

HOUTWIJK

research

concept

site and mass

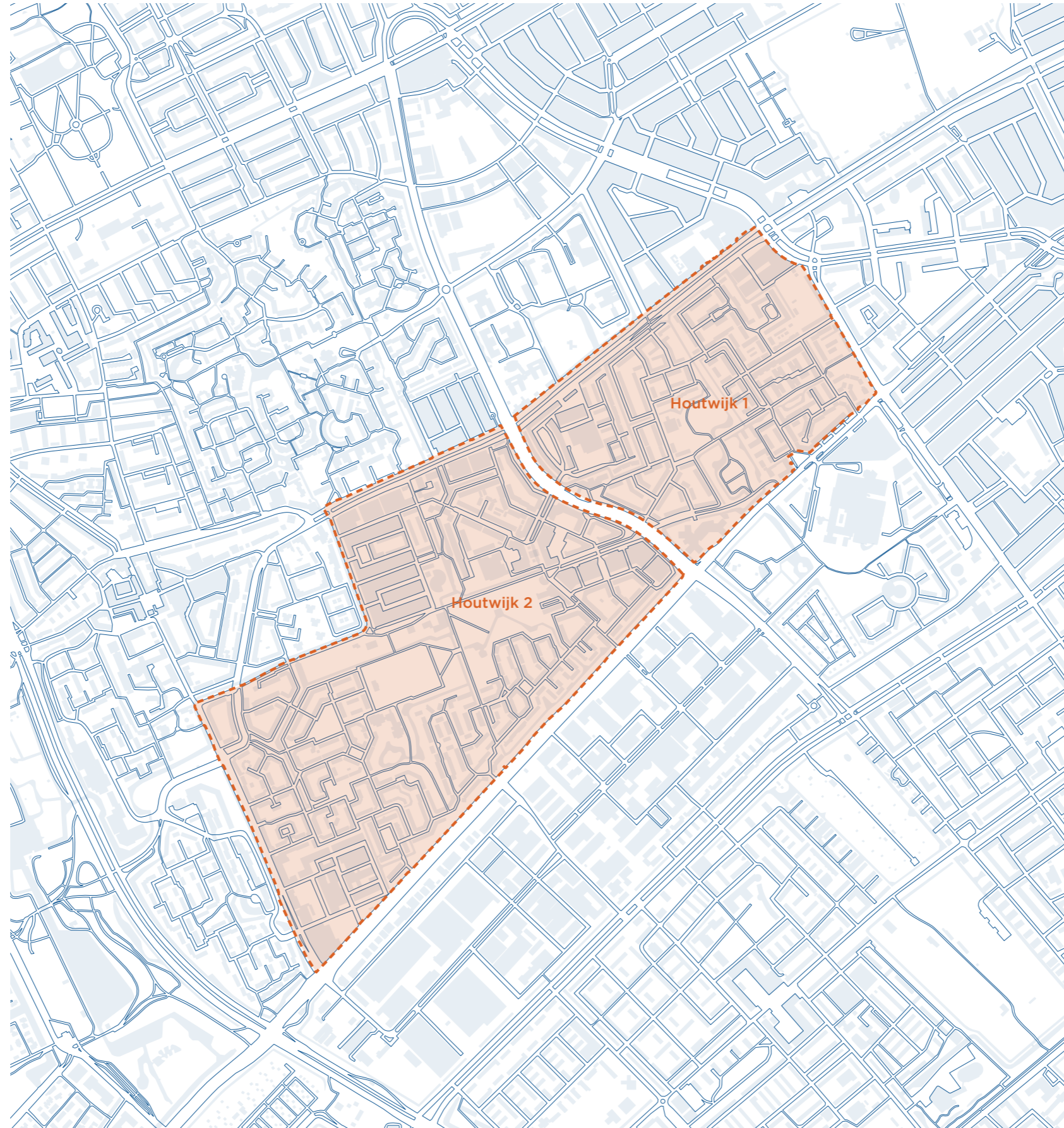
design

conclusion

Houtwijk
Location



Houtwijk Location



Houtwijk

Care facilities



Houtwijk
Inward looking architecture



Houtwijk

RESEARCH

concept

site and mass

design

conclusion

Research
Main question

Missing in/around Houtwijk & The Hague

**In what way can a inpatient rehabilitation centre for children
be designed to enable co-use by residents of Houtwijk?**

Prevent inward looking architecture

Research
Program of requirements

Primary care domain (patient-centered)	
Component	NFA
Reception	250
Clinic environment	600
Central treatment area	1800
Gym	450
Gait analysis	150
Sports hall/central practice floor	500
Swimmingpool	150
Individual practice room	100
Group therapy	100
Consultation room (with examination table)	150
Treatment and consultation room (without examination table)	200
Restaurant (with outdoor terrace)	650
Kitchen area	200
Seating area	300
Coffee corner (with outdoor terrace)	150
Services	100
Total NFA	3400
GFA (NFA*1,6)	5440

Support domain (organization & technology)	
Component	NFA
Organization	300
Meeting rooms	150
Education	50
Offices	100
Staff	300
Technology	150
Storage and logistics	550
Parking	
Total NFA	1300

GFA (NFA*1,6)	2080
Total GFA	7500

Research
Houtwijk needs



Research
Program of requirements and co-use

Primary care domain (patient-centered)	
Component	NFA
Reception	250
Clinic environment	600
Central treatment area	1800
Gym	450
Gait analysis	150
Sports hall/central practice floor	500
Swimmingpool	150
Individual practice room	100
Group therapy	100
Consultation room (with examination table)	150
Treatment and consultation room (without examination table)	200
Restaurant (with outdoor terrace)	650
Kitchen area	200
Seating area	300
Coffee corner (with outdoor terrace)	150
Services	100
Total NFA	3400
GFA (NFA*1,6)	5440

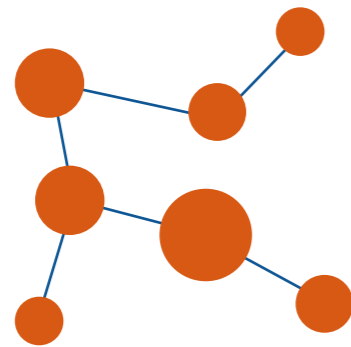
Support domain (organization & technology)	
Component	NFA
Organization	300
Meeting rooms	150
Eduction	50
Offices	100
Staff	300
Technology	150
Storage and logistics	550
Parking	
Total NFA	1300

GFA (NFA*1,6)	2080
Total GFA	7500

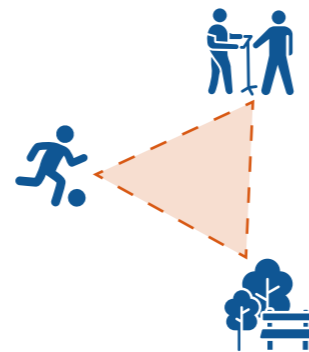
Research
Pediatric design principles

Therapeutic play	Child friendly environment	Family support	Positive distraction	Nature and outdoors
sensory rooms	use of color and texture	room layout to promote family engagement	interactive (hands-free) play technologies	high visibility and accessibility
distributed and integrated play zones	visual connections	comfortable furniture for family	colorful objects and murals	child-sized play features
adaptable open areas	concealment of clinical elements	engagement of families in activity without disturbing patient	sensory room	socialisation spaces
visual connections	human scale	stay-over facilities		shaded areas
sense of normality	continue their daily life			visual connections
facilitate interaction	personalizing spaces.			

