COMPLEX PROJECTS

LABORATORY LIFE

A Medical Laboratory Building

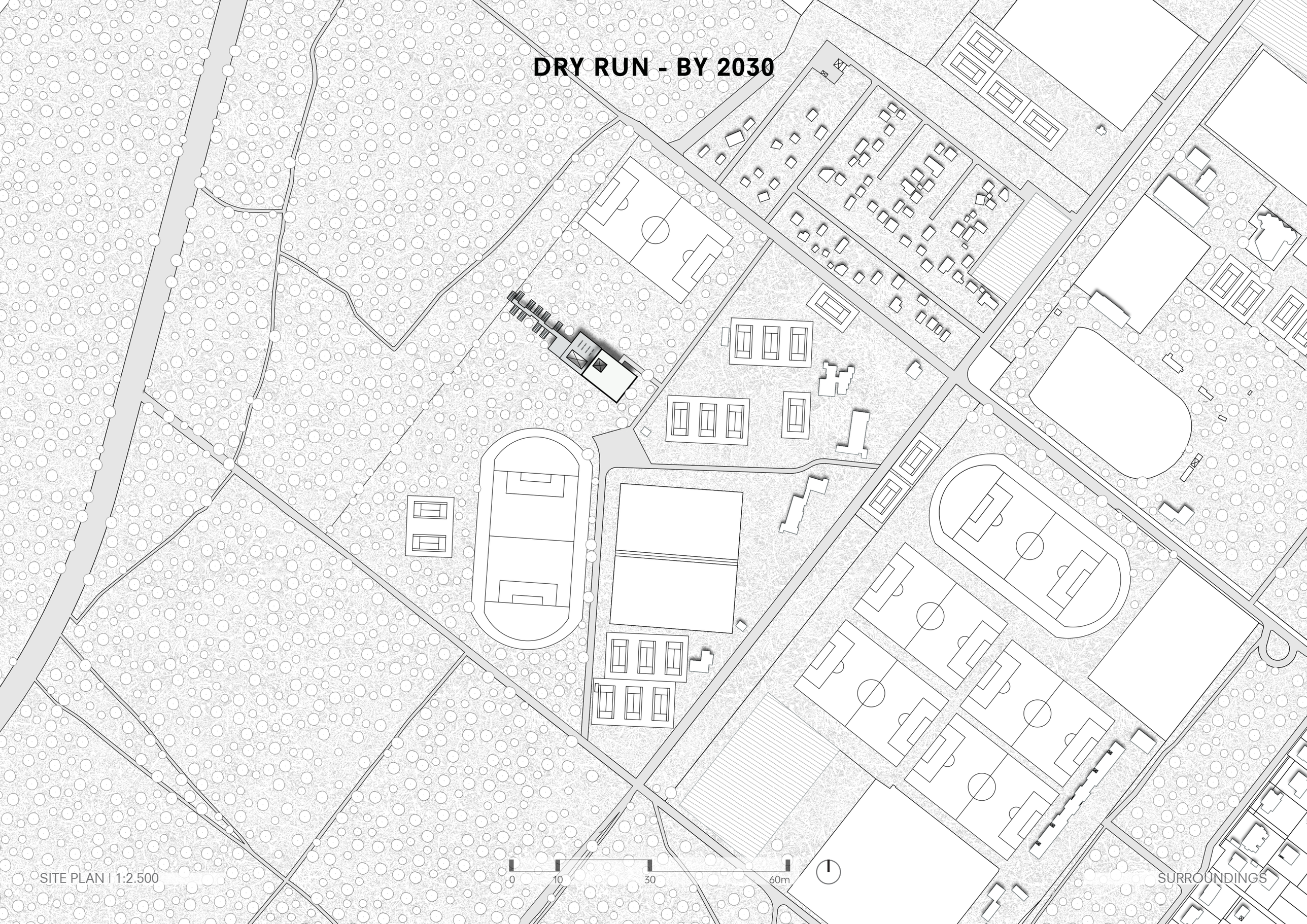
Sander Geluk

Drawing set

Group 9

05/07/2024

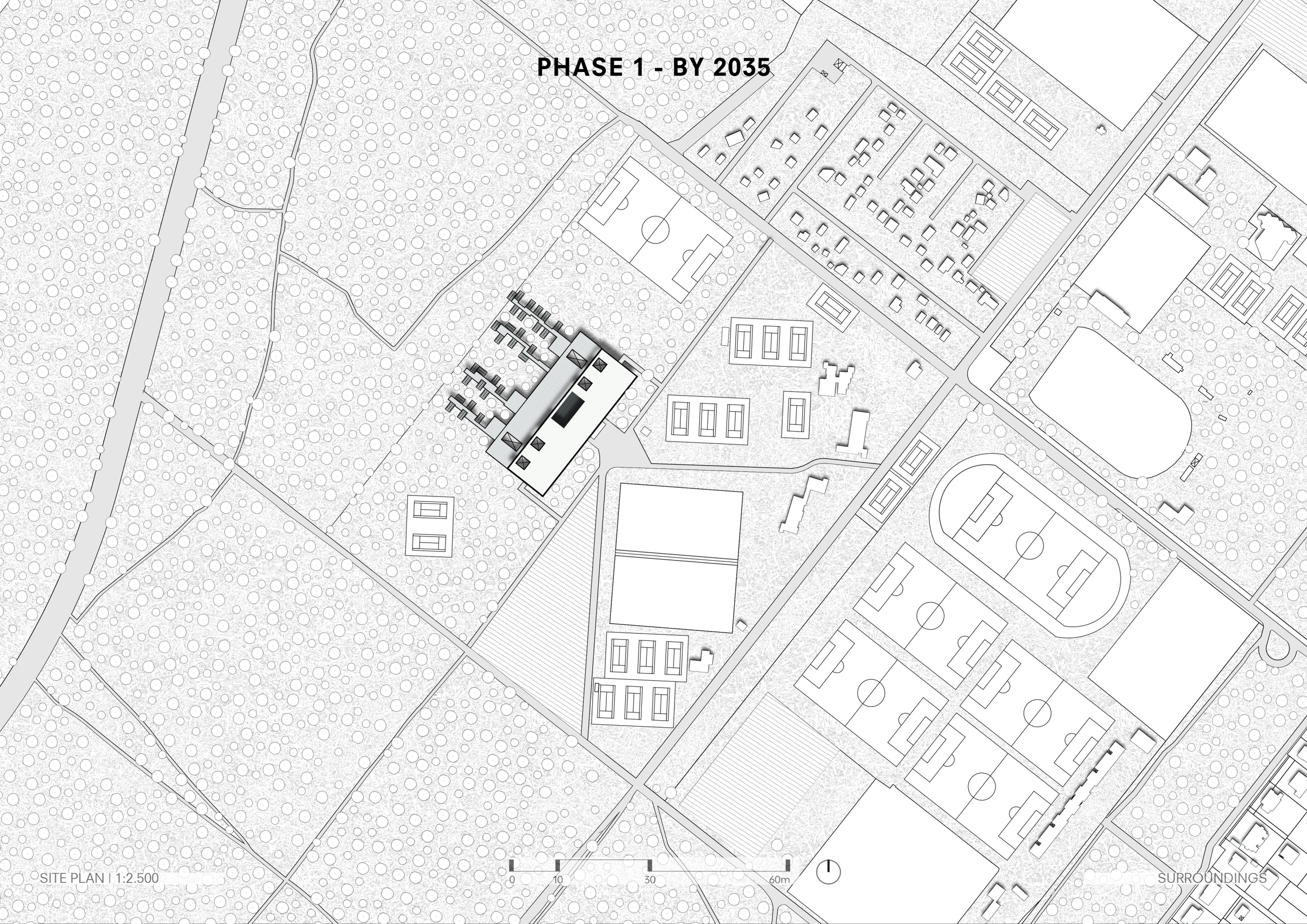
DRY RUN - BY 2030



SITE PLAN | 1:2.500

SURROUNDINGS

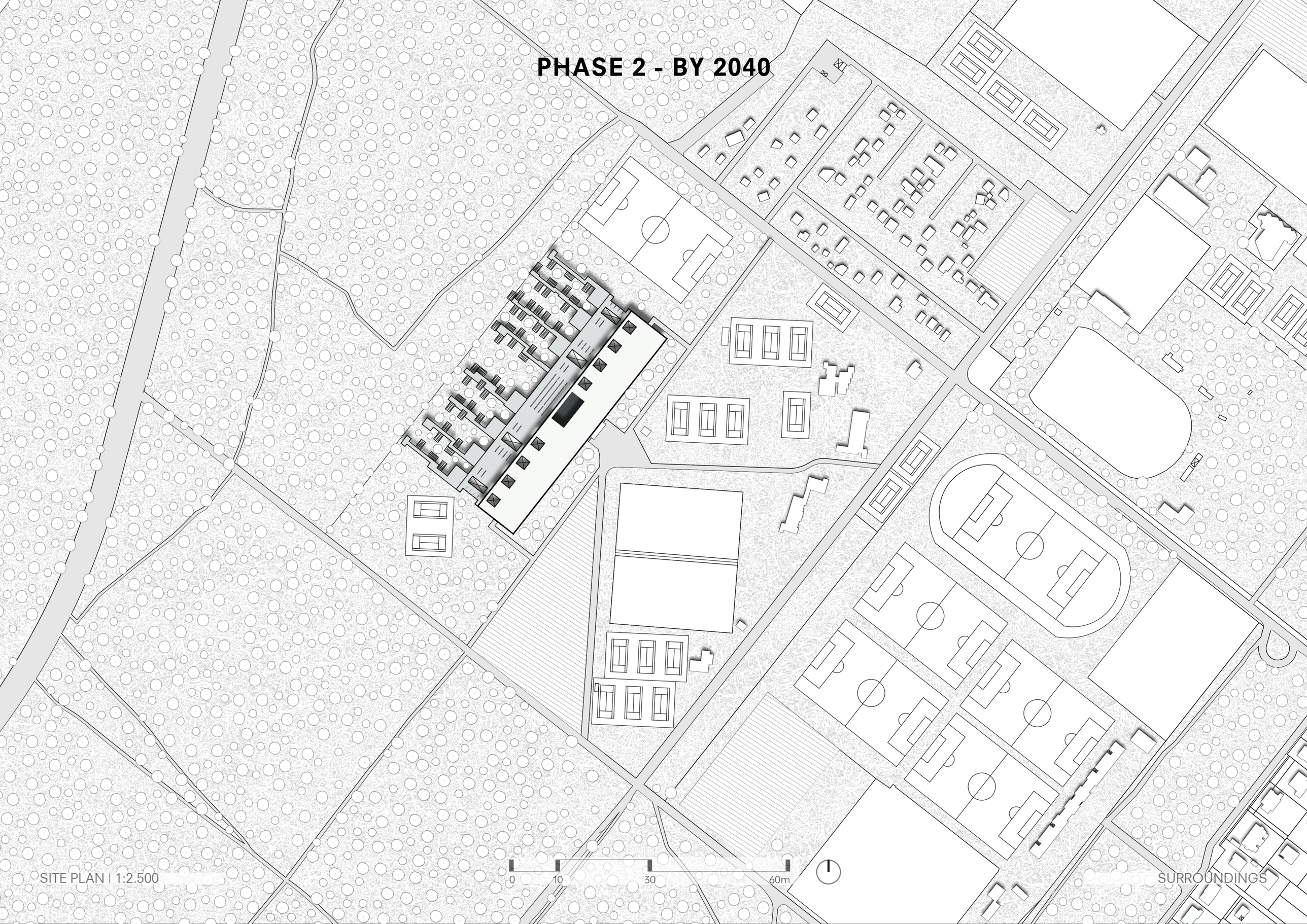
PHASE 1 - BY 2035



SITE PLAN | 1:2.500

SURROUNDINGS

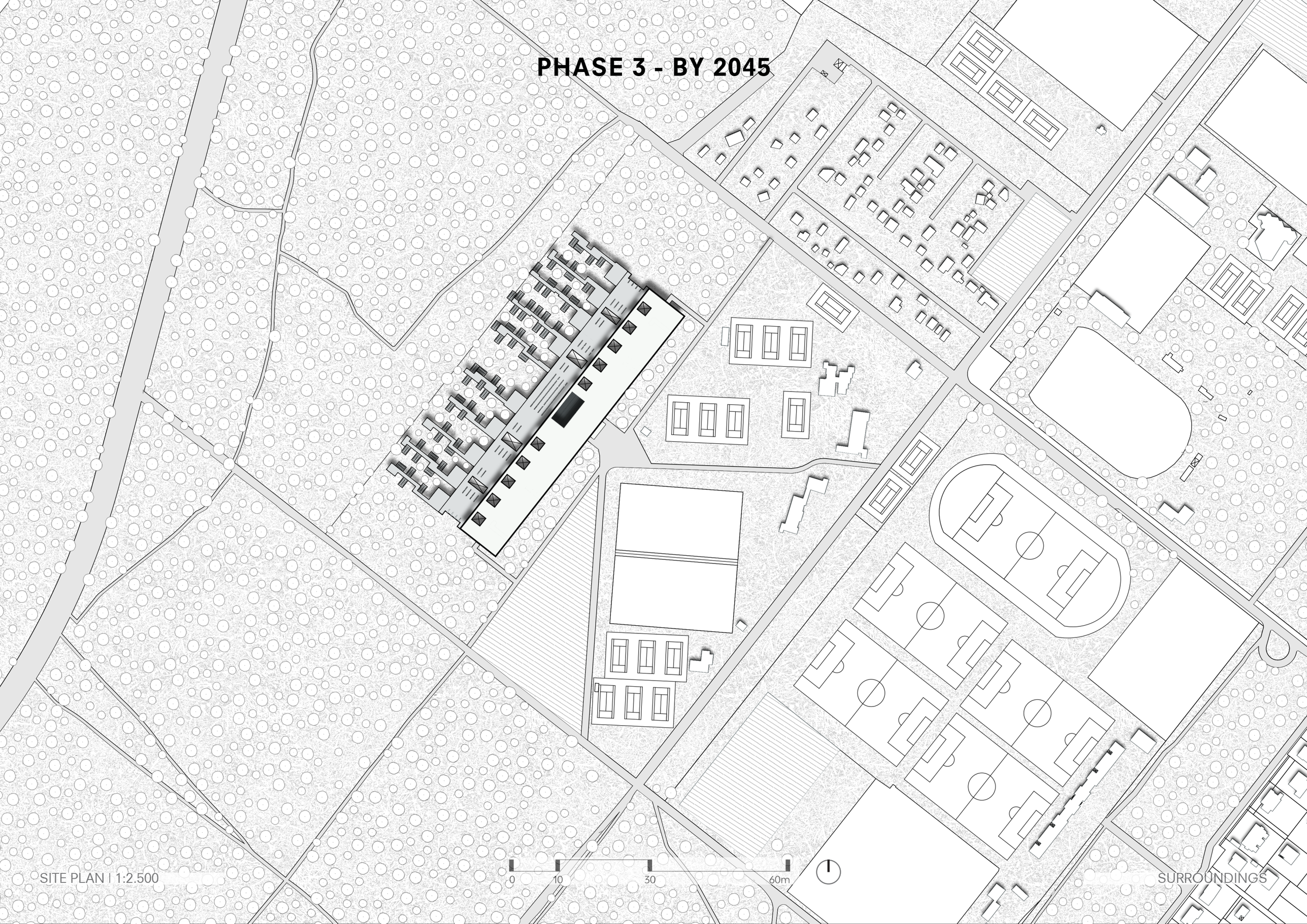
PHASE 2 - BY 2040



SITE PLAN | 1:2.500

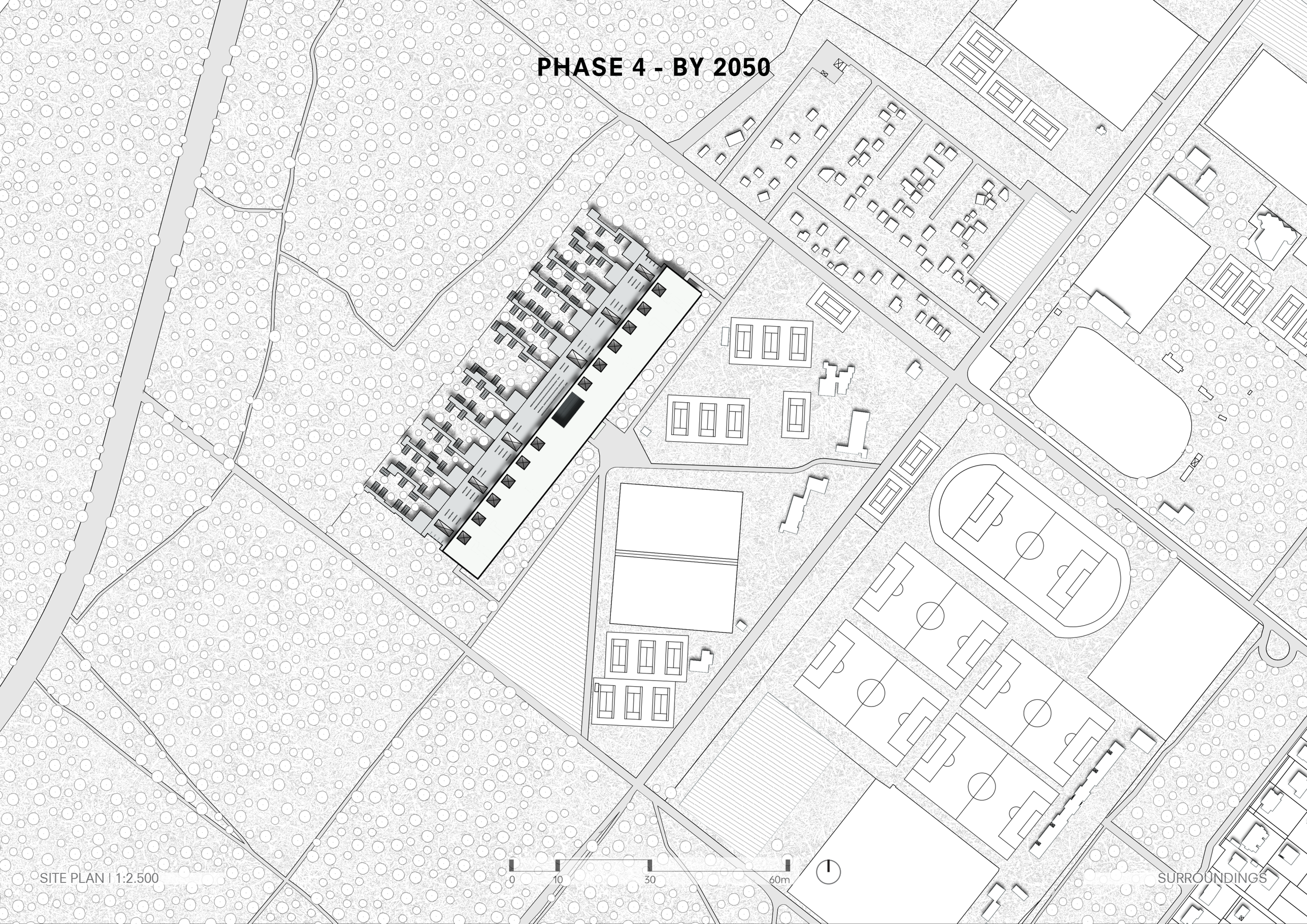
SURROUNDINGS

PHASE 3 - BY 2045

