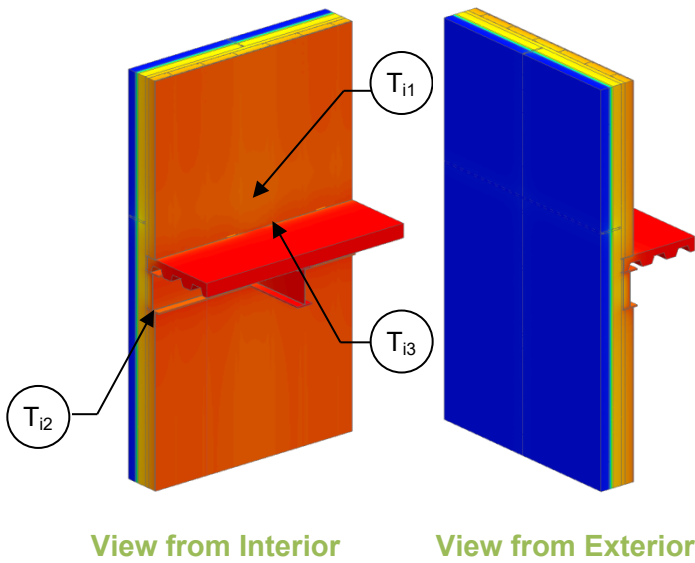


Detail 7.2.10

Precast Sandwich Panel Wall Assembly with Steel Connectors at 16" o.c. – Intermediate Floor Intersection



Thermal Performance Indicators

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 panel joints and floor
Transmittance / Resistance	U_j, R_j, U_f, R_f	U and R values for: j = concrete wall with panel joint f = concrete wall panel joint + floor
Surface Temperature Index ¹	T_i	0 = exterior temperature 1 = interior temperature
Linear Transmittance	Ψ_j, Ψ_f	Incremental increase in transmittance per linear length of: j = panel joint f = floor

¹Assumptions and limitations for surface temperatures identified in ASHRAE 1365-RP

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-12.0 (2.11)	0.083 (0.47)

Panel Joint Linear Transmittance

R_j ft ² ·hr·°F / Btu (m ² K / W)	U_j Btu/ft ² ·hr ·°F (W/m ² K)	Ψ_j Btu/ft ·hr·°F (W/m K)
R-11.6 (2.03)	0.087 (0.49)	0.026 (0.046)

Floor Linear Transmittance

Sandwich Panel Insulation 1D R-Value (RSI)	R_f ft ² ·hr·°F / Btu (m ² K / W)	U_f Btu/ft ² ·hr ·°F (W/m ² K)	Ψ_f Btu/ft ·hr·°F (W/m K)
R-10 (1.76)	R-11.2 (1.97)	0.089 (0.51)	0.039 (0.067)

Temperature Indices

T_{i1}	0.77	Min T on sandwich panel, at corner of sandwich panel
T_{i2}	0.88	Max T on sandwich panel, at centre of panel along top track of bottom wall
T_{i3}	0.93	Min T on slab, at drywall intersection near steel slab angle