Research
Conclusion and design principles



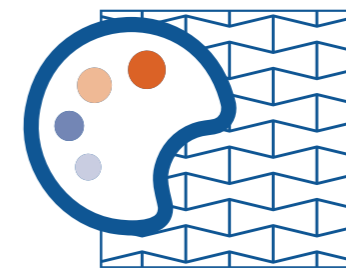
Distributed play zones



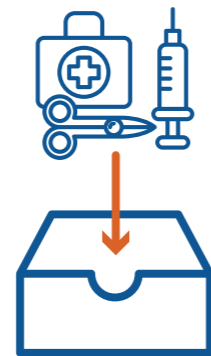
Visual connection



Open to neighborhood



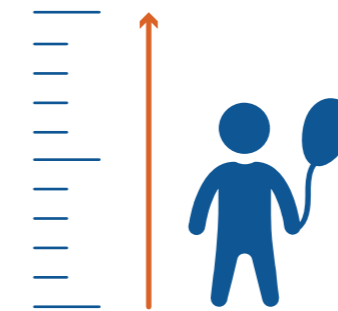
Colors & textures



Concealment of clinical elements



Family engagement



Child-centric scale

Houtwijk

research

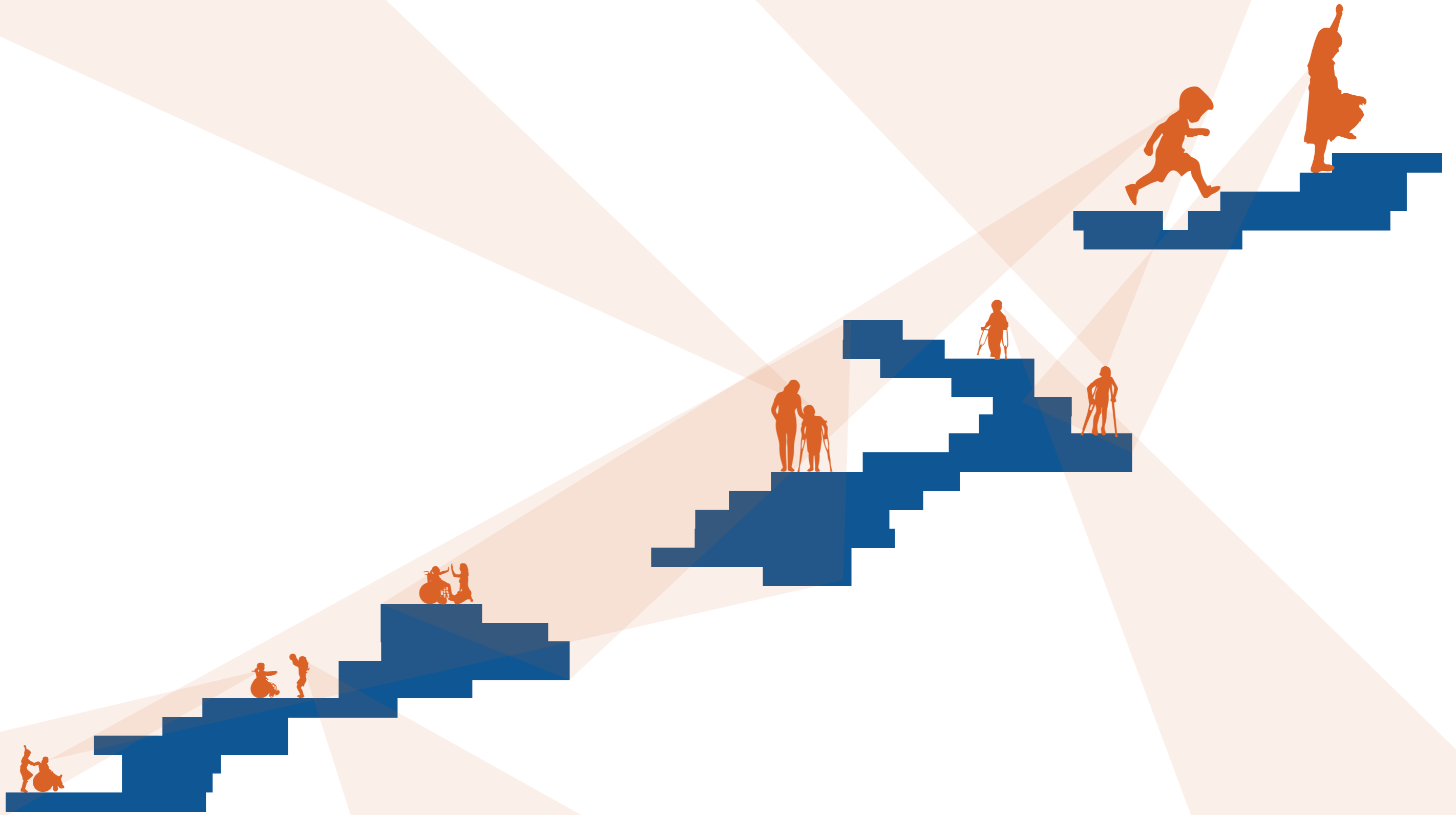
CONCEPT

site and mass

design

conclusion

Concept
HEALING IN SIGHT



Houtwijk

research

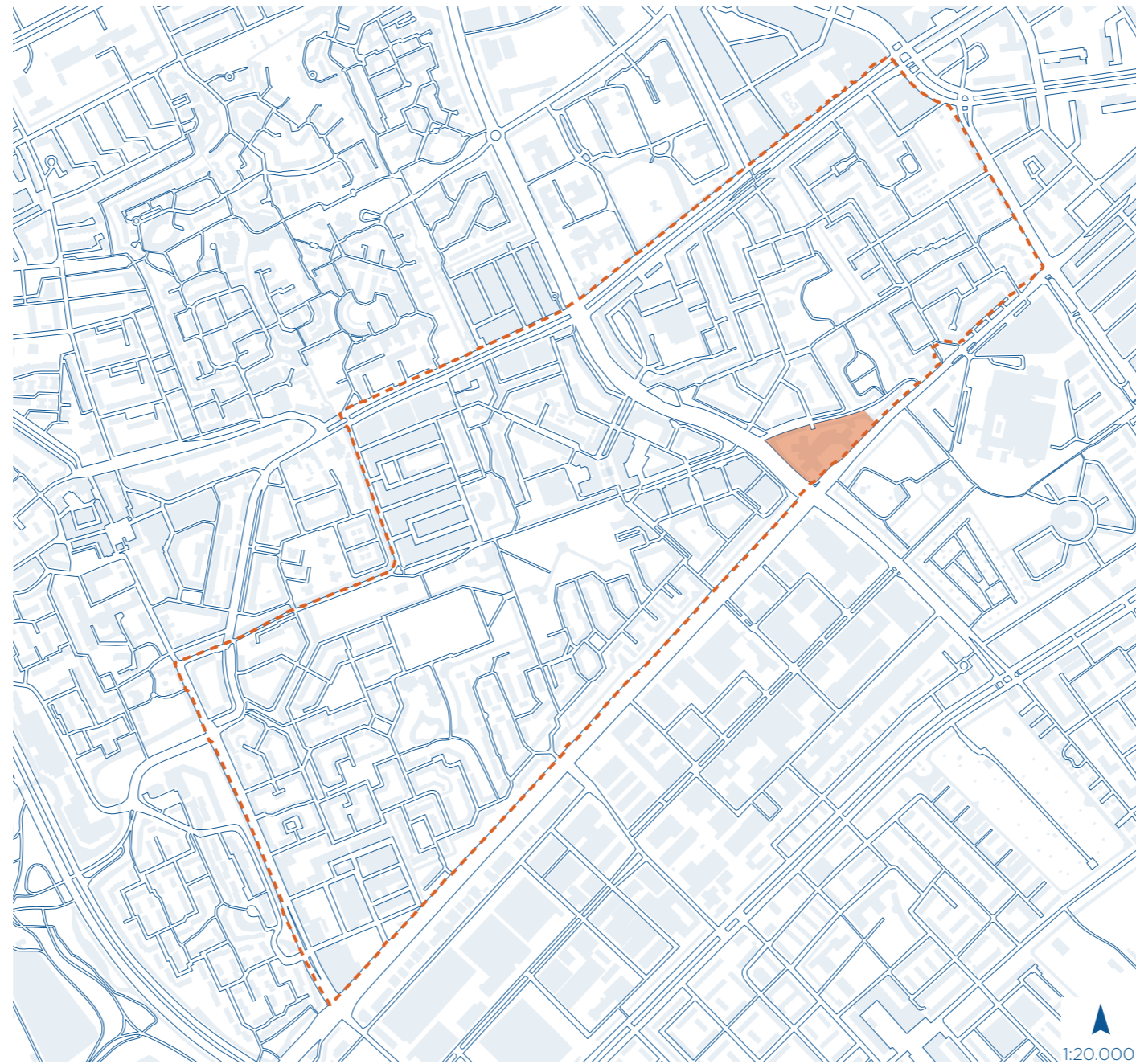
concept

SITE AND MASS

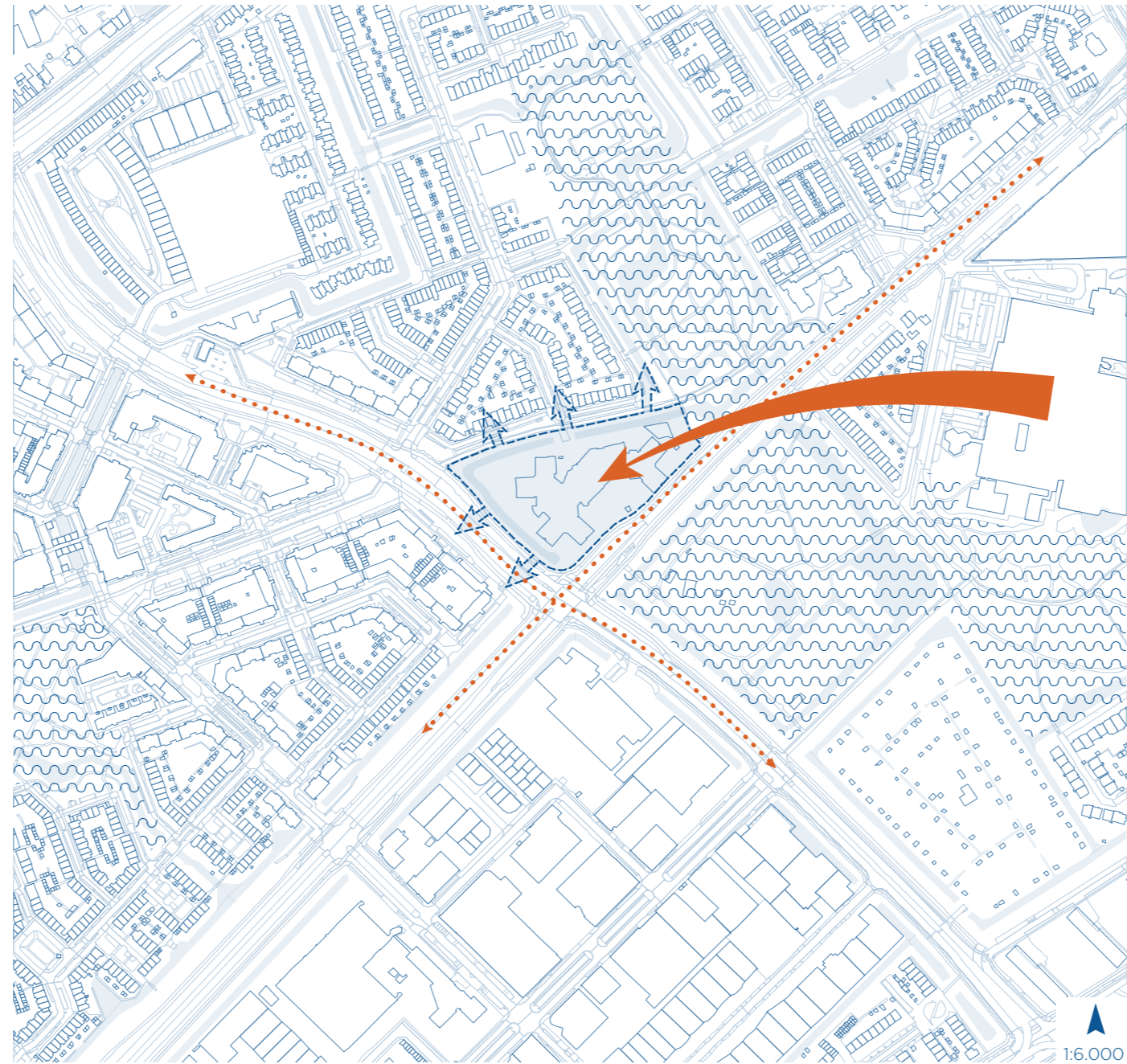
design

conclusion

Site and mass
Location

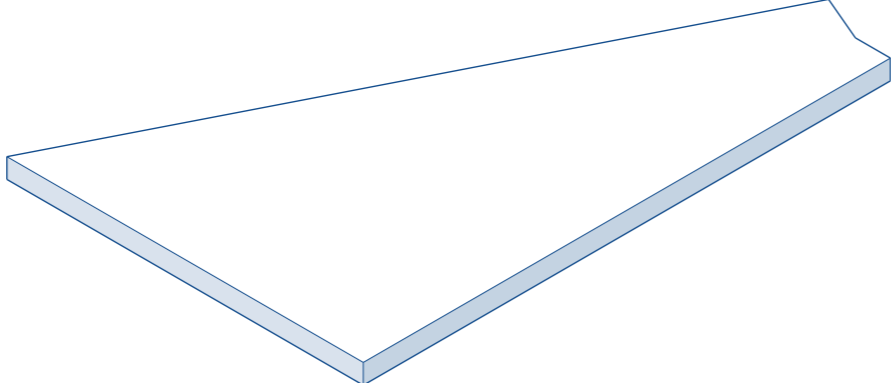


Site and mass
Location

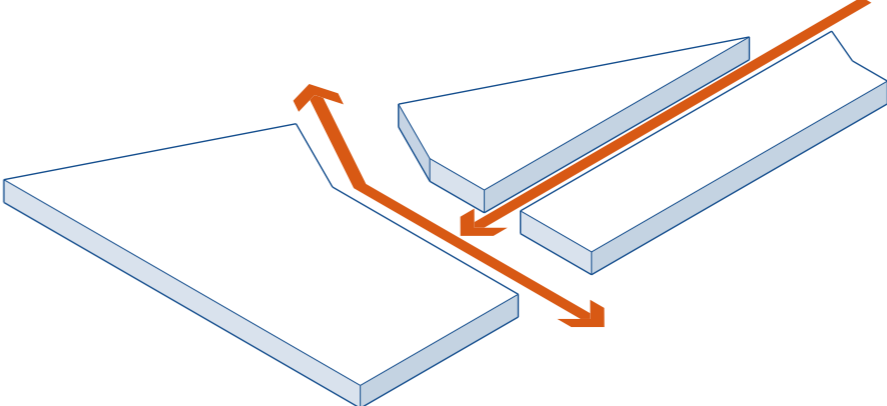


Site and mass
Mass formation

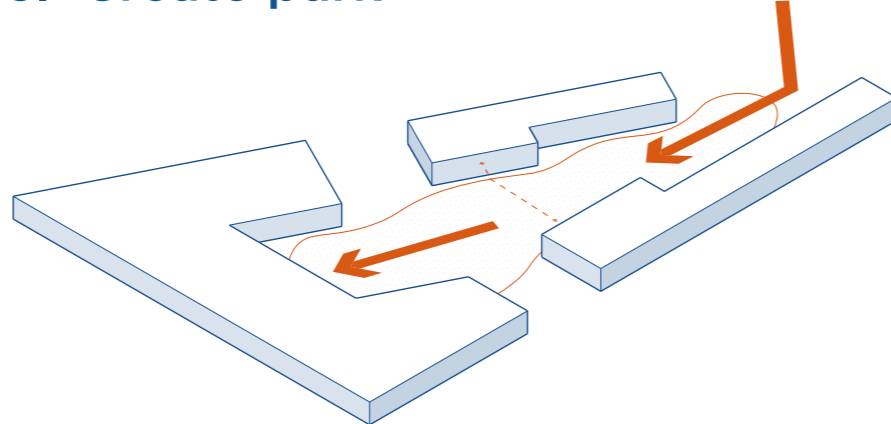
1. Big block



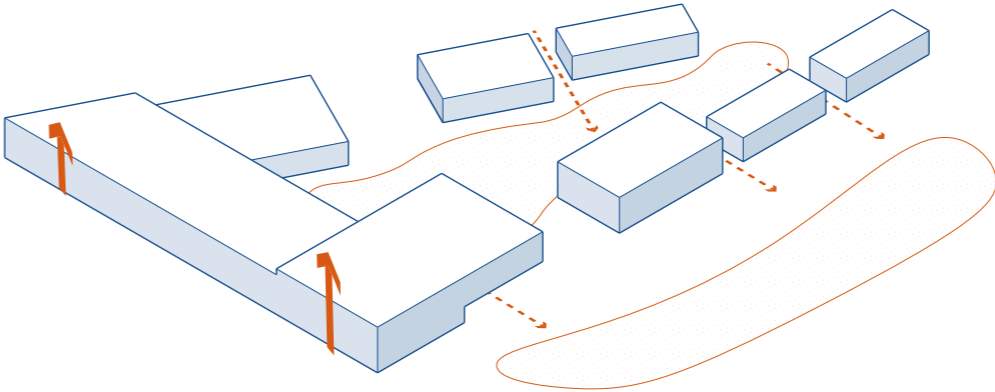
2. Create entrances



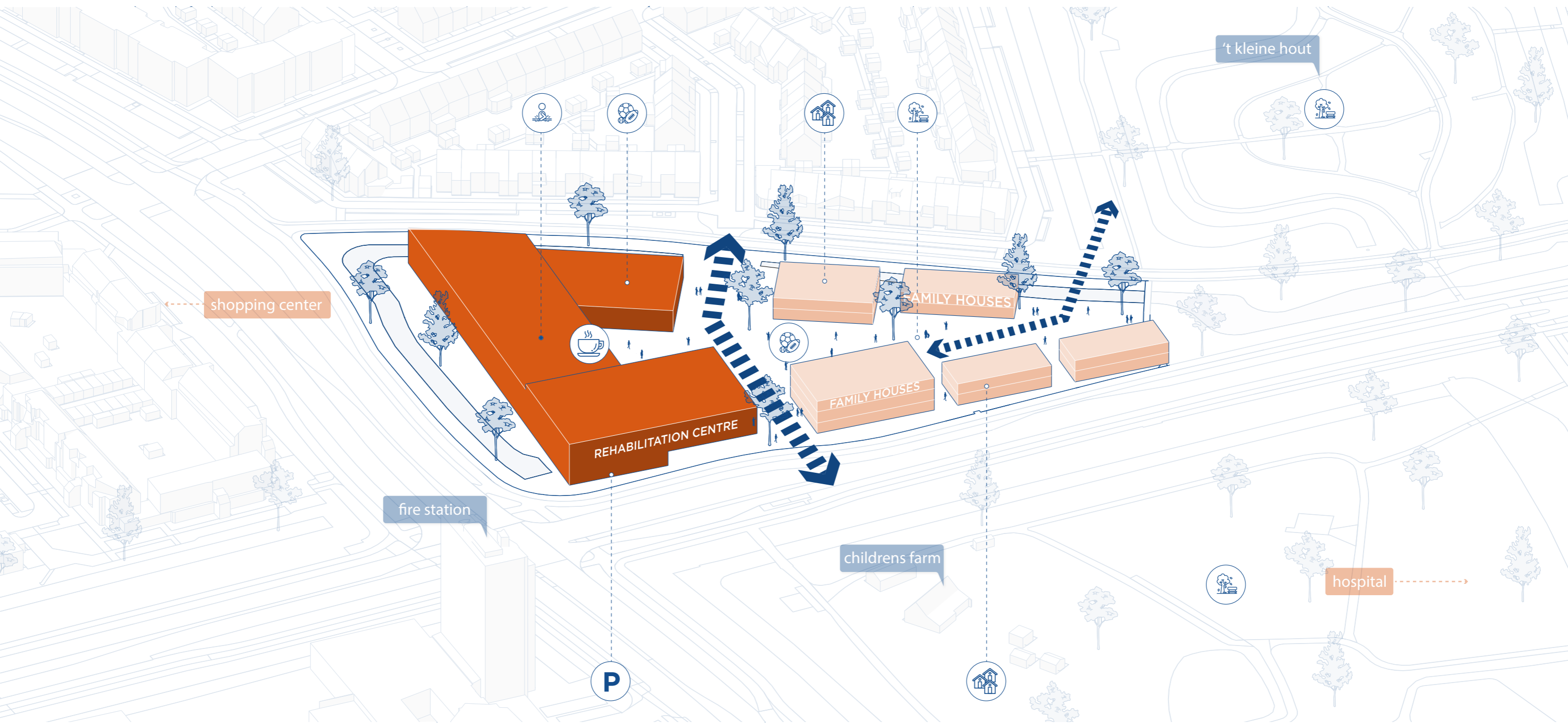
3. Create park



4. Level up and connect



Site and mass
Mass



Houtwijk

research

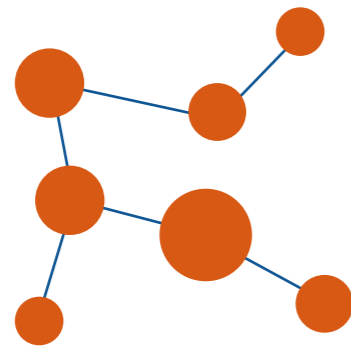
concept

site and mass

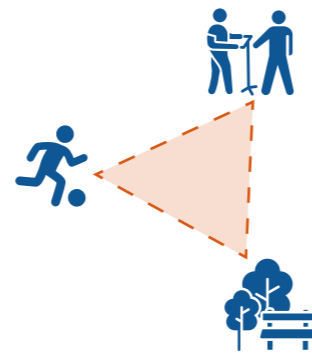
DESIGN

conclusion

Design
Design principles



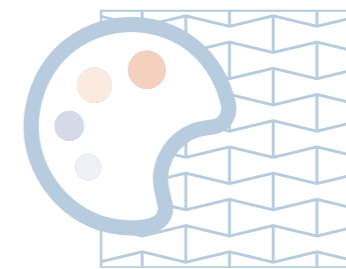
Distributed play zones



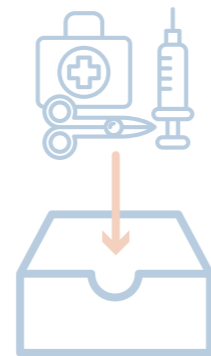
Visual connection



Open to neighborhood



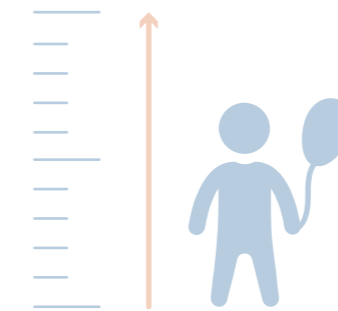
Colors & textures



Concealment of clinical elements

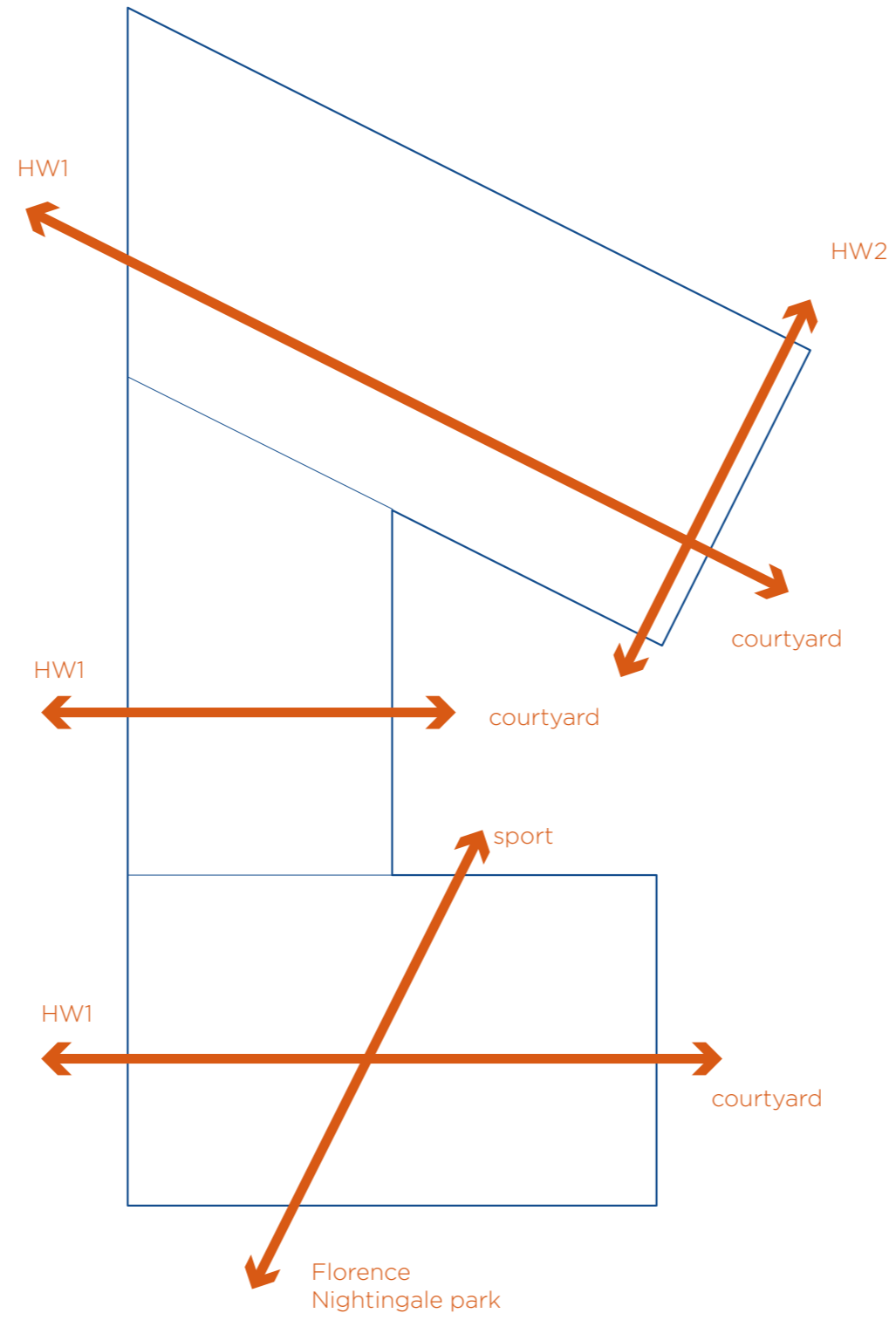


Family engagement



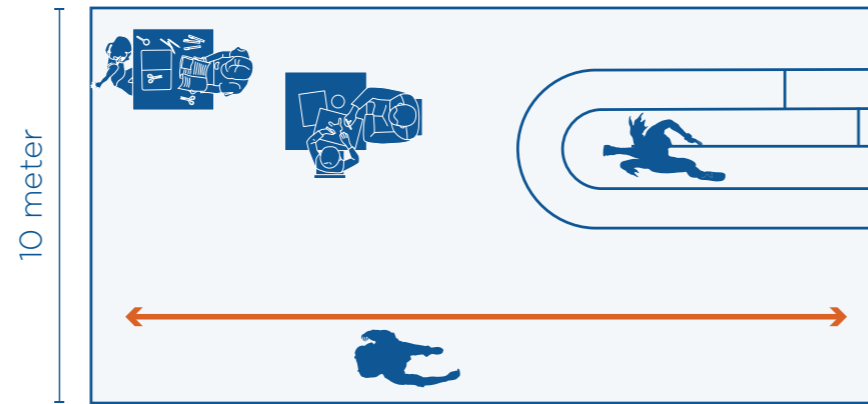
Child-centric scale

Design Sightlines

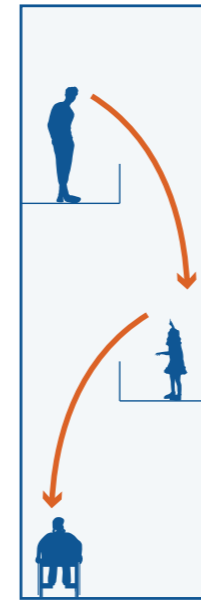
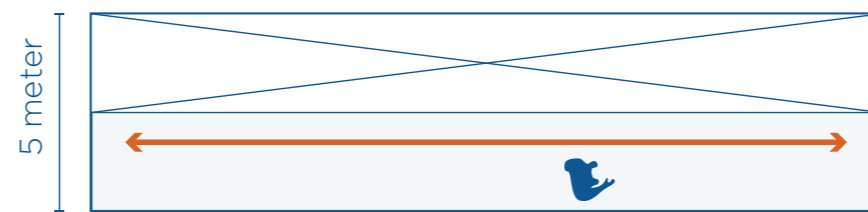