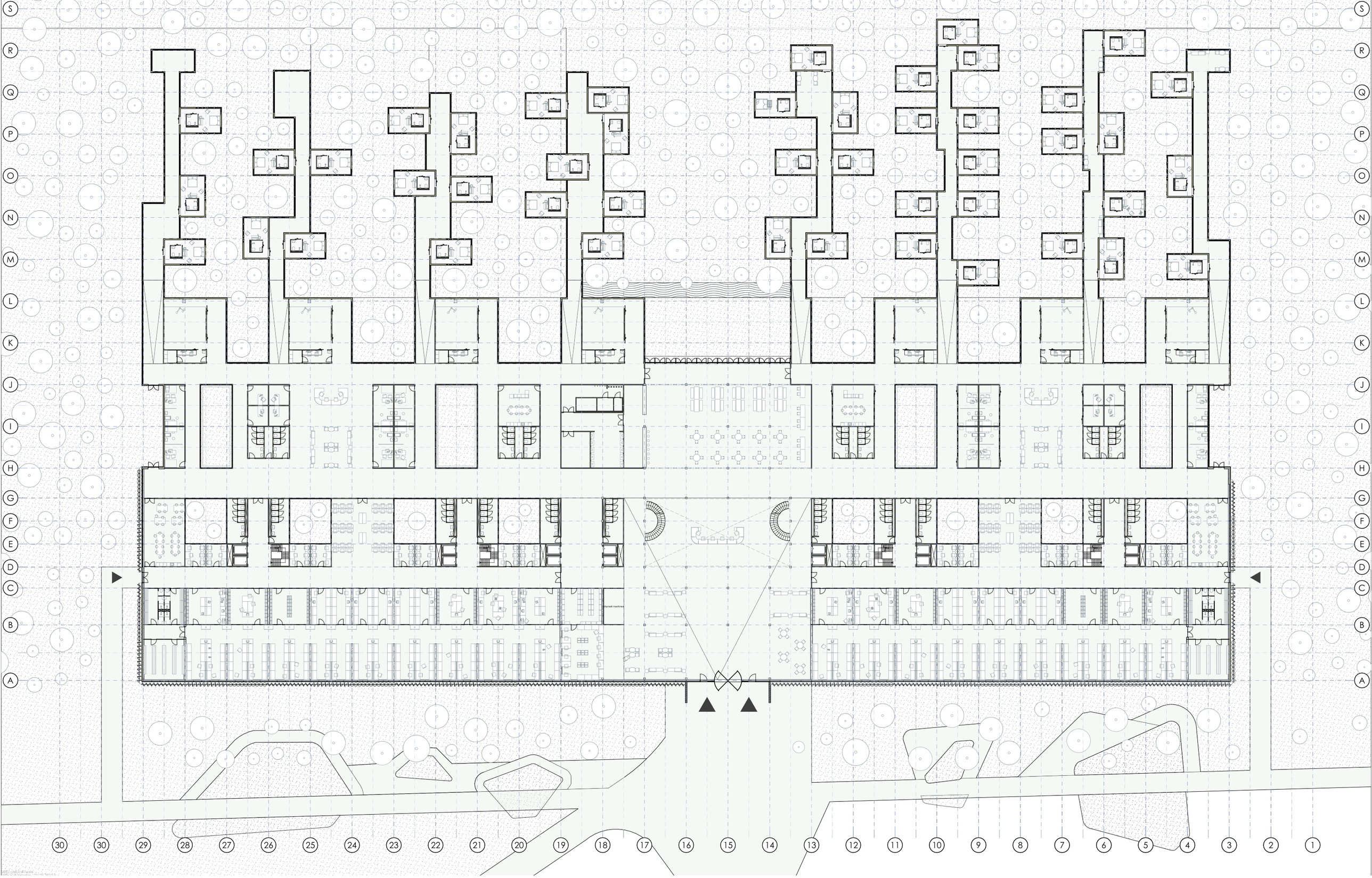


SITE PLAN | 1:2.500

PHASE 4 - BY 2050



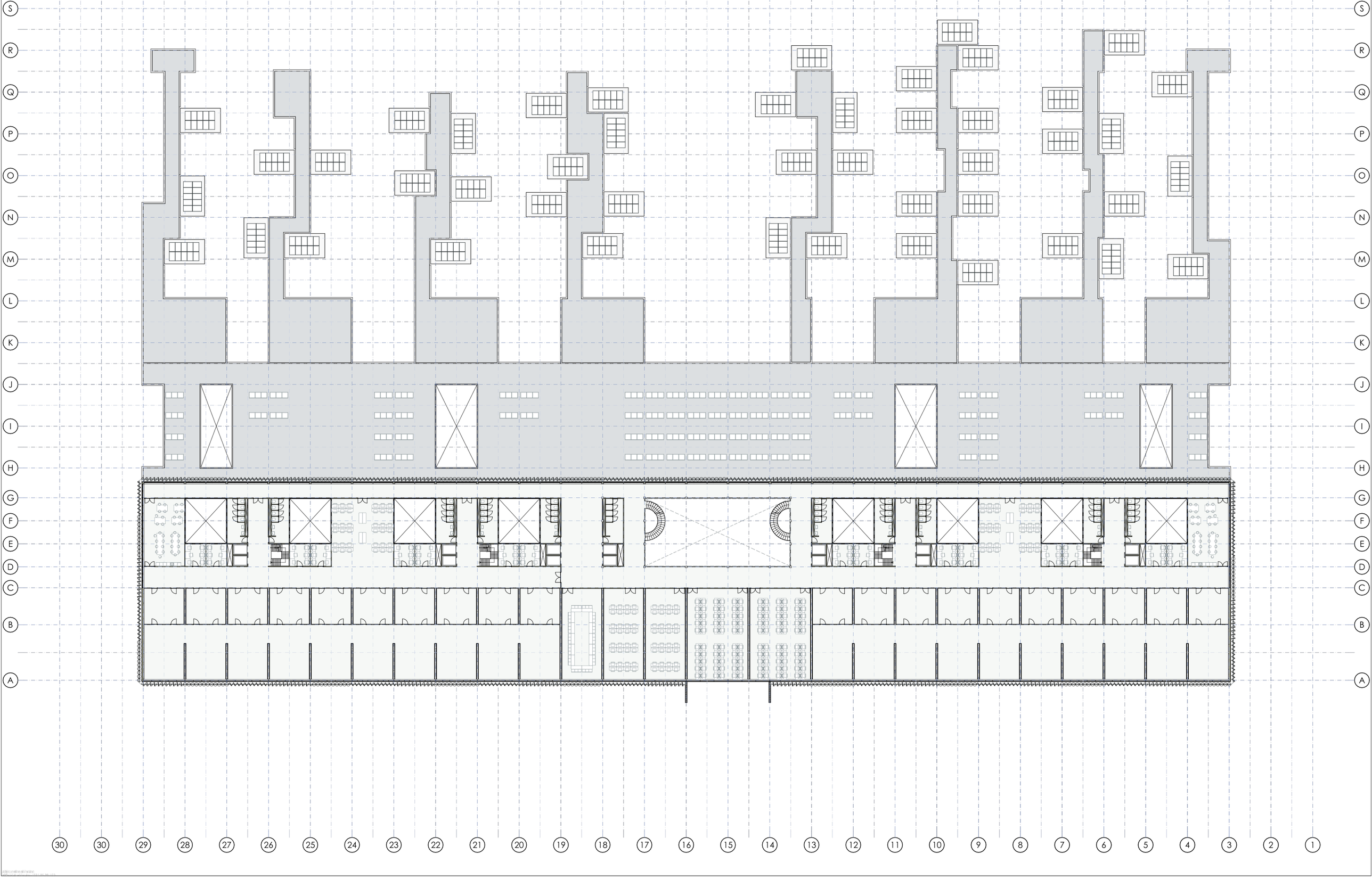
SITE PLAN | 1:2.500



GROUND FLOOR | 1:400

0 10 30 60m

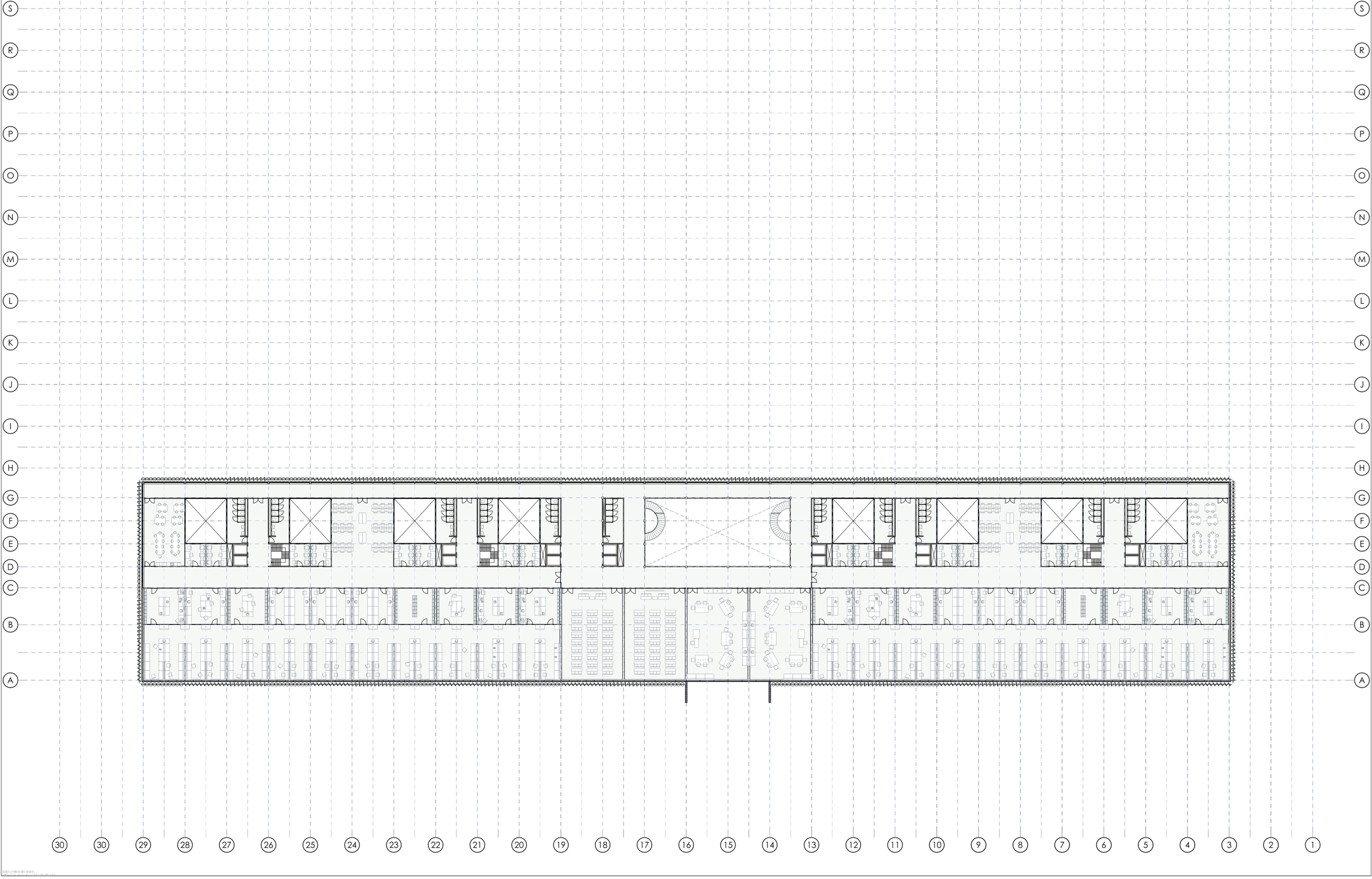
HOSPITAL



FIRST FLOOR | 1:400

0 10 30 60m

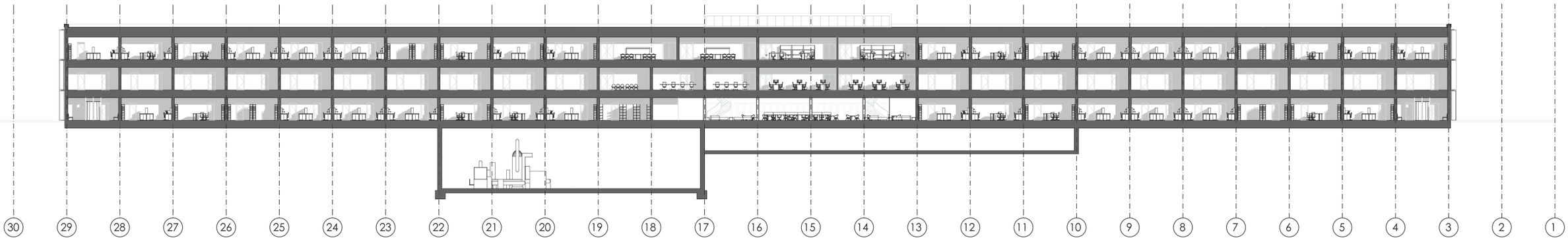
RESEARCH OFFICES

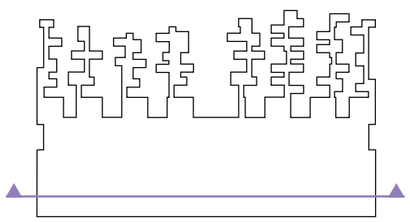


SECOND FLOOR | 1:400

0 10 30 60m

LABORATORY

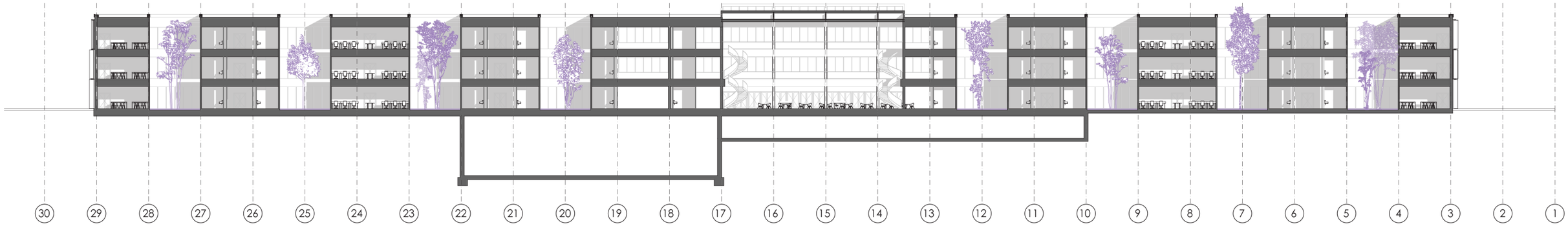


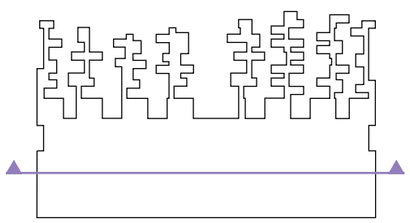


