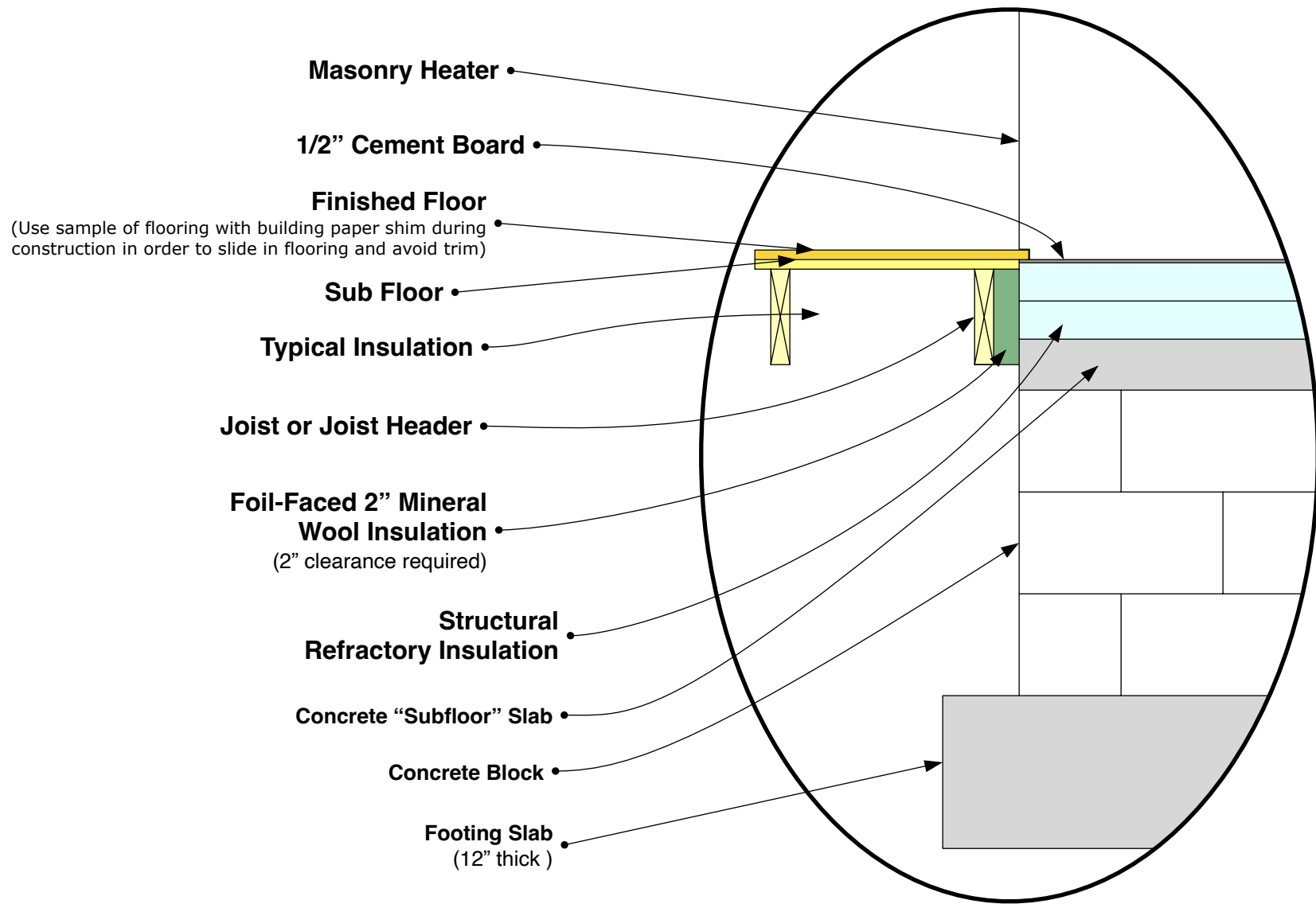




FIRESPEAKING
MASONRY HEATERS • WOOD-FIRED OVENS

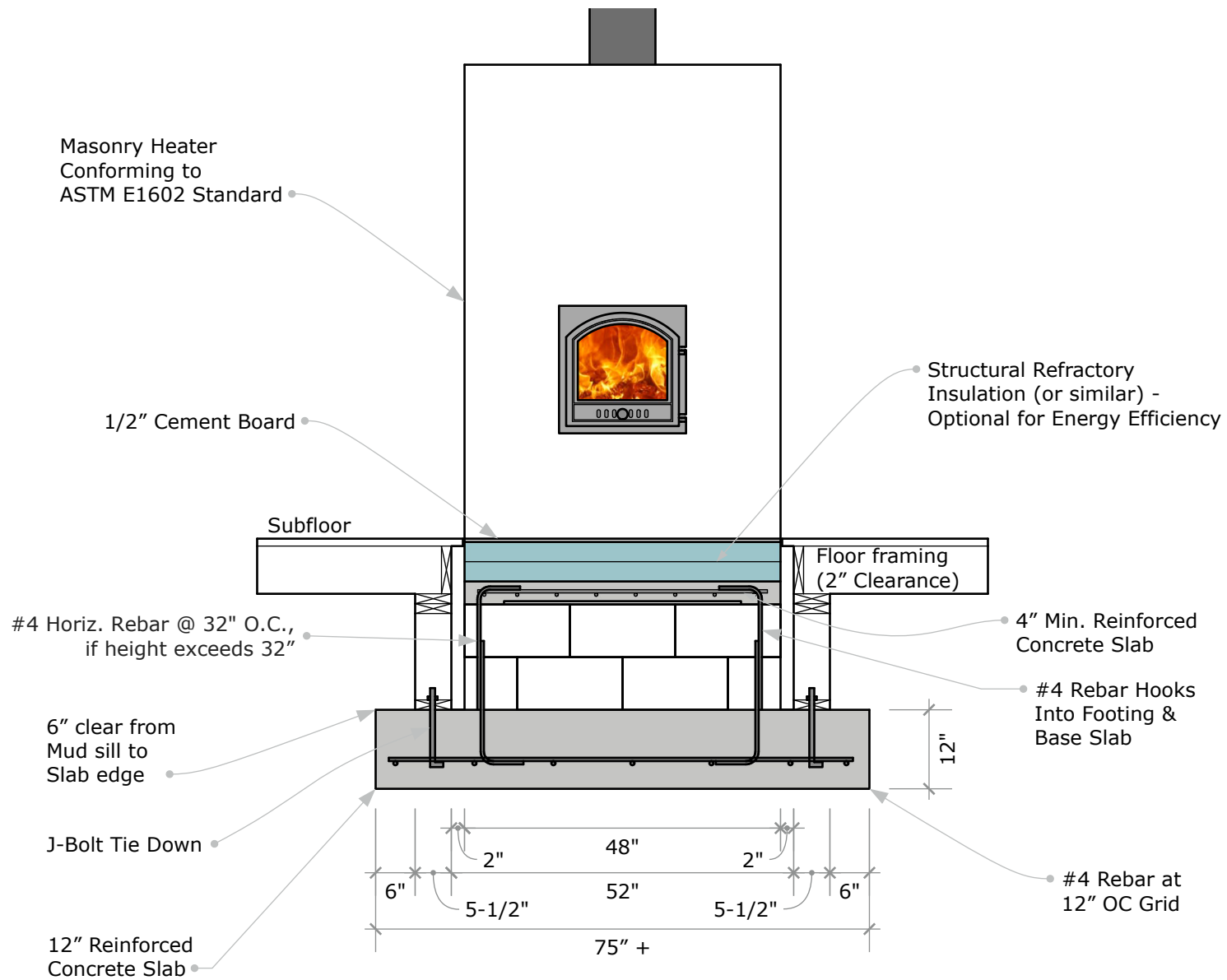
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Masonry Heater Installation Details Typical Foundation & Floor Assembly

