



TGS v3 Thermal Bridging Submission Package

2636 Eglinton Avenue West

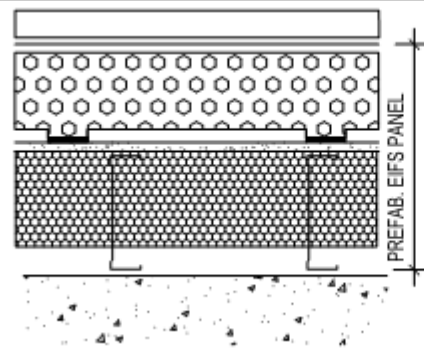
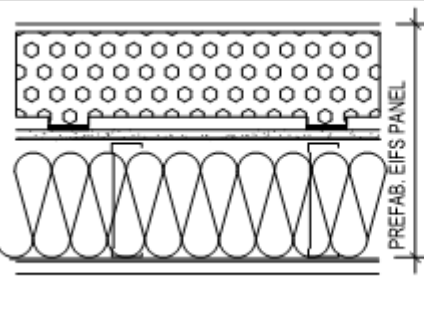
Fora Developments

October 31, 2022

Emily Law | elaw@eqbuilding.com

Clear Field Opaque Wall Assemblies

Wall Assemblies

1	<p>EX5a</p> <p>GR & 2ND FL</p> <p>EIFS PANEL W STONE/ BRICK FACE ON POURED CONCRETE</p>	 <p>PREFAB. EIFS PANEL</p>	<p>40mm FACE BRICK OR STONE STONE/ BRICK ADHESIVE STUCCO REINFORCEMENT MESH & BASE COAT (MESH FULLY BACK WRAPPED AT U/S OF INSULATION.) 100mm TYPE 1 RSI 2.71 (R15.4) E.P.S. INSULATION DRAINAGE CAVITY (GROOVED INSULATION OR DRAINAGE MAT) TROWELLED ON AIR/MOISTURE BARRIER ON 15.9mm DENS-GLASS SHEATHING ON 152mm ENGINEERED METAL STEEL STUDS WITH 75mm RSI. 3.0 CLOSED CELL 2LB SPRAY INSULATION IN STUD CAVITY ON POURED CONC COLUMN AND/OR SHEAR WALL</p>
EX-5a			
2	<p>EX4</p> <p>PREFABRICATED EIFS PANELS</p>	 <p>PREFAB. EIFS PANEL</p>	<p>STUCCO FINISH ON REINFORCEMENT MESH & BASE COAT (MESH FULLY BACK WRAPPED AT U/S OF INSULATION.) 100mm TYPE 1 RSI 2.71 (R15.4) E.P.S. INSULATION DRAINAGE CAVITY (GROOVED INSULATION OR DRAINAGE MAT) TROWELLED ON AIR/MOISTURE BARRIER ON 15.9mm DENS-GLASS SHEATHING ON 152mm ENGINEERED METAL STEEL STUDS WITH 150mm RSI 4.23 (R24) BATT INSULATION IN STUD CAVITY VAPOUR BARRIER 1 LAYER OF 13mm GYPSUM WALLBOARD (PAINTED)</p>
EX-4			

Clear Field Thermal Performance Calculations

EX-5a Gr & 2nd floor	1 - Library - from DOE2 / FramePlus for Spandrel			2 - Simple R per inch			3 - Simple R value	4 - Framed layers - from 90.1-A3.1-4				R value (Imperial)	RSI
Layer Source	Material	Thickness (in)	R value	Thickness (in)	R / inch	R value	R value	Framing Type	Nominal R value	Thickness (in)	Effective R value	R value (Imperial)	RSI
Exterior Film							0.17					0.17	0.03
1 Library	Face Brick (BK04-BK05)	1.50	0.16			0.00					0.00	0.16	0.03
3 - Simple R			0.00			0.00	15.40				0.00	15.40	2.71
4 - A3.1-4			0.00			0.00		Metal	17	5.5	6.70	6.70	1.18
0 None			0.00			0.00					0.00	0.00	0.00
0 None			0.00			0.00					0.00	0.00	0.00
0 None			0.00			0.00					0.00	0.00	0.00
0 None			0.00			0.00					0.00	0.00	0.00
Interior Film	Vertical						0.68					0.68	0.12
<p>* both FramePlus and ASHRAE 90.1 Table A3.1-4 account for a gypsum layer because in almost all cases a framed wall will be present if spandrel is present, the gypsum layer has been removed from the Frameplus results (subtracted R-0.46 / RSI-0.08, for 0.5 in / 13 mm gypsum board)</p>											Assembly R	23.11	4.07
											Assembly U	0.043	0.246
											eQuest U	0.044	
											EnergyPlus Mat thickness (m)	0.1593	

