



Canadian Gypsum and Insulation Systems Manual

Fire Resistance and
Sound Control Design
Division 09



Introduction



The walls you build are constructed with precision and hard work. The products you use need to bring that same level of performance. That's why we offer a full range of reliable insulation, gypsum and finishing solutions that make installations faster and simpler, all while helping you keep pace with demand — no matter the size, complexity, or location of the project.

Our gypsum solutions are manufactured with quality and consistency, and our products are readily available, no matter where you are in the country. Plus, our in-house technical support team is at the ready to help you through even the most demanding installations. We have your back, so you can easily stay on schedule, within budget, and keep your projects running smoothly.

BIM/CAD Information

CertainTeed's Design Studio provides BIM and CAD details to many fire rated and sound rated assemblies in an easy to view experience at bimlibrary.saint-gobain.com/certainteed. Details are available for download in multiple file formats.

Sustainability

Sustainable documentation, including recycled content, Environmental Product Declarations (EPD), Health Product Declarations (HPD) and low VOC Certifications, can be found at saintgobain.ecomedes.com.



Introduction

General

This manual is intended to provide architects, engineers and builders with reference data on Gypsum Panel Systems incorporating CertainTeed Canada gypsum panel products. It contains sections on Partitions, Exterior Walls, Floors and Ceilings, Shaftwalls, Firewalls, and Column and Beam Protection. Each section lists the systems in ascending order of fire rating, and includes sound ratings and basic construction details.

The Canadian Gypsum and Insulation Systems Manual is available in pdf format on our website at www.certainteed.ca. Please visit the website regularly to check for the latest revisions and version of this manual.

The descriptions for the systems in this manual are summaries only. For complete information on systems or components tested, review the listed design or contact your local CertainTeed representative or call CertainTeed Canada at 800-233-8990.

Check with your local authority having jurisdiction regarding Codes and consult the building designer for details and site installation instructions.

Content Disclaimer

Any product information, data or specifications contained in this Manual have been prepared with information available to CertainTeed Canada at the time of posting. Anyone making use of, or relying on, any information, data or specifications contained in this Manual, for any purpose whatsoever, expressly assumes any and all liability that may arise from such use or reliance. CertainTeed Canada does not assume any responsibility for any errors or omissions that may be contained in this Manual. Any information, data or specifications contained in this Manual supersede any and all previous information, data or specifications prior to this manual and are subject to change without notice.

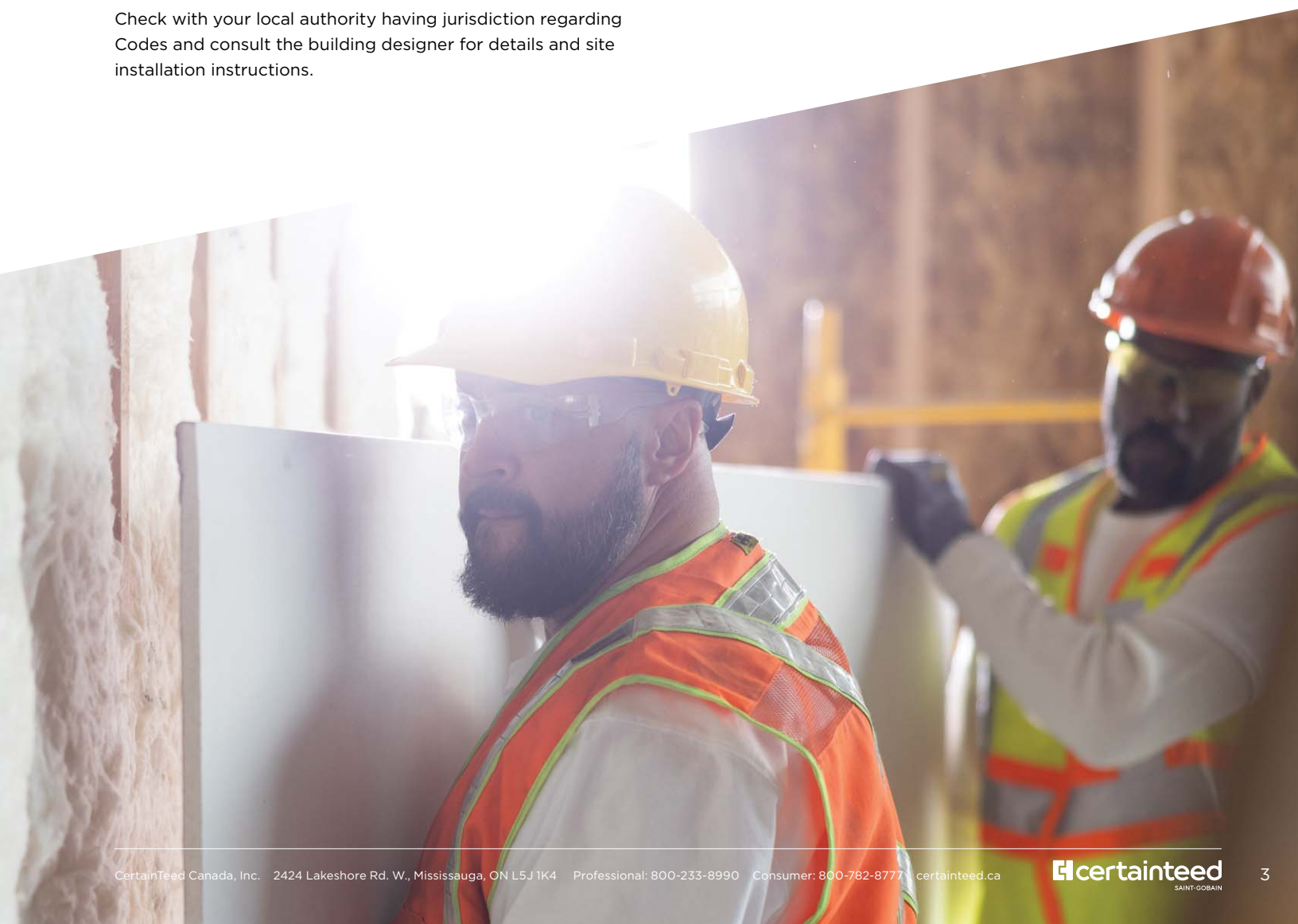
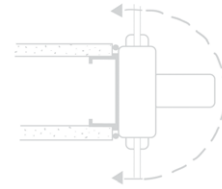


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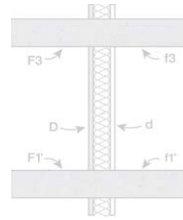


Steel ASTC Systems

Fire Resistance Rating - 1h 16

Wood ASTC Systems

Fire Resistance Rating - 1h 17

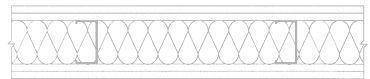


Floor and Ceiling Systems

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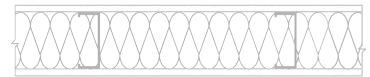
Steel Stud Systems - Non-Loadbearing

Fire Resistance Rating - 45-min 19
 Fire Resistance Rating - 1h 19-22
 Fire Resistance Rating - 2h 22-25
 Fire Resistance Rating - 3h 25
 Fire Resistance Rating - 4h 25



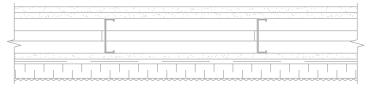
Steel Stud Systems - Interior Loadbearing

Fire Resistance Rating - 1h 26
 Fire Resistance Rating - 2h 26



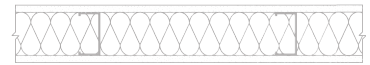
Steel Stud Systems - Exterior Non-Loadbearing

Fire Resistance Rating - 2h 27



Steel Stud Systems - Exterior Loadbearing

Fire Resistance Rating - 45-min 28
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Wood Stud Systems - Interior Loadbearing

Fire Resistance Rating - 45-min 30
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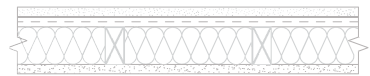
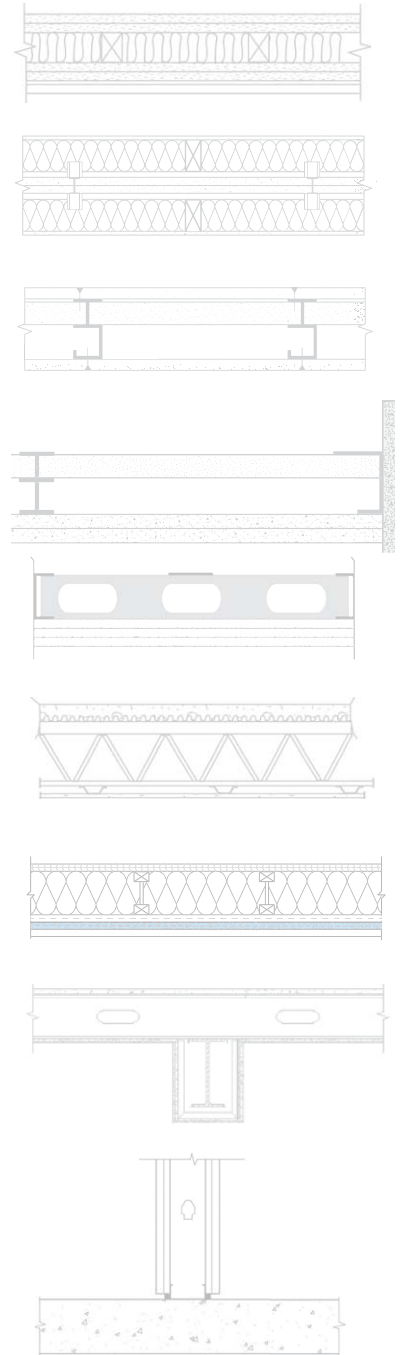


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Fire Resistance

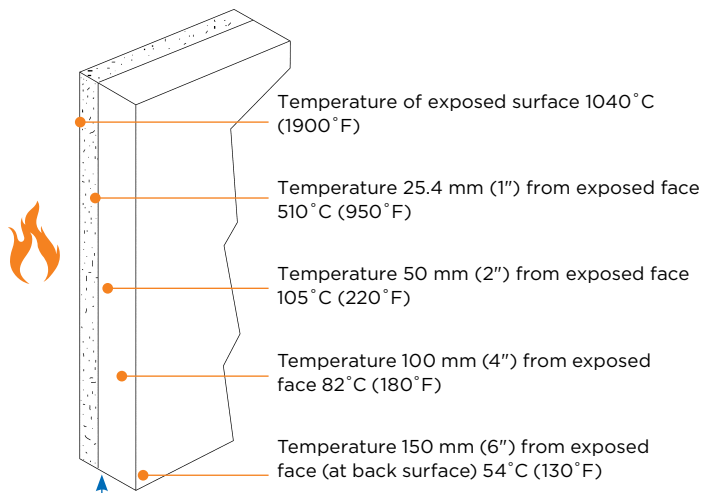
Gypsum panel is the most commonly used fire resistive material and is equally well known as a reliable and economic surfacing material. When used in combination with other products, excellent fire resistive and sound control properties can be achieved.

Gypsum is a naturally occurring mineral mined or quarried in many locations throughout North America and in other parts of the world. When processed into gypsum panel products the chemically combined water (about 21 percent by weight) contributes to its effectiveness as a fire barrier. As gypsum protected structural members are exposed to fire, the water is slowly released as steam, effectively retarding heat transmission and acting as a fire barrier until most of the chemically combined water is eliminated, a process known as calcination. The temperature directly behind the plane of calcination is only slightly higher than that of boiling water at 100°C (212°F), and that is considerably below the temperature at which steel begins to lose its strength or lumber ignites. Once the gypsum is completely calcined, the residue acts as an insulating barrier to the flames.

DSG, or desulphogypsum, is high purity gypsum that is produced instead of mined. DSG is fundamentally the same raw material as mined gypsum, as a result, its properties are virtually the same as mined gypsum.

How Gypsum Retards Heat Transmission

After two hour exposure to heat following CAN/ULC-S101 time-temperature curve:



Vertical line represents plane of calcination. Temperature never greatly exceeds 100°C (212°F) behind plane of calcination.

Type X and Type C Gypsum Panel

There are two basic classifications of gypsum panel core formulations giving different degrees of fire resistance. These are Standard and Type X gypsum panel. Type X panel by definition is a gypsum panel that provides: a 1 hour fire endurance rating for a 15.9 mm (5/8") thickness when applied in a single layer and properly fastened to each side of of 38 mm x 89 mm (nominal 2 x 4) wood framing members.

Although there is no industry definition for Type C gypsum panels, they are readily available in most markets. CertainTeed Type C gypsum panels are proprietary products which meet the requirements of Type X and have further enhanced fire resistive properties resulting in improved performance.

Fire Resistance Tests

There are a number of independent testing authorities capable of conducting fire tests to establish fire resistance classifications according to procedures outlined in:

CAN/ULC-S101, *Standard Methods of Fire Endurance Tests of Building Construction Materials*.

The conditions for tests are thoroughly detailed and the time of failure is the time at which there is excessive heat transmission, passage of flame or structural failure. In addition, failure may result because of penetration by a pressurized hose stream required in the fire test procedure for wall assemblies.

The CAN/ULC-S101 standard, prescribes how various wall, floor, roof, column and beam assemblies are tested. These assemblies have one-side exposed to a furnace that follows a standard time-temperature curve.

All of the assemblies tested and classified must be at least 9.3 m² (100 ft²) with no side dimension less than 2.75 m (9 ft). Temperatures are measured at a minimum of nine points on the unexposed surface of the assembly. When testing loadbearing assemblies, load is applied during the fire test.

The assembly must also stop flame or hot gasses capable of igniting cotton waste. The average temperature of the unexposed surface cannot increase more than 121°C (250°F) above ambient nor shall the temperature rise at any individual point exceed 163°C (325°F). It is also required that a duplicate of the assembly be fire tested for half the specified resistance period, after which it must withstand the impact, erosion and cooling effect of water under high pressure from a fire hose.

Floor and roof assemblies tested and classified have to be a minimum of 16.8 m² (180 ft²) with neither dimension less than 3.66 m (12 ft). The assemblies must sustain the design load throughout the test and not allow either flame or hot gasses, capable of igniting cotton waste, to pass through. The unexposed surface temperature may not rise more than an average of 121°C (250°F) above the initial temperature nor shall the temperature rise at any individual point exceed 177°C (325°F).

Surface Burning Characteristics

Flame spread ratings are intended as a guide in the selection and use of finishing materials and are obtained by measuring the extent and rapidity with which flames spread over their surfaces under test conditions.

Under certain circumstances some building codes may require the use of interior finish materials with a flame spread rating of not more than 25.

CAN/ULC-S102, *Standard Method of Test for Surface Burning Characteristics of Building Materials and Assemblies*.

This test measures relative flame spread, fuel contribution and the amount of smoke developed from the material being tested.

A method of numerical classification to permit comparison of a given material's flame spread performance with that of another has been established.

Flame Spread Rating

Asbestos cement board 0 (control classification)

Gypsum plaster	0
Gypsum lath	10
Gypsum panel	0-15
Gypsum sheathing	0-15
Red oak	100 (control classification)

Sound Control

Sound Transmission Class (STC)

Gypsum construction systems are tested to establish their sound insulation characteristics and airborne sound insulation is reported as the Sound Transmission Class (STC).

ASTM Standard E90, *Standard Test Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions and Elements*, outlines a procedure for measuring sound transmission loss which is the difference between the sound energy in a source room and a receiving room when the two rooms are separated by the assembly being tested. The sound transmission loss is measured at different test frequencies and this data is used to obtain a single number known as the STC rating calculated in accordance with ASTM E413, *Classification for Rating Sound Insulation*.

Calculated STC Ratings

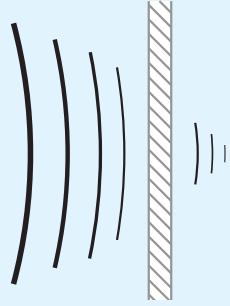
Not all of the assemblies in this catalogue have been individually tested. Where no specific test data is available, a rating, calculated in accordance with the requirements of ASTM E413, is provided for guidance only. CertainTeed Canada makes no claim that these calculated ratings comply with, or are acceptable under, any building code.

Sound Transmission Class (STC) Rating

A single number rating system that represents the sound transmission loss performance of a wall.

Ambient Noise

All sound in a given environment, including sound from outdoors, building services and utilities.



An estimated STC rating, based on results of a similar assembly tested in accordance with recognized standards, will be clearly indicated. This is a judgement of how the particular assembly might react, however, actual performance may differ.

Software tools are also available for estimating STC ratings, please contact your local CertainTeed representative for more information.

If specific compliance is required, tests should be conducted.

Sound Insulation

STC values stated are based on laboratory tests. The actual STC ratings of assemblies as constructed may be significantly less due to deviations from the design or specified materials, flanking paths or poor workmanship. It is essential to the attenuation of airborne sound transmission that air leaks and flanking paths must be closed off or sound will go around an assembly. Hairline cracks or small holes will increase the sound transmission at the higher frequencies. This can have a detrimental effect on the overall acoustical performance and the STC particularly for higher rated assemblies.

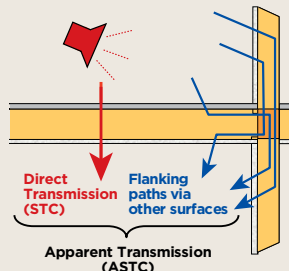
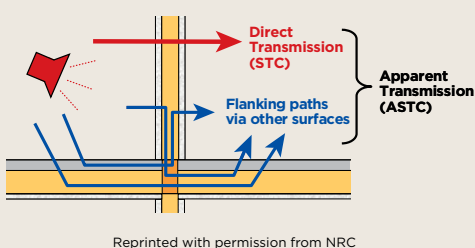
Assemblies should be airtight. Recessed wall fixtures such as medicine cabinets, or electrical, telephone and television outlets, which perforate the gypsum panel surface, should not be located back-to-back or in the same cavity. In addition, any opening for such fixtures and for piping outlets should be carefully cut to proper size and caulked. The entire perimeter of a sound insulating assembly must be made airtight to prevent sound flanking. An acoustical caulking compound or acoustical gasket should be used to seal between the assembly and all dissimilar surfaces. Taping gypsum panel wall and wall-ceiling intersections provides an adequate air seal at these locations. Details of some typical problem areas and their recommended treatments are shown in the accompanying illustrations.

Apparent Sound Transmission Class (ASTC)

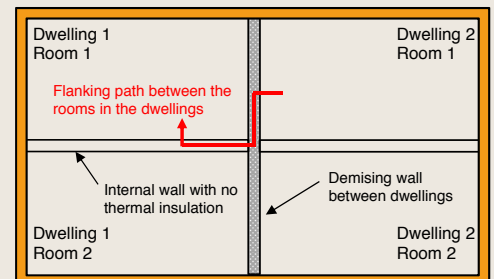
ASTC includes the contributions from flanking transmission of sound and therefore is a better descriptor of the acoustic performance of the building. The ASTC rating between dwelling units must be 47 or greater for compliance with the NBCC.

CertainTeed Canada contracted with the National Research Council Canada (NRC-CNRC) to conduct extensive testing and calculation programs for **SilentFX® QuickCut™** Gypsum Panel on wood and steel stud wall assemblies with example assemblies provided on pages 16-18. For complete details of the ASTC programs, please refer to NRC publication *Guide to Calculating Airborne Sound Transmission in Buildings* <https://doi.org/10.4224/23002279>.

