# **AllClimate**

# EnerGuide Rating System Energy Modelling Required Documents

Architectural Drawings:	
Site plan	✓
Elevation	✓
Floor plan	✓
Section	✓
Assembly & connection details	
Ceilings	✓
Exterior walls	✓
Tall walls	✓
Headers / rim joists	✓
Exposed floors / cantilevers	✓
Foundation walls	✓
Foundation floor, walkout slab	✓
Window & door schedule	✓
Ventilation System: (make & model of each)	
Energy/heat Recovery Ventilator (ERV/HRV)	✓
Kitchen range hood	✓
Exhaust fans (bathrooms, utility)	✓

Heating/Cooling System: (make & model of each)	
Indoor unit: heat pump, furnace or boiler	✓
Outdoor unit: heat pump or air-conditioning	✓
Radiant floor system	
Secondary HWT connected to boiler or DHW tank?	✓
Indicate location/assembly being heated	✓
Fireplaces, stoves	✓
Domestic Hot Water System:	
Make & model	✓
Recirculation pump (if any)	✓
Solar Photovoltaic System:	
Quote from solar PV installer	✓

#### Site plan

Neighbouring buildings including their height and distance to the proposed building must be represented on the site plan if they shade the building. Show topography if possible.

Angle of deviation from North

Neighbouring vegetation or / and any other elements which shade the building, including height and type of vegetation (e.g. coniferous or deciduous) must also be shown

Graphic identification of the building envelope intended for certification





Scale: 1:200 Angle of deviation from North:

206°

Complete address:

Passive House str. 1 Passive City, 12345

Geographic coordinates: 44 °00'N, 25°30'E, Height above the sea level: +/-0.00=556.0m

#### Elevation

Show outdoor and exhaust air vents, grid types, distance from ground

Make sure to show clearly and to name any unheated adjacent rooms accordingly

Show the different type of surfaces (e.g. cladding, stucco etc.)

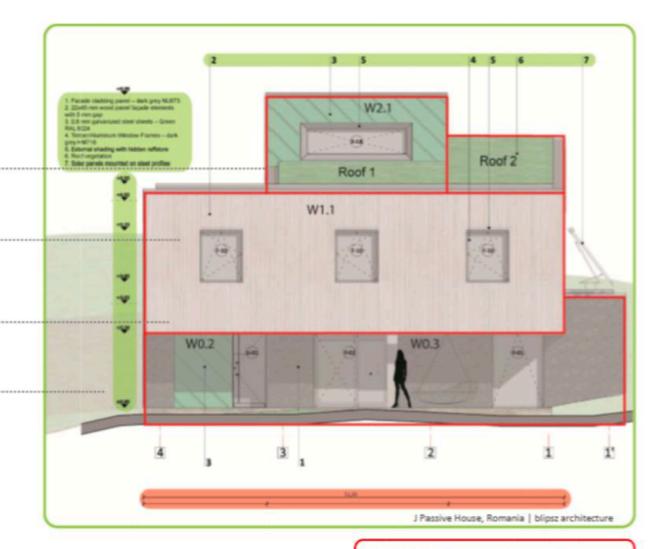
Make sure to name all surfaces and windows using the same naming convention on the drawings, on the window schedule and in the PHPP

Correct representation of walls, windows, and doors

Make sure to show clearly the wall surfaces in contact with the ground as well as the ground line for semi-buried walls

Dimensions

1:50 or 1:100



Graphic identification and external dimensions of the thermal envelope

### Floor plan

Cross section

Dimensions

Clear and accurate representation of walls, windows, and doors

Graphic identification and calculation of each assigned TFA together with the surface calculated, and code names and the percentage used in the calculation

Graphic identification of areas where the room height is below 1 m or 2 m to support TFA calculation

Any unconditioned (i.e. non-heated) adjacent spaces must be marked and named accordingly

1:50 or 1:100



Graphic identification and external dimensions of the thermal envelope

Graphic identification of the airtight layer

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88.6+

#### Section

Correct representation of walls, windows, doors, roofs, and floor

Description of each unique envelope assembly (including heterogeneous layers, e.g.: wood/insulation) with their features: manufacturer and product, thickness, thermal conductivity

Dimensions

1:50 or 1:100 Roof assembly 1 – Green roof 30 mm roof vegetation

40 mm extensive soil layer

Metal profile

Geotextile membrane

70mm 15-30 g gravel

Drainage layer

Mechanical protection layer

Synthetic waterproof membrane, re-

sistant to root penetration

200 mm thermal insulation EPS + slope

EPS

200 mm thermal insulation EPS

Diffusion and vapour barrier membrane

130 mm reinforced concrete slab

Gypsum board ceiling

Graphic identification and external dimensions of the thermal envelope

Graphic identification of the airtight layer

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## Assembly and connection details

