Radiant temperature:

The mean radiant temperature of a given surface is the temperature of the equivalent black enclosure with which it would exchange the same radiative flux exchange with all the other surfaces.

Operative temperature

It's the virtual ambient Temperature with which the sum of the radiative thermal and convictive linearized is exchanged which exchanges with the air and all the other surface.

Solar radiative density:

The solar constant G_{sc} is a flux density measuring mean solar electromagnetic radiation per unit area. the solar constant is not a physical constant, is an average of a varying value. And the value is 1367 W/M^2

Solar radiation characteristic

Solar radiation is attenuate both in the spectral distribution and the total radiation. This is due to the dispersion and absorption phenomenon.

Atmospheric absorption:

The absorption of the solar radiation is due to the atmospheric component is particular ozone, water and carbon dioxide, which absorb the incident radiation in absorption bands, consequently modifying its

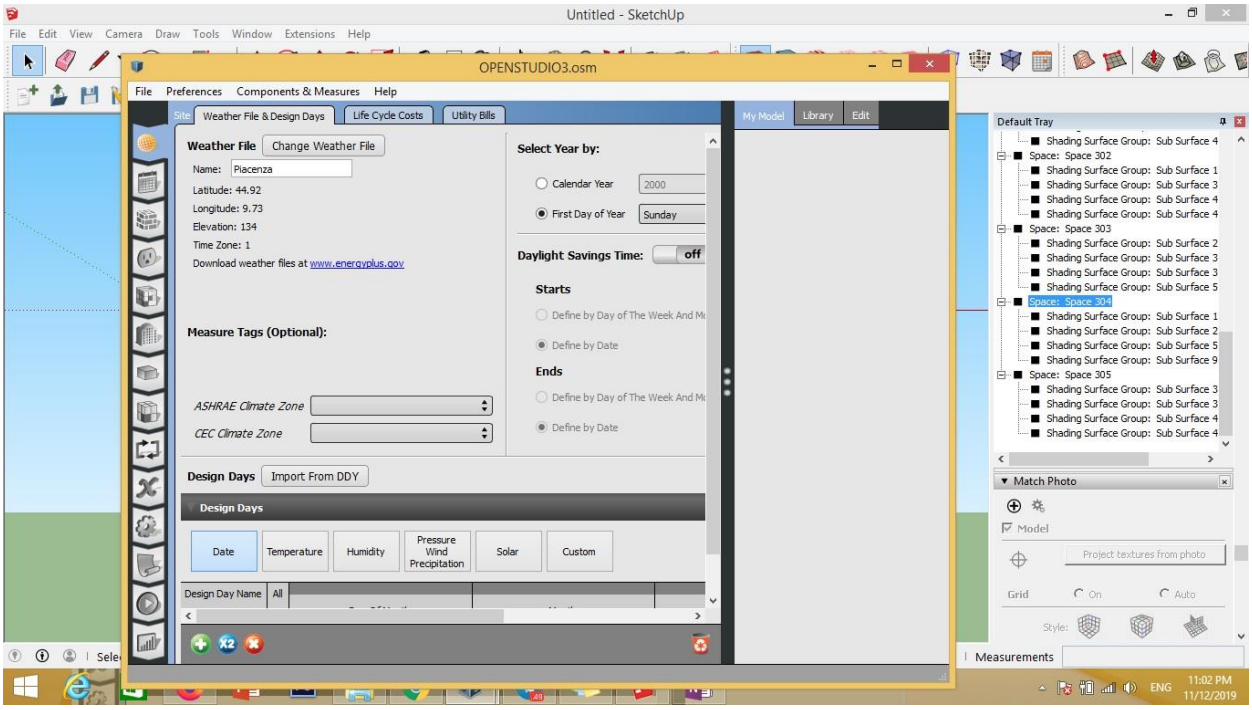
energy spectrum. the stratospheric ozone absorbs almost all the ultraviolet component of solar radiation.

Solar energy:

