

# EXACOR™

## Sound & Fire Assemblies Handbook





## Overview

This handbook is intended to provide general information regarding assemblies that have been evaluated for fire-resistance and/or for acoustical attenuation performance. The assemblies presented in this handbook feature EXACOR™ panels installed as part of an assembly of materials and tested and evaluated in accordance with the following standards:

### Fire-Resistance Testing

- ASTM E119 Standard Test Methods for Fire Tests of Building Construction and Materials / ANSI UL 263 Fire Tests of Building Construction and Materials

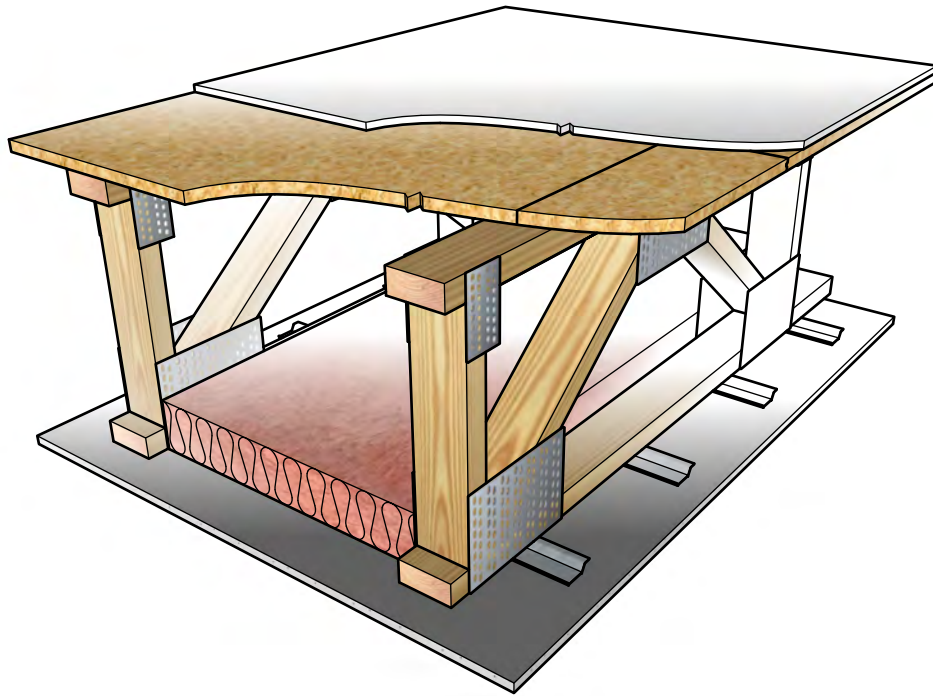
### Sound Assembly Testing

- ASTM E90 Standard Test Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions
- ASTM E413 Classification for Rating Sound Insulation
- ASTM E492 Standard Test Method for Laboratory Measurement of Impact Sound Transmission Through Floor-Ceiling Assemblies Using the Tapping Machine
- ASTM E989 Classification for Determination of Impact Insulation Class
- ASTM E2235 Standard Test Method for Determination of Decay Rates for Use in Sound Insulation Test Methods
- ASTM E3222 Standard Classification for Determination of High-Frequency Impact Sound Ratings

The information contained in this handbook is for guidance and reference only. Please refer to the applicable fire-resistance rated assembly published by Underwriter's Laboratory (UL) or ICC-ES for full assembly details, requirements and options. Some fire-resistance rated assemblies contain multiple material and installation options that may have an impact on sound performance. Not all of the available options in each fire-resistance rated design listing have been tested for STC/IIC ratings. Please see the sound assembly details for more information.

**Please note that this handbook also includes sounds assemblies that have NOT been evaluated for fire-resistance.** The level of fire-resistance (if any) for each assembly is presented at the top of the page for each assembly configuration. Follow all local building code requirements for fire-resistance and sound transmission.

Each assembly presents information for the assembly without a floor covering. This information is meant to represent the base level of performance for the given assembly. EXACOR™ panels should always be covered by an appropriate finished floor covering. Please see the EXACOR™ Subfloor Installation Manual and EXACOR™ Underlayment Installation Manual available at [www.exacor.com](http://www.exacor.com) for more information.



## Floor/Ceiling Assemblies

### Fire-Resistance & Sound Ratings

This section contains STC and IIC ratings for floor/ceiling assemblies that are based on designs that have been assessed for fire-resistance in accordance with ASTM E119/ANSI UL 263. See specific fire-resistance rated Design Listing from UL for full assembly details and requirements. Follow all local building code requirements for fire-resistance and sound transmission.

