



LAYERS of Brest

FUNCTION

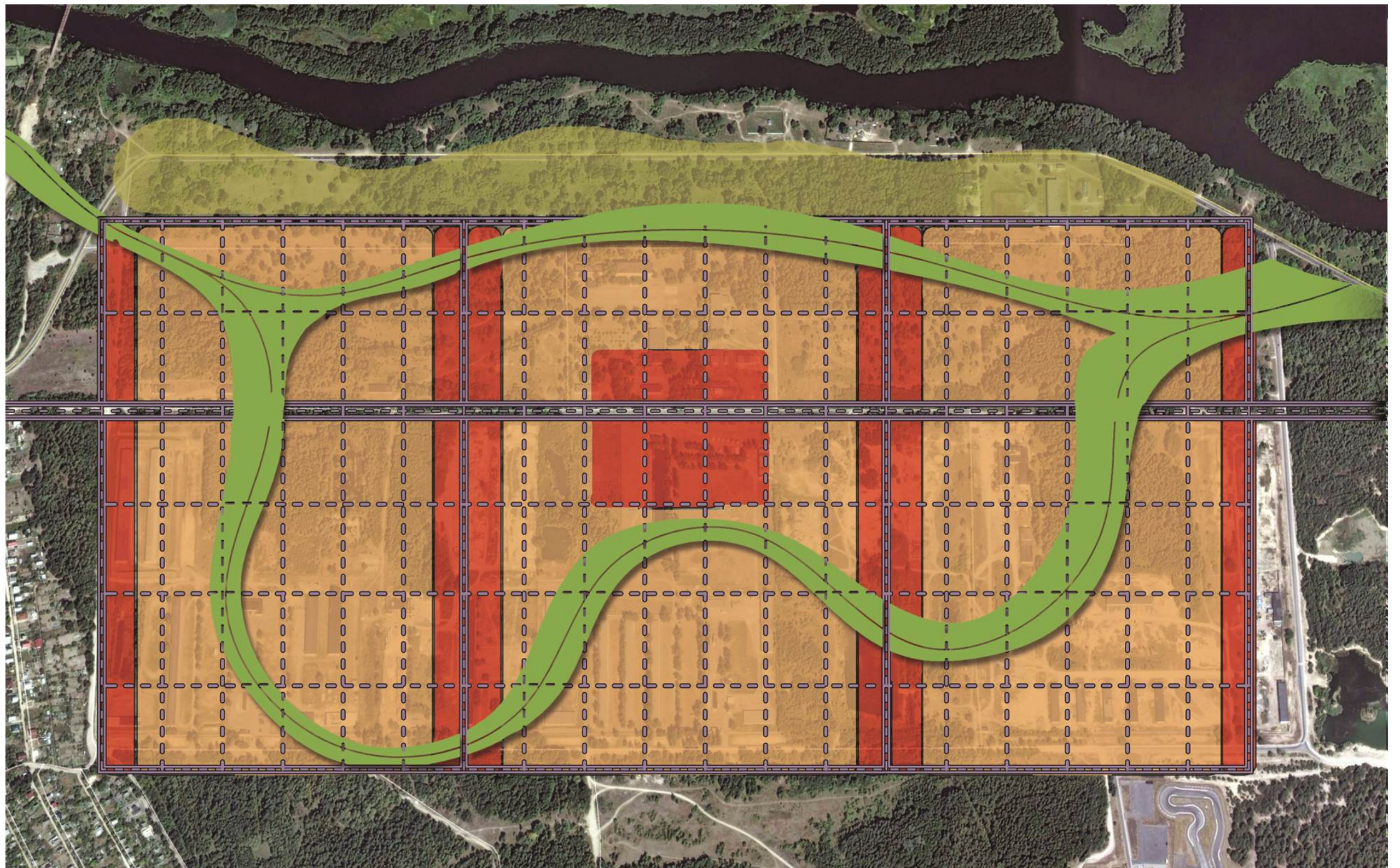
commUNITY

NATURE

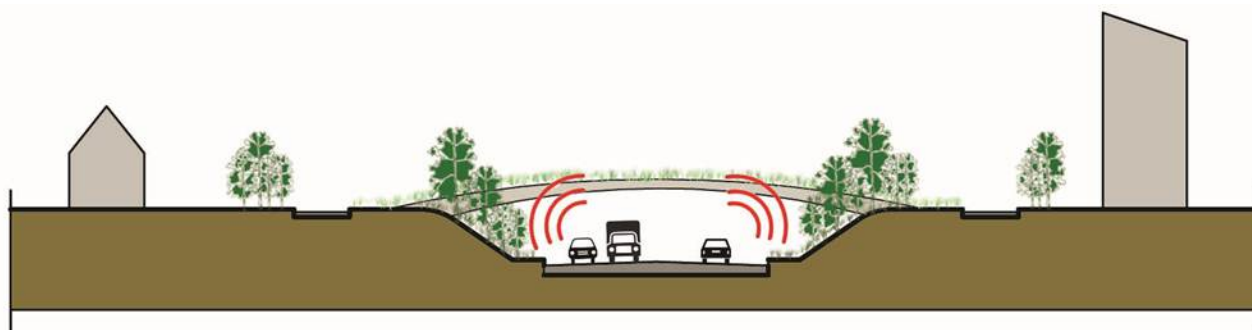
Bulgaria, UACEG, 1st prize,

Bogdan Radichev , Rosen Yordanov , Radoslav Todorov

