



DensGlass®

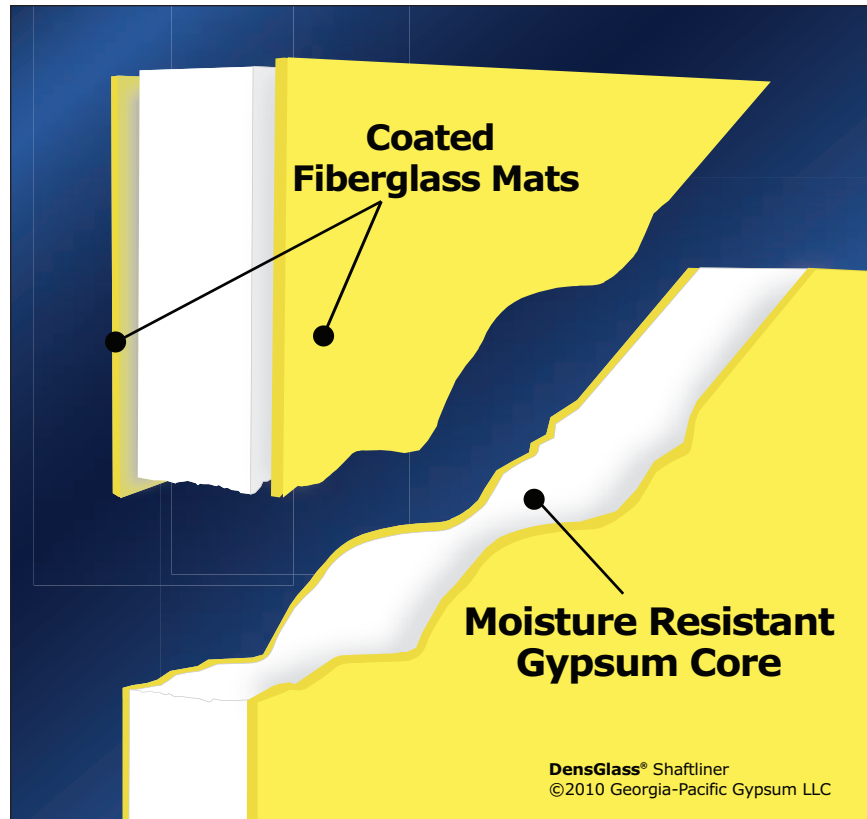
Shaftliner

Area Separation Wall assembly for multi-family, multi-story construction.



**MOISTURE- AND MOLD-RESISTANT
HIGH-PERFORMANCE SOLUTIONS FOR
AREA SEPARATION WALLS**

Product Overview



DensGlass® Shaftliner has fiberglass mats for superior mold and moisture resistance compared to paper-faced shaftliners.

- *Fiberglass mats eliminate a potential food source for mold and may reduce remediation and scheduling delays associated with paper-faced shaftliners.*
- *Replaces traditional paper-faced shaftliner in area separation wall systems.*
- *Backed with a 12-month limited warranty against in-place weather exposure damage (delamination, deterioration and decay)*.*

**For complete warranty details, visit www.gpgypsum.com*

When tested, as manufactured, in accordance with ASTM D 3273, DensGlass Shaftliner panels scored a 10, the highest level of performance for mold resistance under the ASTM D 3273 test method.

The score of 10, in the ASTM D 3273 test, indicates no mold growth in a 4-week controlled laboratory test. The mold resistance of any building product, when used in actual job site conditions, may not produce the same results as were achieved in the controlled, laboratory setting. No material can be considered mold proof. When properly used with good design, handling and construction practices, Dens™ Brand gypsum products provide increased mold resistance compared to standard paper-faced wallboard.

DensGlass Shaftliner is listed as a GREENGUARD microbial resistant product by a leading third-party organization, GREENGUARD Environmental Institute. This listing means DensGlass Shaftliner, which features fiberglass mats instead of the paper facings used on the surface of traditional gypsum board products, resists mold growth. The microbial resistant test is based on ASTM D 6329, a testing standard set by ASTM International, which develops testing guidelines and procedures for building materials, products, systems and services.

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CAUTION: For product fire, safety and use information, go to gp.com/safetyinfo.

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The Georgia-Pacific Gypsum Area Separation Wall assembly is designed for use in multi-family, multi-story townhouses as a firewall with a total height up to 68' (20,726 mm) (page 14, Limitations). Because it is constructed using gypsum board, the assembly is easy to erect and secure, meets all building code requirements, and provides economical fire protection and sound control.

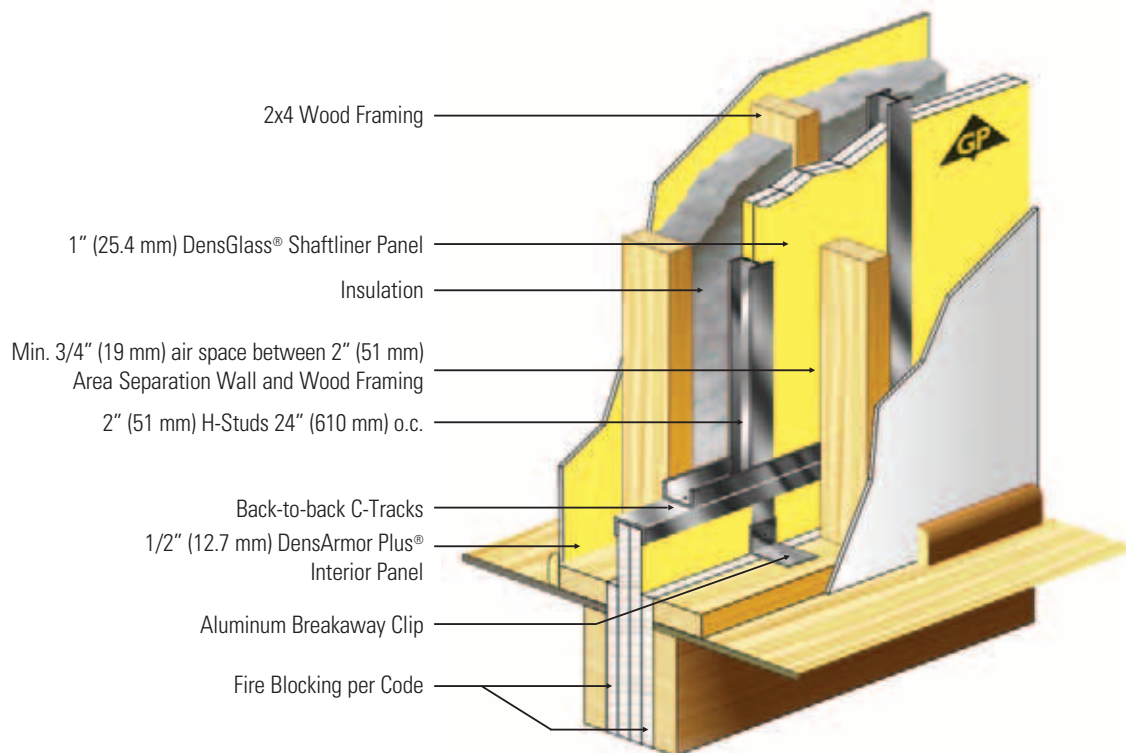
The Area Separation Wall is constructed once the framing for one townhouse unit is complete and prior to the construction of the adjacent unit. The assembly is constructed at the foundation and continues either to the underside of the protected roof sheathing or through the roof to form a parapet. The assembly is linked to the adjacent framing with aluminum breakaway clips that allow for collapse of the fire-exposed unit without collapse of the solid Area Separation Wall.