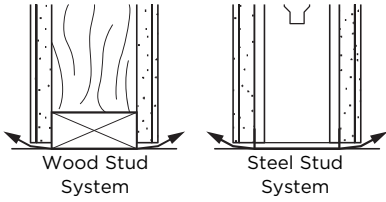
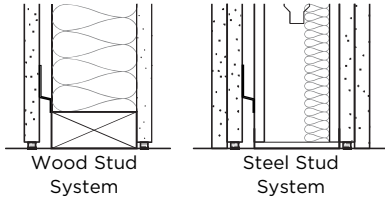
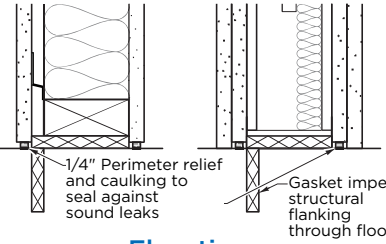
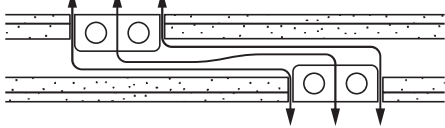
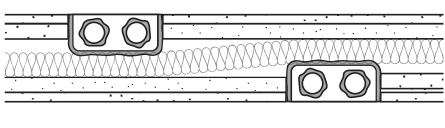
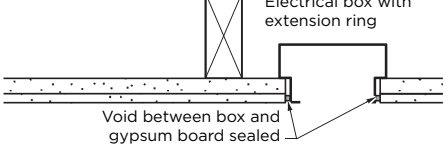
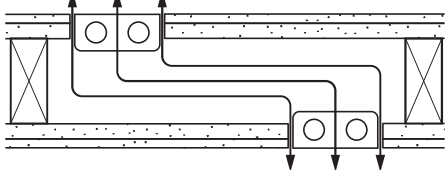
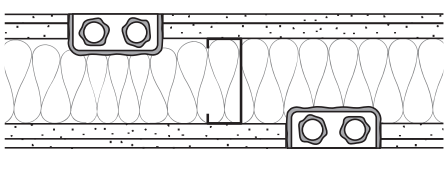
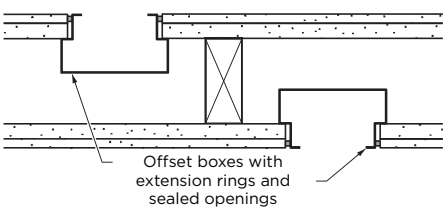
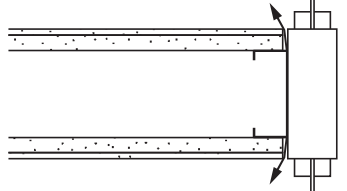
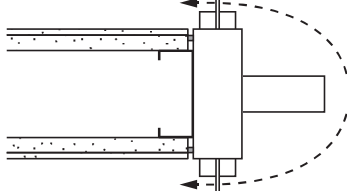
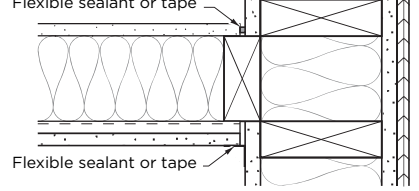
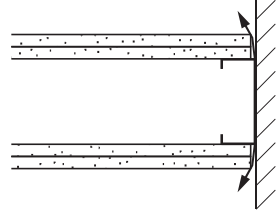
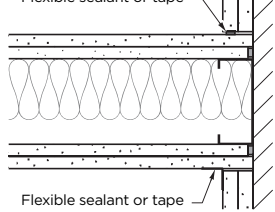
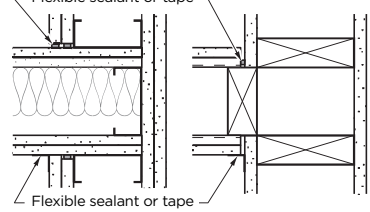
TYPICAL SOUND FLANKING PATHS FOR WOOD FRAME CONSTRUCTION



TYPICAL SOUND FLANKING PATHS FOR STEEL FRAME CONSTRUCTION



Sound Isolation Construction

<p>“NORMAL CONSTRUCTION” Not suitable for good sound control. Arrows show flanking paths</p>	<p>“SELECT CONSTRUCTION” Sealing of relief detail at perimeter of partition and around cut-outs to prevent sound leakage</p>	<p>“PRE-DESIGN” CONSTRUCTION Simulating laboratory conditions</p>
 <p>Wood Stud System Steel Stud System</p> <p>Elevation Under and Over Partitions</p>	 <p>Wood Stud System Steel Stud System</p> <p>Elevation Flexible Sealant</p>	 <p>1/4" Perimeter relief and caulking to seal against sound leaks</p> <p>Gasket impedes structural flanking through floor</p> <p>Elevation</p>
 <p>Plan Through-partition openings outlet boxes (Not permitted in fire-resistance rated construction)</p>	 <p>Plan Sealing of openings through penetrations (Not permitted in fire-resistance rated construction)</p>	 <p>Electrical box with extension ring</p> <p>Void between box and gypsum board sealed</p> <p>Elevation Typical Floor-Ceiling or Roof Detail</p>
 <p>Plan Through-partition openings outlet boxes (Not permitted in fire-resistance-rated construction)</p>	 <p>Plan Boxes offset one stud space and sealing of openings through partitions</p>	 <p>Offset boxes with extension rings and sealed openings</p> <p>Plan Outlet box detail</p>
 <p>Plan Flanking at partition-mullion intersection</p>	 <p>Plan Typical partition-mullion intersection</p>	 <p>Flexible sealant or tape</p> <p>Flexible sealant or tape</p> <p>Plan Intersection with exterior wall</p>
 <p>Plan Metal stud flanking around partition ends</p>	 <p>Flexible sealant or tape</p> <p>Flexible sealant or tape</p> <p>Plan Intersection with interior wall</p>	 <p>Flexible sealant or tape</p> <p>Flexible sealant or tape</p> <p>Plan Typical partition intersection</p>

Authorities and Standards

Definitions

Fire Resistance Rating: The degree to which construction assemblies resist the passage of heat and flame is indicated by ratings determined by full scale fire resistance tests conducted in accordance with CAN/ULC-S101, *Standard Methods of Fire Endurance Tests of Building Construction Materials*.

STC: Sound Transmission Class: a single number rating of how well a building assembly attenuates airborne sound. As per ASTM E90, *Standard Test Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions and Elements* and ASTM E413, *Classification for Rating Sound Insulation*. The higher the STC value, the more efficient the assembly is at reducing sound transmission.

ASTC: Apparent Sound Transmission Class: a single number rating of how well a building assembly attenuates airborne sound and flanking noise. Flanking noise is the sound that travels through wall, ceiling and floor junctions as well as through the structure. ASTC is a more realistic measure of the acoustic performance in a building. As per: ASTM E336, *Standard Test Method for Measurement of Airborne Sound Attenuation between Rooms in Buildings* and/or ASTM E413, *Classification for Rating Sound Insulation*.

Building Codes

Within Canada, Building Codes govern among other items, the type, use and application of construction materials. It is therefore important that the user, when determining the suitability of products and assemblies outlined in this manual, ensure that the requirements of the applicable Building Code(s) have been met.

Material And Application Standards

Gypsum panel products and many of the accessories that are utilized in the construction and/or finishing of gypsum panels are covered by product and application standards. These standards set forth minimum requirements for their physical

and/or performance characteristics, limits of use and methods of application.

The following major Standards Writing Authorities are cited in this manual.

ASTM – American Society for Testing and Materials
CSA – Canadian Standards Association
GA – Gypsum Association
UL – Underwriters Laboratories
CGSB – Canadian General Standards Board

CertainTeed Canada Gypsum Panel Products

CertainTeed Canada gypsum panel products are manufactured to meet or exceed the following product standards.

ASTM C1396/C1396M, Standard Specification for Gypsum Panel
CertainTeed Easi-Lite®, Type X, Type C, M2Tech® Regular, Type X and Shaftliner, FireLITE, Extreme Abuse and Extreme Impact

ASTM C1658/C1658M, Standard Specification for Glass Mat Gypsum Panels
GlasRoc® Shaftliner and GlasRoc® Interior Regular and Type X

ASTM C1177/C1177M, Standard Specification for Glass Mat Gypsum Substrate for Use as Sheathing
GlasRoc® Sheathing Regular and Type X

C1178/C1178M, Standard Specification for Coated Glass Mat Water-Resistant Gypsum Backing Panel
GlasRoc® Tile Backer Regular and Type X

C1766, Standard Specification for Factory-Laminated Gypsum Panel Products
SilentFX® QuickCut™ Regular and Type X

Testing Authorities

Abbreviations for the testing authorities cited in this manual are as follows:

Fire Resistance Ratings

ULC Underwriters Laboratories of Canada
UL Underwriters Laboratories
cUL Underwriters Laboratories
ITS Intertek Testing Services
(Formerly Warnock Hersey International)
NRC National Research Council, Canada

Sound Ratings

NRC National Research Council, Canada
ITS Intertek Testing Services (Formerly Warnock Hersey International)
RAL Riverbank Acoustical Laboratories
OL Orfield Laboratories, Inc.
NGC NGC Testing Services
NOAL North Orbit Acoustic Laboratories

Authorities and Standards

UL Type Designations

Each ULC/cUL Design lists the specific manufacturers and products that are suitable for use in the design. The products are identified with a Type Designation that ties back to specific board formulations. The following identifies the different UL Type Designations and the specific CertainTeed gypsum panels that fall into each category.

Please refer to GA-605, *Proprietary Gypsum Panel Products For Use In UL Classified Systems*.

Type X and Type C gypsum panels manufactured by CertainTeed Canada are described as either GlasRoc®, Shaftliner, LGFCSL, Type X-1, LWTX or Type C and these products are classified/listed by Underwriters Laboratories and Underwriters Laboratories of Canada.

Type X-1: 15.9 mm (5/8") CertainTeed Type X, M2Tech® Type X, Extreme Abuse, Extreme Impact, and Veneer Plaster Base Type X

Type LWTX: 15.9 mm (5/8") CertainTeed FireLITE Type X

Type SilentFX: 15.9 mm (5/8") CertainTeed SilentFX® QuickCut™ Gypsum Panels

Type GlasRoc: 15.9 mm (5/8") GlasRoc® Sheathing, GlasRoc® Interior and GlasRoc® Tile Backer Gypsum Panels

Type C: 15.9 mm (5/8") CertainTeed Type C Gypsum Panels, 12.7 mm (1/2") CertainTeed Type C Gypsum Panels

Type Shaftliner: 25.4 mm (1") CertainTeed M2Tech® Shaftliner

Type LGFCSL: 25.4 mm (1") GlasRoc® Shaftliner

Accessory Materials

The materials used in conjunction with CertainTeed Canada gypsum panel products should be manufactured to meet or exceed the following standards.

Mineral Fibre Insulation - CAN/ULC S702.1

Steel Stud - ASTM C645, ASTM C955, CSA S136

Steel Track - ASTM C645, ASTM C955

Steel Furring Channel - ASTM C645

Wood Framing Members - CAN/CSA O141

Gypsum Screws - ASTM C1002, ASTM C954

Gypsum Nails - CSA B111, ASTM C514

Adhesives - ASTM C557

Joint Compounds - ASTM C475

Joint Tape - ASTM C475

Gypsum Plaster - ASTM C28

Accessories - ASTM C1047

Application Standards

NBCC, *National Building Code of Canada*

ASTM C840, *Application and Finishing of Gypsum Panel*

ASTM C844, *Application of Gypsum Base to Receive Gypsum Veneer Plaster*

ASTM C1280, *Application of Exterior Gypsum Panel Products for Use as Sheathing*

GA-216, *Application and Finishing of Gypsum Panel Products*

GA-253, *Application of Gypsum Sheathing, and*

GA-214, *Levels of Finish for Gypsum Panel Products.*

General Design Notes

1. Indicated fastener lengths and sizes are minimums and spacings are maximums. Closer fastener spacing may reduce the STC value.

Screws meeting ASTM C1002 can be substituted for the prescribed nails, one for one, when the length and head diameter of the screws equal or exceed those of the nails specified in the tested system, and the screw spacing does not exceed the spacing specified for the nails.

2. Unless specified, the face layers of all systems, except those with exterior gypsum sheathing panels, shall have joints taped with either paper tape or glass fibre mesh tape (minimum Level 1 as specified in GA-214 *Recommended Levels of Finish for Gypsum Panel, Glass Mat and Fibre-Reinforced Gypsum Panels*) and fastener heads treated. Unless otherwise specified, base layers in multi-layer systems shall not be required to have joints or fasteners finished.
3. Unless otherwise stated in the detailed description, joints shall be staggered as follows:
 - a. Horizontal butt joints on opposite sides of a partition in a single layer application shall be staggered not less than 305 mm (12").
 - b. Horizontal butt joints in adjacent layers on the same side of a partition in multi-layer applications shall be staggered not less than 305 mm (12").
 - c. Vertical joints on opposite sides of a partition in single layer applications shall not occur on the same stud.
4. Partitions Extending Above the Ceiling — When a fire-resistance rated partition extends above the ceiling, the gypsum panel joints occurring above the ceiling need not be taped and fasteners need not be covered when all of the following conditions are met:
 - a. The ceiling is part of a fire-resistance rated floor-ceiling or roof-ceiling system;
 - b. All vertical joints occur over framing members;
 - c. Horizontal joints are either staggered 610 mm (24") o.c. on opposite sides of the partition or are covered with strips of gypsum panel not less than 150 mm (6") wide; or the partition is a two-layer system with joints staggered 406 mm (16") or 610mm (24") o.c.; and
 - d. The partition is not part of a smoke or sound control system.

Where joint treatment is discontinued at or just above the ceiling line, the vertical joint shall be cross taped at this location to reduce the possibility of joint cracking.

5. When not specified as a component of a fire rated wall design, either faced or unfaced glass fibre, stone wool, or cellulose fibre insulation of a thickness exceeding the cavity depth shall be permitted to be added within the stud cavity. Adding insulation may improve the STC value.

In fire resistance systems containing insulation specified to be either stone wool or glass fibre, the system shall be built using the type specified. Note that both of these are classified as mineral fibre insulation, as per CAN/ULC S702.

6. In floor-ceiling or roof-ceiling systems, the addition or deletion of stone wool or glass fibre insulation in ceiling joist spaces could possibly reduce the fire-resistance rating. The addition of up to 408 mm (16") of 8 kg/m³ (0.5 pcf) glass fibre insulation (RSI 7 / R40) unfaced batt, or loose-fill to any 1 or 2 hour fire-resistance rated floor-ceiling or roof-ceiling system having a cavity deep enough to accept the insulation is permitted, provided one additional layer of either 12.7 mm (1/2") Type C or 15.9 mm (5/8") Type X gypsum panel is applied to the ceiling. The additional layer of gypsum panel shall be of the same type specified in the original design and applied to the face layer of the tested system. The fastener length shall be increased by not less than the thickness of the additional layer of gypsum panel.
7. Additional layers of any type of gypsum panel are permitted to be added to any system within the load capacity limitations of the framing. Additional layers of gypsum panels may improve the STC value.
8. Stud sizes in metal or wood stud systems are minimums and can be increased. Metal studs of greater mil thickness than those tested for fire performance shall be permitted. Greater stud depth may improve the STC value; however, increasing the steel thickness of the stud may reduce the STC value.
9. Stud spacing are maximums and may be decreased. Decreasing the stud spacing may reduce the STC value.
10. Specified floor-ceiling and roof-ceiling framing sizes or truss dimensions are minimums. Greater joist or truss depth may improve the STC value.
11. Specified floor-ceiling and roof-ceiling members spacing are the maximums. Decreasing the joist or truss spacing may reduce the STC value.
12. When not specified as a component of a fire-resistance rated wall or partition system, cementitious backer units and/or wood structural panels shall be permitted to be added to one or both sides as a base or face layer. Additional layers may impact the STC value.
13. Resilient channels may only be used where indicated as optional in the fire resistance test. Addition of a resilient channels may negatively impact fire resistance. As long as they are installed correctly resilient channels may improve the STC value in stiff systems such as load-bearing steel studs systems or wood stud systems. Resilient channels perform best when attached directly to the framing element.

Solution Based Gypsum Panels

TYPE X



TYPE X GYPSUM PANEL



15.9 mm (5/8") CertainTeed Type X is an interior gypsum panel consisting of a non-combustible gypsum core enclosed in ivory-coloured face paper and a strong liner back paper.



Features a specially formulated Type X core providing fire resistance ratings when used in tested assemblies.



M2TECH®



M2TECH® TYPE X GYPSUM PANEL



15.9 mm (5/8") CertainTeed M2Tech® Type X is an interior gypsum panel consisting of a non-combustible gypsum core enclosed in moisture and mould resistant blue-grey face paper and a strong liner back paper.



Designed with a unique technology combining moisture and mould resistance and is specially engineered to provide enhanced protection against mould growth.

Features a specially formulated Type X core providing fire resistance ratings when used in tested assemblies. Also available in a 12.7 mm (1/2") Regular for applications not requiring a fire-resistance rated assembly.



FIRELITE TYPE X



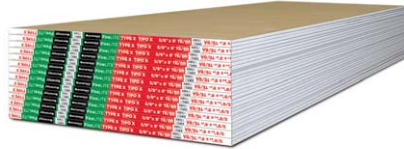
FIRELITE TYPE X GYPSUM PANEL



15.9 mm (5/8") CertainTeed FireLite Type X is an interior gypsum panel consisting of a non-combustible gypsum core that is lighter vs. standard Type X.



Features a specially formulated Type X core providing fire resistance ratings when used in specific LWTX fire-resistance rated assemblies.



New Product, not available in all regions, please check for availability.

M2TECH® SHAFTLINER TYPE X GYPSUM PANEL



25.4 mm (1") CertainTeed M2Tech® Shaftliner Type X is an interior gypsum panel consisting of a non-combustible gypsum core enclosed in moisture and mould resistant blue-grey paper.

Designed with a unique technology combining moisture and mould resistance and is engineered to provide enhanced protection against mould growth. For extended weather exposure applications, specify GlasRoc® Shaftliner Type X.

Features a specially formulated Type X core providing fire resistance ratings when used in tested Shaftwall and Area Separation Firewall assemblies.



TYPE C



TYPE C GYPSUM PANEL



12.7 mm (1/2") or 15.9 mm (5/8") CertainTeed Type C is an interior gypsum panel consisting of a non-combustible gypsum core enclosed in ivory-coloured face paper and a strong liner back paper.



Features an enhanced Type X core providing superior fire performance when used in specific fire-resistance rated Type C assemblies.



Product attributes:



Fire-Rated



Moisture and Mould Resistant



Recycled Content



Acoustics



Durability



Low VOCs



Made in Canada

Solution Based Gypsum Panels

SILENTFX® QUICKCUT™



SILENTFX® QUICKCUT™ TYPE X GYPSUM PANEL

15.9 mm (5/8") CertainTeed Silent FX® QuickCut™ Type X is an interior gypsum panel consisting of a non-combustible gypsum core enclosed in moisture and mould resistant blue-grey paper.

Composed of a viscoelastic polymer between two high-density gypsum cores, significantly improves sound attenuation and is ideal for systems requiring high STC performance.

Features a specially formulated Type X core providing fire performance when used in tested fire-resistance rated assemblies. Also available in a 12.7 mm (1/2") Regular for applications not requiring a fire-resistance rated assembly.



VENEER PLASTER BASE



VENEER PLASTER BASE TYPE X GYPSUM PANEL*

15.9 mm (5/8") CertainTeed Veneer Plaster Base is an interior gypsum panel consisting of a non-combustible gypsum core enclosed in a highly absorptive paper surface which is formulated for use under gypsum veneer plaster.

Features a specially formulated Type X core providing fire resistance ratings when used in tested fire-resistance rated assemblies. Also available in a 12.7 mm (1/2") Easi-Lite® for applications not requiring a fire-resistance rated assembly.



ABUSE RESISTANT



ABUSE RESISTANT TYPE X GYPSUM PANEL*

15.9 mm (5/8") CertainTeed Abuse Resistant Type X or 12.7 mm (1/2") CertainTeed Abuse Resistant Type C are interior gypsum panels consisting of a non-combustible gypsum core enclosed in ivory-coloured face paper and a strong liner back paper.

Composed of high-density gypsum core resulting in greater resistance to abuse compared to standard Type X.

Features a specially formulated Type X core providing fire performance when used in appropriate fire-resistance rated assemblies.



EXTREME ABUSE



EXTREME ABUSE TYPE X GYPSUM PANEL

15.9 mm (5/8") CertainTeed Extreme Abuse Type X is an interior gypsum panel consisting of a non-combustible gypsum core enclosed in moisture and mould resistant blue-grey face paper and a strong liner back paper.

Composed of high-density gypsum core resulting in greater resistance to abuse compared to standard Type X.

Features a specially formulated Type X core providing fire performance when used in tested fire-resistance rated assemblies.



