



INNOVATIONS FOR LIVING™

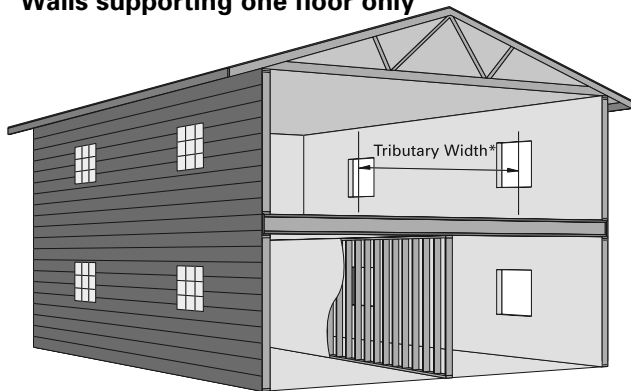


# QuietZone® Acoustic Wall Framing

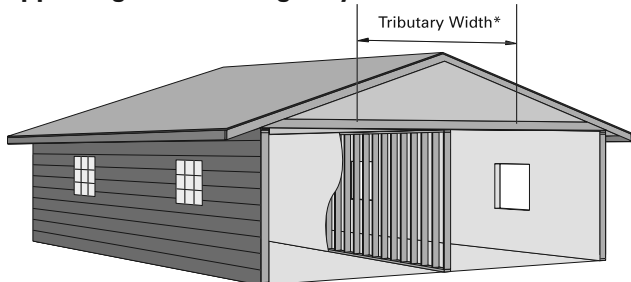
## Design and Installation Guide - USA

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### Walls supporting one floor only



### Walls supporting attic framing only



\*Tributary width is calculated as a percentage of the sum of the joist spans on either side of the wall:  
simple span: 0.5 ft x (left span + right span)  
continuous span: 0.625 ft x (left span + right span)

### GENERAL NOTES

- QuietZone® Acoustic Wall Framing is intended for interior walls only. Call toll free 1-866-864-5710 for information on other applications.
- 2x4 QuietZone® Acoustic Wall Framing has load-bearing capabilities similar to 2x3 wood framing; see design tables for details.
- 2x6 QuietZone® Acoustic Wall Framing has load-bearing capabilities similar to 2x4 wood framing; see design tables for details.
- Screws are recommended for fastening drywall, shelves, and fixtures to QuietZone® Acoustic Wall Framing. Use caution if fastening drywall to resilient member using a nailgun.
- QuietZone® Acoustic Batts (15" or 23" width) will be required in the cavity space between wall framing sections spaced either 16" or 24" o.c. when using 2 x 4 & 2 x 6 QuietZone® Acoustic Wall Framing.
- QuietZone® Acoustic Batts fit between wood framing members with the flanges stapled to the sides of the QuietZone® Acoustic Wall Framing structural members.

**WARNING:** LACK OF PROPER BRACING, INSUFFICIENT WALL SYSTEM DESIGN OR FAILURE TO FOLLOW THE INSTRUCTIONS SET FORTH HEREIN COULD LEAD TO PROPERTY DAMAGE AND/OR SERIOUS BODILY INJURY. NEITHER OWENS CORNING NOR TEMBEC SHALL BE RESPONSIBLE FOR ANY DAMAGE, LOSS, COSTS OR EXPENSES RELATING TO ANY MISUSE OF THE PRODUCTS DESCRIBED ABOVE, OR ANY FAILURE TO ADHERE TO THESE INSTRUCTIONS.

For more information on the QuietZone® Acoustic Wall Framing, call 1-866-864-5710. For more information on other QuietZone® Products (QuietZone® Acoustic Batt & QuietZone® acoustic sealant) call 1-800-GET-PINK™, or visit [www.owenscorning.com](http://www.owenscorning.com).