Because the assembly will be exposed to the elements during construction, Georgia-Pacific Gypsum offers increased protection to the owner, builder and architect with a moisture- and mold-resistant shaftliner panel: DensGlass® Shaftliner.

Georgia-Pacific Gypsum Products and LEED®

Many of our products may contribute to LEED® credits. To find out more, please reference the Sustainable Materials Data Sheets (SMDS) on our website (www.gpgypsum.com) for recycled content, regional materials, low emitting materials and other potential categories for LEED credit contributions.

Components



The Georgia-Pacific Gypsum Area Separation Wall is constructed using 1-inch (25.4 mm) thick, 24-inch (610 mm) wide DensGlass Shaftliner panels, 25-gauge (18 mils) steel H-studs, 25-gauge (18 mils) steel C-track and 2" (51 mm) aluminum breakaway clips.

DensGlass Shaftliner panels consist of a moisture-resistant core with coated fiberglass mats front and back instead of paper facings like traditional shaftliner panels. DensGlass Shaftliner panels are covered by a 12-month in-place exposure limited warranty against delamination, deterioration and decay and a 5-year limited warranty against manufacturing defects.

Fire Testing and Building Code Compliance

The Georgia-Pacific Gypsum Area Separation Wall has been fire tested to ASTM E 119 and CAN/ULC S-101. The Georgia-Pacific Gypsum 2-hour fire-rated Area Separation Wall assembly, constructed using DensGlass Shaftliner panels, is listed by Underwriters Laboratory (UL), Underwriters Laboratories of Canada (ULC) and Warnock Hersey International (WHI/ITS) and meets the requirements of the 2009 International Building Code (IBC) Section 706 "Party Walls," and Section 706, "Fire Walls." The Georgia-Pacific Gypsum Area Separation Wall assembly is listed in the UL Fire Resistance Directory under UL Design U 373, the ULC Fire Resistance Directory ULC Design No. W 312 and the WHI Fire Resistance Directory under WHI GP/WA 120-04. For copies of these listings, please contact Georgia-Pacific Gypsum Technical Services at 1-800-225-6119.

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Installation Instructions

The Georgia-Pacific Gypsum Area Separation Wall is constructed once the framing for one townhouse unit is complete and prior to the construction of the adjacent unit. The solid 2" (51 mm) Area Separation Wall is constructed a minimum 3/4" (19 mm) away from the adjacent framing, which is typically constructed from wood. In many cases the area separation wall is positioned 1" (25.4 mm) away from the wall framing to accommodate the 1" (25.4 mm) DensGlass® Shaftliner panels used as fireblocking between the floor levels. The UL Design U373 Area Separation Wall assembly was evaluated at a height up to 44' (13,411 mm) and the WHI/ITS GP/WA 120-04 Area Separation Wall assembly was evaluated at a height up to 68' (20,726 mm).

Erecting the 2" (51 mm) Area Separation Wall

1. Position 2" (51 mm) C-Track a minimum 3/4" (19 mm) from the framed wall of the adjacent unit. Fasten C-Track to foundation with fasteners spaced a maximum of 24" (610 mm) o.c. When specified, apply a minimum 1/4" (6 mm) bead of acoustical sealant under the C-Track to maximize acoustical privacy. Run the C-Track to the end of the foundation. In case of offset units, see 15 under Special Conditions.
2. Start the wall with a vertical C-Track at one end. Install two 1" (25.4 mm) shaftliner panels vertically with either side facing out* into the C-Track at one end of the area separation wall. Install the H-Stud over the double beveled edges of the shaftliner panels and continue alternately until the wall has reached the opposite end of the foundation. Terminate the wall using a C-Track. The vertical C-Tracks at each end of the wall should be attached in the corners to the horizontal sections of the C-Track using a minimum of one 3/8" (9 mm) minimum length pan head screw.

* Note: some authorities may require labeling to be visible.

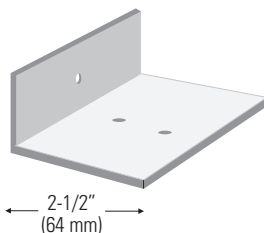
3. Cap the first section of the Area Separation Wall with a C-Track and attach to the vertical C-Track in the corners using a minimum of one 3/8" (9 mm) minimum length pan head screw.
4. Breakaway clips span the minimum 3/4" (19 mm) air space and provide a fusible link between the H-Studs and the adjacent wall framing. Attach the breakaway clips to the flange of the H-Stud using a minimum of one 3/8" (9 mm) minimum length pan head screw and to the adjacent wood framing using a minimum of one 1" (25.4 mm) minimum length drywall screw.

When the UL Design U373 Area Separation Wall assembly is specified, the breakaway clips should be located vertically at each floor level 10'0" (3048 mm) o.c. and horizontally on every H-Stud 24" (610 mm) o.c. When the total height of the Area Separation Wall exceeds 23' (7010 mm), breakaway clips shall be installed every 5'0" (1524 mm) for the lower 20' (6096 mm) and every 10'0" (3048 mm) for the upper 24'0" (7315 mm) of the wall assembly. Breakaway clips are installed on both sides of the Area Separation Wall.

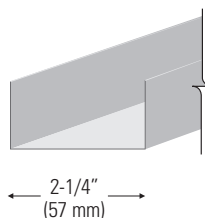
When the WHI/ITS Design WHI GP/WA 120-04 Area Separation Wall assembly is specified, the breakaway clips should be located vertically at each floor level 10'0" (3048 mm) o.c. and horizontally on every other H-stud or 48" (1219 mm) o.c. When the total height of the Area Separation Wall exceeds 20'0" (6096 mm), breakaway clips shall be installed vertically every 8'0" (2438 mm) maximum for the lower 20'0" (6096 mm) and every 10'0" (3048 mm) maximum for the upper 48'0" (14630 m) of the wall assembly.

5. Fireblocking is installed on both sides of the Area Separation Wall at each floor level as defined in Section 717.2.1 of the 2009 IBC. (See Details section). For approved fire-blocking materials, see Special Conditions, Item 8.
6. To continue the wall, install a C-Track over the C-Track used to cap the lower section, placed back to back and attached together with two 3/8" (9 mm) pan head screws at ends and spaced 24" (610 mm) o.c. Stagger back-to-back C-Track joints a minimum of 12" (305 mm).
7. If a parapet is not specified, see Special Conditions, Item 11 for two code-compliant methods for installing a gypsum board roof underlayment.
8. Once the 2" (51 mm) Area Separation Wall is erected, construction of the adjacent interior wall framing can begin. Breakaway clip and fire-blocking installation is identical for both sides of the 2" (51 mm) Area Separation Wall.

