

### ADDENDUM NO. 3

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City of Franklin  
Engineering Office  
109 Third Avenue South  
Franklin, TN 37064

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Contract No. 2023-0050  
Project Southeast Municipal Complex  
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Date of Issuance 10/04/2024

You are directed to make the following changes in the Contract Document:

Description:

- I. **Contractors are required to make the changes highlighted below to Article 2- Attachments to this bid:**

**ARTICLE 2—ATTACHMENTS TO THIS BID**

2.01 The following documents are submitted with and made a condition of this Bid:

- A. The entire Project Manual;
- B. Required Bid security;
- C. Drug Free Affidavit;
- D. Statement of License Certification;
- E. **00413 Iran Divestment Act Certification**
- F. **00414 Non-Boycott of Israel Requirements**

- II. **Bidders/Contractors are hereby notified of the following change/clarification to the Bidding Documents:**

**IMPORTANT CHANGE:** The Inclusive Playground Pavilion is no longer an “Owner Furnished / Contractor Installed (OFI)” item. Because the restroom facility will be constructed on-site in conjunction with the erection of the pavilion structure, the City has decided that it would be best for the Contractor to coordinate directly with the City-designated Playground Pavilion supplier. This will allow the Contractor to more directly control the ordering & delivery schedule of the pavilion. Because of this change the cost to furnish the Playground Pavilion and all costs of installation/construction, including footings, foundations, materials, equipment, accessories, labor, and incidentals, shall be included in the lump sum price bid for Item No. 1.

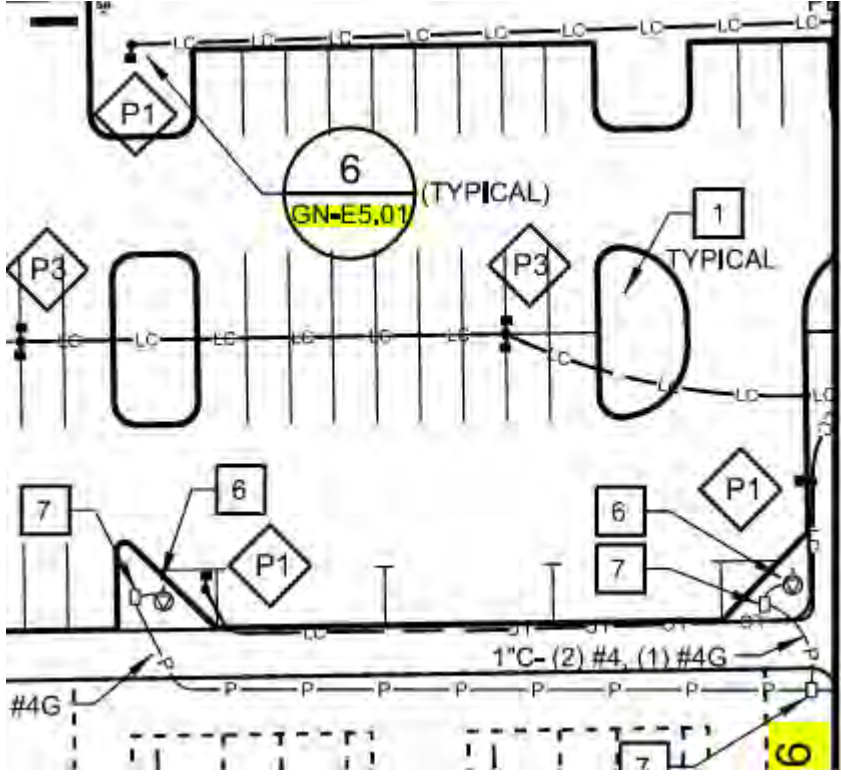
**III. The following revised and/or additional documents are provided with this addendum:**

- a. Attachment A** is a complex soil report that was prepared for the site in 2021 and is attached for reference purposes to answer Q86.
- b. Attachment B** is the Architectural details on the base and wall cabinets located in the Maintenance Building Breakroom 108 to respond to Q112.
- c. Attachment C** is a an Installation Guideline for the DuPont™ Tyvek® Fluid Applied WB+™ product listed as a response for Q111.
- d. Attachment D** is a Product Information Sheet provided for the DuPont™ Tyvek® Fluid Applied WB+™ product listed as a response for Q111.
- e. Attachment E** contains cut sheets of product basis of design for the signage as part of the response for Q89 and 93.
- f. Attachment F** is Electrical sketches as a response to Q88.

**IV. Questions & Clarifications:**

Q86	<p><b><u>Specification for soil for trees, shrubs and groundcovers:</u></b></p> <ul style="list-style-type: none"> <li>• 50% topsoil</li> <li>• 50% Prepared additives as follows:             <ul style="list-style-type: none"> <li>○ 3 parts organic soil conditioner (Nature’s Helper or Equal)</li> <li>○ 1 Part Sterilized Cow Manure</li> <li>○ Commercially Available Fertilizer @ rates specified by Manufacturer</li> <li>○ Lime (as recommended in soil analysis)</li> </ul> </li> </ul> <p>My questions for this mix are:</p> <ul style="list-style-type: none"> <li>a. May STA Certified compost be used in lieu of Sterilized Cow Manure</li> <li>b. Can the starter fertilizer be added to the planting area after the soil is installed, or do it have to be included in the soil blend</li> <li>c. What spec does the soil need to meet for the addition of starter fertilizer if added to the soil blend</li> <li>d. What is the specified pH of the soil blend</li> </ul>
A86	<p><b><u>Answer:</u></b></p> <ul style="list-style-type: none"> <li>a. Yes, STA Certified compost is acceptable in lieu of Cow manure</li> <li>b. Yes, starter fertilizer can be placed after soil is installed around plants provided it is placed around plantings before mulch is installed around plants.</li> <li>c. The starter fertilizer rates should match the rates recommended by the manufacturer selected for the stater fertilizer.</li> <li>d. d. The optimum PH will vary slightly based on each type of plant, but most plants require a PH between 6.0-7.0. Contractors are required to run a new soils report for the project, however a soil report that was prepared for the site in 2021 is attached for reference purposes.</li> </ul>