Last Modified: September 11, 2026

Drawn by: Jeremiah Church & Max Edleson

Scale:



Foundation Slab for Masonry Heater shall be 12" Thick
and Extend 6" Beyond the Footprint of the Heater in all Directions.
#4 Rebar, 12" OC Placed in Lower Third of Slab.
Prescriptions per IRC R1001.2



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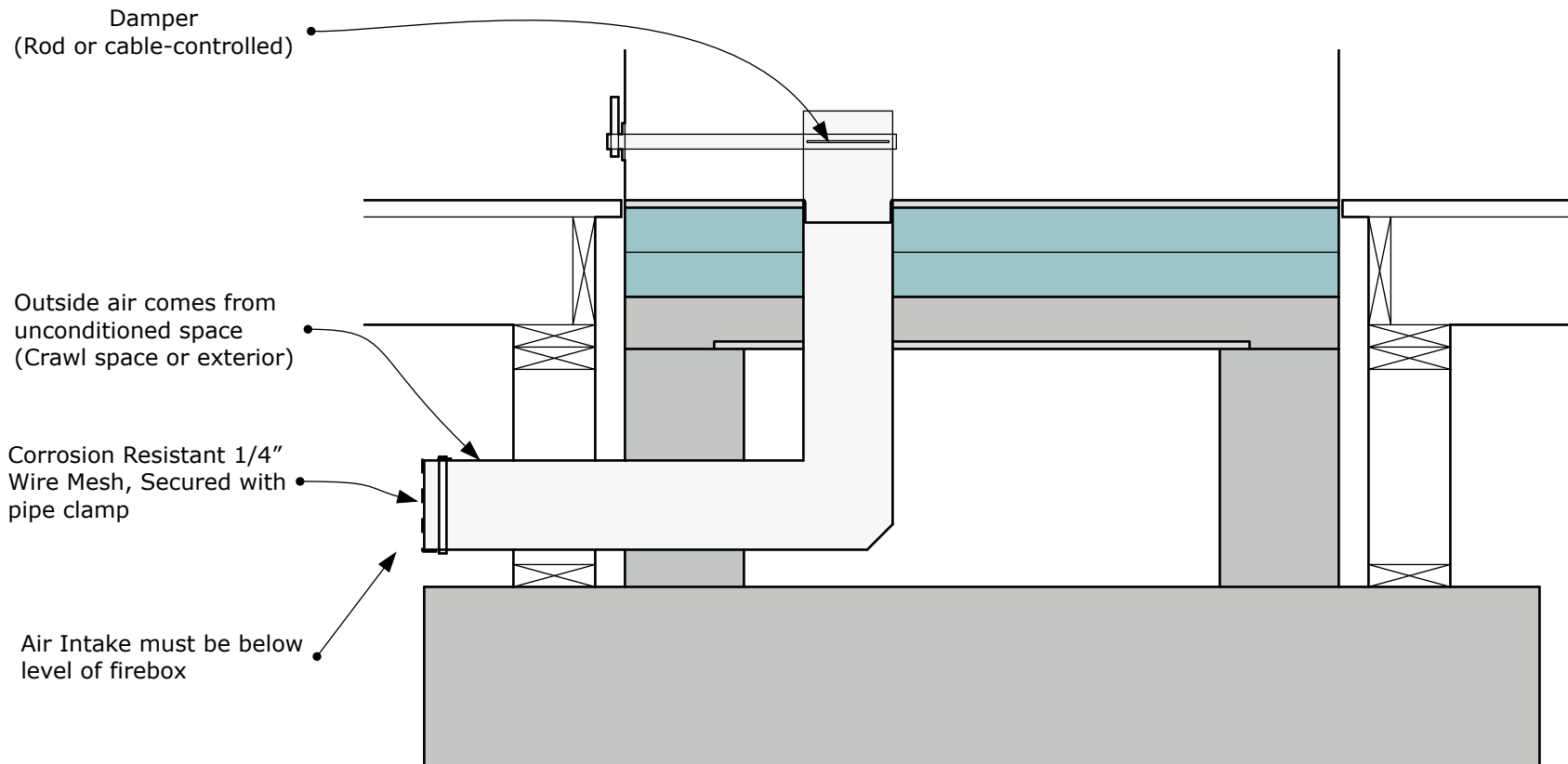
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Masonry Heater Installation Details Typical Crawl Space Foundation

Last Modified: September 11, 2026

Drawn by: Jeremiah Church & Max Edleson

Scale:

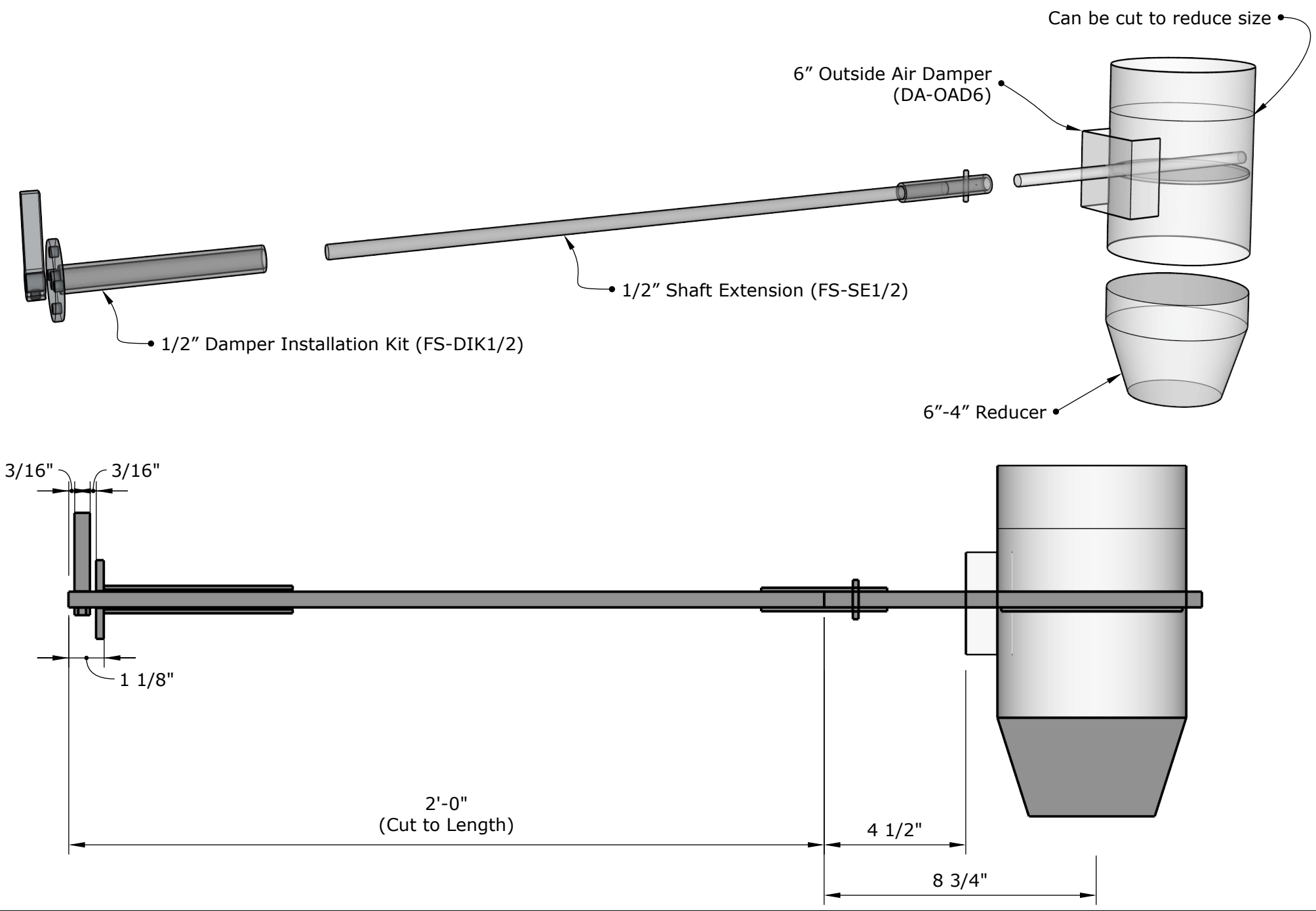


ASTM E1602 - 5.6 **Outside Combustion Air**—When required by the local building code, provide a duct with a minimum cross-sectional area of 7700 mm² (12 in.²) or equivalent. When outside combustion air is required by the authority having jurisdiction the duct shall have a damper that can be fully closed when not in use. Materials shall be non-combustible and methods of construction shall comply with the requirements of the authority having jurisdiction.

5.6.1 In applications in which outside air is introduced directly into the firebox, the air duct must enter the building at a level below the firebox.

5.6.2 Design and position the air inlet to prevent live coals from entering the air duct. To prevent rodents from entering the air duct, cover the outside entry opening of the duct with a 6 mm (1/4 in.) corrosion resistant wire mesh.

5.6.4 When outside air is introduced into the firebox, construct the air duct from noncombustible materials.



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Masonry Heater Installation Details Outside Air Hardware

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Drawn by: Jeremiah Church & Max Edleson

Scale:

Wing Walls

Per ASTM 1602 -

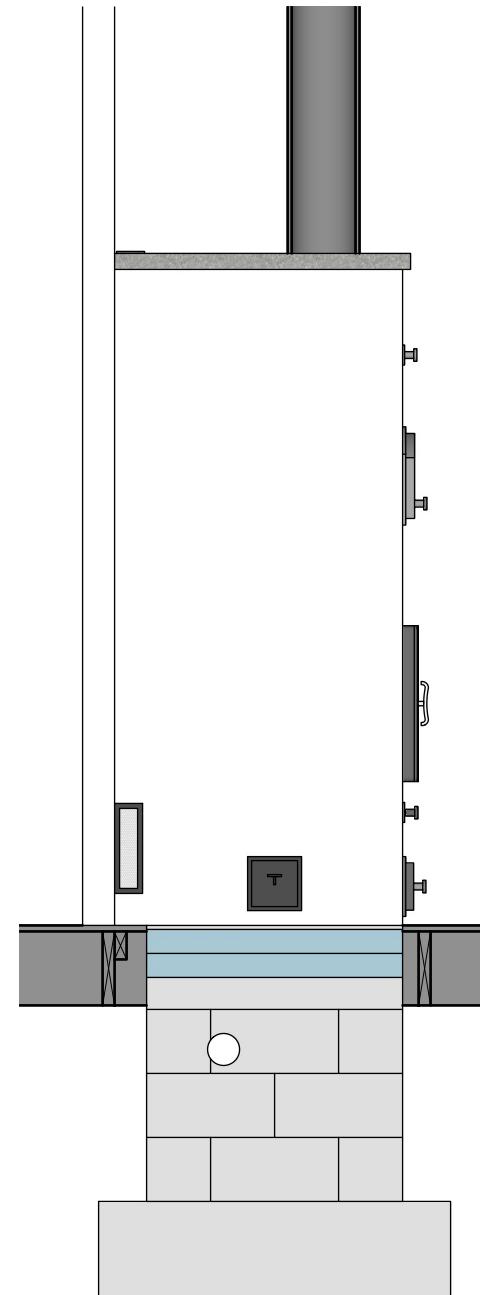
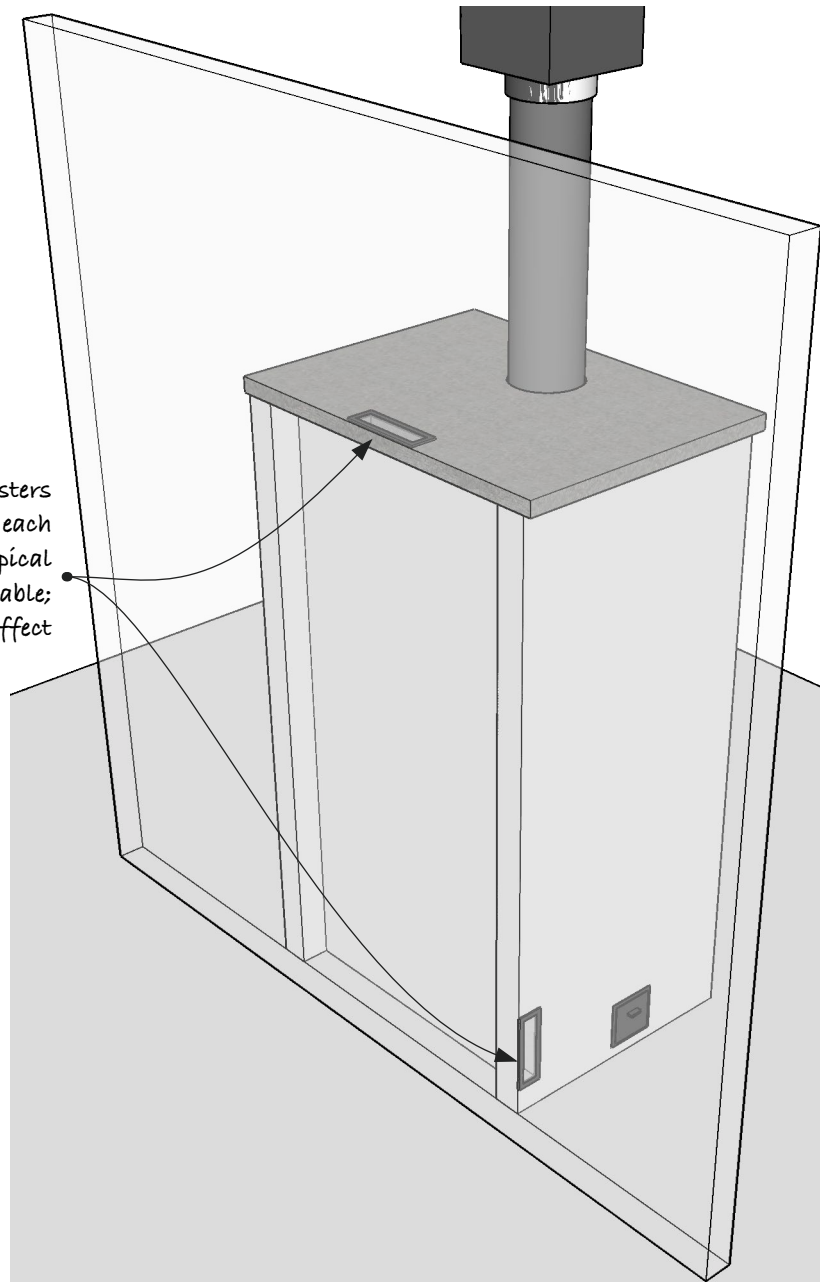
5.2.5 *Wing Walls*—Wing walls may be added to a masonry heater and used as room partitions. Wing walls located at the corners of a masonry heater for the purpose of forming a room divider shall be a minimum of 100 mm (4 in.) in length and a maximum of 100 mm (4 in.) in thickness and be constructed with noncombustible materials. Wing walls located more than 200 mm (8 in.) from a corner of the masonry heater shall be a minimum of 200 mm (8 in.) in length and a maximum of 100 mm (4 in.) in thickness and be constructed with noncombustible materials.

