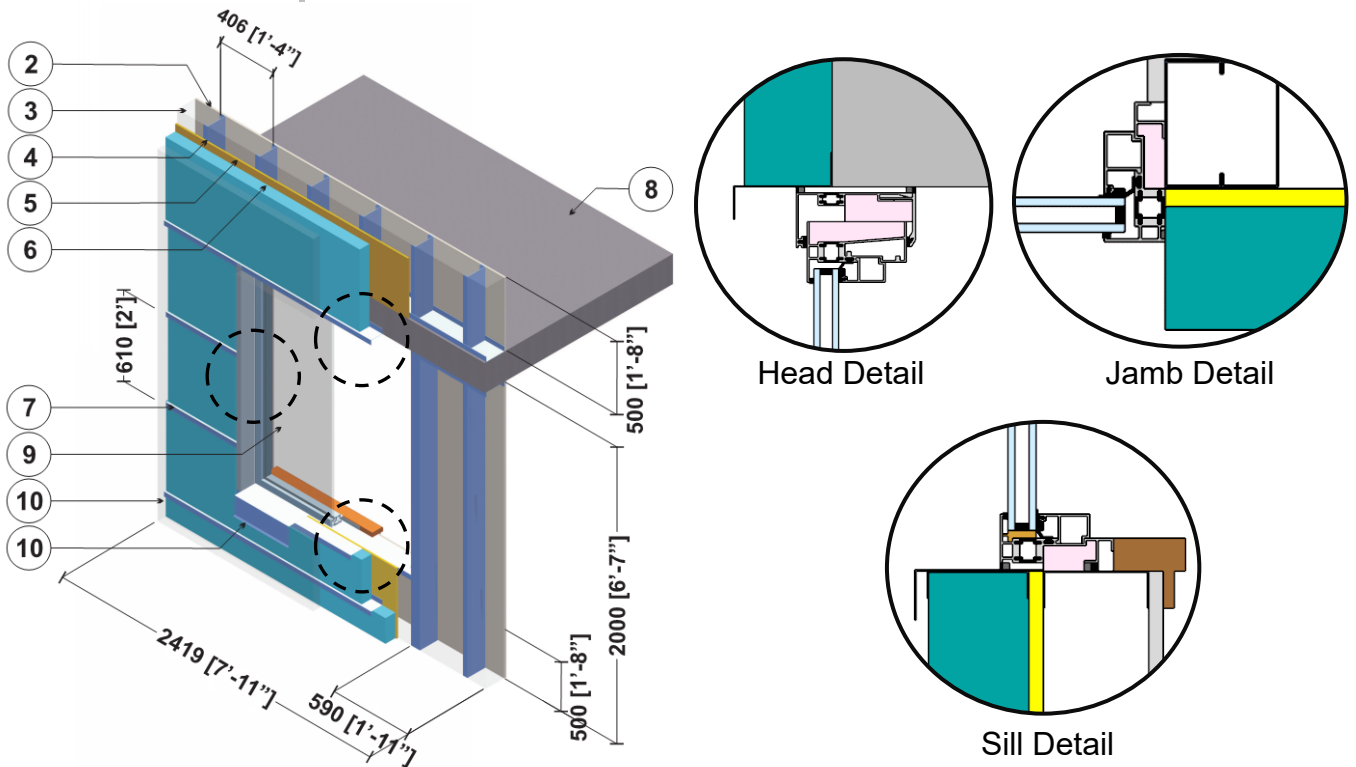


Detail 5.3.5

Exterior 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 – Window & Intermediate Floor Intersection



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 Film ¹	-	-	R-0.6 to R-0.9 (0.11 RSI to 0.16 RSI)	-	-
2	Gypsum Board	1/2" (13)	1.1 (0.16)	R-0.5 (0.08 RSI)	50 (800)	0.26 (1090)
3	Air in Stud Cavity	3 5/8" (92)	-	R-0.9 (0.16 RSI)	0.075 (1.2)	0.24 (1000)
4	3 5/8" x 1 5/8" Steel Studs with Top and Bottom Tracks	18 Gauge	430 (62)	-	489 (7830)	0.12 (500)
5	Exterior Sheathing	1/2" (13)	1.1 (0.16)	R-0.5 (0.08 RSI)	50 (800)	0.26 (1090)
6	Exterior Insulation	Varies	-	R-5 to R-25 (0.88 RSI to 4.4 RSI)	1.8 (28)	0.29 (1220)
7	Horizontal Z-Girts w/ 1 1/2" Flange	18 Gauge	430 (62)	-	489 (7830)	0.12 (500)
8	Concrete Slab	8" (203)	12.5 (1.8)	-	140 (2250)	0.20 (850)
9	5' (1.5m) x 6' (1.8m) Aluminum window: double glazed & thermally broken ² , double glazed IGU U _{IGU} = 0.32 BTU/hr.ft ² .°F (1.82 W/m ² K)					
10	Metal cladding with 1/2" (13mm) vented air space is incorporated into exterior heat transfer coefficient, sill flashing & interior finish materials					
11	Exterior Film ¹	-	-	R-0.2 to R-0.7 (0.03 RSI to 0.12 RSI)	-	-

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

² The thermal conductivity for air spaces within window framing was found using ISO 10077-2