

3M™ Air and Vapour Barrier 3015

# Technical guide



## For installation ease and flexibility, 3M™ Air and Vapour Barrier 3015

High performance 3M acrylic adhesive grabs on contact to exterior sheathing, concrete, masonry, wood, and other construction substrates. It can be applied without time-consuming priming, torching, or asphalt mess.

- Applied in temperatures as low as -18°C (0°F) to extend the building season
- Proprietary 10-mil engineered membrane self-seals against nail penetrations and conforms to contours for continuous contact
- Resists UV exposure for up to six months

#### Handling and storage

Rolls may be stored either vertically or horizontally in the original packaging. Optimum storage conditions are 16° to 27°C (60° to 80°F) and 40% to 60% relative humidity. Rolls must be kept dry.

Note: This technical information and data should be considered representative or typical only and should not be used for specification purposes.

Typical physical properties		
	Typical value	Test method
Air permeability of membrane		
@ 75 Pa (0.3"/wg.)	< 0.0002 L/s·m² (< 0.00005 cfm/ft²)	ASTM E2178 CAN/ULC S741
Air leakage of assembled wall		
Opaque wall @ 75 Pa (0.3"/wg.)	< 0.01 L/s·m² < 0.002 cfm/ft²	ASTM E2357
Penetrated wall @ 75 Pa (0.3"/wg.) Air leakage rate classification	< 0.03 L/s·m² < 0.006 cfm/ft² A1	ASTM E2357 CAN/ULC-S742
Water vapour transmission		
Desiccant method	8 ng/Pa·s·m² (0.14 US perm)	ASTM E96
Surface burning characteristics		
Flame spread index	15	ASTM E84
Smoke developed value	45	ASTM E84
Rating	Class A	ICC AC 38

## **F**

## Installation best practices

#### Substrate Information and Surface Preparation

3M<sup>™</sup> Air and Vapour Barrier 3015 can be applied to a wide variety of sheathing substrates, typically without priming. Substrate condition is crucial to the adhesion performance of any adhesive membrane. Substrate surfaces must be free of grease, oil, unbonded paint, corrosion, or other substances that would adversely affect the adhesive bond between the membrane and substrate.

For optimum performance, substrate surface must be dry to the touch with the ambient temperature above -18°C (0°F). Additionally, consider the following for success with specific surfaces:

- Exterior gypsum sheathing shall have moisture content below 19% with no open joints or cracks wider than ¼".
- Plywood substrates shall have moisture content below 16% with no open joints or cracks wider than ¼".
- Concrete surfaces shall have fins ground flush and void areas filled.
- Masonry substrates must have mortar joints struck flush.
- Fill gaps and cracks exceeding ¼" width with 3M™ Polyurethane Sealant 540, 3M™ Polyurethane Construction Sealant 525 or other compatible sealant, and tool the surface flush and smooth.
- Fill gaps exceeding ½" width with closed cell foam backer rod, seal with 3M™ Polyurethane Sealant 540, 3M™ Polyurethane Construction Sealant 525 or other compatible sealant, and tool the surface flush and smooth.

#### Installation layout planning

To minimize waste, plan the layout prior to applying 3M™ Air and Vapour Barrier 3015. Particular attention should be given to penetrations where weather exposure and tight installation are critical. Detailing window and door penetrations is recommended before applying the membrane, but if necessary, the membrane can be applied after detailing.