Convection Cell vent registers
Minimum 20 sq. in. clear opening each
2-1/4" x 10" vent register typical
Exact locations are variable;
Locate 1 high and 1 low to create stack effect

Masonry
Wing Wall

Ventilated Convection Cell

4" for wing walls at heater corners
8" for wing walls anywhere else



This wing wall serves to close the combustible clearance gap, if desired, but leaving a 4" gap is also acceptable.



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Masonry Heater Installation Details Typical Wing Wall - Heater In Front

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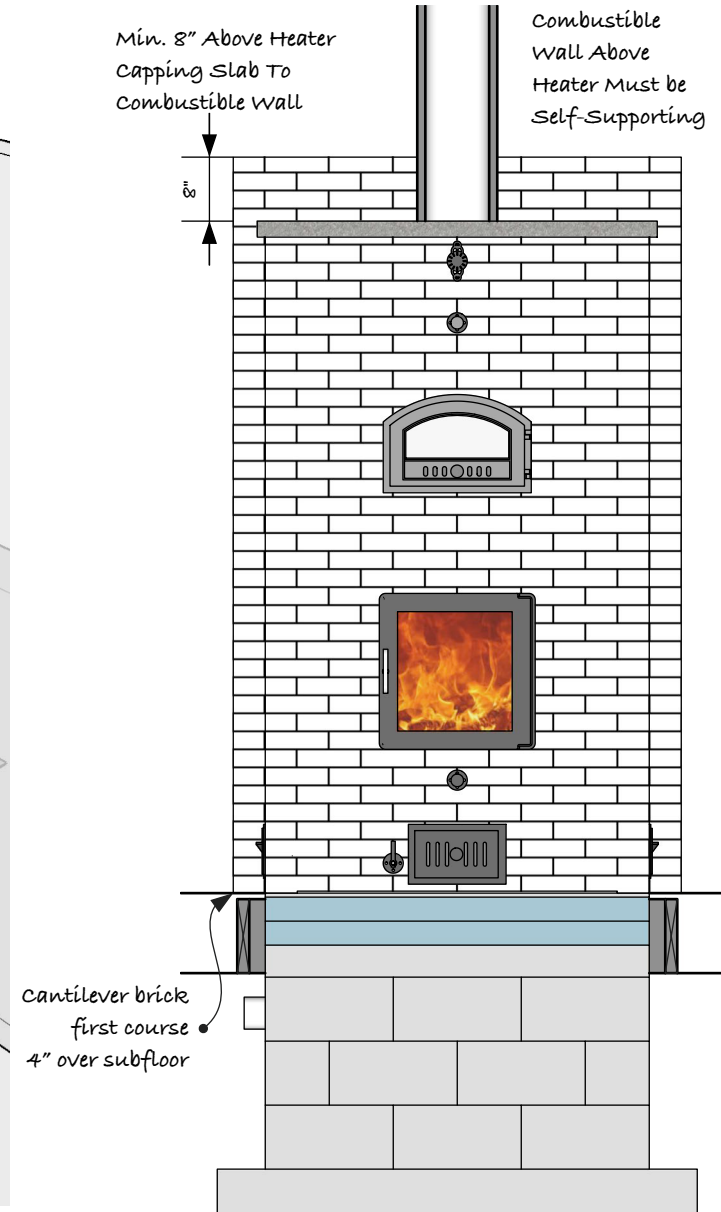
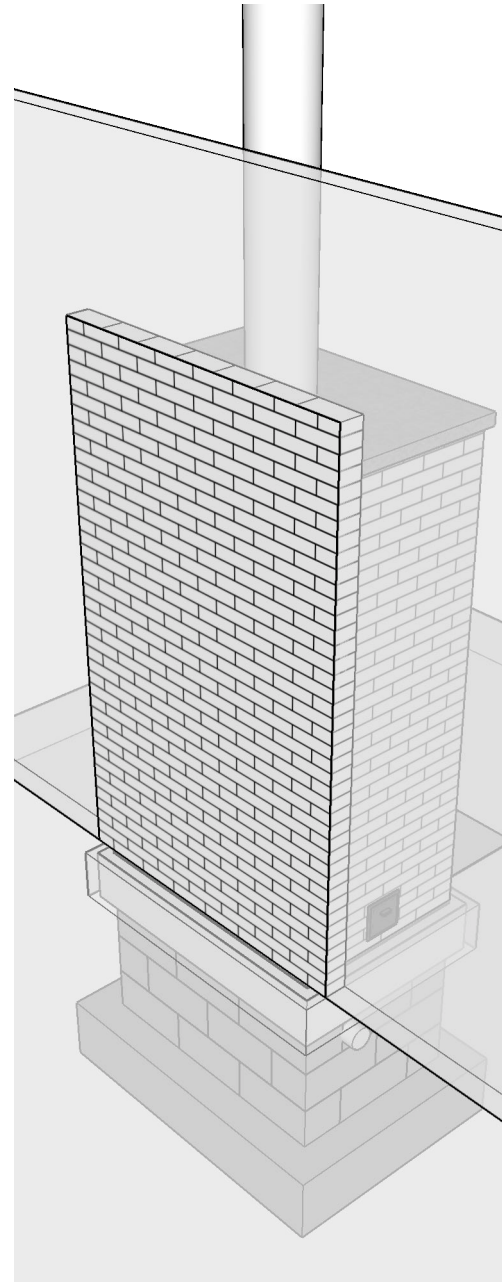
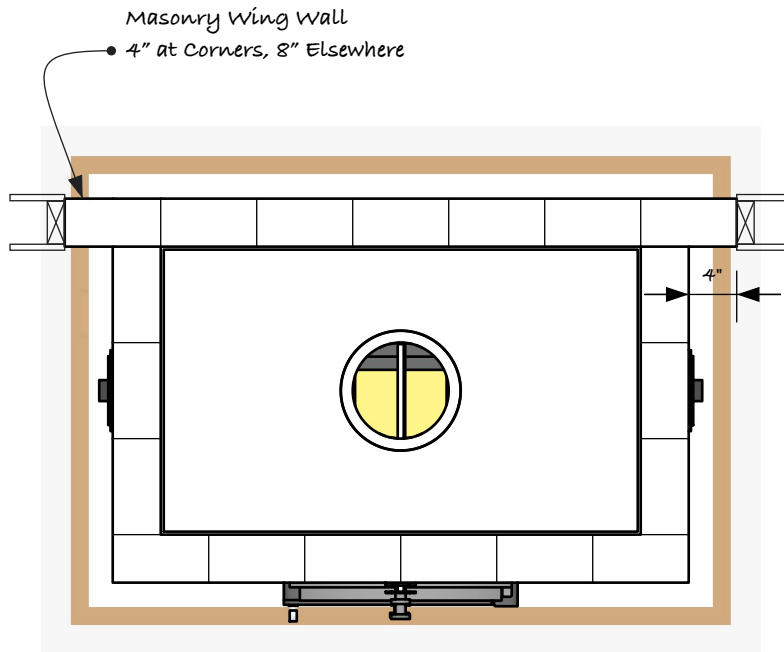
Drawn by: Jeremiah Church & Max Edleson

