

Table 6.2 Summary of Area Calculations

Interface	Calculation
Corner/Wall	$\text{Corner - Effect Area (A}_c\text{)} = \left[\text{Wall Height} - \frac{\text{Roof Effect Dimension}}{2} - \frac{\text{Floor Effect Dimension}}{2} \right] \times \text{[Corner Effect Dimension]}$ $A_c = \left[10 \text{ ft.} - \frac{11.5 \text{ in.} / 12}{2} - \frac{8 \text{ in.} / 12}{2} \right] [25 \text{ in.} / 12]$ $A_c = 19.11 \text{ ft}^3 (1.85 \text{ m}^3)$
Floor/Wall	$\text{Floor - Effect Area (A}_F\text{)} = \left[\text{Floor Length} - \frac{\text{Corner Effect Dimension}}{2} - \frac{\text{Corner Effect Dimension}}{2} \right] \text{[Floor Effect Dimension]}$ $A_F = [20 \text{ ft.} - 25 \text{ in.} / 12] [8 \text{ in.} / 12]$ $A_F = 11.94 \text{ ft}^3 (0.34 \text{ m}^3)$
Roof/Wall	$\text{Roof - Effect Area (A}_R\text{)} = \left[\text{Roof Length} - \frac{\text{Corner Effect Dimension}}{2} - \frac{\text{Corner Effect Dimension}}{2} \right] \text{[Roof Effect Dimension]}$ $A_R = [20 \text{ ft.} - 25 \text{ in.} / 12] [11.5 \text{ in.} / 12]$ $A_R = 17.17 \text{ ft}^3 (5.18 \text{ m}^3)$
Window Header/Wall	$\text{Window - Effect Area (A}_W\text{)} = [\text{Window Header Length} - \text{Window Header Effect Dimension}] \times \text{[Window Header Effect Dimension]}$ $A_W = [3 \text{ ft.} - 17 \text{ in.} / 12] [17 \text{ in.} / 12]$ $A_W = 2.24 \text{ ft}^3 (0.64 \text{ m}^3)$ <p>Assumptions:</p> <p>(1) Vertical dimension of window header thermal effect is equal to that of the lateral dimension (as dimensioned in Wall Assembly Information Sheets – Window Header).</p> <p>(2) Thermal response of window framing not included.</p>
Door Header/Wall	$\text{Door - Header Effect Area (A}_D\text{)} = [\text{Window Header Length} - \text{Window Header Effect Dimension}] \times \text{[Window Header Effect Dimension]}$ $A_D = [3 \text{ ft.} - 17 \text{ in.} / 12] [17 \text{ in.} / 12]$

	<p style="text-align: center;">$A_D = 2.24 \text{ ft}^3 (0.64 \text{ m}^3)$</p> <p>Assumptions:</p> <ul style="list-style-type: none"> (1) Thermal response of window header equals that of the door header. (2) Vertical dimension of door header thermal effect is equal to that of the lateral dimension (as dimensioned in Wall Assembly Information Sheets – Window Header). (3) Thermal response of window framing not included.
Clear Wall	<p style="text-align: center;">Clear Wall Area = (Floor length x Wall Height) - A_C - A_F - A_R - A_W - A_D</p>