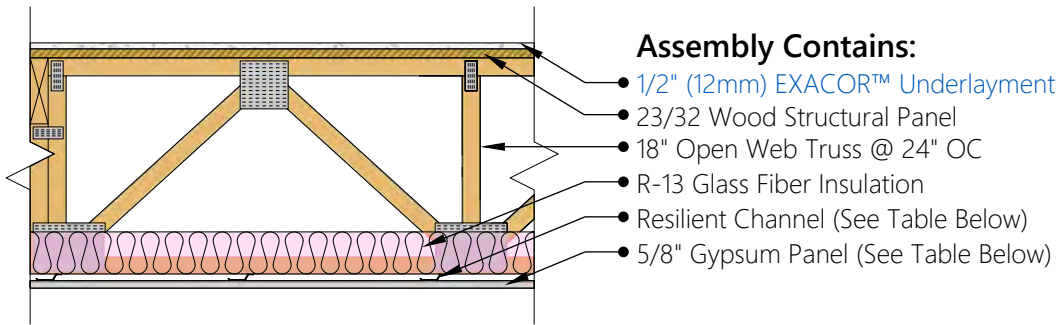
Fire-Resistance Rated Floor/Ceiling Designs:

- UL L528 - System No. 22
- UL L601
- UL L602

## Floor/Ceiling Fire Rated and Sound Assemblies

Floor/Ceiling Assembly	
Design Basis:	UL L528 - System No. 22
Rating:	1hr Fire-Resistance

See applicable UL Design for full assembly details and requirements.



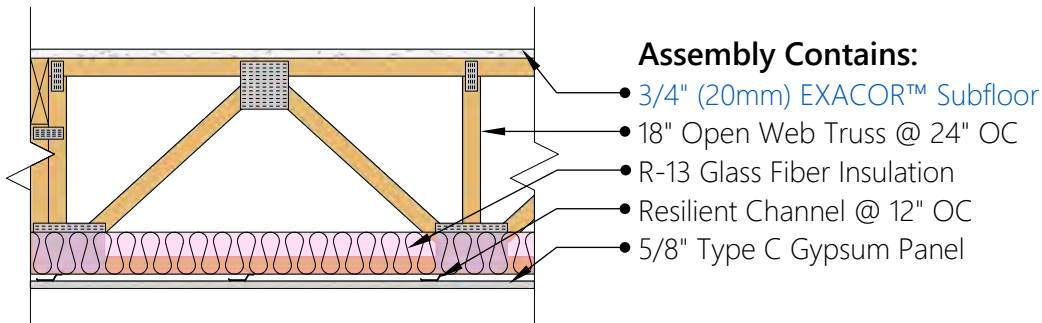
Acoustical Performance - EXACOR™ Underlayment				
		Finished Flooring		
Floor Covering	None*	2mm LVT - Adhered	2mm LVT - Adhered	5.5mm LVT - Floated
Sound Attenuation Mat		None	1.4mm Sound Mat	None
Ceiling Option 1				
Furring Type	Resilient Channel @ 16" On Center			
Gypsum Panel	5/8" ULIX™ Gypsum			
STC/IIC	<b>57/50</b>	<b>58/52</b>	<b>58/53</b>	<b>59/54</b>
HIIC	51	54	63	59
Report No.	L9005.01-113-11-R0	L9005.02-113-11-R0	L9005.03-113-11-R0	L9005.04-113-11-R0
Ceiling Option 2				
Furring Type	Resilient Channel @ 12" On Center			
Gypsum Panel	5/8" Type C Gypsum			
STC/IIC	59/47	<b>59/50</b>	<b>59/51</b>	<b>60/52</b>
HIIC	49	55	64	57
Report No.	L9602.01-113-11-R0	L9006.02-113-11-R0	L9006.03-113-11-R0	L9006.04-113-11-R0

\*Assembly shown without floor covering for information purposes only. EXACOR™ panels must be covered by a finish flooring material.

## Floor/Ceiling Fire Rated and Sound Assemblies

Floor/Ceiling Assembly	
Design Basis:	UL L601
Rating:	1hr Fire-Resistance

See applicable UL Design for full assembly details and requirements.



