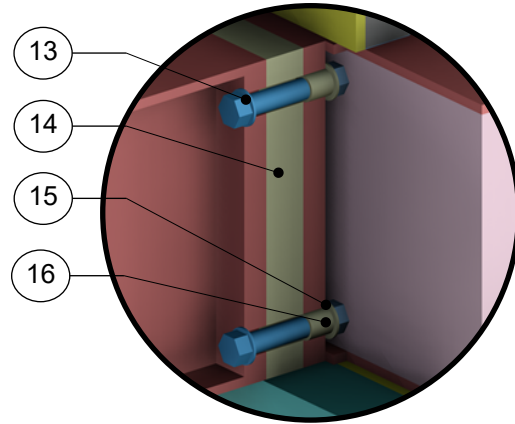
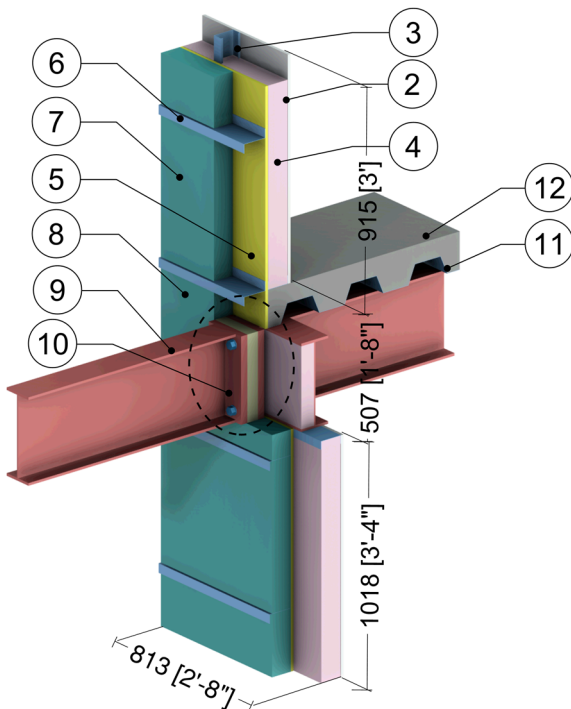


Detail 10

Exterior and Interior 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 – Structural Steel Floor Intersection with Beam Thermal Break



Beam Thermal Break

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 (0.11 RSI) to R-0.9 (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	3 5/8" x 1 5/8" Steel Studs with Top and Bottom Tracks	18 Gauge	430 (62)	-	489 (7830)	0.12 (500)
4	Fibreglass Batt Insulation	3 5/8" (92)	0.29 (0.042)	R-12.0 (2.10 RSI)	0.9 (14)	0.17 (710)
5	Exterior Sheathing	1/2" (13)	1.1 (0.16)	R-0.5 (0.09 RSI)	50 (800)	0.26 (1090)
6	Horizontal Z-girts with 1 1/2" Flange	18 Gauge	430 (62)	-	489 (7830)	0.12 (500)
7	Exterior Insulation	3" (76)	0.2 (0.029)	R-15.0 (2.64 RSI)	1.8 (28)	0.29 (1220)
8	Metal Cladding with 1/2" vented airspace incorporated into exterior heat transfer coefficient					
9	Steel Beam W14x26 (W360x39)	-	347 (50)	-	489 (7830)	0.12 (500)
10	Steel Bearing Plates	1 3/16" (30)	347 (50)	-	489 (7830)	0.12 (500)
11	Steel Deck	1/16" (1.6)	347 (50)	-	489 (7830)	0.12 (500)
12	Concrete Topping	6" (152)	6.3 (0.9)	-	120 (1920)	0.20 (850)
13	Steel or Stainless Steel Bolts	-	347 (50) to 118 (17)	-	500 (8000)	0.12 (500)
14	Armatherm FRR Break	1" to 2" (25 to 50)	1.4 (0.20)	-	85 (5.3)	-
15	Armatherm FRR Washer	3/8" (10)	1.4 (0.20)	-	85 (5.3)	-
16	Armatherm FRR Bushing	1.2" (30)	1.4 (0.20)	-	85 (5.3)	-
17	Exterior Film ¹	-	-	R-0.7 (0.12 RSI)	-	-

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