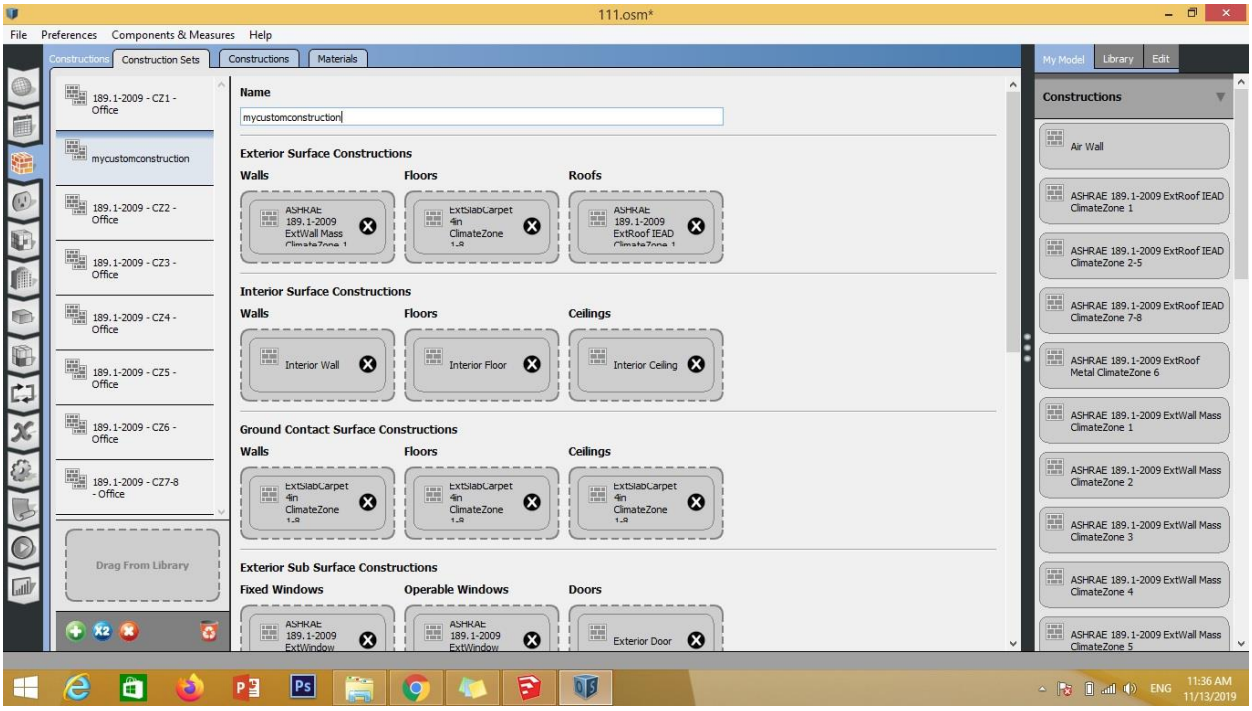
The solar radiation depends on: 1- the sun position 2- the water condition 3- the site altitude over the sea level 4- sunshine hour

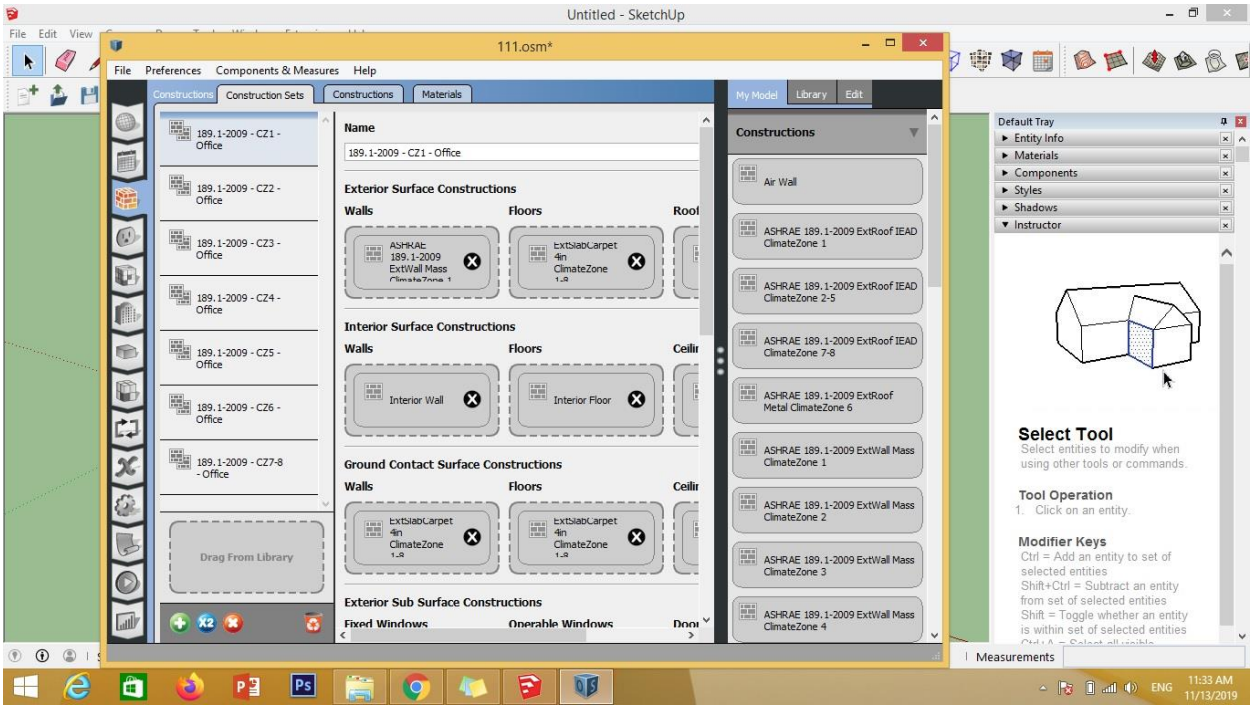
Project:

after we add the Piacenza weather we should go to “construction ‘command

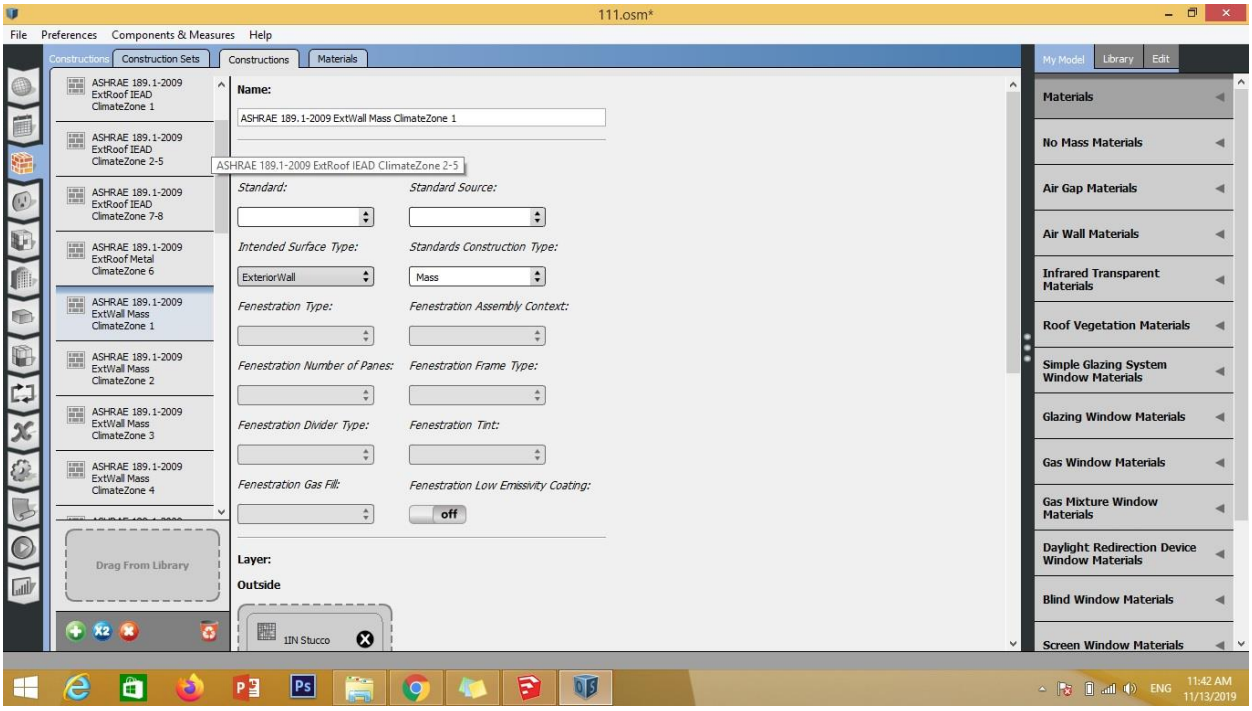


We double it and rename it





Starts customizing the wall package in the construction set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File
Preferences
Components & Measures
Help
Constructions
Construction Sets
Constructions
Materials
My Model
Library
Edit
ASHRAE 189.1-2009 ExtRoof IEAD ClimateZone 1
ASHRAE 189.1-2009 ExtRoof IEAD ClimateZone 2-5
ASHRAE 189.1-2009 ExtRoof IEAD ClimateZone 7-8
ASHRAE 189.1-2009 ExtRoof Metal ClimateZone 6
ASHRAE 189.1-2009 ExtWall Mass ClimateZone 1
ASHRAE 189.1-2009 ExtWall Mass ClimateZone 2
ASHRAE 189.1-2009 ExtWall Mass ClimateZone 3
ASHRAE 189.1-2009 ExtWall Mass ClimateZone 4
Drag From Library
Name:
ASHRAE 189.1-2009 ExtWall Mass ClimateZone 1
ASHRAE 189.1-2009 ExtRoof IEAD ClimateZone 2-5
Standard:
Standard Source:
Intended Surface Type:
ExteriorWall
Standards Construction Type:
Mass
Fenestration Type:
Fenestration Assembly Context:
Fenestration Number of Panes:
Fenestration Frame Type:
Fenestration Divider Type:
Fenestration Tint:
Fenestration Gas Fill:
Fenestration Low Emissivity Coating:
off
Layer:
Outside
IIN Stucco
Materials
No Mass Materials
Air Gap Materials
Air Wall Materials
Infrared Transparent Materials
Roof Vegetation Materials
Simple Glazing System Window Materials
Glazing Window Materials
Gas Window Materials
Gas Mixture Window Materials
Daylight Redirection Device Window Materials
Blind Window Materials
Screen Window Materials
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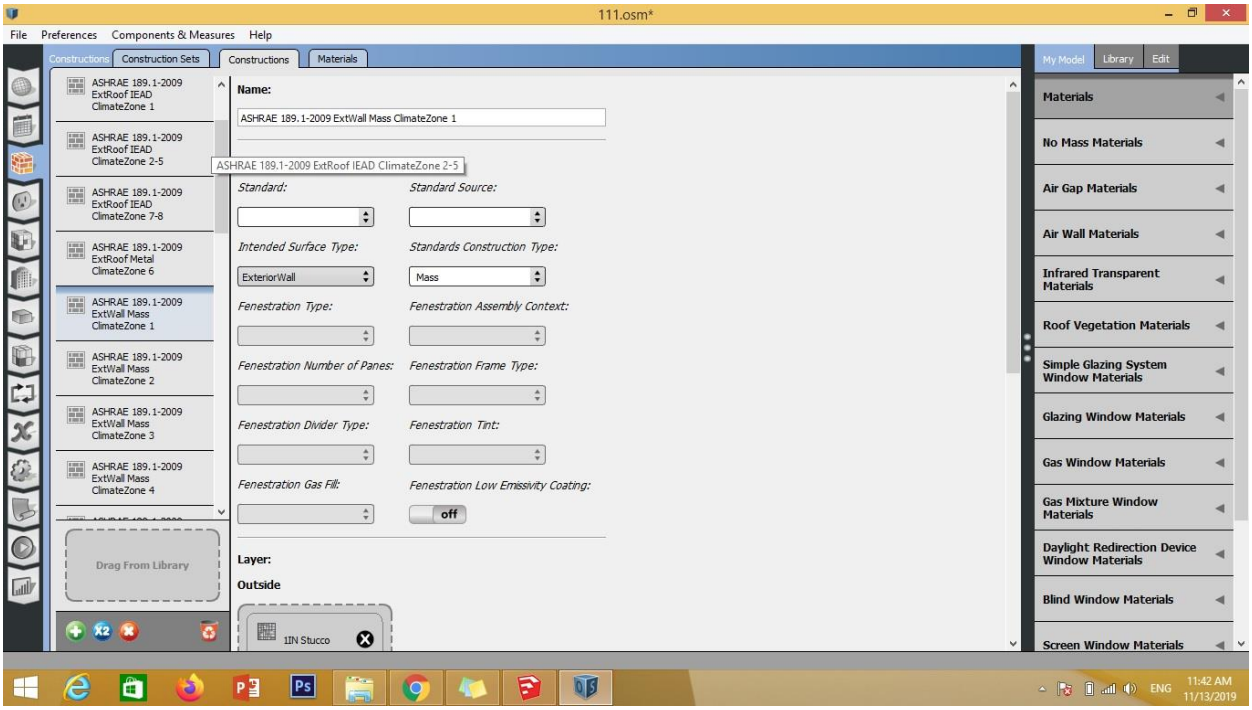
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Components & Measures
Help
Constructions
Construction Sets
Constructions
Materials
My Model
Library
Edit
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ASHRAE 189.1-2009 ExtRoof IEAD ClimateZone 7-8
ASHRAE 189.1-2009 ExtRoof Metal ClimateZone 6
ASHRAE 189.1-2009 ExtWall Mass ClimateZone 1
