# Case study building - Properties I

<table>
<thead>
<tr>
<th>Registration code</th>
<th>Country</th>
<th>Period of construction</th>
<th>Standard</th>
<th>Diffusion of building type</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Austria</td>
<td>1969-1970</td>
<td>social housing</td>
<td>?</td>
</tr>
</tbody>
</table>

Please note that the basic renovation unit (building or building part) that will be renovated should be described. The repetition of renovation units is acquired under “Building size”.

### Basic renovation unit
- Detached
- Attached
- Integrated
- Corner building

### Building shape
- Rectangular
- Square
- Structured
- Irregular

### Floor plan
- Floor plan layout
- Building structure
  - Frame construction
  - Panel construction
  - Partially massive constr.
  - Massive construction

### Apartment access
- Periferal staircase, double flight
- Periferal staircase, single flight
- Central staircase
- Access gallery, internal stair
- Access gallery, external stair(s)
- Elevator

### Roof
- Flat roof
- No attic / empty
- Low slope roof
- Attic space
- Gable roof
- Living space
- Hipped roof
- Roof terrace
- Dormers
- Canopy
- Wood construction

### Basement
- No basement
- Partial basement
- Full basement
- Basement partially underground
- Basement partially or fully heated
- Crawl space

### Roof construction
- Roofing material
# Case study building - Properties II

**Date:** 14.06.2007  
**Name:** Rene Hummer

### Building size

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of blocks</td>
<td>3</td>
</tr>
<tr>
<td>Number of staircases per block</td>
<td>1</td>
</tr>
<tr>
<td>Number of floors</td>
<td>4</td>
</tr>
<tr>
<td>Typical room height</td>
<td>2.6 m</td>
</tr>
<tr>
<td>Length/width L/W</td>
<td>29.0 m/12.0 m</td>
</tr>
<tr>
<td>Façade/volume ratio</td>
<td>0.4</td>
</tr>
</tbody>
</table>

### Apartment size

<table>
<thead>
<tr>
<th>Apartments</th>
<th>Number</th>
<th>Rooms</th>
<th>Bath</th>
<th>m²</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>24</td>
<td>3.0</td>
<td>1</td>
<td>71</td>
</tr>
<tr>
<td></td>
<td>24</td>
<td>3.0</td>
<td>1</td>
<td>64</td>
</tr>
<tr>
<td></td>
<td>0</td>
<td>0.0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

### Façades

- **Façade construction:** masonry
- **Façade finish:** plaster

### Windows

<table>
<thead>
<tr>
<th>Location</th>
<th>% of façade</th>
<th>U-value</th>
<th>Sun-shading</th>
</tr>
</thead>
<tbody>
<tr>
<td>South</td>
<td>10%</td>
<td>W/(m²K) 2.6</td>
<td>✓</td>
</tr>
<tr>
<td>West</td>
<td>30%</td>
<td>W/(m²K) 2.6</td>
<td>✓</td>
</tr>
<tr>
<td>North</td>
<td>10%</td>
<td>W/(m²K) 2.6</td>
<td>✓</td>
</tr>
<tr>
<td>East</td>
<td>30%</td>
<td>W/(m²K) 2.6</td>
<td>✓</td>
</tr>
</tbody>
</table>

### Floor slabs

- **Top floor slab:** wowden beam slab
- **Standard floor slabs:** hollow brick slab

### Balconies

- [ ] none  
- [ ] integrated  
- [ ] partially exposed  
- [ ] exposed  
- [ ] full length  
- [ ] supported  
- [ ] “hanging”  
- [ ] thermal bridge

### Heating

- [ ] Central heating, radiator heating
- [ ] Central heating, floor heating
- [ ] Central air heating
- [ ] Individual appartment heating
- [ ] Individual room heating (electric)
- [ ] Individual room heating (oil / gas / wood / coal)

### Ventilation

- [ ] None, natural ventilation only
- [ ] Exhaust air system, natural (stack ventilation)
- [ ] Exhaust air system, mechanical (bathrooms)
- [ ] Exhaust air system, mechanical (kitchen)
- [ ] Exhaust air, mechanical, bath and kitchen
- [ ] Mechanical ventilation (supply/exhaust air)

### Hot water

- [ ] Central hot water, single pipe system
- [ ] Central hot water, circulation pipe system
- [ ] Individual hot water tanks (electric)
- [ ] Individual boilers (electric)
- [ ] Individual boilers (gas)
- [ ] Central solar system
Case study building - Urban context

Address: Dieselweg 4, 6, 8; 8020 Graz

Rent: 

Orientation: No spec. orientation

Urban situation:
- Detached building in inhomogeneous neighbourhood
- Detached building in homogeneous neighbourhood
- Block development in homogeneous neighbourhood

View:
- Front: Flat, Good view, Green Garden view
- Back: Slope, Slope, Slope
- Top view only, No view

Neighbourhood:
- Public transportation: average
- Shops, services, centre: medium
- Play grounds, sport: average
- Schools: average

Environment:
- Quality of neighbourhood: acceptable
- Air pollution, emissions: acceptable
- Outdoor noise level: noisy
### General information on retrofit situation

- Head demand before retrofit HWB=184 kWh/m²a (calculated via PHPP)

### Façade options

- Compact insulation
- Ventilated insulation
- Blow in fibres
- Prefab module

### Roof options and additions

- Roof panels
- Attic space module
- Flat roof panels
- Attic space module
- With canopy
- Without canopy
- Dormers
- Access to attic / roof level
- Roof terrasse

### Living room extension
- possible

### Kitchen extension
- possible

### Bath room extension
- possible

### New, separate balconies
- possible

### New elevator (external)
- possible

### New elevator (internal)
- possible

### Additional Renovation measures

- Kitchen: no renovation
- Bathroom: no renovation
- Staircase(s): no renovation

### Actual state of building components

- Walls/ceilings: used up
- Floors: used up
- Windows: used up /untight
- Façade: used up
- Roof: used up

### Actual state of installations

- Piping system: used up
- Electrical system: old
- Ventilation: used up
- Kitchen: used
- Bathroom: used