Q87	<p><b>Specification for soil for sod</b></p> <p>Will there be space on site for the sand, soil and compost to be blended on site, or does it all need to be blended before delivery?</p>
A87	<p><b>Answer:</b> Due to the large size of the site, it is probably feasible that a space could be designated for blending soil on site. However, the general contractor will ultimately be responsible for coordination of this activity with all the other subcontractors regarding identifying a location that does not impact other work. Mixing soil on site is acceptable as long as it is done in coordination with the general contractor. However, no guarantee is made regarding the availability of space on site. All cost related to mixing materials on or off site shall be included in pay item #1.</p>

Q88	<p>In reviewing the responses, I noticed that Q 36 has a screen shot of ES1.05 which is different than the ES-1.05 we have in our bidding set.</p> <p>Here is a snapshot of the drawing we received from the original drawing set. The Communications Conduit (CC) is not shown on our drawing; nor does the icon for the camera in the island and at the parking stalls, the communications pull boxes, or pathways.</p> <p>The drawing sheet we have has been updated with Rev.1 dated 04/19/2024.</p> <p>Was there a revision to the drawing set we are missing?</p> 
A88	<p><b>Answer:</b> Include the CC conduit per sketch included SK-1/ES1.05.</p>

Q89	(Section 101423.16) 2.2 A 1 - For the top layer where it specs "Sandblasted polymer face sheet with raised graphics", would a laser cut acrylic face with routed raised engraving plastic be a suitable substitution?
A89	<b>Answer:</b> Basis of Design APCO Full View. Standard Assembly option with ADA bottom plaque with direct-print raised acrylic characters/braille permanently attached to frame, or architect approved equal. Contractor shall provide submittal as required by specifications. Vendor must provide qualifications of sign substitution with detailed specifications and how they meet or exceed the criteria for performance as specified. A request for substitution shall include the amount of the savings to be passed on to the Owner.

Q90	(Section 101423.16) 2.2 A 2-3 - Do the edge of each sign and the frame both need a bevel, or do some not have frames?
A90	<b>Answer:</b> Please provide beveled edge on all sign types for consistency.

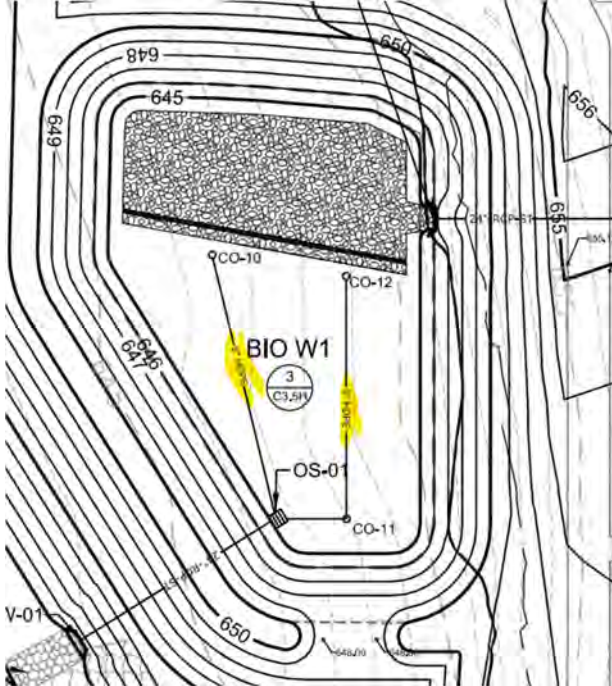
Q91	(Section 101423.16) 2.5 B-C - Is there a specific quantity of each subsurface graphics (applied vs etched), or is it a combination with both?
A91	<b>Answer:</b> Subsurface graphics shall be digitally printed behind the acrylic non-glare lens.

Q92	Did you have someone lined up for the installation, or would you like for us to add that to our quote?
A92	<b>Answer:</b> Installation by the general contractor.

Q93	Do you have a sample of what these need to look like that you can send a photo of? Please confirm that braille will be required on signs.
A93	<b>Answer:</b> See attached cut sheets of product Basis of Design APCO Full View. Standard Assembly option with ADA bottom plaque with direct-print raised acrylic characters/braille permanently attached to frame, or architect approved equal. Contractor shall provide submittal as required by specifications.

Q94	Sheet SB-E1.03 has no one line diagram. Can they provide one?
A94	<b>Answer:</b> Per keyed note 4 on ES-E1.03, the one-line diagram is shown on sheet MB-1.03.

Q95	Sheet CR-E6.02 panel LPB calls for all 3 pole 20-amp breakers, but panel LPA calls for all 3 pole 30-amp breakers. Should panel LPB 3 pole 30-amp breakers?
A95	<b>Answer:</b> Yes. Provide 30A/3P breakers in LPB.

