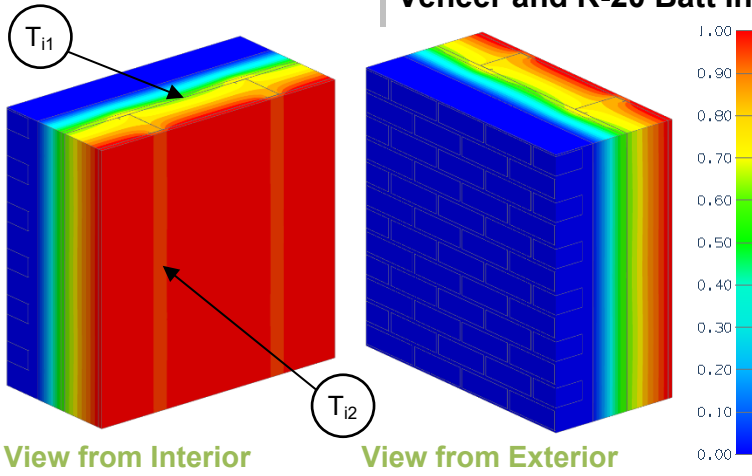


Detail 5.1.79

Exterior and Interior Insulated 6" x 1 5/8" Steel Stud (16" o.c. and 24" o.c.) Wall Assembly with Steel Brick Anchors Supporting Brick Veneer and R-20 Batt Insulation in Stud Cavity – Clear Wall



Thermal Performance Indicators

Assembly 1D (Nominal) R-Value	R_{1D}	R-23.4 (4.12 RSI) + exterior insulation
Transmittance / Resistance	U_o, R_o	"clear wall" U- and R-value
Surface Temperature Index ¹	T_i	0 = exterior temperature 1 = interior temperature

Nominal (1D) vs. Assembly Performance Indicators

Exterior Insulation 1D R-Value (RSI)	R_{1D} ft ² ·hr·°F / Btu (m ² K / W)	16" o.c.		24" o.c.	
		R_o ft ² ·hr·°F / Btu (m ² K / W)	U_o Btu/ft ² ·hr ·°F (W/m ² K)	R_o ft ² ·hr·°F / Btu (m ² K / W)	U_o Btu/ft ² ·hr ·°F (W/m ² K)
R-20.0 (3.52)	R-43.4 (7.65)	R-26.3 (4.62)	0.038 (0.22)	R-30.3 (5.34)	0.033 (0.19)
R-25.0 (4.40)	R-48.4 (8.53)	R-29.3 (5.17)	0.034 (0.19)	R-33.9 (5.97)	0.030 (0.17)
R-30.0 (5.28)	R-53.4 (9.41)	R-32.2 (5.68)	0.031 (0.18)	R-37.4 (6.58)	0.027 (0.15)
R-35.0 (6.16)	R-58.4 (10.29)	R-35.4 (6.23)	0.028 (0.16)	R-40.8 (7.19)	0.025 (0.14)

Temperature Indices

	R20	R25	R30	R35	
T_{i1}	0.59	0.62	0.65	0.68	Min T on sheathing, between studs
T_{i2}	0.72	0.75	0.77	0.79	Max T on sheathing, along studs

Temperature indices taken from scenario with 16" o.c. studs. All other scenarios have higher minimum temperature index.