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ASHRAE 189.1-2009 ExtWall Mass ClimateZone 4
Drag From Library
Name:
ASHRAE 189.1-2009 ExtWall Mass ClimateZone 1
ASHRAE 189.1-2009 ExtRoof IEAD ClimateZone 2-5
Standard:
Standard Source:
Intended Surface Type:
ExteriorWall
Standards Construction Type:
Mass
Fenestration Type:
Fenestration Assembly Context:
Fenestration Number of Panes:
Fenestration Frame Type:
Fenestration Divider Type:
Fenestration Tint:
Fenestration Gas Fill:
Fenestration Low Emissivity Coating:
off
Layer:
Outside
IIN Stucco
Materials
No Mass Materials
Air Gap Materials
Air Wall Materials
Infrared Transparent Materials
Roof Vegetation Materials
Simple Glazing System Window Materials
Glazing Window Materials
Gas Window Materials
Gas Mixture Window Materials
Daylight Redirection Device Window Materials
Blind Window Materials
Screen Window Materials
ENG
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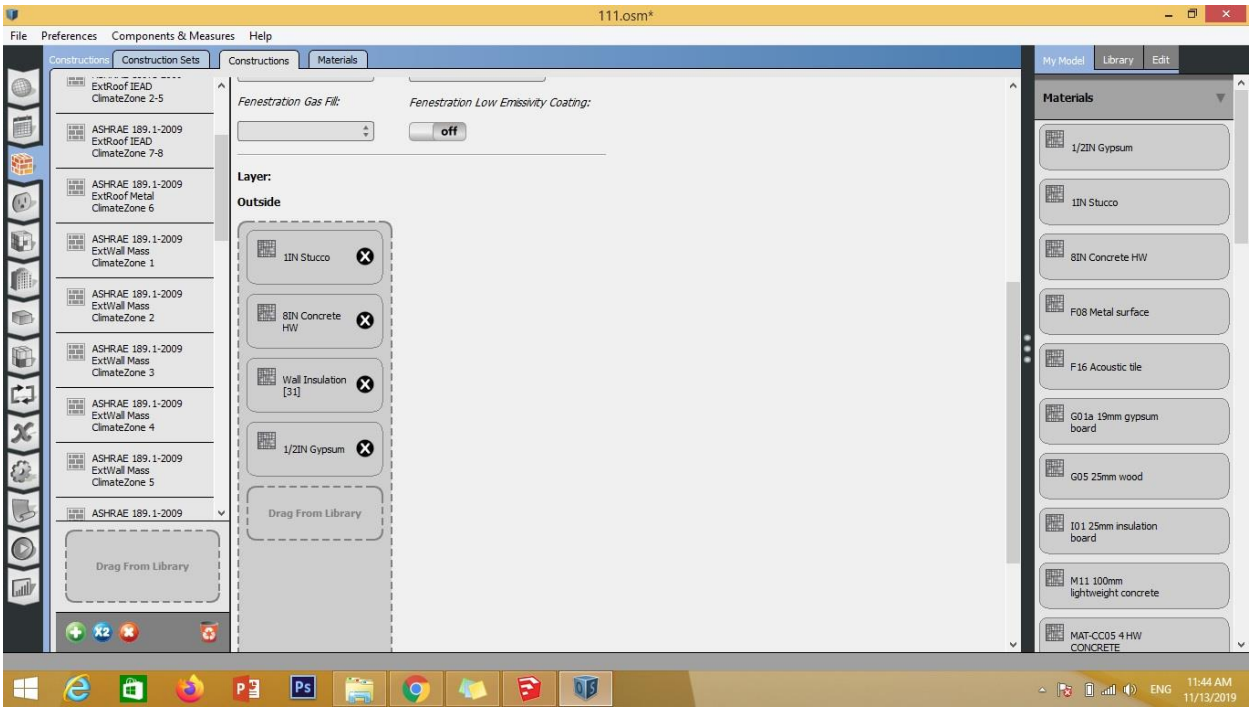
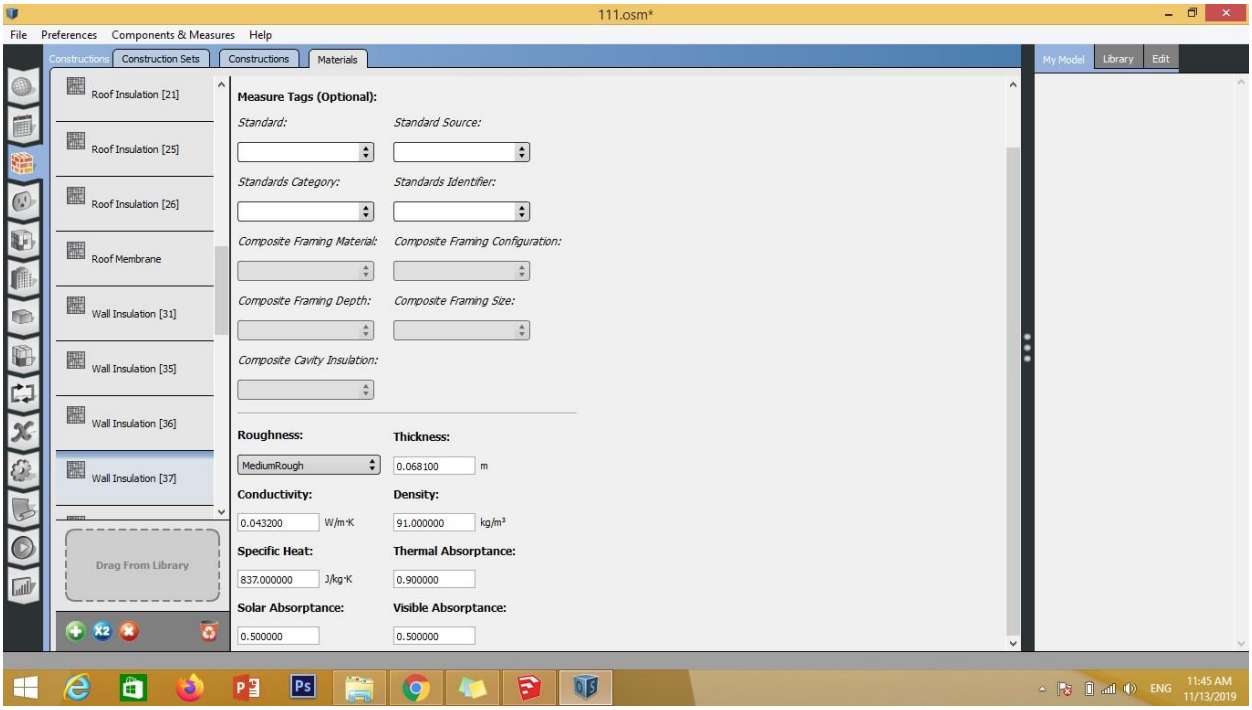