Design Corridors

1. SIGHTLINES



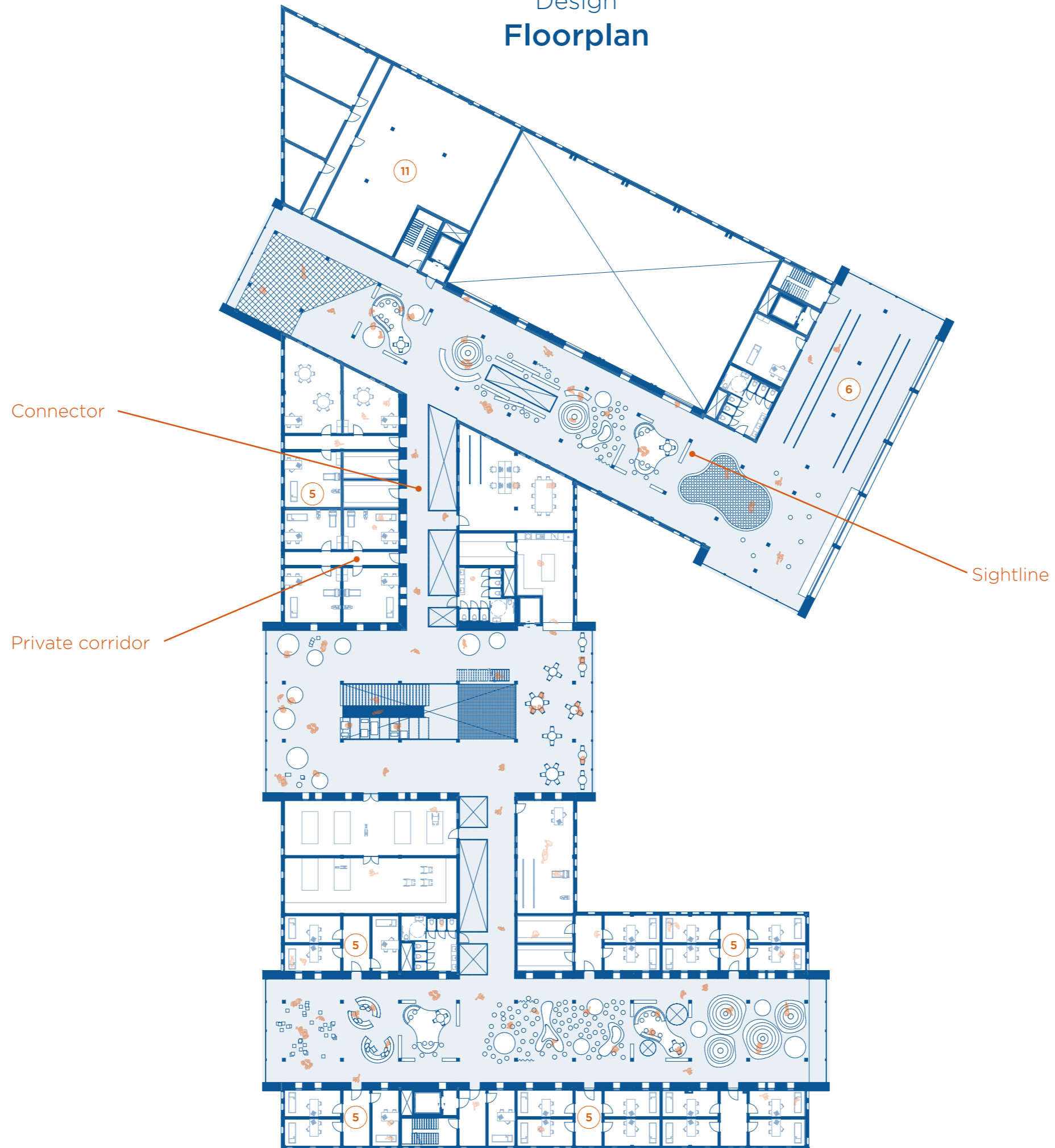
2. CONNECTOR



3. PRIVATE CORRIDORS



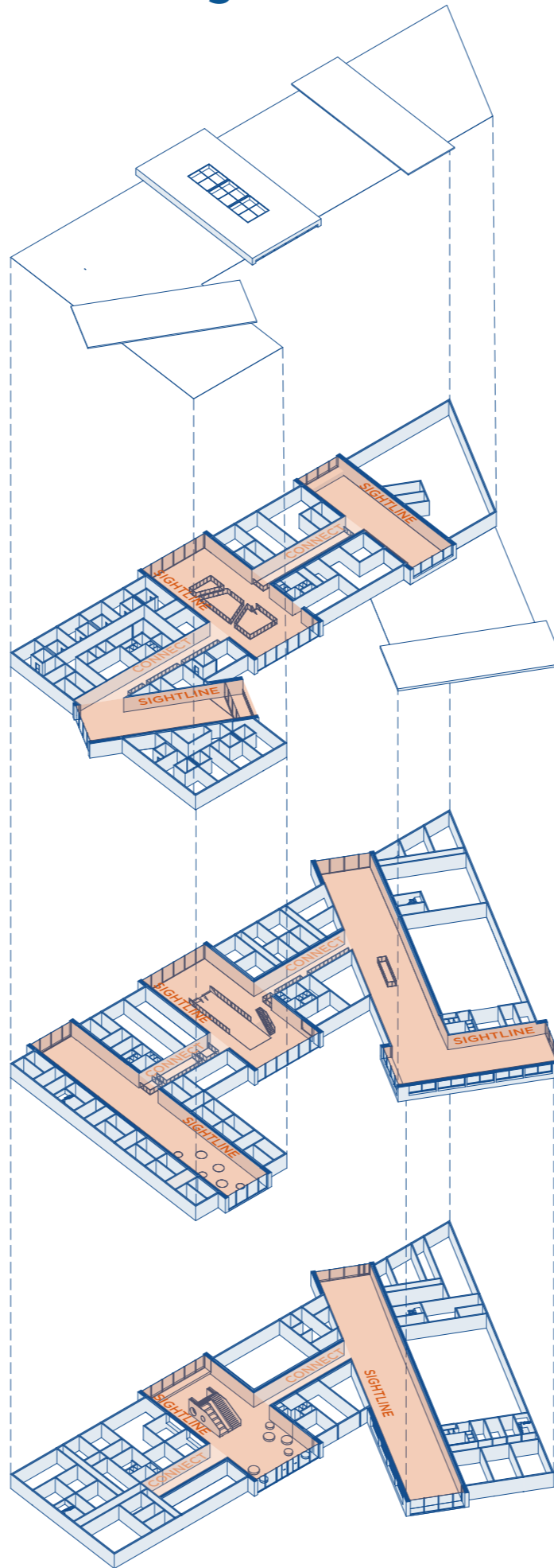
Design Floorplan



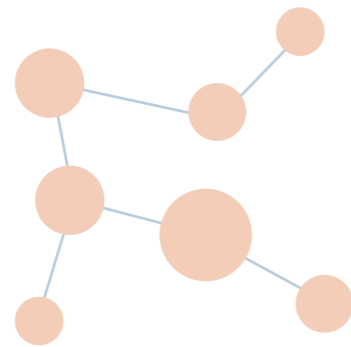
1:400

- 1st floor**
Legend
- 1. Restaurant
 - 2. Swimming pool
 - 3. Sports hall
 - 4. Gym
 - 5. Therapy
 - 6. Gait analysis
 - 7. Bedrooms
 - 8. Living room
 - 9. School
 - 10. Office
 - 11. Technical/storage

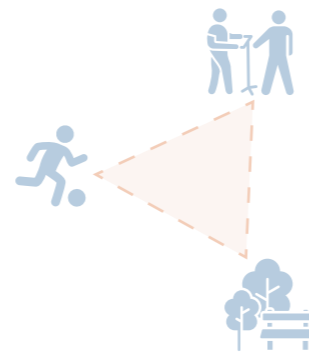
Design Sightlines



Design
Design principles



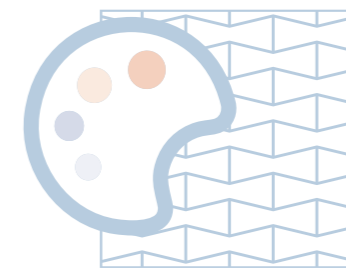
Distributed play zones



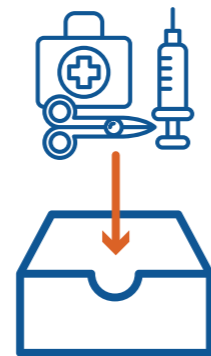
Visual connection



Open to neighborhood



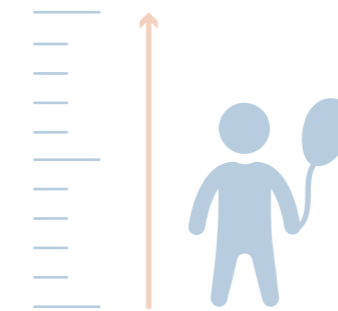
Colors & textures



Concealment of clinical elements

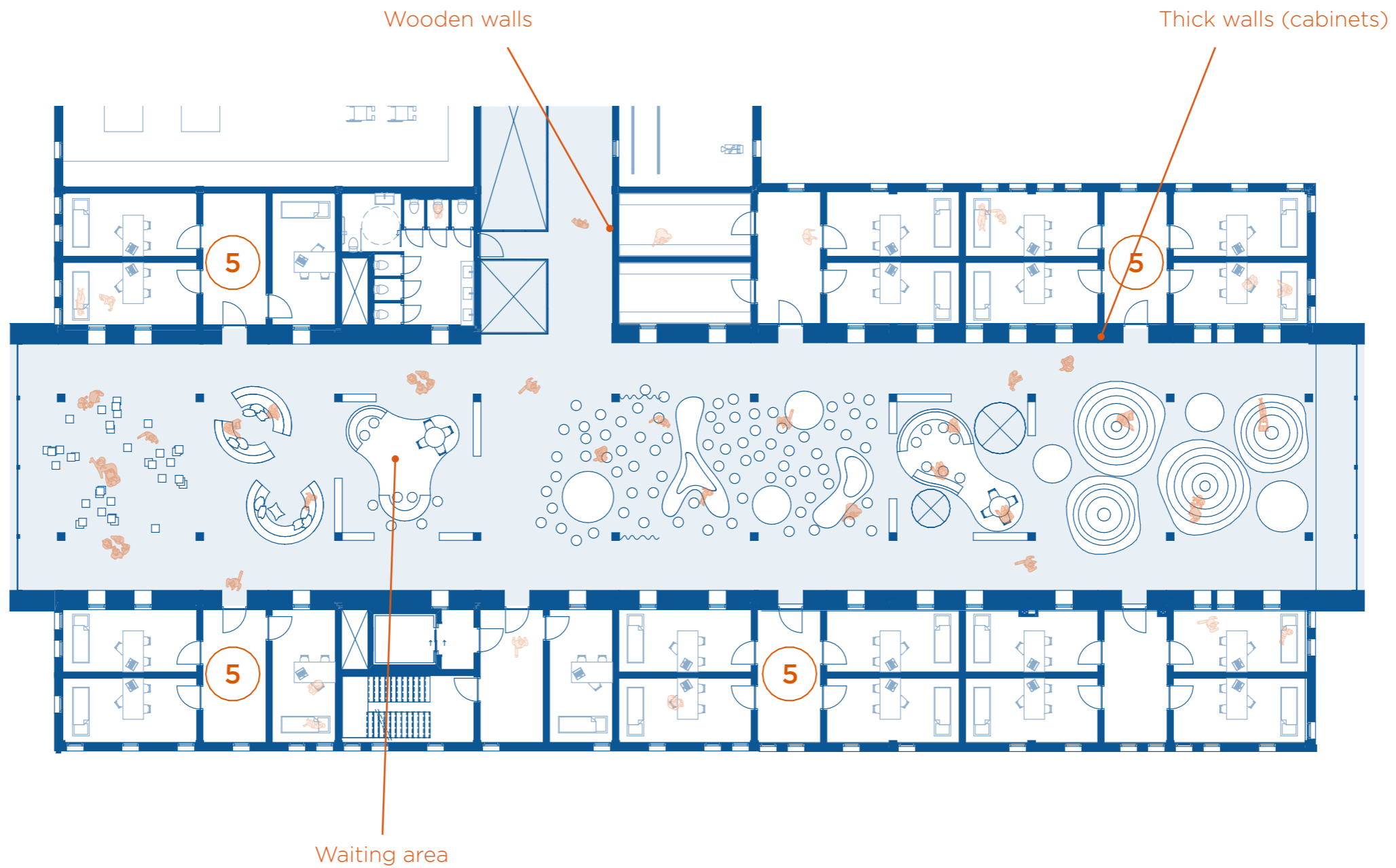


Family engagement



Child-centric scale

Design Floorplan

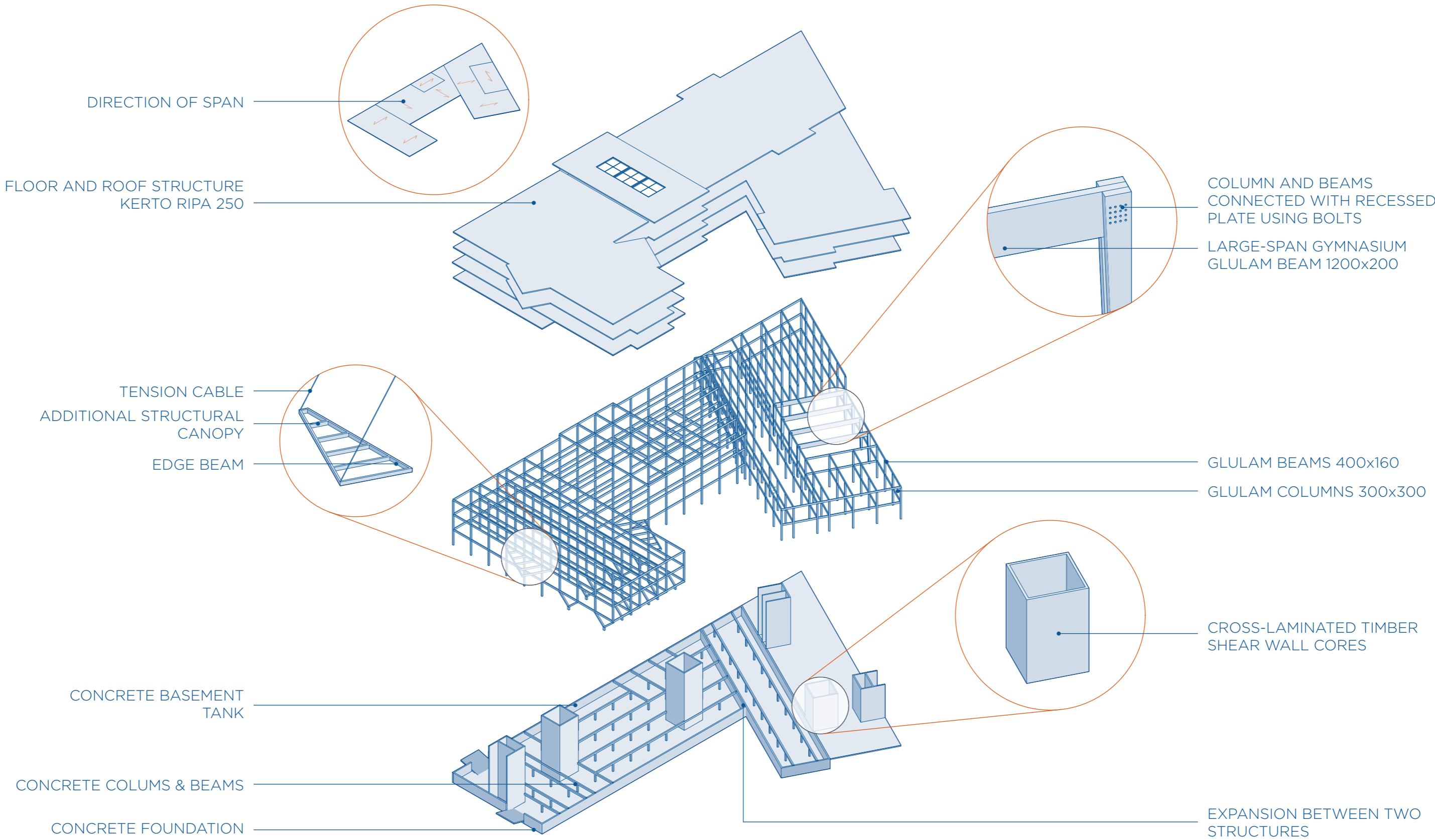


1:200

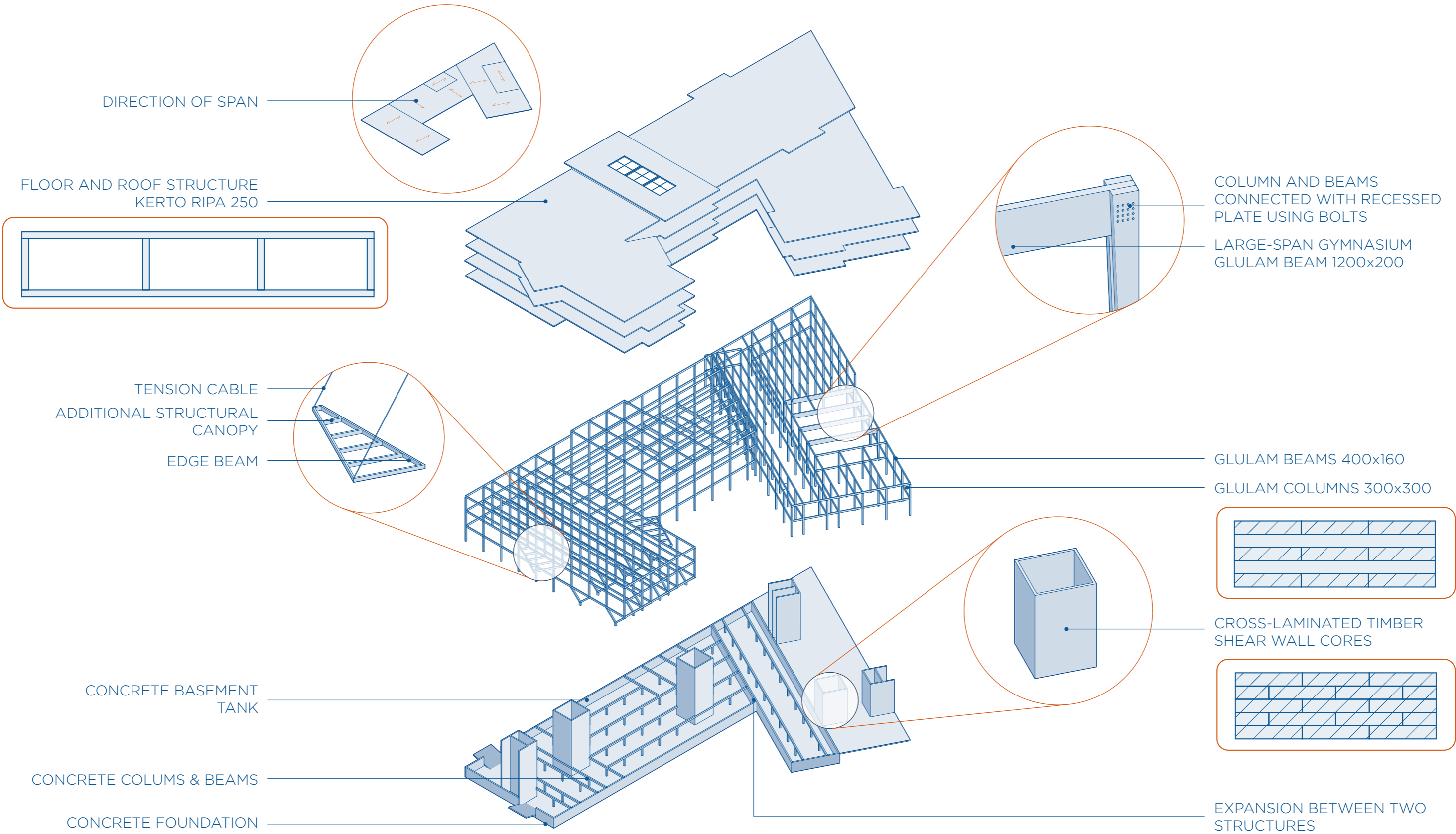
1st floor

- Legend
1. Restaurant
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 4. Gym
 5. Therapy
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 8. Living room
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 11. Technical/storage

