

A two-story house with a stone fireplace and two white garage doors. The house has a dark roof and light-colored siding. The stone fireplace is in the center, flanked by two white garage doors. There are windows with shutters and a decorative stone archway above the fireplace. The house is set against a clear blue sky.

M2TECH[®] SHAFTLINER

For Area Separation Firewalls

CertainTeed
SAINT-GOBAIN

M2Tech® Shaftliner Type X for Area Separation Firewalls

M2Tech® Shaftliner is a specially formulated product for applications where enhanced mold resistance is preferred. It can be used for firewalls in standard multi-family residential applications.

M2TECH®

CertainTeed's M2Tech® Moisture and Mold resistant family of products features unique M2Tech® technology. M2Tech® provides:

- Additional zone of protection against moisture and mold
- Numerous fire-rated assembly designs for safety and performance
- Lightweight gypsum board that handles like other CertainTeed gypsum boards
- Does not require special tools
- Easy to cut and install
- May be finished, painted, or wallpapered using conventional gypsum board techniques
- Achieves score of 10 for mold resistance per ASTM D3273

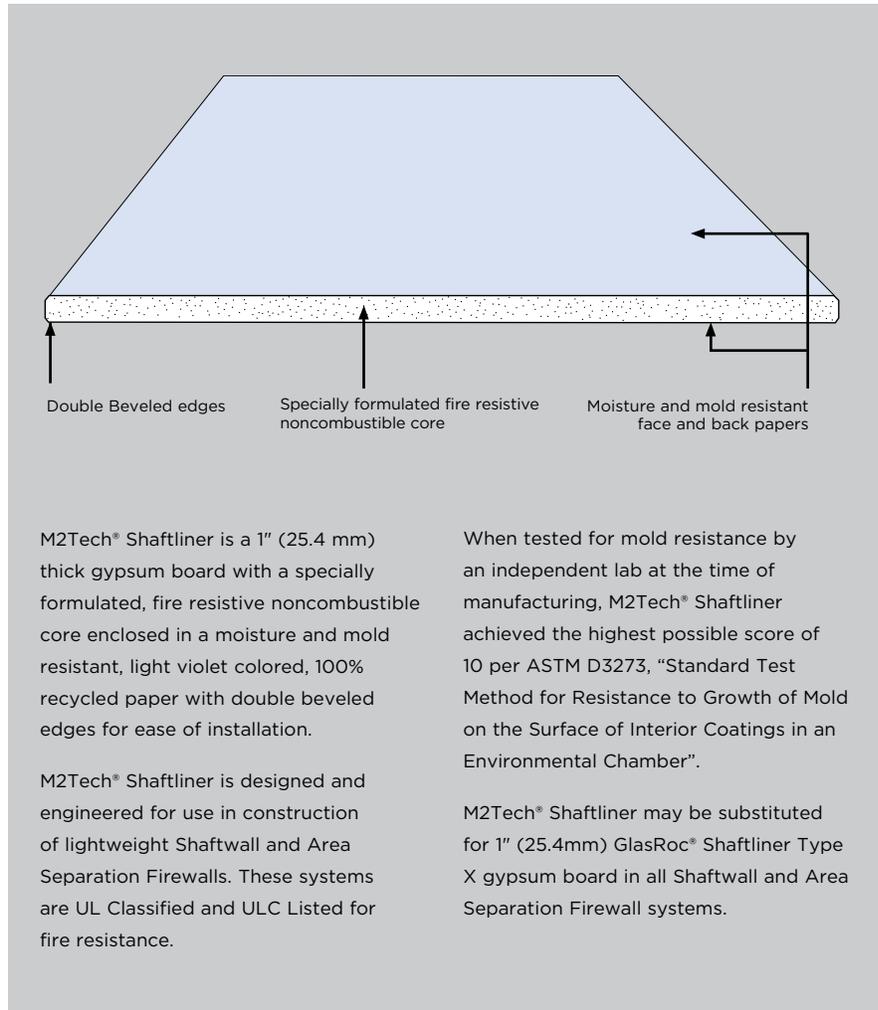
The M2Tech® Shaftliner advantage...