Scale:

Wing Walls

Per ASTM 1602 -

5.2.5 *Wing Walls*—Wing walls may be added to a masonry heater and used as room partitions. Wing walls located at the corners of a masonry heater for the purpose of forming a room divider shall be a minimum of 100 mm (4 in.) in length and a maximum of 100 mm (4 in.) in thickness and be constructed with noncombustible materials. Wing walls located more than 200 mm (8 in.) from a corner of the masonry heater shall be a minimum of 200 mm (8 in.) in length and a maximum of 100 mm (4 in.) in thickness and be constructed with noncombustible materials.



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Masonry Heater Installation Details Typical Wing Wall - Heater in Plane

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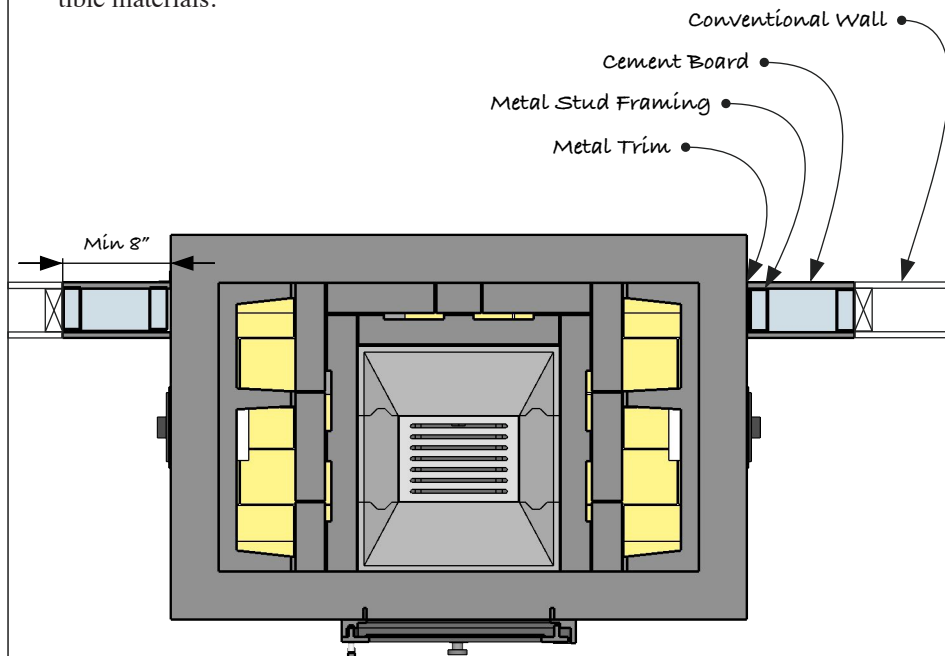
Drawn by: Jeremiah Church & Max Edleson

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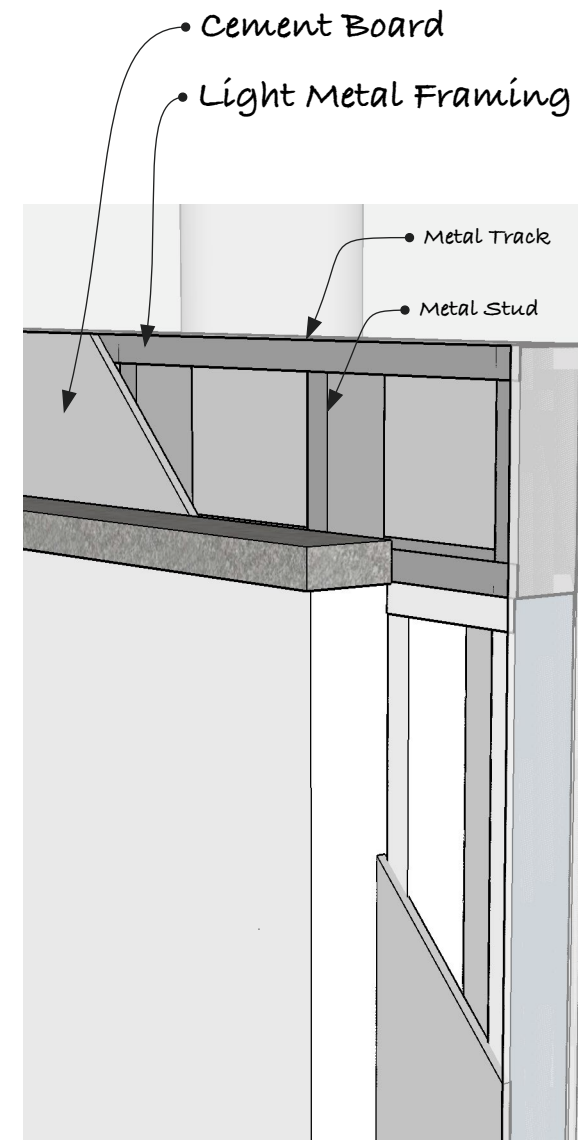
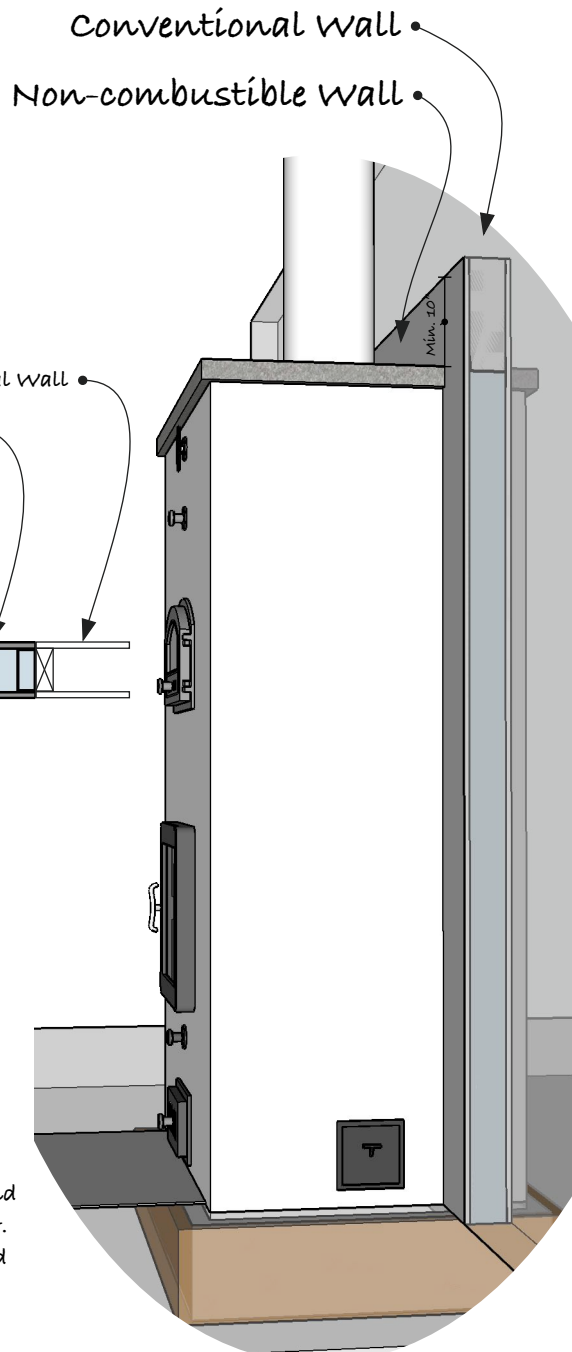
Wing Walls