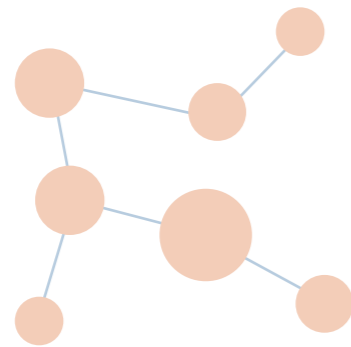
Design Axonometric



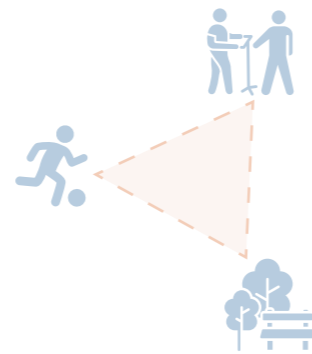
Design Axonometric



Design
Design principles



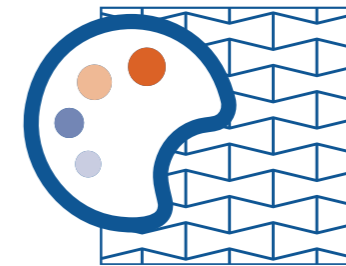
Distributed play zones



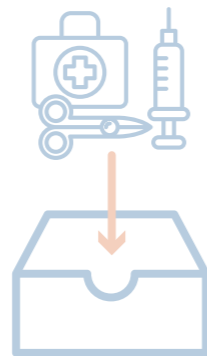
Visual connection



Open to neighborhood



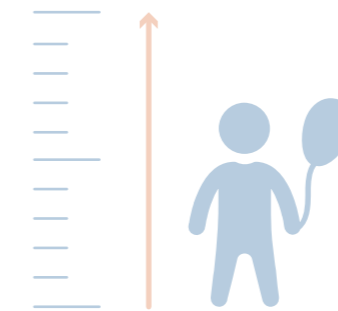
Colors & textures



Concealment of clinical elements



Family engagement



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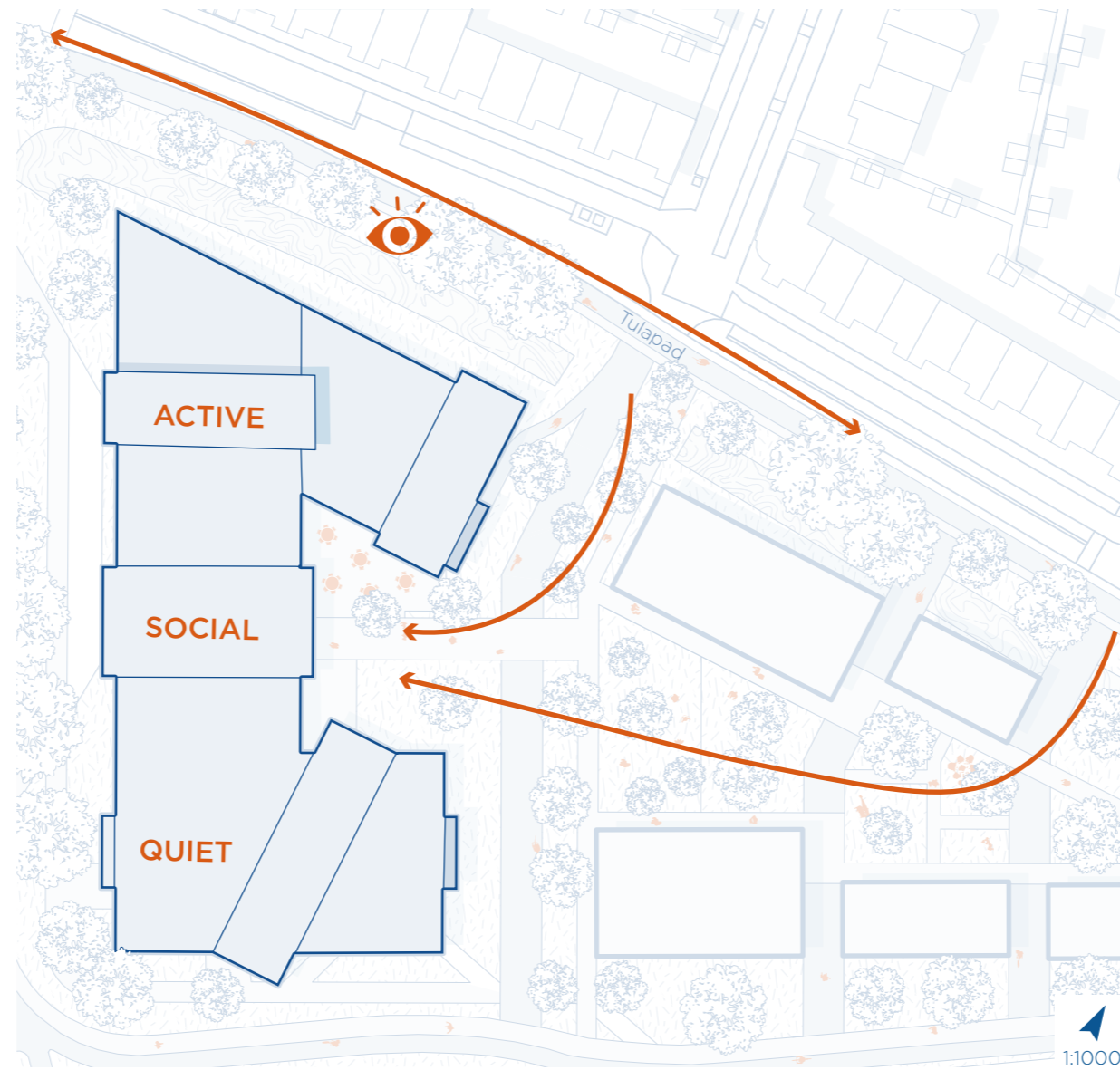
Design Site



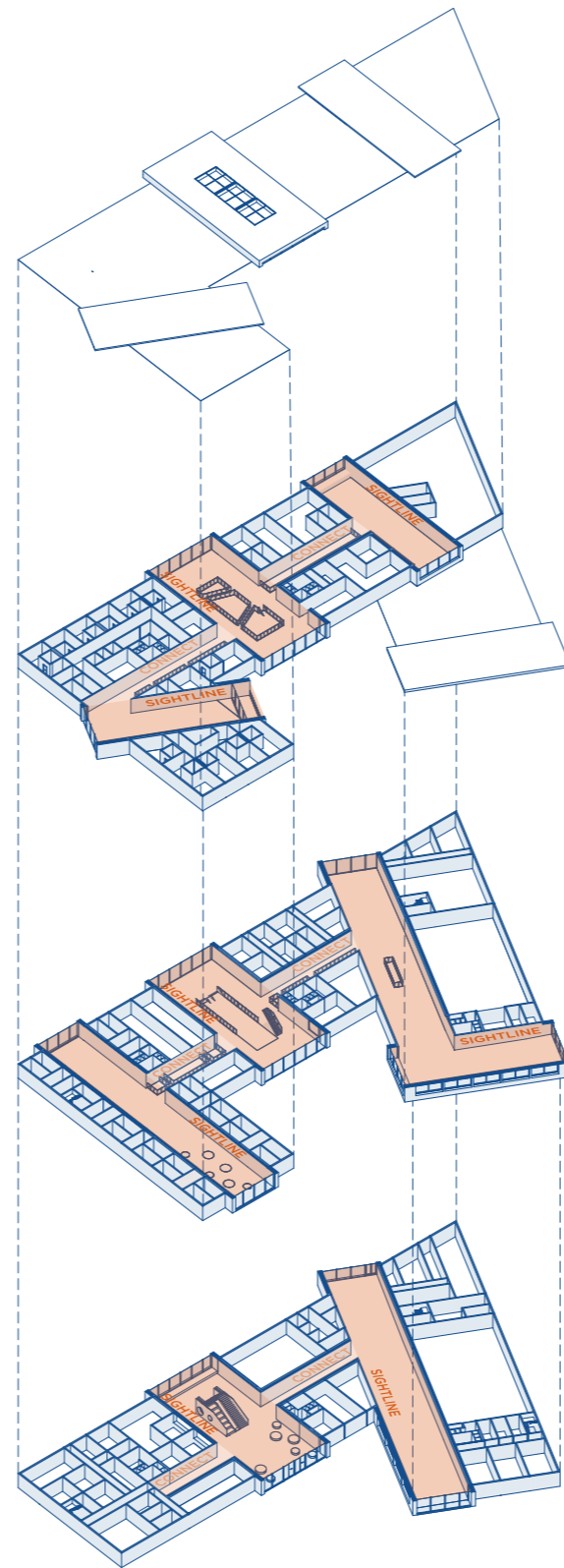
Design
Entrance



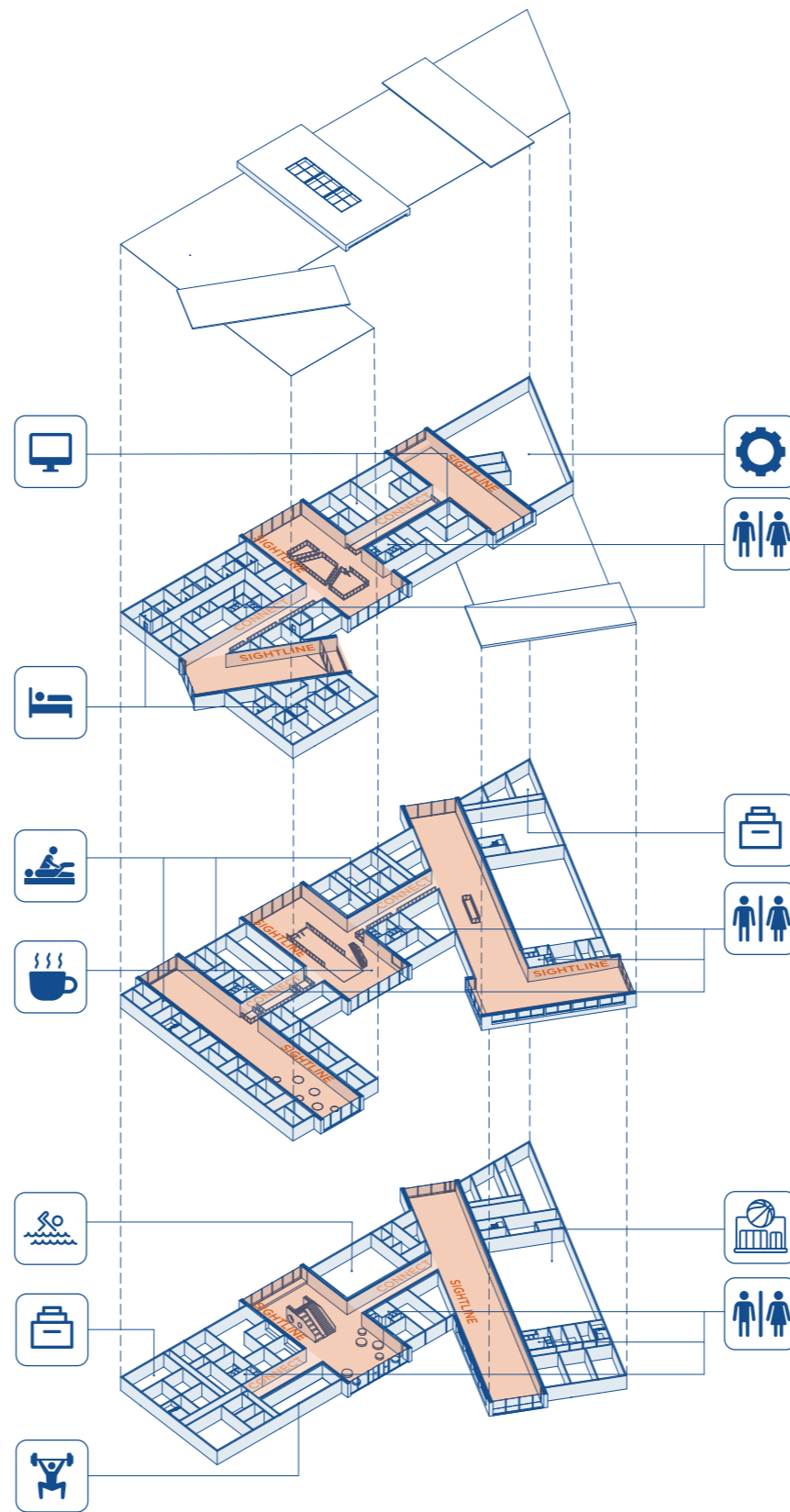
Design
Division



Design Program



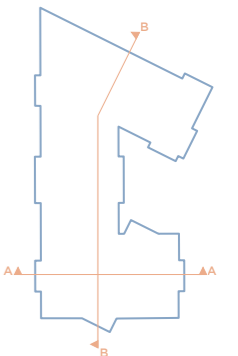
Design Program



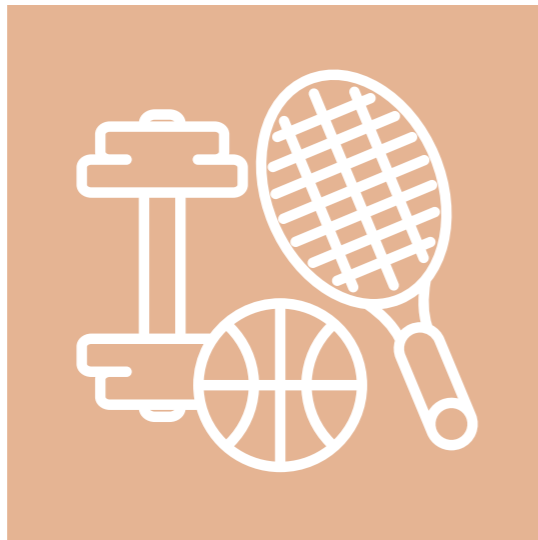
Design Wayfinding



1:300



Design
Wayfinding



SPORT



THERAPY



LIVING

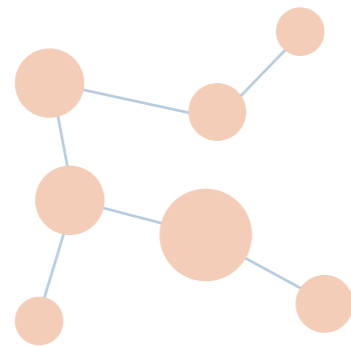
Design
Wayfinding



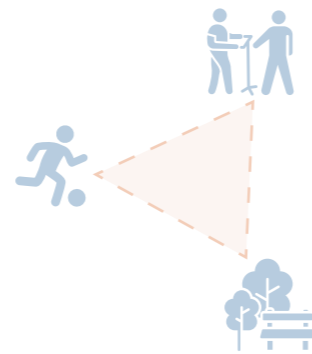
Design
Wayfinding



Design
Design principles



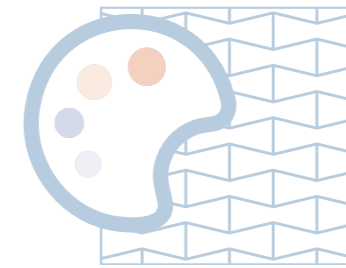
Distributed play zones



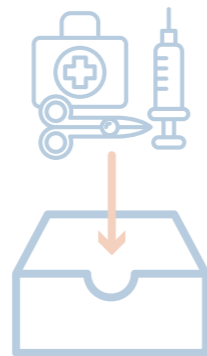
Visual connection



Open to neighborhood



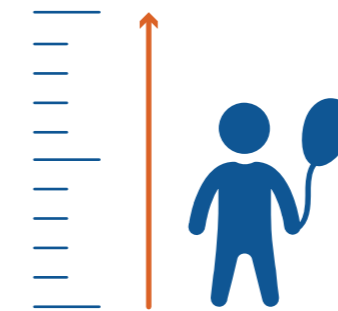
Colors & textures



Concealment of clinical elements

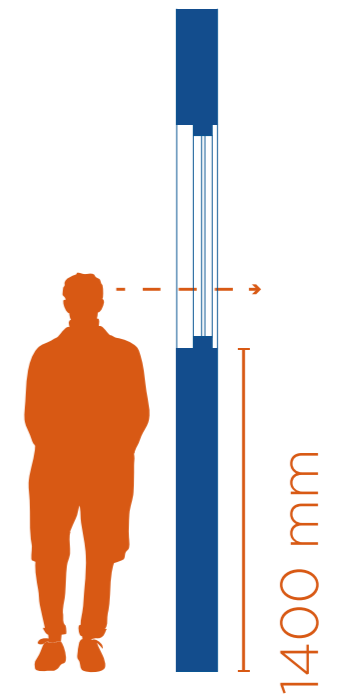
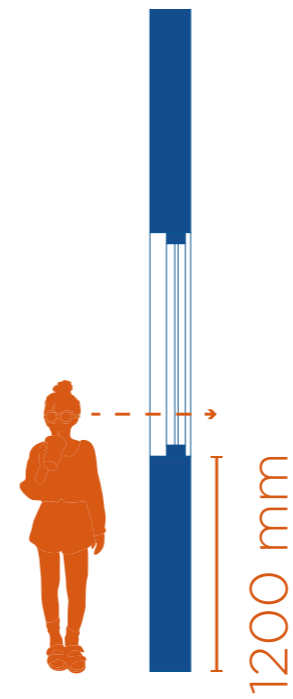
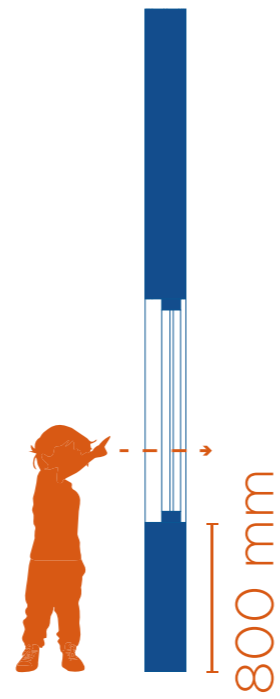
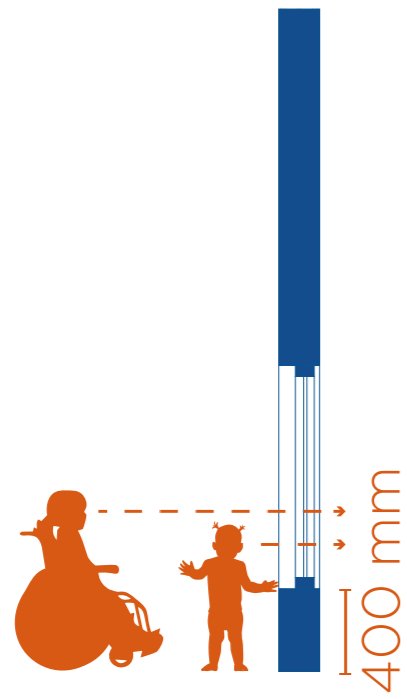


