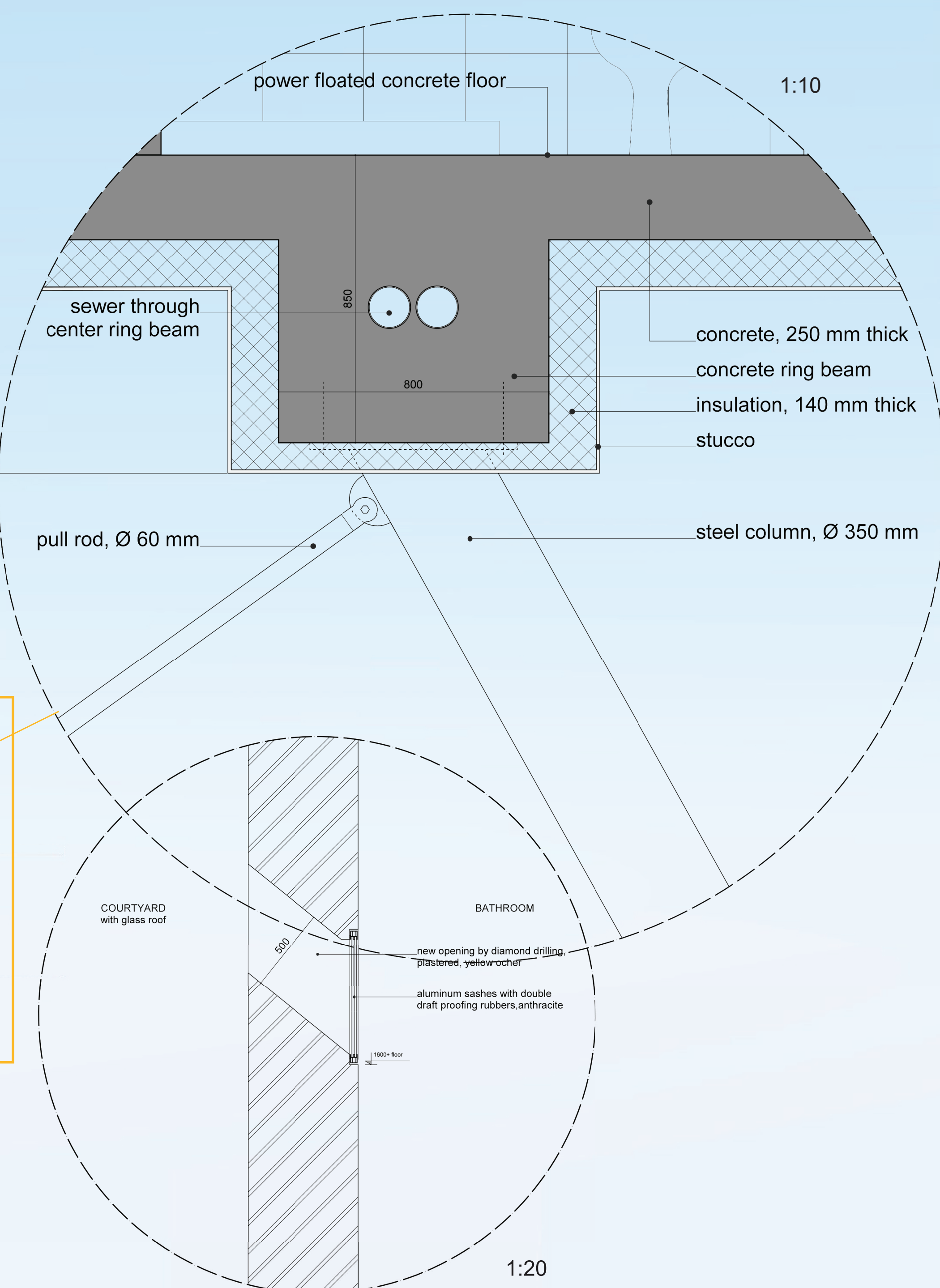
detail of new bridge,
on other side of fort

1:50



- Considerations choice for concrete:
- very stiff box realizable
 - mass, related sound
 - a tunnel formwork can be used, as the rooms are serially
 - reduce material by power floating floor
 - maintenance (steel is not low-maintenance, except stainless steel
 - fire
- Ecology:
- 40% surcharge concrete rubble granulate
 - no high-strength concrete, C20/25 is enough (less cement)

1:10



power floated concrete floor
sewer through center ring beam

pull rod, Ø 60 mm

COURTYARD
with glass roof

BATHROOM

new opening by diamond drilling
plastered, yellow ochre

aluminum sashes with double
draft proofing rubbers, anthracite

1000 mm

1:20

concrete, 250 mm thick
concrete ring beam
insulation, 140 mm thick
stucco

steel column, Ø 350 mm

moat

hostel in
escarp
gallery

soil

exhibition and education space

inner street
east

restaurant

inner street
west

food stock

inner garden

hotel
room

moat

section AA