### Maximum Tributary Width\* (ft)

#### One Floor Only

Member Nominal Size	Wall Height	Member Spacing	Floor Load	
			40LL + 12DL	40LL + 25DL
2x4	8'	16" o.c.	13	10
		24" o.c.	11	9
	9'	16" o.c.	9	7
		24" o.c.	—	—
	10'	16" o.c.	—	—
		24" o.c.	—	—
2x6	8'	16" o.c.	30	30
		24" o.c.	30	30
	9'	16" o.c.	30	30
		24" o.c.	30	28
	10'	16" o.c.	30	24
		24" o.c.	26	21
12'	16" o.c.	16	13	
	24" o.c.	13	10	

### Maximum Tributary Width\* (ft)

#### Attic Framing Only

Member Nominal Size	Wall Height	Member Spacing	Attic Load (psf unfactored)
			20LL + 10DL
2x4	8'	16" o.c.	22
		24" o.c.	19
	9'	16" o.c.	15
		24" o.c.	12
	10'	16" o.c.	10
		24" o.c.	—
2x6	8'	16" o.c.	30
		24" o.c.	30
	9'	16" o.c.	30
		24" o.c.	30
	10'	16" o.c.	30
		24" o.c.	30
12'	16" o.c.	28	
	24" o.c.	23	

### Maximum Vertical Load (plf factored)

#### Interior Walls Only

Wall Height	Stud Length	2x4 Wall			2x6 Wall		
		On Center Spacing			On-Center Spacing		
		12"	16"	24"	12"	16"	24"
8'	92 3/8"	1,055	965	810	3,715	3,715	3,470
9'	104 3/8"	735	655	520	3,030	2,875	2,590
10'	116 3/8"	515	450	330	2,335	2,190	1,925
12'	144"	—	—	—	1,315	1,195	980

Table is based upon:

- Type X gypsum wallboard applied to each side of the wall
- Interior lateral wall pressure of 5 psf



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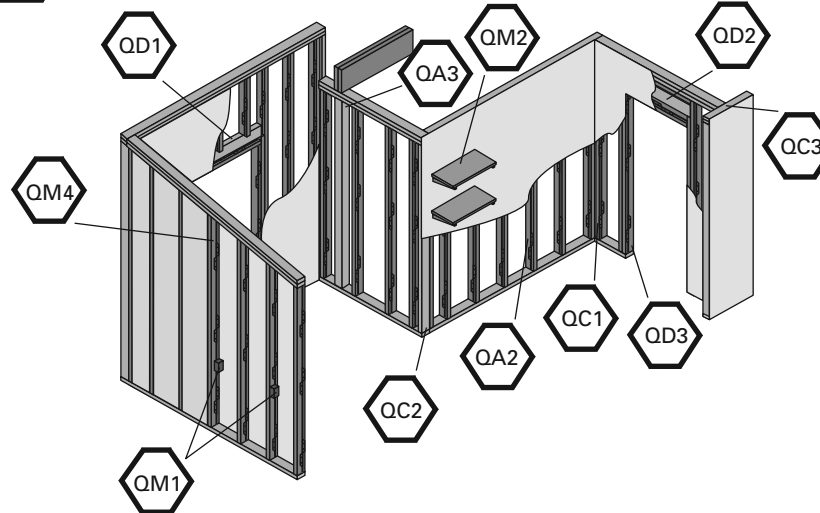
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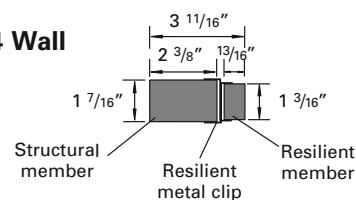
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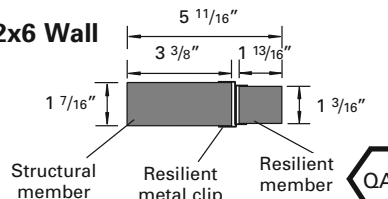