M2Tech® Shaftliner and CertainTeed's gypsum boards that include M2Tech® technology can be combined to offer superior mold resistance performance for Area Separation Firewalls.

Gypsum Area Separation Firewall systems replace traditional masonry for fire separation between multi-family units. Some inherent advantages of gypsum Area Separation Firewalls are: lighter weight, reduced thickness, ease and speed of installation, no requirement for scaffolding,

and no requirement for an additional trade on the job.

Area Separation Firewalls offer the advantages of fire resistance and noise attenuation between adjoining housing units. These walls offer a 2-hour fire resistance rating line of defense between units and provide sound ratings up to STC 61. For improved sound attenuation, substitute 1/2" (12.7 mm) SilentFX® QuickCut™ for 1/2" (12.7 mm) CertainTeed® Regular in Area Separation Firewall systems.



M2Tech® Shaftliner is a 1" (25.4 mm) thick gypsum board with a specially formulated, fire resistive noncombustible core enclosed in a moisture and mold resistant, light violet colored, 100% recycled paper with double beveled edges for ease of installation.

M2Tech® Shaftliner is designed and engineered for use in construction of lightweight Shaftwall and Area Separation Firewalls. These systems are UL Classified and ULC Listed for fire resistance.

When tested for mold resistance by an independent lab at the time of manufacturing, M2Tech® Shaftliner achieved the highest possible score of 10 per ASTM D3273, "Standard Test Method for Resistance to Growth of Mold on the Surface of Interior Coatings in an Environmental Chamber".

M2Tech® Shaftliner may be substituted for 1" (25.4mm) GlasRoc® Shaftliner Type X gypsum board in all Shaftwall and Area Separation Firewall systems.

Area Separation Firewalls

M2Tech® Shaftliner is used in conjunction with other CertainTeed gypsum board products in Area Separation Firewalls.

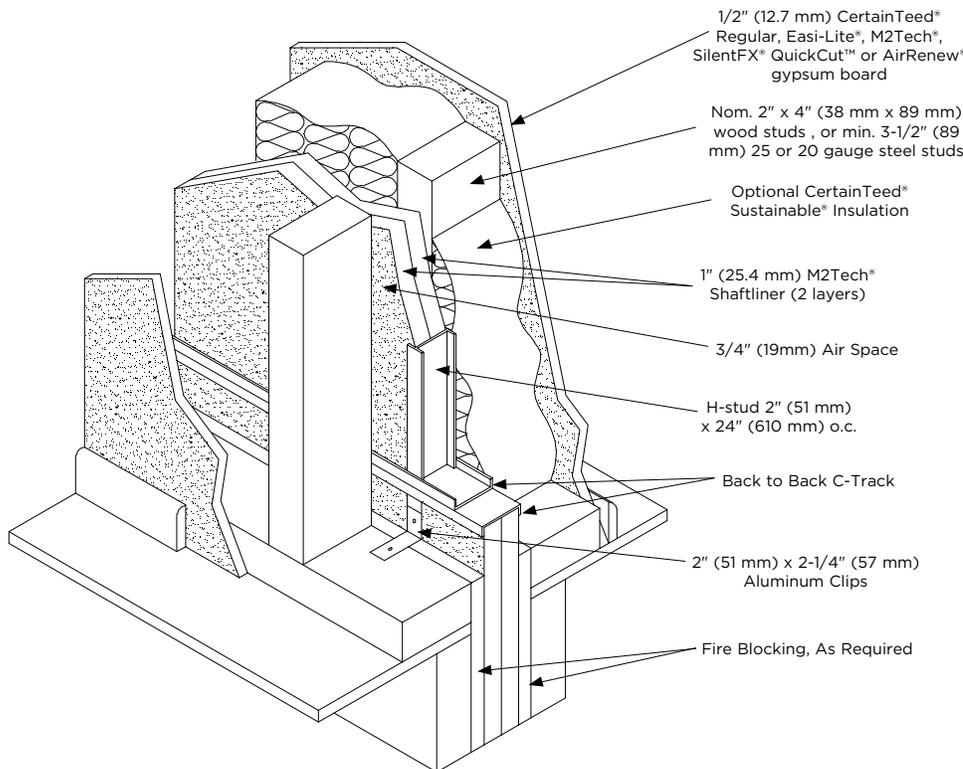
Area Separation Firewalls are solid type separation walls assembled using 1" (25.4 mm) M2Tech® Shaftliner gypsum board, metal framing and 1/2" (12.7 mm) CertainTeed® Regular, Easi-Lite®, M2Tech®, SilentFX® QuickCut™ or AirRenew® gypsum board for the interior finish. The firewall is easily stacked, floor to floor, allowing progressive construction.