#### **Needed supplies**

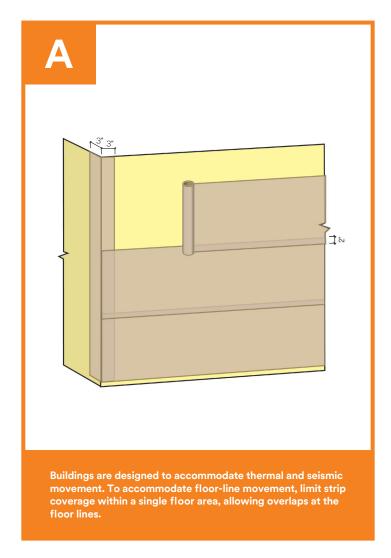
- 3M™ Air and Vapour Barrier 3015
- 3M<sup>™</sup> Polyurethane Sealant 540, 3M<sup>™</sup> Polyurethane Construction Sealant 525 or other compatible sealant
- Extended blade razor knife
- J Roller

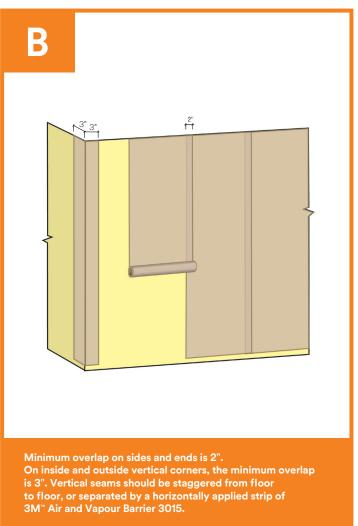
Install 3M<sup>™</sup> Air and Vapour Barrier 3015 vertically or horizontally. During installation, keep membrane dry, and protect from dust and debris.

For easier handling, pre-cut membrane into individual manageable lengths. Simply pull the material off the main roll to the desired length then cut the square to the factory edges using a razor knife.

### **Wall Application**

While the membrane may be applied horizontally or vertically, horizontal installation is preferred. Best practice includes a "weatherboard" or "shingle fashion," starting with the first strip of membrane across the bottom of the wall. Moving up the wall, the next strip higher will overlap the lower previous strip by 2".







3M™ Air and Vapour Barrier 3015 is ready to apply as soon as the release liner is peeled back. Be careful when aligning product on the wall as repositioning may be challenging. The adhesive is very aggressive and quickly bonds to substrates.



To start:

- 1. Cut material to desired length.
- 2. Wind up into a roll for easy handling
- 3. Fold the starting edge back over itself to crease the paper release liner.
- 4. Peel back the liner to expose a starting 2–3 inch adhesive strip.
- Keep clean—do not contaminate the starting strip with dust or debris before applying it to the intended surface.

Once aligned, set the membrane in place by rolling the product back against the exposed adhesive.



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Unwind the roll while simultaneously pulling the release liner, maintaining pressure against the wall to tack the membrane in place.



3

Wipe the membrane down with a feathering motion from the middle outward to obtain a smooth surface.



4

For best air barrier membrane performance, roll the membrane with a J roller to ensure a tight seal against the wall and between overlapped edges.

Best practice methods recommend sealing the leading edge of the membrane at the end of each work day. 3M recommends using 3M" Polyurethane Sealant 540 if you do this. Smooth the bead to the surface to avoid creating a projecting obstruction when the next layer of membrane is overlapped.

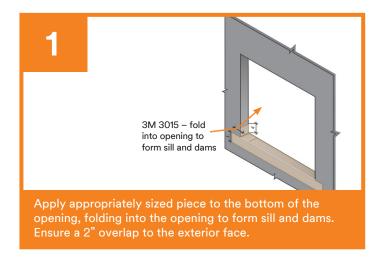
#### Penetration areas

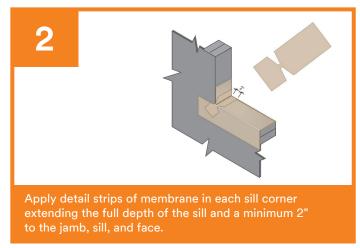
Window and door penetrations can be detailed pre- or post-installation of the membrane. Pre-installation, however, is recommended. All penetrations, including windows and doors, must be installed in proper sequence for appropriate moisture management. Use 3M™ Air and Vapour Barrier 3015 for flashing and detail work. Penetrations should be additionally sealed with a sealant like 3M™ Polyurethane Sealant 540 or 3M™ Polyurethane Construction Sealant 525 to achieve a weathertight result.