Family engagement



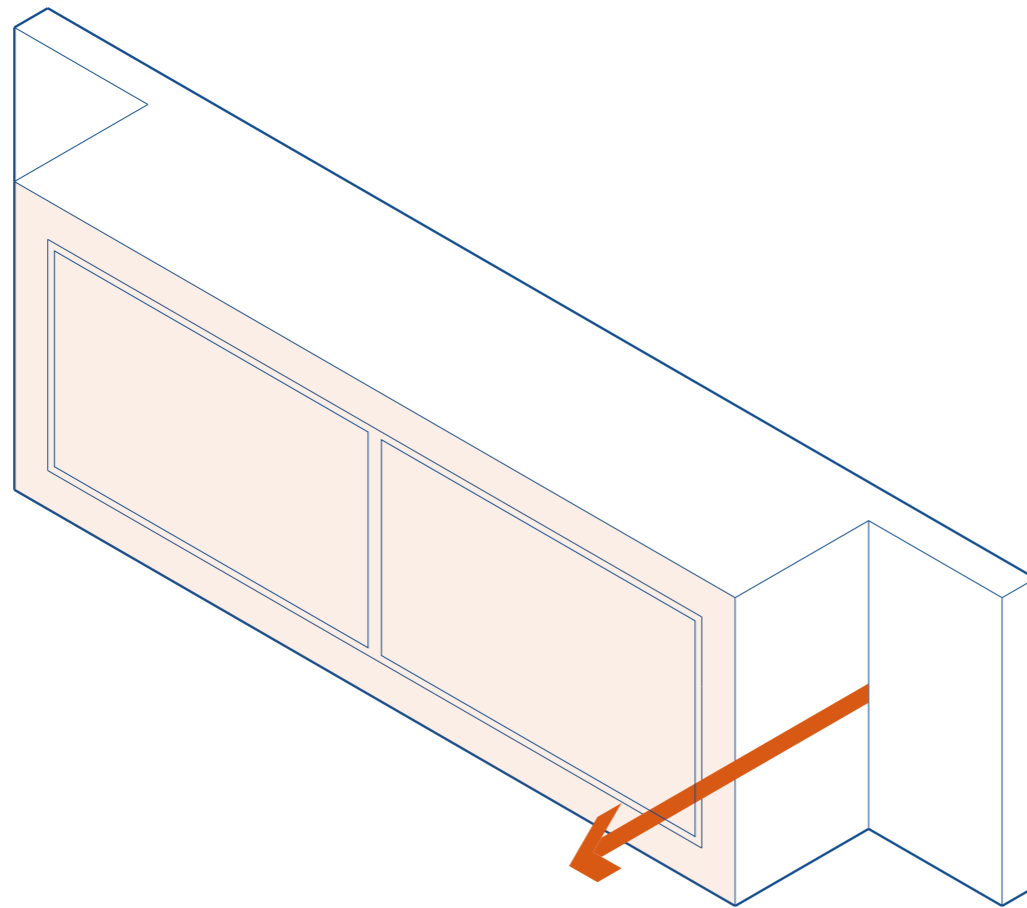
Child-centric scale

Design Windows

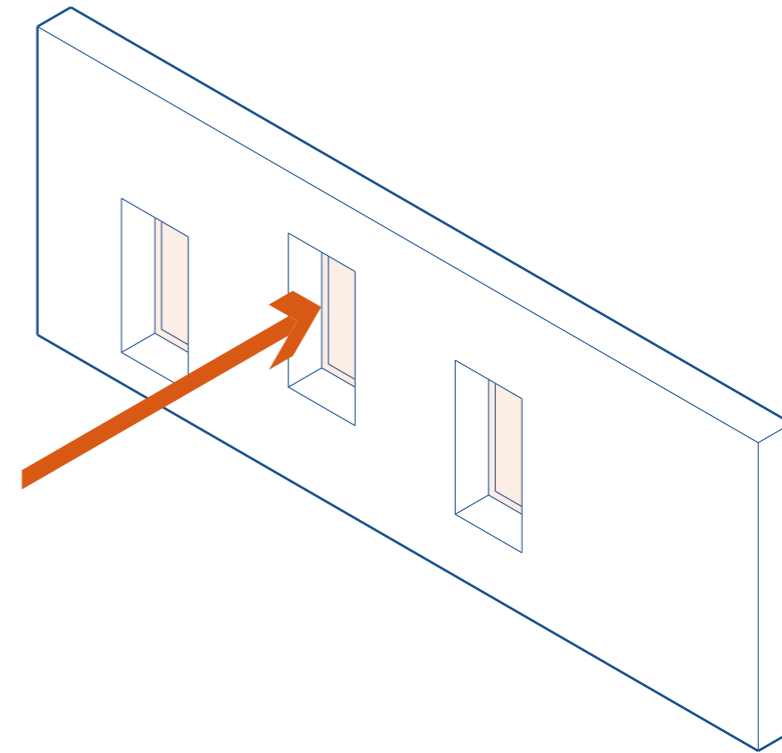


Design
Windows

SIGHTLINES



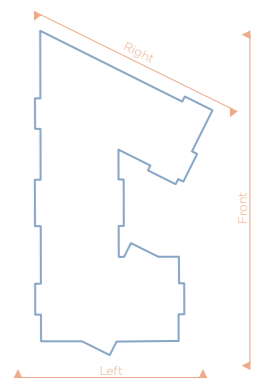
FUNCTIONS



Design
Facade



1:300

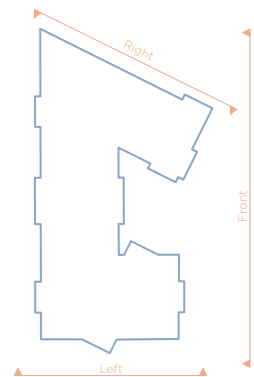


Design
Facade

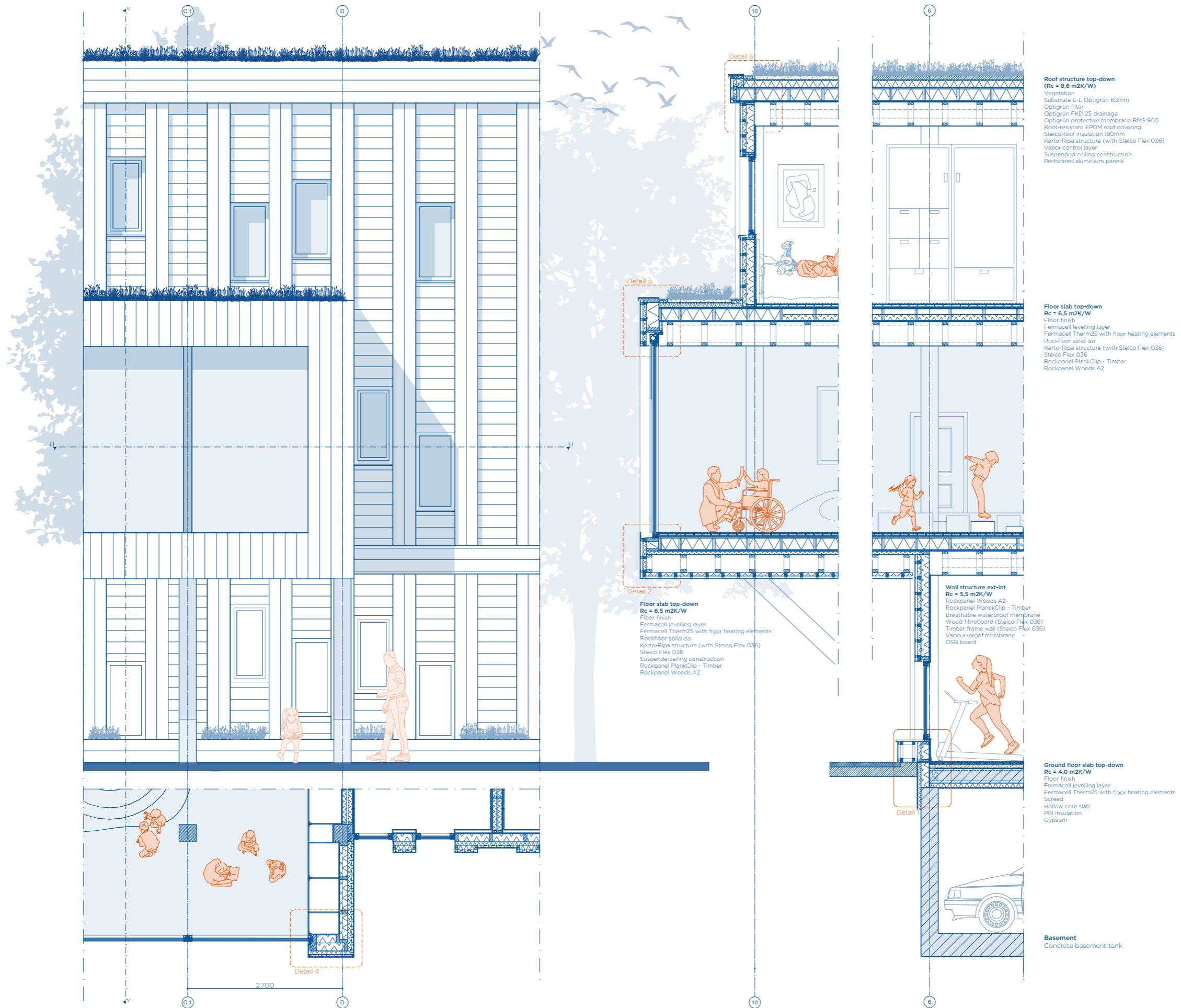


1:300

Fragment



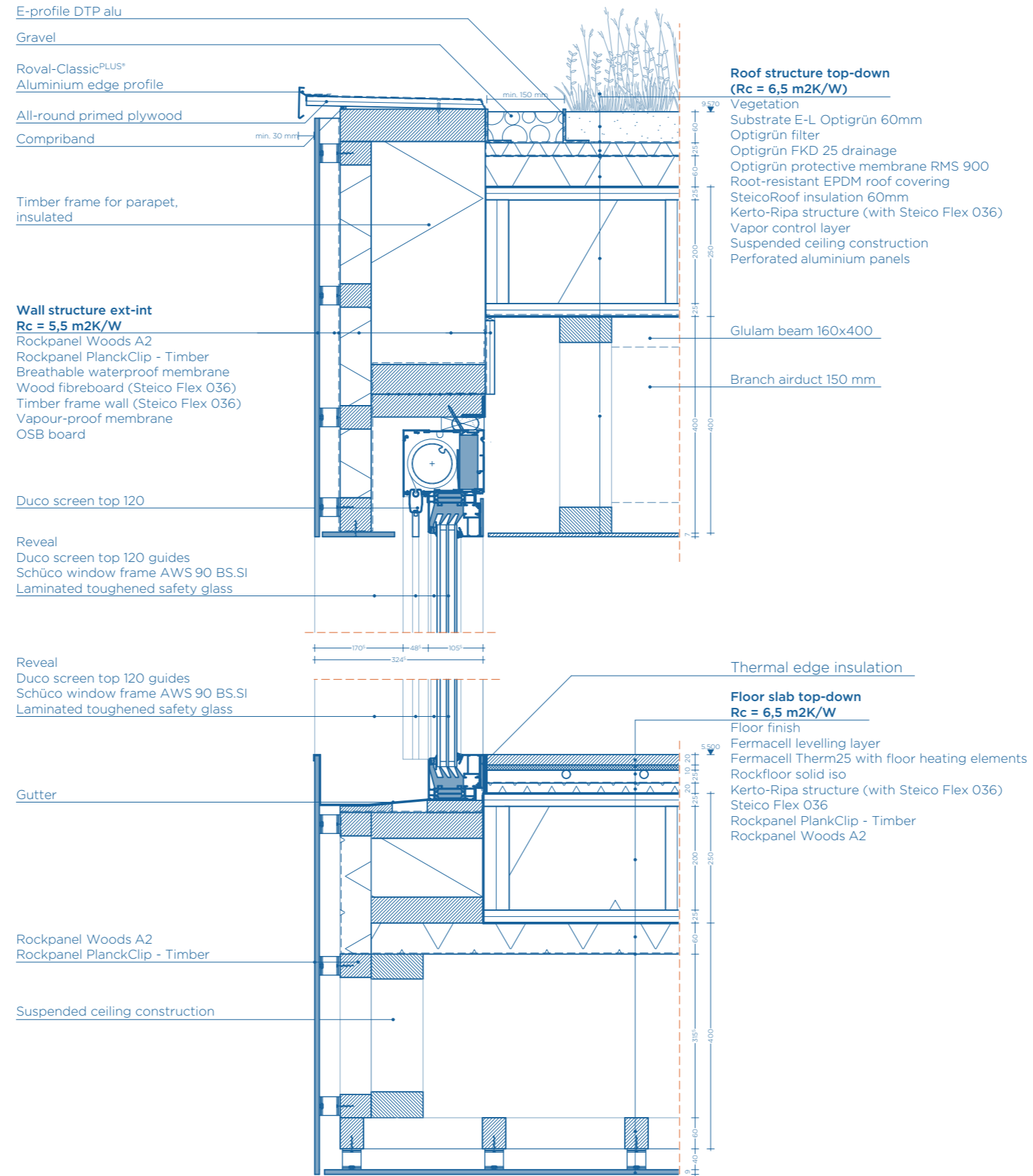
Design Fragment



Design
View corridor



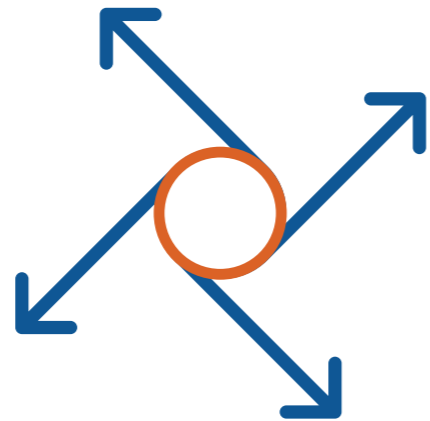
Design Detail



Design
Sustainability goals



Climate adaptation



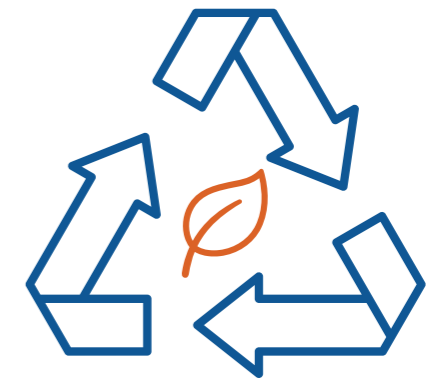
Flexibel lay-out



Low maintenance
materials

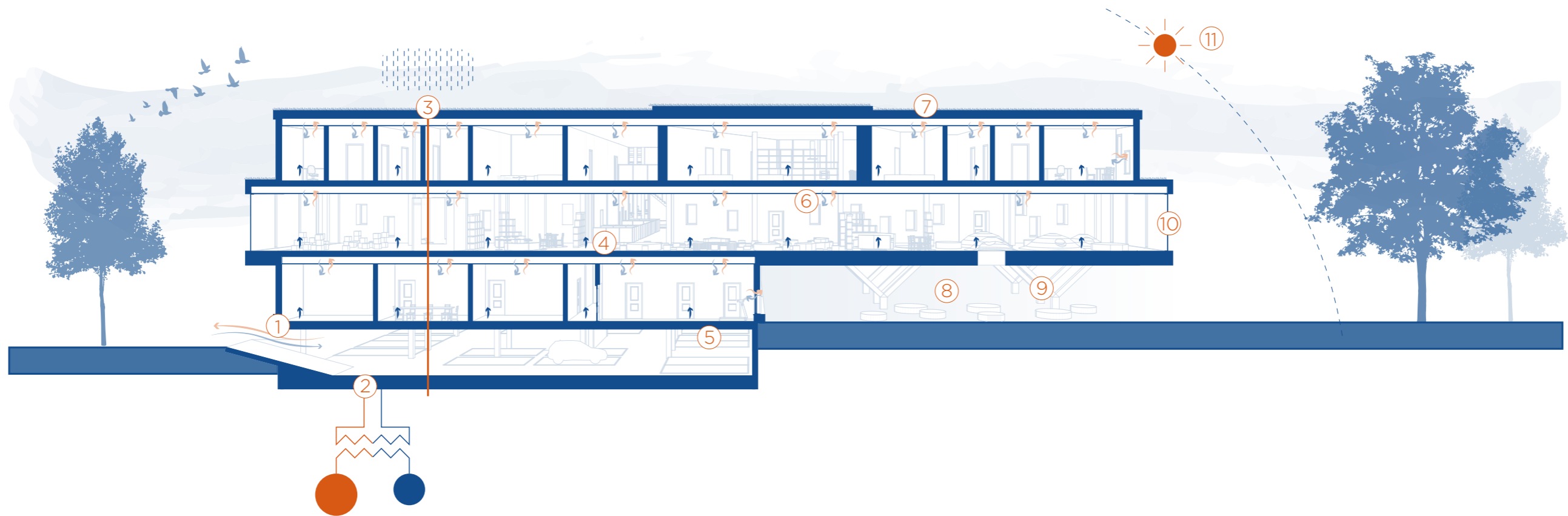


Long life span



Circular/biobased
materials

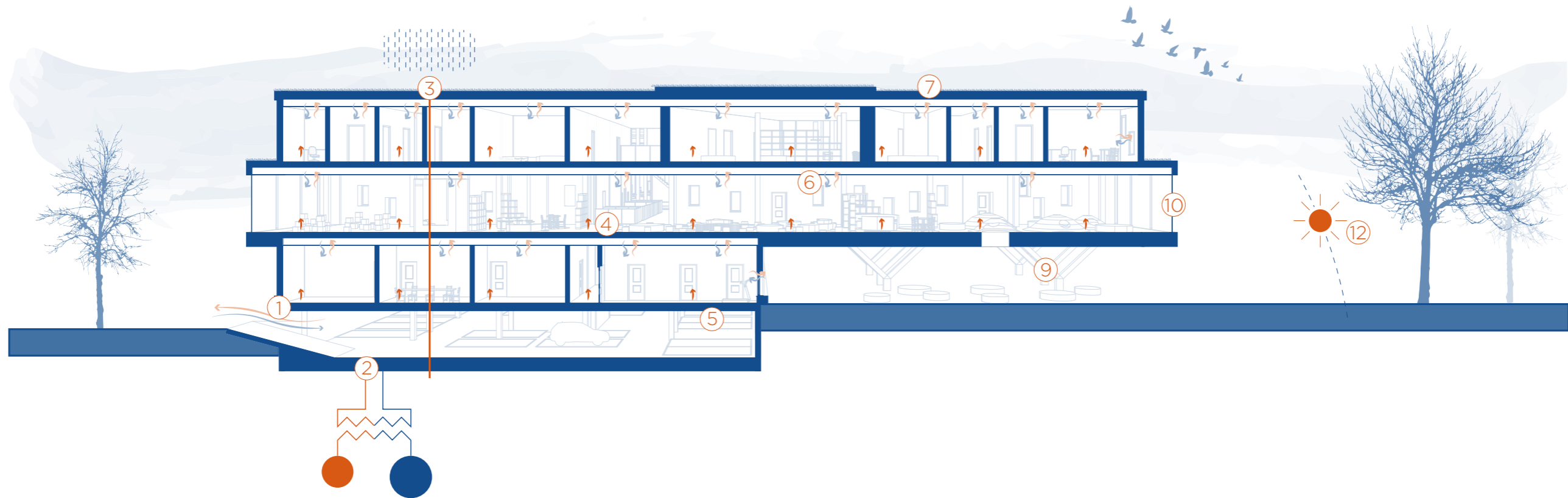
Design Climate section



Legend

1. Naturally ventilated parking
2. Thermal Energy Storage system provides cooling in summer and heating in winter
3. Several Pluvia's distributed across the roof, with the water being channelled down through the shafts
4. Floor heating that warms in winter and cools in summer
5. Impulse fan creates a controlled airflow that extracts polluted air from the car park and supplies fresh air
6. Mechanical supply and exhaust ventilation
7. Green roof contributes to climate adaptation by reducing heat and collecting rainwater
8. An area with shade in summer
9. Wooden structure
10. Automatic sunshading reacts as soon as the sun comes out and reduces heat build-up by blocking sunlight from outside
11. Summer sun
12. Winter sun

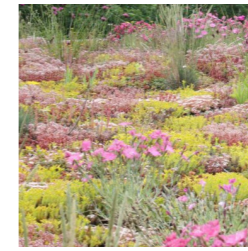
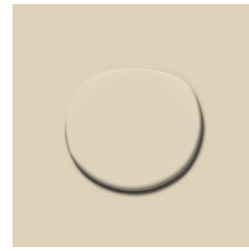
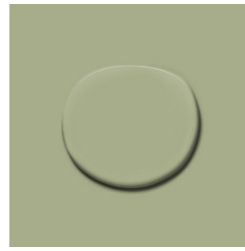
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Design
Materials



Houtwijk

research

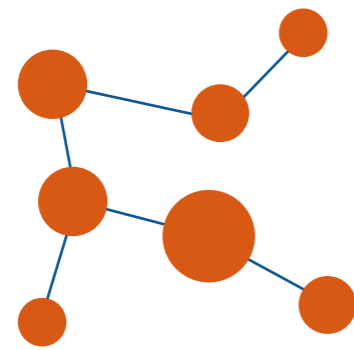
concept

site and mass

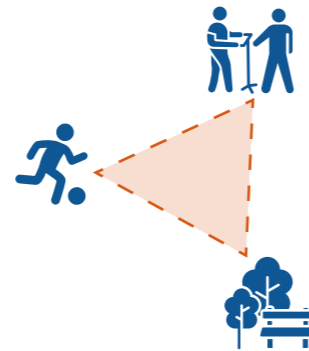
Design

CONCLUSION

In what way can a inpatient rehabilitation centre for children be designed to enable co-use by residents of Houtwijk?