Q96	<p>The 6" and 12" Storm Lines are listed on the Pipe Tables as PVC, But are shown throughout the project as HDPE. Are these Storm Lines HDPE or PVC? And What Class of Pipe are to be used for these?</p>  <table border="1" data-bbox="235 1192 1318 1270"> <tr> <td>P-239</td> <td>6</td> <td>PVC</td> <td>CO-10</td> <td>640.70</td> <td>OS-01</td> <td>639.75</td> <td>77.6</td> <td>1.2</td> <td>0.4</td> <td>0.8</td> <td>4.1</td> </tr> <tr> <td>P-240</td> <td>6</td> <td>PVC</td> <td>CO-11</td> <td>640.20</td> <td>OS-01</td> <td>639.75</td> <td>19.4</td> <td>2.3</td> <td>0.6</td> <td>1.1</td> <td>3.0</td> </tr> <tr> <td>P-241</td> <td>6</td> <td>PVC</td> <td>CO-12</td> <td>640.70</td> <td>CO-11</td> <td>640.20</td> <td>69.2</td> <td>0.7</td> <td>0.6</td> <td>0.6</td> <td>3.0</td> </tr> </table>	P-239	6	PVC	CO-10	640.70	OS-01	639.75	77.6	1.2	0.4	0.8	4.1	P-240	6	PVC	CO-11	640.20	OS-01	639.75	19.4	2.3	0.6	1.1	3.0	P-241	6	PVC	CO-12	640.70	CO-11	640.20	69.2	0.7	0.6	0.6	3.0
P-239	6	PVC	CO-10	640.70	OS-01	639.75	77.6	1.2	0.4	0.8	4.1																										
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P-241	6	PVC	CO-12	640.70	CO-11	640.20	69.2	0.7	0.6	0.6	3.0																										
A96	<b>Answer:</b> Pipe shall be a dual walled HDPE and meet ASTM F2648.																																				

Q97	There was talk of stripping 2' off the site for the Cultivated Soil. Is this needing to be represented in the Quote for the Grading? Or is this to be addressed at another date?
A97	<b>Answer:</b> The agriculture soil has organics and needs to be removed before fill can be placed. It needs to be represented in the bid. See the earth moving specification (31 20 00). Agricultural soil is considered the same as topsoil.

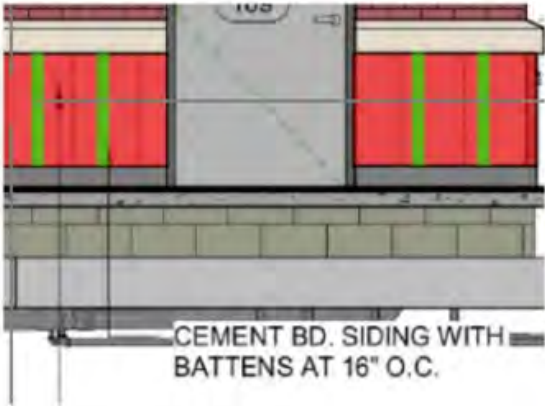
Q98	I am not seeing any 'approved' manufacturers for the mechanical equipment other than BOD on the plans. Do you know if Barge is going to allow equals? If so, can they provide who is acceptable?
A98	<p><b>Answer:</b></p> <p>Air Curtain – Berner, Mars Air</p> <p>Split System – Trane/Mitsubishi, Carrier, Daikin</p> <p>Energy Recovery Unit – RenewAire, Fantech, Honeywell</p> <p>Electric Unit Heater – Indeco, QMark, Markel</p> <p>Gas Unit Heater – Reznor, Trane</p> <p>Exhaust Fan – Greenheck, Loren Cook</p> <p>HVLS – Greenheck, Macroair, Big Ass Fans</p> <p>Louver – Greenheck, Ruskin</p> <p>Air Distribution – Titus, Price, Krueger</p> <p>Packaged Rooftop Unit – Trane, Carrier, Daikin</p> <p>VAV Terminal Unit – Trane, Carrier, Daikin</p>

Q99	Is each building going to operate with standalone controls? I am not seeing a requirement for any type of BAS/BMS.
A99	<b>Answer:</b> There is no site wide system for the mechanical equipment. Controls shall be limited to only what's required for each system to communicate with each component as noted in respective sequence of operations.


Q100	At the sign and the perimeter columns the precast stone calls for Haddonstone with several different model numbers, I was looking for some contact information to get some pricing.
A100	<b>Answer:</b> The contact information for Haddonstone is 866-733-8225 or <a href="http://www.Haddonstone.com">www.Haddonstone.com</a> (See Note 1/ Drawings L7.06 & L7.07).

Q101	For the brick Addendum 2 did not answer what brick they want, if we do not have a specific brick I can use an allowance to price I, but need an allowance amount.
A101	<b>Answer:</b> The brick level of quality and specifics are shown in the specifications based on providing a product for the architect/owner to select from the manufacturer's full range of colors and textures as answered previously in addendum 2. Contractor shall price based on the higher value of brick masonry that meets the specifications using the manufacturer's full range of standard colors and textures. A separate allowance will not be provided.

Q102	At the Playground Restrooms it looks like a full bed stone veneer but I can not find what stone it is. Please confirm type of stone to be used.
A102	<b>Answer:</b> Provide Boral Country LedgeStone Echo Ridge cultured stone as noted on note 3, sheet L7.07. This should match the cultured stone shown on landscape drawings for signage and columns.

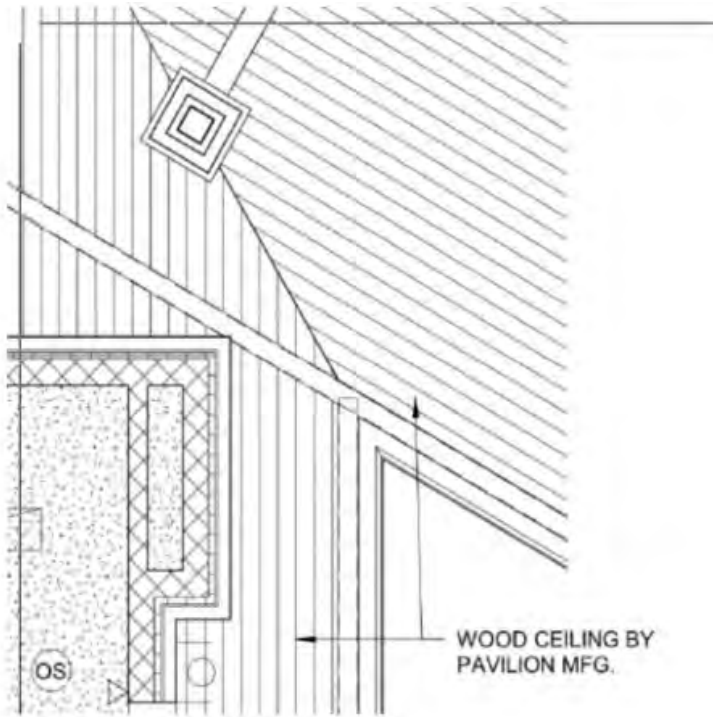
Q103	<p>Please confirm the Batten Spacing. Plans call out 16.00" but the Specs call out 24.00".</p>  <p>CEMENT BD. SIDING WITH BATTENS AT 16" O.C.</p> <p>NOMINAL THICKNESS: NOT LESS THAN 5/16 INCH.</p> <p>Vertical Pattern: 48-inch-wide sheets with wood-grain texture and 2 1/2" Batten Strips at 24 inches o.c.</p>
A103	<b>Answer:</b> Spacing is 16" O.C. typical on this project.