### DIMENSIONS

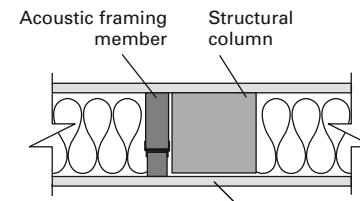
#### 2x4 Wall



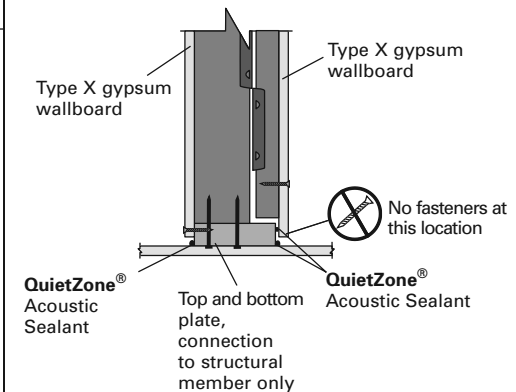
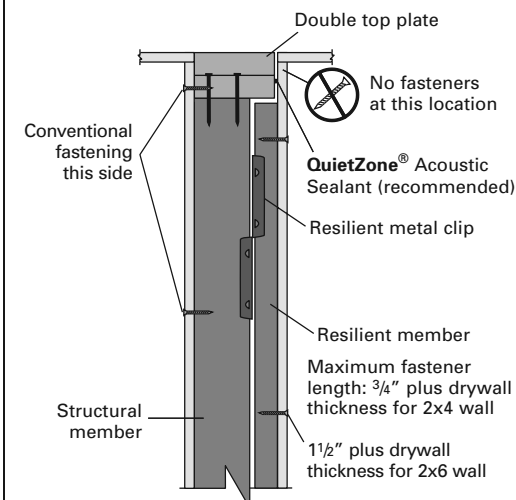
#### 2x6 Wall



### SUPPORT COLUMNS



DO NOT fasten gypsum to structural column on this side of wall



### ALLOWABLE DESIGN VALUES (100% LOAD DURATION) - STRUCTURAL MEMBER

QuietZone® Acoustic Wall Framing featuring Tembec Select Engineered Lumber (Structural Member) and Selectem™ LVL (Resilient Member)

Modulus of elasticity	E =	1.4 x 10 <sup>6</sup> psi
Bending at extreme fibre	Fb =	875 psi
Compression parallel to grain	Fc =	1150 psi
Compression perpendicular to grain	Fcp =	425 psi
Shear parallel to grain	Fv =	135 psi

Values may be increased by a repetitive member factor (Cr) if applicable  
Values may be increase by a load duration factor (Cd) if applicable  
Values may be increased by a size factor (Cf)

QuietZone® Acoustic Wall Framing is to be used in "dry" service conditions only  
QuietZone® Acoustic Wall Framing has no Preservative or Fire Retardant Treatment  
QuietZone® Acoustic Wall Framing is to be used as a vertical end-loaded member in compression

Nail Design Values, Structural Member, Lateral and Withdrawal: Design as per National Design Specification for Wood Construction for Spruce Pine Fir species SG = 0.42  
Nail Design Values, Resilient Member, Lateral and Withdrawal: Design as per National Design Specification for Wood Construction for Hem-Fir species SG = 0.43  
Code Evaluation for Resilient Member: ESR-1898 (see [www.ics-es.org](http://www.ics-es.org))



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# QuietZone® Acoustic Wall Framing

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<p><b>2</b> <b>INSIDE CORNER</b></p> <p>Attach fasteners through structural member only into 2x stud</p> <p>2x stud</p> <p>4 1/2" for 2x4 wall</p> <p>6 1/2" for 2x6 wall</p> <p>QuietZone® Acoustic Sealant</p> <p>Type X gypsum wallboard (typical both sides)</p> <p>QuietZone® Acoustic Batts</p> <p>Acoustic framing member</p> <p>QC1</p>	<p><b>OUTSIDE CORNER</b></p> <p>QuietZone® Acoustic Sealant</p> <p>QuietZone® Acoustic Batts</p> <p>2x stud</p> <p>Acoustic framing member</p> <p>Type X gypsum wallboard (typical both sides)</p> <p>Attach fasteners through structural member only into 2x stud</p> <p>QC2</p>	<p><b>QUIETZONE® TO STANDARD WALL CONNECTION</b></p> <p>Acoustic framing member</p> <p>Attach fasteners through structural members only</p> <p>QuietZone® Acoustic Batts</p> <p>2x studs</p> <p>Type X gypsum wallboard (typical both sides)</p> <p>QuietZone® Acoustic Sealant</p> <p>QC3</p>
<p><b>QUIETZONE® WALL TO QUIETZONE® WALL CONNECTION</b></p> <p>Attach fasteners through structural member only into 2x stud</p> <p>2x stud</p> <p>Optional</p> <p>QuietZone® Acoustic Sealant</p> <p>Type X gypsum wallboard (typical both sides)</p> <p>QuietZone® Acoustic Batts</p> <p>Acoustic framing member</p> <p>QC3a</p>	<p><b>STANDARD WALL TO 2X4 QUIETZONE® WALL CONNECTION</b></p> <p>QuietZone® Acoustic Batts</p> <p>Acoustic framing member</p> <p>QuietZone® Acoustic Sealant</p> <p>Type X gypsum wallboard (typical both sides)</p> <p>Attach fasteners through structural member only into 2x stud</p> <p>QC3b</p>	<p><b>STANDARD WALL TO QUIETZONE® WALL CONNECTION</b></p> <p>Attach fasteners through structural member only into 2x stud</p> <p>Acoustic framing member</p> <p>QuietZone® Acoustic Batts</p> <p>Type X gypsum wallboard (typical both sides)</p> <p>QuietZone® Acoustic Sealant</p> <p>QC3c</p>
<p><b>LOW HEADER</b> (Install header flush to structural side of wall only)</p> <p>Double top plate</p> <p>Acoustic cripple</p> <p>Header</p> <p>Acoustic framing member</p> <p>Acoustic trimmer and king stud*</p> <p>Do not fasten gypsum wallboard to header</p> <p>QC1</p>	<p><b>HIGH HEADER</b> (Install header flush to structural side of wall only)</p> <p>Double top plate</p> <p>Acoustic framing member tight between top plates and header</p> <p>Header</p> <p>Acoustic framing member</p> <p>Acoustic trimmer and king stud*</p> <p>Do not fasten gypsum wallboard to header</p> <p>QC2</p>	<p><b>DOOR ATTACHMENT</b></p> <p>QuietZone® Acoustic Sealant</p> <p>Acoustic framing member</p> <p>Fasten door frame to structural member only</p> <p>Type X gypsum wallboard (typical both sides)</p> <p>QuietZone® Acoustic Sealant</p> <p>QC3</p>