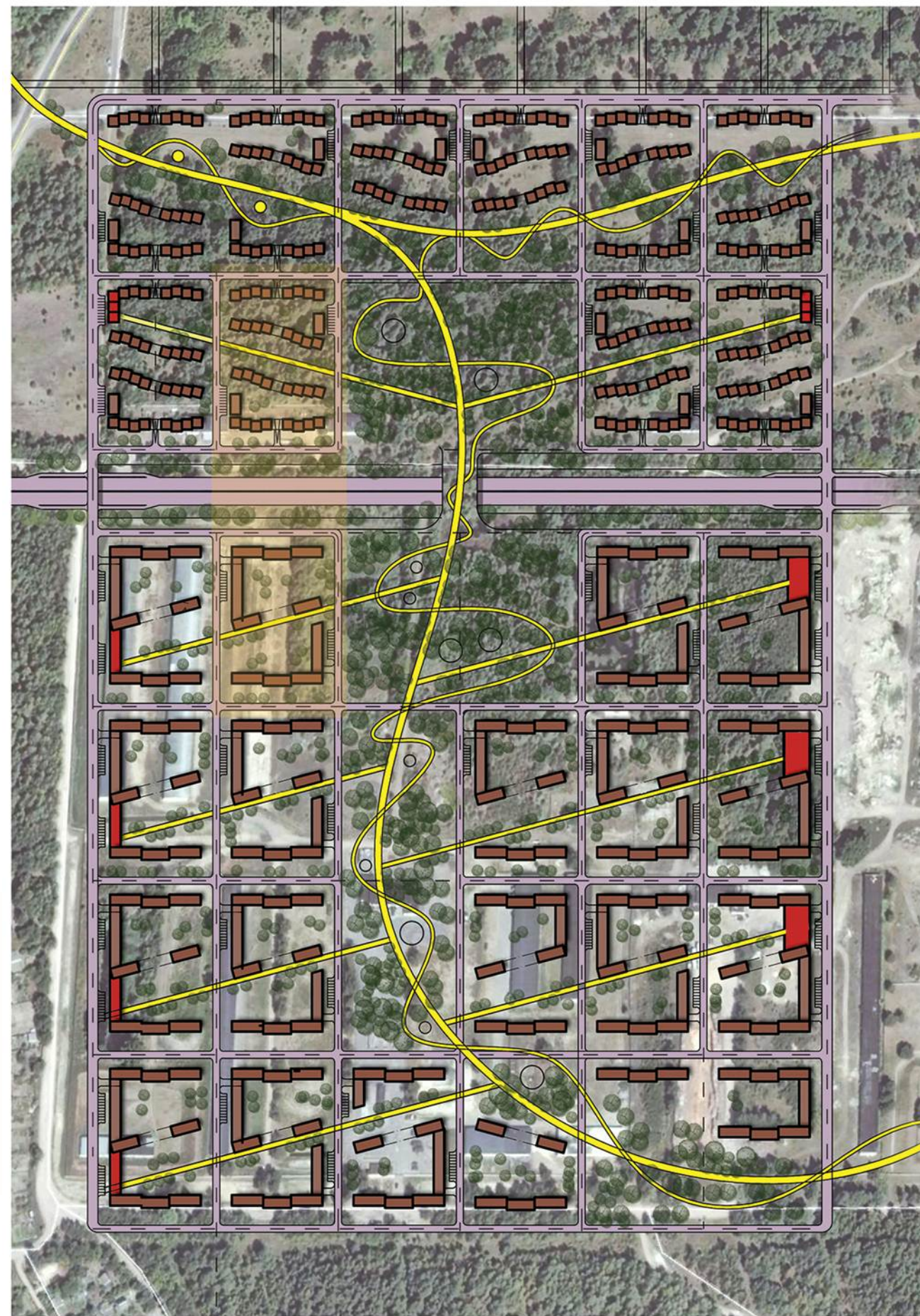
PRIMAIRY INFRASTRUCTURE PLANNING



MODULE
DEVELOPMENT



Section through main street

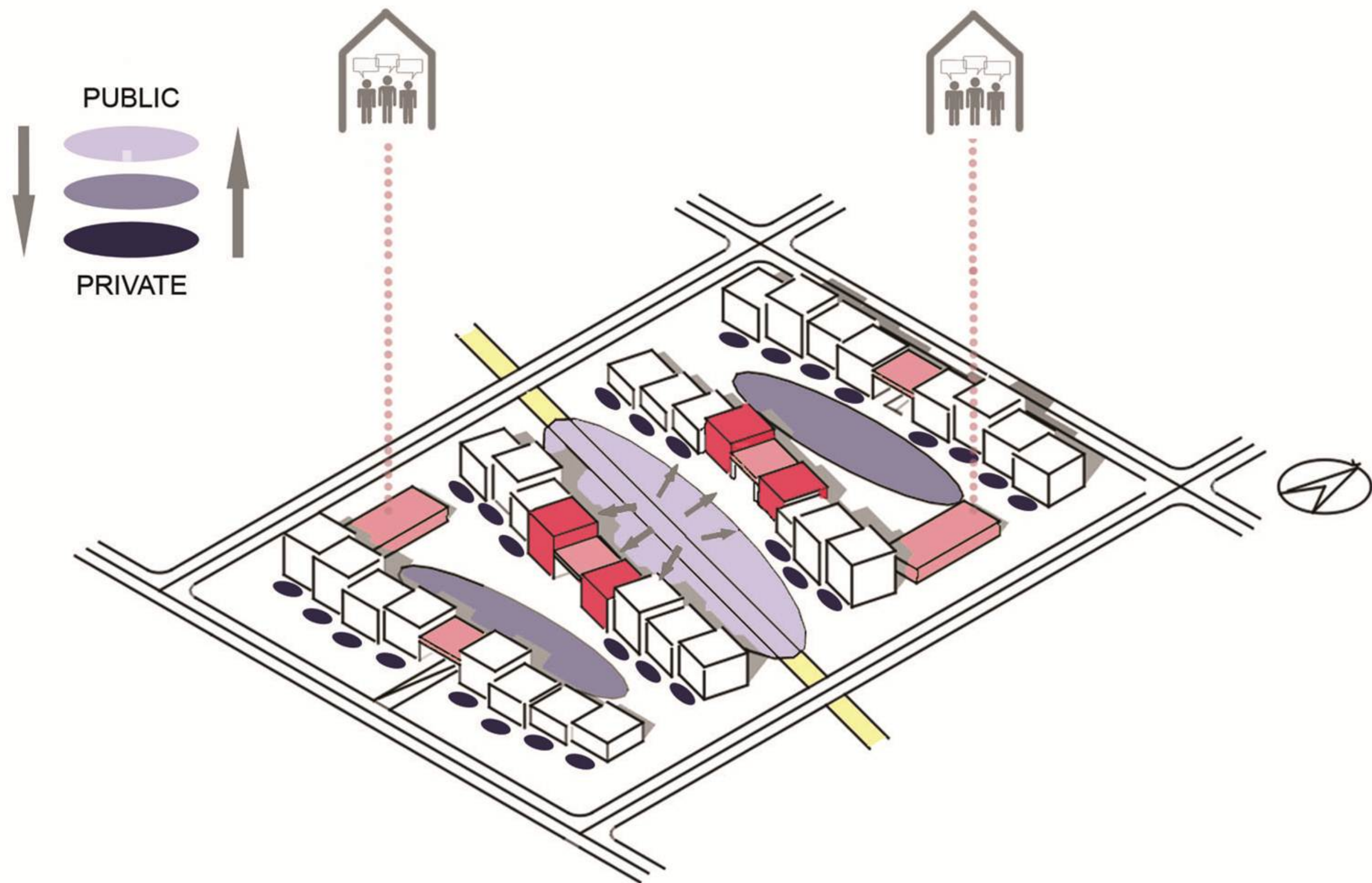