Q104	The Specs call out Panel & Soffits to be Cedarmill. Please confirm all Trim to be Cedarmill.
A104	<b>Answer:</b> Panels & soffits to be Cedarmill. The trim is to be smooth. The batting strips are to be the rustic grain texture.

Q105	<p>Elevation appears to show Plank on the South Elevation of Storage Building. Please confirm if this is to be Plank or will be Board &amp; Batten.</p> 
A105	<b>Answer:</b> This elevation should be Board & Batten.

Q106

RCP Calls out Wood Ceiling Provided By Pavilion Manufacturer. Please confirm you do not want pricing for this.



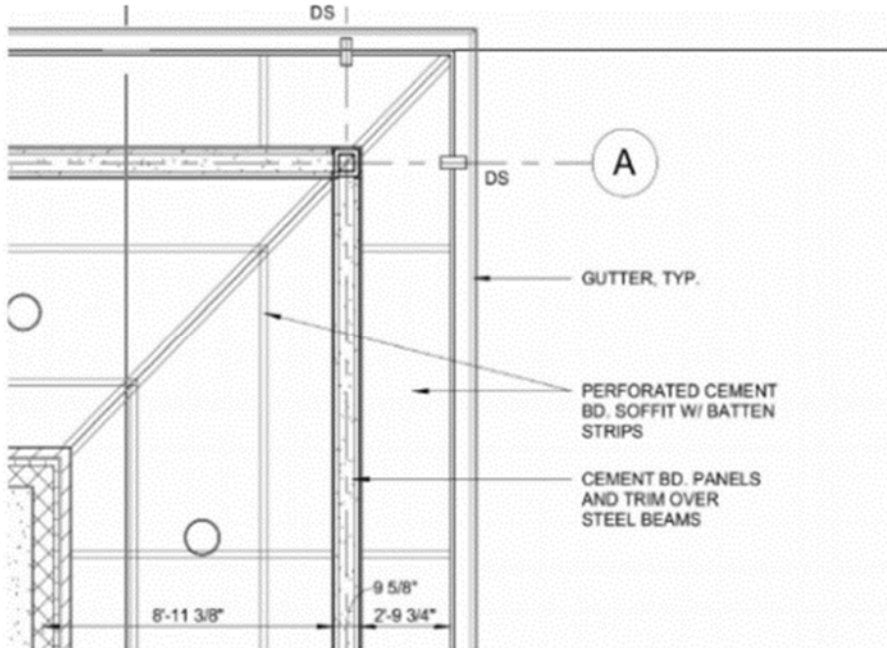
A106

**Answer:** The Inclusive Playground Pavilion is no longer an “Owner Furnished / Contractor Installed” item. It is now to be procured by the Contractor from the City-designated supplier, Classic Recreation Systems, Inc. / Recreational Concepts – Shelia Steward, (931) 303-0227, [shelia@rec-concepts.com](mailto:shelia@rec-concepts.com), and constructed/installed/erected/etc. on the project site by the Contractor.

Payment for this work, including all related footings, foundations, materials, equipment, accessories, labor and incidentals to furnish and install the Inclusive Playground Restroom / Pavilion, shall be included in the lump sum payment for Item No. 1.



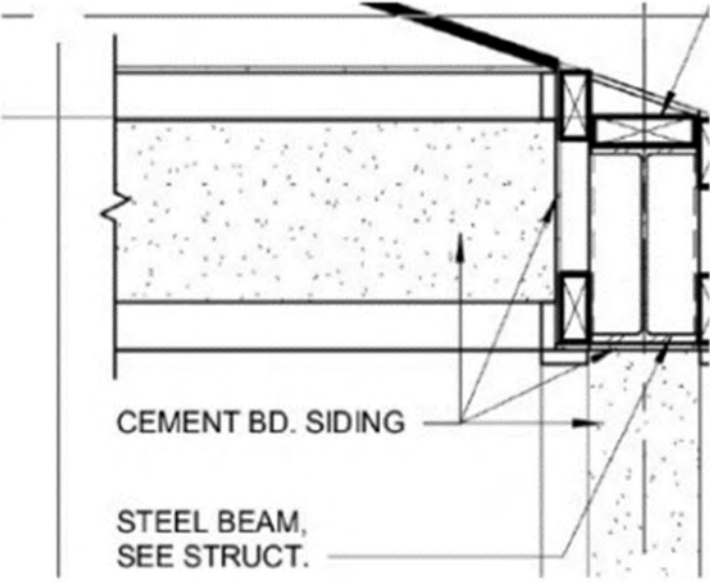
Q107 Are you wanting 1/4 Hardie Soffit Board or 5/16 Hardie Panel for the Concession Ceiling.



A107 **Answer:** 5/16 Hardie Soffit is the correct thickness and material as specified.

Q108 The largest Perforated Soffit Board is a 24.00" x 8.00' which would not line up with the current design of battens. Do the Soffit Boards need to be Perforated?