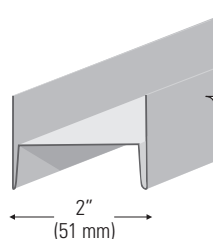
Aluminum Angle Clip



C-Track, Cap, Edge or End Closure



H-Stud, 25-Gauge (18 mils)



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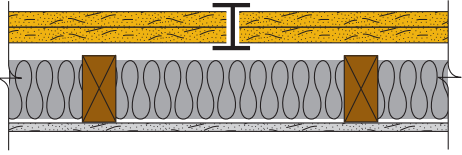
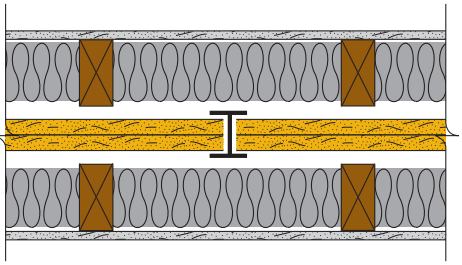
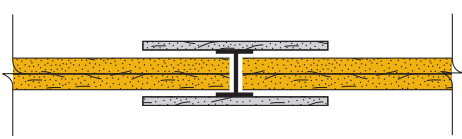
Special Conditions

1. When an H-Stud does not align with the adjacent wood framing, insert blocking between wood framing members and attach breakaway clip to blocking using one 1-1/4" (32 mm) drywall screw and to the H-Stud using a minimum of one 3/8" (9 mm) minimum length pan head screw.
2. If gaps are present between back-to-back C-Tracks, caulk using appropriate fire caulking material.
3. When wall framing is spaced greater than 1" (25.4 mm) away from the solid 2" (51 mm) Area Separation Wall, aluminum clips with longer legs are permitted. Contact clip manufacturers including CLARKWESTERN Building Systems and Telling Industries for modified clips. Additional wood blocking can be added between the wood studs to provide clip support. Space wood blocking minimum 3/4" (19 mm) away from Area Separation Wall.
4. The solid 2" (51 mm) Georgia-Pacific Gypsum Area Separation Wall is non-load bearing. The adjacent framed wall can be designed as load bearing.
5. The wall located adjacent to the solid 2" (51 mm) Area Separation Wall, a minimum of 3/4" (19 mm) away, can be constructed of wood or steel framing. When constructed using steel framing, use a minimum of one 3/8" (9 mm) minimum length pan head screw to attach the aluminum breakaway clip.
6. The support walls located adjacent to, and on each side of the solid 2" (51 mm) Area Separation Wall protect and maintain the required 3/4" (19 mm) air space, offer increased acoustical privacy and provide necessary aesthetics. These walls can be designed as load bearing and readily accommodate code-compliant electrical and plumbing systems. These systems should not impede the required 3/4" (19 mm) air space. Apply acoustical sealant around penetrations for maximum acoustical privacy.
7. The required 3/4" (19 mm) air space can be eliminated if the metal framing is covered on both faces with 6" (152 mm) wide, 1/2" (12.7 mm) DensArmor Plus® Fireguard C™ or 1/2" (12.7 mm) ToughRock® Fireguard C™ or 5/8" (15.9 mm) ToughRock® Fireguard® or 5/8" (15.9 mm) DensArmor Plus® Fireguard® gypsum board strips. The gypsum board strips are attached with 1" (25.4 mm) drywall screws spaced 12" (305 mm) o.c. to the metal framing. This primarily occurs in accessible attic areas. Attic areas not accessible do not require the 6" (152 mm) wide gypsum board strips.
8. The required fireblocking between floor levels may consist of 2" (51 mm) nominal lumber, or two thicknesses of 1" (25.4 mm) nominal lumber with broken lap joints, or one thickness of 0.719" (18.3 mm) wood structural panel with joints backed by 0.719" (18.3 mm) wood structural panel, or one thickness of 0.75" (19 mm) particleboard with joints backed by 0.75" (19 mm) particleboard. Gypsum board, including 1" (25.4 mm) DensGlass® Shaftliner and 5/8" (15.9 mm) DensArmor Plus interior panel, batts or blankets of mineral wool or fiberglass or other approved materials installed in such a manner as to be securely retained in place shall be permitted as an acceptable fireblock. (Section 717.2.1, 2009 IBC)
9. The Georgia-Pacific Gypsum Area Separation Wall assembly can be constructed with or without a parapet.
10. At the intersection of the solid 2" (51 mm) Area Separation Wall and the underside of the structural roof sheathing, cut liner panels at an angle to provide a tight fit to the structural sheathing. The 2" (51 mm) Area Separation Wall is not required to be capped using a C-Stud. Where the shaftliner panels are not tight to the structural sheathing, apply an approved fireblocking material (see Special Conditions, Item #8) to both sides of the Area Separation Wall.
11. There are two code-compliant methods for installing a fire-resistant roof underlayment: the ledger strip method and the partial roof underlayment method. In the ledger strip method, one layer of 5/8" (15.9 mm) DensArmor Plus Fireguard interior panel or 5/8" (15.9 mm) ToughRock Fireguard gypsum board is placed 4' (1219 mm) on both sides of the Area Separation Wall. The gypsum board is cut to fit tight between the roof framing members. Nominal 2" (51 mm) x 2" (51 mm) wood ledger strips hold the gypsum board snug to the underside of the roof sheathing and flush with the top of the roof framing. The ledgers are attached to the roof framing and form a continuous strip. The second method is using fire-treated plywood at least 4' (1219 mm) on both sides of the Area Separation Wall.
12. Penetrations through the solid 2" (51 mm) Georgia-Pacific Gypsum Area Separation Wall should be protected in accordance with the 2009 IBC Section 713. For specific installation details consult UL category XHEZ Through-penetration Firestop Systems.
13. Size and protection of openings in the solid 2" (51 mm) Georgia-Pacific Gypsum Area Separation Wall shall be in accordance with the 2009 IBC, Section 706.1.1. When the Georgia-Pacific Gypsum Area Separation Wall is designed as a Party Wall ("Any wall located on a property line between adjacent buildings, which is used or adapted for joint service between the two buildings.") as listed in the 2009 IBC, Section 706.1.1, openings are not permitted.
14. For specialized end-use areas, such as bathrooms, the adjacent framed walls can be covered with DensShield® Tile Backer from Georgia-Pacific in lieu of standard paper-faced gypsum board or fiberglass mat-faced interior panels.

Special Conditions *continued*

15. An offset occurs when one unit extends past the front or back edge of an adjacent unit. The H-studs of the Area Separation Wall are not designed for hanging sheathing and cladding, so planning is required before construction begins. There are two ways to deal with the offset. The first option is to pour enough concrete so that the Area Separation Wall and adjacent framed wall can extend to the furthest most point. Sheathing and cladding can then be installed to the adjacent framed wall. The second option is to terminate the Area Separation Wall at the end of the shared wall and then construct a one-hour wall to the end of the offset unit. Both scenarios are shown in the Details section of this brochure.