EX-4	1 - Library - from DOE2 / FramePlus for Spandrel			2 - Simple R per inch			3 - Simple R value	4 - Framed layers - from 90.1-A3.1-4				R value (Imperial)	RSI
Layer Source	Material	Thickness (in)	R value	Thickness (in)	R / inch	R value	R value	Framing Type	Nominal R value	Thickness (in)	Effective R value	R value (Imperial)	RSI
Exterior Film							0.17					0.17	0.03
3 - Simple R			0.00			0.00	15.40				0.00	15.40	2.71
4 - A3.1-4			0.00			0.00		Metal	24	5.5	7.44	7.44	1.31
0 None			0.00			0.00					0.00	0.00	0.00
0 None			0.00			0.00					0.00	0.00	0.00
0 None			0.00			0.00					0.00	0.00	0.00
0 None			0.00			0.00					0.00	0.00	0.00
0 None			0.00			0.00					0.00	0.00	0.00
Interior Film	Vertical						0.68					0.68	0.12
<p>* both FramePlus and ASHRAE 90.1 Table A3.1-4 account for a gypsum layer because in almost all cases a framed wall will be present if spandrel is present, the gypsum layer has been removed from the Frameplus results (subtracted R-0.46 / RSI-0.08, for 0.5 in / 13 mm gypsum board)</p>											Assembly R	23.69	4.17
											Assembly U	0.042	0.240
											eQuest U	0.043	
											EnergyPlus Mat thickness (m)	0.1636	

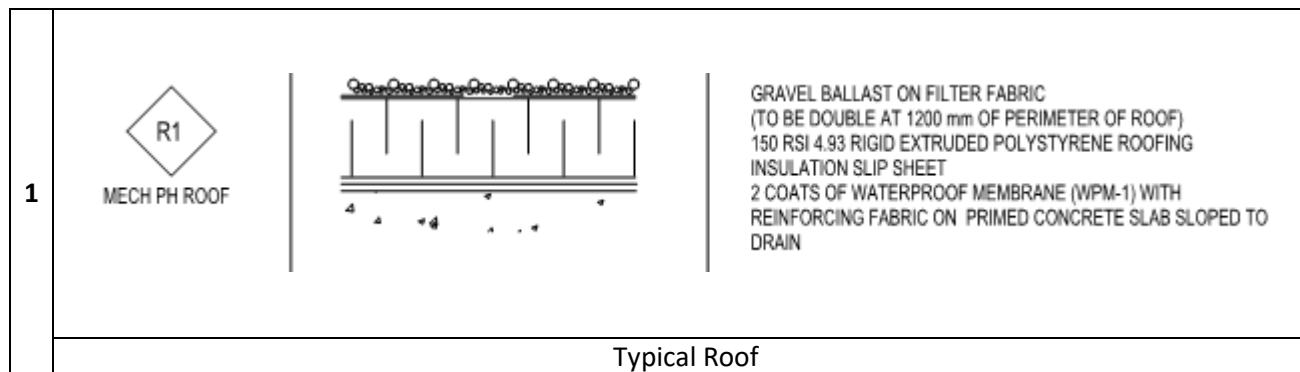
Overall Clear Wall Effective R-Value

Summary / Weighted Wall	Assembly U	Area	UxA	IMP	SI	Assembly R	Assembly RSI	Assembly USI
Masonry	0.043	2159	93.42			23.1	4.07	0.246
Precast	0.042	12071	509.63			23.7	4.17	0.240
Weighted R				23.60	4.16			
Weighted U				0.042	0.241			

The overall clear wall effective R-value is: **23.6** ft²·°F·h/BTU

Roof Assemblies

Roof Assemblies



Thermal Performance Calculations

Roof	1 - Library - from DOE2 / FramePlus for Spandrel			2 - Simple R per inch			3 - Simple R value	4 - Framed layers - from 90.1-A3.1-4				R value (Imperial)	RSI	
Layer Source	Material	Thickness (in)	R value	Thickness (in)	R / inch	R value	R value	Framing Type	Nominal R value	Thickness (in)	Effective R value	R value (Imperial)	RSI	
Exterior Film							0.17					0.17	0.03	
1 Library	CMU HW 8in ConcFill (CB12)	8.00	0.88				0.00					0.88	0.16	
3 - Simple R							27.99					0.00	27.99	4.93
0 None							0.00					0.00	0.00	
0 None							0.00					0.00	0.00	
0 None							0.00					0.00	0.00	
0 None							0.00					0.00	0.00	
0 None							0.00					0.00	0.00	
Interior Film	Vertical							0.68					0.68	0.12
* both FramePlus and ASHRAE 90.1 Table A3.1-4 account for a gypsum layer because in almost all cases a framed wall will be present if spandrel is present, the gypsum layer has been removed from the Frameplus results (subtracted R-0.46 / RSI-0.08, for 0.5 in / 13 mm gypsum board)											Assembly R Assembly U eQuest U EnergyPlus Mat thickness (m)	29.72 0.034 0.034 0.2417	5.23 0.191	