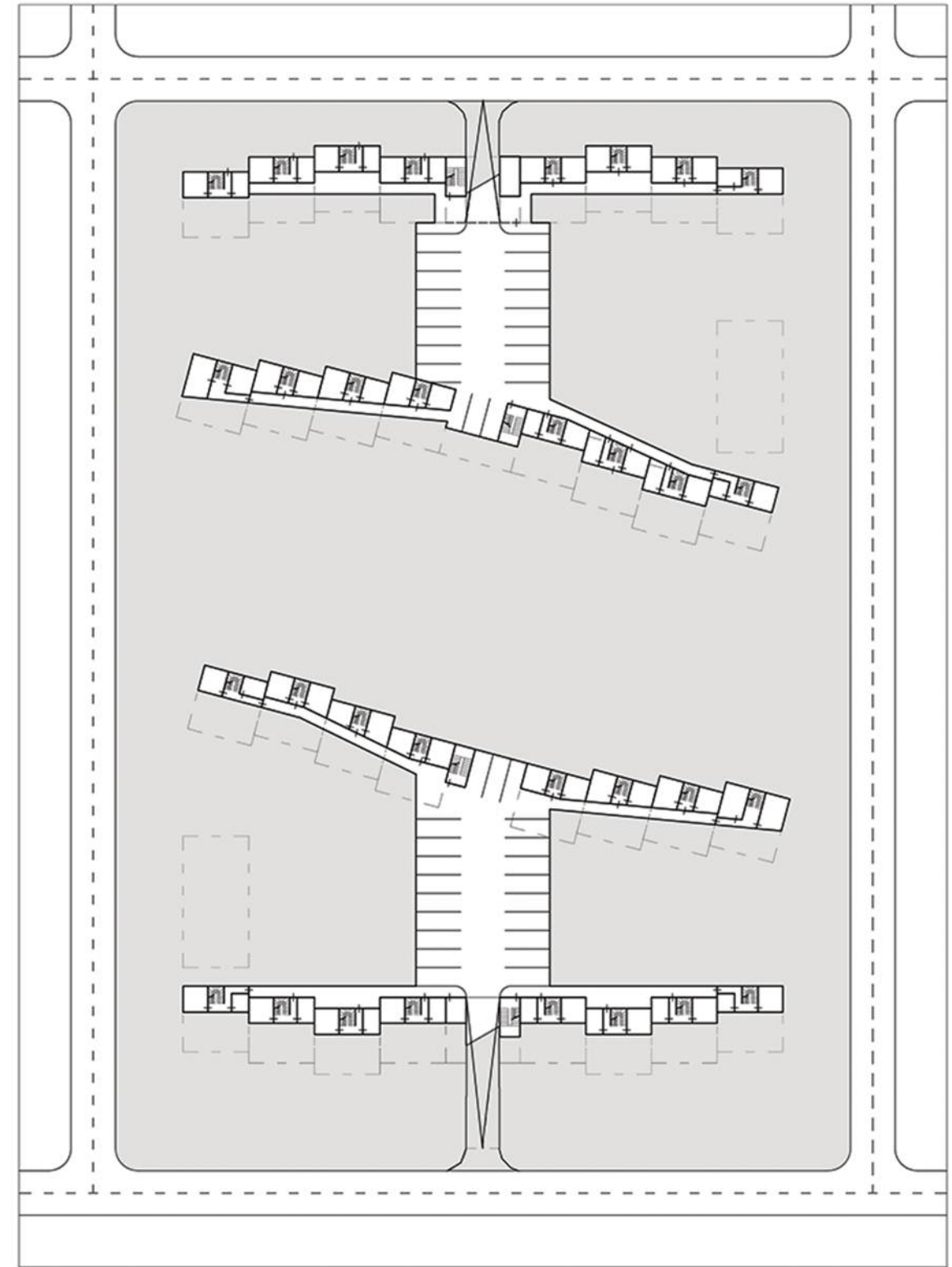
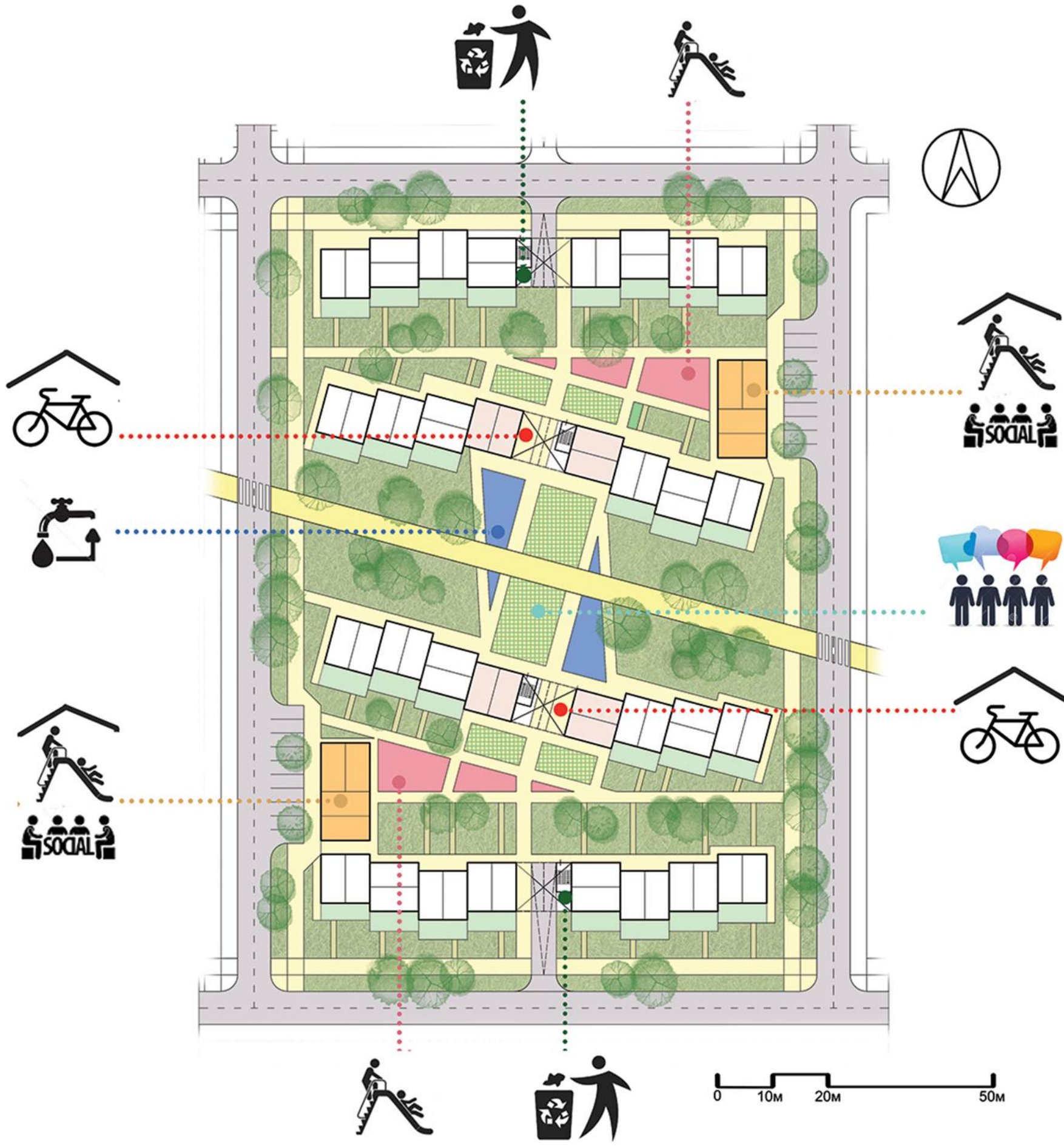


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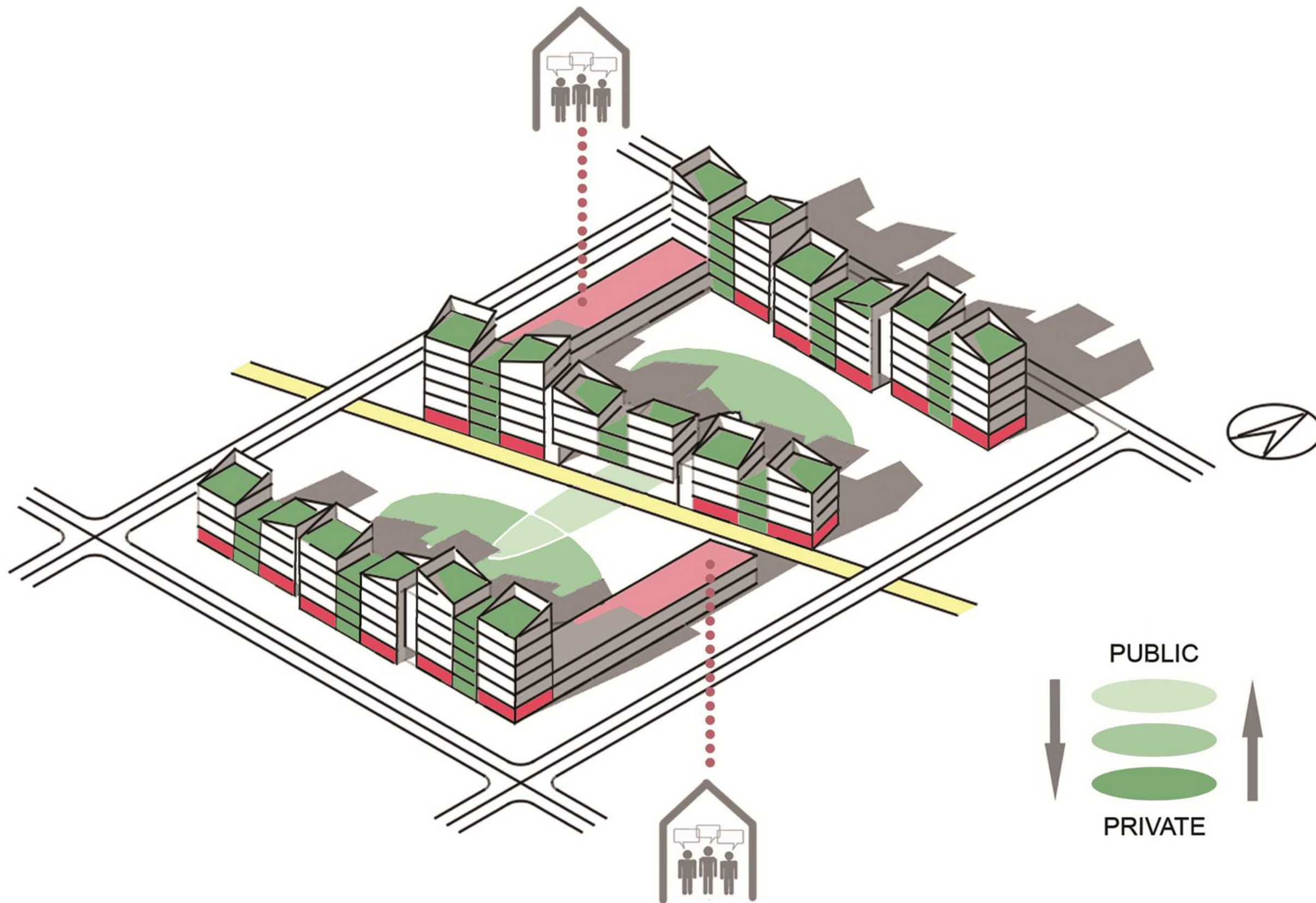