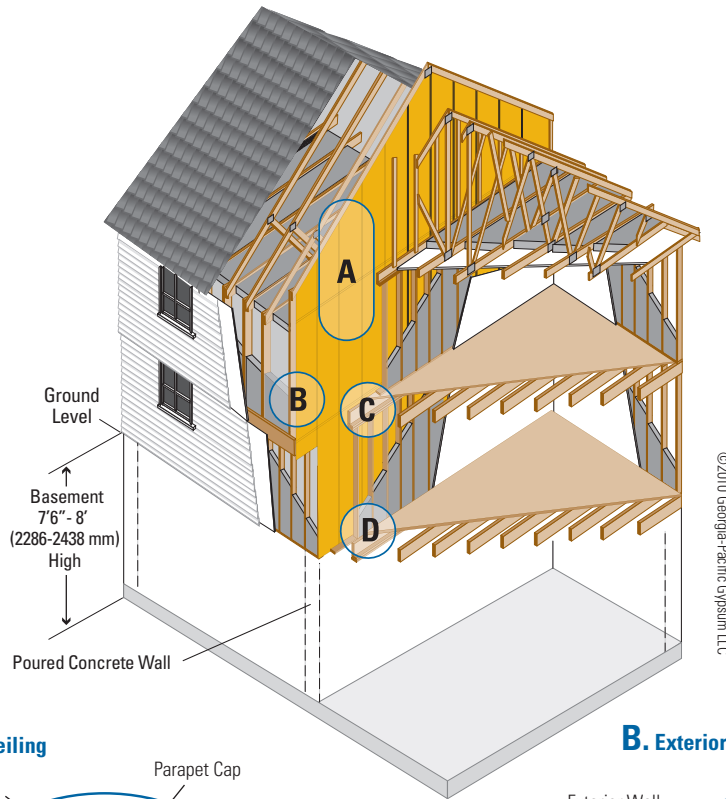
System Assemblies – 2-Hour Ratings*

Construction Detail	Assembly Components	STC	Test Reference
	Two layers 1" (25.4 mm) DensGlass® Shaftliner inserted in H-Studs 24" (610 mm) o.c. Min. 3/4" (19 mm) air space between liner panels and adjacent wood or metal framing.	60	UL DESIGN U373 ULC DESIGN W312 WHI GP/WA 120-03 Based on RAL TL89-383
	Two layers 1" (25.4 mm) DensGlass Shaftliner inserted in H-Studs 24" (610 mm) o.c. Min. 3/4" (19 mm) air space on both sides must be maintained between liner panels and adjacent framing. Sound Tested with 2 x 4 stud wall with 1/2" (12.7 mm) DensArmor Plus® interior panel each side of assembly and 3-1/2" (89 mm) fiberglass insulation in stud space both sides.	60	UL DESIGN U373 ULC DESIGN W312 WHI GP/WA 120-04 Based on RAL TL89-383
	Part. Thickness: 3" (76 mm) Weight per Sq. Ft.: 9.5 (46 Kg/m²) Two layers 1" (25.4 mm) DensGlass Shaftliner inserted in H-Studs 24" (610 mm) o.c. Metal framing covered using 6" (152 mm) wide or 1/2" (12.7 mm) DensArmor Plus® Fireguard C™ Interior Panel or 1/2" (12.7 mm) ToughRock® Fireguard C™ gypsum board.	38 est.	WHI 495-0743

Breakaway clip facings and height of wall differ between UL Design U373 and WHI GP/WA 120-04.

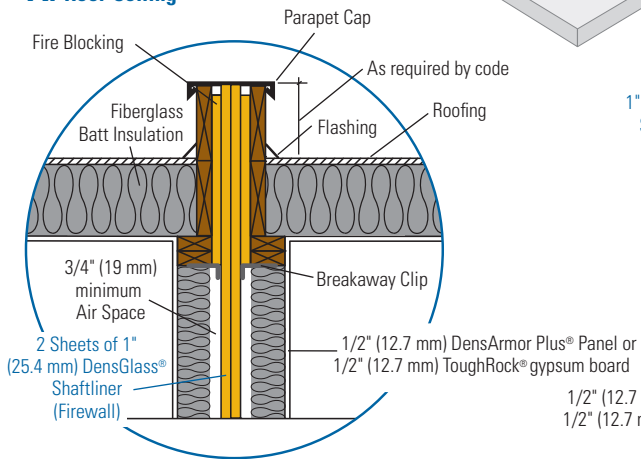
**Design assemblies for illustrative purposes only. Consult appropriate fire resistance directory for assembly information. See Fire Safety caution on back panel.*

Details

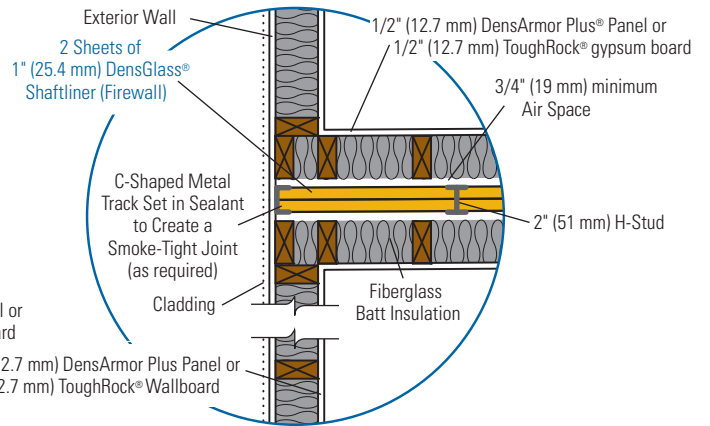


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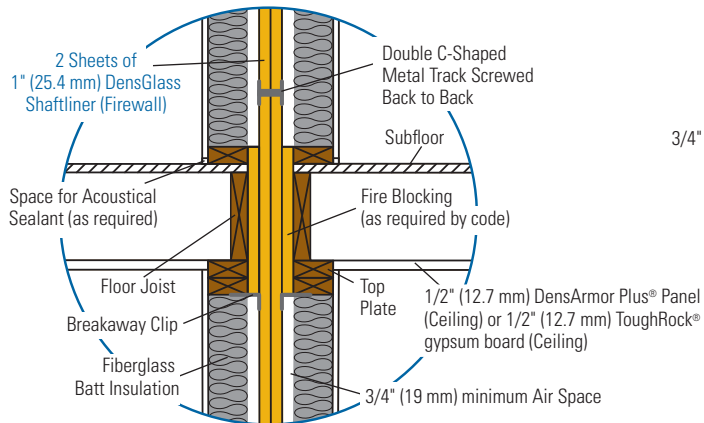
A. Roof-Ceiling