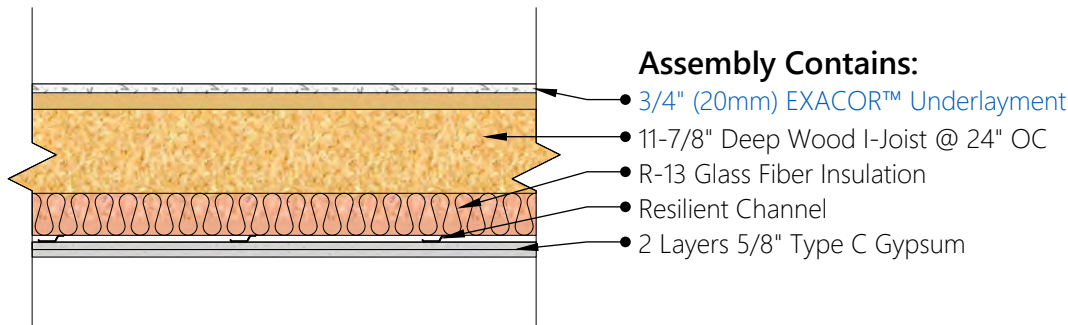
Acoustical Performance - EXACOR™ Subfloor			
		Finished Flooring	
Floor Covering	None*	2mm LVT - Adhered	5.5mm LVP - Floating
Sound Attenuation Mat		1.4 mm Sound Mat	2.1mm Sound Mat
<b>Ceiling</b>			
Furring	Resilient Channel @ 12" On Center		
Gypsum Panel	5/8" Type C Gypsum		
STC/IIC	<b>56/41</b>	<b>58/50</b>	<b>58/50</b>
HIIC	40	65	61
Report No.	K9387.07-113-11-R0	K9387.04-113-11-R0	K9387.01-113-11-R0

\*Assembly shown without floor covering for information purposes only. EXACOR™ panels must be covered by a finish flooring material.

### Floor/Ceiling Fire Rated and Sound Assemblies

Floor/Ceiling Assembly	
Design Basis:	UL L602
Rating:	1hr Fire-Resistance

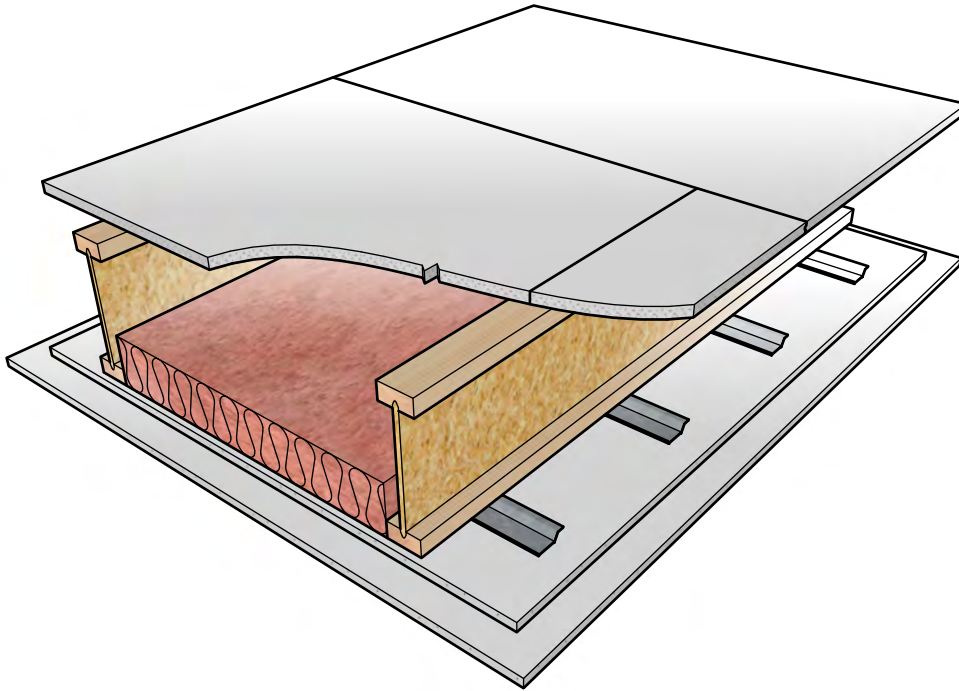
See applicable UL Design for full assembly details and requirements.