Per ASTM 1602 -

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One solution to integrating masonry heaters into partition walls while respecting required clearance to combustibles is to use a non-combustible wall assembly for the portions of the wall immediately adjacent to the masonry heater. This assembly consists of a combination of light metal framing and cement board that can be taped, mudded and painted to blend with the conventional wall around it or tiled to create a transitional border. Anticipate differential thermal expansion between the masonry heater and surrounding wall by leaving a small gap between the two and trimming with architectural metal profiles. Surrounding wood trim should respect clearance to combustibles.



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Masonry Heater Installation Details Typical Non-Combustible Wall

Last Modified: September 11, 2026

Drawn by: Jeremiah Church & Max Edleson

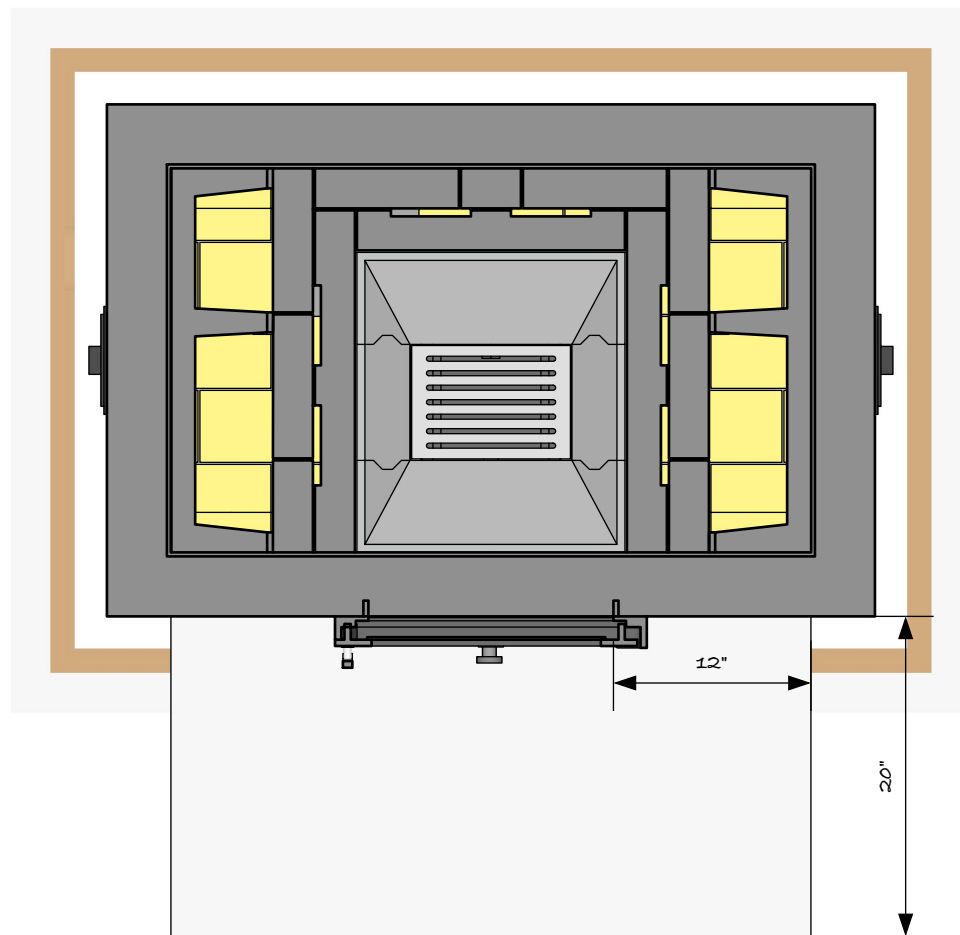
Scale:

Per ASTM E1602:

5.4 Hearth Extension:

5.4.1 Masonry heaters shall have hearth extensions of brick, concrete, stone, tile, or other approved noncombustible material properly supported. Remove wooden forms used during the construction of hearth and hearth extension once construction is completed.

5.4.2 *Closed Door Fireboxes*— With a masonry heater designed to be fired with a closed door of glass or metal, the hearth extension shall be at least 500 mm (20 in.) in front of the facing materials and at least 300 mm (12 in.) beyond each side of the masonry heater opening. When a raised hearth of at least 200 mm (8 in.) in height is used and the hearth extension is located at the base of the door, the hearth extension can be reduced to 400 mm (16 in.) in front of the facing materials.



Tile on 1/4" cement board (screwed to subfloor 6" O.C.) produces 3/4" noncombustible surface which planes out with typical flooring.



A heated bench must be supported by a masonry foundation.