Overall Clear Roof Effective R-Value

The overall clear roof effective R-value is: **29.7** ft²·°F·h/BTU

Window-to-wall ratio Calculations

General			North					South					East					West				
Floor	# of Fl	Height (m)	Length (m)	Window Width (m)	Fixed (m2)	Opaque (m2)	WWR %	Length (m)	Window Width (m)	Fixed (m2)	Opaque (m2)	WWR %	Length (m)	Window Width (m)	Fixed (m2)	Opaque (m2)	WWR %	Length (m)	Window Width (m)	Fixed (m2)	Opaque (m2)	WWR %
1f	1	6	38.6	7	40	232	20%	43.5	35	207	261	93%	54.9	19.1	115	329	41%	45.5		0	273	0%
2f	1	3	49.8	22	65	149	58%	43.1	19	58	129	60%	36	13.6	41	108	50%	22.5		0	68	0%
3f	1	3	49.8	22	65	149	58%	43.1	19	58	129	60%	36	13.6	41	108	50%	22.5		0	68	0%
4f	1	3.5	40.7	18	63	142	57%	38.5	16	54	135	52%	24.1	10.7	37	84	57%	19.5	10.4	36	68	69%
5f	1	3	46.8	22	65	140	61%	40.1	20	59	120	65%	33.6	15.2	46	101	60%	27.2	12.3	37	82	60%
6f	1	3	46.8	22	65	140	61%	40.1	20	59	120	65%	33.6	15.2	46	101	60%	27.2	12.3	37	82	60%
7f	1	3	39.4	21	62	118	69%	36.8	21.2	64	110	77%	23.9	11.2	34	72	62%	22.9	11.3	34	69	66%
8-31f	24	3	39	19.5	59	117	67%	37.1	20.9	63	111	75%	27.1	11.1	33	81	55%	22.8	11.8	35	68	69%
32f	1	3	39	19.5	59	117	67%	37.1	20.9	63	111	75%	27.1	11.1	33	81	55%	22.8	11.8	35	68	69%
33f	1	4	39	19.5	78	156	63%	37.1	20.9	84	148	70%	27.1	11.1	44	108	51%	22.8	11.8	47	91	65%
MPH	1	6	24.3		0	146	0%	24.6		0	148	0%	11.7		0	70	0%	11.7		0	70	0%
			N	638.3	1963.55	4298.65	60.5%	S	692.2	2208.75	4083.85	71.0%	E	387.2	1235.35	3114.15	52.1%	W	353.1	1076.3	2579.55	55.4%
Overall				2070.8	6483.95	14076.2	60.8%															

Glazing Performance Details

Typical Glazing

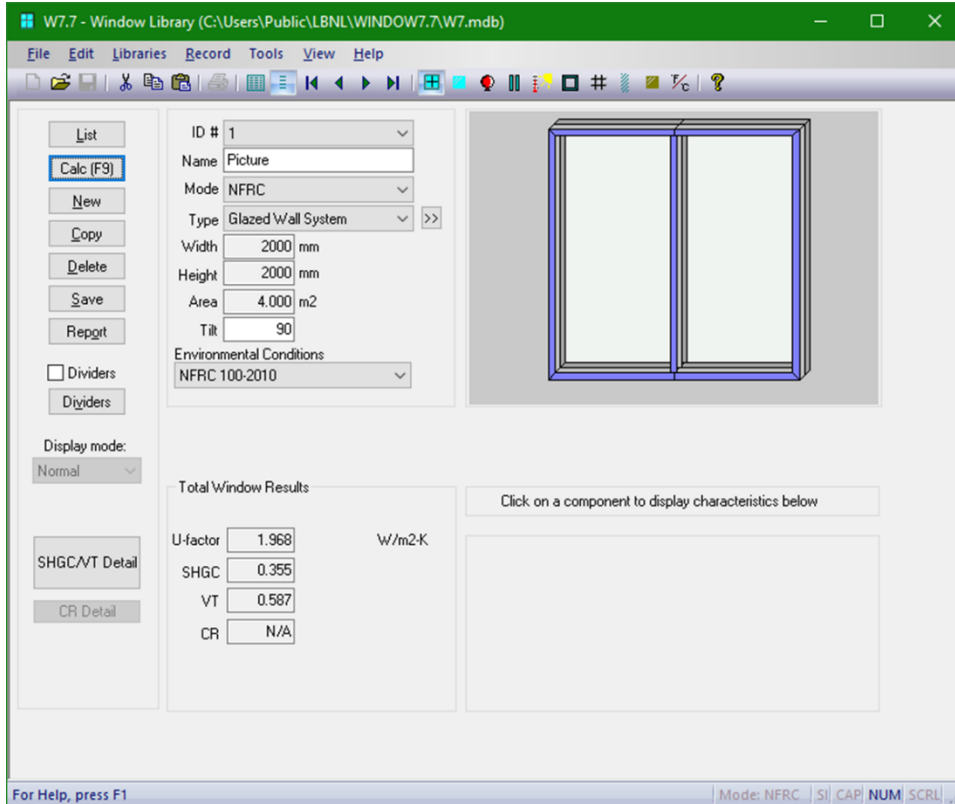
Double Glazed with Argon Fill, warm-edge spacers, low-e coating, COG U-0.25 BTU/ ft²·°F·h