A108 **Answer:** Place batten strips at 24" O.C. and 8' O.C. end to end to match standard soffit board size. Batten strips should be centered symmetrically with each building elevation and match pattern shown at building corners. Soffit boards are perforated as shown on the drawings.

Q109	<p>Will the Panels &amp; Trim Wrapping the Steel Beams need furring?</p> 
A109	<p><b>Answer:</b> Provide 2 ½" steel stud furring at infill of beam at 16" O.C. Per Manufacturer, soffit at the beam may be attached via structural adhesive in addition to mechanical fastening.</p>

Q110	<p>Spec section 042613 para 2.3B mentions decorative CMU. There is none shown on the plans, please clarify if there will be decorative CMU on the project.</p>
A110	<p><b>Answer:</b> There is no decorative CMU on the project.</p>

Q111	<p>Is the weather barrier at the face of CMU to match the fluid applied weather barrier at the trusses? If so, please provide what product.</p>
A111	<p><b>Answer:</b> Provide Dupont Tyvek Fluid Applied WB+ or architect approved equal. Contractor shall comply with manufacturers requirements. Attachment of product cut sheet and installation guide provided for Dupont product listed.</p>

Q112	<p>Please provide details on the base and wall cabinets located in the Maintenance Building Breakroom 108.</p>
A112	<p><b>Answer:</b> See added sketches SK1/MB-A9.01 and SK2/MB-A9.01</p>

Q113	Spec section 323113 calls for swing gates to be accompanied by chain link fencing, but drawings show a sliding gate with a V-Track. Confirm whether the chain link alternate is to include a sliding gate chain link with a v-track or a swing gate
A113	<b>Answer:</b> Sliding gates are required at the maintenance facility for ingress/egress of vehicles. All other gates are to be swing gates.

Q114	Specification Section 087110 does not specify lockset cores. Please confirm if cores are to be interchangeable or permanent.
A114	<b>Answer:</b> Interchangeable cores shall be provided.

Q115	Hardware sets 11, 11A, and 13 are listed for fire rated doors per the door schedule on sheet MB- A9.01. Specification Section 087110 does not call for smoke seals. Please confirm that smoke seals are not a requirement.
A115	<b>Answer:</b> Smoke gaskets are required per NFPA 80

Q116	Per sheet MB-A9.01, door 100A (hollow metal door) is labeled for hardware set #8. Specification Section 087110 lists hardware set #8 for aluminum entrances. Please advise.
A116	<b>Answer:</b> Door 100A should be Aluminum and glass, not hollow metal. Door schedule should list aluminum for storefront entrance. Refer specification section 043413 Aluminum-Framed Storefronts.

Q117	Hardware sets 2 and 3 do not align with the door schedule per CR-A9.01. The storeroom doors are tagged for hardware set #3 "Restroom Exterior" and restroom doors for hardware set #2 "Storeroom Exterior". Please advise.
A117	<b>Answer:</b> Doors 101 and 103 should be hardware set 3 (Restroom Exterior) and doors 102, 104 and 108 should be hardware set 2 (Storeroom Exterior).

Q118	We are getting different quantities for CA2 and SM Seed. The numbers differ by 500,000 SF under the plant schedule for CA2 and 140,000 SF over the plant schedule for SM seed. My guess is the reason would be missing areas in the landscape plans for CA2 but not sure why the huge discrepancy for the SM grass mix. Please advise on which quantity needs to be taken for proposal, Schedule quantity or takeoff quantity?
A118	<b>Answer:</b> The Contractor is ultimately responsible for his own quantity calculations with the planting plan taking precedence over the planting schedule as noted in general notes 3 & 6 on drawing L2.1. However, we did check the quantities for CA2 and SM and the planting schedule qtys. match the landscape plan qtys. Please note that a copy of the CAD file for the landscape plan is available to assist in qty. calculations upon request to the City of Franklin and completion of the electronic file disclaimer form by the contractor.

Q119	<p>We are getting different quantities for 1 Shrub, 1 Ground Cover and 1 Plugs.</p> <ol style="list-style-type: none"> <li>1. The number for Shrub '(IV)-Itea Virginica Merlot TM' given in schedule is very high. The quantity given in the schedule is around 3,871 and we are getting only 90 in our take off.</li> <li>2. The number for Groundcover '(AC)-Annual Color' with 18" spacing, given in schedule is high. The quantity given in the schedule is around 428 and we are getting only 89 in our take off.</li> <li>3. There is a plug given in the planting schedule with 50,000 quantities. The name of plug is 'Panicum Virgatum Shenandoah'. But we are not able to find the callout for this plug anywhere in the Landscape sheets. Can you please advise us on where we can find those plugs?</li> </ol> <p>Please advise on which quantity needs to be taken for proposal, Schedule quantity or takeoff quantity?</p>
A119	<p><b>Answer:</b> The Contractor is ultimately responsible for his own quantity calculations with the planting plan taking precedence over the planting schedule as noted in general notes 3 &amp; 6 on drawing L2.1. However, we offer the following clarifications based on our calculations. A copy of the CAD file for the landscape plan was provided on CD with the bid set to assist in qty. calculations.</p> <ol style="list-style-type: none"> <li>1. The quantity of the (IV)-Itea Virginica Merlot TM' listed in the plant schedule is not correct. The quantity should be 90 based on our count verification.</li> <li>2. The quantity of 428 for (AC)-Annual Color listed in the plant schedule appear correct based on our count verification.</li> <li>3. These plugs are specified to be planted in accordance with the plug schedule in all areas with riparian and detention seed mixes as noted in plug notes and plug schedule on L2.01. The quantity of 50,000 is derived from plugs spaced at 4' o.c. in these seeded areas. Many of the native seed mix varieties specified take a few years to get established, so the plugs will provide a quicker establishment of vegetative cover than seed planted without plugs.</li> </ol>

