

Passive Solar Assessments House Data Form

Customer Name	
Mailing Address	
Street/PO Box	
City / Town / Municipality	
Province / State / Territory	Country
Postal / ZIP Code	
e-mail for communication only	
Project Name / Title (optional)	
Site address if different from above	
Street	
City / Town / Municipality	
Province / State / Territory	Country
Postal / ZIP Code	
e-mail for communication only	
Nearest Town or City if rural	
This helps to find more accurate climate data if necessary.	

GENERAL DESCRIPTION			
			<u>Location</u> Approx Year Built _____
House	1 storey 2½ storey	Side Split	Rural _____
Townhouse	1½ storey 3 storey	Back Split	Subdivision _____
	2 storey	Finished Attic	City Lot _____
Is there an insulated room built in the Attic? _____			
Is there a Garage? _____		On which side of the house (N E S W)? _____	
How many Basement Levels _____			
OR			
Ground Floor or Foundation Slab			
Thickness _____		Insulation _____	
✓ <u>Exterior and Other Features</u>			
<u>Brick Veneer</u>	<u>Wood Siding</u>	<u>Sky Light</u>	<u>Finished Basement</u>
<u>Vinyl Siding</u>	<u>Board and Batten</u>	<u>Patio Door</u>	<u>No Basement</u>
<u>Aluminum Siding</u>	<u>Stucco</u>	<u>Sun Room</u>	<u>Crawl Space</u>
<u>Insulated Siding</u>			<u>Balcony</u>
Blower Door Test Results (if any in ACPH(50) or L/min) _____			

SPECIFIC DETAILS

Measurement units (ft, in, m) _____
Ceiling height (8ft or 9 ft) _____
Length and Width of the home: _____ Long by _____ Wide

Window Details (eg: double glazed, Argon filled, Low-e, vinyl frame)

<u>Glazing</u>	<u>Frame</u>	<u>Other details (if known)</u>
<input type="checkbox"/> single	<input type="checkbox"/> vinyl	<input type="checkbox"/> Low emissivity
<input type="checkbox"/> double	<input type="checkbox"/> wood	<input type="checkbox"/> Argon filled
<input type="checkbox"/> tripple	<input type="checkbox"/> metal	Other _____

Manufacturer and ratings if available

Note: Any window specific detail like shutters or awning can be reported on the Wall/Window Form along with dimensions and positions.

BUILDING ORIENTATION - Choose one of the 2 methods

- 1/ Magnetic Compass (we will apply the magnetic declination correction)
(make sure you are far away from power lines, transformers etc.)

With your back to the South wall, you are looking in the same direction as the surface of the wall. This direction is: _____

OR

Looking along an East or West wall towards the South so that the near and far corners line up, it is aligned in this compass direction: _____

- 2/ Timing / Shadow Method

!! DO NOT LOOK DIRECTLY AT THE SUN !!
!! Look at SHADOWS only!!

- a/ Stand on the North side of the building in alignment with the West (or East) wall. Record the time at which the wall's shadow is aligned with the wall. This will be difficult because the Sun has "width" on the sky (ie: it is not a point source). To handle this record the times when the shadow first and last looks like it is aligned. Average these times and record it.
- b/ Alternatively, drive a stake into the ground beside the E or W wall, and record when its shadow is parallel to the wall. Make sure the stake is plumb to the wall.

Also, record your Time Zone and if Standard or Daylight Savings were in effect.

	Date	Time	AM/PM	Zone
Shadow was in alignment at:	_____	_____	_____	_____

CLIMATE and SOLAR DATA

This will be retrieved from available weather records based on the site address above.
In addition, Sun Path and Insolation data will be retrieved from databases and research in the public domain.

BUILDING DETAILS

Number of floors _____

Wall thickness (measured at a doorway) _____ Insulation "R" value _____

Typical wall construction - if known

(eg: drywall, vapour barrier, 2x6 studs with fiberglass insulation, 1/4" exterior sheathing, airspace, brick veneer)

Note: Variations in exterior wall finish can be shown on the Windows and Wall Form for each wall.

Roof / Ceiling Insulation (eg: 9 1/2" fiberglass between the joists) _____

Roof Pitch Angle if there is a Sky Light _____ Overhang _____

Number of Basement Levels

1

2

3

Foundation Depth

*Note: Variations in exterior wall finish
and floor finish can be shown on the
Window & Walls and the Floor Plans forms.*

BUILDING DETAILS - continued

Basement Walls Detail (eg. 12" concrete block, building paper, 2x2" framing, fiberglass filled, vapour barrier and drywall)

Basement Floors Detail (eg: 4" conc. slab, 2x2" subfloor with fiberglass insulation, vapour barrier 1/2" plywood, rubber underpad, low pile carpet. More detail can be placed on the floor plan.)

Primary Heating Method (eg. High eff forced air nat gas, oil, wood stove, electric baseboard, etc)

Heating and Cooling

During heating season what is your most comfortable thermostat setting? _____ °F / °C

Setback thermostat setting if used _____ °F / °C

During cooling season what is your most comfortable thermostat setting? _____ °F / °C

Setback thermostat setting if used _____ °F / °C

Is Air Conditioning used? _____

Electricity Grid Name & Operator (if known) _____

MAJOR OBSTACLES - which may block sunshine

OTHER DETAILS

Basic model includes assessment for: Added Insulation for Walls (inside and out), Attic, Basement Floors and Walls, Infiltration effects if necessary, Thermostat setting effects, Upgrade for Windows, Effect of Window Treatments, Addition of Awnings or Shutters, Adjusting Roof Overhang, Addition of Trees (if possible).

If you have complex renovation plans like adding an extra floor, adding or removing windows, adding a Sunroom, a Deck or Patio with Trellises vines for shade, etc., please provide drawings with dimensions so they can be evaluated in the model.

INSTRUCTIONS / GENERAL INFORMATION

- | | | |
|-----|-----------------------------|---|
| 1/ | Nearest Town or City | -this helps to find more accurate climate data if necessary. |
| 2/ | Garage | -this can provide a wind break or buffer zone. |
| 3/ | Exterior and Other Features | -check all that apply. If some exterior walls have stucco and others have wood siding, please note it on the Windows and Walls Form so the R values can be adjusted. |
| 4/ | Window Details | -check all that apply for best precision. |
| | Building Orientation | -the Sun's disc is about 0.5° on the sky and takes about 2 minutes to pass. So, this method is fairly accurate. |
| 5/ | Wall "R" value | -if not known, we'll estimate it from the Wall Thickness and the construction you provide. |
| 6/ | Typical wall construction | -if not known, it will be estimated from your other descriptions. |
| 7/ | Roof Pitch | -needed if there are Sky Lights. Typical is 3" or 4" per foot. |
| | Roof Overhang | -report the overhang including the eaves trough. |
| 8/ | Basement Levels | -usually Back-Split and Side-Split styles have multiple levels. |
| 9/ | Basement Walls and Floors | -this is usually where the most variation in "R" is found.
Please diagram these on the Windows and Wall Form. |
| 10/ | Electricity Grid Operator | -this can be helpful in obtaining GHG ratings. |
| 11/ | Blower Door Test Results | -these improve the model's precision but are usually not known.
-if there are no results to use, the model will assume a proper seal and that Infiltration is not a concern. |