LONGITUDINAL SECTION A - A

0 10 30 60m

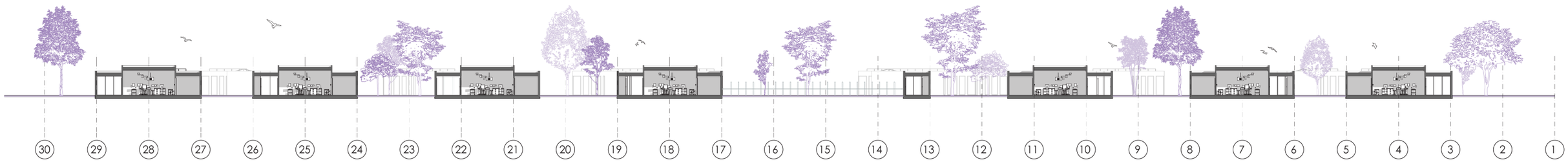
LABORATORY

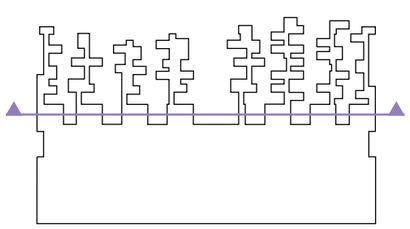




LONGITUDINAL SECTION B - B

RESEARCH OFFICES

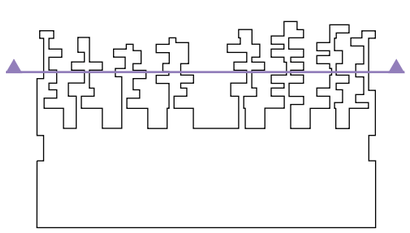




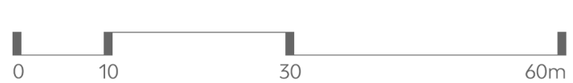
LONGITUDINAL SECTION C - C

0 10 30 60m

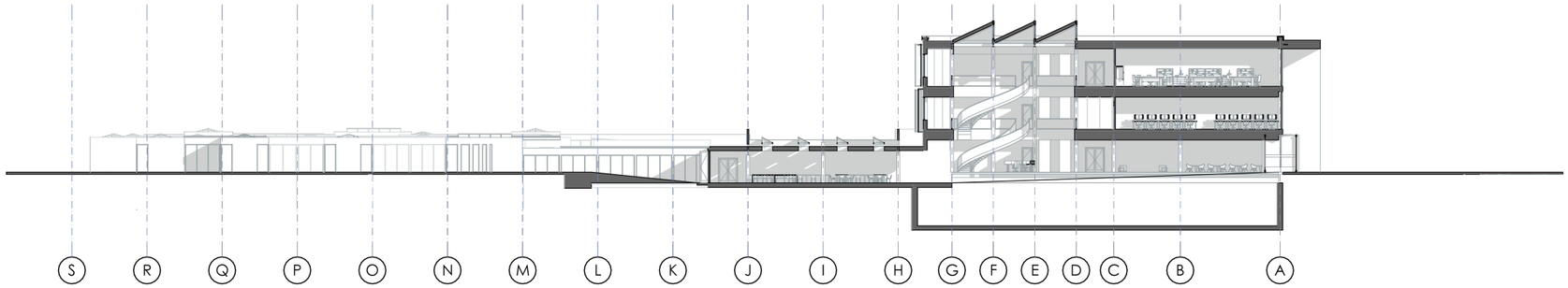
HOSPITAL

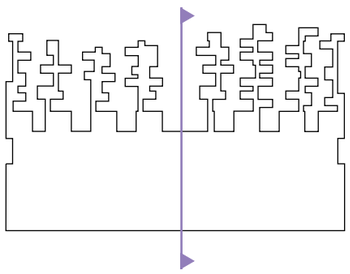


LONGITUDINAL SECTION D - D



INCUBATION ROOMS

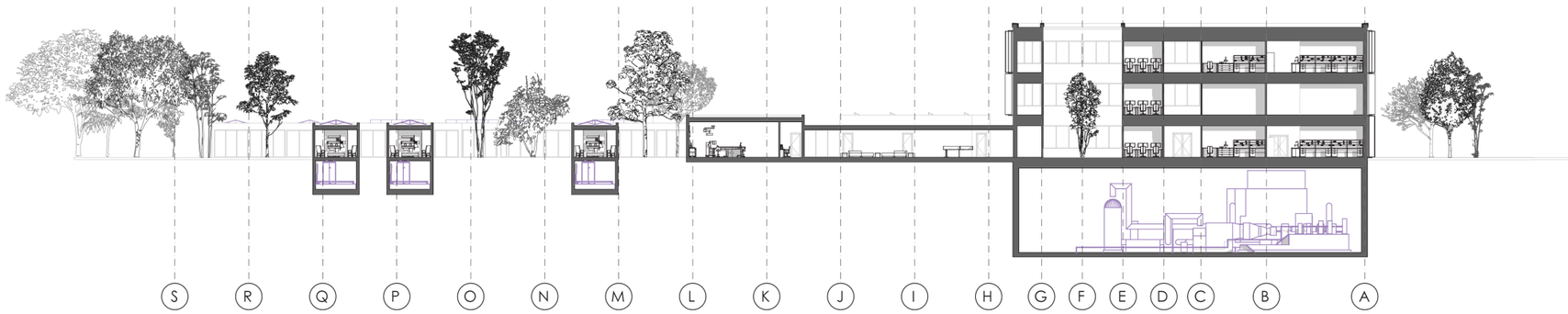