Go to space window and insert the project layer with our modifica\tion applying to the whole building.



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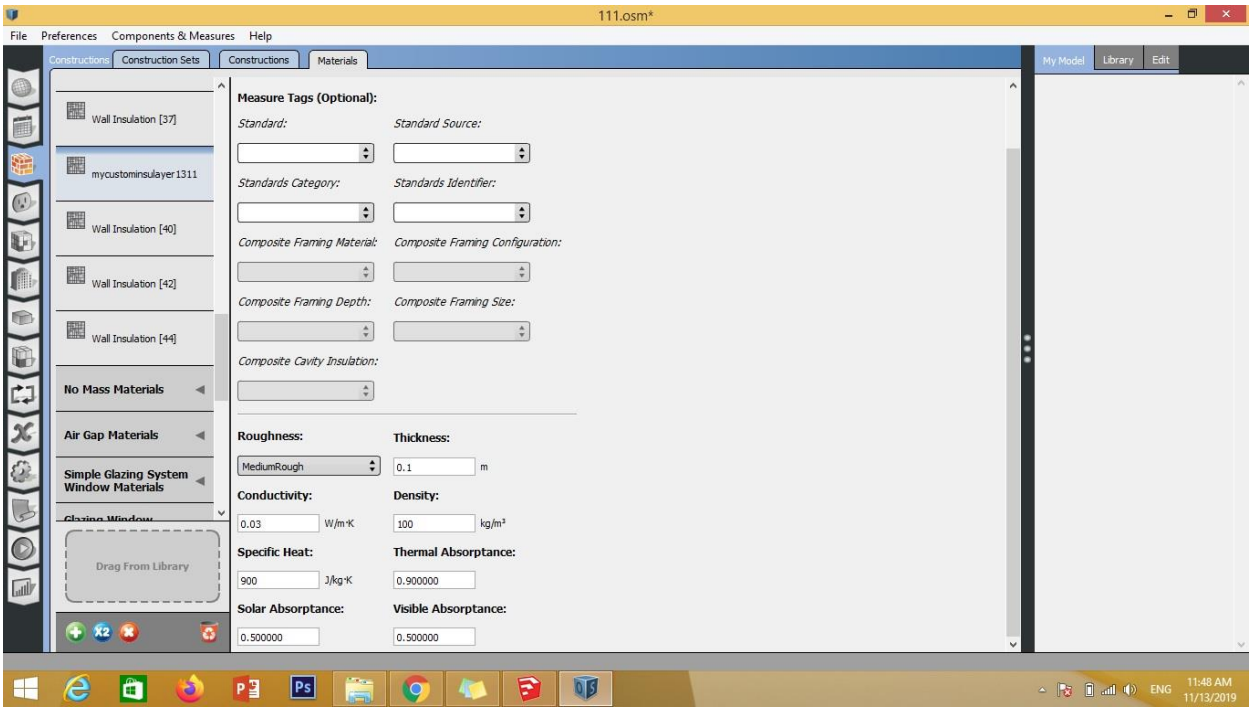
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File
Preferences
Components & Measures
Help
Constructions
Construction Sets
Constructions
Materials
My Model
Library
Edit
Wall Insulation [37]
mycustominsulayer1311
Wall Insulation [40]
Wall Insulation [42]
Wall Insulation [44]
No Mass Materials
Air Gap Materials
Simple Glazing System Window Materials
Drag From Library
Measure Tags (Optional):
Standard:
Standard Source:
Standards Category:
Standards Identifier:
Composite Framing Material:
Composite Framing Configuration:
Composite Framing Depth:
Composite Framing Size:
Composite Cavity Insulation:
Roughness:
MediumRough
Thickness:
0.1
m
Conductivity:
0.03
W/m·K
Density:
100
kg/m³
Specific Heat:
900
J/kg·K
Thermal Absorptance:
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Solar Absorptance:
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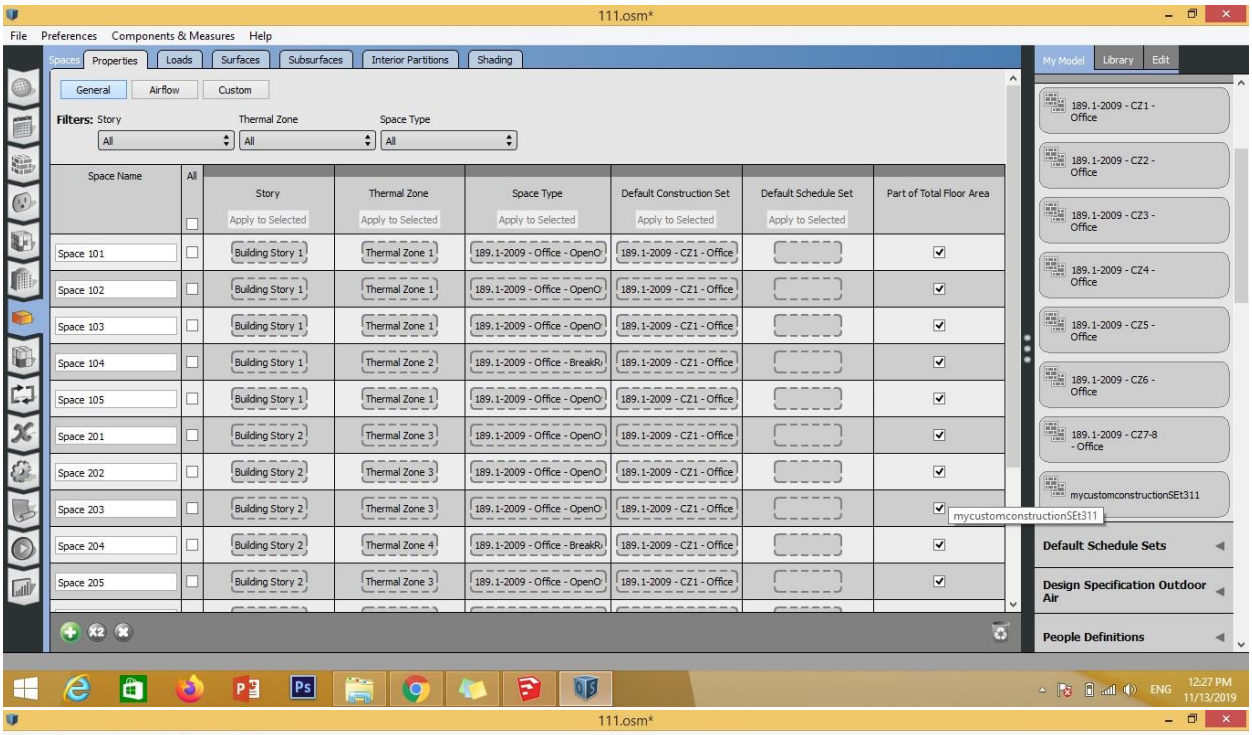
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Spaces: Properties Loads Surfaces Subsurfaces Interior Partitions Shading