U-Value (BTU/ ft²·°F·h):

0.35

SHGC (-):

0.35

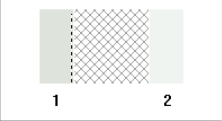


W7.7 - Glazing System Library (C:\Users\Public\LBNL\WINDOW7.7\W7.mdb)

File Edit Libraries Record Tools View Help

List
Calc (F9)
New
Copy
Delete
Save
Repgit
Radiance

ID #: 2 Name: Double Clear Air
 # Layers: 2 Tilt: 90° IG Height: 1000.00 mm
 Environmental Conditions: NFRC 100-2010 IG Width: 1000.00 mm
 Comment:
 Overall thickness: 23.227 mm Mode: # Model Deflection



	ID	Name	Mode	Thick	Flip	Tsol	Rsol1	Rsol2	Tvis	Rvis1	Rvis2	Tir	E1	E2	Cond	Comment
▼ Glass 1 ▶▶	3110	SGSN68C6.grd	#	5.6	<input type="checkbox"/>	0.381	0.299	0.446	0.757	0.060	0.050	0.000	0.840	0.039	0.997	
Gap 1 ▶▶	2	Argon		12.0												
▼ Glass 2 ▶▶	3016	Clear_60.GRD	#	5.6	<input type="checkbox"/>	0.813	0.076	0.075	0.894	0.083	0.083	0.000	0.840	0.840	1.000	

Center of Glass Results | Temperature Data | Optical Data | Angular Data | Color Properties | Radiance Results

Ufactor	SC	SHGC	Rel. Ht. Gain	Tvis	Keff	Layer 1 Keff	Gap 1 Keff	Layer 2 Keff
W/m2K			W/m2		W/m-K	W/m-K	W/m-K	W/m-K
1.358	0.429	0.373	280	0.679	0.0414	0.9969	0.0218	1.0003

For Help, press F1 | Mode: NFRC | SI | CAP | NUM | SCRU |

Select

Select Cancel Find ID 5410 records found.

ID	Name	ProductName	Manufacturer	Source	Mode	Color	Thickness	Tsol	Rsol1	Rsol2	Tvis	Rvis1	Rvis2	Tir	emis1	emis2	Cond
							mm										W/m-K
▶ 3110	SGSN68C6.grd	SunGuard® SuperNeutral 68 on Clear	Guardian	IGDB v15.4	#		5.613	0.381	0.299	0.446	0.757	0.060	0.050	0.000	0.840	0.039	0.997
3111	SGSN68G6.grd	SunGuard® SuperNeutral 68 on Green	Guardian	IGDB v15.4	#		5.613	0.268	0.082	0.441	0.643	0.055	0.041	0.000	0.840	0.039	0.997