For projects that require an exposure warranty for the shaftliner board due to

prolonged exposure or inclement weather, we recommend GlasRoc® Shaftliner with its 12 month exposure Limited Warranty.

Breakaway aluminum clips are used to attach the interior wall to adjacent structural metal framing and provide lateral support. When one side is exposed to fire, the clips yield from the heat and break away allowing the gypsum board interior wall on the fire side to collapse. Thus the Area Separation Firewall remains intact to protect neighboring spaces.

Area Separation Firewalls are easier and faster to construct, lighter weight, and take up less space than masonry wall systems.



- Thickness:** 1" (25.4 mm)
- Widths:** 2' (610 mm) Standard
- Lengths:** 8' (2440 mm), 10' (3050 mm) and 12' (3660 mm) Standard
- Edges:** Double beveled
- Paper:** Light violet colored 100% recycled moisture & mold resistant paper face and back

BUILDING RESPONSIBLY

Through the responsible development of innovative and sustainable building products, CertainTeed has helped shape the building products industry for more than 100 years. Founded in 1904 as General Roofing Manufacturing Company, the firm's slogan "Quality Made Certain, Satisfaction Guaranteed," quickly inspired the name CertainTeed. Today, CertainTeed is North America's leading brand of exterior and interior building products, including roofing, siding, fence, decking, railing, trim, gypsum, ceilings and insulation.





Working With the Product

Handling and Storage

CertainTeed gypsum boards should be stacked flat on a smooth, level surface, not stored directly on the ground. When spacers are used, position them closely enough together to minimize warpage. Care should be taken to prevent damage to edges and corners. Always keep gypsum boards dry prior to installation.

CertainTeed assumes no responsibility for consequential damages that may result from the presence of standing water or where moisture is in direct contact with Area Separation Firewall system components.

Cutting

The score and snap method is a fast and efficient way to cut gypsum board.

Steps:

1. On the face side, position a straight edge along the line of cut.
2. Score sheets with a knife or other suitable tool.
3. With a quick, firm motion, snap back away from the face.
4. The back paper can either be cut with a knife or separated by snapping the piece in the opposite direction.

5. Smooth all cut ends and edges to ensure tight joints.

To make cut outs, score around the perimeter on the face and back and tap out the waste piece from the face side. Cut outs can also be made with a drywall saw. Gypsum boards can also be cut with a saw. Safety glasses should always be worn when using power tools. For information on avoiding dust inhalation, refer to the Material Safety Data Sheet available on our web site, www.certainteed.com.

Installation

Area Separation Wall (Non-Loadbearing):

Steel framing and installation of 1" (25.4 mm) M2Tech® Shaftliner gypsum board for solid type Area Separation Firewalls are used as the common wall of one unit. An Area Separation Firewall can be constructed by following these steps before continuing to frame the adjacent unit.