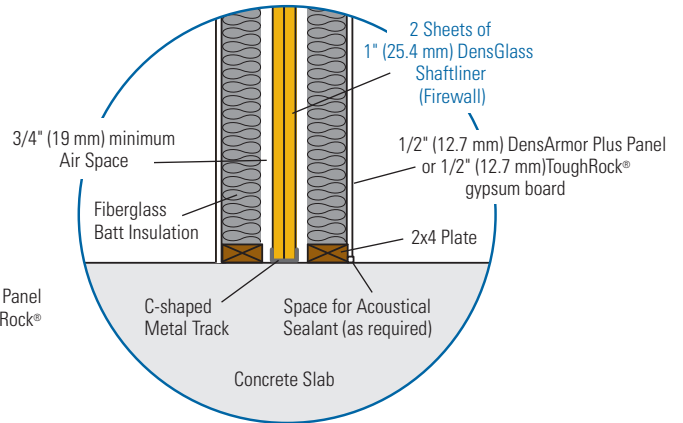
B. Exterior Wall Intersection



C. Floor Intersection

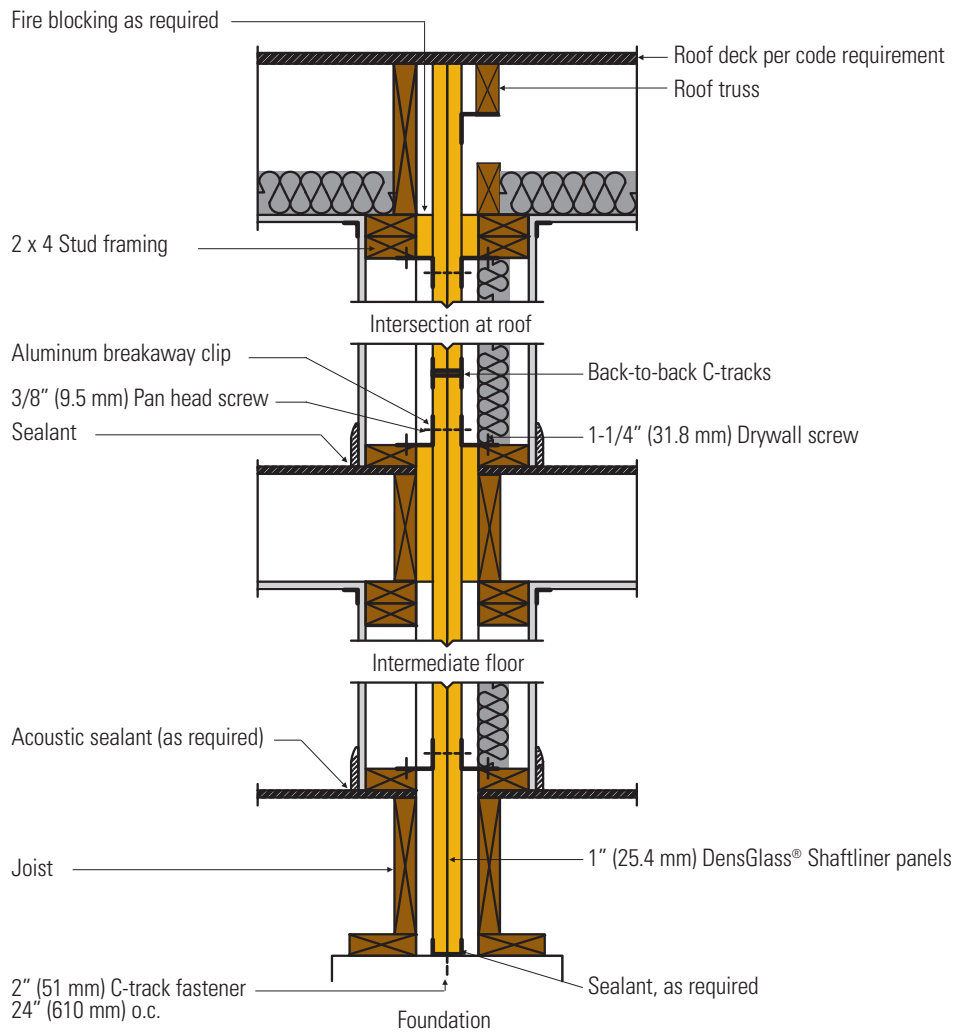


D. Wall-to-Slab



Details

Full Wall

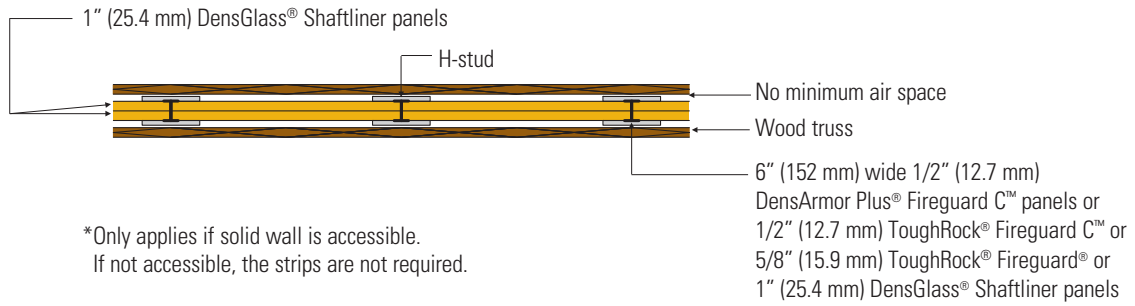


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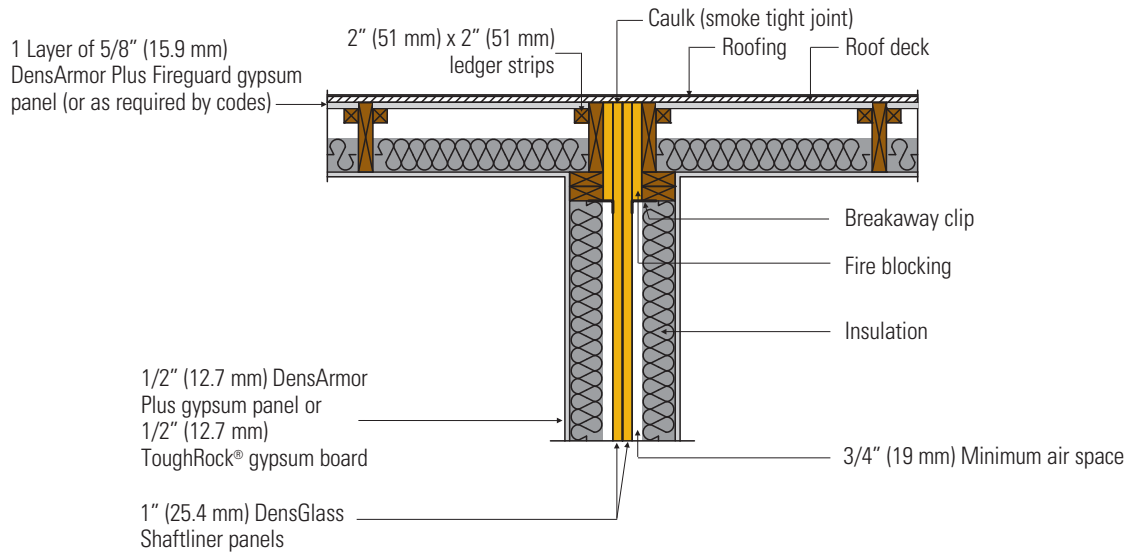
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Details