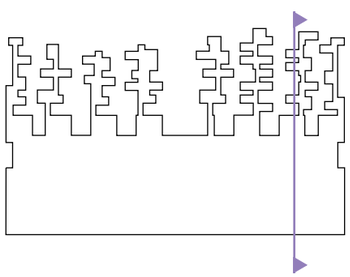


CROSS SECTION 1′ - 1′

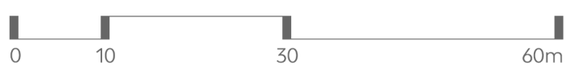
0 10 30 60m

ENTRANCE HALL

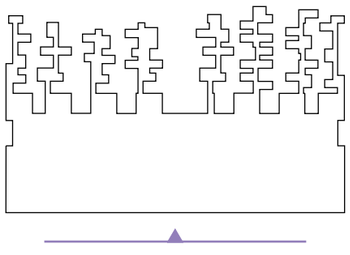




CROSS SECTION 2′ - 2′

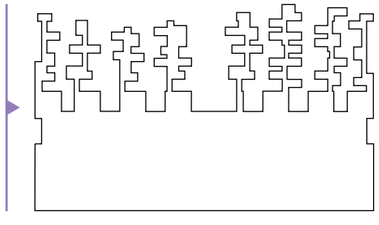


CLIMATE CONCEPT



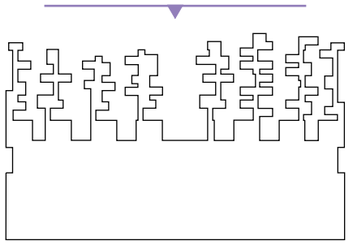
ELEVATIONS | 1:400

SOUTH-EAST FACADE



ELEVATIONS | 1:400

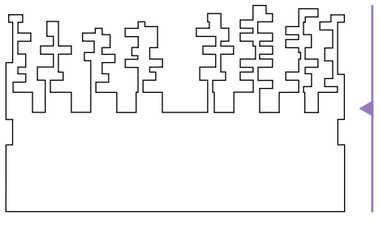
SOUTH-WEST FACADE



ELEVATIONS | 1:400

0 10 30 60m

NORTH-WEST FACADE



ELEVATIONS | 1:400

NORTH-EAST FACADE