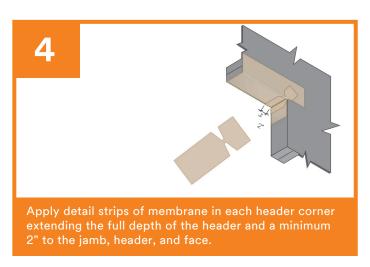
### Rough openings (windows and doors)

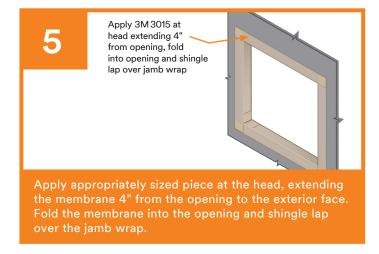
When working with 3M™ Air and Vapour Barrier 3015, it is recommended to install membrane in "weatherboard" or "shingle fashion." Begin by pre-cutting membrane into appropriate size, align and position the membrane, remove release liner, and press firmly into place. Roll all laps and membrane with a J roller to ensure optimum seal. Follow these steps:





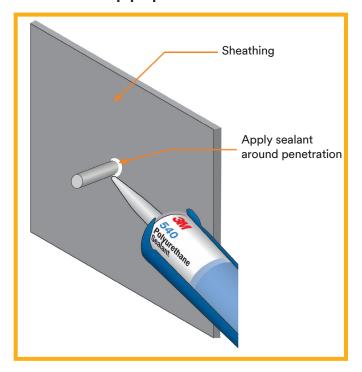




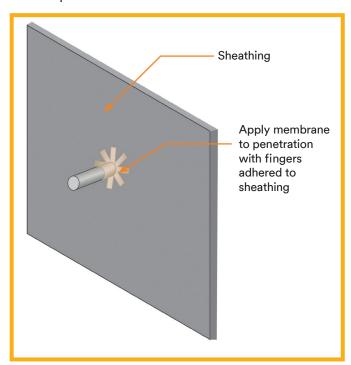




#### Vent and pipe penetrations

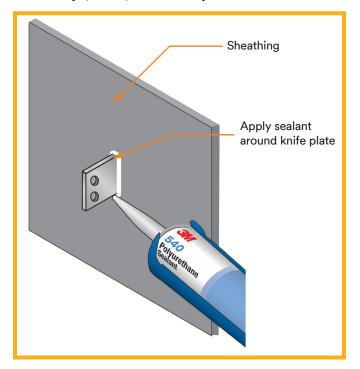


1. Apply 3M™ Polyurethane Sealant 540, 3M™ Polyurethane Construction Sealant 525 or other compatible sealant in the gap between the penetration and the exterior wall.

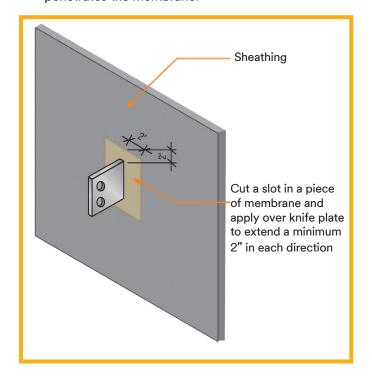


2. Apply membrane to allow continuous 2" overlap onto vent/pipe penetration and cut "fingers" to transition to the exterior wall.

#### Masonry (brick) tie/knife plate



1. Apply 3M™ Polyurethane Sealant 540, 3M™ Polyurethane Construction Sealant 525 or other compatible sealant where knife plate penetrates the membrane.