Attic – Adjacent to Trusses*

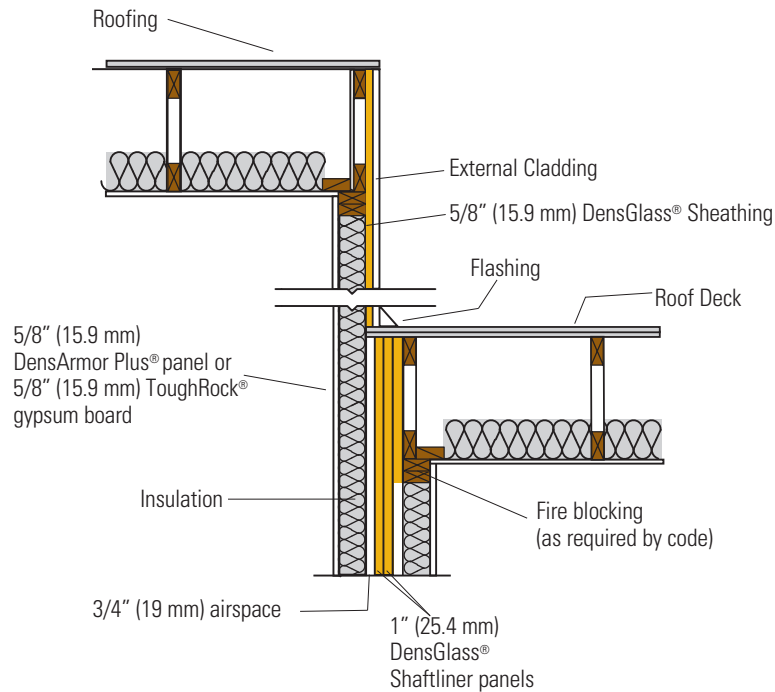


Typical Roof Junction

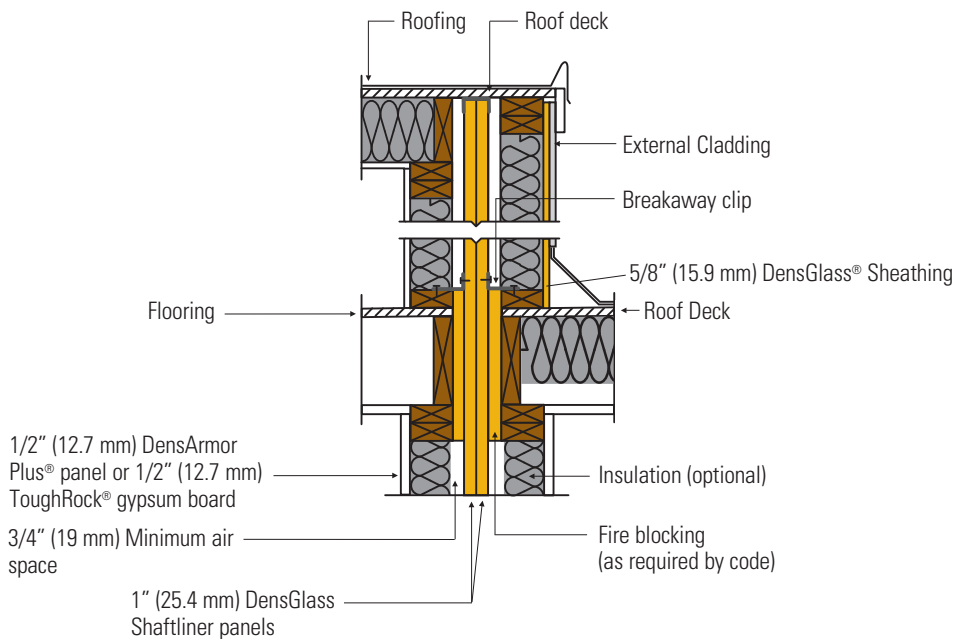


Details

Typical Offset Roof—1 Hour



Typical Offset Roof—2 Hour

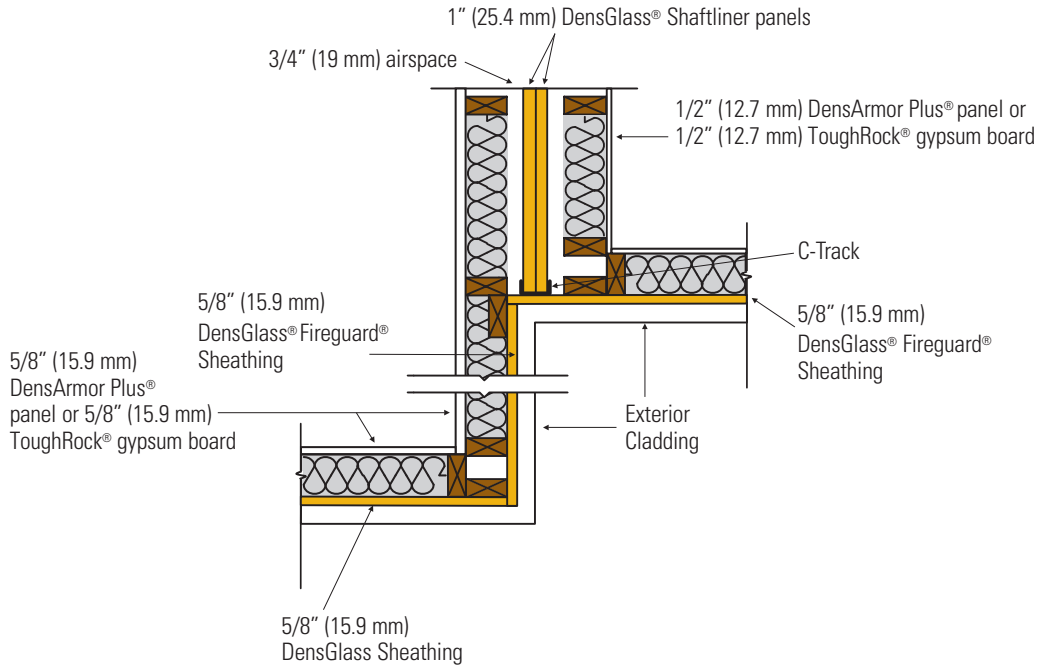


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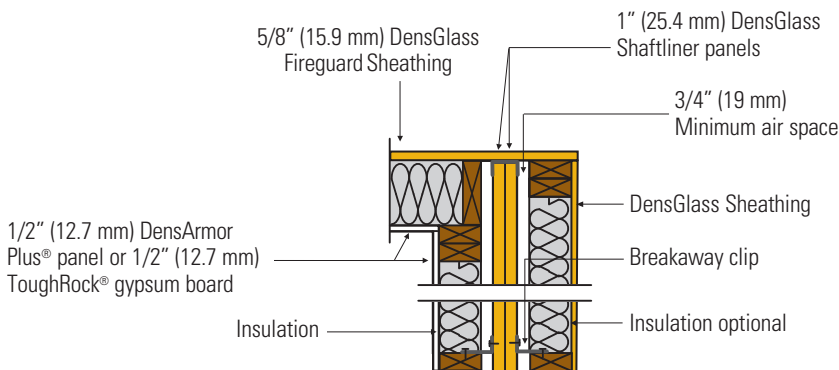
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Details