EXTREME IMPACT



EXTREME IMPACT TYPE X GYPSUM PANEL

15.9 mm (5/8") CertainTeed Extreme Impact Type X is an interior gypsum panel consisting of a non-combustible gypsum core enclosed in moisture and mould resistant blue-grey face paper and a strong liner back paper.

Composed of high-density gypsum core and a fibreglass mesh reinforcement resulting in greater resistance to impact and abuse compared to standard Type X.

Features a specially formulated Type X core providing fire performance when used in tested fire-resistance rated assemblies.



Product attributes:



Fire-Rated



Moisture and Mould Resistant



Recycled Content



Acoustics



Durability



Low VOCs








Made in Canada

*Product not available in all areas, consult your local CertainTeed representative






Solution Based Gypsum Panels

GLASROC®

-  **GLASROC® INTERIOR TYPE X GYPSUM PANEL**
-  15.9 mm (5/8") CertainTeed GlasRoc® Interior Type X is an interior gypsum panel consisting of a non-combustible gypsum core enclosed in fibreglass face and back mats.
-  Designed to provide exceptional mould and moisture resistance for interior applications and exterior soffits.
-  The innovative, off-white facer mat and tapered edges allow for superior indoor finishing and decorating results.
- 

Features a specially formulated Type X core providing fire performance when used in tested fire-resistance rated assemblies. Also available in a 12.7 mm (1/2") Regular for applications not requiring a fire-resistance rated assembly.








-  **GLASROC® TILE BACKER TYPE X GYPSUM PANEL**
-  15.9 mm (5/8") CertainTeed GlasRoc® Tile Backer Type X is an interior gypsum panel consisting of a non-combustible gypsum core enclosed in fibreglass face and back mats.
-  Designed to be used as a ceramic tile substrate for applications in interior wet, non-wet or high-humidity areas. Refer to the Product Data Sheet for specific information on installation.
- 
- 

Features a specially formulated Type X core providing fire performance when used in tested fire-resistance rated assemblies. Also available in a 12.7 mm (1/2") Regular for applications not requiring a fire-resistance rated assembly.






GLASROC®

-  **GLASROC® SHEATHING TYPE X GYPSUM PANEL**
-  15.9 mm (5/8") CertainTeed GlasRoc® Sheathing Type X is an exterior gypsum panel consisting of a non-combustible gypsum core enclosed in fibreglass face and back mats.
-  Designed to provide exceptional mould and moisture resistance for exterior sheathing and soffit applications, ideal for long-term protection against weather exposure.
- 
- 

Features a specially formulated Type X core providing fire performance when used in tested fire-resistance rated assemblies.










-  **GLASROC® SHAFTLINER TYPE X**
-  25.4 mm (1") CertainTeed GlasRoc® Shaftliner Type X is an interior gypsum panel consisting of a non-combustible gypsum core enclosed in fibreglass face and back mats
- 

Designed and engineered to provide added protection against moisture and mould, GlasRoc Shaftliner achieved the best possible score of 10 per ASTM D3273 for mould resistance; used for interior vertical enclosures, stairwells, elevator enclosures, area separation firewalls, etc.

Offers lightweight, thinner walls, ease and speed of installation and cleanup, and cost effective construction, designed for extended weather exposure applications. Specially formulated core for fire-resistive, Type X designs.



Product attributes:

-  Fire-Rated
-  Moisture and Mould Resistant
-  Recycled Content
-  Acoustics
-  Durability
-  Low VOCs
-  Made in Canada

Solution Based Insulation and Corners

GLASS-FIBRE INSULATION



SUSTAINABLE INSULATION™ AND NOISEREDUCER™ INSULATION

Glass fibre insulation that enhance the performance of both fire-rated and acoustical assemblies. In addition to thermal and acoustical advantages, Sustainable Insulation has a high recycled content and natural plant-based binder.



FINISHING PRODUCTS



CERTAINTEED READY-MIXED JOINT COMPOUNDS

Pre-mixed high-performance products designed for professional applicators.

CERTAINTEED LITE SAND PLUS AND HIGH DENSITY SETTING COMPOUNDS

Lightweight sandable chemically setting powders used to prefill joints, embed joint tape and conceal joints, fasteners and trim accessories.

CERTAINTEED MARCO® SPARK-PERF® PAPER TAPE AND FIBAFUSE® PAPERLESS DRYWALL TAPE

Joint tape to reinforce gypsum panel joints and corners.



NO-COAT®



The industry's first non-metal drywall corner approved in cUL fire-resistance rated assemblies.

Provides superior strength and durability, installs faster, and delivers significant savings in labour and costs. Ideal for off-angle applications, both short and long runs.

Provides superior strength and durability that withstands severe impacts and won't blister, bubble, dent or crack. Wide flange covers large gaps and poor framing, creating crisp, straight lines.

NO-COAT® STICKS

Pre-cut lengths for inside and outside 90 corners, L-trim and bullnose.



NO-COAT® FLEXIBLE CORNER

Built-in flexible hinge fits any inside or outside corner angle, ideal for off-angle applications, both short and long runs, long columns and soffits

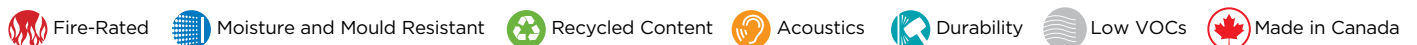


NO-COAT® PRO AUTOMATED SYSTEM

The first and only automated system for custom cutting corners of any length or angle. Used in conjunction with NO-COAT® Pro corner and CertainTeed ready mix joint compound. Lightweight and portable, it is the fastest and most efficient cornering system available.



Product attributes:



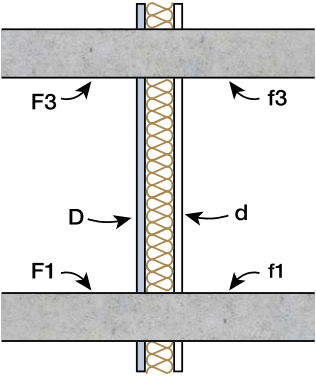
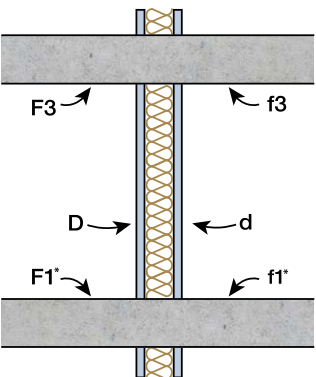
Steel ASTC Systems

1-Hour Fire Resistance Rating

1-Hour Fire Design
cUL U465,
V450, V486

Gypsum Panel Types

- Type X
- M2Tech® Type X
- Extreme Abuse
- Extreme Impact
- SilentFX® QuickCut™ Type X

Assembly	Fire and Acoustical Details	ASTC	Report #
	<p>WALL</p> <ul style="list-style-type: none"> • 1 layer SilentFX® QuickCut™ Type X one side • 1 layer Type X CertainTeed panel other side • 92 mm (3-5/8"), 0.45 mm (0.018") steel studs at 406 mm (16") o.c. • 89 mm (3-1/2") glass fibre insulation • Tape and finish with CertainTeed products <p>CEILING/FLOOR</p> <ul style="list-style-type: none"> • Concrete floors and ceilings (normal weight concrete, 150 mm thickness) no attached ceiling 	<h1>47</h1>	<p>NRC Report A1-010179.1 Example 2</p>
	<p>WALL</p> <ul style="list-style-type: none"> • 1 layer SilentFX® QuickCut™ Type X each side • 92 mm (3-5/8"), 0.45 mm (0.018") steel studs at 406 mm (16") o.c. • 89 mm (3-1/2") glass fibre insulation • Tape and finish with CertainTeed products <p>CEILING/FLOOR</p> <ul style="list-style-type: none"> • Concrete floors and ceilings (normal weight concrete, 150 mm thickness) no attached ceiling 	<h1>48</h1>	<p>NRC Report A1-010179.1 Example 1</p>

Legend

D, d - Direct transmission surface

F, f - Flanking Surface

For additional information, please see the full NRC report at: <http://doi.org/10.4224/23002223>

Wood ASTC Systems

1-Hour Fire Resistance Rating

1-Hour Fire Design
ULC W313 and
cUL M535

Gypsum Panel Types

- Type X
- M2Tech® Type X
- Extreme Abuse
- Extreme Impact
- SilentFX® QuickCut™ Type X
- Type C

Assembly	Fire and Acoustical Details	ASTC	Report #
	<p>WALL</p> <ul style="list-style-type: none"> • 1 layer SilentFX® QuickCut™ Type X one side • 1 layer Type X CertainTeed panel other side • 38 mm x 89 mm (nominal 2x4) studs at 406 mm (16") o.c., studs staggered on common nominal 2x6 plate • 89 mm (3-1/2") CertainTeed glass fibre insulation • Tape and finish with CertainTeed products <p>CEILING/FLOOR</p> <ul style="list-style-type: none"> • Wood I-Joists, 302 mm (nominal 12") deep, spaced at 406 mm (16") o.c., parallel to wall assembly • 1 layer 15 mm (19/32") OSB subfloor directly attached to I-joists • 152 mm (6") CertainTeed glass fibre insulation • 2 layers 12.7 mm (1/2") CertainTeed Type C attached with resilient channels at 610 mm (24") o.c. • Tape and finish with CertainTeed products 	50	<p>NRC A1-007750.3 Example 2</p> <p>A1-007750.3 Example 2 tested with 300 mm (12") screw spacing</p>
	<p>WALL</p> <ul style="list-style-type: none"> • 1 layer SilentFX® QuickCut™ Type X each side • 38 mm x 89 mm (nominal 2x4) studs at 406 mm (16") o.c., studs staggered on common nominal 2x6 plate • 89 mm (3-1/2") CertainTeed glass fibre insulation • Tape and finish with CertainTeed products <p>CEILING/FLOOR</p> <ul style="list-style-type: none"> • Wood I-Joists, 302 mm (nominal 12") deep, spaced at 406 mm (16") o.c., parallel to wall assembly • 1 layer 15 mm (19/32") OSB subfloor directly attached to I-joists • 152 mm (6") CertainTeed glass fibre insulation • 2 layers 12.7 mm (1/2") CertainTeed Type C attached with resilient channels at 610 mm (24") o.c. • Tape and finish with CertainTeed products 	54	<p>Sound: NRC A1-007750.3 Example 1</p>

Legend

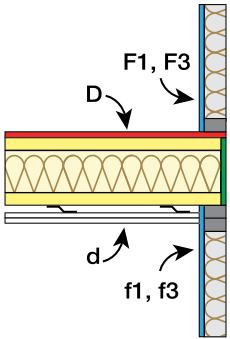
D, d - Direct transmission surface

F, f - Flanking Surface

For additional information, please see the full NRC report at: <http://doi.org/10.4224/23002826>

Floor and Ceiling Systems

1-Hour Fire Resistance Rating

1-Hour Fire Design cUL M535 and ULC W313			
Assembly	Fire and Acoustical Details	ASTC	Report #
	<p>FLOOR/CEILING</p> <ul style="list-style-type: none"> • Sub-flooring, min. 15 mm (19/32") wood structural panels • Wood I-Joists, 302 mm (nominal 12") deep at 406 mm (16") o.c. max. • 152 mm (6") CertainTeed fibre glass insulation • 2 layers 12.7 mm (1/2") CertainTeed Type C panels attached with resilient channels at 610 mm (24") o.c. • Tape and finish outer layer with CertainTeed products <p>WALL</p> <ul style="list-style-type: none"> • 1 layer SilentFX® QuickCut™ Type X one side • 1 layer Type X CertainTeed panel other side • 38 mm x 89 mm (nominal 2x4) studs at 406 mm (16") o.c., studs staggered on common nominal 2x6 plate • 89 mm (3-1/2") CertainTeed glass fibre insulation • Tape and finish with CertainTeed products 	<h1>50</h1>	<p>NRC A1-007750.3</p>

1-Hour Fire Design
cUL M535 and
ULC W313

Gypsum Panel Types

- Type X
- M2Tech® Type X
- Extreme Abuse
- Extreme Impact
- SilentFX® QuickCut™ Type X
- Type C

Legend


D, d - Direct transmission surface

F f - Flanking Surface


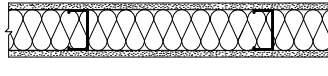
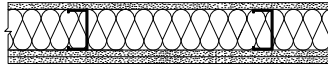
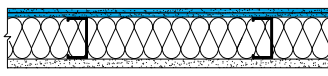
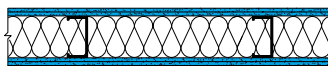
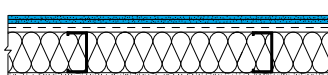
For additional information, please see the full NRC report at: <http://doi.org/10.4224/23002826>

Steel Stud Systems - Non-Loadbearing

45-Minute Fire Resistance Rating

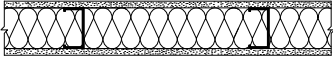
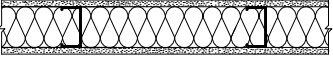

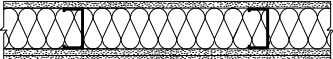

45-Minute Fire Design ULC W409	Fire System Details <ul style="list-style-type: none"> Type X CertainTeed Gypsum Panels Min. 64 mm (2-1/2"), 0.45 mm (0.018") steel studs at 610 mm (24") o.c. max. Optional CertainTeed glass fibre insulation Tape and finish with CertainTeed products 	Gypsum Panel Types <ul style="list-style-type: none"> Type X M2Tech® Type X Extreme Abuse Extreme Impact 	
	Assembly 	Acoustical Details <p>1 layer Type X each side, 64 mm (0.45 mm) studs at 406" o.c. or 610 mm o.c.</p>	STC <p>35</p>

1-Hour Fire Resistance Rating

1-Hour Fire Design ULC U411	Fire System Details <ul style="list-style-type: none"> Type X CertainTeed Gypsum Panels Min. 92 mm (3-5/8"), 0.45 mm (0.018") steel studs at 610 mm (24") o.c. max. Optional CertainTeed glass fibre insulation Optional resilient channel Tape and finish outer layer with CertainTeed products <p>• Comparable assembly cUL U465</p>	Gypsum Panel Types <ul style="list-style-type: none"> Type X M2Tech® Type X Extreme Abuse Extreme Impact SilentFX® QuickCut™ Type X GlasRoc® Interior Type X GlasRoc® Tile Backer Type X GlasRoc® Sheathing Type X 15.9 mm Type C 	
	Assembly 	Acoustical Details <p>1 layer Type X each side 92 mm (0.45 mm) studs at 610 mm o.c.</p>	STC <p>39</p>
	Acoustical Details <p>1 layer Type X each side 92 mm (0.45 mm) studs at 610 mm o.c. 89 mm glass fibre insulation</p>	STC <p>50</p>	Report # <p>NOAL 18-0652</p>
	Acoustical Details <p>1 layer Type X one side 2 layers Type X other side 92 mm (0.45 mm) studs at 610 mm o.c. 89 mm glass fibre insulation</p>	STC <p>53</p>	Report # <p>NOAL 18-0653</p>
	Acoustical Details <p>1 layer SilentFX® QuickCut™ Type X one side 1 layer Type X other side 92 mm (0.45 mm) studs at 610 mm o.c. 89 mm glass fibre insulation</p>	STC <p>56</p>	Report # <p>OL 17-0229</p>
	Acoustical Details <p>1 layer SilentFX® QuickCut™ Type X each side 92 mm (0.45 mm) studs at 610 mm o.c. 89 mm glass fibre insulation</p>	STC <p>58</p>	Report # <p>OL 17-0228</p>
	Acoustical Details <p>Resilient channels at 610 mm o.c. with 1 layer SilentFX® QuickCut™ Type X one side 2 layers Type X other side 92 mm (0.45 mm) studs at 610 mm o.c. 89 mm glass fibre insulation</p>	STC <p>60</p>	Report # <p>NOAL 22-0679</p>

Steel Stud Systems - Non-Loadbearing

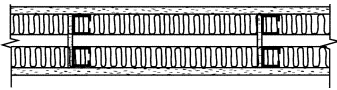
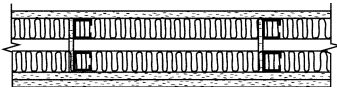
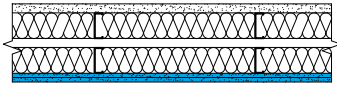
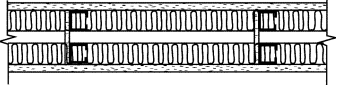

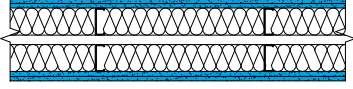
1-Hour Fire Resistance Rating

1-Hour Fire Design cUL U465		Fire System Details <ul style="list-style-type: none"> • Type X CertainTeed Gypsum Panels • Min. 92 mm (3-5/8"), 0.45 mm (0.018") steel studs at 610 mm (24") o.c. max. • Optional CertainTeed glass fibre insulation • Optional resilient channel • Tape and finish outer layer with CertainTeed products 	Gypsum Panel Types <ul style="list-style-type: none"> • FireLITE Type X* 	
Assembly 	Acoustical Details <p>1 layer FireLITE Type X each side 92 mm (0.45 mm) studs at 610 mm o.c. 89 mm glass fibre insulation</p>	STC 45	Report # NOAL 22-1103	
1-Hour Fire Design ULC U411		Fire System Details <ul style="list-style-type: none"> • Type X or Type C CertainTeed Gypsum Panels • Min. 64 mm (2-1/2"), 0.45 mm (0.018") steel studs at 610 mm (24") o.c. max. • CertainTeed glass fibre insulation or • Stone wool insulation (required for 12.7 mm Type C) • Optional resilient channel • Tape and finish with CertainTeed products 	Gypsum Panel Types <ul style="list-style-type: none"> • Type X • M2Tech® Type X • Extreme Abuse • Extreme Impact • SilentFX® QuickCut™ Type X • GlasRoc® Interior Type X • GlasRoc® Tile Backer Type X • GlasRoc® Sheathing Type X • 12.7 mm or 15.9 mm Type C 	
Assembly 	Acoustical Details <p>1 layer Type X each side 64 mm (0.45 mm) studs at 610 mm o.c. 64 mm glass fibre insulation</p>	STC 45	Report # NOAL 18-0649	
Assembly 	Acoustical Details <p>1 layer 12.7 mm Type C each side 64 mm (0.45 mm) studs at 610 mm o.c. 38 mm stone wool insulation</p>	STC 44	Report # NOAL 18-0644	
1-Hour Fire Design ULC W498		Fire System Details <ul style="list-style-type: none"> • Min. 12.7 mm (1/2") Type C CertainTeed Gypsum Panels • Min. 64 mm (2-1/2"), 0.45 mm (0.018") steel studs at 610 mm (24") o.c. max. • Optional CertainTeed glass fibre insulation • Tape and finish outer layer with CertainTeed products 	Gypsum Panel Types <ul style="list-style-type: none"> • 12.7 mm or 15.9 mm Type C 	
Assembly 	Acoustical Details <p>1 layer 12.7 mm Type C one side 2 layers 12.7 mm Type C other side 64 mm (0.45 mm) studs at 610 mm o.c. 64 mm glass fibre insulation</p>	STC 50	Report # OL 18-1013	
Assembly 	Acoustical Details <p>1 layer 12.7 mm Type C one side 2 layers 12.7 mm Type C other side 92 mm (0.45 mm) studs at 610 mm o.c. 89 mm glass fibre insulation</p>	STC 52	Report # NOAL 18-0654	

*New Product, not available in all regions, please check for availability.