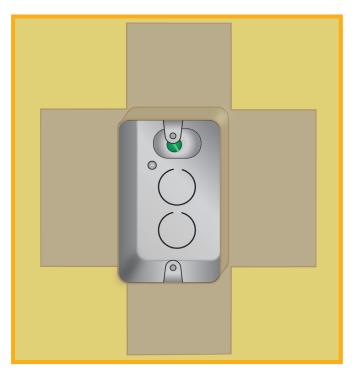
2. Cut a square of membrane that overlaps the knife plate a minimum 2" in each direction. Cut a slot in the centre of the square to slip membrane over the knife plate.



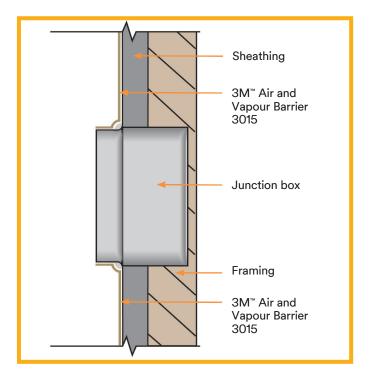
#### Junction box



**1.** Apply 3M<sup>™</sup> Polyurethane Sealant 540, 3M<sup>™</sup> Polyurethane Construction Sealant 525 or other compatible sealant around junction box.

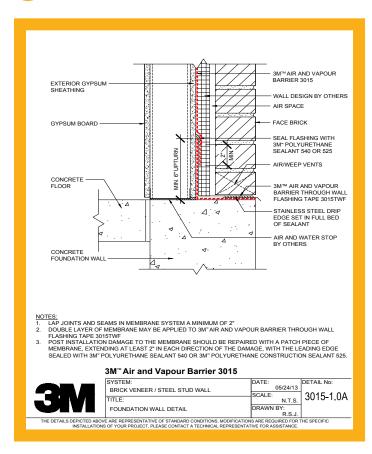


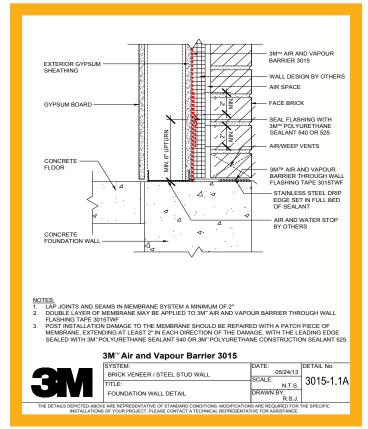
**3.** Perpendicular to the direction of the wrap, cut four "fingers" so that the membrane can transition down from the box to the exterior wall.

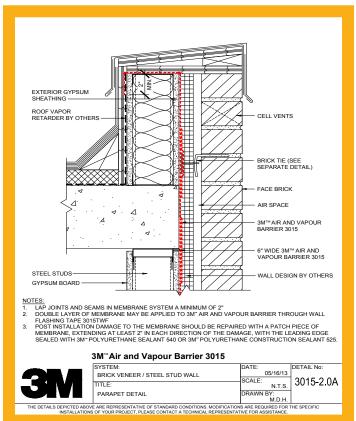


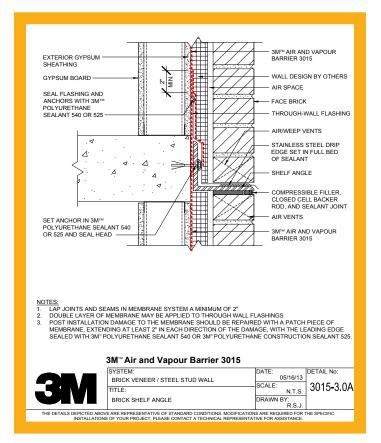
2. Cut piece of membrane to a size that wraps the exterior of the box with one continuous piece, allowing a 2" overlap.



