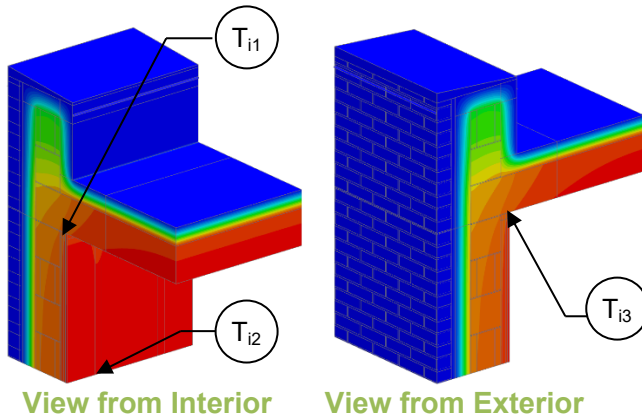


# Detail 7.5.12

## Owens Corning Exterior Insulated Concrete Block Wall Assembly with Heckmann Pos-I-Tie Vener Anchoring System Supporting Brick Veneer – Roof to Wall Intersection with Insulation Wrapped Around Parapet



### Thermal Performance Indicators

Assembly 1D (Nominal) R-Value	$R_{1D}$	R-5.6 (0.99 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 <sup>1</sup>	$T_i$	0 = exterior temperature 1 = interior temperature
Linear Transmittance	$\psi$	Incremental increase in transmittance per length of parapet

<sup>1</sup>Assumptions and limitations for surface temperatures identified in ASHRAE 1365-RP

### Nominal (1D) vs. Assembly Performance Indicators

#### Base Assembly – Wall

Exterior Insulation 1D R-Value (RSI)	$R_{1Dw}$ ft <sup>2</sup> ·hr·°F / Btu (m <sup>2</sup> K / W)	$R_w$ ft <sup>2</sup> ·hr·°F / Btu (m <sup>2</sup> K / W)	$U_w$ Btu/ft <sup>2</sup> ·hr ·°F (W/m <sup>2</sup> K)
R-10.0 (1.76)	R-15.6 (2.75)	R-13.4 (2.36)	0.075 (0.42)
R-20.0 (3.52)	R-25.6 (4.51)	R-20.0 (3.52)	0.050 (0.28)

#### Base Assembly - Roof

Roof Insulation 1DR-Value (RSI)	$R_r$ ft <sup>2</sup> hr °F / Btu (m <sup>2</sup> K / W)	$U_r$ Btu/ft <sup>2</sup> ·hr ·°F (W/m <sup>2</sup> 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 <sup>2</sup> ·hr·°F / Btu (m <sup>2</sup> K / W)	U Btu/ft <sup>2</sup> ·hr ·°F (W/m <sup>2</sup> K)	$\psi$ Btu/ft hr °F (W/m K)
R-10.0 (1.76)	R-11.5 (2.03)	0.087 (0.49)	0.150 (0.260)
R-20.0 (3.52)	R-14.4 (2.53)	0.070 (0.40)	0.121 (0.209)

### Temperature Indices

	R10	R20	
$T_{i1}$	0.81	0.85	Min T on interior CMU surface, at concrete roof slab intersection
$T_{i2}$	0.86	0.90	Max T on interior CMU surface, at studs and away from concrete roof slab intersection
$T_{i3}$	0.85	0.88	Min T on concrete ceiling, at drywall intersection, exposed to interior air