Typical Offset Wall—1 Hour

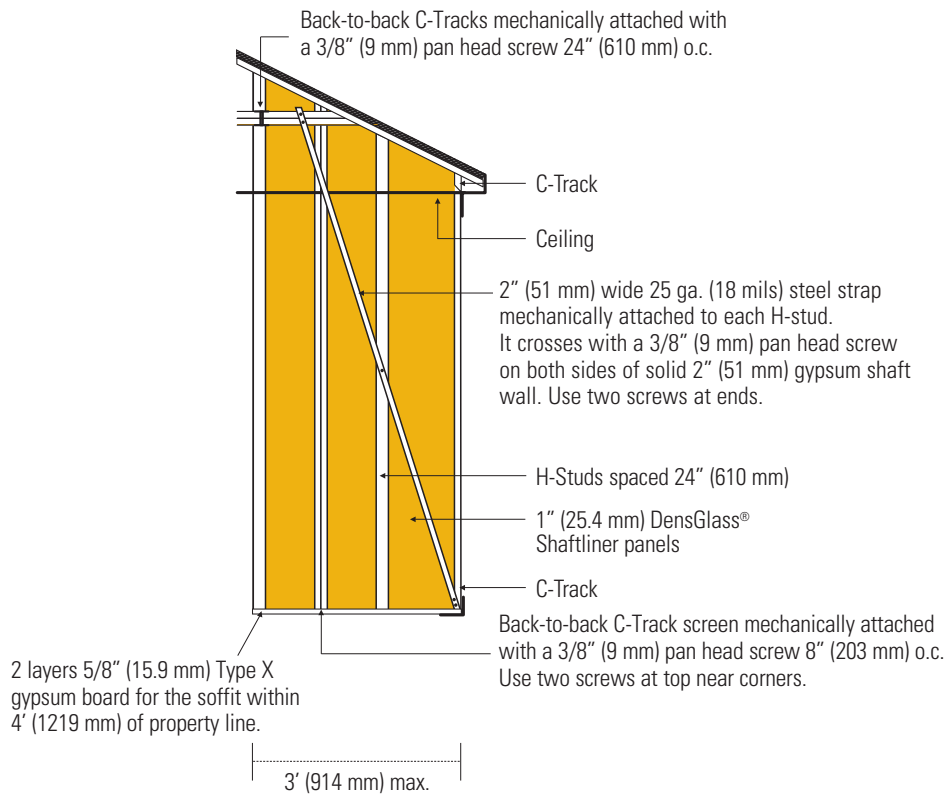


Typical Offset Wall—2 Hour



Details

Cantilever Detail



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Architectural Specifications

Part 1 – General

1.0 Description of Work

The type of work specified herein includes, but is not limited to, Area Separation Wall systems.

1.1 Quality Assurance

Fire Resistance Ratings: Provide fire-resistance rated assemblies identical to those indicated by reference to UL (Underwriters Laboratories), ULC (Underwriters Laboratories of Canada) or WHI (Warnock Hersey International) ITS numbers or in listings of other agencies acceptable to authorities having jurisdiction.

1.2 Qualifications

All area separation wall shaftliner and gypsum board and joint treatment materials shall be manufactured or provided by Georgia-Pacific Gypsum. The steel framing components and aluminum breakaway clips shall be provided by a steel manufacturer authorized by Georgia-Pacific Gypsum unless otherwise indicated. All materials shall be installed in accordance with printed installation instructions as required by the testing agency.

System must be constructed to meet any applicable code requirements.

1.3 Submittals

Product Data: Submit Georgia-Pacific Gypsum's descriptive literature for each area separation wall component indicating materials, dimensions, finishes and other data required to show compliance with the specifications.

1.4 Delivery, Storage and Handling

Deliver materials in original packages, containers or bundles bearing Georgia-Pacific Gypsum's brand name and identification. Product also may be wrapped in temporary factory-applied plastic packaging (plastic wrap) that **must** be removed upon receipt. Reference GA 801 for storage information. **Failure to remove the plastic shipping covers and plastic wrap may result in entrapment of condensation or moisture, which may cause application problems.**

Store materials flat, inside, under cover. Keep materials dry and protect from weather and damage from construction operations and other causes.

Handle area separation wall components to minimize damage to edges, ends or surfaces. Protect metal accessories, framing and trim from bending and damage.

1.5 Project Conditions

Environmental Requirements: Comply with the requirements of gypsum board application standards and recommendations of Georgia-Pacific Gypsum for environmental conditions before, during and after application of DensGlass® Shaftliner and ToughRock® gypsum board or DensArmor Plus® High-Performance Interior Panel.

Part 2 – Products

2.0 Materials

A. Metal Framing:

1. Steel H-Studs, minimum 25-gauge (18 mils), galvanized, and conforming to applicable sections of ASTM C 645. Lengths as required.
2. C-Track, minimum 25-gauge (18 mils), galvanized, in 10' (3048 mm) lengths.
3. Aluminum breakaway clips, 2" (51 mm) x 2-1/2" (64 mm) x 0.063" (2 mm).

B. Gypsum Board:

1. Shaftliner: 1" (25.4 mm) DensGlass® Fireguard® Shaftliner panels conforming to ASTM C 1658 or ASTM C 1396. 24" (610 mm) wide with double beveled edges. Lengths as required.
2. Gypsum board: 1/2" (12.7 mm) ToughRock® Fireguard C™ gypsum board or 5/8" (15.9 mm) ToughRock Fireguard gypsum board; 1/2" (12.7 mm) DensArmor Plus® Fireguard C™ High-Performance Interior Panel or 5/8" (15.9 mm) DensArmor Plus® Fireguard® High Performance Interior Panel meeting the relevant physical requirements of ASTM C 1658, ASTM C 1177, ASTM C 1396 and ASTM C 36.

C. Fasteners: For 25-gauge (18 mils) framing, Type S screws.

D. Miscellaneous Materials: Acoustical sealant.

Part 3 – Execution

3.0 General

Follow Georgia-Pacific Gypsum recommendations for installation of metal framing and gypsum board for area separation walls.

3.1 Installation

Foundation: Position 2" (51 mm) C-Track at floor and attach securely to foundation at ends and 24" (610 mm) o.c. Caulk under runner at foundation with min. 1/4" (6 mm) bead of acoustical sealant when specified to reduce noise transmission.

First Floor: Start the wall with a vertical C-Track at one end and install two DensGlass® Shaftliner panels. Install H-Studs and insert DensGlass Shaftliner panels. Attach two thicknesses of 1" (25.4 mm) DensGlass Shaftliner vertically in C-Track with long edges in H-Stud. Continue installing H-Studs and shaftliner alternately until wall is complete. Attach horizontal C-Track to top of shaftliner panels, fastening flanges of C-Track at all corners on both sides of shaftliner with minimum of one 3/8" (9 mm) minimum length drill point screws.