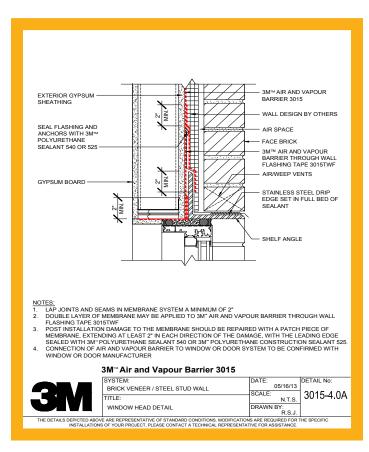


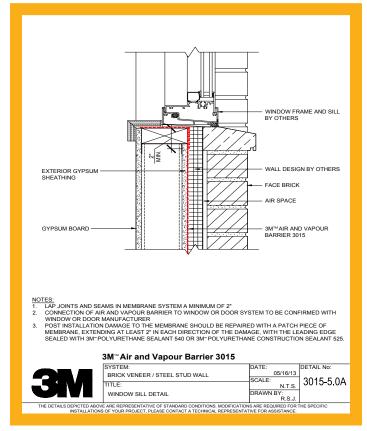


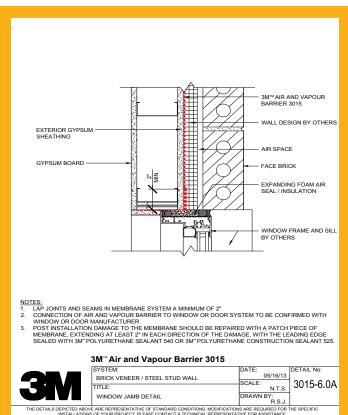


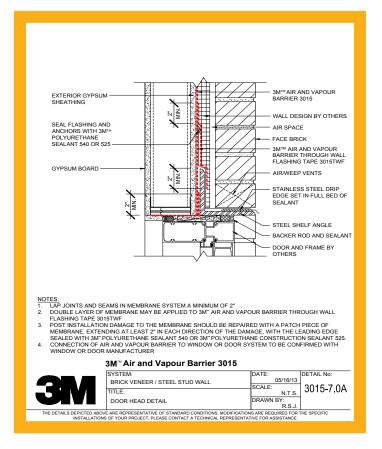




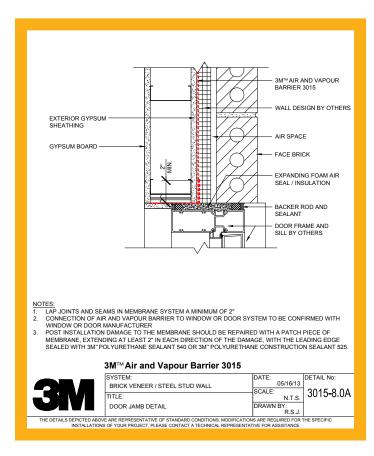


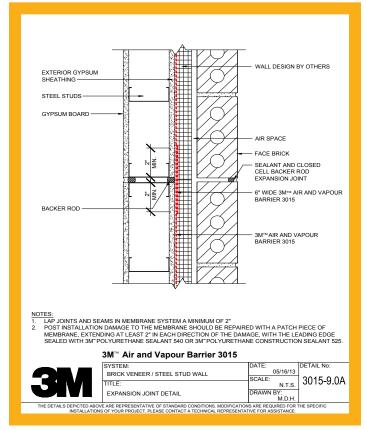


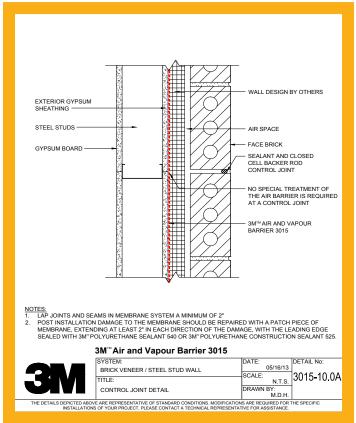