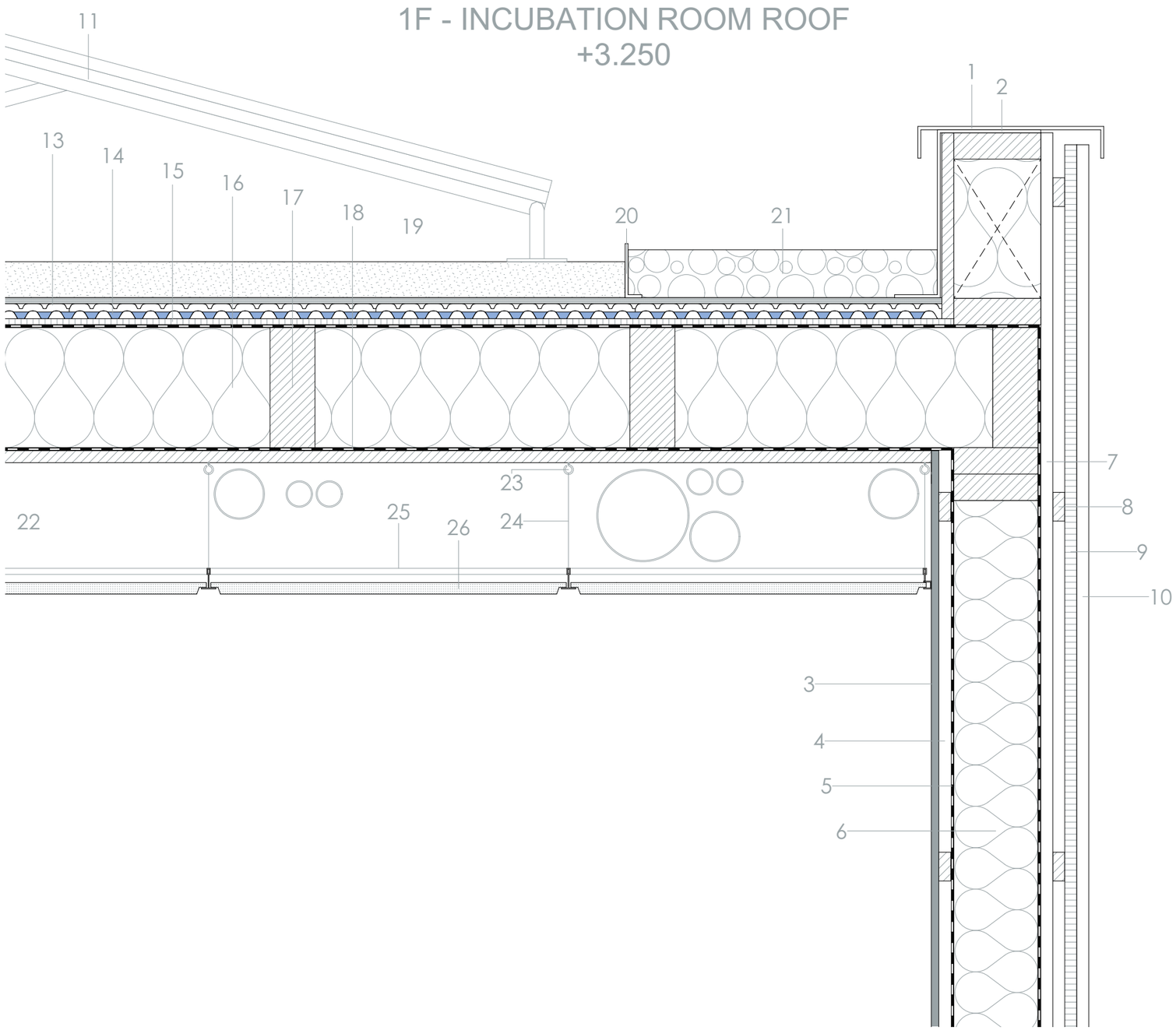
KEY SPACE

INCUBATION ROOMS

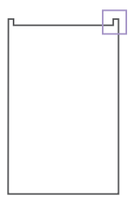
FRAGMENT | 1:20

INCUBATION ROOMS

1F - INCUBATION ROOM ROOF
+3.250



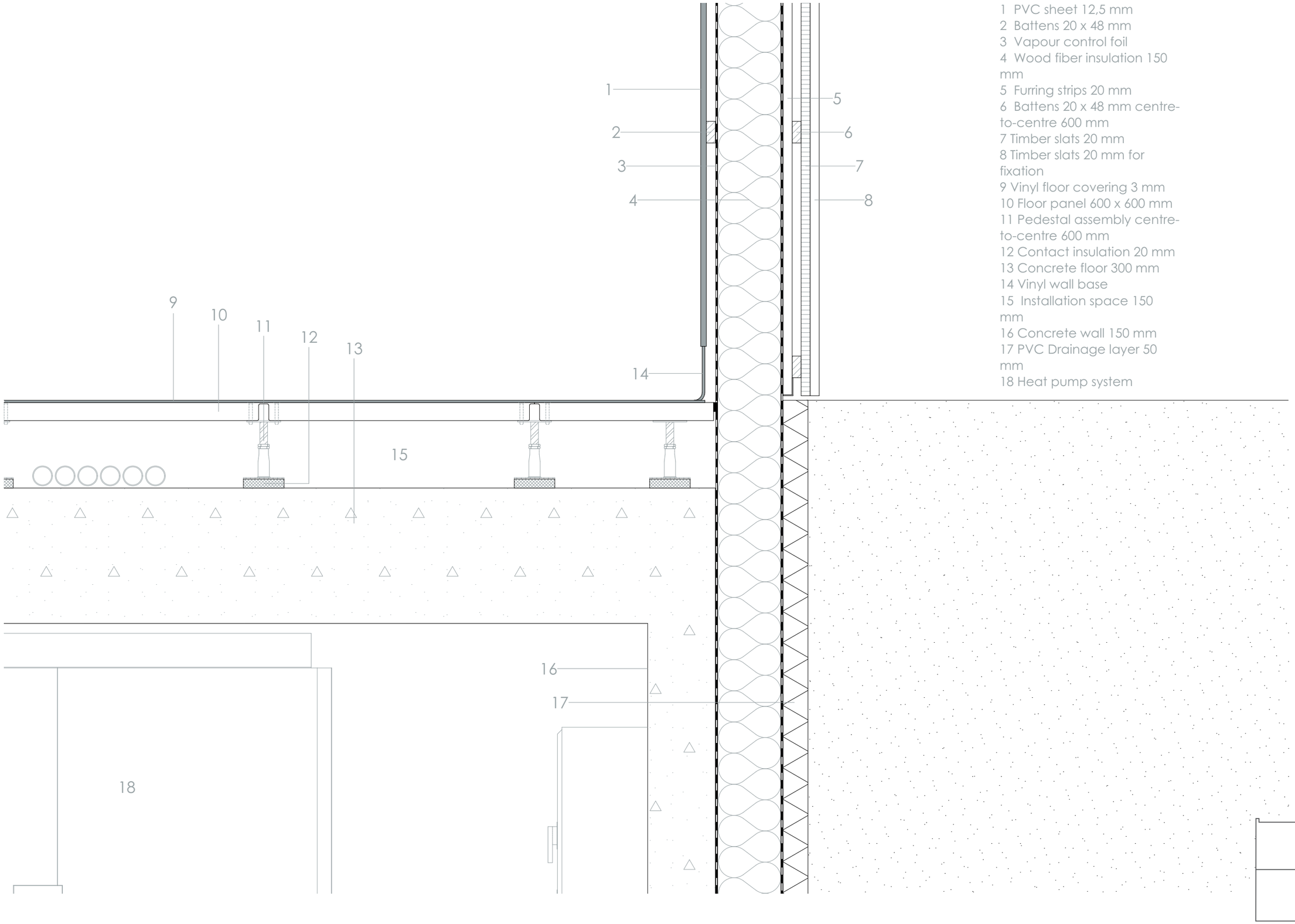
1 Aluminum parapet finishing
2 Side seal
3 PVC sheet 12,5 mm
4 Battens 20 x 48 mm
5 Vapour control foil
6 Wood fiber insulation 150 mm
7 Furring strips 20 mm
8 Battens 20 x 48 mm centre-to-centre 600 mm
9 Timber slats 20 mm
10 Timber slats 20 mm for fixation
11 Solar panels
12 Growth medium 60 mm
13 Filter membrane membrane 10 mm
14 Drainage layer/ protective layer/water retention 25 mm
15 Slip sheet (Root barrier / Protection layer) 10 mm
16 Wood fiber Insulation 200 mm
17 Timber 75 x 200 mm
18 Vapour control layer
19 Gypsum fiber board 20 mm
20 Separation corner profile
21 Gravel
22 Installation space 200 mm
23 Metallic dowel with hook L= 25mm
24 Galvanized steel cable
25 Metal structure with galvanized steel T profile, centre-to-centre 600 mm
26 Suspended ceiling 600 x 600 x 20 mm