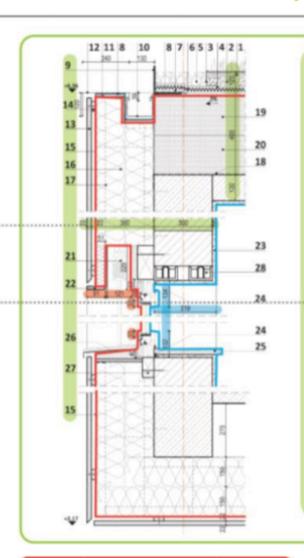
Detailed construction drawings should be prepared and submitted to the Certifier for all assemblies and connections of the building envelope. The thermal bridge details must be easily identifiable in the PHPP.

Thickness in mm of heterogeneous layers

Description of each component of the detail (incl. heterogeneous layers), product manufacturer and name, thickness [mm], thermal conductivity

> For masonry/concrete materials: a | resistance class b | reinforcement degree c | volume density

1:5 or 1:10 or 1:20



- 1, 30 mm roof vegetation
- 2. 40 mm extensive soil layer
- 3. Metal profile to separate the gravel from the soil
- 4. Geotextile membrane
- 5. 70 mm 15-30 gr gravel
- 6. Water retention and drainage layer
- 7. Mechanical protection layer
- 8. Synthetic waterproofing membrane, resistant to root penetration
- Perimetral plastic profile with side penetrations for drainage
- 10. 13x20 cm galvanized steel rectangular gutter
- 11.15 mm OSB board
- 12. Drip edge galvanized steel profile
- 22x40 mm wood panel façade elements with 5 mm gap
- 14. 22x40 mm wooden support elements for the façade: Black coating
- Ventilated façade membrane resistant to wind, UV and moisture
- 16. 2x150 mm thermal Insulation Basalt wool
- 17. Vertical facade carrier (2 wooden fireproof beams
- 30x50 mm connected by OSB boards)
- 18. Diffusion and vapor barrier membrane
- 19. 200 mm thermal Insulation EPS + Slope EPS
- 20, 200 mm thermal Insulation EPS
- 21. External shading with hidden raff store
- 22. OSB + galvanized steel profile
- 23. Interior plaster applied until the concrete slab level
- 24. Window perimeter plaster, applied on airtight tape
- 25. 30 mm wooden interior window sill
- 26. Aluminum exterior window sill
- 27. 60x100 mm window footing wooden beam
- 28. Prefabricated lintel

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Graphic identification and external dimensions of the thermal envelope

Graphic identification of the airtight layer

#### Window schedule

Make sure to use the same naming convention on the drawings and in the PHPP

Dimensions

Type of glazing and frame (U-values, lambda)

Area

Materials

Scale: 1:50 or 1:100

Name	Door 1	Window 1	Window 2	
Quantity	2	6	2	
	16 701 16 701 16 701 16 701 8 8	11 98 11	10 2.07 <sup>5</sup> 11 84 15 82 4 2.20 <sup>5</sup> 4	
Dimensions	1 x 2.255 m	1.2 x 1.55 m	2.06 x 2.285 m	
Area	2.255 m <sup>2</sup>	1.86 m²	4.707 m <sup>2</sup>	
	"PH Glazing"	"PH Glazing"	"PH Glazing"	
Glazing	$U_g = 0.60 \text{ W/m}^2$	$U_g = 0.56 \text{ W/m}^2$	U <sub>g</sub> = 0.56 W/m <sup>2</sup>	
	g-value= 0.55 g-value= 0.50		g-value= 0.50	
Frame	"PH Frame, SWISSPACER UI- timate"	"PH Frame, SWISSPACER UI- timate"	"PH Frame, SWISSPACER Ultimate"	
	$U_f = 0.59 \text{ W/m}^2$	$U_f = 0.59 \text{ W/m}^2$	$U_f = 0.59 \text{ W/m}^2$	
	PU on wood	PU on wood	PU on wood	
Facing frame	L 0.16m; r 0.08m; t 0.08m;	L 0.11m; r 0.11m; t 0.11m;	L 0.11m; m 0.12m; r 0.04m; t	
width	b 0.16m	b 0.11m	0.11m/0.04m; b 0.1m/0.04m	
Glazing edge thermal bridge	Ψ <sub>glazing edge</sub> = 0.049 W/mK	Ψ <sub>glazing edge</sub> = 0.029 W/mK	Ψ <sub>glazing edge</sub> » 0.029 W/mK	
Installation thermal bridge	Ψ <sub>installation x</sub> 0.02 W/mK	Ψ <sub>installation z</sub> 0.005 W/mK	Ψ <sub>installation a</sub> 0.005 W/mK	