**V. Attachments:**

- a. **Attachment A:** *Complex Soil Report.*
- b. **Attachment B:** *Arch Sketches.*
- c. **Attachment C:** *product information sheet provided for Dupont product listed in the bid set.*
- d. **Attachment D:** *a product information sheet provided for Dupont product listed in the bid set.*
- e. **Attachment E:** *Fullview Signs Spec Sheets.*
- f. **Attachment F:** *Electrical Sketch as a response to Q88.*

**END of Addendum**



## Soil, Plant &amp; Pest Center

5201 Marchant Dr. | Nashville, TN 37211

615.832.5850 | SoilLab@Tennessee.edu

[soilLab.tennessee.edu](http://soilLab.tennessee.edu)

For general agriculture or horticulture questions please first try contacting your local county Extension office:

[utextension.tennessee.edu](http://utextension.tennessee.edu)

\_ Stephens Seed and Supply  
800 FESSLERS LN.  
NASHVILLE TN 37210

07/28/2021

Customer County: Davidson  
Sample County: Williamson

Lab Number: 607398

Sample Name: SEPNOR

Farm Name:

## Soil Results

pH		Phosphorus	Potassium	Calcium	Magnesium	Zinc	Iron	Manganese	Boron	Sodium
Soil pH	Buffer Value	P	K	Ca	Mg	Zn	Fe	Mn	B	Na
Pounds per acre - Mehlich 1										
6.15	7.53	256 V	98 M	2831 S	127 S	2.3 S	21 S	31 S	0.4	17

Crop/plant Interpretation ranges on last sheet

L = Low, M= Medium, H=High, V= Very High, S = Sufficient

**Additional tests, if they were requested**

Sulfur	Nitrogen			Carbon	C/N Ratio	Organic Matter	Soluble Salts	Particle Size Analysis - Hydrometer Method			
LBS/ACRE	NH4-N ppm	NO3-N ppm	Total N %	%	%	%	dS/m	% Sand	% Silt	% Clay	Soil Texture
							1.5				

1.5

## Recommendations

Crop	Fertilizer				Lime
	Nitrogen (as N)	Phosphate (as P2O5)	Potash (as K2O)	Rate	As 65% RNV
Athletic Field Bermudagrass	4 split*	0	0.5	pounds per 1,000 square feet	0
Athletic Field Tall Fescue	4 split*	0	0.5	pounds per 1,000 square feet	0

Please read any text below or on next sheet for additional suggestions and resources

**Sample Number: SEPNOR --- Crop: Athletic Field Bermudagrass**

\* Split apply the 4 pounds of nitrogen per 1,000 square feet as 1 pound in May, June, July, and August. Remember pounds of nutrient does not equal pounds of fertilizer product. Use percent by weight of nutrient in the product to adjust accordingly. For more resources see: Bermuda Athletic Field Publication - <https://extension.tennessee.edu/publications/documents/PB1632.pdf>

**Sample Number: SEPNOR --- Crop: Athletic Field Tall Fescue**

\* Split apply the 4 pounds of nitrogen per 1,000 square feet as 0.5 pound in March, and April. Up the rate to 1 pound in September, October, and November. Remember pounds of nutrient does not equal pounds of fertilizer product. Use percent by weight of nutrient in the product to adjust accordingly. For more resources see: Fescue Care at <https://extension.tennessee.edu/publications/Documents/PB1576.pdf>

Programs in agriculture and natural resources, 4-H youth development, family and consumer sciences, and resource development.

University of Tennessee Institute of Agriculture, U.S. Department of Agriculture and county governments cooperating.

UT Extension provides equal opportunities in programs and employment.



Soil, Plant & Pest Center

5201 Marchant Dr. | Nashville, TN 37211  
 615.832.5850 | SoilLab@Tennessee.edu  
[soilLab.tennessee.edu](http://soilLab.tennessee.edu)

For general agriculture or horticulture questions please first try contacting your local county Extension office:

[utextension.tennessee.edu](http://utextension.tennessee.edu)

\_ Stephens Seed and Supply  
 800 FESSLERS LN.  
 NASHVILLE TN 37210

07/28/2021  
 Customer County: Davidson  
 Sample County: Williamson

**Lab Number:** 607399

**Sample Name:** SEPSOU

**Farm Name:**

### Soil Results

pH		Phosphorus	Potassium	Calcium	Magnesium	Zinc	Iron	Manganese	Boron	Sodium
Soil pH	Buffer Value	P	K	Ca	Mg	Zn	Fe	Mn	B	Na
Pounds per acre - Mehlich 1										
6.91		106 H	129 M	8102 S	284 S	2.6 S	7 S	46 S	0.8	17

Crop/plant Interpretation ranges on last sheet

L = Low, M= Medium, H=High, V= Very High, S = Sufficient

***Additional tests, if they were requested***

Sulfur	Nitrogen			Carbon	C/N Ratio	Organic Matter	Soluble Salts	Particle Size Analysis - Hydrometer Method			
LBS/ACRE	NH4-N ppm	NO3-N ppm	Total N %	%	%	%	dS/m	% Sand	% Silt	% Clay	Soil Texture

2.6



## Recommendations

Crop	Fertilizer				Lime	
	Nitrogen (as N)	Phosphate (as P2O5)	Potash (as K2O)	Rate	As 65% RNV	
Athletic Field Bermudagrass	4 split*	0.5	0.5	pounds per 1,000 square feet	0	pounds per 1000 square feet
Athletic Field Tall Fescue	4 split*	0.5	0.5	pounds per 1,000 square feet	0	pounds per 1000 square feet

Please read any text below or on next sheet for additional suggestions and resources

**Sample Number: SEPSOU --- Crop: Athletic Field Bermudagrass**

\* Split apply the 4 pounds of nitrogen per 1,000 square feet as 1 pound in May, June, July, and August. Remember pounds of nutrient does not equal pounds of fertilizer product. Use percent by weight of nutrient in the product to adjust accordingly. For more resources see: Bermuda Athletic Field Publication - <https://extension.tennessee.edu/publications/documents/PB1632.pdf>

**Sample Number: SEPSOU --- Crop: Athletic Field Tall Fescue**

\* Split apply the 4 pounds of nitrogen per 1,000 square feet as 0.5 pound in March, and April. Up the rate to 1 pound in September, October, and November. Remember pounds of nutrient does not equal pounds of fertilizer product. Use percent by weight of nutrient in the product to adjust accordingly. For more resources see: Fescue Care at <https://extension.tennessee.edu/publications/Documents/PB1576.pdf>

Programs in agriculture and natural resources, 4-H youth development, family and consumer sciences, and resource development.