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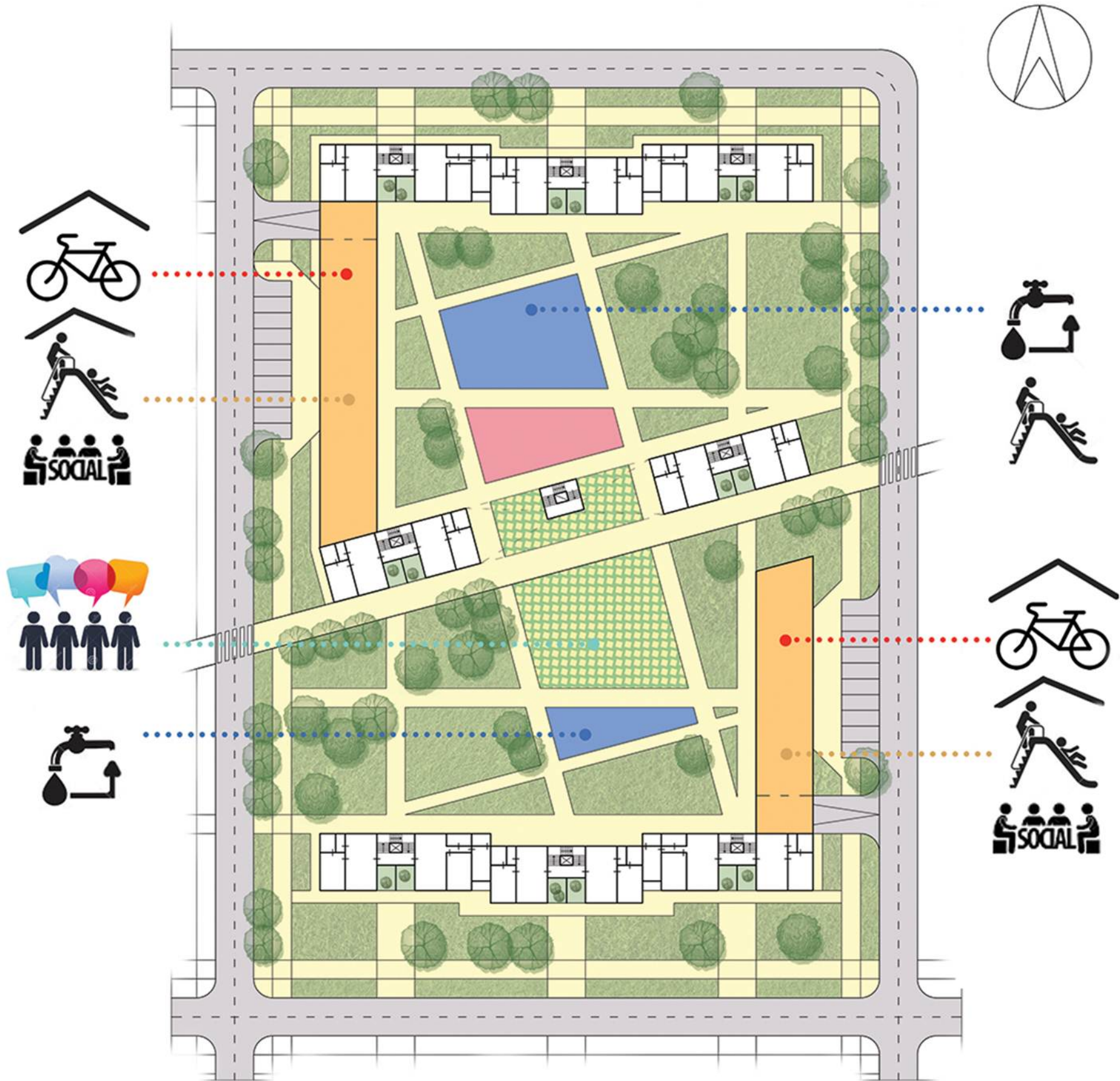
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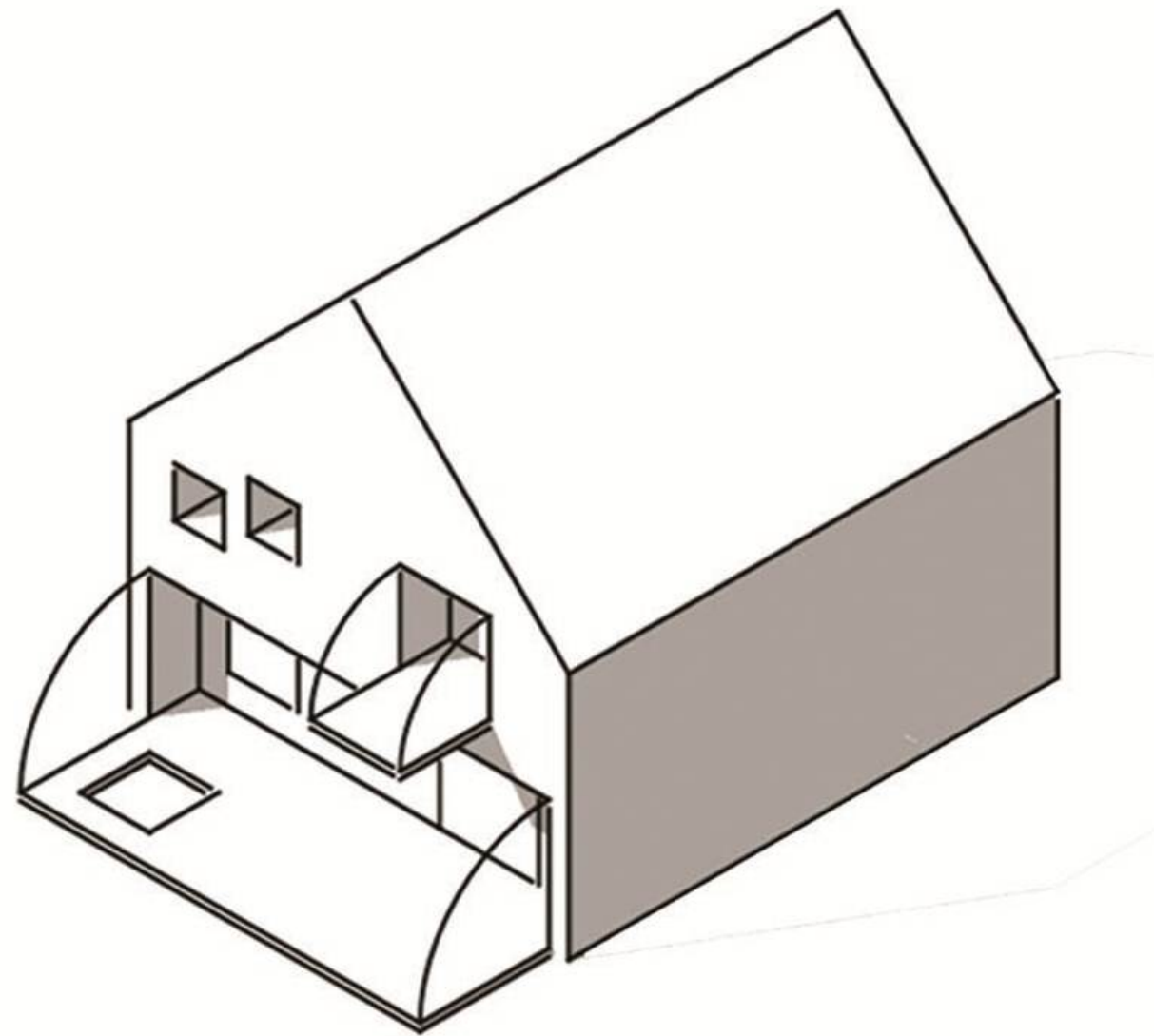