General Airflow Custom
Filters: Story Thermal Zone Space Type
All All All
Space Name All
Story Thermal Zone Space Type Default Construction Set Default Schedule Set Part of Total Floor Area
Apply to Selected
Space 101 Building Story 1 Thermal Zone 1 189.1-2009 - Office - OpenO 189.1-2009 - CZ1 - Office
Space 102 Building Story 1 Thermal Zone 1 189.1-2009 - Office - OpenO 189.1-2009 - CZ1 - Office
Space 103 Building Story 1 Thermal Zone 1 189.1-2009 - Office - OpenO 189.1-2009 - CZ1 - Office
Space 104 Building Story 1 Thermal Zone 2 189.1-2009 - Office - BreakR 189.1-2009 - CZ1 - Office
Space 105 Building Story 1 Thermal Zone 1 189.1-2009 - Office - OpenO 189.1-2009 - CZ1 - Office
Space 201 Building Story 2 Thermal Zone 3 189.1-2009 - Office - OpenO 189.1-2009 - CZ1 - Office
Space 202 Building Story 2 Thermal Zone 3 189.1-2009 - Office - OpenO 189.1-2009 - CZ1 - Office
Space 203 Building Story 2 Thermal Zone 3 189.1-2009 - Office - OpenO 189.1-2009 - CZ1 - Office
Space 204 Building Story 2 Thermal Zone 4 189.1-2009 - Office - BreakR 189.1-2009 - CZ1 - Office
Space 205 Building Story 2 Thermal Zone 3 189.1-2009 - Office - OpenO 189.1-2009 - CZ1 - Office
My Model Library Edit
189.1-2009 - CZ1 - Office
189.1-2009 - CZ2 - Office