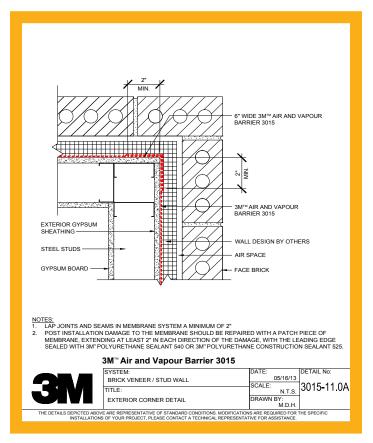


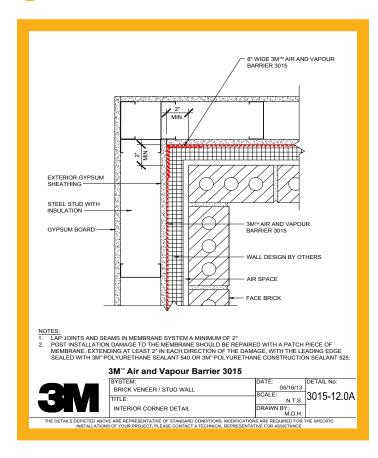


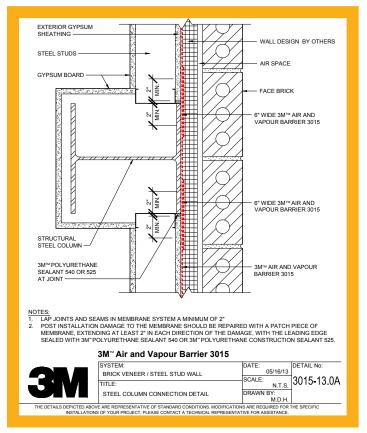


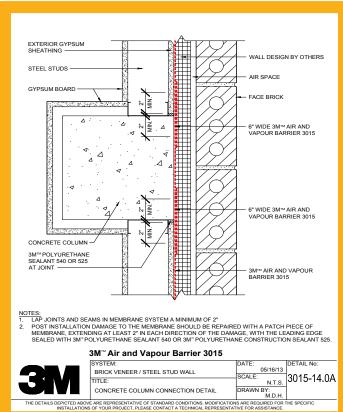


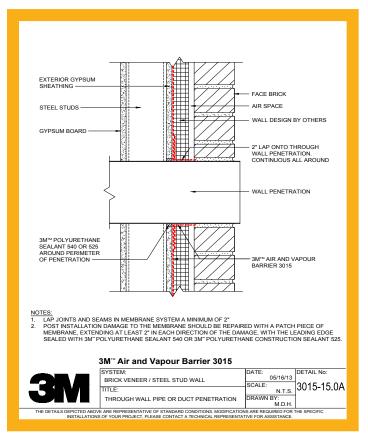




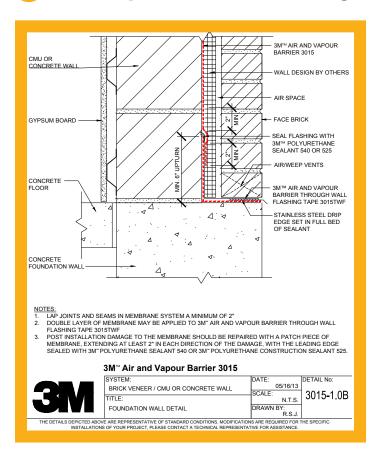


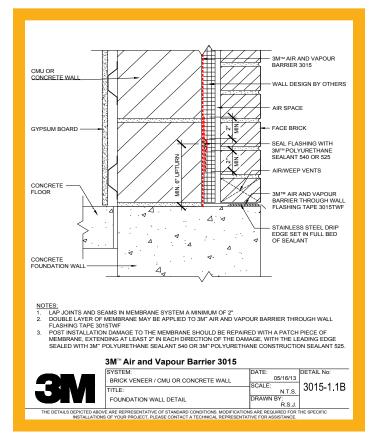


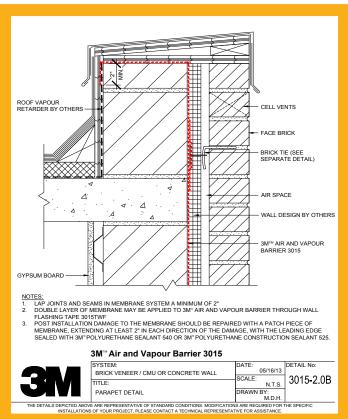