Steel Stud Systems - Non-Loadbearing


1-Hour Fire Resistance Rating

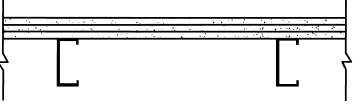
1-Hour Fire Design cUL U420	Fire System Details <ul style="list-style-type: none"> • Type X CertainTeed Gypsum Panels • 2 rows, min. 41 mm (1-5/8"), 0.45 mm (0.018") steel studs at 610 mm (24") o.c. max. • Bracing required, vertical spacing not to exceed 1.2 m (48") o.c. • Optional CertainTeed glass fibre insulation • Tape and finish outer layer with CertainTeed products 	Gypsum Panel Types <ul style="list-style-type: none"> • Type X • M2Tech® Type X • Extreme Abuse • Extreme Impact • SilentFX® QuickCut™ Type X • GlasRoc® Interior Type X • GlasRoc® Tile Backer Type X • GlasRoc® Sheathing Type X • 15.9 mm Type C 	
Assembly	Acoustical Details	STC	Report #
	1 layer Type X each side 2 rows, 64 mm (0.45 mm) studs at 610 mm o.c. 25 mm air space between rows of studs 2 rows, 64 mm glass fibre insulation	55	OL 18-1005
	1 layer Type X one side 2 layers Type X other side 2 rows, 64 mm (0.45 mm) studs at 610 mm o.c. 25 mm air space between rows of studs 2 rows, 64 mm glass fibre insulation	60	OL 18-1006
	1 layer Type X one side 1 layer SilentFX® QuickCut™ Type X other side 2 rows, 64 mm (0.45 mm) studs at 610 mm o.c. 25 mm air space between rows of studs 2 rows, 64 mm Glass Fibre insulation	61	OL 18-1003
1-Hour Fire Design cUL U420	Fire System Details <ul style="list-style-type: none"> • 1 layer FireLITE Type X, each side • 2 rows, min. 41 mm (1-5/8"), 0.45 mm (0.018") steel studs at 610 mm (24") o.c. max. • Bracing required • Optional CertainTeed glass fibre insulation • Optional resilient channels • Tape and finish with CertainTeed products 	Gypsum Panel Types <ul style="list-style-type: none"> • FireLITE Type X* 	
1-Hour Fire Design cUL V469	Fire System Details <ul style="list-style-type: none"> • Type X CertainTeed Gypsum Panels • 2 rows, min. 64 mm (2-1/2"), 0.45 mm (0.018") steel studs at 610 mm (24") o.c. max., staggered or in-line • Bracing required • Min. 25 mm (1") air space between rows of studs • Optional CertainTeed glass fibre insulation • Optional resilient channels • Tape and finish with CertainTeed products 	Gypsum Panel Types <ul style="list-style-type: none"> • Type X • M2Tech® Type X • Extreme Abuse • Extreme Impact • GlasRoc® Interior Type X • GlasRoc® Tile Backer Type X • GlasRoc® Sheathing Type X • 15.9 mm Type C 	
Assembly	Acoustical Details	STC	Report #
	1 layer Type X each side 2 rows, 64 mm (0.45 mm) studs at 610 mm o.c. 25 mm air space between rows of studs 2 rows, 64 mm glass fibre insulation	58	NOAL 18-0651
	1 layer SilentFX® QuickCut™ Type X each side 2 rows, 92 mm (0.45 mm) studs at 610 mm o.c. 64 mm air space between rows of studs 2 rows, 89 mm glass fibre insulation	65	NOAL 22-0702

*New Product, not available in all regions, please check for availability.

Steel Stud Systems - Non-Loadbearing


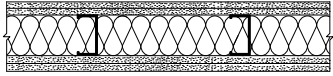
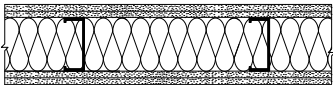
1-Hour Fire Resistance Rating

1-Hour Fire Design cUL V469	Fire System Details <ul style="list-style-type: none"> • 1 layer FireLITE Type X, each side • 2 rows, min. 64 mm (2-1/2"), 0.45 mm (0.018") steel studs at 610 mm (24") o.c. max., staggered or in-line • Bracing required • Min. 25 mm (1") air space between rows of studs • 64 mm (2-1/2") CertainTeed glass fibre insulation (required) • Optional resilient channels • Tape and finish with CertainTeed products 	Gypsum Panel Types <ul style="list-style-type: none"> • FireLITE Type X* 
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1-Hour Fire Design cUL W443	Fire System Details <ul style="list-style-type: none"> • Type X CertainTeed Gypsum Panels • Min. 92 mm (3-5/8"), 0.45 mm (0.018") steel studs at 610 mm (24") o.c. max. • Tape and finish outer layer with CertainTeed products • <i>Exposed to fire from either side</i> 	Gypsum Panel Types <ul style="list-style-type: none"> • Type X • M2Tech® Type X • Extreme Abuse • Extreme Impact • GlasRoc® Tile Backer Type X • GlasRoc® Interior Type X 
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2-Hour Fire Resistance Rating


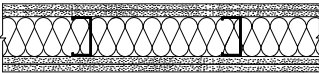
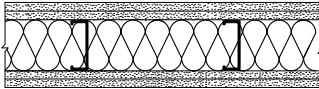
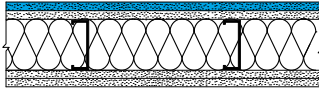

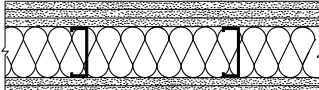
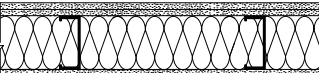
2-Hour Fire Design ULC U411	Fire System Details <ul style="list-style-type: none"> • Type C or Type X CertainTeed Gypsum Panels • Min. 64 mm (2-1/2"), 0.45 mm (0.018") steel studs at 610 mm (24") o.c. max. • Optional CertainTeed glass fibre insulation • Optional resilient channel • Tape and finish outer layer with CertainTeed products 	Gypsum Panel Types <ul style="list-style-type: none"> • Type X • M2Tech® Type X • Extreme Abuse • Extreme Impact • SilentFX® QuickCut™ Type X • GlasRoc® Interior Type X • GlasRoc® Tile Backer Type X • GlasRoc® Sheathing Type X • 12.7 mm or 15.9 mm Type C
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Assembly	Acoustical Details	STC	Report #
	2 layers 12.7 mm Type C each side 64 mm (0.45 mm) studs at 610 mm o.c.	46	NOAL 18-0648
	2 layers 12.7 mm Type C each side 64 mm (0.45 mm) studs at 610 mm o.c. 64 mm glass fibre insulation	51	NOAL 18-0647
	2 layers 12.7 mm Type C each side 92 mm (0.45 mm) studs at 610 mm o.c. 89 mm glass fibre insulation	57	NGC 2006049

*New Product, not available in all regions, please check for availability.

Steel Stud Systems - Non-Loadbearing

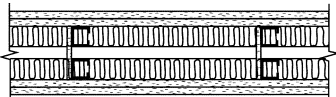
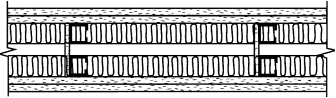
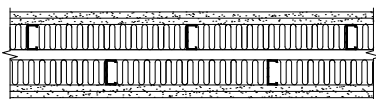

2-Hour Fire Resistance Rating

2-Hour Fire Design cUL U411			
Fire System Details			
Gypsum Panel Types			
Assembly	Acoustical Details	STC	Report #
	2 layers Type X each side 64 mm (0.45 mm) studs at 610 mm o.c.	49	NOAL 18-0642
	2 layers Type X each side 64 mm (0.45 mm) studs at 610 mm o.c. 64 mm glass fibre insulation	56	NGC 2017057
	2 layers Type X each side 92 mm (0.45 mm) studs at 610 mm o.c. 89 mm glass fibre insulation	56	NOAL 19-0602
	1 layer Type X and 1 layer SilentFX® QuickCut™ Type X one side 2 layers Type X other side 92 mm (0.45 mm) studs at 610 mm o.c. 89 mm glass fibre insulation	58	OL 18-1239
	3 layers Type X one side 2 layers Type X other side 92 mm (0.45 mm) studs at 610 mm o.c.	50	NOAL 18-0832
	3 layers Type X one side 2 layers Type X other side 92 mm (0.45 mm) studs at 610 mm o.c. 89 mm glass fibre insulation	55	NOAL 18-0655
2-Hour Fire Design cUL U411			
Fire System Details			
Gypsum Panel Types			
Assembly	Acoustical Details	STC	Report #
	2 layer FireLITE Type X each side 92 mm (0.45 mm) studs at 610 mm o.c. 89 mm glass fibre insulation	53	NOAL 22-1104

*New Product, not available in all regions, please check for availability.

Steel Stud Systems - Non-Loadbearing

2-Hour Fire Resistance Rating

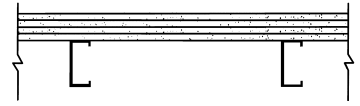
2-Hour Fire Design cUL U420	Fire System Details <ul style="list-style-type: none"> • Type X CertainTeed Gypsum Panels • 2 rows, min. 41 mm (1-5/8"), 0.45 mm (0.018") steel studs at 610 mm (24") o.c. max. • Bracing required, vertical spacing not to exceed 1.2 m (48") o.c. • Optional CertainTeed glass fibre insulation • Tape and finish outer layer with CertainTeed products 	Gypsum Panel Types <ul style="list-style-type: none"> • Type X • M2Tech® Type X • Extreme Abuse • Extreme Impact • GlasRoc® Interior Type X • GlasRoc® Tile Backer Type X • GlasRoc® Sheathing Type X • 15.9 mm Type C 	
Assembly 	Acoustical Details <p>2 layers Type X each side 2 rows, 64 mm (0.45 mm) studs at 610 mm o.c. 25 mm air space between rows of studs 64 mm glass fibre insulation within each cavity</p>	STC <p style="font-size: 2em; text-align: center;">65</p>	Report # <p style="text-align: center;">NRC 93-321</p>
2-Hour Fire Design cUL U420	Fire System Details <ul style="list-style-type: none"> • 2 layers FireLITE Type X, each side • 2 rows, min. 41 mm (1-5/8"), 0.45 mm (0.018") steel studs at 610 mm (24") o.c. max. • Bracing required • Optional CertainTeed glass fibre insulation • Optional resilient channels • Tape and finish with CertainTeed products 	Gypsum Panel Types <ul style="list-style-type: none"> • FireLITE Type X* 	
2-Hour Fire Design cUL V469	Fire System Details <ul style="list-style-type: none"> • Type X CertainTeed Gypsum Panels • 2 rows, min. 64 mm (2-1/2"), 0.45 mm (0.018") steel studs at 610 mm (24") o.c. max. staggered or in-line • Bracing required • Min. 25 mm (1") air space between rows of studs • Optional CertainTeed glass fibre insulation • Optional resilient channels • Tape and finish with CertainTeed products 	Gypsum Panel Types <ul style="list-style-type: none"> • Type X • M2Tech® Type X • Extreme Abuse • Extreme Impact • GlasRoc® Interior Type X • GlasRoc® Tile Backer Type X • GlasRoc® Sheathing Type X • 15.9 mm Type C 	
Assembly 	Acoustical Details <p>2 layers Type X each side 2 rows, 64 mm (0.45 mm) studs at 610 mm o.c. 25 mm air space between rows of studs 2 rows, 64 mm glass fibre insulation</p>	STC <p style="font-size: 2em; text-align: center;">60</p>	Report # <p style="text-align: center;">OL 18-1006</p>
2-Hour Fire Design cUL V469	Fire System Details <ul style="list-style-type: none"> • 2 layers FireLITE Type X, each side • 2 rows, min. 64 mm (2-1/2"), 0.45 mm (0.018") steel studs at 610 mm (24") o.c. max., staggered or in-line • Bracing required • Min. 25 mm (1") air space between rows of studs • 64 mm (2-1/2") CertainTeed glass fibre insulation, each row • Optional resilient channels • Tape and finish with CertainTeed products 	Gypsum Panel Types <ul style="list-style-type: none"> • FireLITE Type X* 	

*New Product, not available in all regions, please check for availability.

Steel Stud Systems - Non-Loadbearing


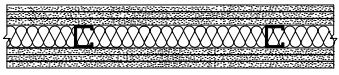
2-Hour Fire Resistance Rating

2-Hour Fire Design cUL W443	Fire System Details <ul style="list-style-type: none"> • Type X CertainTeed Gypsum Panels • Min. 92 mm (3-5/8"), 0.45 mm (0.018") steel studs at 610 mm (24") o.c. max. • Optional CertainTeed glass fibre insulation • Tape and finish outer layer with CertainTeed products <p>• <i>Exposed to fire from either side</i></p>	Gypsum Panel Types <ul style="list-style-type: none"> • Type X • M2Tech® Type X • Extreme Abuse • Extreme Impact • GlasRoc® Interior Type X • GlasRoc® Tile Backer Type X
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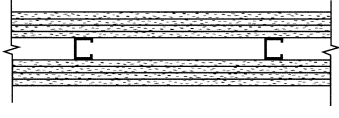
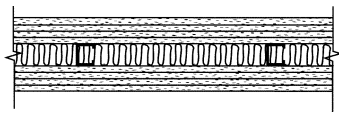
3-Hour Fire Resistance Rating

3-Hour Fire Design ULC U411	Fire System Details <ul style="list-style-type: none"> • Type X or Type C CertainTeed Gypsum Panels • Min. 41 mm (1-5/8"), 0.45 mm (0.018") steel studs at 610 mm (24") o.c. max. • Optional CertainTeed glass fibre insulation • Optional resilient channels • Tape and finish outer layer with CertainTeed products 	Gypsum Panel Types <ul style="list-style-type: none"> • Type X • M2Tech® Type X • Extreme Abuse • Extreme Impact • GlasRoc® Interior Type X • GlasRoc® Tile Backer Type X • GlasRoc® Sheathing Type X • 12.7 mm or 15.9 mm Type C
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Assembly	Acoustical Details	STC	Report #
	3 layers 12.7 mm Type C each side 41 mm (0.45 mm) studs at 610 mm o.c.	48	NOAL 18-0701
	3 layers 12.7 mm Type C each side 41 mm (0.45 mm) studs at 610 mm o.c. 38 mm glass fibre insulation	53	NOAL 18-0704

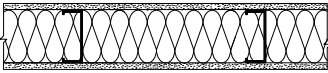
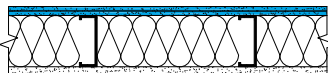
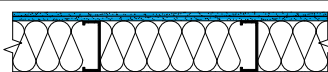
4-Hour Fire Resistance Rating

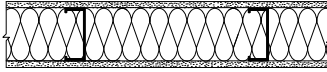
4-Hour Fire Design ULC U411	Fire System Details <ul style="list-style-type: none"> • Type X or Type C CertainTeed Gypsum Panels • Min. 41 mm (1-5/8"), 0.45 mm (0.018") steel studs at 610 mm (24") o.c. max. • Optional CertainTeed glass fibre insulation • Optional resilient channels • Tape and finish outer layer with CertainTeed products 	Gypsum Panel Types <ul style="list-style-type: none"> • Type X • M2Tech® Type X • Extreme Abuse • Extreme Impact • GlasRoc® Interior Type X • GlasRoc® Tile Backer Type X • GlasRoc® Sheathing Type X • 12.7 mm or 15.9 mm Type C
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Assembly	Acoustical Details	STC	Report #
	4 layers 12.7 mm Type C each side 41 mm (0.45 mm) studs at 610 mm o.c.	51	NOAL 18-0702
	4 layers 15.9 mm Type X each side 41 mm (0.45 mm) studs at 610 mm o.c.	52	NOAL 18-0705
	4 layers 12.7 mm Type C each side 41 mm (0.45 mm) studs at 610 mm o.c. 38 mm glass fibre insulation	55	NOAL 18-0703
	4 layers 15.9 mm Type X each side 41 mm (0.45 mm) studs at 610 mm o.c. 38 mm glass fibre insulation	57	NOAL 18-0706

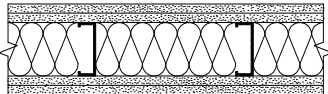
Steel Stud Systems - Interior Loadbearing

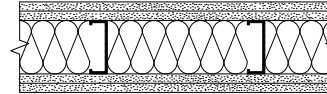
1-Hour Fire Resistance Rating

1-Hour Fire Design cUL U425	Fire System Details <ul style="list-style-type: none"> Type X CertainTeed Gypsum Panels Min. 92 mm (3-5/8"), 0.84 mm (0.033") loadbearing steel studs at 610 mm (24") o.c. max. Optional CertainTeed glass fibre insulation Optional resilient channels Tape and finish with CertainTeed products <ul style="list-style-type: none"> Comparable assembly cUL W488 		Gypsum Panel Types <ul style="list-style-type: none"> Type X M2Tech® Type X Extreme Abuse Extreme Impact SilentFX® QuickCut™ Type X GlasRoc® Interior Type X GlasRoc® Tile Backer Type X GlasRoc® Sheathing Type X 15.9 mm Type C 	
	Assembly 	Acoustical Details <p>1 layer Type X each side 92 mm (0.84 mm) studs at 610 mm o.c. 89 mm glass fibre insulation</p>	STC 48	Report # OL 12-0922
		Acoustical Details <p>1 layer SilentFX® QuickCut™ Type X one side 1 layer Type X other side 92 mm (0.84 mm) studs at 610 mm o.c. 89 mm glass fibre insulation</p>	STC 56	Report # OL 17-0229
		Acoustical Details <p>1 layer SilentFX® QuickCut™ Type X each side 92 mm (0.84 mm) studs at 610 mm o.c. 89 mm glass fibre insulation</p>	STC 58	Report # OL 17-0228

1-Hour Fire Design cUL W488	Fire System Details <ul style="list-style-type: none"> 1 layer FireLITE Type X each side Min. 92 mm (3-5/8"), 0.84 mm (0.033") loadbearing steel studs at 610 mm (24") o.c. max. 89 mm (3-1/2") CertainTeed glass fibre insulation required Optional resilient channels Tape and finish with CertainTeed products 		Gypsum Panel Types <ul style="list-style-type: none"> FireLITE Type X* 	
	Assembly 			

2-Hour Fire Resistance Rating

2-Hour Fire Design cUL U425	Fire System Details <ul style="list-style-type: none"> 15.9 mm CertainTeed Gypsum Panels Min. 92 mm (3-5/8"), 0.84 mm (0.033") loadbearing steel studs at 610 mm (24") o.c. max. Optional CertainTeed glass fibre insulation Optional resilient channels Tape and finish outer layer with CertainTeed products <ul style="list-style-type: none"> Comparable assembly cUL W488 		Gypsum Panel Types <ul style="list-style-type: none"> Type X M2Tech® Type X Extreme Abuse Extreme Impact SilentFX® QuickCut™ Type X GlasRoc® Interior Type X GlasRoc® Tile Backer Type X GlasRoc® Sheathing Type X 15.9 mm Type C 	
	Assembly 	Acoustical Details <p>2 layers Type X each side 92 mm (0.84 mm) studs at 610 mm o.c. 89 mm glass fibre insulation</p>	STC 54	Report # OL 12-0924

2-Hour Fire Design cUL W488	Fire System Details <ul style="list-style-type: none"> 2 layers FireLITE Type X each side Min. 92 mm (3-5/8"), 0.84 mm (0.033") loadbearing steel studs at 610 mm (24") o.c. max. Optional CertainTeed glass fibre insulation Optional resilient channels Tape and finish outer layer with CertainTeed products 		Gypsum Panel Types <ul style="list-style-type: none"> FireLITE Type X* 	
	Assembly 			

*New Product, not available in all regions, please check for availability.