Select ×

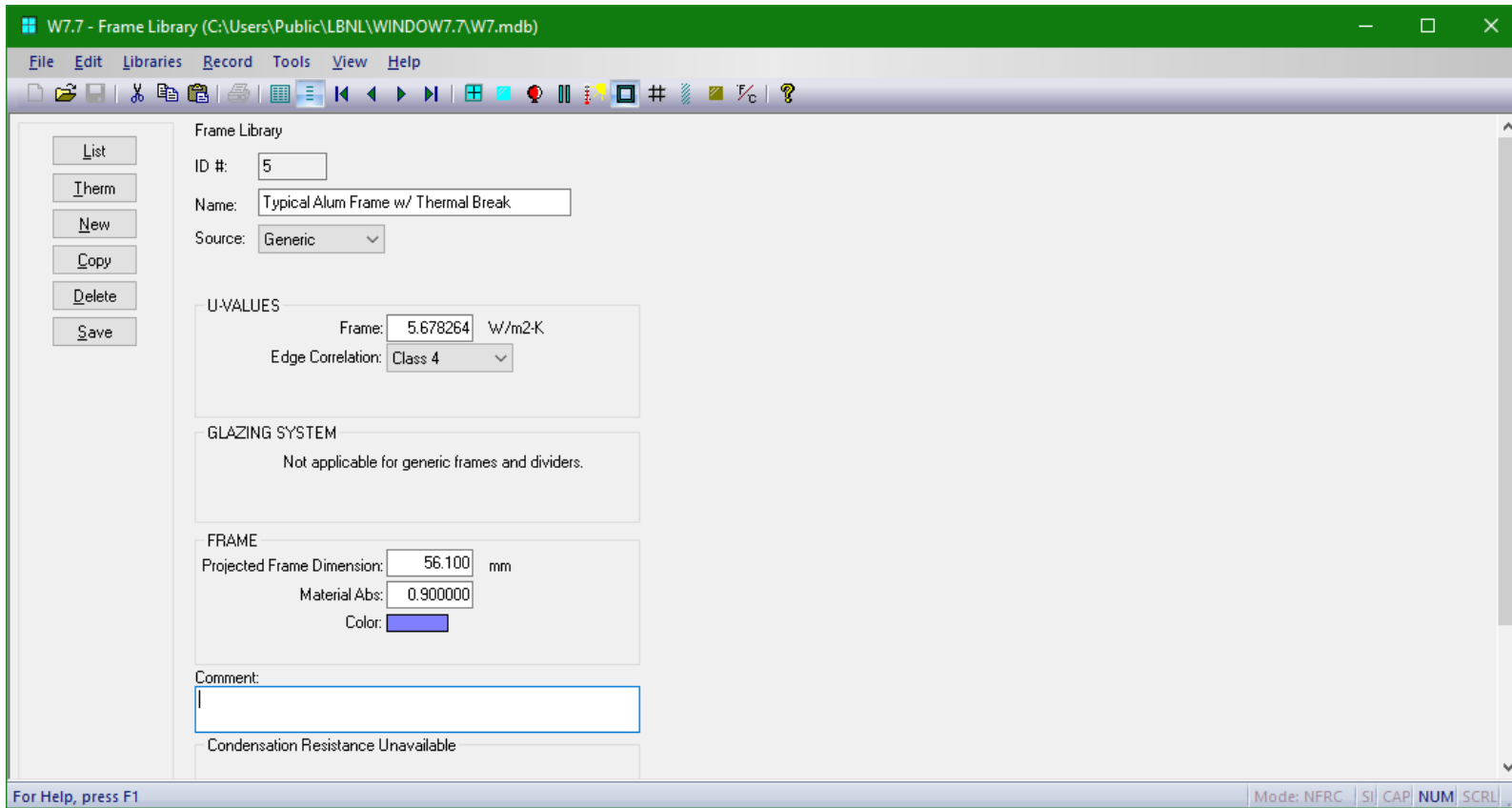
Select Find ID 23 records found.

ID	Name	Type	Conductivity	Viscosity	Cp	Density	Prandtl	Conductance	Comment
			W/m-K	kg/m-s	J/kg-K	kg/m3		W/m2-K	
1	Air	Pure	0.024069	0.000017	1006.103271	1.292498	0.7197		
▶ 2	Argon	Pure	0.016349	0.000021	521.928528	1.782282	0.6704		
3	Krypton	Pure	0.008664	0.000023	248.090698	3.738740	0.6717		
4	Xenon	Pure	0.005160	0.000021	158.339706	5.857955	0.6542		

Select ×

Select Find ID 5410 records found.

ID	Name	ProductName	Manufacturer	Source	Mode	Color	Thickness	Tsol	Rsol1	Rsol2	Tvis	Rvis1	Rvis2	Tir	emis1	emis2	Cond
							mm										W/m-K
▶ 3016	Clear_60.GRD	6 mm Clear Float Glass	Guardian	IGDB v43.0	#		5.613	0.813	0.076	0.075	0.894	0.083	0.083	0.000	0.840	0.840	1.000
3017	Clear_80.grd	8 mm Clear Float Glass	Guardian	IGDB v43.0	#		7.468	0.784	0.074	0.073	0.887	0.083	0.083	0.000	0.840	0.840	1.000



Building Envelope Thermal Bridging Guide – Inputs

Length/Area Calculations

Thermal Bridging Areas/Lengths		
Clear Wall	6627.00	m2
Floor Slab Junction	1002.5	m
Window Perimeter	11653.6	m
Corners	1669	m
Balconies	3308.2	m
Terraces	64.1	m
Parapet	198.3	m

Slab Edge Detail

Detail 5.2.16 Exterior and Interior Insulated 3 5/8" x 1 5/8" Steel Stud (16" o.c.) Drained EIFS Wall Assembly with R-12 Batt Insulation in Stud Cavity – Intermediate Floor Intersection

View from Interior

View from Exterior

Indicator	Symbol	Value
Assembly 1D (Nominal) R-Value	R _{1D}	R-14.2 (2.51 RSI) + exterior insulation
Transmittance / Resistance without Anomaly	U _o , R _o	"clear wall" U- and R-value without slab
Transmittance / Resistance	U, R	U- and R-values for overall assembly
Surface Temperature Index ¹	T _i	0 = exterior temperature 1 = interior temperature
Linear Transmittance	ψ	Incremental increase in transmittance per linear length of slab

¹Assumptions and limitations for surface temperatures identified in ASHRAE 136S-RP

Balcony Detail

Detail 9.1.6 Window Wall System with Spandrel Panels and Sliding Door - Concrete Balcony and Curb Intersection