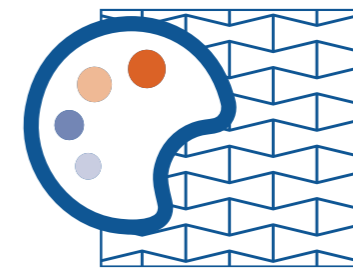
Distributed play zones



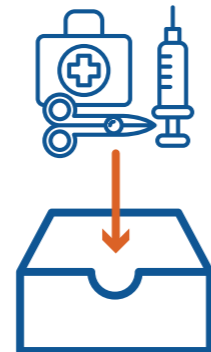
Visual connection



Open to neighborhood



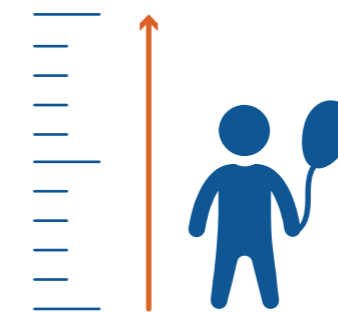
Colors & textures



Concealment of clinical elements



Family engagement



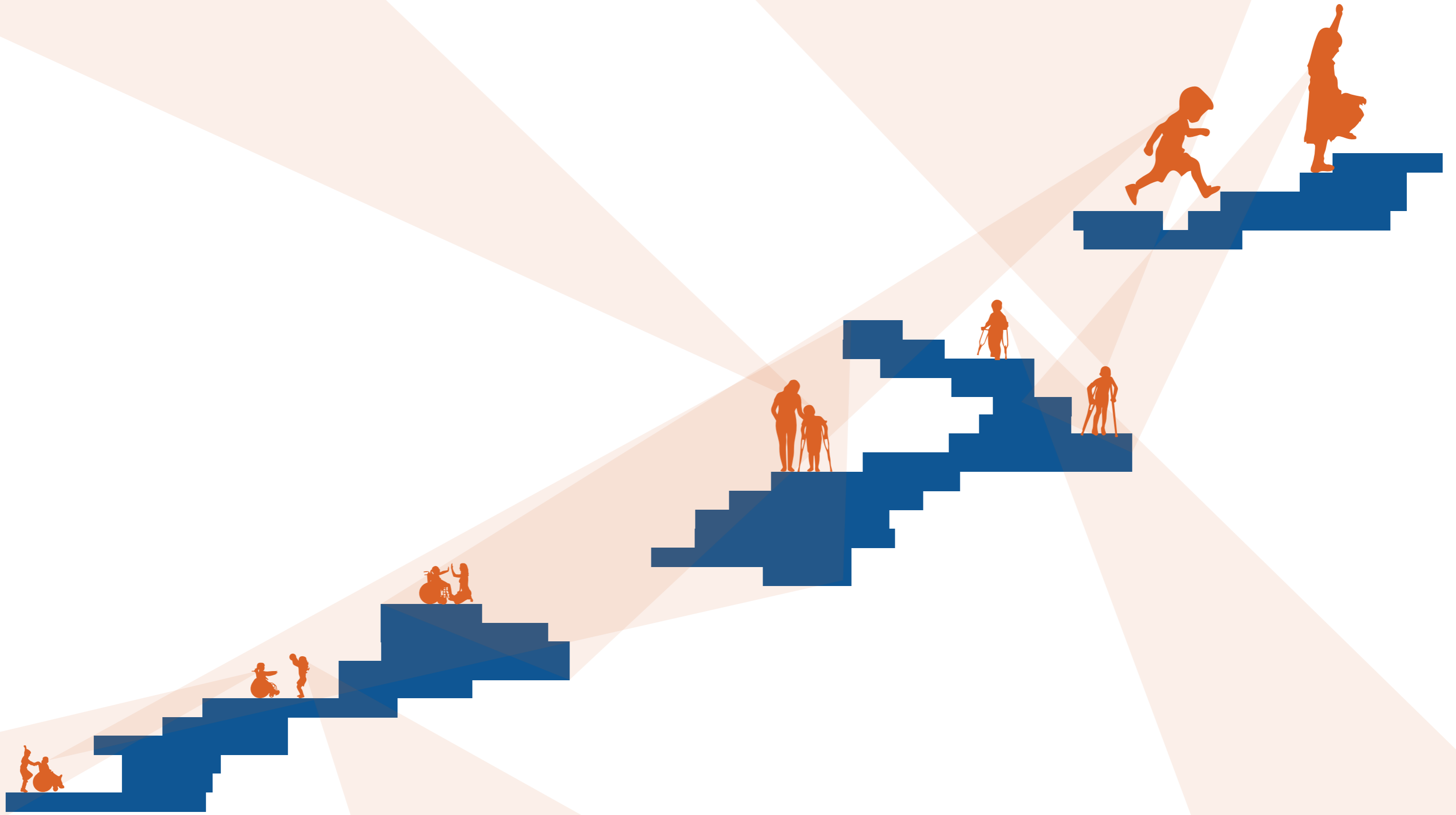
Child-centric scale

HEALING IN SIGHT

Where **transparent** design inspires you to **recover** and **grow**



EXTRA PAGES



Render
Cafe



Render
Entrance hall



Render
Restaurant



Research Framework

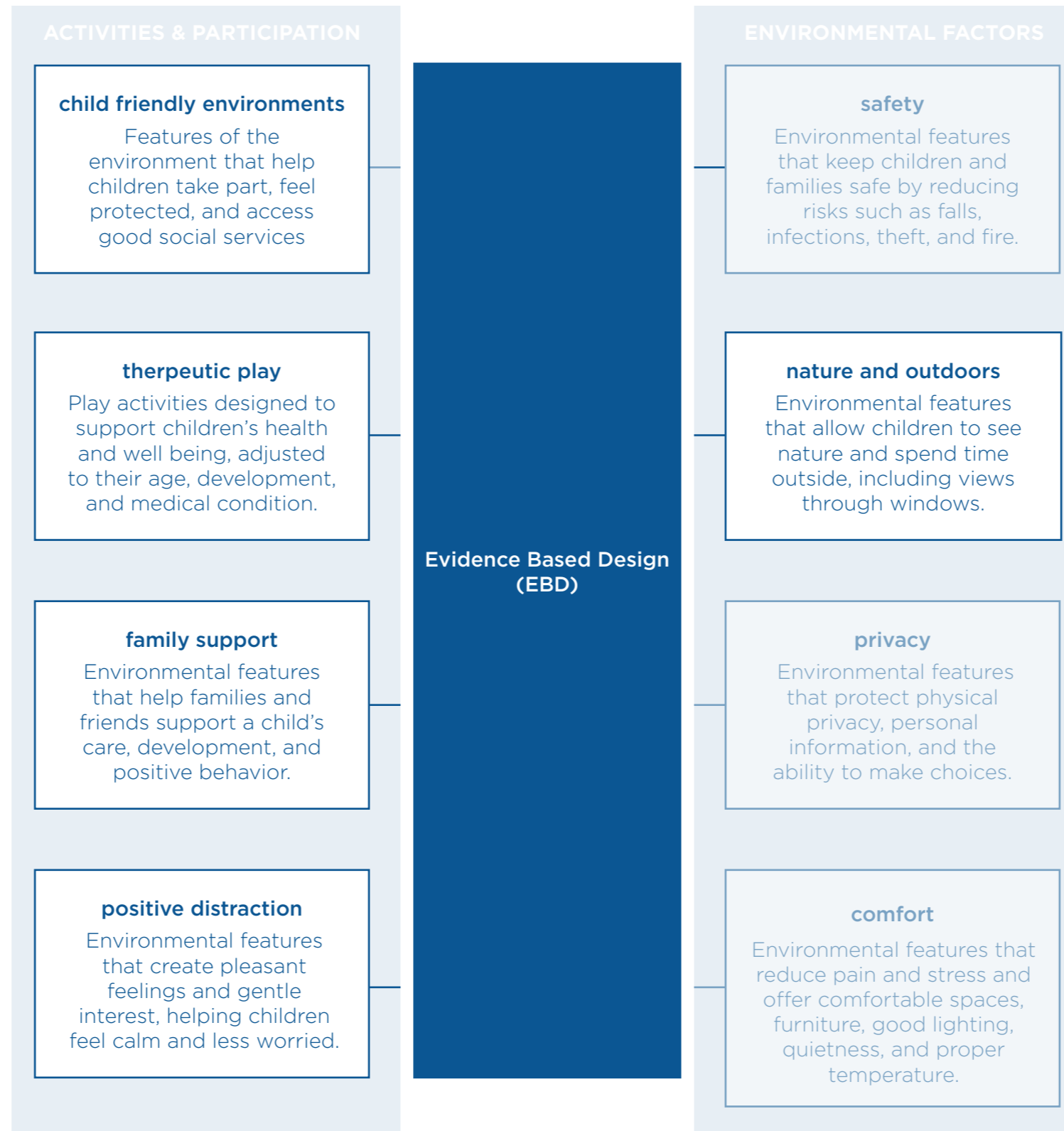


Figure 2.1: EBD diagram (own ill.)

Conclusion
Recommendations



1. Smart Management (Co-use)

- Make clear agreements about access times, maintenance, and liability.
- Ensure shared spaces (pool, gym, cafe) stay open after 5 PM and on weekends.



2. Privacy & Access Control

- Balance open sightlines with patient privacy.
- Use physical and digital access control (like access tags) where needed.



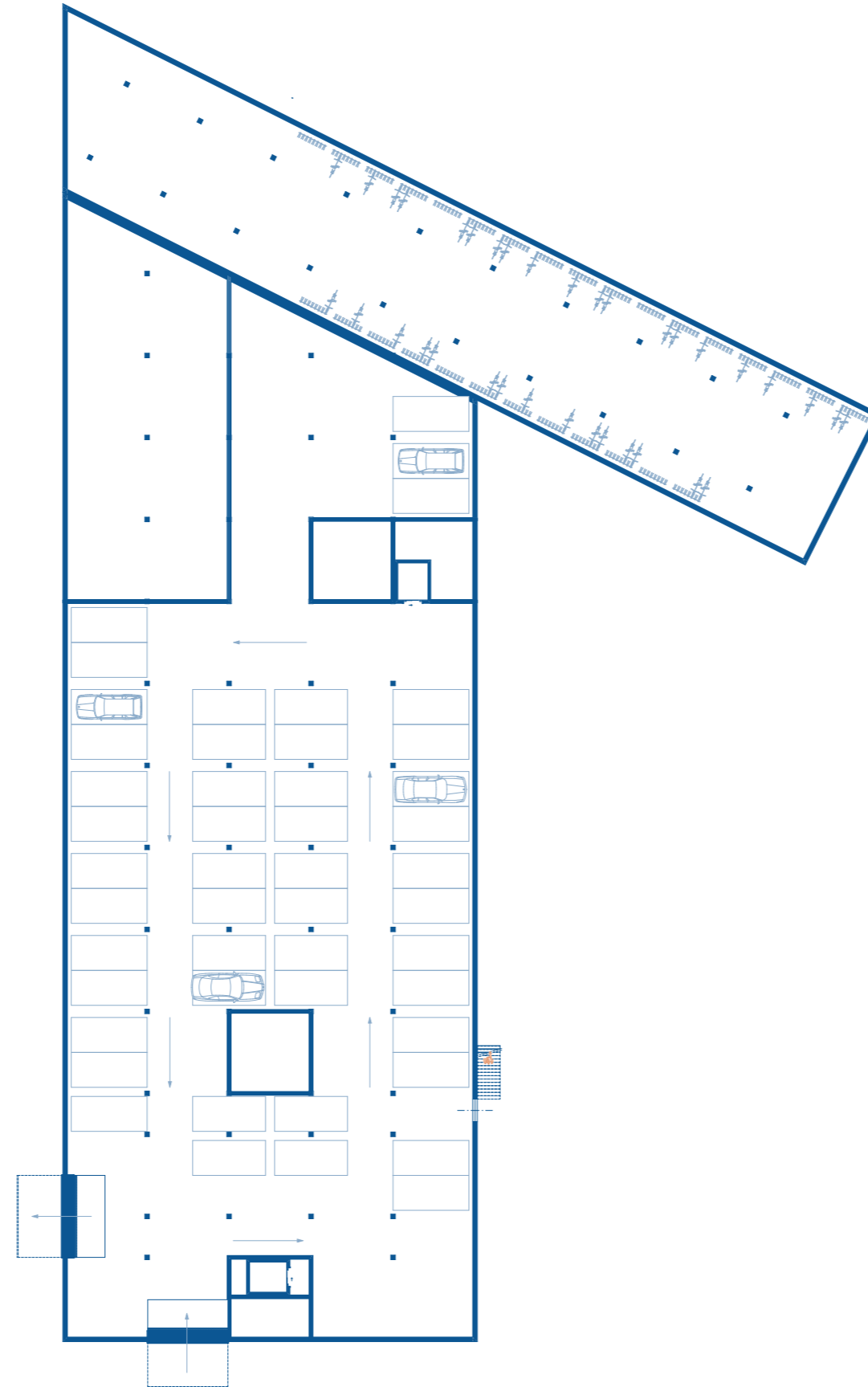
3. Practical Feasibility & Future Research

- Talk with healthcare professionals to test this hybrid model in practice.
- Put the needs and experiences of the children at the center.
- Study the long-term effects of shared use on the feeling of safety.

In what way can an inpatient rehabilitation centre be designed to enable co-use by residents of Houtwijk?

1. Which programmatic elements are required in an inpatient rehabilitation centre for children?
2. Which design principles are important for a pediatric inpatient rehabilitation centre?
3. Which programmatic elements of the rehabilitation centre can be designed for co-use, while addressing the needs of the residents of Houtwijk?
4. What spatial strategies enables seamless co-use between the rehabilitation center and Houtwijk?

Floorplan Basement

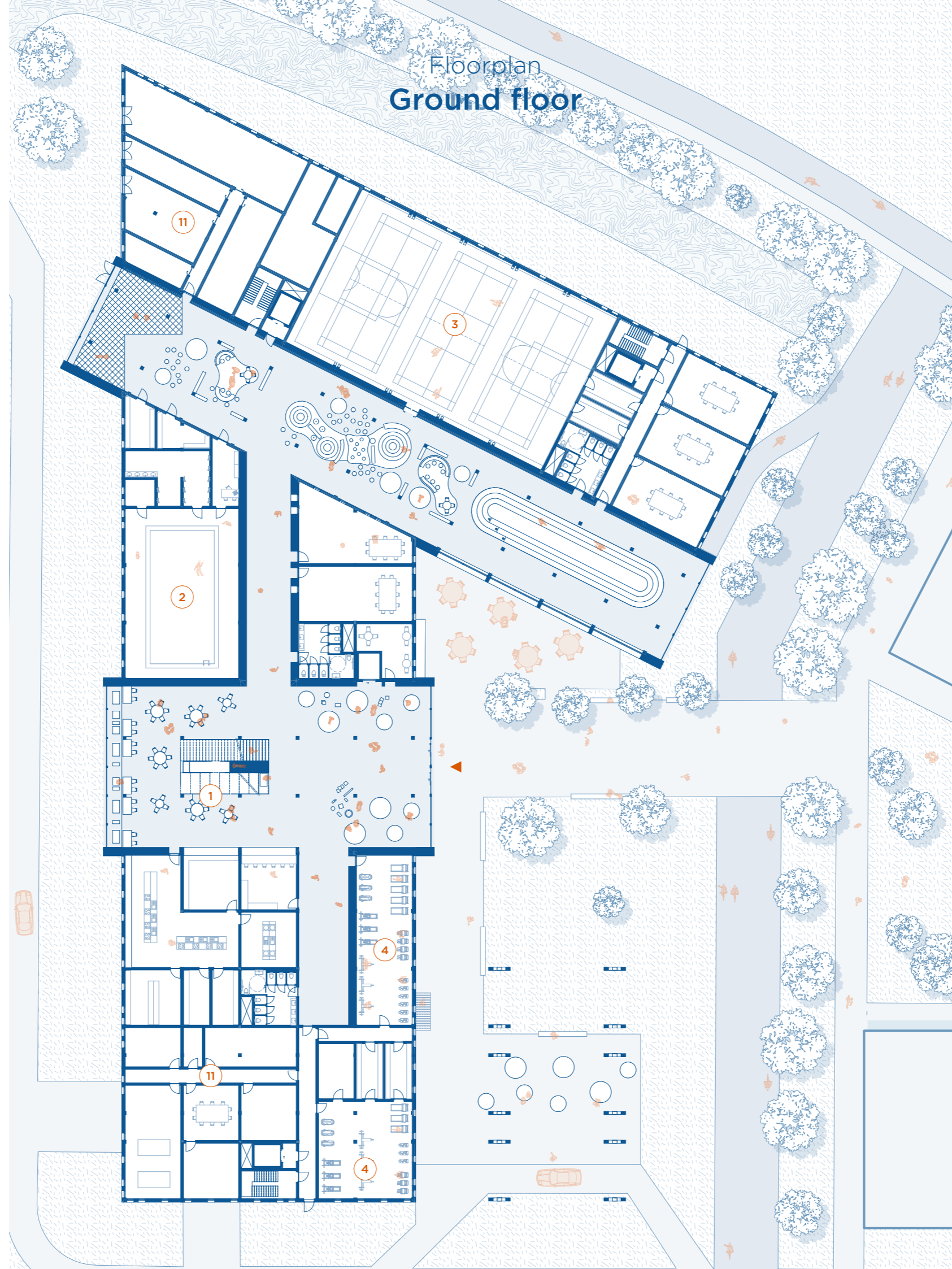


Basement

Legend

1. Restaurant
2. Swimming pool
3. Sports hall
4. Gym
5. Therapy
6. Gait analysis
7. Bedrooms
8. Living room
9. School
10. Office
11. Technical/storage