Steel Stud Systems - Exterior Non-Loadbearing

2-Hour Fire Resistance Rating

2-Hour Fire Design ULC W456

Fire System Details

- Rated for fire exposure from interior side only
- Min. 92 mm (3-5/8"), 0.84 mm (0.033") steel studs at 610 mm (24") o.c. max.
 - Braced with steel channel bracing inserted through stud cutouts at 1.2 m (48")

Interior

- 2 layers 15.9 mm (5/8") Type X CertainTeed Gypsum Panels
- Tape and finish outer layer with CertainTeed products

Exterior

- 1 layer 15.9 mm GlasRoc® Sheathing Type X
- Joints covered with 120 mm (5") fibreglass seam tape
- Finished with expanded polystyrene insulation and proprietary EIFS system

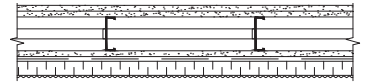
Gypsum Panel Types

Interior

- Type X
- M2Tech® Type X
- Extreme Abuse
- Extreme Impact
- GlasRoc® Interior Type X
- GlasRoc® Tile Backer Type X

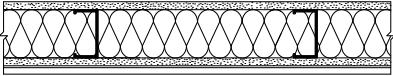
Exterior

- GlasRoc® Sheathing Type X

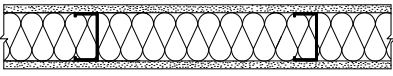



Steel Stud Systems - Exterior Loadbearing

45-Minute Fire Resistance Rating

45-Minute Fire Design cUL U425	Fire System Details <ul style="list-style-type: none"> CertainTeed Gypsum Panels Min. 92 mm (3-5/8"), 0.84 mm (0.033") loadbearing steel studs at 610 mm (24") o.c. max. CertainTeed glass fibre insulation Optional resilient channels (interior) Tape and finish with CertainTeed products (interior) Aluminum or steel siding, brick veneer or stucco required over gypsum sheathing <p><i>Rated for fire exposure from interior side only</i></p>	Gypsum Panel Types Interior <ul style="list-style-type: none"> Type X M2Tech® Type X Extreme Abuse Extreme Impact GlasRoc® Interior Type X GlasRoc® Tile Backer Type X Exterior <ul style="list-style-type: none"> 12.7 mm GlasRoc® Sheathing 	
	Assembly 	Acoustical Details 1 layer Type X interior side 1 layer 12.7 mm GlasRoc® Sheathing exterior side 92 mm (0.84 mm) studs at 610 mm o.c. 89 mm glass fibre insulation	STC 49

1-Hour Fire Resistance Rating

1-Hour Fire Design cUL U425	Fire System Details <ul style="list-style-type: none"> Type X CertainTeed Gypsum Panels Min. 92 mm (3-5/8"), 0.84 mm (0.033") loadbearing steel studs at 610 mm (24") o.c. max. CertainTeed glass fibre insulation Optional resilient channels (interior) Tape and finish with CertainTeed products (interior) <p><i>Rated for fire exposure from interior side only</i></p>	Gypsum Panel Types Interior <ul style="list-style-type: none"> Type X M2Tech® Type X Extreme Abuse Extreme Impact GlasRoc® Interior Type X GlasRoc® Tile Backer Type X Exterior <ul style="list-style-type: none"> GlasRoc® Sheathing Type X 	
	Assembly 	Acoustical Details 1 layer Type X interior side 1 layer 15.9 mm GlasRoc® Sheathing Type X exterior side 92 mm (0.84 mm) studs at 610 mm o.c. 89 mm glass fibre insulation	STC 45

1-Hour Fire Design cUL W488	Fire System Details <ul style="list-style-type: none"> FireLITE Type X Gypsum Panel (interior) GlasRoc® Sheathing Type X (exterior) Min. 92 mm (3-5/8"), 0.84 mm (0.033") loadbearing steel studs at 610 mm (24") o.c. max. CertainTeed glass fibre insulation required Optional resilient channels (interior) Tape and finish with CertainTeed products (interior) <p><i>Rated for fire exposure from interior or exterior side</i></p>	Gypsum Panel Types Interior <ul style="list-style-type: none"> FireLITE Type X* Exterior <ul style="list-style-type: none"> GlasRoc® Sheathing Type X 	
	Assembly 		

*New Product, not available in all regions, please check for availability.

Steel Stud Systems - Exterior Loadbearing

90-Minute Fire Resistance Rating

**90-Minute
Fire Design
cUL U425**

Fire System Details

- Type X CertainTeed Gypsum Panels
- Min. 92 mm (3-5/8"), 0.84 mm (0.033") loadbearing steel studs at 610 mm (24") o.c. max.
- CertainTeed glass fibre insulation
- Optional resilient channels (interior)
- Tape and finish outer layer with CertainTeed products (interior)
- Aluminum or steel siding, brick veneer or stucco required over gypsum sheathing

• *Rated for fire exposure from interior side only*

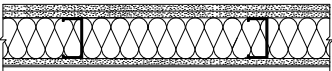
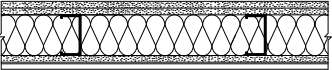
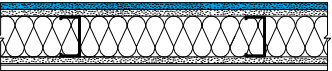
Gypsum Panel Types

Interior

- Type X
- M2Tech® Type X
- Extreme Abuse
- Extreme Impact
- GlasRoc® Interior Type X
- GlasRoc® Tile Backer Type X
- 15.9 mm Type C

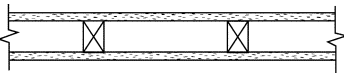
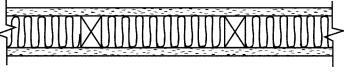
Exterior

- 12.7 mm GlasRoc® Sheathing
- GlasRoc® Sheathing Type X

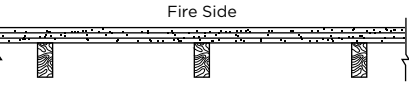
Assembly	Acoustical Details	STC	Report #
	2 layers Type X interior side 1 layer 12.7 mm GlasRoc® Sheathing exterior side 92 mm (0.84 mm) studs at 610 mm o.c. 89 mm glass fibre insulation	N/A	
	2 layers Type X interior side 1 layer GlasRoc® Sheathing Type X exterior side 92 mm (0.84 mm) studs at 610 mm o.c. 89 mm glass fibre insulation	49	NOAL 18-0326
	1 layer SilentFX® QuickCut™ Type X and 1 layer Type X interior side 1 layer GlasRoc® Sheathing Type X exterior side 92 mm (0.84 mm) studs at 610 mm o.c. 89 mm glass fibre insulation	54	NOAL 18-0325

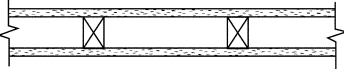
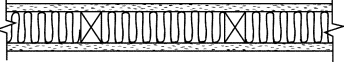
Wood Stud Systems - Interior Loadbearing

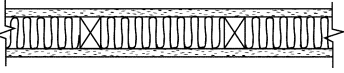
45-Minute Fire Resistance Rating

45-Minute Fire Design ULC W302	Fire System Details <ul style="list-style-type: none"> • 12.7 mm (1/2") Type C CertainTeed Gypsum Panels • 38 mm x 89 mm (nom. 2x4) wood studs at 406 mm (16") o.c. max. • Optional CertainTeed Glass Fibre insulation • Tape and finish with CertainTeed products 		Gypsum Panel Types <ul style="list-style-type: none"> • 12.7 mm Type C 	
	Assembly	Acoustical Details	STC	Report #
	1 layer Type C each side 38 mm x 89 mm (nom. 2x4) wood studs at 406 mm o.c.	32	NBCC (2020) Table A-9.10.3.1.A Wall W1e	
	1 layer Type C each side 38 mm x 89 mm (nom. 2x4) wood studs at 406 mm o.c.	34	NBCC (2020) Table A-9.10.3.1.A Wall W1c	

1-Hour Fire Resistance Rating

1-Hour Fire Design cUL W306	Fire System Details <ul style="list-style-type: none"> • 15.9 mm (5/8") CertainTeed Gypsum Panels • 38 mm x 89 mm (nom. 2x4) wood studs at 406 mm (16") o.c. • Tape and finish outer layer with CertainTeed products • <i>Exposed to fire from one side only</i> 		Gypsum Panel Types <ul style="list-style-type: none"> • Type X • M2Tech® Type X • Extreme Abuse • Extreme Impact • 15.9 mm Type C 	
	Assembly	Acoustical Details	STC	Report #
	3 layers Type X one side only	41	OL 19-0715	

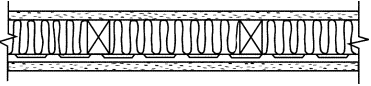
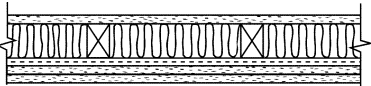
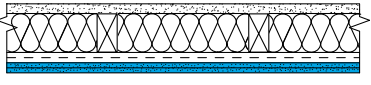
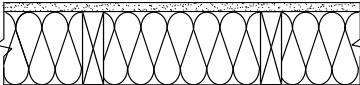
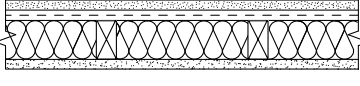
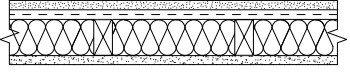
1-Hour Fire Design ULC W301	Fire System Details <ul style="list-style-type: none"> • 15.9 mm (5/8") CertainTeed Gypsum Panels • 38 mm x 89 mm (nom. 2x4) wood studs at 406 mm (16") o.c. max. • Optional CertainTeed Glass Fibre insulation • Tape and finish with CertainTeed products 		Gypsum Panel Types <ul style="list-style-type: none"> • Type X • M2Tech® Type X • Extreme Abuse • Extreme Impact • 15.9 mm Type C 	
	Assembly	Acoustical Details	STC	Report #
	1 layer Type X each side 38 mm x 89 mm (nom. 2x4) wood studs at 406 mm o.c.	32	NBCC (2020) Table A-9.10.3.1.A Wall W1d	
	1 layer Type X each side 38 mm x 89 mm (nom. 2x4) wood studs at 406 mm o.c. 89 mm Glass Fibre insulation	36	NBCC (2020) Table A-9.10.3.1.A Wall W1a	

1-Hour Fire Design ULC W301	Fire System Details <ul style="list-style-type: none"> • 1 layer FireLITE Type X each side • 38 mm x 89 mm (nom. 2x4) wood studs at 406 mm (16") o.c. max. • Optional CertainTeed Glass Fibre insulation • Tape and finish with CertainTeed products • Comparable assembly cUL U305 		Gypsum Panel Types <ul style="list-style-type: none"> • FireLITE Type X* 	
	Assembly	Acoustical Details	STC	Report #
				

*New Product, not available in all regions, please check for availability.

Wood Stud Systems - Interior Loadbearing

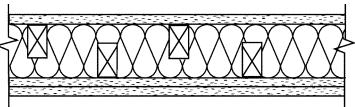
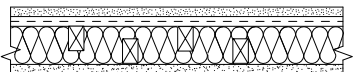

1-Hour Fire Resistance Rating

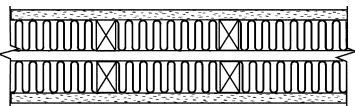
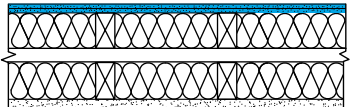
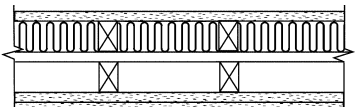
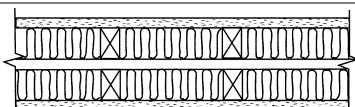
1-Hour Fire Design cUL U305	Fire System Details <ul style="list-style-type: none"> • 15.9 mm (5/8") CertainTeed Gypsum Panels • 38 mm x 89 mm (nom. 2x4) wood studs at 406 mm (16") o.c. max. • Optional CertainTeed Glass Fibre insulation • Optional resilient channels • Tape and finish with CertainTeed products 		Gypsum Panel Types <ul style="list-style-type: none"> • Type X • M2Tech® Type X • Extreme Abuse • Extreme Impact • SilentFX® QuickCut™ Type X • GlasRoc® Interior Type X • GlasRoc® Tile Backer Type X • 15.9 mm Type C 	
	Assembly	Acoustical Details	STC	Report #
		1 layer Type X each side Resilient channels at 610 mm o.c. one side 38 mm x 89 mm (nom. 2x4) wood studs at 406 mm o.c. 89 mm Glass Fibre insulation	50	OL 18-1233
		1 layer Type X one side 2 layers Type X other side Resilient channels at 610 mm o.c. on 2 layer side 38 mm x 89 mm (nom. 2x4) wood studs at 406 mm o.c. 89 mm Glass Fibre insulation	52	NOAL 18-0711
	1 layer Type X one side, 1 layer SilentFX® QuickCut™ Type X other side Resilient channels at 610 mm o.c. SFX side 38 mm x 89 mm (nom. 2x4) wood studs at 406 mm o.c. 89 mm Glass Fibre insulation	52	OL 18-0819	
1-Hour Fire Design cUL U309	Fire System Details <ul style="list-style-type: none"> • 15.9 mm (5/8") CertainTeed Gypsum Panels • 38 mm x 89 mm (nom. 2x4) wood studs at 610 mm (24") o.c. max. • Optional CertainTeed Glass Fibre insulation • Optional resilient channels • Tape and finish with CertainTeed products 		Gypsum Panel Types <ul style="list-style-type: none"> • Type X • M2Tech® Type X • Extreme Abuse • Extreme Impact • GlasRoc® Interior Type X • GlasRoc® Tile Backer Type X • 15.9 mm Type C 	
	Assembly	Acoustical Details	STC	Report #
		1 layer Type X each side 38 mm x 140 mm (nom. 2x6) at 610 mm o.c. 127 mm Glass Fibre insulation	44	OL 18-1019
		1 layer Type X each side Resilient channels at 610 mm o.c., one side 38 mm x 89 mm (nom. 2x4) wood studs at 610 mm o.c. 89 mm Glass Fibre insulation	52	OL 18-1018
1-Hour Fire Design cUL U309	Fire System Details <ul style="list-style-type: none"> • 1 layer FireLITE Type X each side • 38 mm x 89 mm (nom. 2x4) wood studs at 610 mm (24") o.c. max. • Optional CertainTeed Glass Fibre insulation • Optional resilient channels • Tape and finish with CertainTeed products 		Gypsum Panel Types <ul style="list-style-type: none"> • FireLITE Type X* 	
				

*New Product, not available in all regions, please check for availability.

Wood Stud Systems - Interior Loadbearing

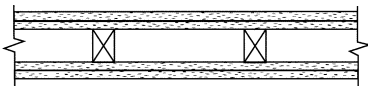
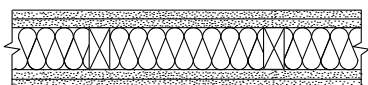
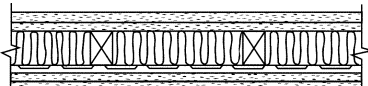
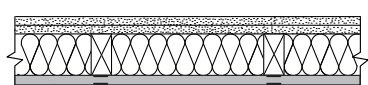
1-Hour Fire Resistance Rating


1-Hour Fire Design ULC W313		Fire System Details	Gypsum Panel Types	
		<ul style="list-style-type: none"> • 15.9 mm CertainTeed Gypsum Panels • 38 mm x 89 mm (nom. 2x4) wood studs at 610 mm (24") o.c. max. • Studs staggered on common 2x6 plate • CertainTeed Glass Fibre insulation (required) • Optional resilient channels • Tape and finish outer layer with CertainTeed products 	<ul style="list-style-type: none"> • Type X • M2Tech® Type X • Extreme Abuse • Extreme Impact • SilentFX® QuickCut™ Type X • 15.9 mm Type C 	
Assembly	Acoustical Details	STC	Report #	
	1 layer Type X one side 2 layers Type X other side 38 mm x 89 mm (nom. 2x4) wood studs at 610 mm o.c. 89 mm Glass Fibre insulation	51	OL 18-0825	
	1 layer Type X each side Resilient channels at 610 mm o.c. one side 38 mm x 89 mm (nom. 2x4) wood studs at 406 mm o.c. 89 mm glass fibre insulation	55	NOAL 22-0724	
	1 layer Type X one side 1 layer SilentFX® QuickCut™ Type X other side 38 mm x 89 mm (nom. 2x4) wood studs at 406 mm o.c. 89 mm Glass Fibre insulation	55	OL 15-1112	

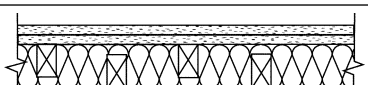
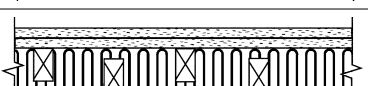
1-Hour Fire Design ULC W313		Fire System Details	Gypsum Panel Types	
		<ul style="list-style-type: none"> • 15.9 mm CertainTeed Gypsum Panels • Double row min. 38 mm x 89 mm (nom. 2x4) wood studs at 610 mm (24") o.c. max. • No minimum air space required for fire system • CertainTeed Glass Fibre insulation (required) • Optional resilient channels • Tape and finish outer layer with CertainTeed products 	<ul style="list-style-type: none"> • Type X • M2Tech® Type X • Extreme Abuse • Extreme Impact • SilentFX® QuickCut™ Type X • 15.9 mm Type C 	
Assembly	Acoustical Details	STC	Report #	
	1 layer Type X each side Double row 38 mm x 89 mm (nom. 2x4) studs at 406 mm o.c. 25 mm air space between plates 89 mm Glass Fibre insulation, each row	58	NOAL 18-0714	
	1 layer Type X one side, 1 layer SilentFX® QuickCut™ Type X, other side Double row 38 mm x 89 mm (nom. 2x4) studs at 406 mm o.c. 25 mm air space between plates 89 mm Glass Fibre insulation, each row	61	OL 17-0214	
	1 layer Type X one side, 2 layers Type X, other side, Double row 38 mm x 89 mm (nom. 2x4) studs at 406 mm o.c. 25 mm air space between plates 89 mm Glass Fibre insulation one side only	57	NBCC (2020) Table A-9.10.3.1.A Wall W14c	
	1 layer Type X one side, 2 layers Type X, other side, Double row 38 mm x 89 mm (nom. 2x4) studs at 406 mm o.c. 25 mm air space between plates 89 mm Glass Fibre insulation, each row	61	NBCC (2020) Table A-9.10.3.1.A Wall W14a	

Wood Stud Systems - Interior Loadbearing

2-Hour Fire Resistance Rating

2-Hour Fire Design cUL U301			
Fire System Details			
<ul style="list-style-type: none"> • 15.9 mm (5/8") CertainTeed Gypsum Panels • 38 mm x 89 mm (nom. 2x4) wood studs at 406 mm (16") o.c. max. • Optional CertainTeed Glass Fibre insulation • Optional resilient or furring channels • Tape and finish outer layer with CertainTeed products 			
Gypsum Panel Types			
<ul style="list-style-type: none"> • Type X • M2Tech® Type X • Extreme Abuse • Extreme Impact • SilentFX® QuickCut™ Type X • GlasRoc® Interior Type X • GlasRoc® Tile Backer Type X • 15.9 mm Type C 			
Assembly	Acoustical Details	STC	Report #
	2 layers Type X each side 38 mm x 89 mm (nom. 2x4) wood studs at 406 mm o.c.	36	NBCC (2020) Table A-9.10.3.1.A Wall W2d
	2 layers Type X each side 38 mm x 89 mm (nom. 2x4) wood studs at 406 mm o.c. 89 mm Glass Fibre insulation	38	NBCC (2020) Table A-9.10.3.1.A Wall W2a
	2 layers Type X each side Resilient channels at 610 mm o.c. one side 38 mm x 89 mm (nom. 2x4) wood studs at 406 mm o.c. 89 mm Glass Fibre insulation	56	NOAL 18-0713
	2 layers Type X each side Sound isolation clips at 1220 mm (48") o.c. one side with 22 mm (7/8") furring channel at 610 mm o.c. 38 mm x 89 mm (nom. 2x4) wood studs at 406 mm o.c. 89 mm Glass Fibre insulation	61	NOAL 22-0207

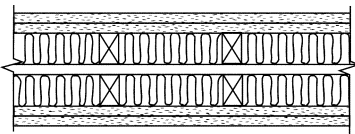
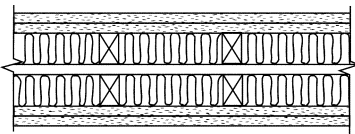
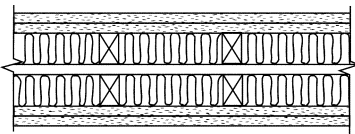
2-Hour Fire Design cUL U301			
Fire System Details			
<ul style="list-style-type: none"> • 2 layers FireLITE Type X each side • 38 mm x 89 mm (nom. 2x4) wood studs at 406 mm (16") o.c. max. • Optional CertainTeed Glass Fibre insulation • Optional resilient or furring channels • Tape and finish outer layer with CertainTeed products 			
Gypsum Panel Types			
<ul style="list-style-type: none"> • FireLITE Type X* 			
			

2-Hour Fire Design ULC W313			
Fire System Details			
<ul style="list-style-type: none"> • 15.9 mm (5/8") CertainTeed Gypsum Panels • 38 mm x 89 mm (nom. 2x4) wood studs at 610 mm (24") o.c. max. • Studs staggered on common 2x6 plate • CertainTeed Glass Fibre insulation (required) • Optional resilient channels • Tape and finish outer layer with CertainTeed products 			
Gypsum Panel Types			
<ul style="list-style-type: none"> • Type X • M2Tech® Type X • Extreme Abuse • Extreme Impact • SilentFX® QuickCut™ Type X • 15.9 mm Type C 			
Assembly	Acoustical Details	STC	Report #
	2 layers Type X each side 38 mm x 89 mm (nom. 2x4) wood studs at 406 mm or 610 mm o.c. 89 mm Glass Fibre insulation	56	NBCC (2020) Table A-9.10.3.1.A Wall W9a
	2 layers Type X each side Resilient channels at 610 mm o.c. one side 38 mm x 89 mm (nom. 2x4) wood studs at 406 mm o.c. 89 mm Glass Fibre insulation	63	NOAL 22-0725

*New Product, not available in all regions, please check for availability.

