



Acoustically engineered lumber for wall framing, designed to break sound vibration paths in noise control applications.

QuietZone™ Noise Control System

The home is a series of systems, and with the System Thinking™ approach to building, different areas of the home will perform more effectively. Rooms built with the *QuietZone* Noise Control System provide a more peaceful home. Owens Corning *QuietZone* acoustic wall framing is part of this complete *QuietZone* Noise Control System. The system uses *QuietZone* acoustic products to effectively manage sound and control noise by incorporating four basic acoustic principles:

- *QuietZone* acoustic batts **absorb** sound vibration
- *QuietZone* acoustic wall framing **breaks** sound vibration
- *QuietZone* acoustic caulk **blocks** sound vibration
- *QuietZone* acoustic floor mat **isolates** sound vibration



The system greatly reduces noise transmission from laundry rooms, entertainment rooms, family rooms, and other areas where noise is created. It can also be used to create privacy in home offices, master bedrooms or other areas where peace and quiet is desired.

System Benefits:

- Differentiate the homes you build with increased performance
- Increase sales by offering unique up-sell options
- Provide homeowners with quieter, more peaceful living conditions
- Enhance your image by positioning yourself as an acoustic solutions expert
- Save homeowners time and money by suggesting noise control prior to new home construction as compared to retrofitting at a later date

Unconventional Performance

QuietZone acoustic wall framing is designed to replace conventional wall framing in noise control applications for the home.

Each framing piece combines two sections of engineered lumber connected by several acoustically resilient metal clips. These built-in clips create a break in the sound vibration path and allow the gypsum board on the inside of the room to float and isolate sound waves from the rest of the home (Figure 1).

This wall framing is available in 2x4 and 2x6 dimensions and is pre-cut to standard and extended lengths for efficient construction. It works together with other *QuietZone* acoustic products in the *QuietZone* Noise Control System to provide Optimum Noise Control Wall Construction (Figure 2).

Performance Attributes

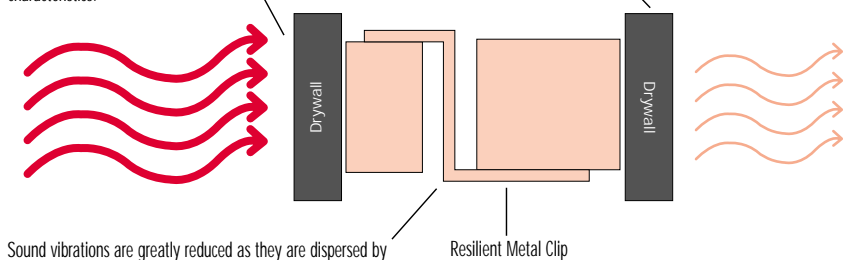
QuietZone acoustic wall framing:

- Eliminates the need for staggered-stud construction or conventional resilient channels
- Walls built at a lower total installed cost than alternative noise control construction techniques*
- Is composed of consistent engineered lumber and unique resilient metal clips
- Installs quickly and easily with no additional steps
- Maintains nominal wall depths for both 2x4 and 2x6 wall constructions
- Free of knots and wane
- Resists bowing, twisting and shrinking

Figure 1

QuietZone acoustic wall framing is designed to allow one side of the wall to float, breaking the path of sound vibrations traveling through the wall. This results in excellent noise reduction characteristics.

The sound vibrations reaching the opposite side of the wall have been greatly reduced, providing a quieter, more comfortable living space.



Sound vibrations are greatly reduced as they are dispersed by acoustically engineered resilient clips.

*Note: Total installed cost based upon averages from RS Means Residential Cost Data, field trials and living space allowances. Variables such as local rates, material distribution costs and availability as well as specific construction requirements can impact total installed costs and differ by location.

QuietZone™ Acoustic Wall Framing

Product Applications

QuietZone acoustic wall framing is specially designed for Optimum Noise Control Wall Construction (Figure 2). When used with the complete *QuietZone* Noise Control System, you can offer homeowners the best in noise control performance.

Noise Control Wall Construction

Installing the complete *QuietZone* Noise Control System of products – including *QuietZone* acoustic wall framing, *QuietZone* acoustic caulk and *QuietZone* acoustic batts, provides walls with superior noise control performance. This type of wall construction can provide walls with a Sound Transmission Class (STC) rating of up to STC 63. The result is a reduction in perceived noise levels through *QuietZone* Noise Control System walls by up to 80% or more when compared with uninsulated conventional

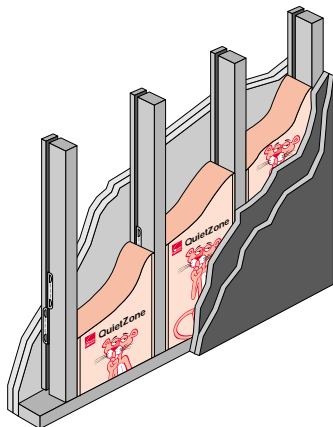


Figure 2

QuietZone acoustic wall framing, *QuietZone* acoustic batts, and double layers of 1/2" Type X gypsum wall board.

Allowable Design Stresses

(100% Load Duration)

Shear modulus of elasticity	G = 81,250 psi
Modulus of elasticity	E = 1.3 x 10 ⁶ psi
Flexural stress	F _b = 1,700 psi ⁽¹⁾
Compression parallel to grain	F _c = 1,400 psi
Compression perpendicular to grain parallel to wide face of strands	F _{c⊥} = 680 psi ⁽²⁾
Compression perpendicular to grain perpendicular to wide face of strands	F _{c⊥} = 435 psi ⁽²⁾
Horizontal shear perpendicular to wide face of strands	F _v = 400 psi

(1) For 12-inch depth. For others, multiply by $(\frac{12}{d})^{0.092}$ (2) F_{c||} shall not be increased for duration of load.

wood stud walls. Optimum wall and floor construction together can provide the most effective noise control performance. For information on different floor construction techniques or additional wall systems and performance values, contact your Sales Representative or contact Owens Corning at 1-800-GET-PINK.

Product Installation

QuietZone acoustic wall framing is designed for constructing walls in traditional single-family homes and is installed and finished using the same general principles applied to conventional wood framing.**

Building Restrictions

- 2x4 *QuietZone* acoustic wall framing has limited load-bearing capabilities and should be used on interior walls only†
- 2x6 *QuietZone* acoustic wall framing has load-bearing capabilities similar to standard 2x4 wood framing†

†Consult with your lumber dealer or Owens Corning for further design assistance.

**See *QuietZone acoustic wall framing installation instructions, Pub. No. 15-BL-43827* for complete steps and load-bearing capabilities.

Note: *QuietZone acoustic caulk is an important part of any wall system. Any gap or opening will reduce the acoustic performance of the wall system. QuietZone acoustic caulk seals these gaps to ensure that the wall system performs to its highest value.*

Fire Safety

For fire blocking, *QuietZone* acoustic batts (15" or 23" width) will be required in the cavity space between wall framing sections when using 2x4 *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. The facing must be installed in substantial contact with an approved interior material. Owens Corning acoustic batts will be required to fill the cavity space between wall framing sections when using 2x6 *QuietZone* acoustic wall framing.

Code Evaluation

Always check with your local building code official regarding local requirements affecting installation of all building components.

Wall Framing Sizes

Wall Framing Lengths

2x4	92 5/8"	104 5/8"	116 5/8"	
2x6	92 5/8"	104 5/8"	116 5/8"	144" 168"

For more information on *QuietZone* acoustic wall framing or the *QuietZone* Noise Control System call 1-800-GET-PINK or visit our Web site at www.owenscorning.com.



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