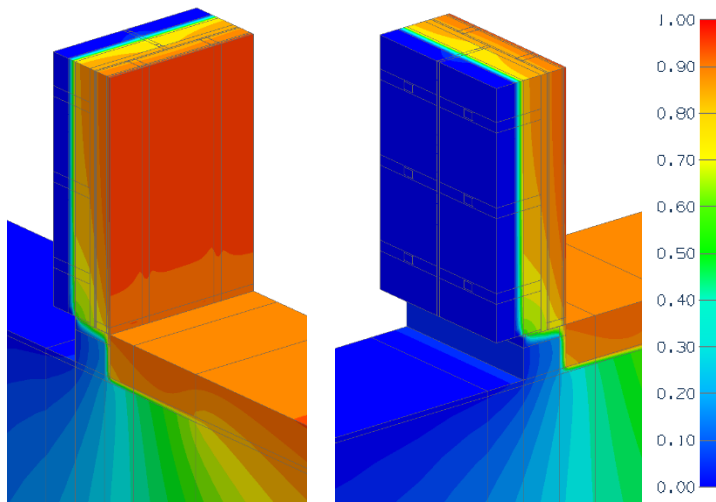


Detail 3

Precast Sandwich Panel with 3 5/8" Steel Stud (16" o.c.) – Thermally Broken Concrete Slab and Foundation Intersection

Thermal Performance Indicators



View from Interior

View from Exterior

Assembly 1D (Nominal) R-Value	R_{1D}	R-3.9 (0.69 RSI) + sandwich panel insulation
Transmittance / Resistance without Anomaly	U_o, R_o	"clear wall" U- and R-value, without foundation
Surface Temperature Index	T_i	0 = exterior temperature 1 = interior temperature
Foundation Transmittance ¹	L_{2Df}, L_{2Dt}	Heat loss of slab on grade per unit width of slab: f = floor t = floor + wall + foundation
Linear Transmittance	ψ	Incremental increase in transmittance per linear length of foundation

¹Calculation method follows ISO 10211:2007, 10.4.3

Scenarios

Scenario	
1	Continuous Concrete Footing, Caulked Floor to Footing Joint
2	Continuous Concrete Footing, 1" Fibreboard Joint
3	2" Armatherm Block under Precast wall and Anchors Only, 1" Fibreboard Joint
4	2" Armatherm Block under Precast Wall, Anchors and Stud Wall, 1" Fibreboard Joint
5	2" Armatherm Block under Precast Wall, Anchors and Stud Wall, 2" Armatherm Joint

Nominal (1D) vs. Assembly Performance Indicators

Base Assembly – Wall

Sandwich Panel 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-10 (1.76)	R-13.9 (2.45)	R-10.2 (1.79)	0.099 (0.56)

Foundation Linear Transmittance

Scenario	Foundation Insulation 1D R-Value (RSI)	Insulation Length From Footing in (mm)	L_{2Df} Btu/ft ·hr·°F (W/m K)	L_{2Dt} Btu/ft ·hr·°F (W/m K)	ψ Btu/ft ·hr·°F (W/m K)
1	R-5 (0.88)	12 (305)	1.18 (2.04)	1.97 (3.41)	0.400 (0.693)
2	R-5 (0.88)	12 (305)	1.18 (2.04)	1.88 (3.25)	0.309 (0.534)
3	R-5 (0.88)	12 (305)	1.18 (2.04)	1.83 (3.17)	0.262 (0.453)
4	R-5 (0.88)	12 (305)	1.18 (2.04)	1.74 (3.01)	0.170 (0.294)
5	R-5 (0.88)	12 (305)	1.18 (2.04)	1.71 (2.96)	0.139 (0.241)
	R-5 (0.88)	24 (610)	1.12 (1.94)	1.65 (2.85)	0.133 (0.230)
	R-5 (0.88)	36 (914)	1.07 (1.86)	1.60 (2.77)	0.132 (0.228)
	R-5 (0.88)	48 (1219)	1.04 (1.80)	1.57 (2.71)	0.131 (0.227)