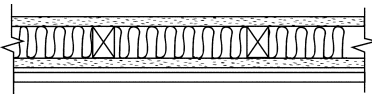
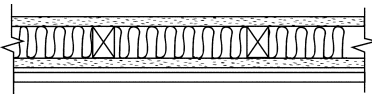
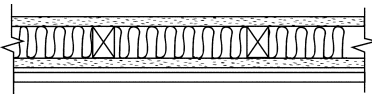
Wood Stud Systems - Interior Loadbearing

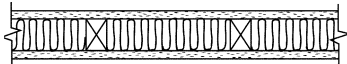
2-Hour Fire Resistance Rating

2-Hour Fire Design ULC W313	Fire System Details <ul style="list-style-type: none"> • 15.9 mm (5/8") CertainTeed Gypsum Panels • Double row min. 38 mm x 89 mm (nom. 2x4) wood studs at 610 mm (24") o.c. max. • No minimum air space required for fire • CertainTeed Glass Fibre insulation (required) • Optional resilient channels • Tape and finish outer layer with CertainTeed products 	Gypsum Panel Types <ul style="list-style-type: none"> • Type X • M2Tech® Type X • Extreme Abuse • Extreme Impact • SilentFX® QuickCut™ Type X • 15.9 mm Type C 						
	<table border="1"> <thead> <tr> <th>Assembly</th> <th>Acoustical Details</th> <th>STC</th> <th>Report #</th> </tr> </thead> <tbody> <tr> <td>  </td> <td> 2 layers Type X, each side Double row 38 mm x 89 mm (nom. 2x4) wood studs at 610 mm o.c. 25 mm air space between plates 89 mm Glass Fibre insulation, each row </td> <td style="text-align: center; vertical-align: middle;"> 67 </td> <td style="vertical-align: middle;"> NOAL 18-0716 </td> </tr> </tbody> </table>	Assembly	Acoustical Details	STC	Report #		2 layers Type X, each side Double row 38 mm x 89 mm (nom. 2x4) wood studs at 610 mm o.c. 25 mm air space between plates 89 mm Glass Fibre insulation, each row	67
Assembly	Acoustical Details	STC	Report #					
	2 layers Type X, each side Double row 38 mm x 89 mm (nom. 2x4) wood studs at 610 mm o.c. 25 mm air space between plates 89 mm Glass Fibre insulation, each row	67	NOAL 18-0716					

Wood Stud Systems - Exterior Loadbearing

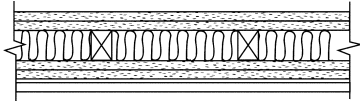
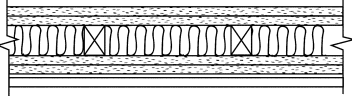
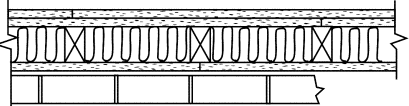
1-Hour Fire Resistance Rating

1-Hour Fire Design cUL W307	Fire System Details <ul style="list-style-type: none"> • 15.9 mm (5/8") CertainTeed Gypsum Panels • 38 mm x 89 mm (nom. 2x4) wood studs at 406 mm (16") o.c. max. • CertainTeed Glass Fibre insulation • Optional resilient channels • Tape and finish interior side with CertainTeed products • Exterior cladding system applied <p>• Comparable assembly ULC W301</p> <p>• <i>Rated for fire exposure from interior or exterior side</i></p>	Gypsum Panel Types <ul style="list-style-type: none"> • Type X • M2Tech® Type X • Extreme Abuse • Extreme Impact • SilentFX® QuickCut™ Type X • GlasRoc® Interior Type X • GlasRoc® Tile Backer Type X • GlasRoc® Sheathing Type X 						
	<table border="1"> <thead> <tr> <th>Assembly</th> <th>Acoustical Details</th> <th>STC</th> <th>Report #</th> </tr> </thead> <tbody> <tr> <td>  </td> <td> 1 layer Type X interior side 1 layer GlasRoc® Sheathing Type X exterior side 38 mm x 89 mm (nom. 2x4) wood studs at 406 mm o.c. 89 mm Glass Fibre insulation With fibre cement siding </td> <td style="text-align: center; vertical-align: middle;"> 37 </td> <td style="vertical-align: middle;"> NGC 2021006 </td> </tr> </tbody> </table>	Assembly	Acoustical Details	STC	Report #		1 layer Type X interior side 1 layer GlasRoc® Sheathing Type X exterior side 38 mm x 89 mm (nom. 2x4) wood studs at 406 mm o.c. 89 mm Glass Fibre insulation With fibre cement siding	37
Assembly	Acoustical Details	STC	Report #					
	1 layer Type X interior side 1 layer GlasRoc® Sheathing Type X exterior side 38 mm x 89 mm (nom. 2x4) wood studs at 406 mm o.c. 89 mm Glass Fibre insulation With fibre cement siding	37	NGC 2021006					

1-Hour Fire Design cUL W308	Fire System Details <ul style="list-style-type: none"> • 1 layer 15.9 mm (5/8") Type X interior side • 1 layer 12.7 mm (1/2") GlasRoc® Sheathing exterior side • 38 mm x 89 mm (nom. 2x4) wood studs at 406 mm (16") o.c. max. • Min. 89 mm (3-1/2") CertainTeed glass fibre insulation • Tape and finish interior side with CertainTeed products <p>• <i>Rated for fire exposure from interior side only</i></p>	Gypsum Panel Types <p>Interior</p> <ul style="list-style-type: none"> • Type X • M2Tech® Type X • Extreme Abuse • Extreme Impact • GlasRoc® Interior Type X • GlasRoc® Tile Backer Type X <p>Exterior</p> <ul style="list-style-type: none"> • GlasRoc® Sheathing Type X
		

Wood Stud Systems - Exterior Loadbearing

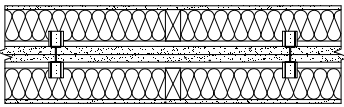
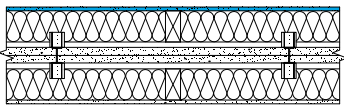
2-Hour Fire Resistance Rating

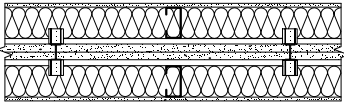
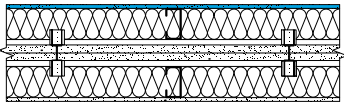
<p>Fire Design cUL U301</p>	<p>Fire System Details</p> <ul style="list-style-type: none"> • 15.9 mm (5/8") CertainTeed Gypsum Panels • 38 mm x 89 mm (nom. 2x4) wood studs at 406 mm (16") o.c. max. • CertainTeed Glass Fibre insulation • Optional resilient channels • Tape and finish interior side with CertainTeed products • Exterior cladding system applied <p>• <i>Rated for fire exposure from interior or exterior side</i></p>	<p>Gypsum Panel Types</p> <ul style="list-style-type: none"> • Type X • M2Tech® Type X • Extreme Abuse • Extreme Impact • SilentFX® QuickCut™ Type X • GlasRoc® Interior Type X • GlasRoc® Tile Backer Type X • GlasRoc® Sheathing Type X 	
<p>Assembly</p> 	<p>Acoustical Details</p> <p>2 layers Type X interior side 2 layers GlasRoc® Sheathing Type X exterior side 38 mm x 89 mm (nom. 2x4) wood studs at 406 mm o.c. 89 mm glass fibre insulation</p>	<p>STC</p> <p>38</p>	<p>Report #</p> <p>NBCC (2020) Table A-9.10.3.1.A Wall W2a</p>
<p>2-Hour Fire Design cUL U301</p>	<p>Fire System Details</p> <ul style="list-style-type: none"> • 2 layers FireLITE Type X interior side • 2 layers GlasRoc® Sheathing Type X exterior side • 38 mm x 89 mm (nom. 2x4) wood studs at 406 mm (16") o.c. max. • Min. 89 mm (3-1/2") CertainTeed Glass Fibre insulation • Optional resilient channels • Tape and finish interior side with CertainTeed products • Exterior cladding system applied <p>• <i>Rated for fire exposure from interior or exterior side</i></p>	<p>Gypsum Panel Types</p> <p>Interior</p> <ul style="list-style-type: none"> • FireLITE Type X* <p>Exterior</p> <ul style="list-style-type: none"> • GlasRoc® Sheathing Type X 	
<p>2-Hour Fire Design ULC U302</p>	<p>Fire System Details</p> <ul style="list-style-type: none"> • 2 layers 15.9 mm (5/8") CertainTeed Gypsum Panels interior side • 1 layer 12.7 mm GlasRoc® Sheathing exterior side • 38 mm x 89 mm (nom. 2x4) wood studs at 406 mm (16") o.c. max. • CertainTeed Glass Fibre insulation • Tape and finish interior side with CertainTeed products • Exterior brick veneer system applied <p>• <i>Rated for fire exposure from interior side only</i></p>	<p>Gypsum Panel Types</p> <p>Interior</p> <ul style="list-style-type: none"> • Type X • M2Tech® Type X • Extreme Abuse • Extreme Impact • GlasRoc® Interior Type X • GlasRoc® Tile Backer Type X • 15.9 mm Type C <p>Exterior</p> <ul style="list-style-type: none"> • 12.7 mm GlasRoc® Sheathing 	
<p>Assembly</p> 	<p>Acoustical Details</p> <p>2 layers Type X interior side 1 layer 12.7 mm GlasRoc® Sheathing exterior side 38 mm x 89 mm (nom. 2x4) wood studs at 406 mm o.c. 89 mm glass fibre insulation</p>	<p>STC</p> <p>42</p>	<p>Report #</p> <p>Calculated to ASTM E413</p>

*New Product, not available in all regions, please check for availability.

Firewalls - Non-Loadbearing

2-Hour Fire Resistance Rating

2-Hour Fire Design ULC W313		Fire System Details	Gypsum Panel Types	
		Firewall <ul style="list-style-type: none"> 2 layers 25.4 mm (1") CertainTeed Shaftliner panels 51 mm (2"), 0.45 mm (0.018") steel H studs at 610 mm (24") o.c. max. Min. 51 mm (2"), 0.45 mm (0.018") steel Channel 19 mm (3/4") air space between studs and Firewall Max. overall height 21.3 m (70 ft) Protection wall: Bearing or Nonbearing <ul style="list-style-type: none"> CertainTeed Gypsum Panels (rated or non-rated) Optional CertainTeed Glass Fibre insulation Tape and finish with CertainTeed products 	<ul style="list-style-type: none"> M2Tech® Shaftliner Type X GlasRoc® Shaftliner Type X 12.7 mm Easi-Lite® 12.7 mm SilentFX® QuickCut™ Attachment clips <ul style="list-style-type: none"> Min. 51 mm (2"), 1.6 mm (0.063") thick aluminum angle <ul style="list-style-type: none"> Attached between wall plate and H studs, spacing dependent on Firewall height 	
Assembly	Acoustical Details	STC	Report #	
	Protection walls 38 mm x 89 mm wood studs at 610 mm o.c. 89 mm glass fibre insulation 12.7 mm (1/2") Easi-Lite® panel each wall	66	NOAL 19-0709	
	Protection walls 38 mm x 89 mm wood studs at 610 mm o.c. 89 mm glass fibre insulation 12.7 mm (1/2") SilentFX® QuickCut™ panel one wall 12.7 mm (1/2") Easi-Lite® panel other wall	70	NOAL 17-1134	

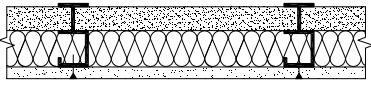
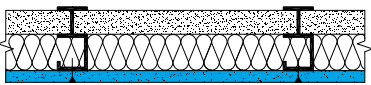
2-Hour Fire Design ULC W311		Fire System Details	Gypsum Panel Types	
		Firewall <ul style="list-style-type: none"> 2 layers 25.4 mm (1") CertainTeed Shaftliner panels 51 mm (2"), 0.45 mm (0.018") steel H studs at 610 mm (24") o.c. max. Min. 51 mm (2"), 0.45 mm (0.018") steel Channel 19 mm (3/4") air space between studs and Firewall Max. overall height 21.3 m (70 ft) Protection wall: Bearing or Nonbearing <ul style="list-style-type: none"> CertainTeed Gypsum Panels (rated or non-rated) Optional CertainTeed Glass Fibre insulation Tape and finish with CertainTeed products 	<ul style="list-style-type: none"> M2Tech® Shaftliner Type X GlasRoc® Shaftliner Type X 12.7 mm Easi-Lite® 12.7 mm SilentFX® QuickCut™ Attachment clips <ul style="list-style-type: none"> Min. 51 mm (2"), 1.6 mm (0.063") thick aluminum angle <ul style="list-style-type: none"> Attached between wall plate and H studs, spacing dependent on Firewall height 	
Assembly	Acoustical Details	STC	Report #	
	Protection walls 92 mm, 0.45 mm steel studs at 610 mm o.c. 89 mm glass fibre insulation 12.7 mm (1/2") Easi-Lite® panel each wall	67	NOAL 23-02035	
	Protection walls 92 mm, 0.45 mm steel studs at 610 mm o.c. 89 mm glass fibre insulation 12.7 mm (1/2") SilentFX® QuickCut™ panel one wall 12.7 mm (1/2") Easi-Lite® panel other wall	71	NGC 2017121_R2	

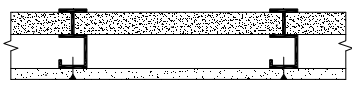
Refer to GlasRoc® and M2Tech® Shaftliner for Firewalls, CTG-7077 for additional details and installation guidelines.

Vertical Shaftwall Systems - Non-loadbearing

1-Hour Fire Resistance Rating

1-Hour Fire Design ULC W446	Fire System Details <ul style="list-style-type: none"> 25.4 mm (1") CertainTeed Shaftliner panels 64 mm (2-1/2"), 102 mm (4") or 152 mm (6"), 0.45 mm (0.018") C-H or C-T steel studs at 610 mm (24") o.c. max. CertainTeed Type X Gypsum Panels Optional CertainTeed Glass Fibre insulation Optional resilient channel Tape and finish with CertainTeed products <i>Finished one side</i> <ul style="list-style-type: none"> Comparable assemblies cUL U469 and cUL U417 	Gypsum Panel Types <ul style="list-style-type: none"> Type X M2Tech® Type X Extreme Abuse Extreme Impact GlasRoc® Tile Backer Type X GlasRoc® Interior Type X M2Tech® Shaftliner Type X GlasRoc® Shaftliner Type X
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Assembly	Acoustical Details	STC	Report #
	Shaftliner panel 64 mm, 0.45 mm C-H studs at 610 mm o.c. 38 mm glass fibre insulation 1 layer Type X finished side	45	NOAL 19-0705
	Shaftliner panel 64 mm, 0.45 mm C-T studs at 610 mm o.c. 38 mm glass fibre insulation 1 layer SilentFX® QuickCut™ Type X finished side	49	NOAL 17-1140

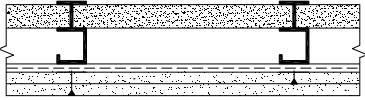
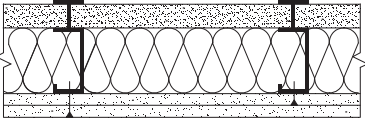
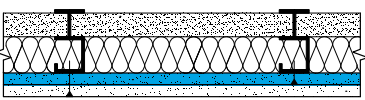
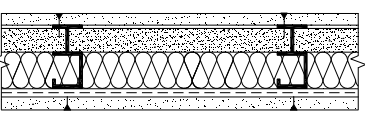
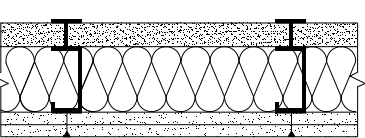
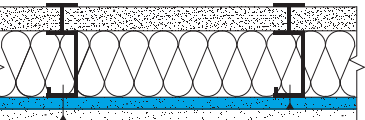
1-Hour Fire Design ULC W446	Fire System Details <ul style="list-style-type: none"> 25.4 mm (1") CertainTeed Shaftliner panels 102 mm (4") or 152 mm (6"), 0.45 mm (0.018") C-H or C-T steel studs at 610 mm (24") o.c. max. CertainTeed FireLITE Type X Gypsum Panels Optional CertainTeed Glass Fibre insulation Optional resilient channel Tape and finish with CertainTeed products <i>Finished one side</i> <ul style="list-style-type: none"> Comparable assembly cUL U417 	Gypsum Panel Types <ul style="list-style-type: none"> FireLITE Type X* M2Tech® Shaftliner Type X GlasRoc® Shaftliner Type X 	
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Refer to GlasRoc® and M2Tech® Shaftliner for Shaftwalls, CTG-7144 for additional details and installation guidelines.

*New Product, not available in all regions, please check for availability.

Vertical Shaftwall Systems - Non-loadbearing

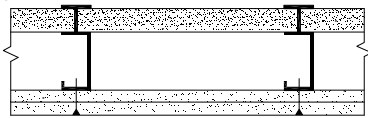
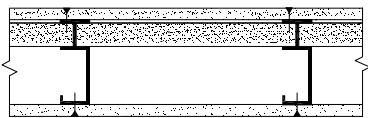
2-Hour Fire Resistance Rating

2-Hour Fire Design ULC W446		Fire System Details	Gypsum Panel Types	
		<ul style="list-style-type: none"> • 25.4 mm (1") CertainTeed Shaftliner panels • 64 mm (2-1/2"), 102 mm (4") or 152 mm (6"), 0.45 mm (0.018") C-H or C-T steel studs at 610 mm (24") o.c. max. • CertainTeed Type C or Type X Gypsum Panels • Optional CertainTeed Glass Fibre insulation • Optional resilient channel • Tape and finish outer layer with CertainTeed products • <i>Finished one side or both sides</i> 	<ul style="list-style-type: none"> • Type X • M2Tech® Type X • Extreme Abuse • Extreme Impact • GlasRoc® Tile Backer Type X • GlasRoc® Interior Type X • Type C • M2Tech® Shaftliner Type X • GlasRoc® Shaftliner Type X 	
Assembly	Acoustical Details	STC	Report #	
	Shaftliner panel 64 mm (0.45 mm) C-T studs at 610 mm o.c. 38 mm glass fibre insulation Resilient channels at 610 mm o.c. 2 layers Type X one side	53	NOAL 18-0811	
	Shaftliner panel 102 mm (0.45 mm) C-T studs at 610 mm o.c. max. 89 mm glass fibre insulation 2 layers 12.7 mm Type C or 2 layers 15.9 mm Type X, one side	54	NRC TL-94-037	
	Shaftliner panel 64 mm (0.45 mm) C-T studs at 610 mm o.c. 38 mm glass fibre insulation 1 layer SilentFX® QuickCut™ Type X and 1 layer Type X one side	55	NOAL 17-1141	
	Shaftliner panel 64 mm (0.45 mm) C-T studs at 610 mm o.c. 38 mm glass fibre insulation Resilient channels at 610 mm o.c. 1 layer Type X each side	53	NOAL 18-0810	
	Shaftliner panel 102 mm (0.84 mm) C-T studs at 610 mm o.c. 89 mm glass fibre insulation 2 layers 12.7 mm Type C one side	53	NOAL 19-0945	
	Shaftliner panel 102 mm (0.84 mm) C-T studs at 610 mm o.c. 89 mm glass fibre insulation 2 layers Type X one side	54	NOAL 18-0816	
	Shaftliner panel 102 mm (0.84 mm) C-T studs at 610 mm o.c. 89 mm glass fibre insulation 1 layer SilentFX® QuickCut™ Type X and 1 layer Type X one side	58	NOAL 18-0815	

Refer to GlasRoc® and M2Tech® Shaftliner for Shaftwalls, CTG-7144 for additional details and installation guidelines.