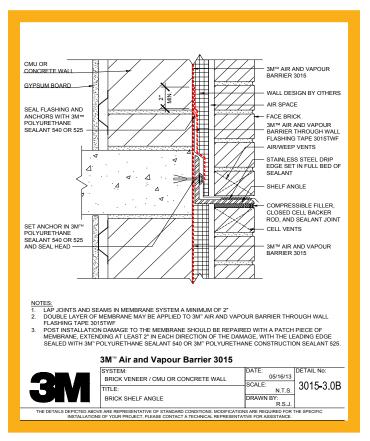




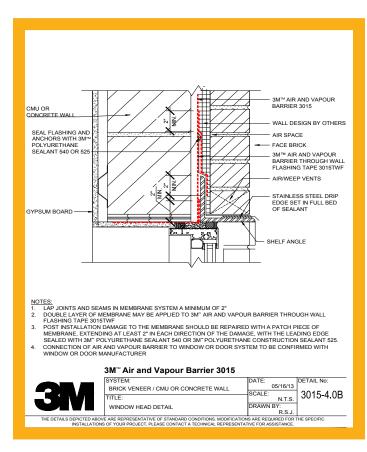


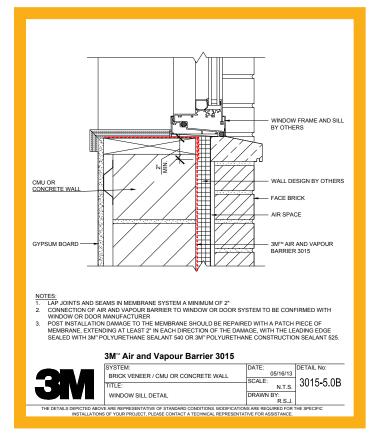


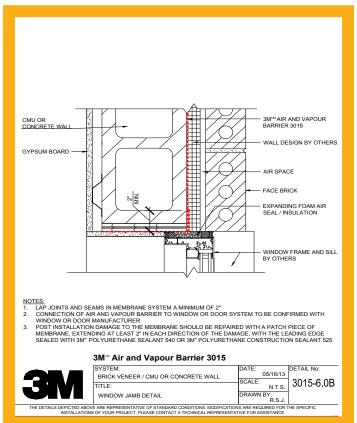


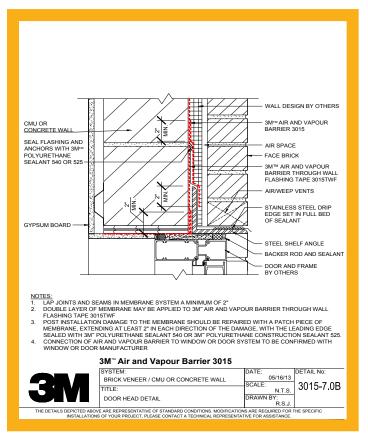




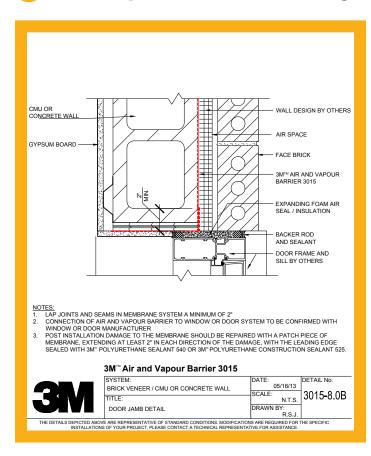


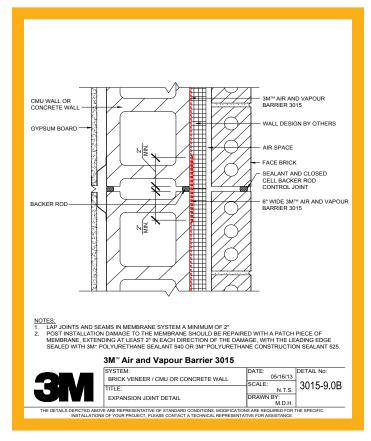