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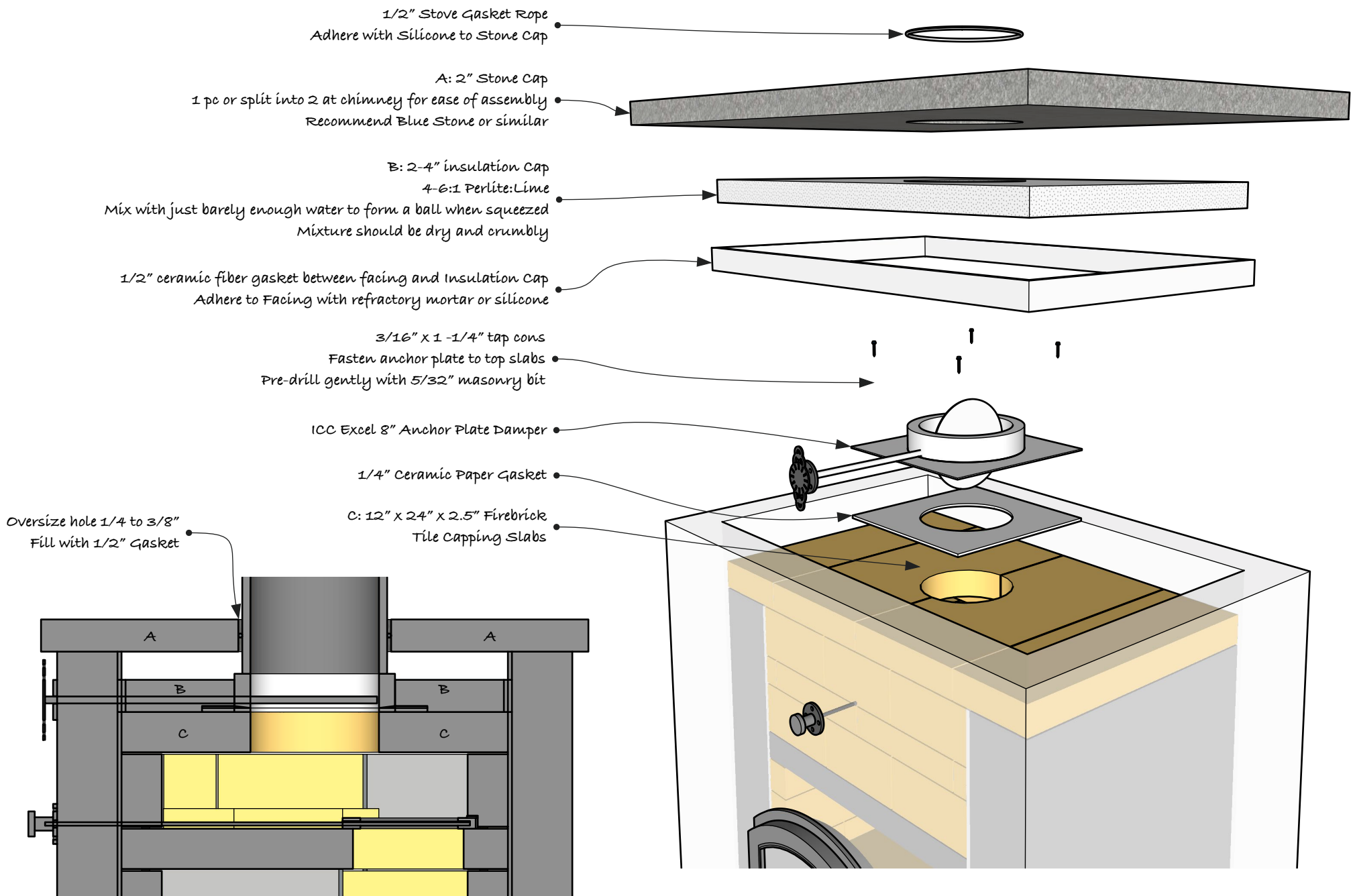
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Masonry Heater Installation Details Typical Hearth Extension

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Scale: 1" = 1' (1:12)



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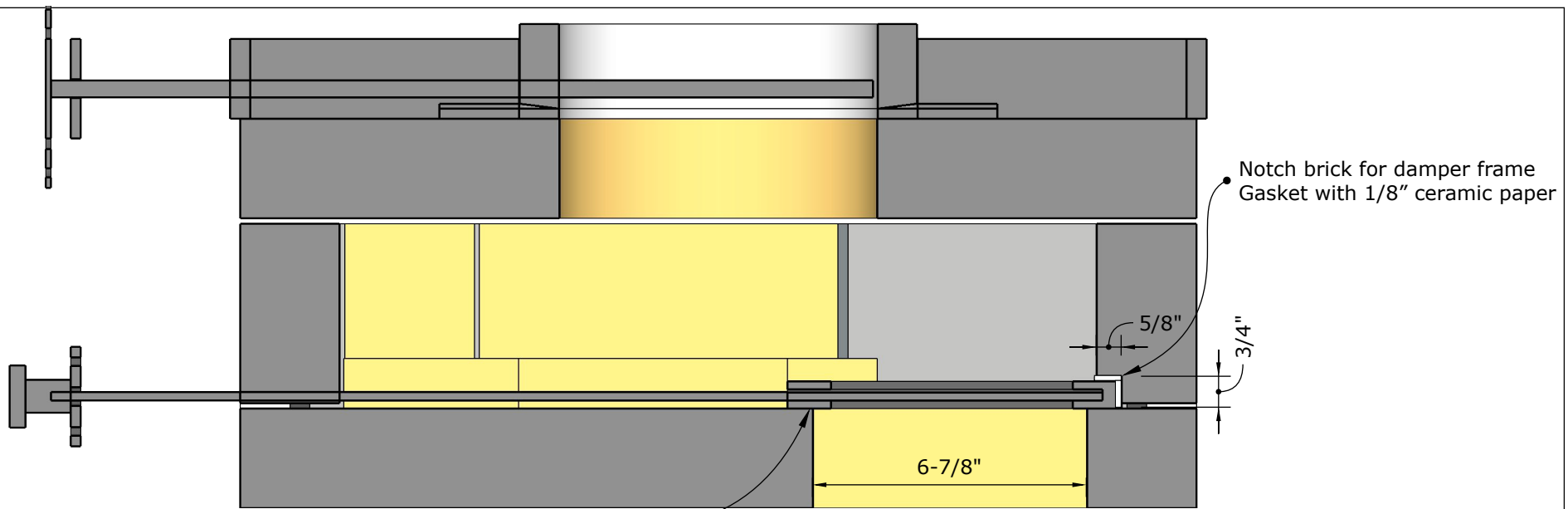
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Masonry Heater Installation Details Typical Anchor Plate & Top of Heater

Last Modified: September 11, 2026

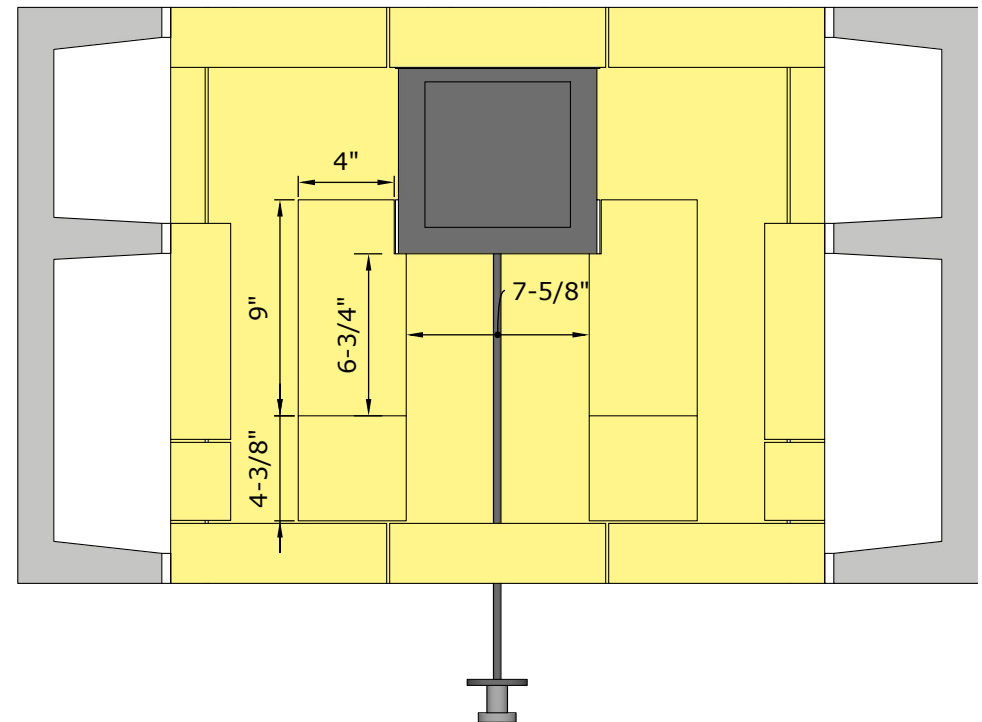
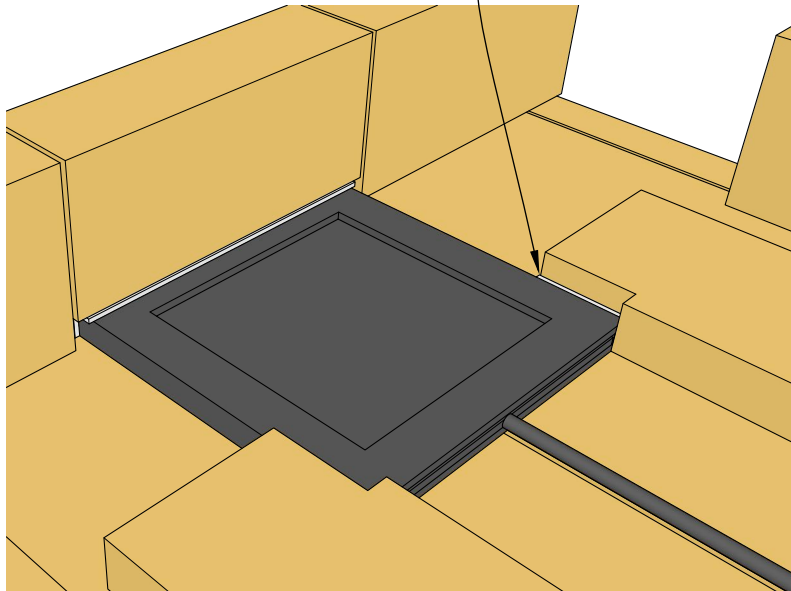
Drawn by: Jeremiah Church & Max Edleson