View from Interior

View from Exterior

Indicator	Symbol	Value
Assembly 1D (Nominal) R-Value	R _{1D}	R-3.2 (0.55 RSI) + backpan insulation
Transmittance without Anomaly	U _g	U-value for glazed sliding door, including framing
Transmittance / Resistance	U _w , R _w , U _s , R _s , U _t , R _t	U and R-values for w = spandrel wall s = balcony slab + curb only t = combined glazing + spandrel + slab
Surface Temperature Index ¹	T _i	0 = exterior temperature 1 = interior temperature
Linear Transmittance	ψ _w , ψ _s	Incremental increase in transmittance per linear length of w = slab under spandrel s = slab under door

¹Assumptions and limitations for surface temperatures identified in ASHRAE 136S-RP

Nominal (1D) vs. Assembly Performance Indicators

Exterior Insulation 1D R-Value (RSI)	R _{1D} ft ² ·hr·°F / Btu (m ² K / W)	R _o ft ² ·hr·°F / Btu (m ² K / W)	U _o Btu/ft ² ·hr·°F (W/m ² K)	R ft ² ·hr·°F / Btu (m ² K / W)	U Btu/ft ² ·hr·°F (W/m ² K)	ψ Btu/ft·hr·°F (W/m K)
R-7.5 (1.32)	R-21.7 (3.83)	R-16.6 (2.93)	0.060 (0.34)	R-14.5 (2.55)	0.069 (0.39)	0.076 (0.132)
R-15 (2.64)	R-29.2 (5.15)	R-24.0 (4.23)	0.042 (0.24)	R-22.0 (3.88)	0.045 (0.26)	0.032 (0.056)

Temperature Indices

	R7.5	R15	
T ₁₁	0.41	0.58	Min T on sheathing, between studs
T ₁₂	0.85	0.91	Max T on sheathing, along steel track at slab
T ₁₃	0.90	0.94	Min T on slab, at edge interior drywall, exposed to interior air

Nominal (1D) vs. Assembly Performance Indicators

Base Assembly – Spandrel Section without Slab				Base Assembly – Glazed Door	
Backpan Insulation 1D R-Value (RSI)	R _{1D} ft ² ·hr·°F / Btu (m ² K / W)	R _w ft ² ·hr·°F / Btu (m ² K / W)	U _w Btu/ft ² ·hr·°F (W/m ² K)	U _{centre of glass} Btu/ft ² ·hr·°F (W/m ² K)	U _g Btu/ft ² ·hr·°F (W/m ² K)
R-8.4 (1.48)	R-11.6 (2.03)	R-6.3 (1.11)	0.158 (0.90)	0.321 (1.82)	0.486 (2.76)
R-12.6 (2.25)	R-15.7 (2.77)	R-7.1 (1.26)	0.140 (0.80)		

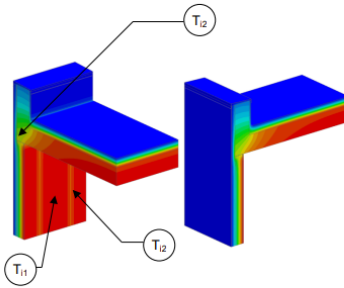
Balcony Linear Transmittance				Balcony Only	
Backpan Insulation 1D R-Value (RSI)	R _t ft ² ·hr·°F / Btu (m ² K / W)	U _t Btu/ft ² ·hr·°F (W/m ² K)	ψ _s ² Btu/ft·hr·°F (W/m K)	R _s ft ² ·hr·°F / Btu (m ² K / W)	U _s Btu/ft ² ·hr·°F (W/m ² K)
R-8.4 (1.48)	R-1.9 (0.34)	0.519 (2.95)	0.645 (1.116)	R-1.8 (0.32)	0.551 (3.13)
R-12.6 (2.25)	R-1.9 (0.34)	0.519 (2.95)	0.645 (1.116)	R-1.8 (0.32)	0.551 (3.13)

²Transmittance not based on an opaque wall clear field value. See Part 1 Dealing with Floor to Floor Glazing.

Parapet Detail

Detail 5.5.3

Exterior and Interior Insulated 3 5/8" x 1 5/8" Steel Stud (16" o.c.)
Drained EIFS Wall Assembly with R-12 Batt Insulation in Stud Cavity
– Concrete Parapet & Slab Intersection



Thermal Performance Indicators

Assembly 1D (Nominal) R-Value	R_{1Dw}	R-14.2 (2.51 RSI) + exterior insulation
Transmittance / Resistance without Anomaly	U_r , R_r , U_w , R_w	"clear field" U- and R-values for: r = roof w = wall
Transmittance / Resistance	U , R	U- and R-values for overall assembly
Surface Temperature Index ¹	T_i	0 = exterior temperature 1 = interior temperature
Linear Transmittance	ψ	Incremental increase in transmittance per linear length of parapet