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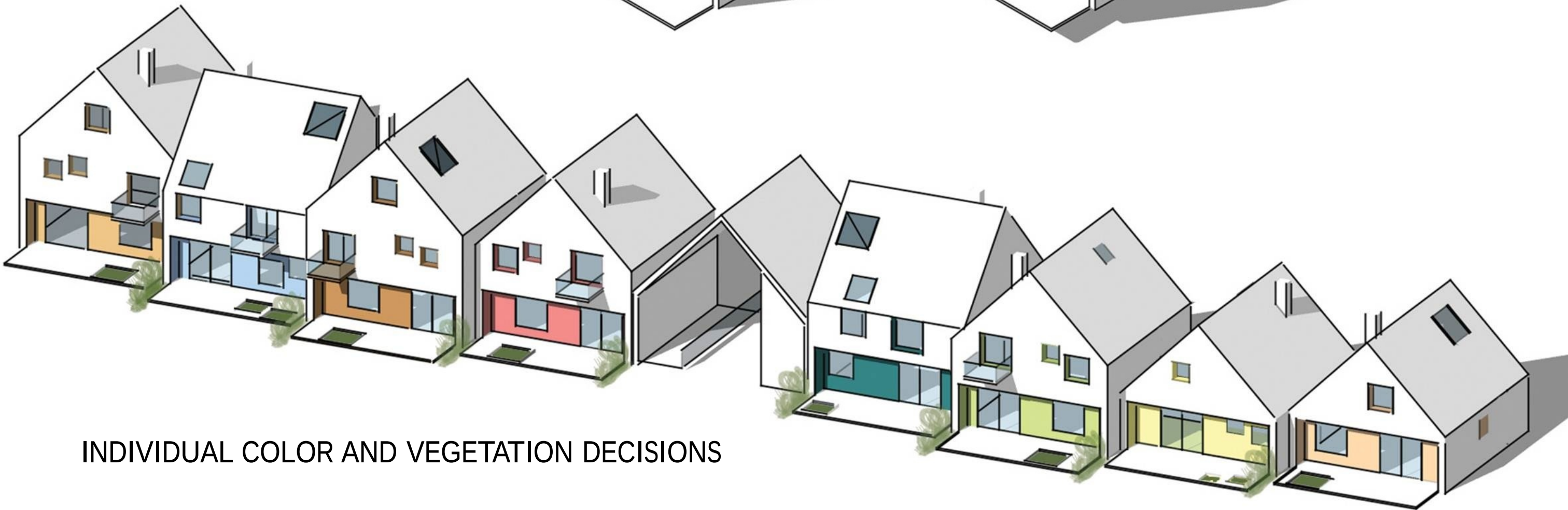
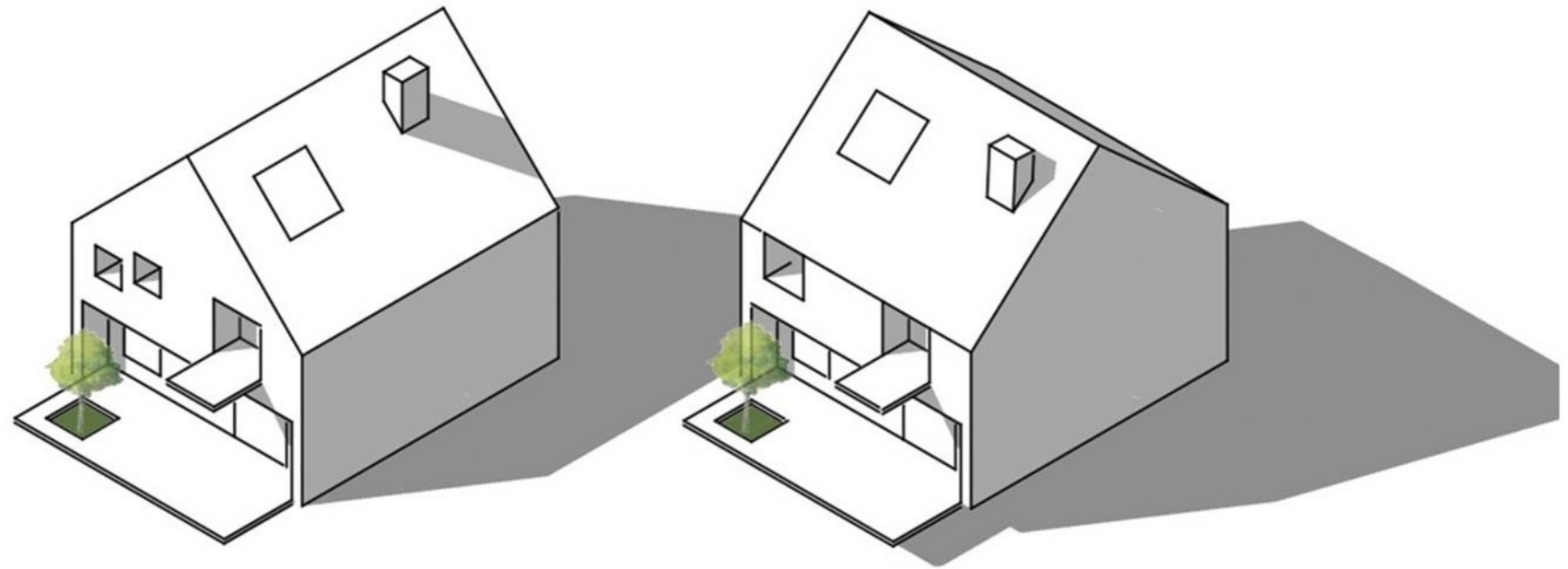
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OPENING TO THE NATURE



Individuality & Variety

- Rotating the roof slope
- Height and levels
- Size and position of the windows
- Colors

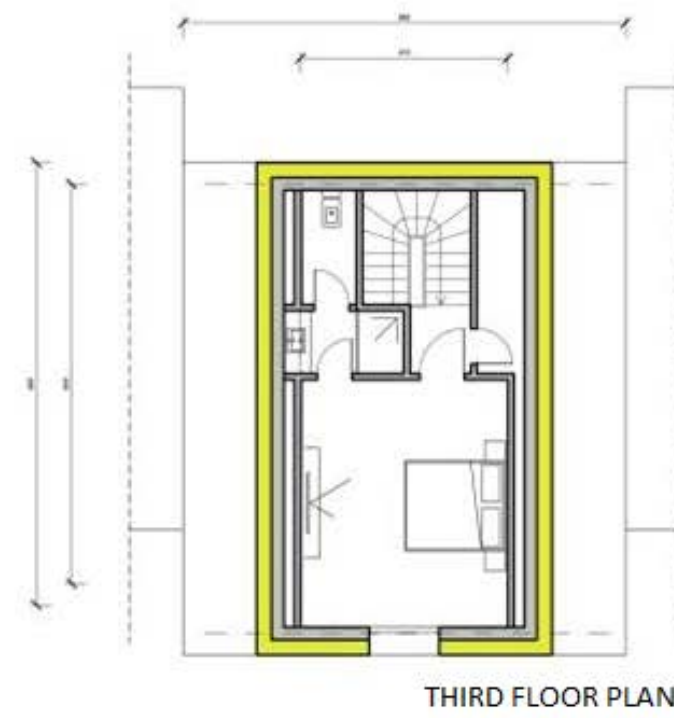
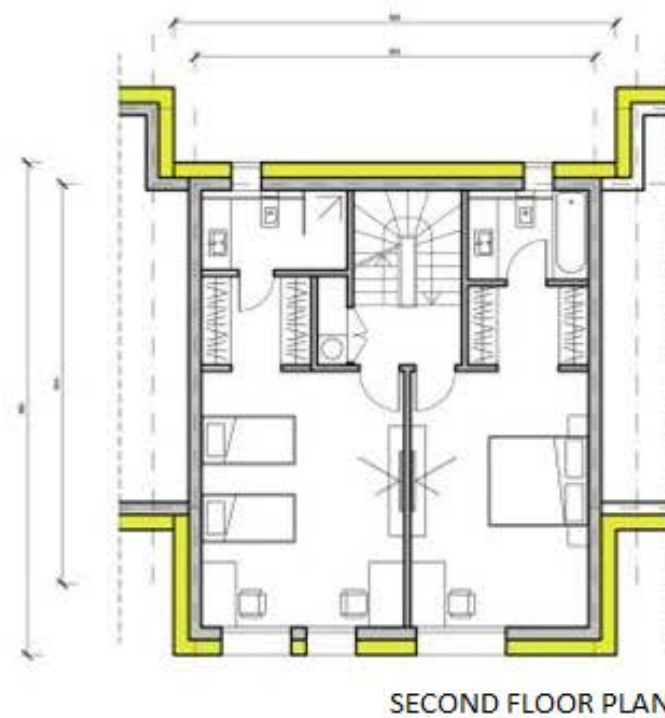