1. Attach 2" (51 mm) wide C-Track to slab at bottom of wall using suitable fasteners at a maximum of 24" (610 mm) o.c. Allow a 3/4" (19 mm) space from wood or steel stud framing on each side of the area separation firewall.
2. Install vertical C-Track at the beginning of the wall and support as needed.
3. Insert two sections of 1" (25.4 mm) M2Tech® Shaftliner gypsum board in bottom channel and plumb to vertical C-Track.
4. Install 1" (25.4 mm) M2Tech® Shaftliner gypsum boards vertically. Continue wall as needed by placing H-Studs between the preceding panels every 24" (610 mm) for the length of the wall and enclose the end boards with vertical C-Track.
5. Cap the wall assembly before continuing higher using C-Track fastened to the H-Studs on alternate sides with 3/8" (10 mm) Type S screws. A second C-Track for the next row of shaftliner panels is then placed back to back with end joints staggered at least 12" (305 mm) o.c. and fastened with double 3/8" (10 mm) Type S screws at ends and 24" (610 mm) o.c.

6. Attachment Clips: Aluminum angle, 0.063" (1.6 mm) thick, min. 2" (51 mm) wide with min. 2" (51 mm) and 2-1/4" (57 mm) legs. Clips secured to each side of every H-Stud (two per stud) to each side of every H-Stud (two per stud) with Type S screws 3/8" (10 mm) long to H-Studs and steel framing, and with Type W screws 1-1/4" (32 mm) long to wood framing through holes provided in the clip. Clips spaced a max of 10' (3050 mm) o.c. vertically between wood and steel framing and H-Studs for separation firewalls up to 23' (7000 mm) high. For separation firewalls up to 44' (13400 mm) high, clips spaced as described above for the upper 24' (7300 mm) and the remaining wall area below requires clips spaced a max. 5' (1525 mm) o.c. vertically between wood framing and H-Studs.
7. For separation firewalls greater than 44' (13400 mm) and up to 68' high (20700 mm); clips are spaced a maximum 40" (1015 mm) o.c. for the lower 24' (7300 mm) section, a maximum 5' (1525 mm) o.c. for the 24' to 44' section and a maximum 10' (3050 mm) o.c. for the 44' to 68' section.
8. This assembly can be repeated, per plan, up to 68 feet (20,700 mm) high. Cap the top of the assembly with 2" (51 mm) C-Track and protect the entire installation from moisture.
9. Where required, use an approved acoustical sealant, such as such as SilentFX® Noiseproofing Sealant to caulk around the perimeter of wall sections and between horizontal back-to-back C-tracks.

Interior Finish Walls:

Protected Walls - (Loadbearing or Non-Loadbearing)

10. Wood Studs - Nom 2" (38 mm) by 4" (89 mm) max. spaced 24" (610 mm) o.c. Steel Studs - Min. 3-1/2" (89 mm) 25 gauge for non-loadbearing or 20 gauge for loadbearing walls max. spaced 24" (610 mm) o.c. Studs cross-braced at mid-height where necessary for clip attachment. Min. 3/4" (19 mm) separation between wood or steel framing and Area Separation Firewall. As an alternate to the 3/4" (19 mm) separation air space from wood or steel framing, the center Area Separation Firewall steel framing components are permitted to be covered with 6" (150

mm) wide batten strips of 1/2" (12.7 mm) CertainTeed® Type C gypsum board¹ attached to the steel framing with 1" (25.4 mm) Type S drywall screws spaced 12" (300 mm) o.c. Accessible attic areas typically use this alternate method. Non-accessible attic areas do not require the 6" (150 mm) wide gypsum board batten strips.

11. Insulation (Optional) - CertainTeed Sustainable® Insulation, or equivalent, installed between wood or steel studs to meet listed STC performance.
12. CertainTeed gypsum board, min. 1/2" (12.7 mm) thick, 4' (1220 mm) wide, applied either horizontally or vertically. Gypsum board attached to wood studs with 1-1/4" (32 mm) long drywall nails or 1-1/4" (32 mm) Type W drywall screws spaced 8" (200 mm) o.c. Gypsum board attached to steel studs with min. 1" (25.4 mm) Type S drywall screws spaced 12" (300 mm) o.c. Vertical joints located over studs. Joints and fasteners finished with CertainTeed Finishing system or equivalent.

