Assemblies/window types

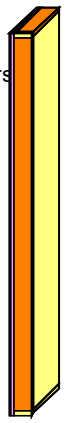
Assembly (Id.1): 2x6 @ 16" o.c., Cavity Batt, Zip-R6

Inhomogenous layers

Thermal resistance: 26.653 / 29.27 hr ft² °F/Btu (EN ISO 6946 / homogenous layers

Heat transfer coefficient (U-value): 0.036 Btu/hr ft² °F

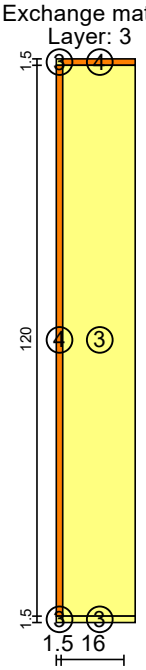
Thickness: 6.975 in



Nr.	Material/Layer (from outside to inside)	ρ [lb/ft³]	c [Btu/lb°F]	λ [Btu/hr ft °F]	Thickness [in]	Color
1	Oriented Strand Board high	45.26	0.45	0.0664	0.475	
2	Polyisocyanurate Board	2.03	0.35	0.0139	1	
3	Fibre Glass	1.87	0.2	0.0202	5.5	
Exchange materials						
4	Softwood	24.97	0.33	0.052	---	

Exchange material(s), Assembly (Id.1): 2x6 @ 16" o.c., Cavity Batt, Zip-R6

Layer: 3



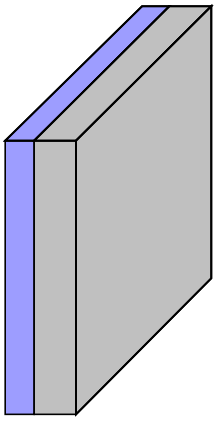
Assembly (Id.2): Concrete Slab - 4" XPS under 6" CIP Concrete

Homogenous layers

Thermal resistance: 16.534 hr ft² °F/Btu (without Rsi, Rse)

Heat transfer coefficient (U-value): 0.057 Btu/hr ft² °F

Thickness: 10 in



Nr.	Material/Layer (from outside to inside)	ρ [lb/ft³]	c [Btu/lb°F]	λ [Btu/hr ft °F]	Thickness [in]	Color
1	Expanded Polystyrene Insulation	0.92	0.35	0.0208	4	
2	Concrete w/c 0,4	144.96	0.2	0.9822	6	

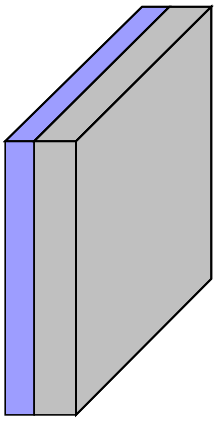
Assembly (Id.3): Concrete Slab - 4" XPS under 6" CIP Concrete

Homogenous layers

Thermal resistance: 16.534 hr ft² °F/Btu (without Rsi, Rse)

Heat transfer coefficient (U-value): 0.058 Btu/hr ft² °F

Thickness: 10 in



Nr.	Material/Layer (from outside to inside)	ρ [lb/ft³]	c [Btu/lb°F]	λ [Btu/hr ft °F]	Thickness [in]	Color
1	Expanded Polystyrene Insulation	0.92	0.35	0.0208	4	
2	Concrete w/c 0,4	144.96	0.2	0.9822	6	

Window type (Id 1): Kawneer 1620 UT

Basic data

Uw -mounted [Btu/hr ft² °F]	0.18
Frame factor	0.8378
Glass U-value [Btu/hr ft² °F]	0.11
SHGC/Solar energy transmittance (perpendicular)	0.326

Frame data

Setting	Left	Right	Top	Bottom
Frame width [in]	2.25	2.25	2.25	2.2
Frame U-value [Btu/hr ft² °F]	0.15	0.15	0.15	0.15
Glazing-to-frame psi-value [Btu/hr ft °F]	0.027	0.027	0.0272	0.0272
Frame-to-Wall psi-value [Btu/hr ft °F]	0.02	0.02	0.02	0.02

Solar radiation angle dependent data

Angle [°]	Total solar trans.
90	0.5

Window type (Id 6): Intus Supera CW Casement (High SHGC)

Basic data

Uw -mounted [Btu/hr ft² °F]	0.1749
Frame factor	0.684
Glass U-value [Btu/hr ft² °F]	0.1
SHGC/Solar energy transmittance (perpendicular)	0.39

Frame data

Setting	Left	Right	Top	Bottom
Frame width [in]	4.57	4.57	4.57	4.57
Frame U-value [Btu/hr ft² °F]	0.23	0.23	0.23	0.23
Glazing-to-frame psi-value [Btu/hr ft °F]	0.0101	0.0101	0.0098	0.0098
Frame-to-Wall psi-value [Btu/hr ft °F]	0.029	0.029	0.029	0.029

Solar radiation angle dependent data

Angle [°]	Total solar trans.
90	0.5

Window type (Id 3): Intus Supera Balcony Door

Basic data

Uw -mounted [Btu/hr ft² °F]	0.2282
Frame factor	0.7692
Glass U-value [Btu/hr ft² °F]	0.2
SHGC/Solar energy transmittance (perpendicular)	0.33

