ECOWEEK 2010

GREEN HOUSE OF ZERO EMISSION

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Office: AREA™
Maximum lot coverage 70%

Proposed lot coverage 40%

The building's floor area is reduced in order to get more green space at the lot in the city center and reduce the urban heat island effect.

Typical 3 story building

3 family appartments organized split levels

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<tr>
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<th>M²/person living space</th>
<th>M²/person green</th>
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<tbody>
<tr>
<td>GREECE</td>
<td>30 - 35m²</td>
<td>2,5m²</td>
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<tr>
<td>EUROPE</td>
<td>&gt;20m²</td>
<td>7 - 10m²</td>
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<tr>
<td>PROPOSAL</td>
<td>25m²</td>
<td>12m²</td>
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<tr>
<td>PLOT AREA</td>
<td>313,84m²</td>
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- We create a natural fence of trees by placing them in a row in order not only to ensure the privacy for the habitants but also to help the natural irrigation towards the communal park.
- We adopt the car club strategy: one car is being used by the whole building. We manage to reduce the use of the car by limiting the parking spaces.
IDEAL TEMPERATURES FOR EACH USE

- **BATHROOM**: 22 °C
- **LIVING ROOM**: 20 °C
- **KITCHEN**: 18-20 °C
- **BEDROOM**: 16-18 °C
- **STAIRCASE**: 12 °C
- **HALLWAYS**: 12 °C
- **LAUNDRY ROOM**: 12 °C

**NEUTRAL PLAN AND SECTION**

PLACING SPACES ACCORDING TO IDEAL TEMPERATURE

**PROPOSED PLAN AND SECTION**

PLACING SPACES ACCORDING TO IDEAL TEMPERATURE, PHYSICAL LIGHTING AND CIRCULATION

**THE MATRYOSKA DOLLS STRATEGY**
POSSIBLE FUTURE EXPANSION OF THE FAMILY UNIT VERTICALLY
Materials and techniques used

- Heat pump for heating and cooling
- Solar thermal collectors (extra heat collected in summer is stored in rockbin under ground)
- Stairways space used for ventilation and cooling
- Materials:
  - Traditional brick wall with 15cm insulation
  - Double glazing windows shaded with overhangs, whose size is bound by the sun angles in winter and summer