INDIVIDUAL COLOR AND VEGETATION DECISIONS

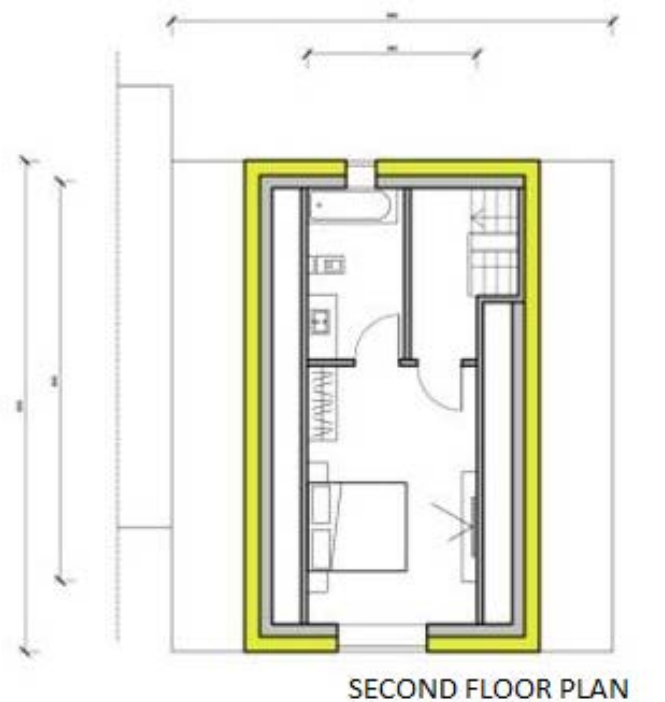
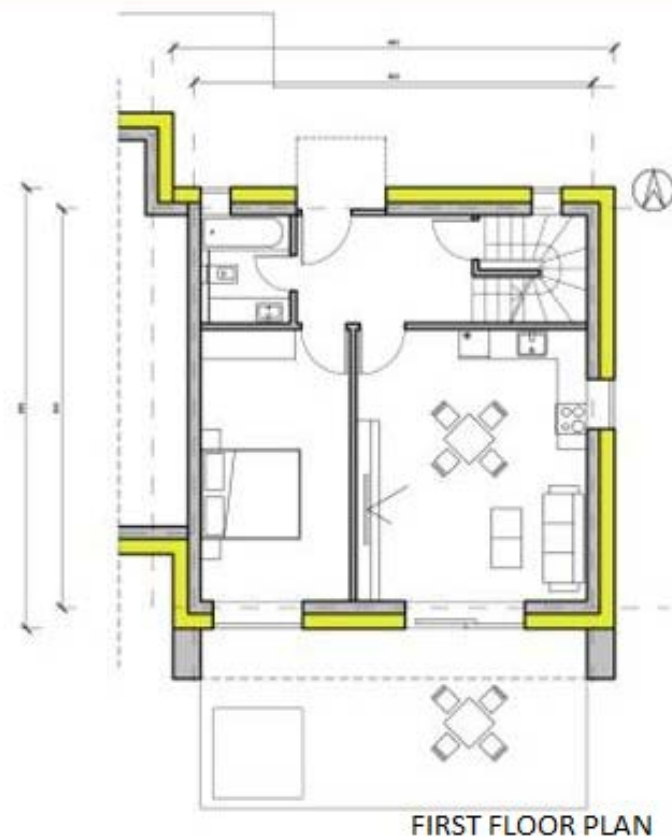


FLOOR PLANS

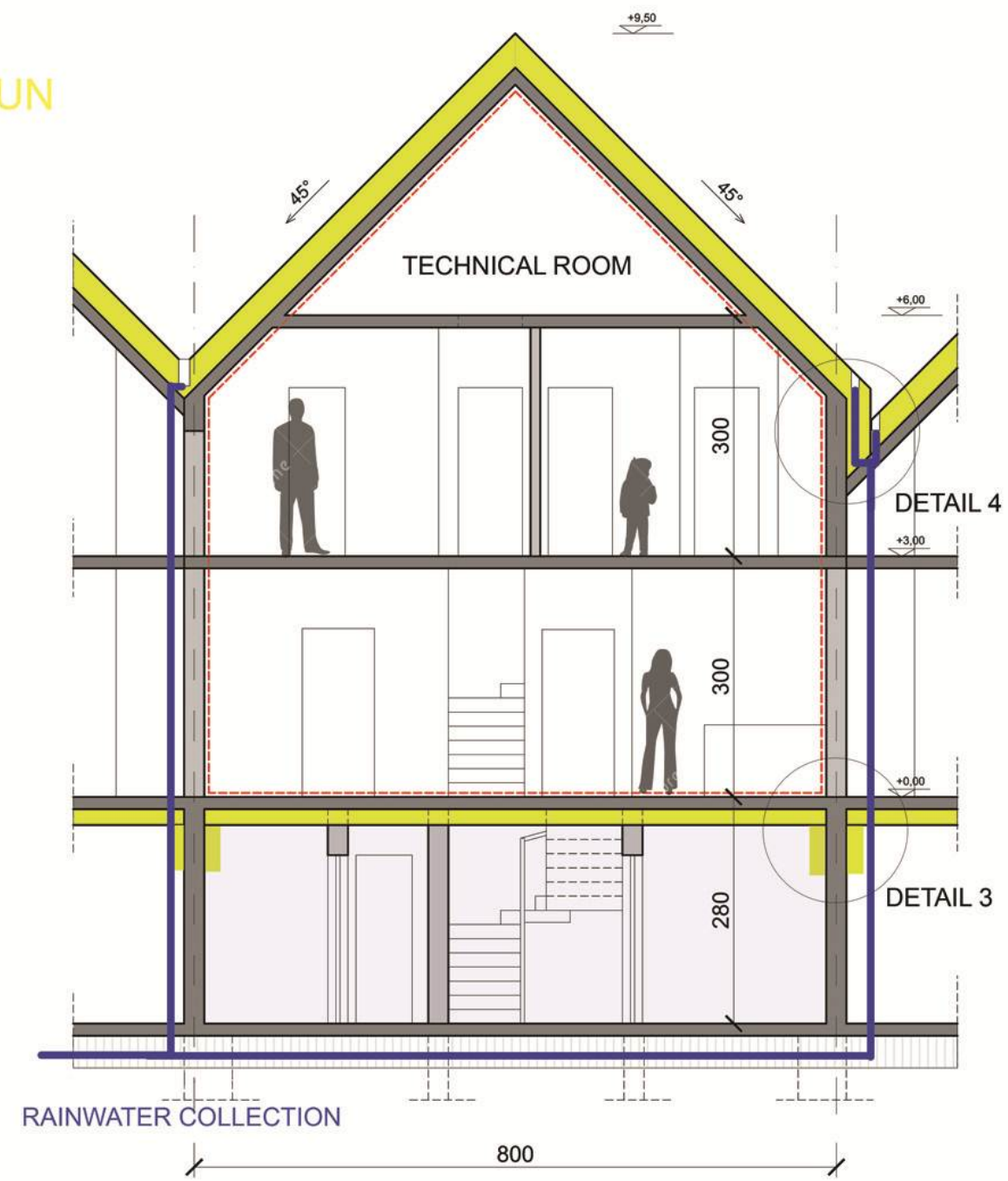
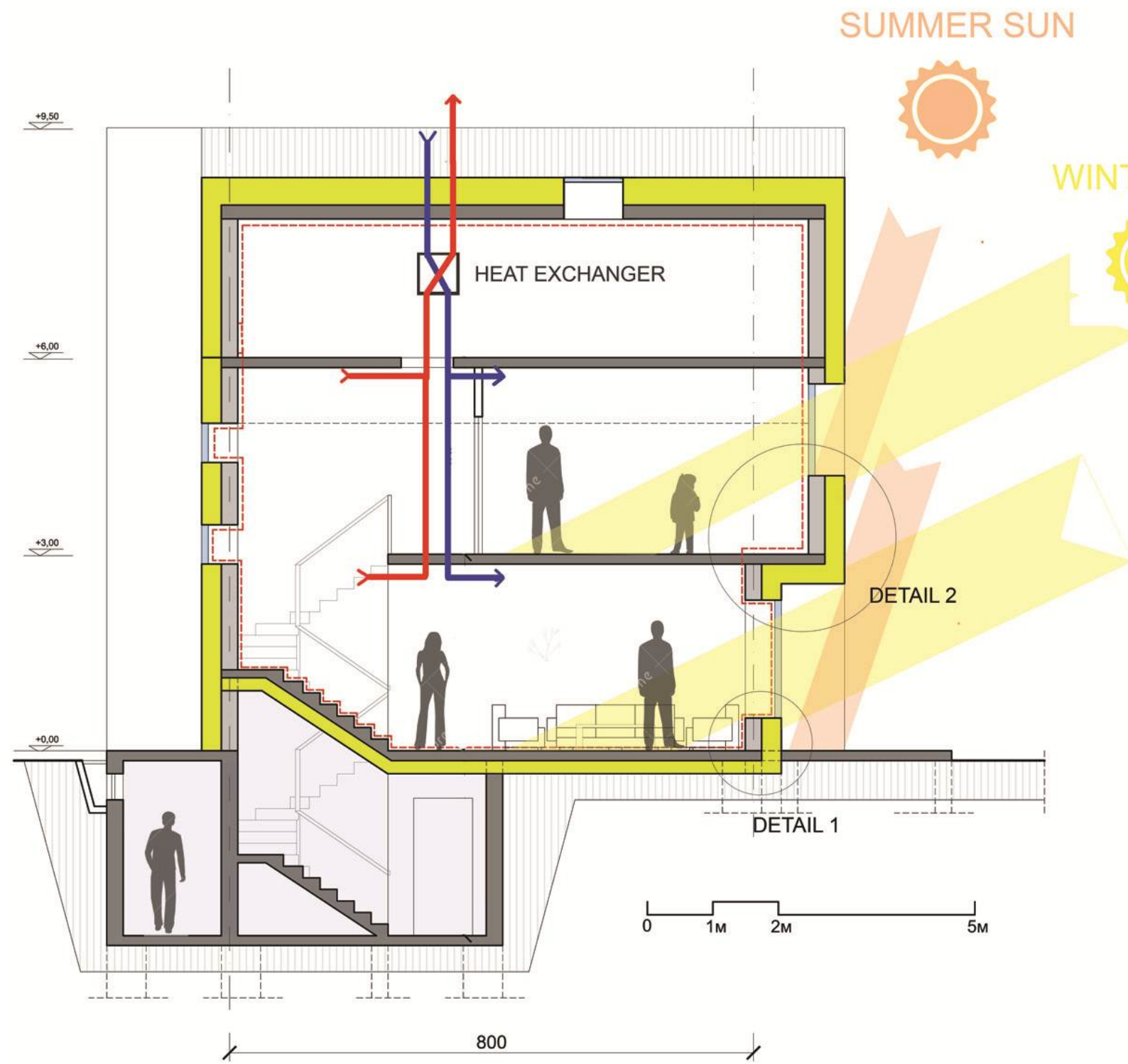
TYPE 3