Intermediate Floors: Attach C-Track to C-Track cap on wall below. Fasten C-Tracks together using two 3/8" (9 mm) minimum length screws at ends and 24" (610 mm) o.c. Fasten H-Studs to adjacent framing with aluminum breakaway clips. Attach breakaway clips to H-stud with a minimum of one 3/8" (9 mm) minimum length pan head screw and to adjacent wood framing with 1-1/4" (32 mm) drywall screw. Install fire blocking between solid wall system and adjacent framing at floor lines, bottom of truss line and any other locations according to code requirements. When the UL Design U373 Area Separation Wall assembly is specified, the breakaway clips should be located vertically at each floor level (10'0" (3048 mm) o.c.) and horizontally on every H-Stud 24" (610 mm) o.c. When the total height of the Area Separation Wall exceeds 23'0" (7010 mm), breakaway clips shall be installed every 5'0" (1524 mm) maximum for the lower 20' (6096 mm) and every 10'0" (3048 mm) maximum for the upper 24'0" (7315 mm) of the wall assembly. Breakaway clips are installed on both sides of the Area Separation Wall. When the WHI/ITS Design GP/WA 120-04 Area Separation Wall assembly is specified, the breakaway clips should be located vertically at each floor level (10'0" (3048 mm) o.c.) and horizontally on every other H-stud 48" (1219 mm) o.c. When the total height of the Area Separation Wall exceeds 20'0" (6096 mm), breakaway clips shall be installed vertically every 8'0" (2438 mm) maximum for the lower 20'0" (6096 m) and every 10'0" (3048 mm) maximum for the upper 48'0" (14630 mm) of the wall assembly.

Roof: Cut DensGlass Shaftliner panels and H-Studs to follow roof pitch. Fasten H-Studs to framing with an aluminum breakaway clip.

Fiberglass Insulation: Friction-fit fiberglass blanket insulation within cavities.

Interior Finish: Apply gypsum board as specified to wood studs with screws or nails in conventional manner.

3.2 Accessories

Joint System: Finish all face layer joints and internal angles of wood stud wall with ToughRock® joint treatment applied according to manufacturer's directions. Spot exposed fasteners on face layers and finish corner bead, control joints and trim as required.

Metal Trim: Where partition or ceiling terminates against masonry or other dissimilar material, apply metal trim over drywall edge.

Control Joints: Gap gypsum board behind joint and back with double framing. Attach control joint on both flanges along entire length of joint.

Limitations

Unsupported wall height between floors should not exceed 12' (3658 mm). May be used in buildings up to four stories. The UL Design U373 Area Separation Wall assembly was evaluated at a height up to 44' (13,411 mm) and the WHI/ITS Design WHI GP WA 120-04 Area Separation Wall assembly was evaluated at a height up to 68' (20,726 mm).

Service cutouts or through penetrations shall be installed and protected in accordance with the building code.

Do not install insulation in the system until the building has been properly closed in.

Provide for deflection of live-loaded floor assemblies by using relief joints or floating trim.

CAUTION: For product fire, safety and use information, go to gp.com/safetyinfo.

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COMMONLY USED METRIC CONVERSIONS

Gypsum Board Thickness

1/4 in. – 6 mm
1/2 in. – 12.7 mm
5/8 in. – 15.9 mm
1 in. – 25.4 mm

Gypsum Board Width

2 ft. – 610 mm
4 ft. – 1219 mm
32 in. – 813 mm

Gypsum Board Length

4 ft. – 1219 mm
5 ft. – 1524 mm
8 ft. – 2438 mm
9 ft. – 2743 mm
10 ft. – 3048 mm
12 ft. – 3658 mm

Framing Spacing

16 in. – 406 mm
24 in. – 610 mm

Fastener Spacing

2 in. – 51 mm
2.5 in. – 64 mm
7 in. – 178 mm
8 in. – 203 mm
12 in. – 305 mm
16 in. – 406 mm
24 in. – 610 mm

Temperature

40°F – 5°C
50°F – 10°C
125°F – 52°C

The Dens™ Brand of High-Performance Gypsum Products from Georgia-Pacific

DensGlass® Sheathing	The original and universal standard of exterior gypsum sheathing offers superior weather resistance, with a 12-month weather exposure limited warranty. Look for the familiar GOLD color.
DensShield® Tile Backer	Acrylic-coated tile backer stops moisture at the surface. Lightweight and strong, built for speed on the job site. IBC/IRC Code Compliant. GREENGUARD listed for microbial resistance.
DensDeck® Roof Boards	Fiberglass mat roof board used as the ideal thermal barrier and cover board to improve resistance to wind uplift, hail, foot traffic, fire, moisture and mold in a broad range of commercial roofing applications. Look for green DensDeck Prime and DensDeck DuraGuard, too.
DensGlass® Shaftliner	Specially-designed panels for moisture-prone vertical or horizontal shafts, interior stairwells and area separation wall assemblies. 12-month weather exposure limited warranty. GREENGUARD listed for microbial resistance.
DensArmor Plus® High-Performance Interior Panel	High-performance interior panel accelerates scheduling because it can be installed before the building is dried-in. 12-month weather exposure limited warranty. GREENGUARD Indoor Air Quality Certified,® GREENGUARD Children & Schools SM Certified and CHPS TM listed for low emissions. GREENGUARD listed for microbial resistance.
DensArmor Plus® Abuse-Resistant Interior Panel	Same benefits as DensArmor Plus® High-Performance Interior Panel with added resistance to scuffs, abrasions and surface indentations. Ideal for healthcare facilities and schools. GREENGUARD Indoor Air Quality Certified,® GREENGUARD Children & Schools SM Certified and CHPS TM listed for low emissions. GREENGUARD listed for microbial resistance.
DensArmor Plus® Impact-Resistant Interior Panel	Even greater durability with an embedded impact-resistant mesh for the ultimate resistance in high traffic areas. Ideal for healthcare facilities, schools and correctional institutions. GREENGUARD Indoor Air Quality Certified,® GREENGUARD Children & Schools SM Certified and CHPS TM listed for low emissions. GREENGUARD listed for microbial resistance.



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Some of our products have been certified by Scientific Certification Systems (SCS). SCS is an internationally recognized third-party evaluation, testing and certification organization. Its program spans a wide cross-section of the economy, including manufacturing and retailing, consumer products, the energy industry, and the home improvement and construction sectors. For details on specific Georgia-Pacific Gypsum products and plants, please contact our Technical Hotline at 1-800-225-6119.

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For current warranty information for this product, please go to www.gpgypsum.com and select the product for warranty information. All sales of this product by Georgia-Pacific are subject to our Terms of Sale available at www.gpgypsum.com.

UPDATES AND CURRENT INFORMATION –

The information in this document may change without notice. Visit our website at www.gpgypsum.com for updates and current information.

CAUTION: For product fire, safety and use information, go to gp.com/safetyinfo or call 1-800-225-6119.

HANDLING AND USE –

CAUTION: This product contains fiberglass facings which may cause skin irritation. Dust and fibers produced during the handling and installation of the product may cause skin, eye and respiratory tract irritation. Avoid breathing dust and minimize contact with skin and eyes. Wear long sleeve shirts, long pants and eye protection. Always maintain adequate ventilation. Use a dust mask or NIOSH/MSHA approved respirator as appropriate in dusty or poorly ventilated areas.

FIRE SAFETY CAUTION –

Passing a fire test in a controlled laboratory setting and/or certifying or labeling a product as having a one-hour, two-hour, or any other fire resistance or protection rating and, therefore, as acceptable for use in certain fire rated assemblies/systems, does not mean that either a particular assembly/system incorporating the product, or any given piece of the product itself, will necessarily provide one-hour fire resistance, two-hour fire resistance, or any other specified fire resistance or protection in an actual fire. In the event of an actual fire, you should immediately take any and all actions necessary for your safety and the safety of others without regard for any fire rating of any product or assembly/system.