DETAIL | 1:5

0 1m

INCUBATION ROOMS

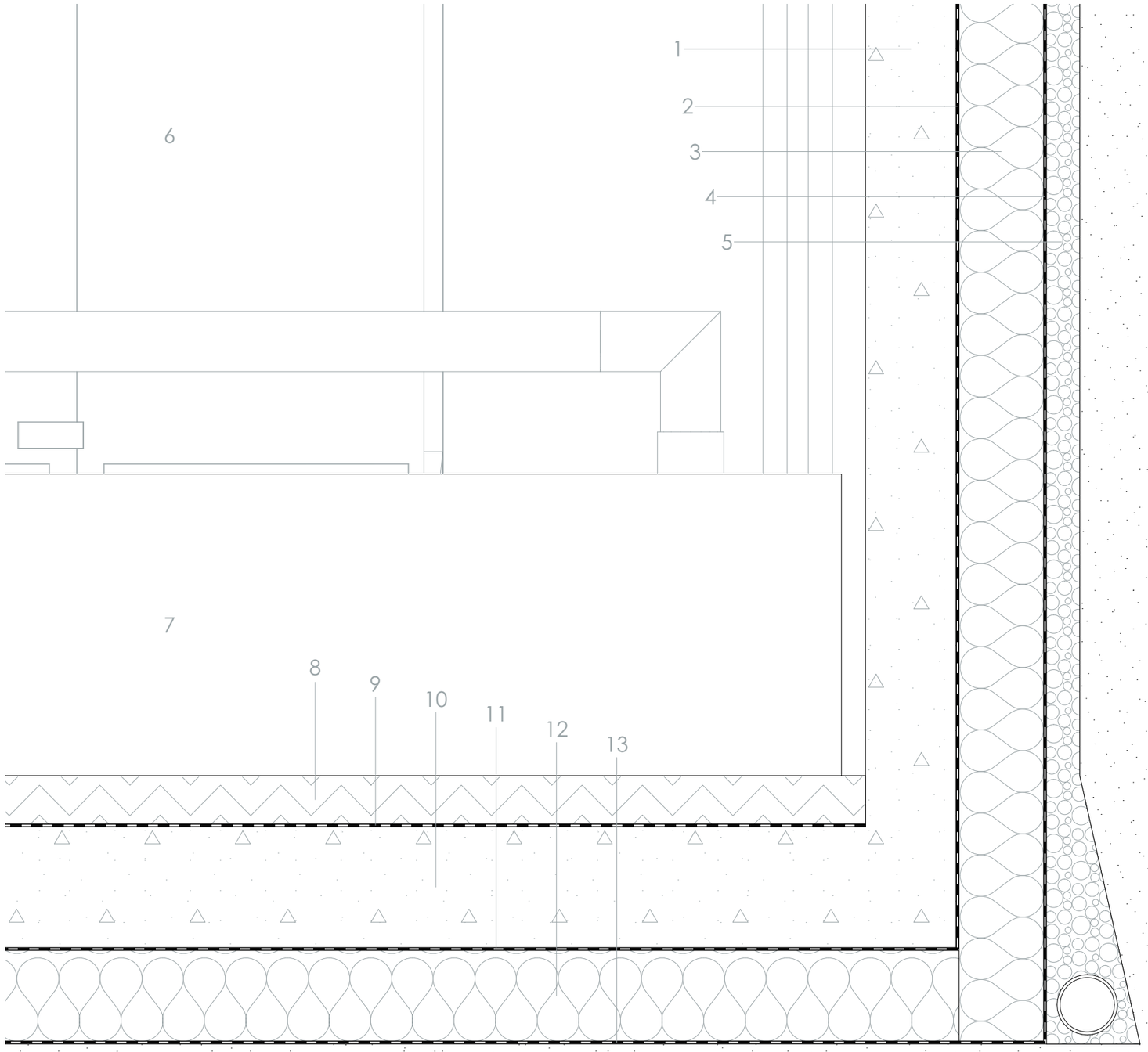


1 PVC sheet 12,5 mm
2 Battens 20 x 48 mm
3 Vapour control foil
4 Wood fiber insulation 150 mm
5 Furring strips 20 mm
6 Battens 20 x 48 mm centre-to-centre 600 mm
7 Timber slats 20 mm
8 Timber slats 20 mm for fixation
9 Vinyl floor covering 3 mm
10 Floor panel 600 x 600 mm
11 Pedestal assembly centre-to-centre 600 mm
12 Contact insulation 20 mm
13 Concrete floor 300 mm
14 Vinyl wall base
15 Installation space 150 mm
16 Concrete wall 150 mm
17 PVC Drainage layer 50 mm
18 Heat pump system

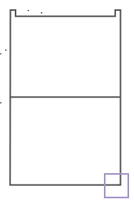
DETAIL I 1:5

0 1m

INCUBATION ROOMS



1 Concrete wall 150 mm
2 Vapour control foil
3 Wood fiber insulation 150 mm
4 Waterproof foil
5 PVC Drainage layer 50 mm
6 Heat pump system
7 Buffer bag filled with water for heat storage 4.000 x 6.000 x 0,5 m³
8 Screed floor 80 mm
9 PE foil
10 Concrete floor 200 mm
11 Vapour control layer
12 Wood fiber insulation 150 mm
13 Waterproofing layer

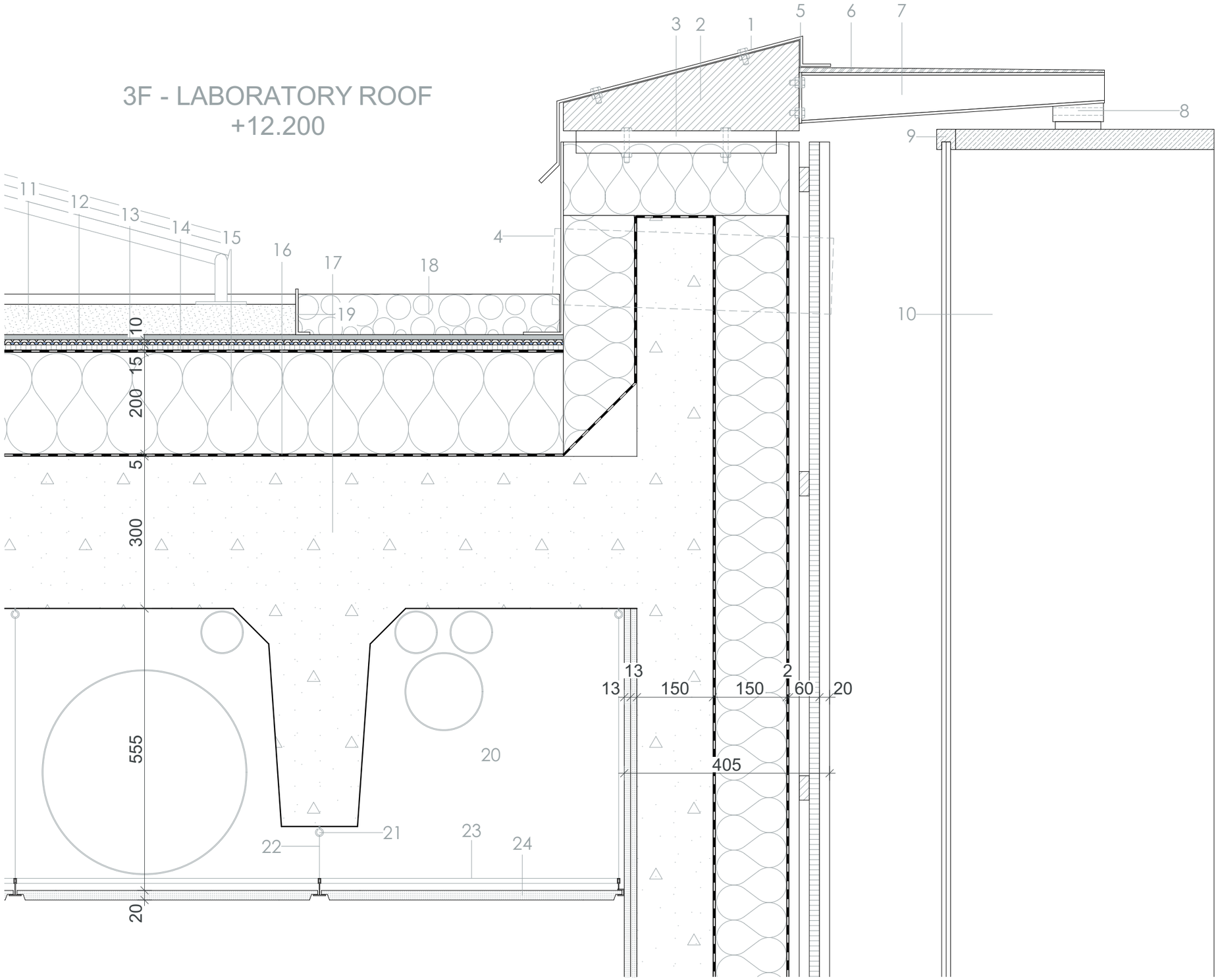


DETAIL | 1:5

0 1m

INCUBATION ROOMS

3F - LABORATORY ROOF
+12.200



1 Aluminum parapet finishing
2 Tapered rigid insulation
3 Steel stiffener
4 Emergency drain
5 Steel plate
6 Aluminium sheet
7 Steel cantilever
8 Stainless steel glass mounting
9 PVC U-profile
10 Vertically pivoting fritted glass lamellas 50 mm x 3.900 mm