TYPE 2



TYPE 1 SECTIONS



Section E in cm

- 1,5 Interior plaster
- 17,5 Lime-sandstone KSR 6 DF (175)
- 16,0 ISOVER Kontur FSP 1-032 Easy Fix
- 16,0 ISOVER Kontur FSP 1-032 Easy Fix
- 1,0 Waterproofing
- 3,0 Rear ventilation
- 2,0 Clinker

Section A in cm

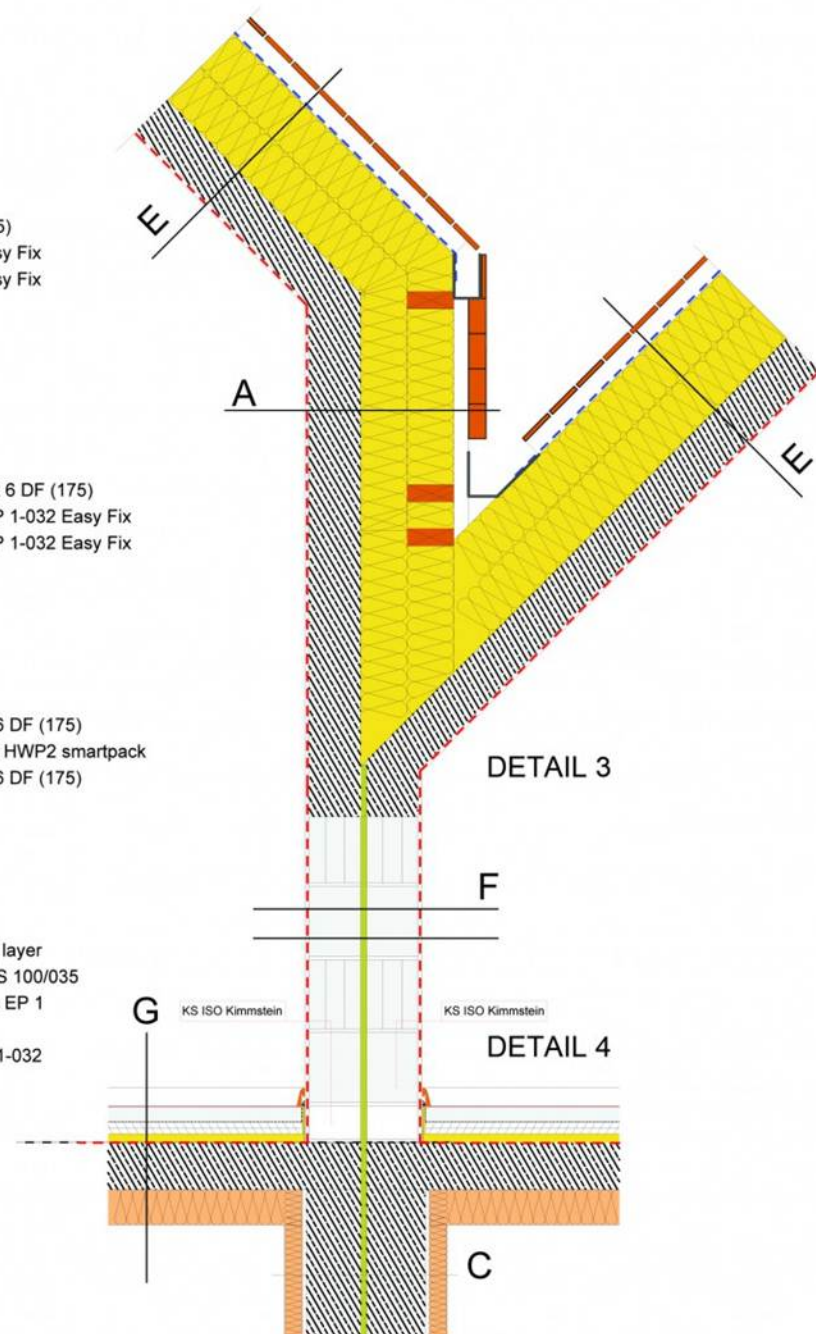
- 1,5 Interior plaster
- 17,5 Masonry Lime-sandstone KSR 6 DF (175)
- 16,0 Insulation ISOVER Kontur FSP 1-032 Easy Fix
- 16,0 Insulation ISOVER Kontur FSP 1-032 Easy Fix
- 3,0 Rear ventilation
- 5,0 Clinker bricks facade

Section F in cm

- 1,5 Interior plaster
- 17,5 Masonry Lime-sandstone KSR 6 DF (175)
- 2,0 Soundproofing ISOVER Akustic HWP2 smartpack
- 17,5 Masonry Lime-sandstone KSR 6 DF (175)
- 1,5 Interior plaster

Section G in cm

- Floor covering
- 5,0 Screed
- Vapour retarder and separating layer
- 4,0 Insulation ISOVER Exporit EPS 100/035
- 3,0 Soundproofing ISOVER Akustic EP 1
- 16,0 Reinforced concrete
- 12,0 Insulation ISOVER Topdec DP 1-032



Section A in cm

- 1,5 Interior plaster
- 17,5 Masonry Lime-sandstone KSR 6 DF
- 16,0 Insulation ISOVER Kontur FSP 1-032
- 16,0 Insulation ISOVER Kontur FSP 1-032
- 3,0 Rear ventilation
- 5,0 Clinker brick facade

Section B in cm

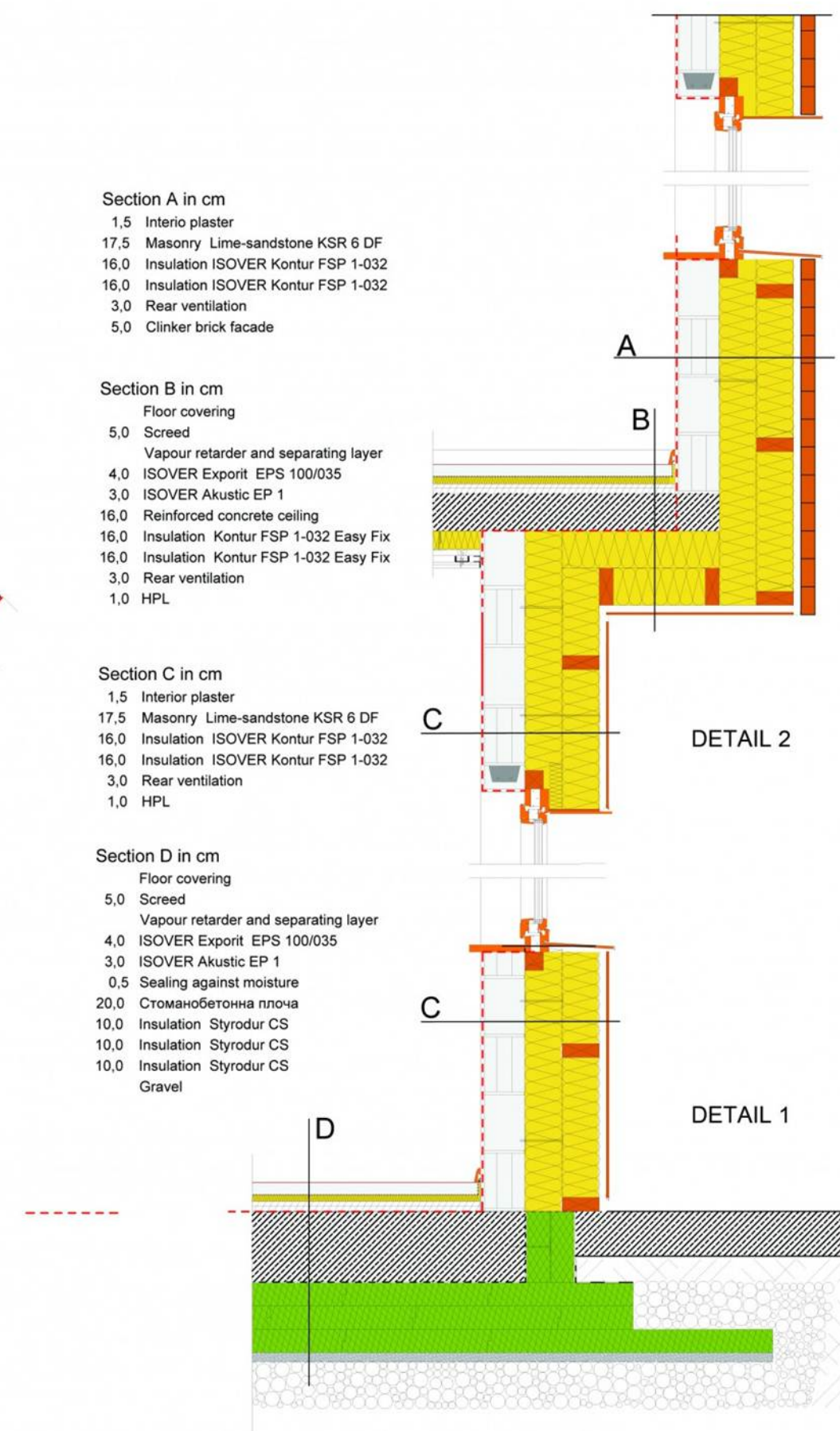
- Floor covering
- 5,0 Screed
- Vapour retarder and separating layer
- 4,0 ISOVER Exporit EPS 100/035
- 3,0 ISOVER Akustic EP 1
- 16,0 Reinforced concrete ceiling
- 16,0 Insulation Kontur FSP 1-032 Easy Fix
- 16,0 Insulation Kontur FSP 1-032 Easy Fix
- 3,0 Rear ventilation
- 1,0 HPL

Section C in cm

- 1,5 Interior plaster
- 17,5 Masonry Lime-sandstone KSR 6 DF
- 16,0 Insulation ISOVER Kontur FSP 1-032
- 16,0 Insulation ISOVER Kontur FSP 1-032
- 3,0 Rear ventilation
- 1,0 HPL

Section D in cm

- Floor covering
- 5,0 Screed
- Vapour retarder and separating layer
- 4,0 ISOVER Exporit EPS 100/035
- 3,0 ISOVER Akustic EP 1
- 0,5 Sealing against moisture
- 20,0 Стomанобетонна плоча
- 10,0 Insulation Styrodur CS
- 10,0 Insulation Styrodur CS
- 10,0 Insulation Styrodur CS
- Gravel



A. Object Data:

Country: Belarus
Climate zone: Brest
Construcion: New Building
Building Type: Residential
Design Temperature: 22°

B. Area Data

Heated Space Area: 152.00 m2
Heated Space Volume: 408.00 m3

C. Average U-Values

Pitched roof/mono pitched: 0.11 W/(m2K)
Wall against air: 0.11 W/(m2K)
Slab against ground: 0.10 W/(m2K)
Windows: 0.73 W/(m2K)
Doors: 0.80 W/(m2K)

D. Airtightness

Airtightness Rate: 0.60

E. Mean Shading Factor

South 180°: 0.94
North 0°: 0.7
East 90°: 0.7
West 270°: 0.7
Horizontal°: 1.00

F. HVAC

Heat Recovery Systems : 95.00 %
Subsoil Heat Exchanger : NO

G. CALCULATIONS

Specific Heat Demand

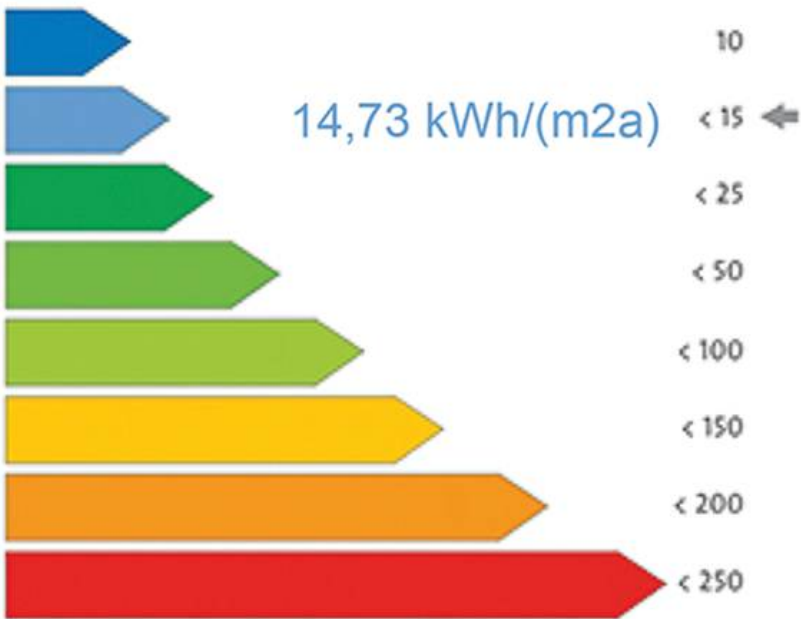
Transmission Heat Losses: 4291.68 kWh/a
Ventilation Heat Losses: 993.25 kWh/a
Total Heat Losses: 5284.93 kWh/a
Internal Heat Gains: 1670.05 kWh/a
Solar Heat Gains: 1474.84 kWh/a
Total Heat Gains: 3045.46 kWh/a
Annual Heat Demand: 2239.47 kWh/a

Specific Heat Demand: 14.73 kWh/(m2a)

Overheating

Exterior Thermal Transmittance: 38.28 W/K
Ground Thermal Transmittance: 3.20 W/K
Ventilation Transmission Ambient: 26.93 W/K
Ventilation Transmission Ground: 0.00 W/K
Solar Aperture: 9.57 m2
Frequency of Overheating: 0 %

Energy efficiency classes



THANK YOU FOR YOUR ATTENTION