Floorplan
Ground floor

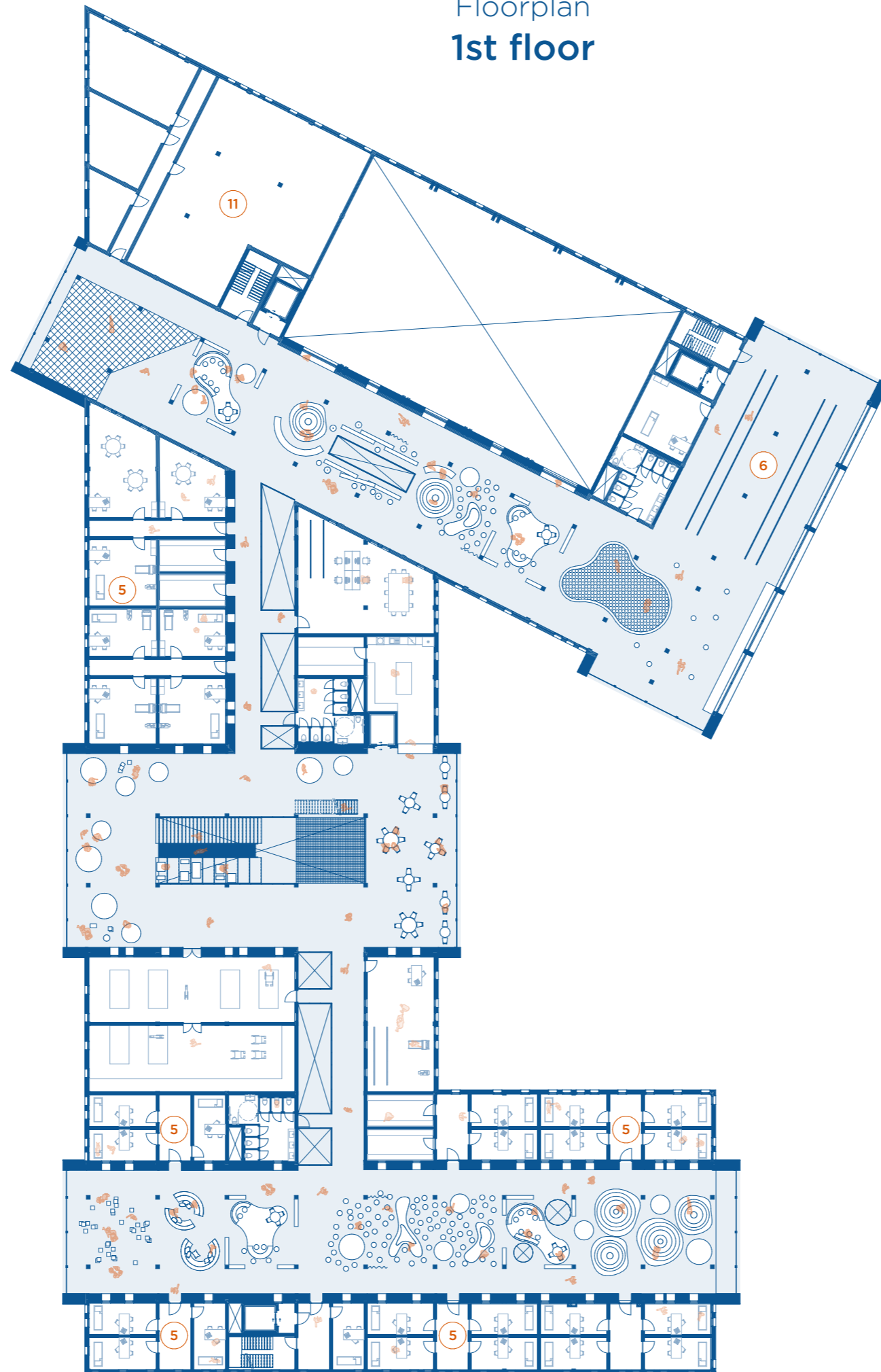


Ground floor

Legend

- 1. Restaurant
- 2. Swimming pool
- 3. Sports hall
- 4. Gym
- 5. Therapy
- 6. Gait analysis
- 7. Bedrooms
- 8. Living room
- 9. School
- 10. Office
- 11. Technical/storage

Floorplan 1st floor

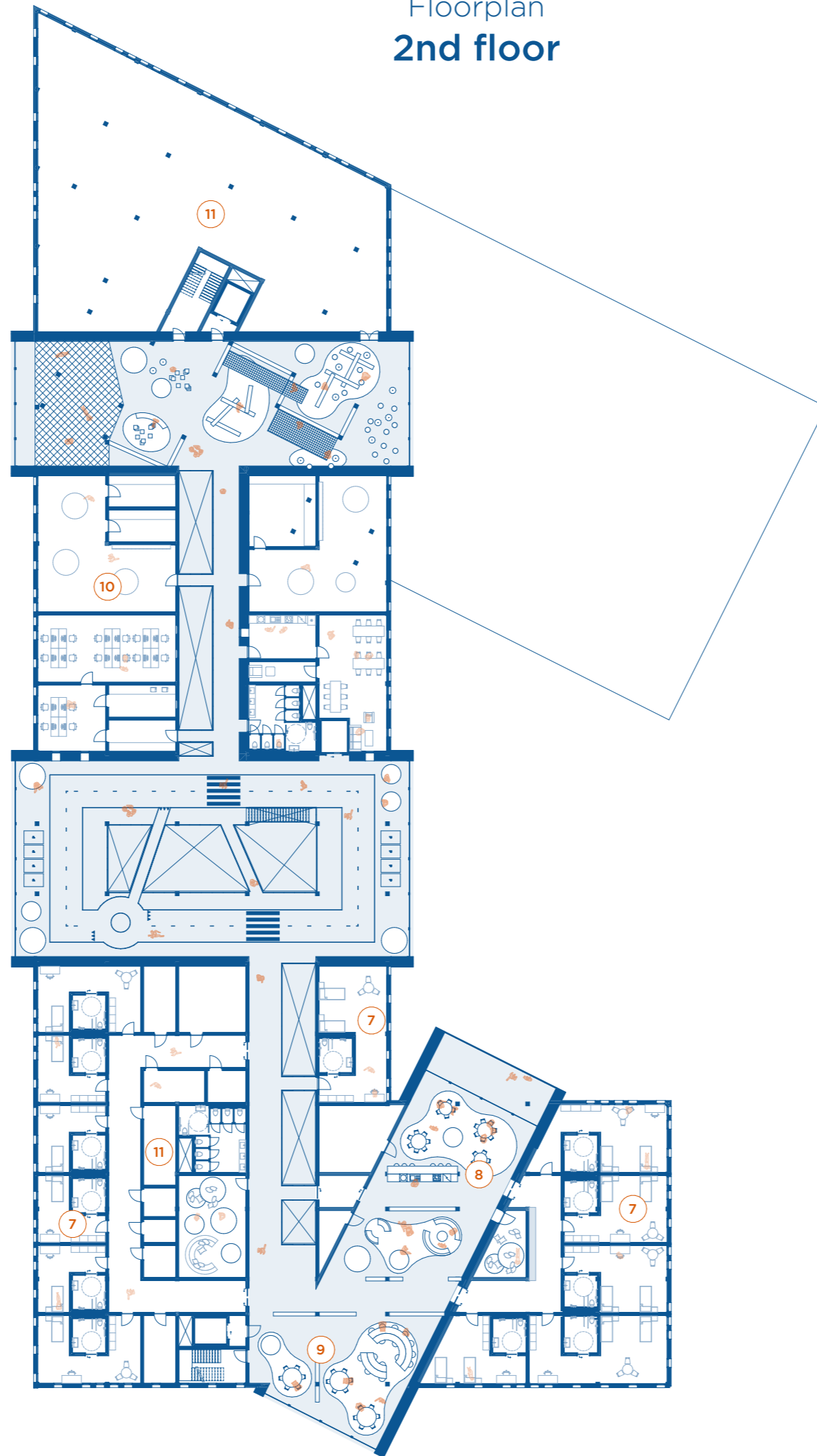


1st floor

Legend

- 1. Restaurant
- 2. Swimming pool
- 3. Sports hall
- 4. Gym
- 5. Therapy
- 6. Gait analysis
- 7. Bedrooms
- 8. Living room
- 9. School
- 10. Office
- 11. Technical/storage

Floorplan 2nd floor

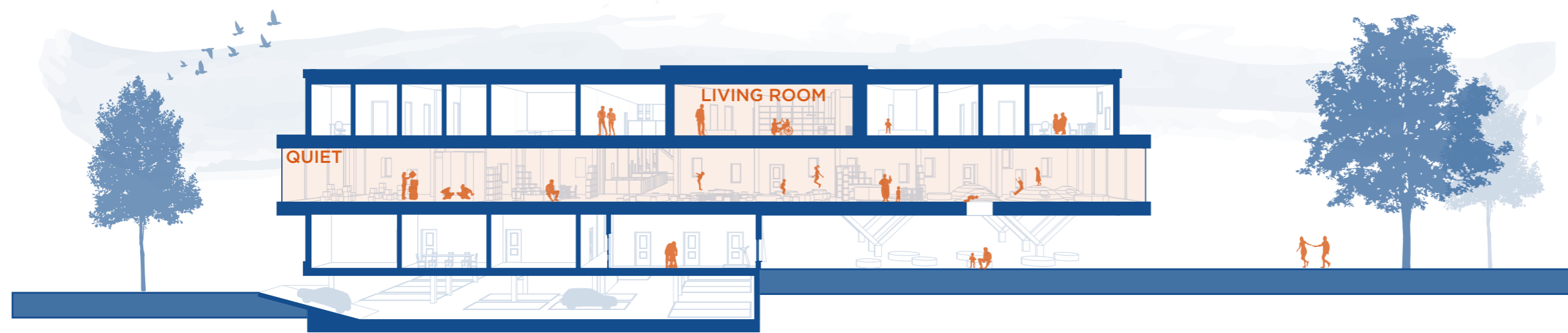


2nd floor

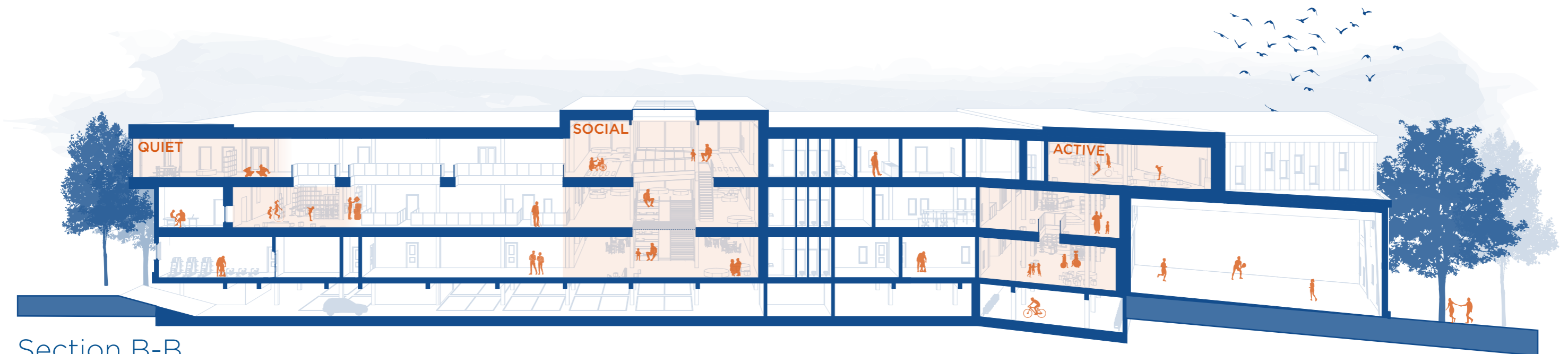
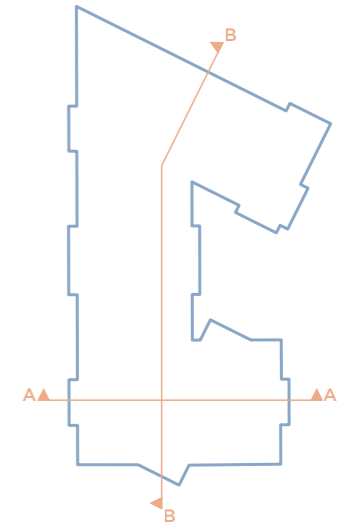
Legend

- 1. Restaurant
- 2. Swimming pool
- 3. Sports hall
- 4. Gym
- 5. Therapy
- 6. Gait analysis
- 7. Bedrooms
- 8. Living room
- 9. School
- 10. Office
- 11. Technical/storage

Section
Section



Section A-A

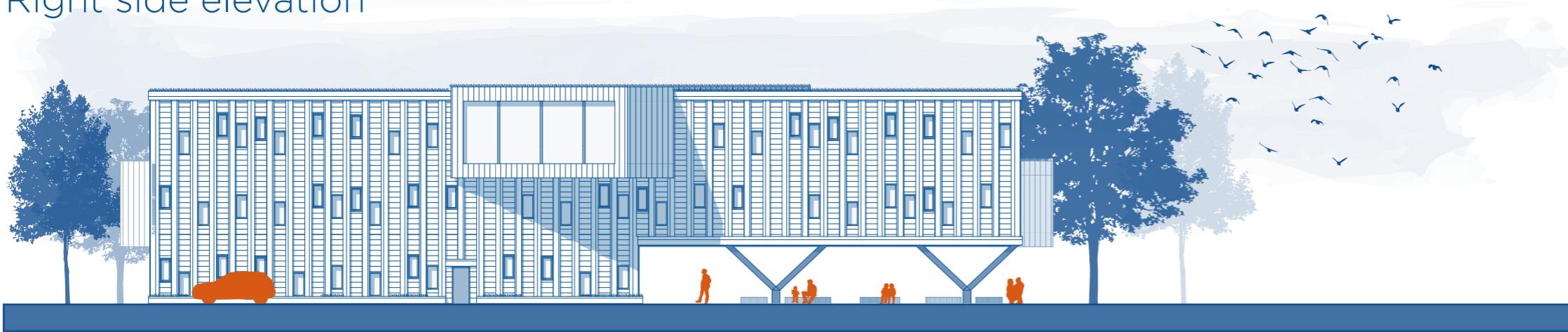
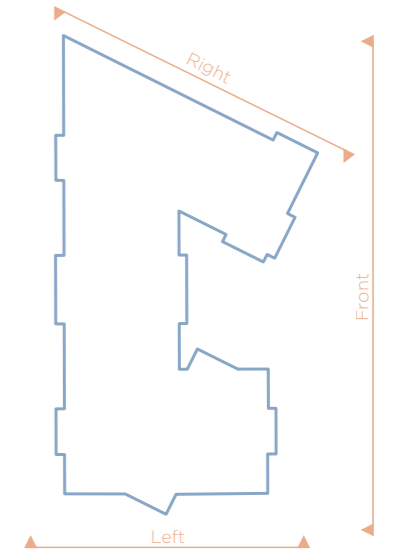