¹Assumptions and limitations for surface temperatures identified in ASHRAE 136S-RP

View from Interior View from Exterior

Nominal (1D) vs. Assembly Performance Indicators

Base Assembly – Wall

Exterior Insulation 1D R-Value (RSI)	R_{1Dw} ft ² -hr ² -°F / Btu (m ² K / W)	R_w ft ² -hr ² -°F / Btu (m ² K / W)	U_w Btu/ft ² · hr ² -°F (W/m ² K)
R-7.5 (1.32)	R-21.7 (3.83)	R-16.6 (2.93)	0.060 (0.34)
R-15 (2.64)	R-29.2 (5.15)	R-24 (4.23)	0.042 (0.24)

Base Assembly - Roof

Roof Insulation 1D R-Value (RSI)	R_r ft ² hr ² °F / Btu (m ² K / W)	U_r Btu/ft ² · hr ² · °F (W/m ² K)
R-20 (3.52)	R-21.9 (3.86)	0.046 (0.26)

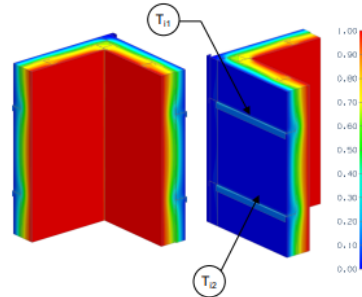
Parapet Linear Transmittance

Exterior Insulation 1D R-Value (RSI)	R ft ² -hr ² -°F / Btu (m ² K / W)	U Btu/ft ² · hr ² · °F (W/m ² K)	ψ Btu/ft ² · hr ² · °F (W/m K)
R-7.5 (1.32)	R-11.5 (2.02)	0.087 (0.49)	0.297 (0.514)
R-15 (2.64)	R-13.3 (2.35)	0.075 (0.43)	0.260 (0.451)

Corner Detail

Detail 5.6.5

Exterior and Interior Insulated 3 5/8" x 1 5/8" Steel Stud (16" o.c.)
Wall Assembly with Horizontal Z-girts (24" o.c.) Supporting Metal
Cladding and R-12 Batt Insulation in Stud Cavity – Corner
Intersection



Thermal Performance Indicators

Assembly 1D (Nominal) R-Value	R_{1D}	R-14.2 (2.50 RSI) + exterior insulation
Transmittance / Resistance without Anomaly	U_o , R_o	"clear wall" U- and R-value, without corner
Transmittance / Resistance	U , R	U- and R-values for overall assembly
Surface Temperature Index ¹	T_i	0 = exterior temperature 1 = interior temperature
Linear Transmittance	ψ	Incremental increase in transmittance per linear length of corner

¹Assumptions and limitations for surface temperatures identified in ASHRAE 136S-RP

View from Interior View from Exterior

Nominal (1D) vs. Assembly Performance Indicators

Exterior Insulation 1D R-Value (RSI)	R_{1D} ft ² hr ² °F / Btu (m ² K / W)	R_o ft ² · hr ² · °F / Btu (m ² K / W)	U_o Btu/ft ² · hr ² · °F (W/m ² K)	R ft ² · hr ² · °F / Btu (m ² K / W)	U Btu/ft ² · hr ² · °F (W/m ² K)	ψ Btu/ft ² · hr ² · °F (W/m K)
R-10 (1.76)	R-24.2 (4.26)	R-16.3 (2.87)	0.061 (0.35)	R-11.3 (1.99)	0.089 (0.50)	0.105 (0.181)
R-15 (2.64)	R-29.2 (5.14)	R-18.5 (3.25)	0.054 (0.31)	R-12.7 (2.23)	0.079 (0.45)	0.098 (0.170)

Temperature Indices

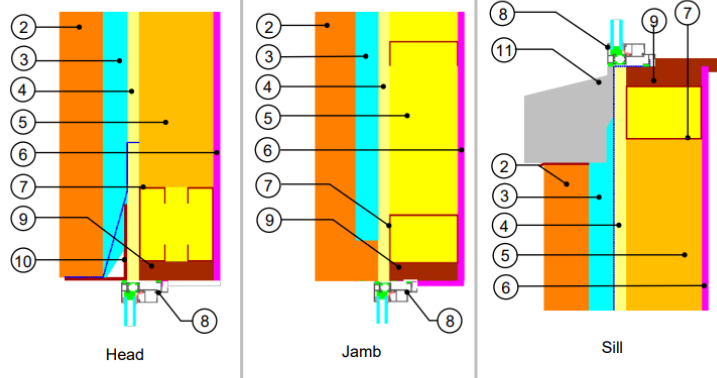
	R10	R15	
T_{i1}	0.29	0.33	Min T on sheathing, along girts, between studs
T_{i2}	0.71	0.75	Max T on sheathing, along studs, between girts