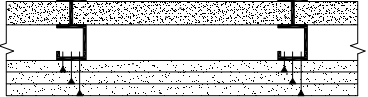
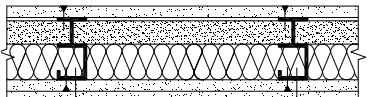
Vertical Shaftwall Systems - Non-loadbearing

2-Hour Fire Resistance Rating

2-Hour Fire Design ULC W446	Fire System Details <ul style="list-style-type: none"> 25.4 mm (1") CertainTeed Shaftliner panels 102 mm (4") or 152 mm (6"), 0.45 mm (0.018") C-H or C-T steel studs at 610 mm (24") o.c. max. CertainTeed FireLITE Type X Gypsum Panels Optional CertainTeed Glass Fibre insulation Optional resilient channel Tape and finish with CertainTeed products <i>Finished one side or both sides</i> <ul style="list-style-type: none"> Comparable assembly cUL U417 	Gypsum Panel Types <ul style="list-style-type: none"> FireLITE Type X* M2Tech® Shaftliner Type X GlasRoc® Shaftliner Type X
		

3-Hour Fire Resistance Rating

3-Hour Fire Design ULC W446	Fire System Details <ul style="list-style-type: none"> 25.4 mm (1") CertainTeed Shaftliner panels 64 mm (2-1/2"), 102 mm (4") or 152 mm (6"), 0.45 mm (0.018") C-H or C-T steel studs at 610 mm (24") o.c. max. CertainTeed Type C Gypsum Panels Optional CertainTeed Glass Fibre insulation Optional resilient channel Tape and finish outer layer with CertainTeed products <i>Finished one side or both sides</i> <ul style="list-style-type: none"> Comparable assembly cUL U417 	Gypsum Panel Types <ul style="list-style-type: none"> 15.9 mm Type C M2Tech® Shaftliner Type X GlasRoc® Shaftliner Type X
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Assembly	Acoustical Details	STC	Report #
	Shaftliner panels 64 mm (0.45 mm) C-T studs at 610 mm o.c. 3 layers 15.9 mm Type C one side	54	NOAL 18-0719
	Shaftliner panels 64 mm (0.45 mm) C-T studs at 610 mm o.c. 38 mm glass fibre insulation 1 layer 15.9 mm Type C one side, 2 layers 15.9 mm Type C other side	55	NOAL 18-0720

Refer to GlasRoc® and M2Tech® Shaftliner for Shaftwalls, CTG-7144 for additional details and installation guidelines.

*New Product, not available in all regions, please check for availability.

Vertical Shaftwall Systems - Non-loadbearing

4-Hour Fire Resistance Rating

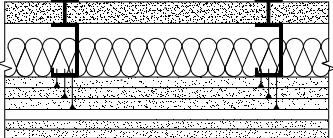
4-Hour Fire Design
cUL W471

Fire System Details

- 25.4 mm (1") CertainTeed Shaftliner panels
- Min. 102 mm (4") or 152 mm (6"), 0.45 mm (0.018") C-H, C-T or I-studs at 610 mm (24") o.c. max.
- CertainTeed Type C Gypsum Panels
- Hat shaped furring channels at 406 mm (16") o.c. max
- Optional CertainTeed Glass Fibre insulation
- Tape and finish outer layer with CertainTeed products
- *Finished one side*

Gypsum Panel Types

- 15.9 mm Type C
- M2Tech® Shaftliner Type X
- GlasRoc® Shaftliner Type X

Assembly	Acoustical Details	STC	Report #
	Shaftliner panels 102 mm (0.45 mm) C-T studs at 610 mm o.c. 64 mm glass fibre insulation 3 layers 15.9 mm Type C attached to studs Furring channel at 406 mm o.c. 2 layers of 15.9 mm Type C attached to furring channel	<h1>54</h1>	NGC 2019098

Refer to GlasRoc® and M2Tech® Shaftliner for Shaftwalls, CTG-7144 for additional details and installation guidelines.

Horizontal Shaft Systems - Non-loadbearing

1-Hour Fire Resistance Rating

1-Hour Fire Design cUL I515

Fire System Details

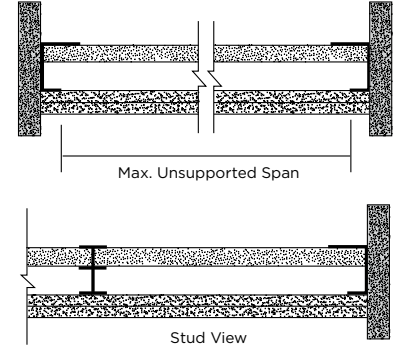
- Min. 64 mm (2-1/2"), 0.45 mm (0.018") C-H, C-T or I-studs at 610 mm (24") o.c. max.
- Min. 64 mm (2-1/2"), 0.45 mm (0.018") J-Track
- 25.4 mm (1") CertainTeed Shaftliner
- 2 layers 15.9 mm (5/8") CertainTeed Gypsum Panels
- Optional resilient channels
- Tape and finish outer layer with CertainTeed products

- **Exposed to fire from below only**

Max. unsupported span less than 2438 mm (96")

Gypsum Panel Types

- Type X
- M2Tech® Type X
- M2Tech® Shaftliner Type X
- GlasRoc® Shaftliner Type X



1-Hour Fire Design cUL I515

Fire System Details

- Min. 64 mm (2-1/2"), 0.45 mm (0.018") C-H, C-T or I-studs at 610 mm (24") o.c. max.
- Min. 64 mm (2-1/2"), 0.45 mm (0.018") J-Track
- 25.4 mm (1") CertainTeed Shaftliner
- 2 layers 15.9 mm (5/8") CertainTeed Gypsum Panels
- Optional resilient channels
- Tape and finish outer layer with CertainTeed products

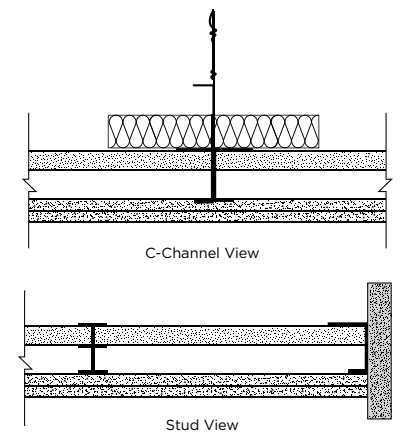
Clear spans over 2438 mm (96")

- Min. 4.1 mm (8 Ga) steel wire at 610 mm (24") o.c. max.
- Minimum 152 mm (6"), 0.45 mm (0.018") steel C-channel, min. 32 mm (1-1/4") legs
- Min. 64 mm (2-1/2"), 0.45 mm (0.018") J-track, either side of C-channel
- Min. 51 mm x 152 mm (2" x 6") stone wool insulation on each side, along full length of C-channel

- **Exposed to fire from below only**

Gypsum Panel Types

- Type X
- M2Tech® Type X
- M2Tech® Shaftliner Type X
- GlasRoc® Shaftliner Type X



Refer to GlasRoc® and M2Tech® Shaftliner for Shaftwalls, CTG-7144 for additional details and installation guidelines.

Horizontal Shaft Systems - Non-loadbearing

2-Hour Fire Resistance Rating

2-Hour Fire Design cUL 1515

Fire System Details

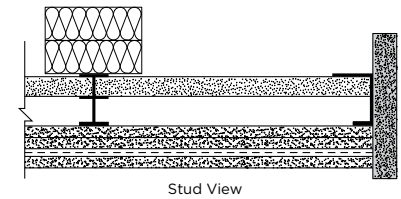
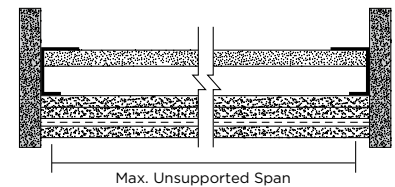
- Min. 64 mm (2-1/2"), 0.84 mm (0.033") C-H, C-T or I-studs at 610 mm (24") o.c. max.
- Min. 64 mm (2-1/2"), 0.84 mm (0.033") J-Track
- Min. 102 mm x 152 mm (4" x 6") stone wool insulation along full length of studs
- 25.4 mm (1") CertainTeed Shaftliner
- 3 layers 15.9 mm (5/8") CertainTeed Type C Gypsum Panels
- Resilient channels at 406 mm (16") o.c. between 2nd and 3rd layer of gypsum panel
- Tape and finish outer layer with CertainTeed products

• **Refer to full UL report for information on fire rating from both sides**

Max. unsupported span less than 2438 mm (96")

Gypsum Panel Types

- 15.9 mm Type C
- M2Tech® Shaftliner Type X
- GlasRoc® Shaftliner Type X



2-Hour Fire Design cUL 1515

Fire System Details

- Min. 64 mm (2-1/2"), 0.84 mm (0.033") C-H, C-T or I-studs at 610 mm (24") o.c. max.
- Min. 64 mm (2-1/2"), 0.84 mm (0.033") J-Track
- 25.4 mm (1") CertainTeed Shaftliner
- 3 layers 15.9 mm (5/8") CertainTeed Type C Gypsum Panels
- Resilient channels at 406 mm (16") o.c. between 2nd and 3rd layer of gypsum panel
- Tape and finish outer layer with CertainTeed products

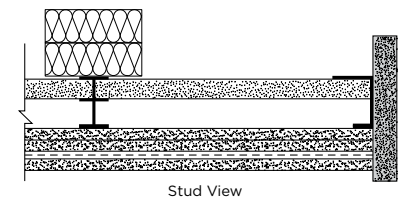
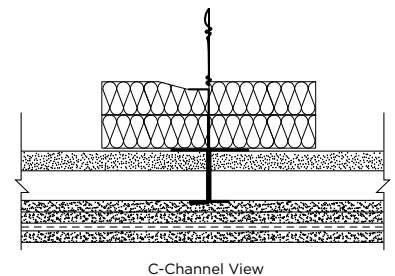
Clear spans over 2438 mm (96")

- Min. 4.1 mm (8 Ga) steel wire at 610 mm (24") o.c. max.
- Minimum 152 mm (6"), 0.45 mm (0.018") steel C-channel, min. 32 mm (1-1/4") legs
- Min. 64 mm (2-1/2"), 0.84 mm (0.033") J-track, either side of C-channel
- Min. 102 mm x 152 mm (4" x 6") stone wool insulation on each side, along full length of C-channel and along full length of studs

• **Refer to full UL report for information on fire rating from both sides**

Gypsum Panel Types

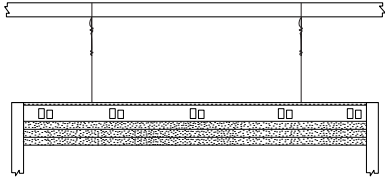
- 15.9 mm Type C
- M2Tech® Shaftliner Type X
- GlasRoc® Shaftliner Type X

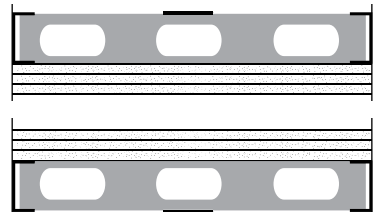


Refer to GlasRoc® and M2Tech® Shaftliner for Shaftwalls, CTG-7144 for additional details and installation guidelines.

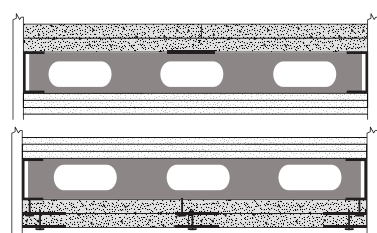
Horizontal Membrane Systems - Non-loadbearing

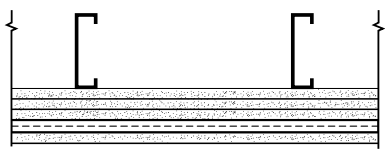
1-Hour Fire Resistance Rating

<p>1-Hour Fire Design cUL I518</p>	<p>Fire System Details</p> <ul style="list-style-type: none"> • CertainTeed Drywall Grid suspension system Main runners at 1220 mm (48") o.c., Cross tees at 610 mm (24") o.c. • Hanger wire as required • 3 layers 15.9 mm (5/8") CertainTeed Gypsum Panels • Tape and finish outer layer with CertainTeed products <p>• <i>Exposed to fire from below only</i></p>	<p>Gypsum Panel Types</p> <ul style="list-style-type: none"> • Type X • M2Tech® Type X 
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<p>1-Hour Fire Design cUL I507</p>	<p>Fire System Details</p> <ul style="list-style-type: none"> • Min. 152 mm (6"), 0.84 mm (0.033") steel studs at 406 mm (16") o.c. max. • Optional hanger wire as necessary • 102 mm (4"), 0.84 mm (0.033") steel strapping applied at mid-span of studs • 3 layers 15.9 mm (5/8") CertainTeed Gypsum Panels • Tape and finish outer layer with CertainTeed products <p>• <i>Exposed to fire from either side</i></p> <p>• Max. unsupported length of studs < 2460 mm (8'-1")</p>	<p>Gypsum Panel Types</p> <ul style="list-style-type: none"> • Type X • M2Tech® Type X 
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2-Hour Fire Resistance Rating

<p>2-Hour Fire Design cUL I519</p>	<p>Fire System Details</p> <ul style="list-style-type: none"> • Min. 152 mm (6"), 0.84 mm (0.033") steel studs at 406 mm (16") o.c. max. • Min. 102 mm (4"), 0.84 mm (0.033") steel strapping applied at mid-span of studs • 2 layers of nominal 38 mm (1-1/2") thick stone wool insulation • Min. 102 mm (4"), 1.21 mm (0.048") steel strapping at 203 mm (8") o.c., applied to each layer of stone wall batts (only required when stone wool is on the bottom of the system) • 3 layers 15.9 mm (5/8") CertainTeed Gypsum Panels • Optional tape and finish outer layer with CertainTeed products <p>• <i>Exposed to fire from either side</i></p> <p>• Max. unsupported length of studs < 2460 mm (8 ft. 1")</p>	<p>Gypsum Panel Types</p> <ul style="list-style-type: none"> • Type X • M2Tech® Type X • FireLITE Type X* 
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<p>1-Hour Fire Design cUL I514</p>	<p>Fire System Details</p> <ul style="list-style-type: none"> • Min. 152 mm (6"), 0.84 mm (0.033") steel studs at 610 mm (24") o.c. max. • Optional hanger wire as necessary • 102 mm (4"), 0.84 mm (0.033") steel strapping applied at mid-span of studs • 4 layers 15.9 mm (5/8") CertainTeed Type C Gypsum Panels • Resilient channels at 406 mm o.c. between 3rd and 4th layers of gypsum panels • Tape and finish outer layer with CertainTeed products <p>• <i>Exposed to fire from below only</i></p>	<p>Gypsum Panel Types</p> <ul style="list-style-type: none"> • 15.9 mm Type C 
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*New Product, not available in all regions, please check for availability.

Steel Joist Floors and Ceilings

1-Hour Fire Resistance Rating

1-Hour Fire Design NBCC Appendix D Table D.2.3.4-B

Fire System Details

- Fire rating provided by gypsum membrane only
- 2 layers 15.9 mm (5/8") CertainTeed Type X panels
- Cold-formed C-shaped steel joists at 610 mm (24") o.c. max.
- Optional resilient channels at 610 mm (24") o.c. max.
- Tape and finish outer layer with CertainTeed products

Gypsum Panel Types

- Type X
- M2Tech® Type X
- 15.9 mm Type C
- FireLITE Type X*



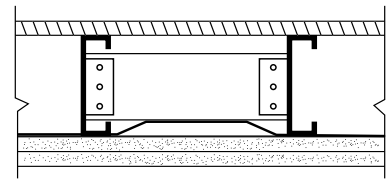
1-Hour Fire Design ULC M511

Fire System Details

- Min. 15.9 mm (5/8") T&G plywood floor sheathing
- Min. 203 mm (8") C-shaped steel joists at 406 mm (16") o.c., Base metal thickness of min. 1.15 mm galv steel, min. 230 MPa
- Blocking and bridging required at 1930 mm (76") o.c. max.
- 2 layers CertainTeed Type C panels
- Tape and finish outer layer with CertainTeed products

Gypsum Panel Types

- 12.7 mm or 15.9 mm Type C



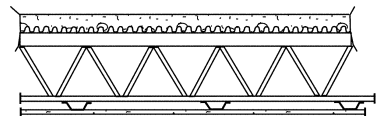
1-Hour Fire Design ULC I509

Fire System Details

- 51 mm (2"), 19 MPa (2800 psi) concrete floor
- Min. 300 mm (12") deep (9 kg/m) steel joists at 610 mm (24") o.c. max.
- Furring channels at 610 mm (24") o.c. max.
- 1 layer 15.9 mm (5/8") CertainTeed Type X panels
- Tape and finish with CertainTeed products

Gypsum Panel Types

- Type X
- M2Tech® Type X



STC 53

Calculated to ASTM E413

90-Minute Fire Resistance Rating

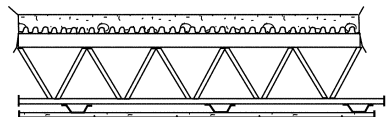
90-Minute Fire Design ULC I510

Fire System Details

- 51 mm (2"), 19 MPa (2800 psi) concrete floor
- Min. 300 mm (12") deep (9 kg/m) steel joists at 610 mm (24") o.c. max.
- Furring channels at 610 mm (24") o.c. max.
- 1 layer 12.7 mm (1/2") CertainTeed Type C panels
- Tape and finish with CertainTeed products

Gypsum Panel Types

- 12.7 mm Type C



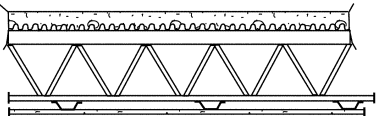
STC 53

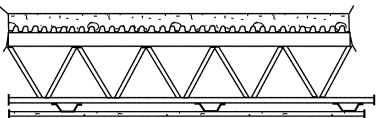
Calculated to ASTM E413

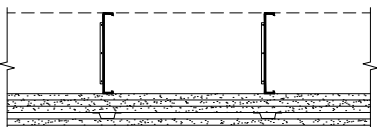
*New Product, not available in all regions, please check for availability.