189.1-2009 - CZ3 - Office
189.1-2009 - CZ4 - Office
189.1-2009 - CZ5 - Office
189.1-2009 - CZ6 - Office
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mycustomconstructionSEt311
Default Schedule Sets
Design Specification Outdoor Air
People Definitions
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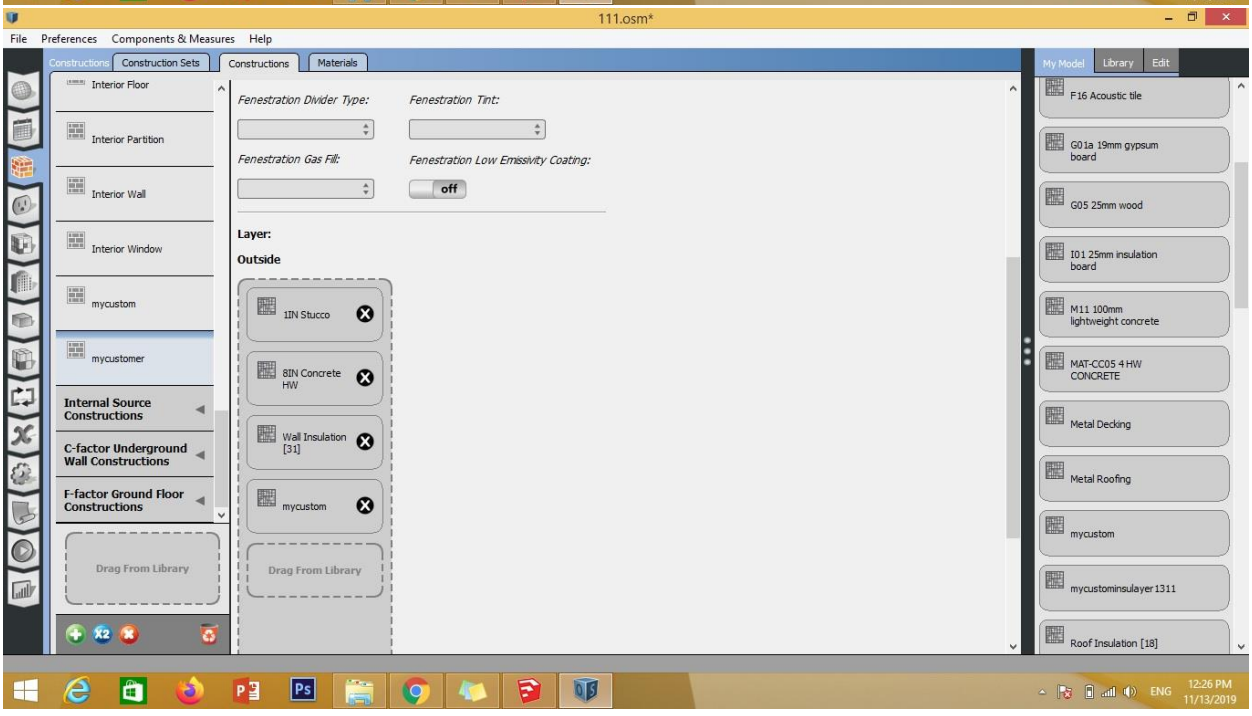
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File Preferences Components & Measures Help
Constructions: Construction Sets Constructions Materials
Interior Floor
Interior Partition
Interior Wall
Interior Window
mycustom
mycustomer
Internal Source Constructions
C-factor Underground Wall Constructions
F-factor Ground Floor Constructions
Drag From Library
Fenestration Divider Type:
Fenestration Tint:
Fenestration Gas Fill:
Fenestration Low Emissivity Coating:
off
Layer:
Outside
1IN Stucco
8IN Concrete HW
Wall Insulation [31]
mycustom
Drag From Library
My Model Library Edit
F16 Acoustic tile
G01a 19mm gypsum board
G05 25mm wood
I01 25mm insulation board
M11 100mm lightweight concrete
MAT-CC05 4 HW CONCRETE
Metal Decking
Metal Roofing
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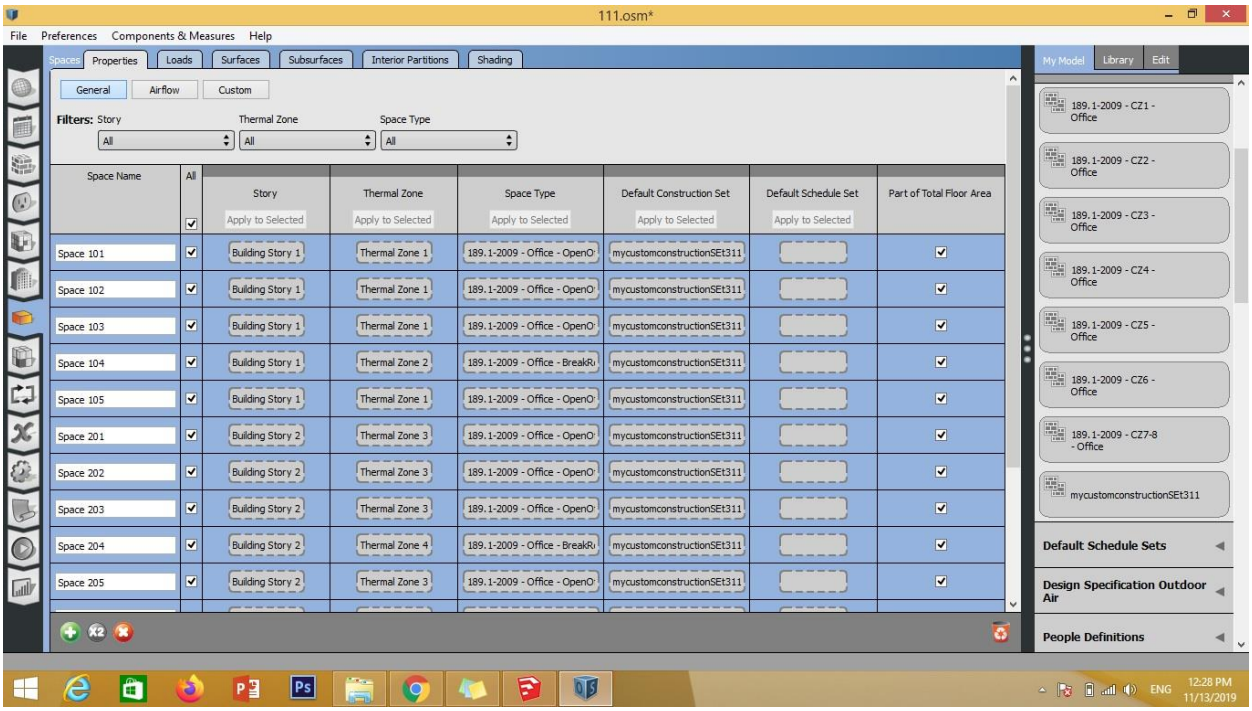

We can change the people in different time