Window Perimeter Detail

Detail 5.3.9

Interior Insulated Steel Frame Wall Assembly with Brick Cladding – Window Intersection Aligned with Insulation

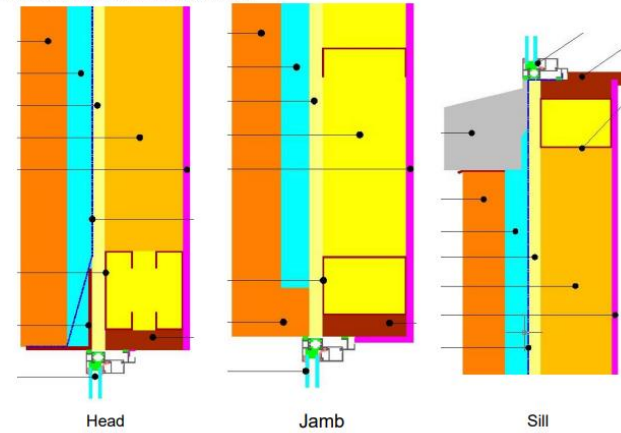
Detail referenced from work done by Passive House Academy



Detail 5.3.9

Interior Insulated Steel Frame Wall Assembly with Brick Cladding - Window Intersection Aligned with Insulation

Detail referenced from work done by Passive House Academy



ID	Component	Thickness Inches (mm)	Conductivity Btu-in / ft ² -hr-°F (W/m K)	Nominal Resistance hr-ft ² -°F/Btu (m ² K/W)	Density lb/ft ³ (kg/m ³)	Specific Heat Btu/lb-°F (J/kg K)
1	Interior Films ¹	-	-	R-0.74 (0.13 RSI)	-	-
2	Brick	3 5/8" (92)	0.578 (1.0)	R-0.523 (0.092 RSI)	110 (1800)	-
3	Air Cavity	2" (51)	0.132 (0.23)	R-1.261 (0.222 RSI)	-	-
4	Insulation	1" (25)	0.0139 (0.024)	R-6 (1.055 RSI)	-	-
5	Mineral Wool Insulation with Steel Studs	6 3/8" (162)	0.0370 (0.064)	R-14.36 (2.53 RSI)	-	-
6	Gypsum Board	1/2" (13)	0.092 (0.16)	R-0.5 (0.08 RSI)	50 (800)	-
7	Steel Studs	-	27.7 (48)	-	-	-
8	5500 ISOWEB Window	-	-	-	-	-
9	Timber Buck	-	0.006 (0.10)	-	-	-
10	Steel Lintel	-	27.7 (48)	-	-	-
11	Concrete Sill	-	1.4 (2.4)	-	-	-
12	Exterior Film ¹	-	-	R-0.23 (0.04 RSI)	-	-

¹ Value selected from table 1, p. 26.1 of 2009 ASHRAE Handbook – Fundamentals depending on surface orientation

Thermal Performance

Condition	Clear Wall R-Value ft ² -hr-°F / Btu (m ² K / W)	Clear Wall U-Value Btu/ ft ² -hr-°F (W/m ² K)	Linear Transmittance (Ψ) Btu/hr ft F (W/m K)
Wall Clear Field	R-22.6 (3.98)	0.044 (0.251)	-
Aligned Jamb			0.056 (0.097)
Aligned Head			0.044 (0.077)
Aligned Sill			0.057 (0.098)
Aligned Overall Window			0.053 (0.092)

Building Envelope Thermal Bridging Guide – Results

							Base Building	Proposed			
							USI	0.24	1.03		
							RSI	4.16	0.97		
							U-value	0.04	0.18		
							R-value	23.60	5.50		
Thermal Bridging Calcs							Totals	6842.17	100%		
Transmittance Type	Transmittance Description	Area	Units	Transmittance Value	Units	Source Reference	Heat Flow (W/K)	%Total Heat Flow			
Clear Field	15% EX5a, 85% EX4	6627.00	m2	0.241	W/m2K		1594.66	23%			
Linear Interface Detail	Floor slab	1002.50	m	0.056	W/mK	5.2.16	56.14	1%			
Linear Interface Detail	Window perimeter	11653.60	m	0.092	W/mK	5.3.9	1072.13	16%			
Linear Interface Detail	Corners	1669.00	m	0.181	W/mK	5.6.5	302.09	4%			
Linear Interface Detail	Balconies	3308.20	m	1.116	W/mK	9.1.6	3691.95	54%			
Linear Interface Detail	Terraces	64.10	m	0.558	W/mK		35.77	1%			
Linear Interface Detail	Parapet	198.30	m	0.451	W/mK	5.5.3	89.43	1%			

I certify that these modelling inputs and assumptions are in general alignment with 2636 Eglinton Avenue West and representative of the design. Although the stage of design is early, either these details or details of equivalent performance will be selected for the final design.

Architect's Name:

Petra Bogias

Date: Dec. 19, 2022

Architect's
Signature:

