

# BCD, LLC

Building Component Development

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E. Weymouth, MA 02189  
781-803-3382  
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## HUSHFRAME

SILENCE THE NOISE

### Raft<sup>®</sup>Connectors

NOISE and VIBRATION ISOLATING  
STRUCTURAL DECOUPLING CONNECTORS



BCD is pleased to publish the results of recent laboratory testing of HushFrame decoupling Raft connectors installed in high performance light gauge metal stud partitions.

#### **Riverbank Acoustical Laboratories certified test reports**

**RAL-TL19-333 STC 54**

**RAL-TL19-332 STC 64**

**RAL-TL19-325 STC 65**  
**UL design W473 - 90 minutes**

**RAL-TL19-326 STC 64**  
**UL design W473 - 90 minutes**

**RAL-TL19-327 STC 64**  
**UL design W473 - 90 minutes**

**RAL-TL19-331 STC 66**  
**UL design W473 - 90 minutes**

#### **Metal stud wall assembly composition**

**2-1/2" - 25 gauge - 24" o.c. - R13 unfaced fiberglass  
single layer 5/8" type X gypsum board**

**2-1/2" - 25 gauge - 24" o.c. - R13 unfaced fiberglass  
double layer 5/8" type X gypsum board**

**3-5/8" - 20 gauge - 24" o.c. - R13 unfaced fiberglass  
double layer 5/8" type X gypsum board**

**3-5/8" - 20 gauge - 24" o.c. - R13 unfaced fiberglass  
double layer 5/8" type X gypsum board  
with max. UL allowed electrical boxes**

**3-5/8" - 20 gauge - 24" o.c. - R13 unfaced fiberglass  
double layer 5/8" type X gypsum board  
with max. UL allowed electrical boxes  
protected by fire-stop putty pads**

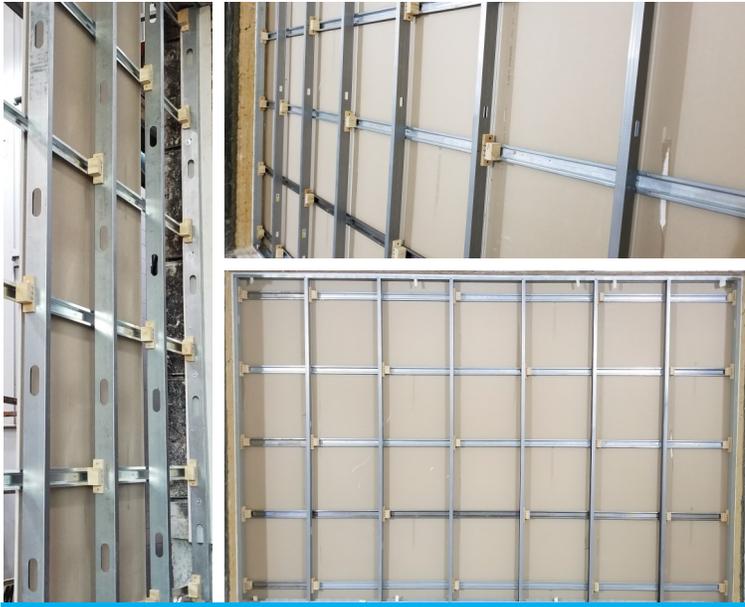
**3-5/8" - 20 gauge - 24" o.c. - R19 unfaced fiberglass  
double layer 5/8" type X gypsum board**

**Please contact us for copies of the long form acoustic test reports**

**Superior acoustic performance for a fraction of what others cost**

**Proudly made in the USA**

For controlling the movement of sound through walls, floor/ceiling assemblies, and associated components of buildings.



Attach the Rafts to the studs and the hat channel to the Rafts

**High Performance Metal Stud Partition  
 Utilizing HushFrame Decoupling Rafts**

**The results when compared to all others...**

- 1.) Lowest cost by a wide margin
- 2.) Highest certified laboratory STC ratings
- 3.) Maximum exposure UL fire resistance rating
- 4.) Greatest structural loading, tension and shear



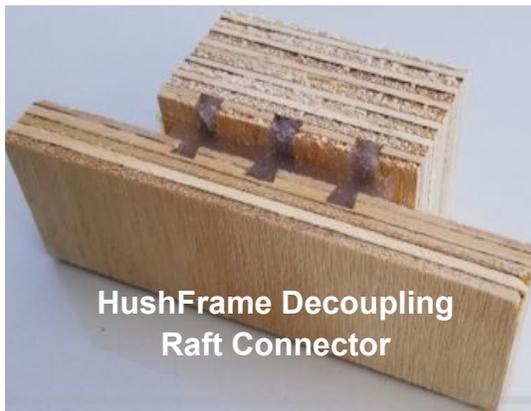
Attach all device boxes, fans, and such to the hat channel on the decoupled side and only sacrifice one STC point



Eliminate the air-spring, insulate the stud bay...  
 Unfaced fiberglass batts perform best



Leave a small gap between the gypsum panels and the adjacent assembly surface. 1/8" works perfectly to defeat flanking noise, fill the gap with soft caulk



**HushFrame Decoupling  
 Raft Connector**

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## **High Performance Metal Stud Wall Assembly**

**BXUV.W473**

**Fire-resistance Ratings - ANSI/UL 263**

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**BXUV - Fire Resistance Ratings - ANSI/UL 263 Certified for United States**

**BXUV7 - Fire Resistance Ratings - CAN/ULC-S101 Certified for Canada**

**Design No. W473**

**September 26, 2019**

**Nonbearing Wall Rating — 1-1/2 Hour**

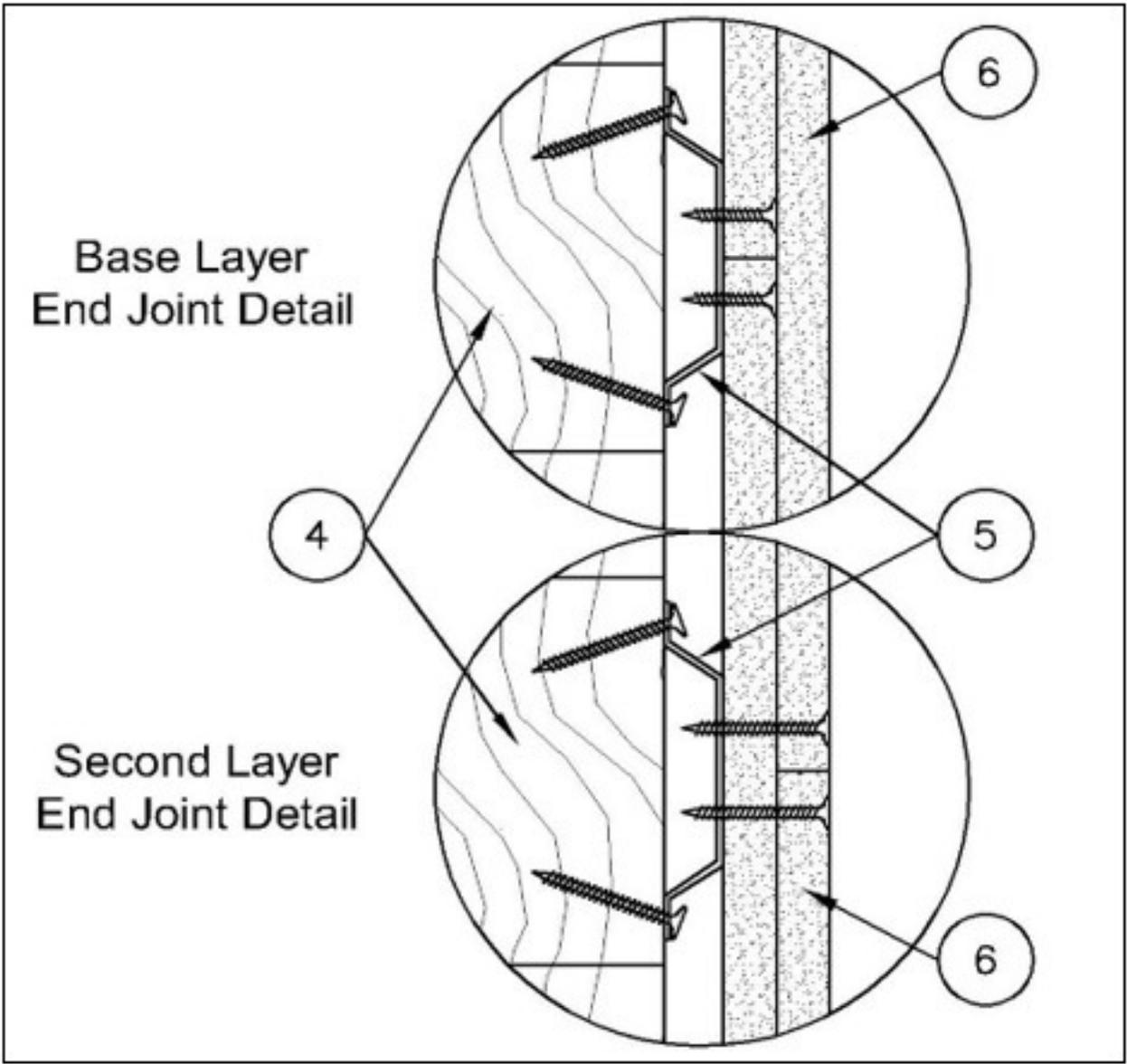
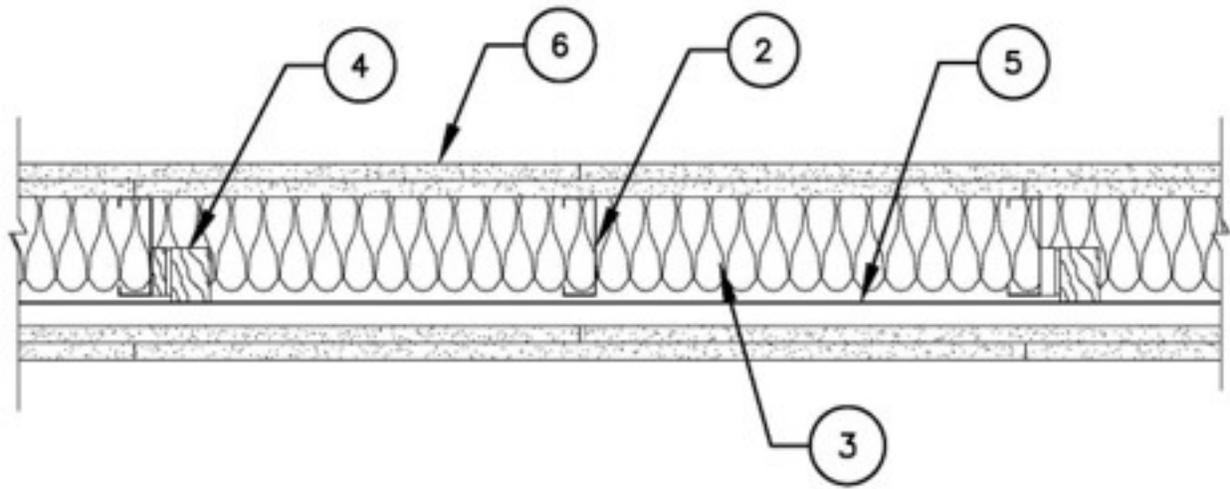
**1-1/2 Hr. Fire**

**FRAMING MEMBERS  
FIRE RESISTANCE CLASSIFICATION  
DESIGN NO. W473  
SEE UL FIRE RESISTANCE DIRECTORY  
<R39523>**

**STC 66**

**ALSO CERTIFIED IN ACCORDANCE WITH  
ASTM E90, "STANDARD TEST METHOD FOR LABORATORY  
MEASUREMENT OF AIRBORNE SOUND TRANSMISSION LOSS OF  
BUILDING PARTITIONS AND ELEMENTS"  
BY RIVERBANK ACOUSTICAL LABORATORIES**





1. **Floor and Ceiling Runners** — (Not Shown) — For use with Item 2 — Channel shaped, fabricated from min 20 MSG corrosion-protected steel, min 3-5/8 in. depth to accommodate stud size, with min 1-1/4 in. long legs, attached to floor and ceiling with fasteners 24 in. OC max.
2. **Steel Studs** — — Channel shaped, fabricated from min 20 MSG corrosion-protected or galvanized steel, 3-5/8 in. min depth, spaced a max of 24 in. OC. Studs friction-fit into floor and ceiling runners. Studs to be cut 5/8 to 3/4 in. less than assembly height.
3. **Batts and Blankets\*** — Glass fiber insulation bearing the UL Classification Marking as to Surface Burning Characteristics and/or Fire Resistance. Min 3-1/2 in. thick with no limit on the overall thickness. Nominal density of 0.81 pcf.

See **Batts and Blankets** (BKNV or BZJZ) Categories for names of Classified companies.

4. **Framing Members\*** — Used to attach furring channels (Item 5) to steel studs (Item 2). Rafts secured to every other stud, spaced 48 in. OC. horizontally, vertically spaced 3 in. from the top and bottom and 24 inch on center along each stud and secured with two 1-1/4 inch (No. 6) Type S-12 drywall screws. One on each side of the core. Fasteners should not be placed closer than 1/4 inch to the edges of the mounts.

**BCD, LLC** — HushFrame Raft Connectors

5. **Furring Channels\*** — Formed of No. 25 MSG galv steel, nominal 2-1/2 in. wide by 7/8 in. deep, spaced 24 in. OC perpendicular to steel studs (Item 2). Channels secured with 1-1/4 inch Type S screws at an angle through each inside corner into the Raft Connectors (Item 4). Ends of adjoining channels overlapped 6 in. and tied together with double strand of No. 18 AWG galv steel wire near each end of overlap. As an alternate, ends of adjoining channels may be overlapped 6 in. and secured together with two self-tapping No. 6 framing screws, min 7/16 in. long at the midpoint of the overlap, with one screw on each flange of the channel.
6. **Gypsum Board\*** — Any 5/8 in. thick, 4 ft. wide, Gypsum Board UL Classified for Fire Resistance (CKNX) eligible for use in Design Nos. U305 and L501 or G512. Two layers, applied vertically, and attached to steel studs (Item 2) or furring channels (Item 5). Vertical gypsum board side joints offset 24 inches between layers. Horizontal butt joints offset 48 inches from adjacent board horizontal joints and 24 inches from base layer butt joint. Vertical joints staggered one stud cavity on opposite sides of studs.
7. **Fasteners** — (Not Shown) — For use with Items 2 and 5 – Type S-12 steel screws used to attach gypsum board to steel studs (Item 2). Type S steel screws used to attach gypsum board to furring channels (Item 5). Direct Attached To

Steel Studs: First layer – 1-1/4 in. long, 3 inches from the edge and 24 in. OC.  
Second layer- 1-7/8 in. long, spaced 1 inch from the edge and 12 in. OC. Attached  
To The Furring Channels: First layer – 1 in. long, 3 inches from the edge and 24  
in. OC. Second layer- 1-5/8 in. long, spaced 1 inch from the edge and 12 in. OC.

8. **Finishing System** — (Not Shown) — Vinyl, dry or premixed joint compound,  
applied in two coats to joints and screw-heads. Nom 2 in. wide paper tape  
embedded in first layer of compound over all joints.

**\* Indicates such products shall bear the UL or cUL Certification Mark for  
jurisdictions employing the UL or cUL Certification (such as Canada), respectively.**

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