Surface Preparation of Finished Sides

Joints, corners and fastener heads on the face side shall be finished in accordance with ASTM C840, GA-214, GA-216, CAN/CSA-A82.31, GA Fire Resistance Design Manual GA-600 and joint compound manufacturer's instructions. Joint compound shall comply with ASTM C475.

1. No surface treatment shall be done until the interior temperature has been maintained at a minimum of 50°F (10°C) for at least 48 hours prior to application of compounds and until all materials have completely dried. Adequate continuous ventilation must also be provided.
2. Fill and level joints with CertainTeed joint compound.
3. Embed tape into the wet compound and allow to dry. For inside corners, crease the tape and work it into joint.
4. Apply a second coat of compound across the joint and feather to approximately 4" (100 mm) on each side.
5. Apply a third coat and feather to approximately 6" (150 mm) on each side.
6. Allow each coat to dry before proceeding. Refer to GA-236 for the effects of environmental conditions on drying times.
7. Attach corner bead to outside corners and apply three coats of joint compound. Feather out each coat as described in steps 4-6.

8. Spot cover all fastener heads with three coats of joint compound applied in different directions.
9. Lightly sand the last coat of all treated areas, taking care not to rough the surrounding gypsum board paper. Smoothing can also be accomplished with a damp sponge.

Finishing Interior Walls

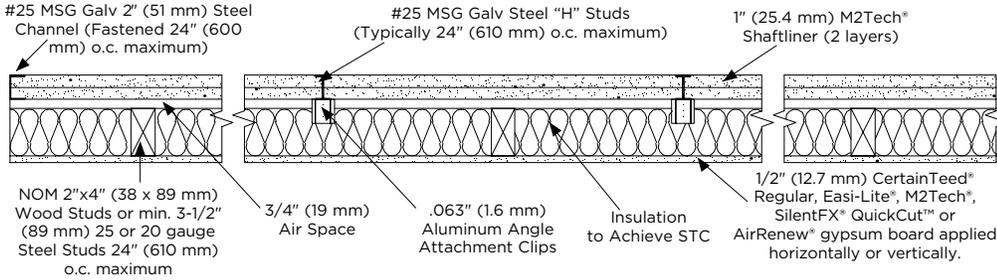
CertainTeed gypsum board can be finished with paint, texture or wallpaper. High quality primer/sealer must be used prior to any type of final decoration. For high gloss paint and severe lighting conditions, a thin skim coat of joint compound or CertainTeed Level V Wall/Ceiling Primer Surfer should be applied across the entire surface (Level 5 Finish). This will help minimize the irregularities and porosity differences between the materials. Refer to GA-214, GA-216, CAN/CSA-A82.31 and ASTM C840 for additional finishing instructions. Finishing is not required on Area Separation Firewall.

Limitations

- Area Separation Firewall is a non-loadbearing partition.
- CertainTeed gypsum board must not be used in areas that are continuously or repeatedly exposed to excessive moisture or dampness.
- Systems shall not be exposed to sustained temperatures exceeding 125°F (52°C).
- Do not use shaftliner boards in unlined air-supply ducts.
- CertainTeed gypsum board should not come in direct contact with concrete, masonry or other surfaces that have a high moisture content.
- Unsupported wall height between floors should not exceed 12' (3660 mm). The assembly may be used in buildings up to 4 stories with a total height not to exceed 68' (20,700 mm).
- Penetrations through the solid 2" (51 mm) Area Separation Firewall should be protected by a Firestop System in accordance with the IBC, IRC or NBCC.
- Penetrations in the solid 2" (51 mm) Area Separation Firewalls, designed as a Party Wall (a wall located on a property line between adjacent buildings which is used or adapted for joint service between the two buildings), i.e. town homes are usually not permitted by code authorities. Consult your local building code authority.