University of Tennessee Institute of Agriculture, U.S. Department of Agriculture and county governments cooperating.

UT Extension provides equal opportunities in programs and employment.

# Interpretation Page

## Soil pH interpretations

Lime Recommended when soil pH is less than:

5.6	Sweet Potatoes, brambles
6.1	Corn, wheat, soybeans, red/white clovers, Lawns, most vegetables
6.6	Alfalfa, Apples, Pears, Peaches

**Buffer pH** helps tell us how much resistant the soil has to being limed. The buffer starts at pH 7.9, the lower the buffer value is from 7.9 the more lime that is required.

## Nutrient Interpretations

	Phosphorus (P)	Potassium (K) Lbs. / acre	Potassium Cotton	Yield response to fertilizer
Low	0 to 17	0 to 90	0 to 140	High probability
Medium	18 to 30	90 to 160	141 to 280	Probable
High	31 to 120	161 to 320	281 to 320	None
Very High	120+	320+	320+	None

**Calcium** is sufficient when greater than 500 pounds per acre.

**Magnesium** is sufficient when greater than 40 pounds per acre.

**Zinc** is recommended for: Corn or Snap Beans when Zn levels are less than 2 lbs per acre

**Iron:** Availability is controlled by soil pH. If the pH is greater than 7.3 one may begin to see iron deficiency symptoms.

**Manganese** is recommended for: Soybeans when the soil pH is greater than 7 and Mn levels are less than 16 lbs.per acre.

**Boron** is recommended for: Cotton when boron levels are less than 0.8 lbs per acre, or the soil pH is greater than 6, or when lime is used.

Tobacco when the B levels are less than 1.2 lbs per acre.

General low dose application recommended annually for Alfalfa, Cauliflower, and broccoli.

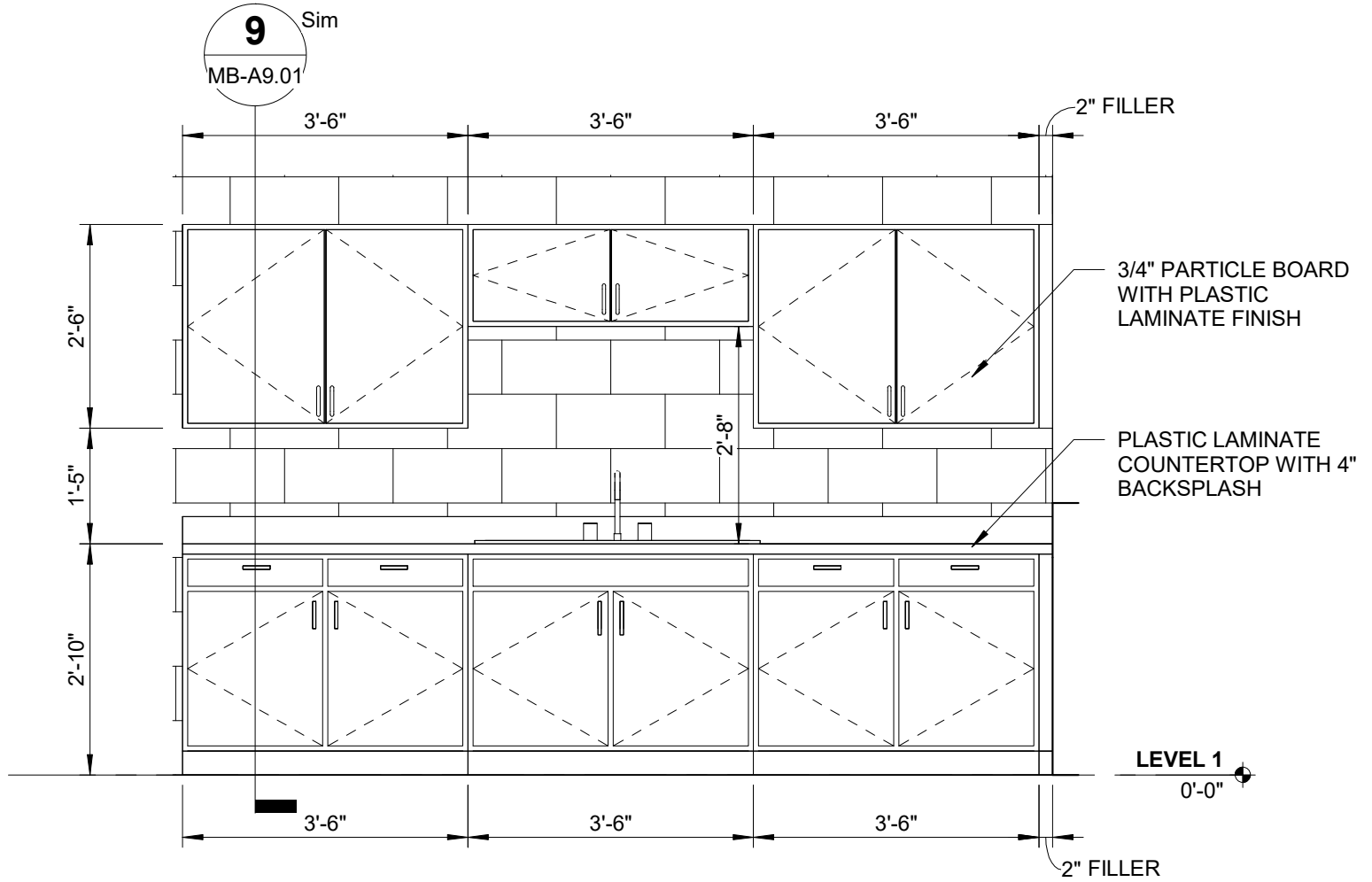
## Soluble Salts

dS/m	approximate ppm	Rating
0.4	560	Low
0.8	1120	Very Slightly Saline
1.6	2240	Slightly Saline
2.4	3360	Moderately Saline
3.2	4480	Strongly Saline
3.2	4480+	Very Strongly Saline