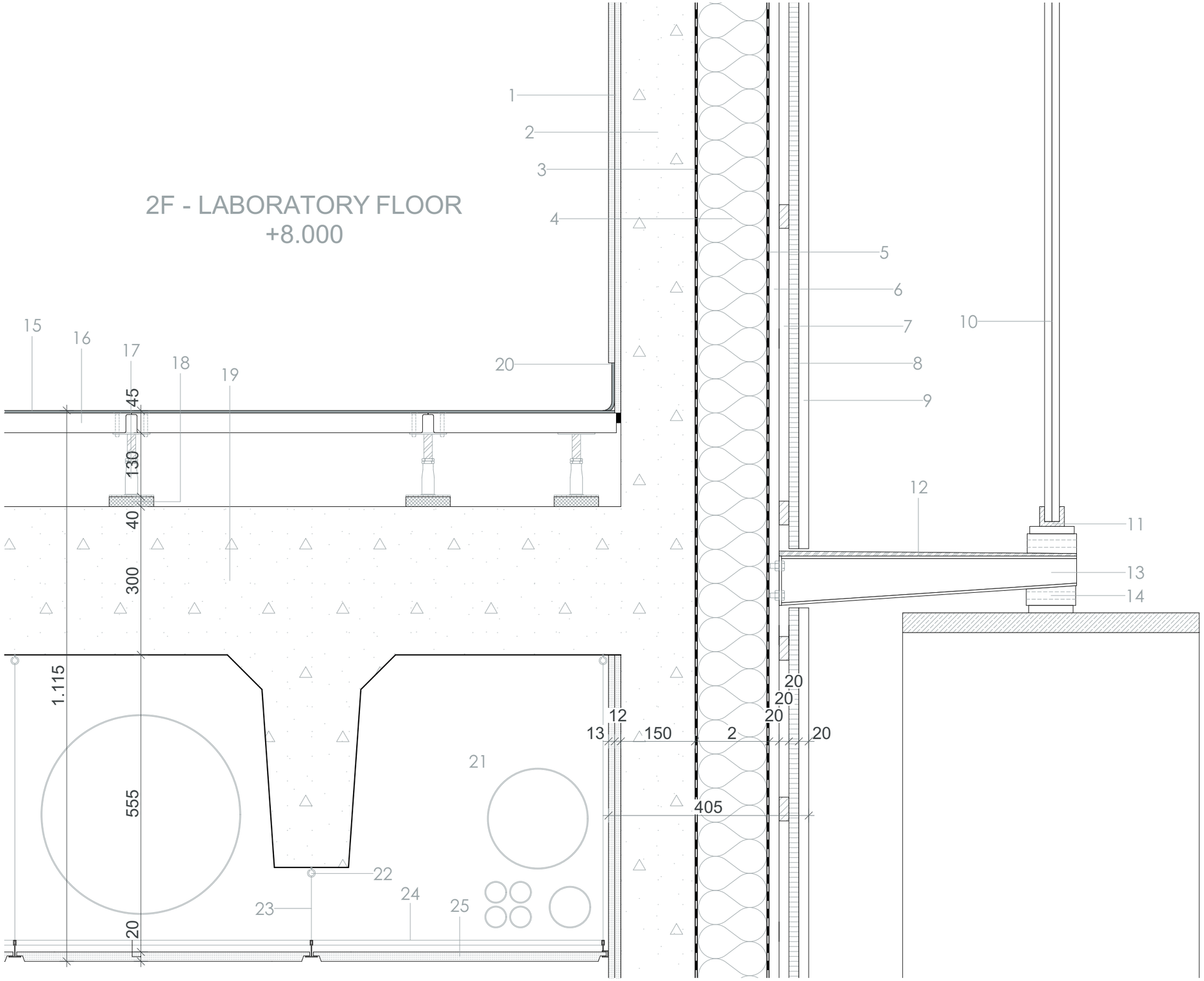
[Automatic system which can be manually overruled]

11 Growth medium 60 mm
12 Filter membrane membrane 10 mm
13 Drainage layer/ protective layer/water retention 25 mm
14 Slip sheet (Root barrier / Protection layer) 10 mm
15 Wood fiber Insulation 200 mm
16 Vapour control layer
17 Concrete composite decking floor 300 mm
18 Gravel
19 Separation corner profile
20 Installation space 555 mm
21 Metallic dowel with hook L= 25mm
22 Galvanized steel cable
23 Metal structure with galvanized steel T profile, centre-to-centre 600 mm
24 Suspended ceiling 600 x 600 x 20 mm

DETAIL | 1:5

0 1m

LABORATORY



1 2 x Plasterwork 10 mm
2 Concrete 150 mm
3 Vapour control foil
4 Wood fiber insulation 150 mm
5 Waterproofing layer
6 Furring strips 20 mm
7 Battens 20 x 48 mm centre-to-centre 600 mm
8 Vertical timber slats 20 mm
9 Timber slats 20 mm for fixation
10 Vertically pivoting fritted glass lamellas 50 mm x 3.900 mm

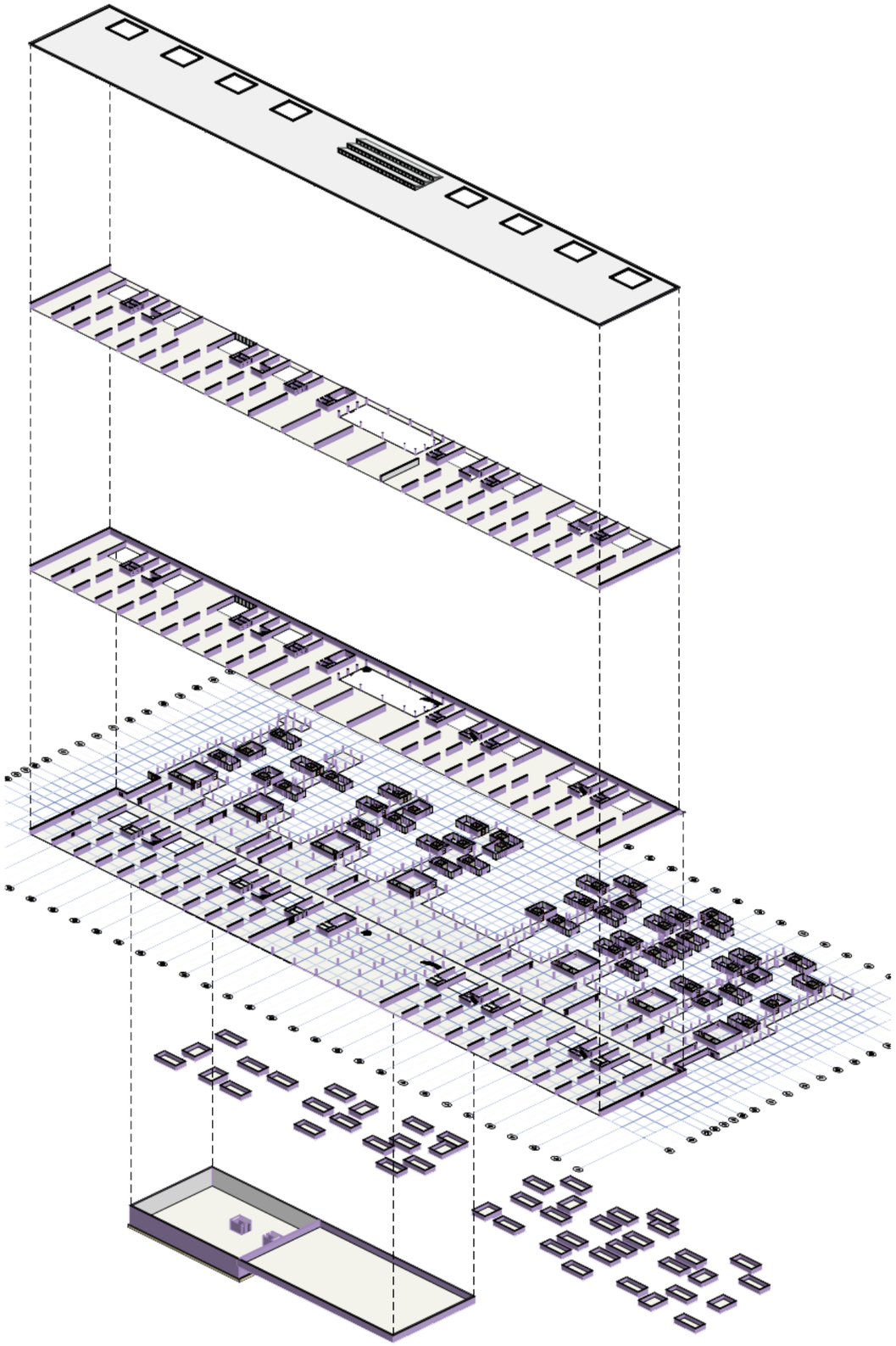
[Automatic system which can be manually overruled

11 PVC U-profile
12 Aluminium sheet
13 Steel cantilever
14 Stainless steel glass mounting
15 Vinyl floor covering 3 mm
16 Floor panel 600 x 600 mm
17 Pedestal assembly centre-to-centre 600 mm
18 Contact insulation 20 mm
19 Concrete floor 300 mm
20 Vinyl wall base
21 Installation space 555 mm
22 Metallic dowel with hook L= 25mm
23 Galvanized steel cable
24 Metal structure with galvanized steel T profile, centre-to-centre 600 mm
25 Suspended ceiling 600 x 600 x 20 mm

0 1m

DETAIL I 1:5

LABORATORY



AXONOMETRIC

CONSTRUCTION


1