Scale: 1" = 1' (1:12)



Notch with grinder as needed so frame sits flat •

- Notch splits
- Leave room for plate to slide
- Gasket side with 1/8" ceramic paper
- No gasket on front
- Seat in light refractory mortar seal



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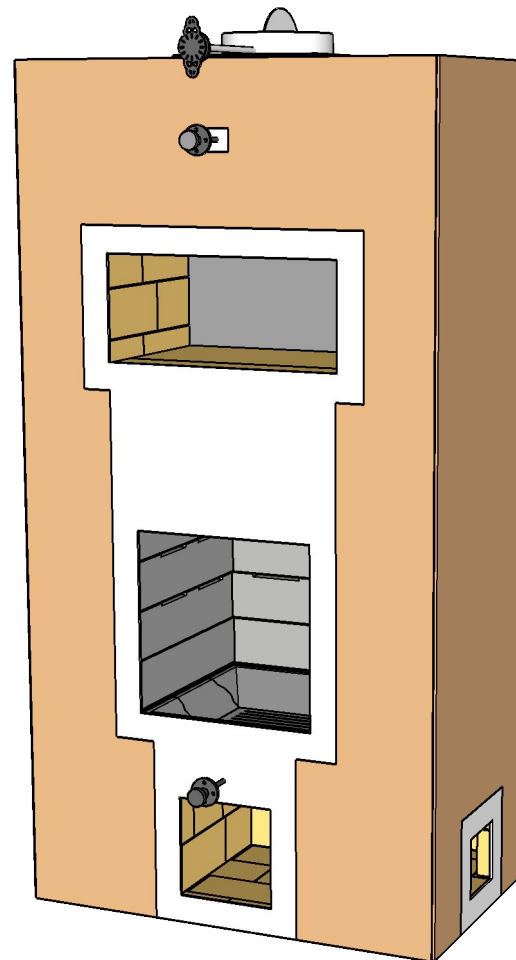
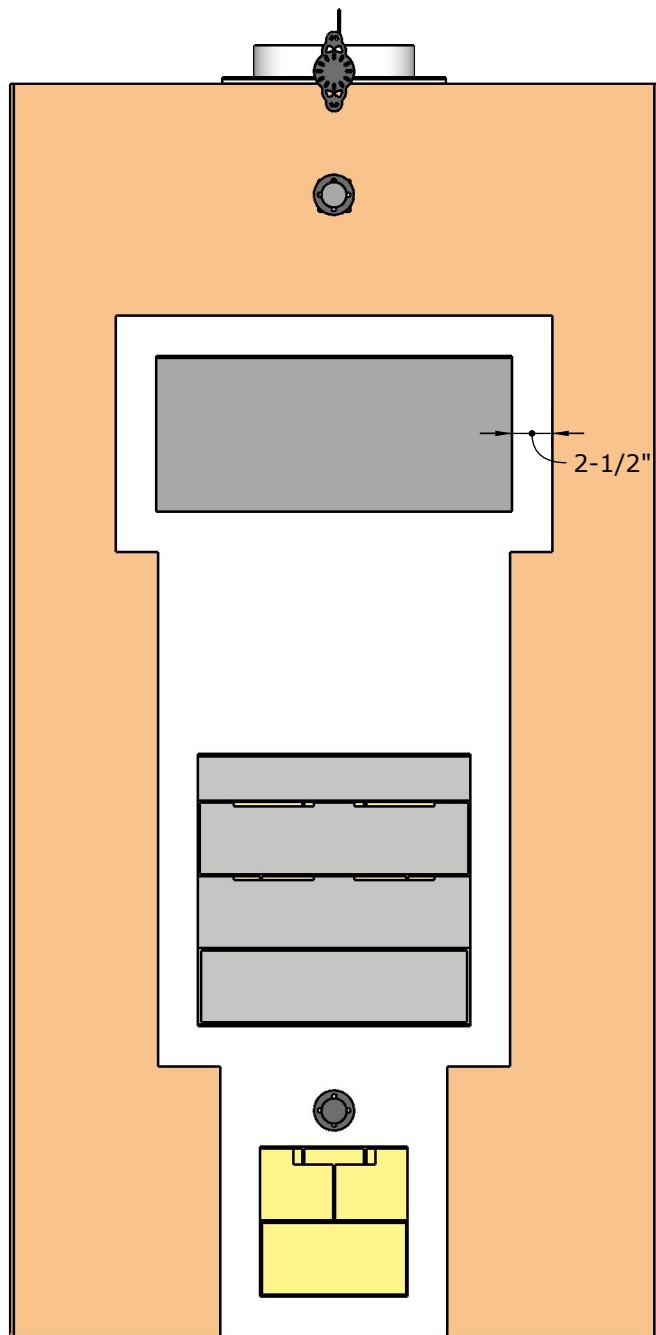
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Masonry Heater Installation Details Typical Sliding Bypass Damper Install

Last Modified: September 11, 2026

Drawn by: Jeremiah Church & Max Edleson

Scale:



EXPANSION JOINT:

Once the core is complete it is wrapped in cardboard and 1/4" ceramic paper. This is the expansion joint that allows the core to move both vertically and laterally separately from the facing.

Cut sheets of cardboard (provided) to the width of the core. Measure the location of any openings including clean-outs, ash door opening, firebox, and oven door opening, and cut out of the cardboard, adding 2-1/2" to all sides of openings, where you will place ceramic paper. As illustrated, fill the area between the firebox door and the oven door with 1/4" ceramic paper. Install 2" square of pre-drilled ceramic paper over the damper shaft.

Adhere cardboard to firebrick core using small dabs of refractory mortar or high-temp silicone. Press flat. Adjacent pieces of cardboard can be taped together using paper masking tape.

Cut strips of 1/4" ceramic paper and adhere to the areas around the openings using small dabs of refractory mortar or high-temp silicone. Press flat. Aim for precision - avoid overlaps or gaps. Trim as needed.