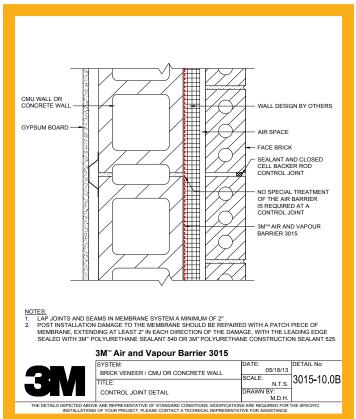


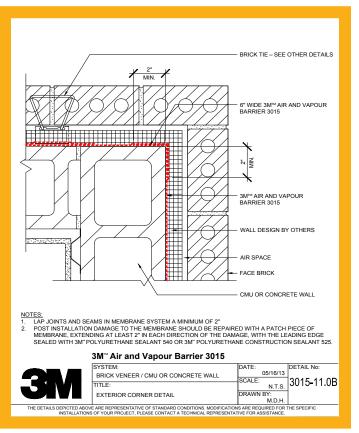


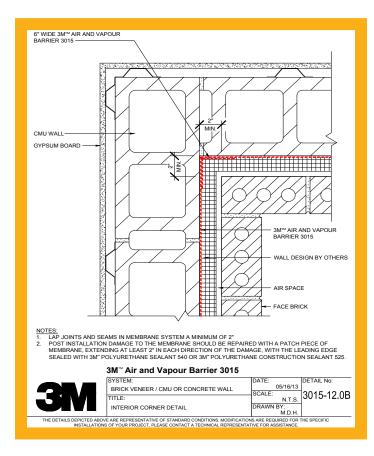


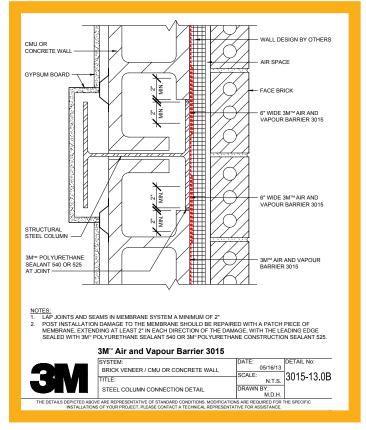


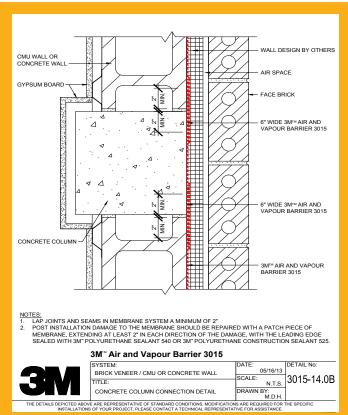


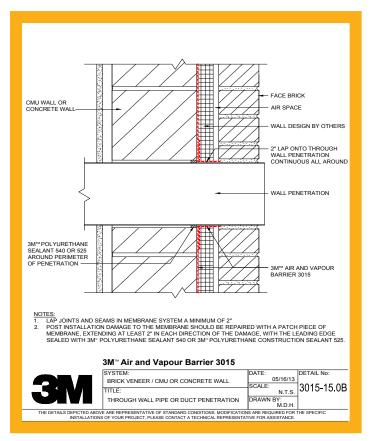














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