Acoustical Performance - EXACOR™ Subfloor					
	Finished Flooring				
Floor Covering	None*	2mm LVT - Adhered	5.5mm LVP - Floated	3/8" Engineered Wood Flooring	Carpet Tile
Sound Attenuation Mat		1.4mm Sound Mat	None	None	None
	Ceiling				
Furring	Resilient Channel @ 12" On Center				
Gypsum Panel	2 Layers 5/8" Type C Gypsum				
STC/IIC	<b>55/40</b>	<b>56/52</b>	<b>57/50</b>	<b>57/51</b>	<b>56/54</b>
HIIC	39	57	50	50	66
Report No.	M2981.06-113-11-R1	M2981.08-113-11-R1	M2981.09-113-11-R1	M2981.10-113-11-R1	M2981.11-113-11-R1

\*Assembly shown without floor covering for information purposes only. EXACOR™ panels must be covered by a finish flooring material.





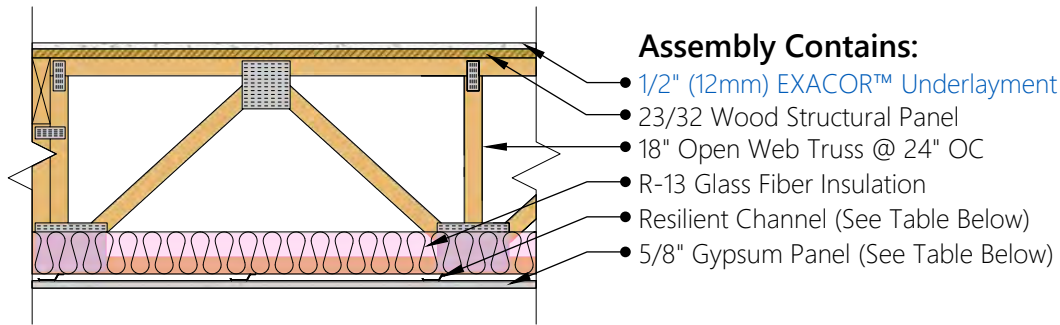
## Floor/Ceiling Assemblies

### Sound Ratings Only

This section contains STC and IIC ratings only for floor/ceiling assemblies. **The assemblies presented in this section have NOT been assessed for fire-resistance and should not be used in constructions where fire-resistance ratings are required.** Examples of potential suitable Construction Types are Types IIIB and VB as defined by the International Building Code. Follow all local building code requirements for fire-resistance and sound transmission.

## Floor/Ceiling Sound Assemblies Only

Floor/Ceiling Assembly	
Design Basis:	N/A
Rating:	Not Rated for Fire-Resistance



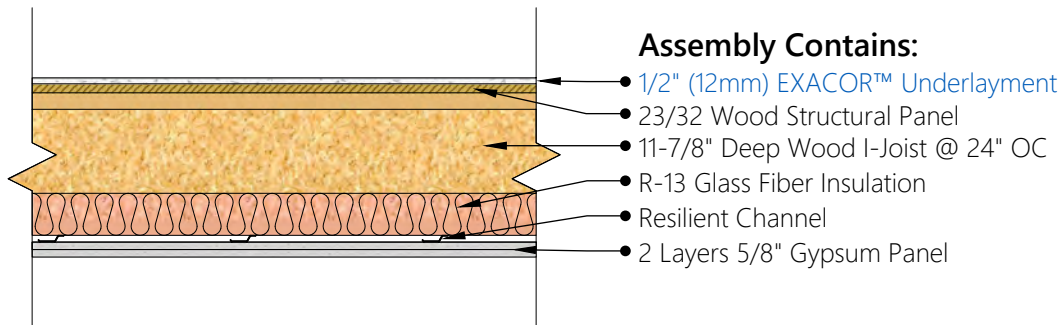
Acoustical Performance - EXACOR™ Underlayment				
		Finished Flooring		
Floor Covering	None*	2mm LVT - Adhered	2mm LVT - Adhered	5.5mm LVT - Floated
Sound Attenuation Mat		None	1.4mm Sound Mat	None
		Ceiling		
Furring	Resilient Channel @ 16" On Center			
Gypsum Panel	5/8" Type C Gypsum			
STC/IIC	<b>58/51</b>	<b>59/54</b>	<b>59/55</b>	<b>60/56</b>
HIIC	52	59	68	61
Report No.	L6141.26-113-11-R0	L6141.27-113-11-R0	L6141.28-113-11-R0	L6141.29-113-11-R0

\*Assembly shown without floor covering for information purposes only. EXACOR™ panels must be covered by a finish flooring material.