Steel Joist Floors and Ceilings

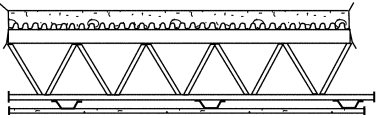
2-Hour Fire Resistance Rating

<p>2-Hour Fire Design ULC I511</p>	<p>Fire System Details</p> <ul style="list-style-type: none"> • 64 mm (2-1/2"), 28 MPa (4000 psi) concrete floor • Min. 255 mm (10") deep (7 kg/m) steel joists at 610 mm (24") o.c. max. • Furring channels at 610 mm (24") o.c. max. • 1 layer 12.7 mm (1/2") CertainTeed Type C panels • Tape and finish with CertainTeed products <p>STC 54 Calculated to ASTM E413</p>	<p>Gypsum Panel Types</p> <ul style="list-style-type: none"> • 12.7 mm Type C 
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<p>2-Hour Fire Design ULC I506</p>	<p>Fire System Details</p> <ul style="list-style-type: none"> • 64 mm (2-1/2"), 24 MPa (3500 psi) concrete floor • Min. nominal 250 mm (10") deep (8 kg/m) steel joists at 610 mm (24") o.c. max., "H" series or "LH" series joists. • Furring channels at 610 mm (24") o.c. max. • 1 layer 12.7 mm (1/2") CertainTeed Type C panels • Tape and finish with CertainTeed products <p>STC 54 Calculated to ASTM E413</p>	<p>Gypsum Panel Types</p> <ul style="list-style-type: none"> • 12.7 mm Type C 
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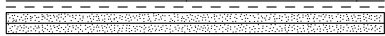
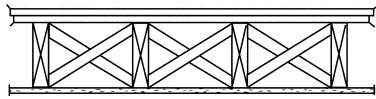
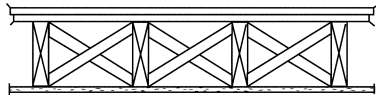
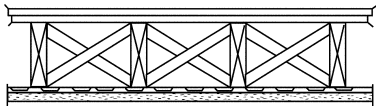
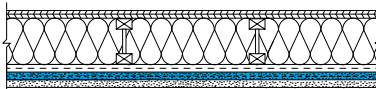
<p>2-Hour Fire Design ULC M514</p>	<p>Fire System Details</p> <ul style="list-style-type: none"> • Min. 19 mm (3/4") T&G structural wood floor sheathing • Min. 203 mm (8") C-shaped steel joists at 610 mm (24") o.c. • Base metal thickness of min. 1.07 mm galv steel, min. 227 MPa • 4 layers 15.9 mm (5/8") CertainTeed Type X panels • Hat shaped furring channels at 610 mm (24") o.c. max. between 3rd and 4th (face) layer of gypsum panel • Tape and finish outer layer with CertainTeed products <p>• <i>Fire rating provided by membrane only</i></p>	<p>Gypsum Panel Types</p> <ul style="list-style-type: none"> • Type X • M2Tech® Type X 
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3-Hour Fire Resistance Rating

<p>3-Hour Fire Design ULC I511</p>	<p>Fire System Details</p> <ul style="list-style-type: none"> • 89 mm (3-1/2"), 24 MPa (3500 psi) concrete floor • Min. nominal 250 mm (10") deep (7 kg/m) steel joists at 610 mm (24") o.c. max., "H" series or "LH" series joists. • Furring channels at 610 mm (24") o.c. max. • 1 layer 12.7 mm (1/2") CertainTeed Type C panels • Tape and finish with CertainTeed products <p>STC 57 Calculated to ASTM E413</p>	<p>Gypsum Panel Types</p> <ul style="list-style-type: none"> • 12.7 mm Type C 
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Wood Joist Floors and Ceilings

1-Hour Fire Resistance Rating

<p>1-Hour Fire Design NBCC Appendix D Table D.2.3.4-B</p>	<p>Fire System Details</p> <ul style="list-style-type: none"> • Fire rating provided by gypsum membrane only • 2 layers 15.9 mm (5/8") CertainTeed Type X panels • Wood joists, trusses or I-joists at 610 mm (24") o.c. max. • Optional resilient channels at 610 mm (24") o.c. max. • Tape and finish with CertainTeed products 	<p>Gypsum Panel Types</p> <ul style="list-style-type: none"> • Type X • M2Tech® Type X • 15.9 mm Type C • FireLITE Type X* 
<p>1-Hour Fire Design ULC M502</p>	<p>Fire System Details</p> <ul style="list-style-type: none"> • Finish flooring, min. 15.9 mm (5/8") T&G plywood sheathing • Sub-flooring, min. 12.5 mm (1/2") plywood sheathing • 2x10 wood joists at 406 mm (16") o.c. max. • 1 layer min. 12.7 mm (1/2") CertainTeed Type C panels • Tape and finish with CertainTeed products <p>STC 34 Calculated to ASTM E413</p>	<p>Gypsum Panel Types</p> <ul style="list-style-type: none"> • 12.7 mm or 15.9 mm Type C 
<p>1-Hour Fire Design ULC M500</p>	<p>Fire System Details</p> <ul style="list-style-type: none"> • Finish flooring, min. 15.5 mm (5/8") T&G plywood sheathing • Sub-flooring, min. 12.5 mm (1/2") plywood sheathing • 2x10 wood joists at 406 mm (16") o.c. max. • 1 layer 15.9 mm (5/8") CertainTeed Type X panels • Tape and finish with CertainTeed products <p>STC 35 Calculated to ASTM E413</p>	<p>Gypsum Panel Types</p> <ul style="list-style-type: none"> • Type X • M2Tech® Type X 
<p>1-Hour Fire Design ULC M501</p>	<p>Fire System Details</p> <ul style="list-style-type: none"> • Finish flooring, min. 15.5 mm (5/8") T&G plywood sheathing • Sub-flooring, min. 12.5 mm (1/2") plywood sheathing • Nominal 2x10 wood joists at 406 mm (16") o.c. max. • Resilient channels at 610 mm (24") o.c. • 1 layer min. 12.7 mm (1/2") CertainTeed Type C panels • Tape and finish with CertainTeed products <p>STC 42 Calculated to ASTM E413</p>	<p>Gypsum Panel Types</p> <ul style="list-style-type: none"> • 12.7 mm or 15.9 mm Type C 
<p>1-Hour Fire Design cUL M535</p>	<p>Fire System Details</p> <ul style="list-style-type: none"> • Finish flooring, min. 12 mm (15/32") wood structural panels • Sub-flooring, min. 15 mm (19/32") wood structural panels • Min. 241 mm (9-1/2") wood I-joists at 610 mm (24") o.c. max. Joists shall conform to ICC-ES ESR-1153 report, min. 57 mm (2-1/4") flange width • Optional CertainTeed loose fill insulation in cavity • Resilient channels at 610 mm (24") o.c. • Base layer min. 15.9 mm (5/8") CertainTeed Type X panels • Face layer 12.7 mm (1/2") Type C or 15.9 mm (5/8") Type X CertainTeed panels • Tape and finish outer layer with CertainTeed products <p>STC 53 NGC 5017060 - with 1 layer of 15.9 mm SilentFX® QuickCut™ and loose fill insulation</p>	<p>Gypsum Panel Types</p> <ul style="list-style-type: none"> • 12.7 mm or 15.9 mm Type C 

*New Product, not available in all regions, please check for availability.

Wood Joist Floors and Ceilings

1-Hour Fire Resistance Rating

1-Hour Fire Design cUL M544

Fire System Details

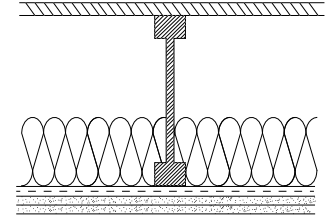
- Min. 18 mm (23/32") wood structural panels
- Min. 241 mm (9-1/2") wood I-joists at 610 mm (24") o.c. max. Joists shall conform to ICC-ES ESR-1153 report, min. 44 mm (1-3/4") flange width
- Min. 89 mm (3-1/2") CertainTeed glass fibre insulation
- Resilient channels at 406 mm (16") o.c.
- 2 layers 15.9 mm (5/8") CertainTeed Type X panels
- Tape and finish outer layer with CertainTeed products

STC 50

NGC 5019094 - with min. 25 mm (1"), 10 MPa (1500 psi) floor topping and vinyl floor covering

Gypsum Panel Types

- Type X
- M2Tech® Type X



2-Hour Fire Resistance Rating

2-Hour Fire Design ULC M503

Fire System Details

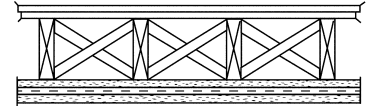
- Finish flooring, min. 15.5 mm (5/8") T&G plywood sheathing
- Sub-flooring, min. 12.5 mm (1/2") plywood sheathing
- Nominal 2x10 wood joists at 406 mm (16") o.c. max.
- Resilient channels at 610 mm (24") o.c.
- 2 layers 15.9 mm (5/8") CertainTeed Type C panels
- Tape and finish with CertainTeed products

STC 35

Calculated to ASTM E413

Gypsum Panel Types

- 15.9 mm Type C



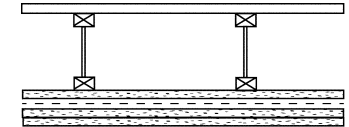
2-Hour Fire Design cUL L538

Fire System Details

- Min. 15.9 mm (5/8") wood structural panels
- Min. 241 mm (9-1/2") wood I-joists at 487 mm (19.2") o.c. max. Joists shall conform to ICC-ES ESR-1153 report, min. 58 mm (2-5/16") flange width
- 3 layers 15.9 mm (5/8") CertainTeed Type C panels
- Resilient channels at 406 mm (16") o.c. between 1st and 2nd layer
- Tape and finish outer layer with CertainTeed products

Gypsum Panel Types

- 15.9 mm Type C



2-Hour Fire Design ULC M514

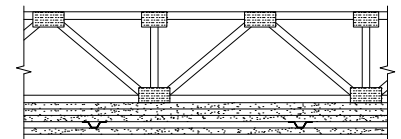
Fire System Details

- Min. 19 mm (3/4") T&G structural wood floor sheathing
- Min. nominal 2x8 wood joists at 610 mm (24") o.c. max. Or Min. 450 mm (17-3/4") deep parallel chord trusses at 610 mm (24") o.c. max.
- 4 layers 15.9 mm (5/8") CertainTeed Type X panels
- Hat shaped furring channels at 610 mm (24") o.c. max. between 3rd and 4th (face) layer of gypsum panel
- Tape and finish outer layer with CertainTeed products

• Fire rating provided by membrane only

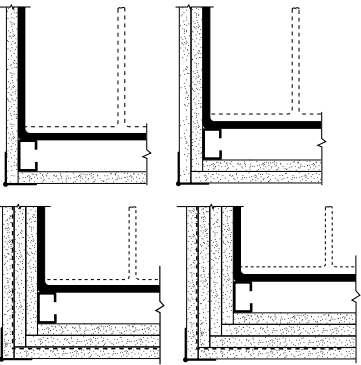
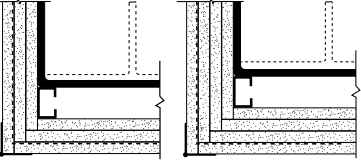
Gypsum Panel Types

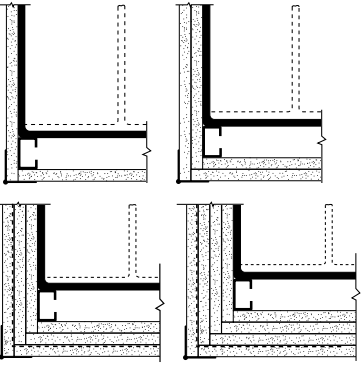
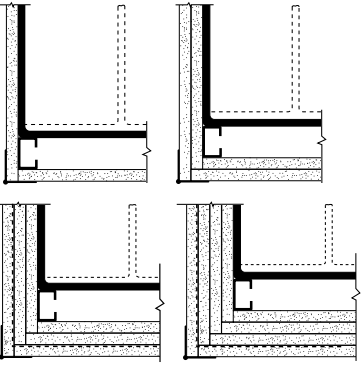
- Type X
- M2Tech® Type X



Column and Beam Protection

1-, 2- and 3-Hour Fire Resistance Rating - Column Protection

1-Hour Fire Design cUL X528		Fire System Details	Gypsum Panel Types
		<ul style="list-style-type: none"> CertainTeed gypsum panels W Shaped Column 41 mm (1-5/8"), 0.45 mm (0.018") steel studs positioned at column corners No. 18 SWG steel tie wire at 610 mm (24") o.c. (3 or 4 layer applications) NO-COAT® drywall corner or metal corner bead Tape and finish outer layer with CertainTeed products 	<ul style="list-style-type: none"> Type X M2Tech® Type X Extreme Abuse Extreme Impact SilentFX® QuickCut™ Type X GlasRoc® Interior Type X GlasRoc® Tile Backer Type X FireLITE Type X* Type C
Assembly	Min. Column Size	Details	Rating
	W100 x 19 (W4 x 13) W150 x 23 (W6 x 15.5)	2 layers 12.7mm Type C or 2 layers 15.9 mm Type X	1-hour
		3 layers 12.7mm Type C or 3 layers 15.9 mm Type X	2-hour
		4 layers 15.9 mm Type X	3-hour
	W250 x 73 (W10 x 49)	1 layer 12.7 mm Type C or 1 layer 15.9 mm Type X	1-hour
		1 layer 12.7 mm Type C and 1 layer 15.9 mm Type X or 2 layers 15.9 mm Type X	2-hour
		3 layers 15.9 mm Type X	3-hour

1-Hour Fire Design cUL X528		Fire System Details	Gypsum Panel Types
		<ul style="list-style-type: none"> CertainTeed gypsum panels HSS column 41 mm (1-5/8"), 0.45 mm (0.018") steel studs positioned at column corners No. 18 SWG steel tie wire at 610 mm (24") o.c. (3 or 4 layer applications) NO-COAT® drywall corner or metal corner bead Tape and finish outer layer with CertainTeed products See also NBCC 2020 Appendix D Table D-2.6.1.F. and ULC Z502 	<ul style="list-style-type: none"> Type X M2Tech® Type X Extreme Abuse Extreme Impact SilentFX® QuickCut™ Type X GlasRoc® Interior Type X GlasRoc® Tile Backer Type X FireLITE Type X* Type C
Assembly	Min. Column Size	Details	Rating
	HSS 102 mm x 102 mm x 5 mm (4" x 4" x 0.188")	2 layers 12.7mm Type C or 2 layers 15.9 mm Type X	1-hour
		1 layer 12.7 mm Type C and 2 layers 15.9 mm Type X or 3 layers 15.9 mm Type X	2-hour
	HSS 200 mm x 200 mm x 6 mm (8" x 8" x 0.250")	1 layer 15.9 mm Type X	1-hour
		3 layers 12.7 mm Type C or 3 layers 15.9 mm Type X	2-hour
		4 layers 15.9 mm Type X	3-hour

*New Product, not available in all regions, please check for availability.

Column and Beam Protection

1-Hour Fire Resistance Rating – Beam Protection

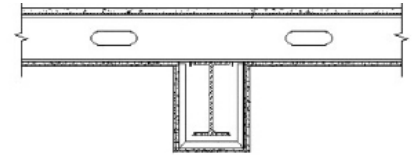
1-Hour Fire Design cUL L524

Fire System Details

- 2 layers 12.7 mm (1/2") CertainTeed Type C gypsum panels
- Beam cage fabricated from steel angles and studs (min. 0.46 mm (0.018") steel)
- Min. W200 x 22 (W8 x 15) steel beam
- Tape and finish with CertainTeed products

Gypsum Panel Types

- 12.7 mm Type C



2-Hour Fire Resistance Rating – Beam Protection

2-Hour Fire Design ULC O501

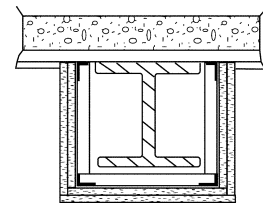
Fire System Details

- 2 layers 15.9 mm (5/8") CertainTeed gypsum panels
- Beam cage fabricated from steel angles or channels, min. 0.46 mm (0.018") steel
- Min. W200 x 36 (W8 x 24) steel beam
- Metal cornerbead
- Tape and finish with CertainTeed products

- Comparable assemblies ULC o502 and cUL N501

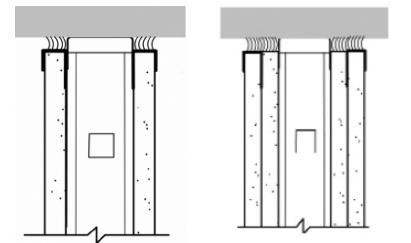
Gypsum Panel Types

- Type X
- M2Tech® Type X

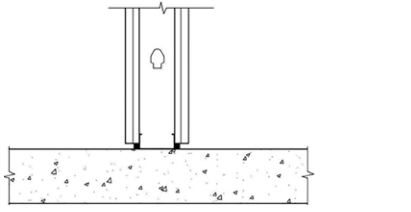


Head and Base of Wall Protection

1- and 2-Hour Head of Wall

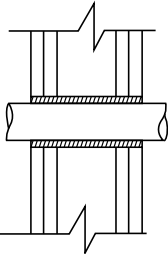
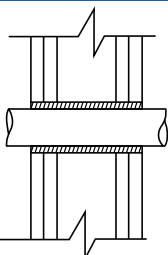
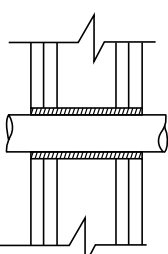
<p>Fire Design Factory Mutual WP-163</p>	<p>Fire System Details</p> <ul style="list-style-type: none"> • Steel top track with min. 25 mm (1") leg, min. 0.46 mm (0.018") • Steel studs cut 13 mm (1/2") short and positioned into top track, leaving 13 mm (1/2") space between top of stud and web of the track • CertainTeed gypsum panels as specified in UL/ULC Design, installed with 13 mm (1/2") gap between panel top and ceiling or deck • Drywall J-bead applied to top edge of face layer panel • Min. 13 mm (1/2") flexible sealant applied in space between top of gypsum panel and ceiling or deck • Intended for use with any 1- or 2-hour fire-resistance rated steel stud system in this Manual using a single row of studs (non-load bearing only) • The wall system shall be constructed per the UL/ULC Design 	<p>1-Hour 2-Hour</p> 
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1- and 2-Hour Base of Wall

<p>Fire Design Factory Mutual WP-163</p>	<p>Fire System Details</p> <ul style="list-style-type: none"> • Steel runner track with min. 25 mm (1") leg, min. 0.46 mm (0.018") • Steel studs cut 10 mm (3/8") short and positioned into runner track • CertainTeed gypsum panels as specified in UL/ULC Design, installed with 16 mm (5/8") gap between panel bottom and floor slab • Fill space between panel and floor slab with smoke and sound barrier sealant • Intended for use with any 1- or 2-hour fire-resistance rated steel stud system in this Manual using a single row of studs (load bearing or non-load bearing) • The wall system shall be constructed per the UL/ULC Design 	<p>1- or 2-Hour</p> 
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Through Penetrations

1- and 2-Hour Through Penetration

<p>Fire Design ULC W-L-1042</p>	<p>Fire System Details</p> <ul style="list-style-type: none"> • Wall Assembly constructed per individual U300 series UL Design • CertainTeed gypsum panels per UL Design • Diameter of opening to be 13 mm (1/2") to 25 mm (1") larger than outside of through penetrant • The hourly F Rating of the firestop system is equal to the hourly fire rating of the wall assembly which it is installed 	
<p>Assembly</p> <p>38 mm x 89 mm (nom. 2x4) at 406 mm (16") o.c. spacing</p>	<p>Maximum Diameter</p> <p>Shaftliner panels 64 mm (0.45 mm) C-T studs at 610 mm o.c. 3 layers 15.9 mm Type C one side</p>	<p>Clearance</p> <p>Minimum 4 mm (1/4") to 13 mm (1/2") maximum all faces</p>
<p>Fire Design ULC W-L-1049</p>	<p>Fire System Details</p> <ul style="list-style-type: none"> • Wall Assembly constructed per individual U300 or U400 series UL Design • CertainTeed gypsum panels per UL Design • The hourly F Rating of the firestop system is equal to the hourly fire rating of the wall assembly which it is installed 	
<p>Assembly</p> <p>38 mm x 89 mm (nom. 2x4) at 406 mm (16") o.c. spacing</p>	<p>Maximum Diameter</p> <p>368 mm (14-1/2")</p>	<p>Clearance</p> <p>Minimum 51 mm (2") to 75 mm (3") maximum all faces</p>
<p>Minimum 92 mm (3-5/8") at maximum 610 mm (24") o.c.</p>	<p>660 mm (26") When diameter exceeds width of stud cavity, frame opening on all sides</p>	<p>Minimum 51 mm (2") to 75 mm (3") maximum all faces</p>
<p>Fire Design ULC W-L-2417 or W-L-2356</p>	<p>Fire System Details</p> <ul style="list-style-type: none"> • Vertical Shaftwall Wall Assembly constructed per ULC W446 or cUL U417 • CertainTeed gypsum panels per UL Design 	
<p>Assembly</p> <p>C-H or C-T shaped studs Minimum 64 mm x 38 mm (2-1/2" x 1-1/2") deep Minimum 0.45 (0.018") steel at maximum 610 mm (24") o.c.</p>	<p>Maximum Diameter</p> <p>75 mm (3")</p>	<p>Clearance</p> <p>Minimum 6 mm (1/4") to 10 mm (3/8") maximum all faces</p>



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