between the museum as city and city as museum

drawing set

Stephan Bastiaans
Explore Lab 29
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warehouse
longitudinal section S.04
1:200
Aalmarkt
north east elevation E.03
1:200
staircase

elevation E.06, E.07

1:200

south west

south east

G F E

7200 7200

21780 + P
17665 + P
13765 + P
9865 + P
5965 + P
3530 - P

P = 0

10m

P 1 2 3 4 5 6 7 8 9 10
100mm extensive substrate
filter layer
40mm drainage/water storage element
weather barrier
80+200mm (tapered) mineral wool, $R_d = 6.7-7 \, m^2K/W$
pro clima intello vapour retarder
120mm concrete
perforated aluminium ceiling with acoustic panels
and integrated lighting rails

(partly) reused brick with 30mm protrusion
weather barrier
60+260mm hemp insulation, $R_d = 8.42 \, m^2K/W$
pro clima intello vapour retarder
18mm plywood
12mm gypsum fibre board
17665 + P

(partly) reused brick with 30mm protrusion
weather barrier
60+260mm hemp insulation, $R_d = 8.42 \text{ m}^2\text{K}/\text{W}$
pro clima intello vapour retarder
18mm plywood
12mm gypsum fibre board

20+30mm screed floor
250mm concrete
40mm PIR insulation, $R_d = 2.0 \text{ m}^2\text{K}/\text{W}$
perforated aluminium ceiling with acoustic panels and integrated lighting rails

stainless steel wire net, $a = 2\text{mm}$
20+8+20mm triple layer clear polycarbonate panels
polycarbonate connector profiles at joints
frame with thermal break
$U = 0.62 \text{ W/m}^2\text{K}$
staircase
vertical detail
1:10

stainless steel wire net, ø = 2mm
20+8+20mm triple layer clear polycarbonate panels
polycarbonate connector profiles at joints
frame with thermal break
U = 0.62 W/m²K

13765 + P

20+30mm screed floor
250mm concrete
40mm PIR insulation, Rₜ = 2.0 m²K/W
perforated aluminium ceiling with acoustic panels
and integrated lighting rails

20+8+20mm triple layer clear polycarbonate panels
polycarbonate connector profiles at joints
frame with thermal break
U = 0.62 W/m²K
staircase
horizontal detail
1:10

stainless steel wire net, ø = 2mm
20+8+20mm triple layer clear polycarbonate panels
polycarbonate connector profiles at joints
frame with thermal break
\[ U = 0.62 \text{ W/m}^2\text{K} \]
staircase

horizontal detail

1:10

8

12mm gypsum fibre board
vapour barrier
40mm PIR insulation, $R_d = 2.0 \, m^2K/W$
660x660mm concrete column

stainless steel wire net, $\phi = 2\,mm$
20+8+20mm triple layer clear polycarbonate panels
polycarbonate connector profiles at joints
frame with thermal break
$U = 0.62 \, W/m^2K$

reused brick with 30mm protrusion
weather barrier
60+260mm hemp insulation, $R_d = 8.42 \, m^2K/W$
pro clima intello vapour retarder
18mm plywood
12mm gypsum fibre board
staircase
corner detail
1:10

(partly) reused brick with 30mm protrusion
weather barrier
60+250mm hemp insulation, $R_d = 8.42 \text{ m}^2\text{K/W}$
pro clima intello vapour retarder
18mm plywood
12mm gypsum fibre board

180x180x8mm square steel hollow section
flame retardant board
frame
structural diagram
1:200
frame
assemblage
warehouse
climate scheme, winter situation

heating:
- ground-coupled heat exchanger
- heat pump
- floor heating

ventilation:
- heat exchanger
warehouse
climate scheme, summer situation

cooling:
- ground-coupled heat exchanger
- heat pump
- floor heating
occupation: 160 people (1600m²)
ventilating regulations (Bouwbesluit 2012): 4dm³/s/person
V_{max} = 3m/s

total ventilation: 664dm³/s
duct: 664dm³/s : 3m/s = 22,1dm² = ø530mm

04 museum
floor area: 420m²
occupation: 42 people
ventilation: 42 x 4dm³/s/person = 168dm³/s
duct: 168dm³/s : 3m/s = 5,6dm² = 200 x 280mm

03 museum
floor area: 390m²
occupation: 39 people
ventilation: 39 x 4dm³/s/person = 156dm³/s
duct: 156dm³/s : 3m/s = 5,2dm² = 200 x 260mm
addendum
toilet: 2 x 7dm³/s = 14dm³/s
staircase: 16m² x 0,5 dm³/s/m² = 8dm³/s
ventilation: 24dm³/s

02 museum
floor area: 390m²
occupation: 39 people
ventilation: 39 x 4dm³/s/person = 156dm³/s
duct: 156dm³/s : 3m/s = 5,2dm² = 200 x 260mm
addendum
toilet: 2 x 7dm³/s = 14dm³/s
staircase: 16m² x 0,5 dm³/s/m² = 8dm³/s
ventilation: 24dm³/s

01 museum
floor area: 280m²
occupation: 28 people
ventilation: 28 x 4dm³/s/person = 112dm³/s
duct: 112dm³/s : 3m/s = 3,7dm² = 200 x 190mm
addendum
toilet: 2 x 7dm³/s = 14dm³/s
staircase: 16m² x 0,5 dm³/s/m² = 8dm³/s
ventilation: 24dm³/s