## Floor/Ceiling Sound Assemblies Only

Floor/Ceiling Assembly	
Design Basis:	N/A
Rating:	Not Rated for Fire-Resistance

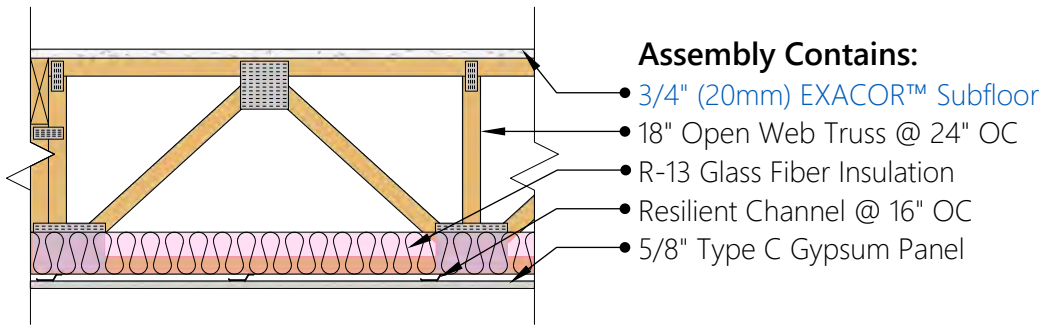


Acoustical Performance - EXACOR™ Underlayment					
	Finished Flooring				
Floor Covering	None*	2mm LVT - Adhered	5.5mm LVP - Floated	3/8" Engineered Wood Flooring	Carpet Tile
Sound Attenuation Mat		None	None	None	None
Ceiling					
Furring	Resilient Channel @ 12" On Center				
Gypsum Panel	2 Layers 5/8" Type C Gypsum				
STC/IIC	<b>58/50</b>	<b>58/55</b>	<b>59/57</b>	<b>59/57</b>	<b>58/58</b>
HIIC	49	56	59	62	74
Report No.	M2981.01-113-11-R1	M2981.02-113-11-R1	M2981.03-113-11-R1	M2981.04-113-11-R1	M2981.05-113-11-R1

\*Assembly shown without floor covering for information purposes only. EXACOR™ panels must be covered by a finish flooring material.

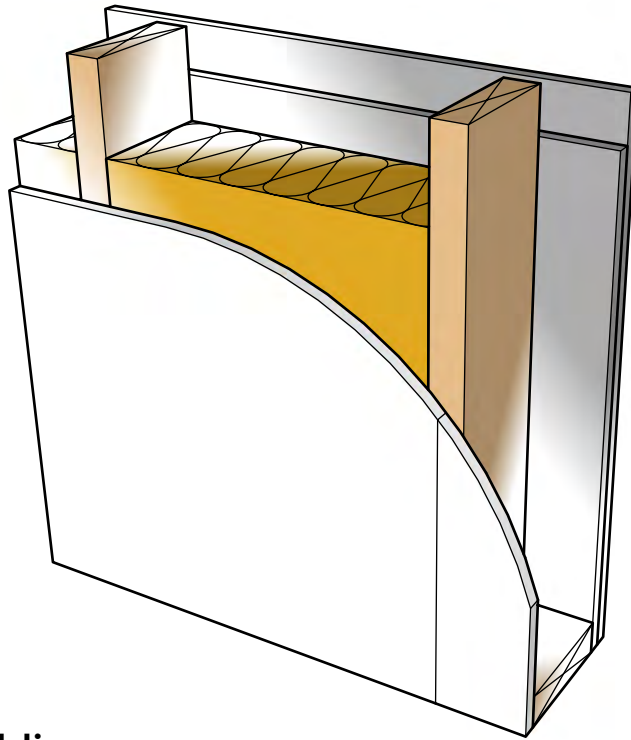
## Floor/Ceiling Sound Assemblies Only

Floor/Ceiling Assembly	
Design Basis:	N/A
Rating:	Not Rated for Fire-Resistance



Acoustical Performance - EXACOR™ Subfloor			
Finished Flooring			
Floor Covering	None*	5mm LVT - Adhered	2.5mm LVT - Adhered
Sound Attenuation Mat		1.4mm Sound Mat	4.3mm Sound Mat
Ceiling			
Furring	Resilient Channel @ 16" OC		
Gypsum Panel	5/8" Type C Gypsum		
STC/IIC	57/36	<b>60/55</b>	<b>58/51</b>
Report No.	H3258.07-113-11-R0	H3258.08-113-11-R0	J5544.01-113-11-R0

\*Assembly shown without floor covering for information purposes only. EXACOR™ panels must be covered by a finish flooring material.