Section B-B

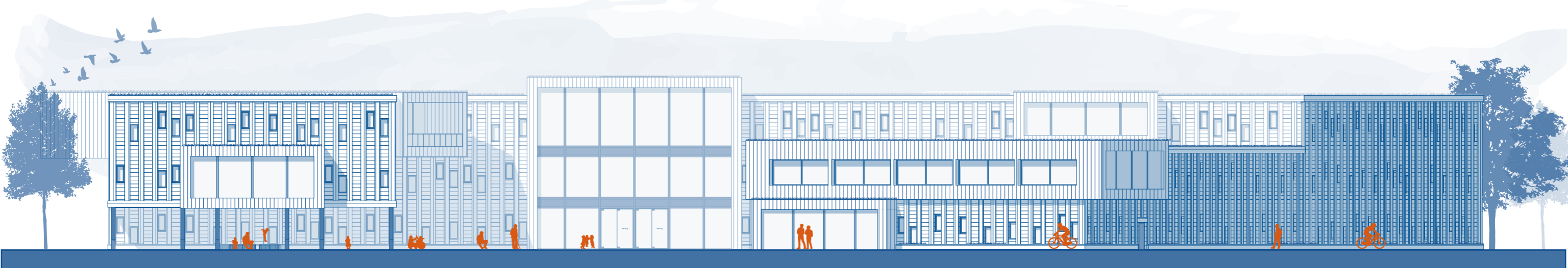
Facade Elevation



Right side elevation

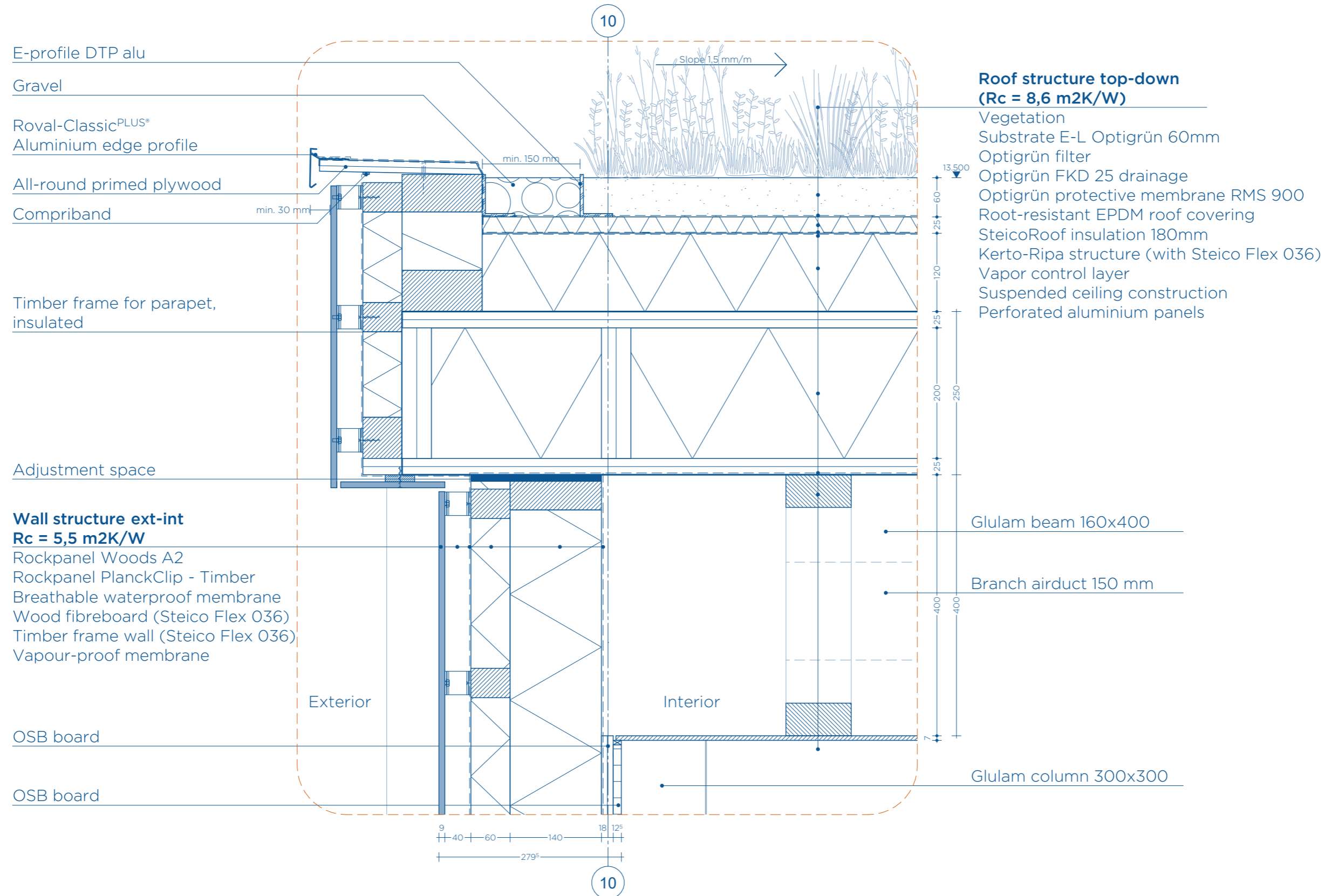


Left side elevation



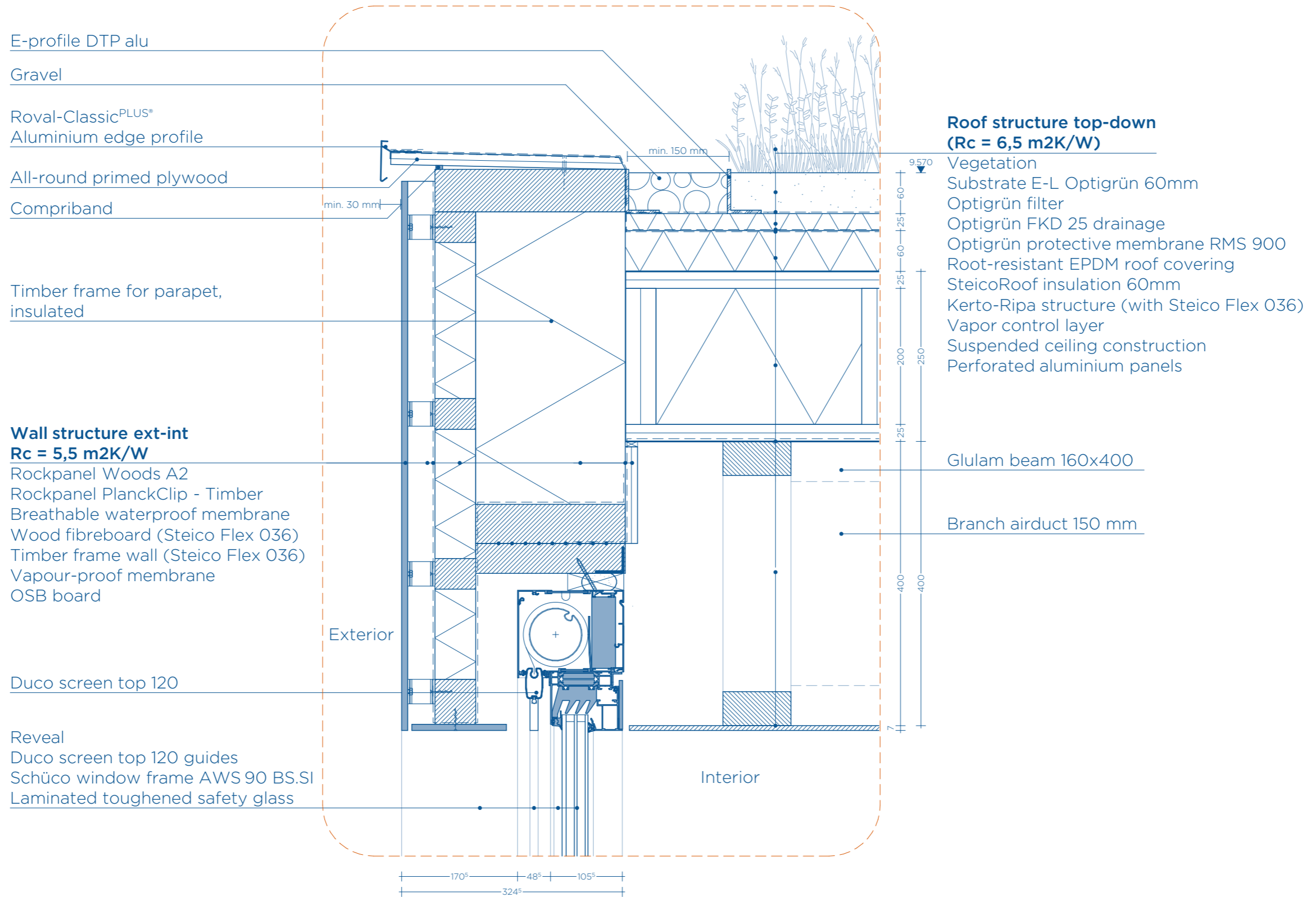
Front elevation

Details Roof



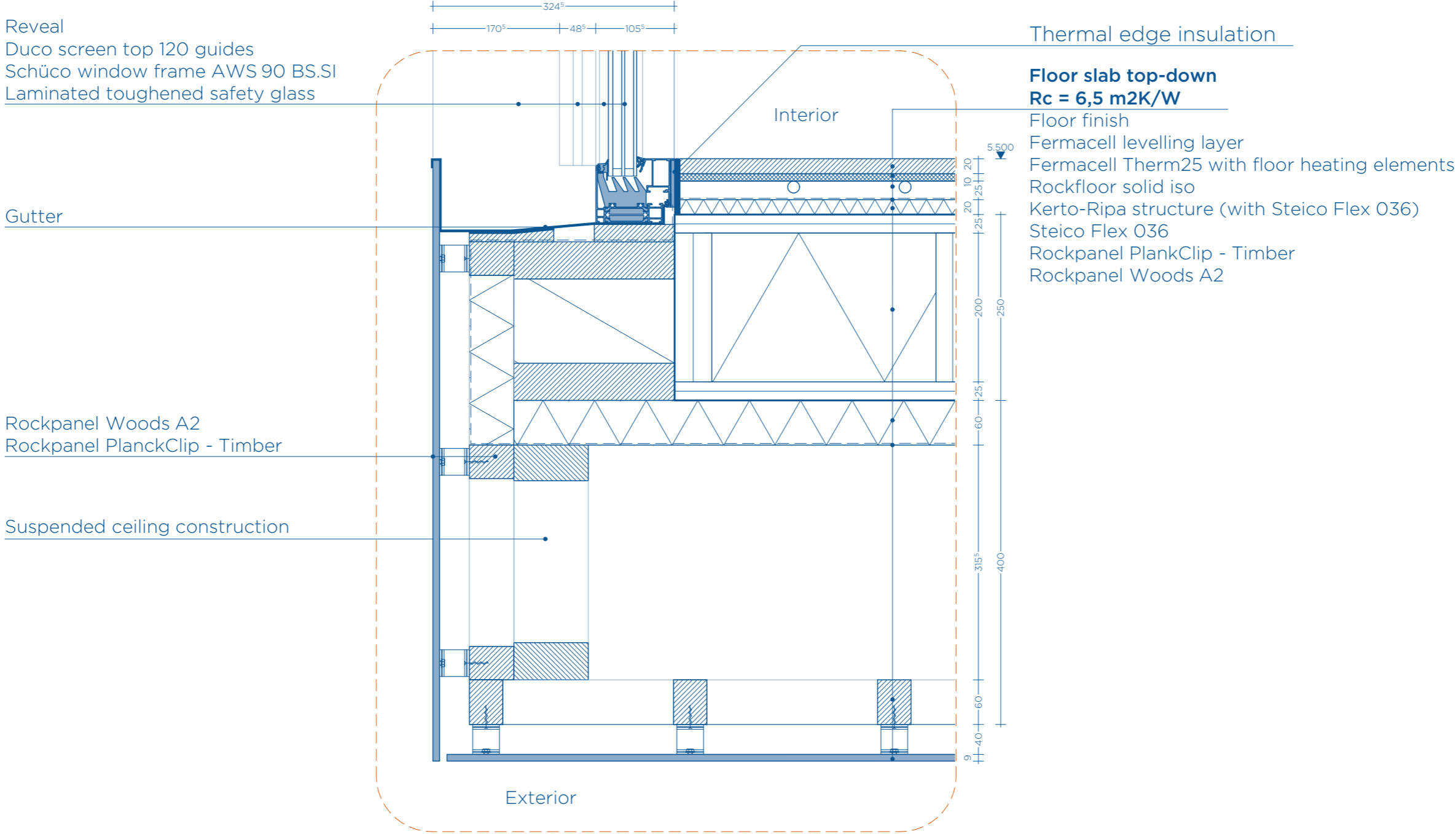
Details

Window frame top

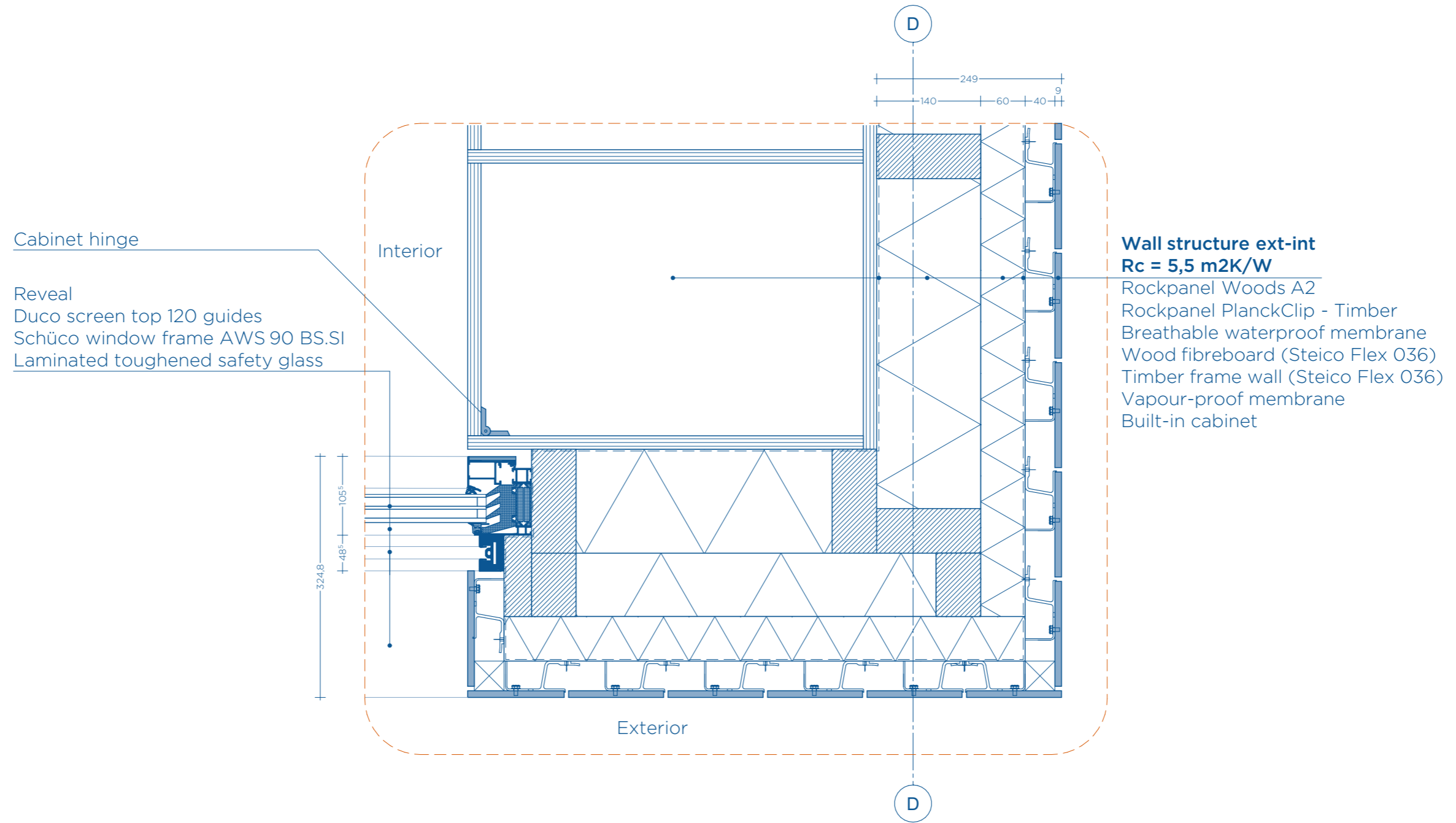


Details

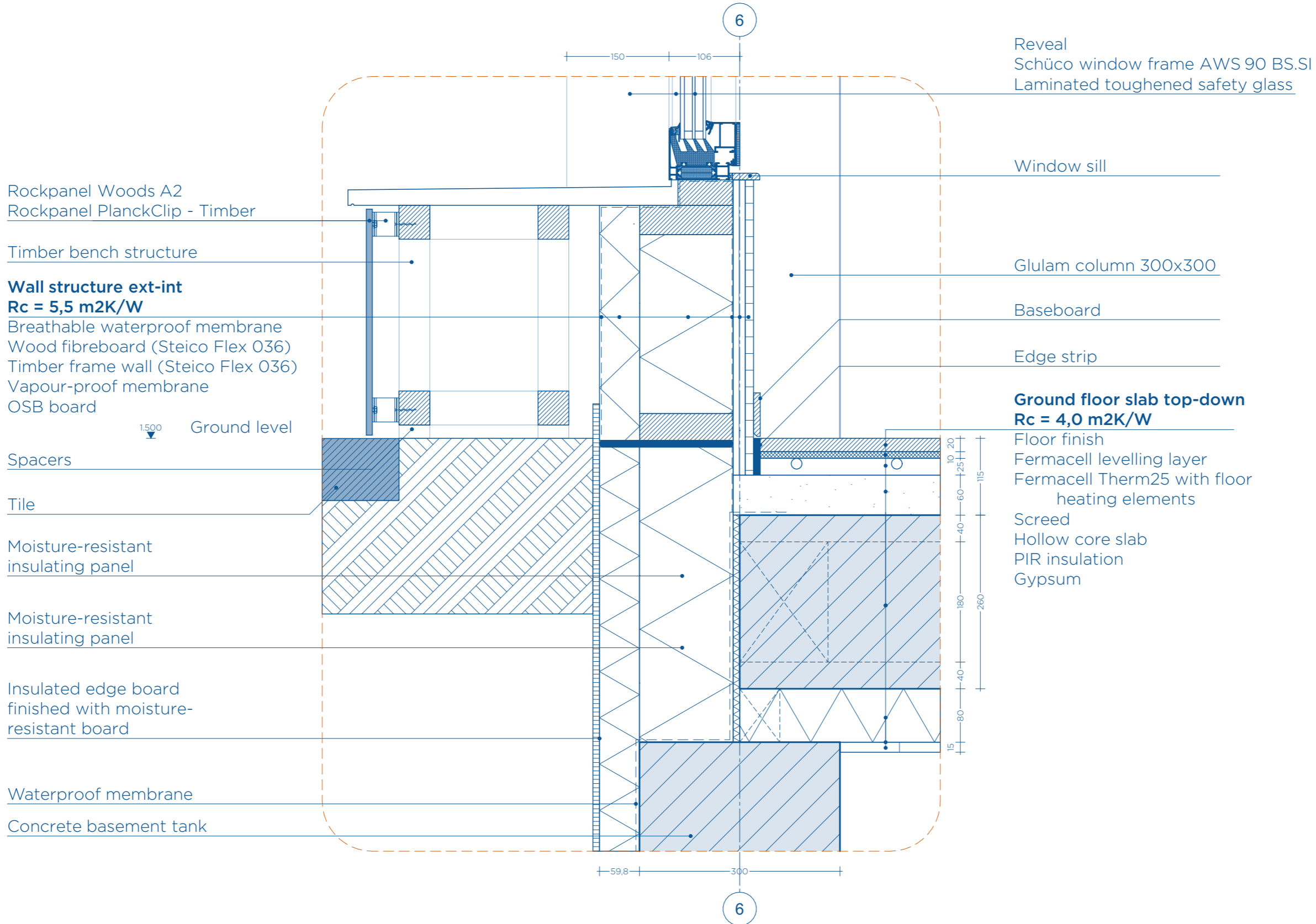
Window frame bottom



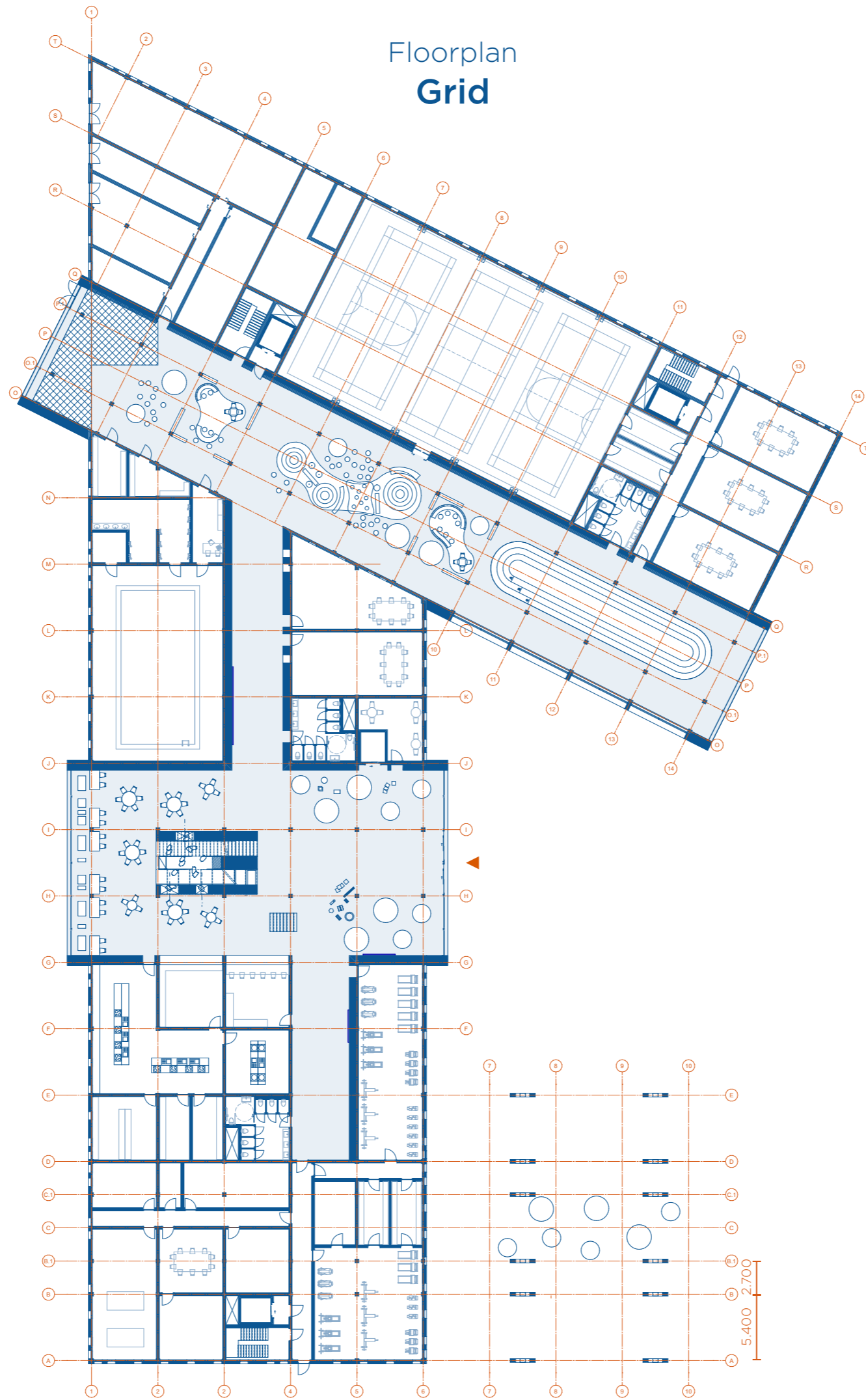
Details
Window frame horizontal



Details Ground floor



Floorplan Grid



Design Sewege