Frame data

Setting	Left	Right	Top	Bottom
Frame width [in]	3.25	3.25	3.25	3.25
Frame U-value [Btu/hr ft² °F]	0.15	0.15	0.15	0.15
Glazing-to-frame psi-value [Btu/hr ft °F]	0.027	0.027	0.0272	0.0272
Frame-to-Wall psi-value [Btu/hr ft °F]	0.02	0.02	0.02	0.02

Solar radiation angle dependent data

Angle [°]	Total solar trans.
90	0.5

Window type (Id 4): Kawneer 500T Insulpour Entry Door

Basic data

Uw -mounted [Btu/hr ft² °F]	0.1623
Frame factor	0.6369
Glass U-value [Btu/hr ft² °F]	0.11
SHGC/Solar energy transmittance (perpendicular)	0.326

Frame data

Setting	Left	Right	Top	Bottom
Frame width [in]	5	5	5	6.5
Frame U-value [Btu/hr ft² °F]	0.15	0.15	0.15	0.15
Glazing-to-frame psi-value [Btu/hr ft °F]	0.027	0.027	0.0272	0.0272
Frame-to-Wall psi-value [Btu/hr ft °F]	0.02	0.02	0.02	0.02

Solar radiation angle dependent data

Angle [°]	Total solar trans.
90	0.5

Window type (Id 5): Kawneer 1620 UT

Basic data

Uw -mounted [Btu/hr ft² °F]	0.18
Frame factor	0.8378
Glass U-value [Btu/hr ft² °F]	0.11
SHGC/Solar energy transmittance (perpendicular)	0.326

Frame data

Setting	Left	Right	Top	Bottom
Frame width [in]	2.25	2.25	2.25	2.2
Frame U-value [Btu/hr ft² °F]	0.15	0.15	0.15	0.15
Glazing-to-frame psi-value [Btu/hr ft °F]	0.027	0.027	0.0272	0.0272
Frame-to-Wall psi-value [Btu/hr ft °F]	0.02	0.02	0.02	0.02

Solar radiation angle dependent data

Angle [°]	Total solar trans.
90	0.5

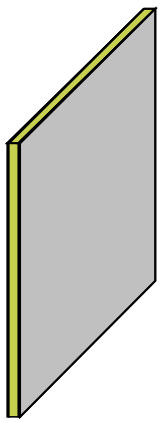
Assembly (Id.4): Insulated Metal Door

Homogenous layers

Thermal resistance: 5.847 hr ft² °F/Btu (without Rsi, Rse)

Heat transfer coefficient (U-value): 0.147 Btu/hr ft² °F

Thickness: 1.75 in



Nr.	Material/Layer (from outside to inside)	ρ [lb/ft³]	c [Btu/lb°F]	λ [Btu/hr ft °F]	Thickness [in]	Color
1	Aluminium	168.56	0.21	115.5582	0.125	
2	Sprayed Polyurethane Foam; open cell	0.47	0.35	0.0214	1.5	
3	Aluminium	168.56	0.21	115.5582	0.125	

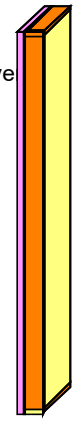
Assembly (Id.5): 2x6 @ 16" o.c., Cavity Batt, Zip-R9

Inhomogenous layers

Thermal resistance: 32.607 / 35.377 hr ft² °F/Btu (EN ISO 6946 / homogenous laye

Heat transfer coefficient (U-value): 0.03 Btu/hr ft² °F

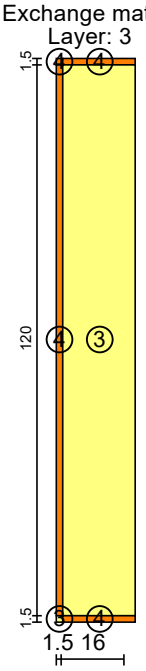
Thickness: 8.125 in



Nr.	Material/Layer (from outside to inside)	ρ [lb/ft³]	c [Btu/lb°F]	λ [Btu/hr ft °F]	Thickness [in]	Color
1	Polyisocyanurate Board	2.03	0.35	0.0139	2	
2	Oriented Strand Board (density: 630 kg/m³)	39.33	0.33	0.0751	0.625	
3	Fibre Glass	1.87	0.2	0.0202	5.5	
Exchange materials						
4	Softwood	24.97	0.33	0.052	---	

Exchange material(s), Assembly (Id.5): 2x6 @ 16" o.c., Cavity Batt, Zip-R9

Layer: 3



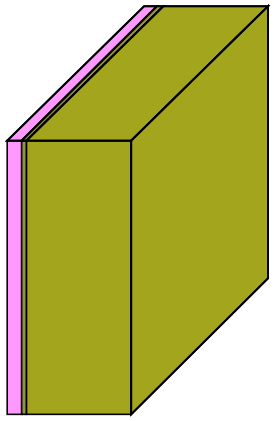
Assembly (Id.6): Roof Flat- 2" PIC (ave), Plywood, R-60 MW

Homogenous layers

Thermal resistance: 73.402 hr ft² °F/Btu (without Rsi, Rse)

Heat transfer coefficient (U-value): 0.013 Btu/hr ft² °F

Thickness: 17.75 in



Nr.	Material/Layer (from outside to inside)	ρ [lb/ft³]	c [Btu/lb°F]	λ [Btu/hr ft °F]	Thickness [in]	Color
1	Polyisocyanurate Board	2.03	0.35	0.0139	2	
2	Plywood (USA)	29.34	0.45	0.0485	0.75	
3	Roxul ComfortBatt	2.25	0.2	0.0208	15	