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<p><b>3</b> <b>ELECTRICAL BOXES</b></p> <p>Electrical box</p> <p>Type X gypsum wallboard</p> <p>Seal perimeter of electrical boxes and other penetrations with QuietZone® Acoustic Sealant</p> <p>Resilient Side of Wall</p> <p>Electrical box should not touch structural member or be fastened to it</p> <p>Fasten electrical boxes to resilient member only</p> <p>2 - #6 x 3/4" screws</p> <p>Acoustic framing member</p> <p>Electrical box with attachment bracket</p> <p>Structural Side of Wall</p> <p>Use standard fastening to structural member</p> <p>Use any code approved electrical box</p> <p>Acoustic framing member</p> <p>QC4</p>	<p><b>SHELVES AND FIXTURES</b></p> <p>Acoustic framing member</p> <p>Maximum shelf dimension 12"</p> <p>Fasten bracket to resilient member with screws*</p> <p>Wall mounted shelf or fixture</p> <p>Type X gypsum wallboard</p> <p>QC5</p>
<p><b>ALLOWABLE HOLES AND NOTCHES</b></p> <p><b>2x4 Walls</b></p> <p>5/8" minimum edge distance</p> <p>3/4" maximum diameter hole</p> <p>3 11/16"</p> <p><b>2x6 Walls</b></p> <p>5/8" minimum edge distance</p> <p>1 3/8" maximum diameter hole</p> <p>5 9/16"</p> <p>7/8" maximum notch</p> <p>NO NOTCHES in the 2x4 wall assembly!</p> <p>Notches shown may be cut in the 2x6 wall assembly anywhere except the middle 1/3 of the length of the member.</p> <p>DO NOT run electrical wires or pipes through the gap between members for either 2x4 or 2x6 wall framing!</p> <p>QC6</p>	<p><b>CUTTING NON-STANDARD LENGTHS</b></p> <p>Maximum extension beyond last clip:</p> <p>2x4 wall - 8"</p> <p>2x6 wall - 16"</p> <p>24" maximum distance between pairs of clips</p> <p>Install extra clips as required with 2- #6 x 1" self-tapping screws into each member</p> <p>Where space permits, install extra clips in pairs</p> <p>Field cut acoustic framing member as required</p> <p>Cut resilient member 1/4" shorter than structural member</p> <p>QC7</p>
<p><b>MULTIPLE LAYERS OF GYPSUM</b></p> <p>Second layer of Type X gypsum wallboard (stagger seams)</p> <p>Type X gypsum wallboard (typical both sides)</p> <p>QuietZone® Acoustic Sealant</p> <p>Apply QuietZone® Acoustic Sealant along corner of first layer of Type X gypsum wallboard before applying second layer of Type X gypsum wallboard.</p> <p>QC8</p>	