## Exterior Wall Assemblies

### Fire-Resistance Ratings Only

This section contains descriptions of wall assemblies that have been tested in accordance with ASTM E119/ANSI UL 263 for fire-resistance. Calculations for load bearing walls are based on 2018 National Design Specification for Wood Construction® (NDS®) design procedures and in accordance with ASTM D6513 Standard Practice for Calculating the Superimposed Load on Wood-Frame Walls for Standard Fire-Endurance Tests. Unless otherwise noted, all superimposed wall loads were calculated assuming walls were braced by sheathing.

This section does NOT contain information related to NFPA 285, Standard Fire Test Method for Evaluation of Fire Propagation Characteristics of Exterior Wall Assemblies Containing Combustible Components. **Limitations and restrictions apply to EXACOR™ sheathing used in exterior walls of Type III Construction that are greater than 40ft in height above grade plane.** For more information on the use of EXACOR™ sheathing in NFPA 285 assemblies, please contact the Technical Services Department at Huber Engineered Woods, LLC.

These assemblies have not been evaluated for STC ratings.

Fire-Resistance Rated Wall and Partition Designs:

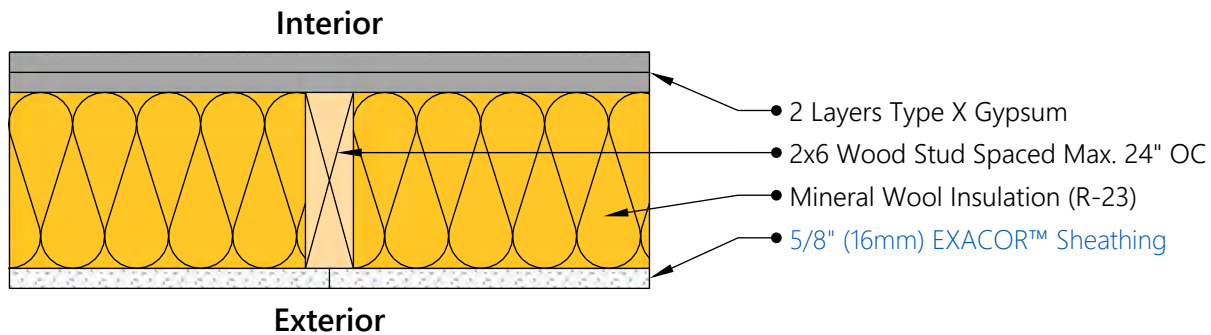
-ICC Design No. MOS-1290-03 (ESL-1290)

-ICC Design No. MOS-1290-04 (ESL-1290)

## Wall Fire Rated Assemblies

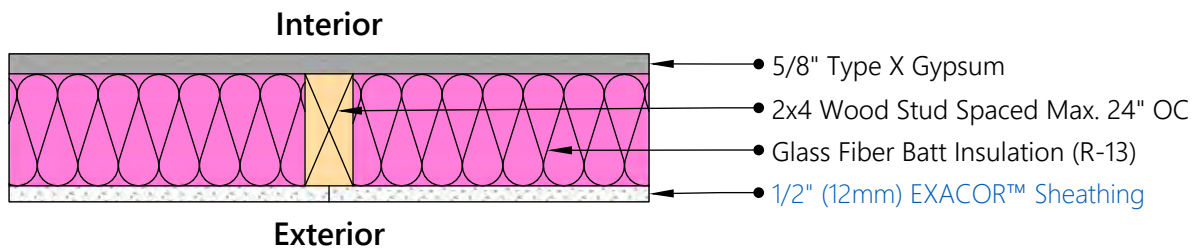
Wall and Partition Assembly	
Design:	ICC Design No. MOS-1290-03 (ESL-1290)
Rating:	Load Bearing - 90% Design Load
	Fire-Resistance Rating
	Interior: 2hr                      Exterior: 2hr

See applicable ICC-ES Design for full assembly details and requirements.



Wall and Partition Assembly	
Design:	ICC Design No. MOS-1290-04 (ESL-1290)
Rating:	Load Bearing - 72% Design Load
	Fire-Resistance Rating
	Interior: 1hr                      Exterior: 1hr

See applicable ICC-ES Design for full assembly details and requirements.





Technical Inquiries:  
Huber Engineered Woods LLC

800.933.9220 x 2716  
techquestions@huber.com  
exacor.com