**Non-loadbearing
Fire Rating - 2 Hour**

EXPOSED TO FIRE FROM AREA SEPARATION FIREWALL SIDE ONLY



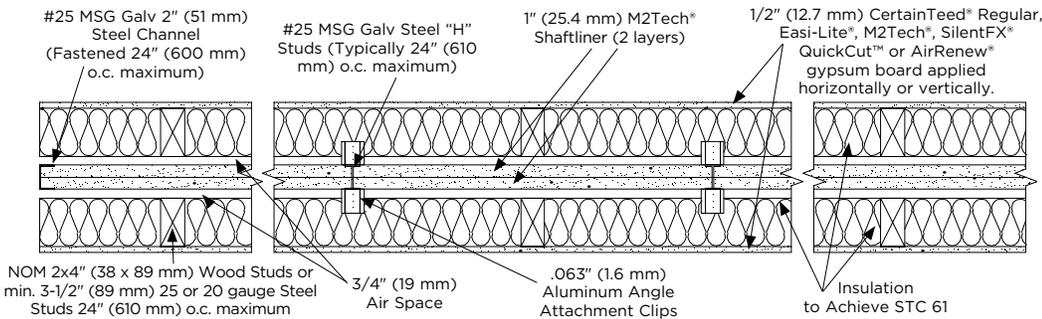
FIRE TEST
UL U366, ULC W311
ITS Report No.
100260628SAT-006A, 006B

SOUND TEST
RAL-TL00-177
STC 57

THICKNESS
6-3/4" (172 mm)

APPROX. WT.
10 psf (49 kg/m²)

EXPOSED TO FIRE FROM EITHER SIDE



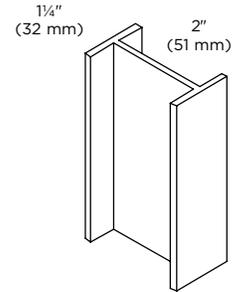
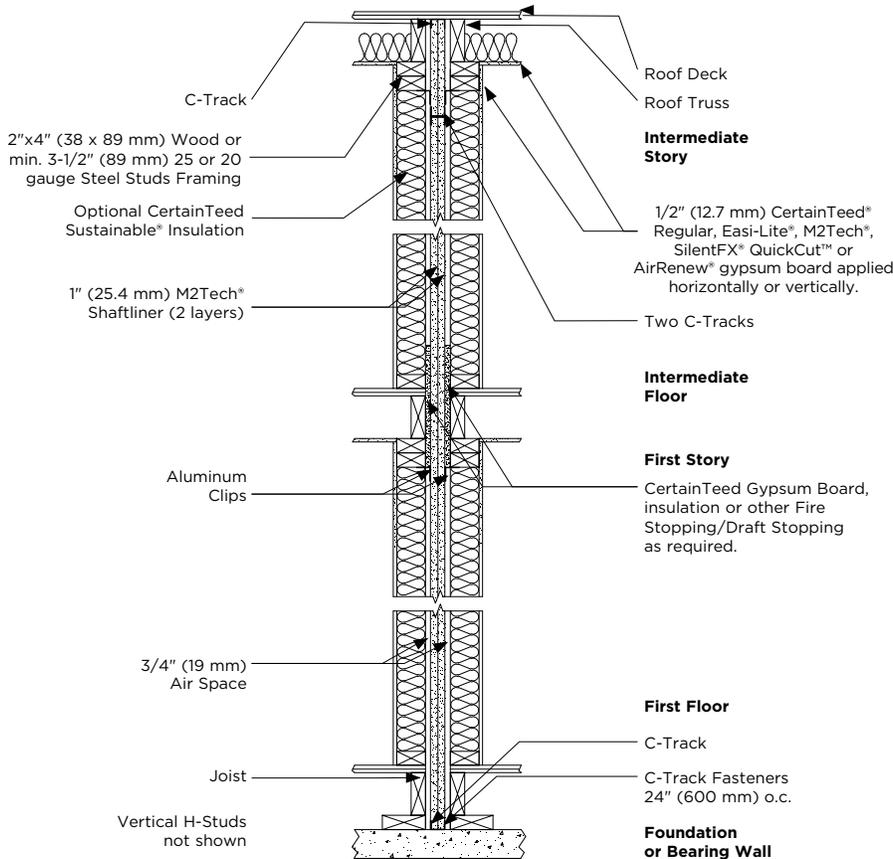
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UL U366, ULC W311
ITS Report No.
100260628SAT-006A, 006B

SOUND TEST
RAL-TL00-176
STC 61

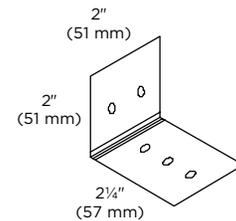
THICKNESS
11 1/2" (292 mm)

APPROX. WT.
13 psf (63kg/m²)

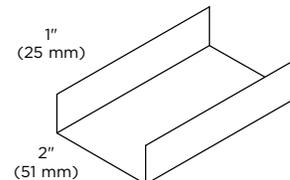
TYPICAL INSTALLATION DETAILS



H-STUD

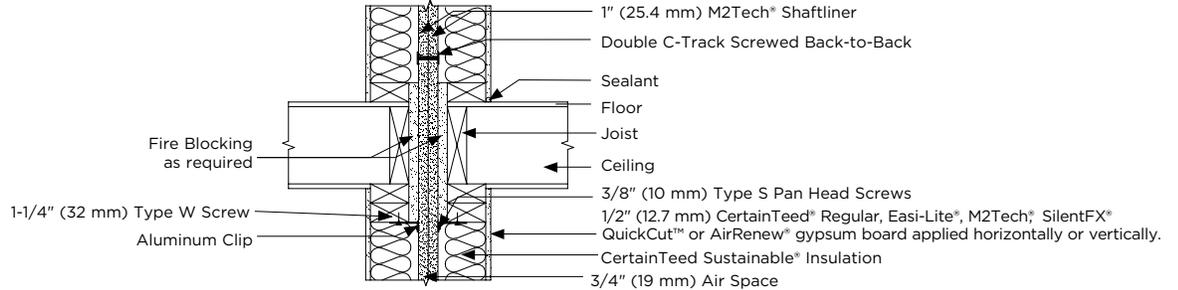


ASW ALUMINUM CLIP

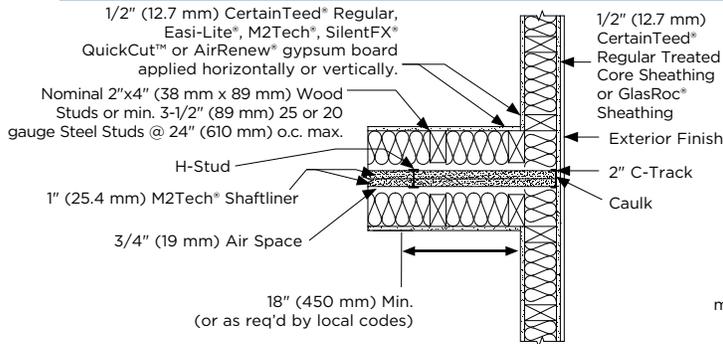


C-TRACK

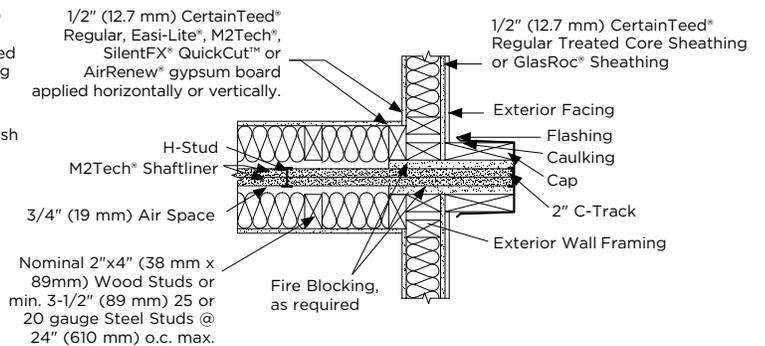
INTERMEDIATE FLOOR INTERSECTION LOCATION OF ASW CLIPS



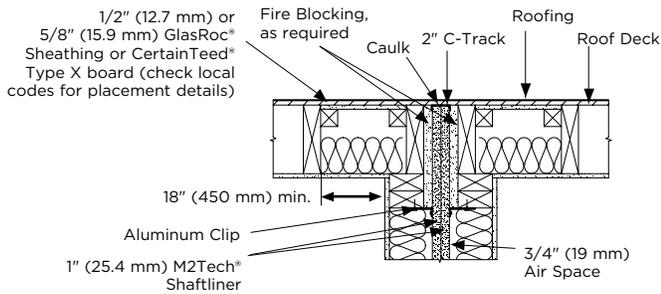
EXTERIOR WALL INTERSECTION



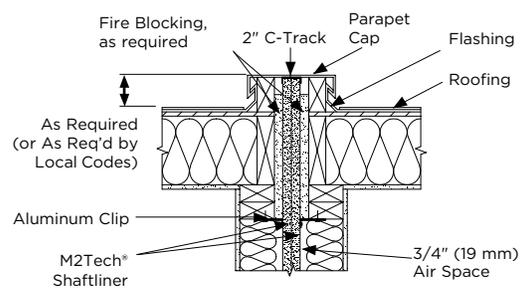
PROTRUDING EXTERIOR WALL



TYPICAL ROOF JUNCTION DETAIL



TYPICAL ROOF PARAPET DETAIL



Component Specifications

M2Tech® Shaftliner		Steel
Standard	ASTM C1396 CAN/CSA A82.27	C-Track 25 ga, 2" (51 mm)
Thickness	1" (25.4 mm)	H-Stud 25 ga, 2" (51 mm)
Width	2' (610 mm)	Aluminum Clip .063" (1.6 mm), 2" (51 mm)
Lengths	8' (2440 mm), 10' (3050mm), 12' (3660 mm)	
Approx. Weight	4.0 psf (18 kg/m ²)	
Edges	Double Beveled	

Consult local building codes for regulations in your area.

Surface Burning Characteristics

M2Tech® Shaftliner		
Standard	Flame Spread	Smoke Developed
ASTM E84	0	5 Class A
CAN/ULC-S102	5	5

Technical References

- ICC International Codes
- UL U366, ULC W311
- UL/ULC Type Designation: Shaftliner
- Gypsum Association Publications GA-214, GA-216, and GA-600
- ASTM E84 (CAN/ULC-S102), E119 (CAN/ULC-S101), E90
- ICC ESR-1338
- National Building Code of Canada
- Riverbank Acoustical Laboratories TL00-176 and TL00-177



- Resists mold growth per ASTM D3273
- Added protection from incidental moisture during construction
- UL Classified and ULC Listed for Fire Resistance and Surface Burning Characteristics
- Rapid ease of installation reduces overall construction time and provides a cost-effective system
- Area Separation Firewall ratings up to two hours with high STC.

learn more at:
CertainTeed.com/drywall

Characteristics, properties or performance of materials or systems manufactured by CertainTeed herein described are derived from data obtained under controlled test conditions. CertainTeed makes no warranties, express or implied, as to their characteristics, properties or performance under any variations from such conditions in actual construction. CertainTeed assumes no responsibility for the effects of structural movement.

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CertainTeed Corporation

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