## Resources

Please visit:

[soilLab.tennessee.edu](http://soilLab.tennessee.edu)

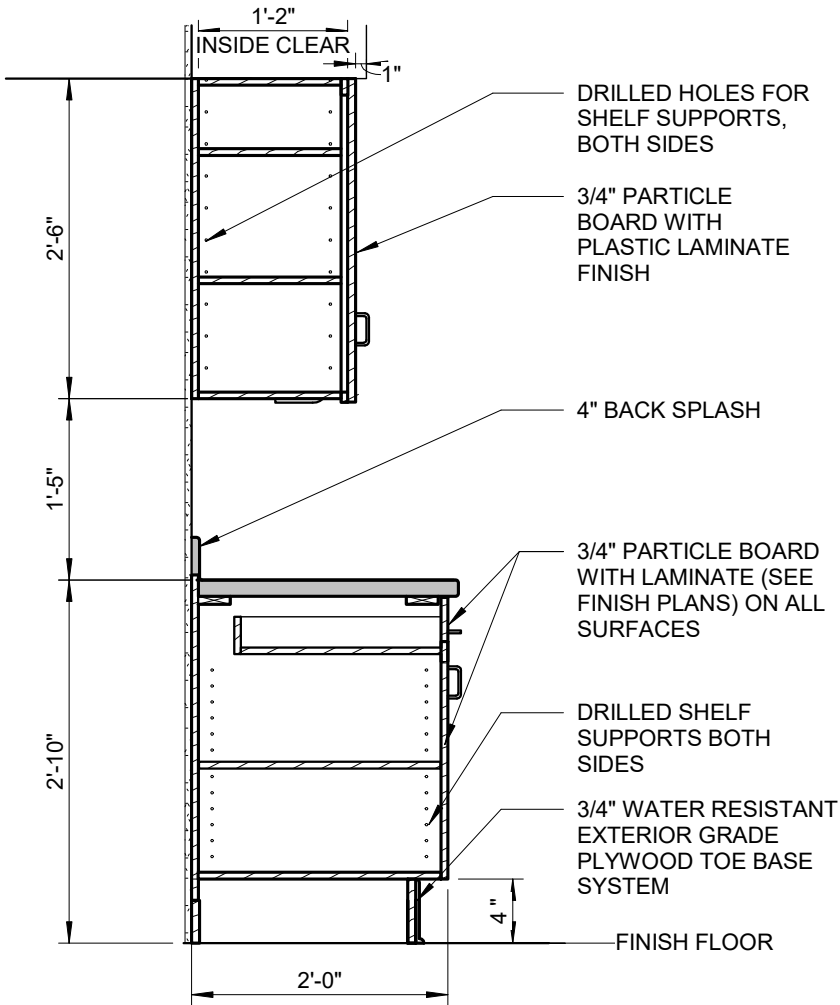


**8 CASEWORK ELEVATION**  
MB-A1.01

NTS

SK-1 / MB-A9.01

ADDENDUM 3  
SOUTHEAST MUNICIPAL COMPLEX  
CITY OF FRANKLIN, TENNESSEE



- CASEWORK GENERAL NOTES:**
1. SUBMIT CASEWORK AND COUNTERTOP SHOP DRAWINGS FOR ARCHITECT'S REVIEW.
  2. FINISHES TO BE SELECTED BY ARCHITECT FROM MANUFACTURER'S FULL RANGE OF COLORS AND TEXTURES.
  3. HARDWARE TO BE 5" CENTERS BAR PULLS. FINISH TO BE SELECTED BY ARCHITECT DURING SHOP DRAWING REVIEW.
  4. CABINET INTERIORS TO BE WHITE MELAMINE FINISH.

9  
MB-A9.01

**CASEWORK SECTION**

NTS

SK-2 / MB-A9.01

ADDENDUM 3  
SOUTHEAST MUNICIPAL COMPLEX  
CITY OF FRANKLIN, TENNESSEE



DuPont Performance Building Solutions

# DuPont™ Tyvek® Fluid Applied WB+™ and DuPont Flashing Products Installation Guidelines



For Commercial and High-Performance  
Buildings of Any Height

July 2022

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## Introduction

This Installation Guideline outlines recommended installation techniques and details for **DuPont™ Tyvek® Fluid Applied Products** and, where applicable, **DuPont Self Adhered Flashing Products**. **DuPont™ Tyvek® Fluid Applied WB+™**, **DuPont™ Tyvek® CommercialWrap®** and **Tyvek® CommercialWrap® D** meet the requirements of a water-resistive barrier as defined in the 2021 International Building Code (IBC) and also functions as a high performance air barrier system. **Tyvek® Fluid Applied Products**, **Tyvek® CommercialWrap®**, and **Tyvek® CommercialWrap® D** installed with **DuPont Self-Adhered Flashing Products** function as high performance air barriers, pass ASTM E2357, and offer water infiltration resistance up to 15 psf when tested in accordance with ASTM E331.

Always check [building.dupont.com](http://building.dupont.com) for the latest versions of DuPont Installation Guidelines and other product literature.

## Applicable Products

### DuPont™ Tyvek® Fluid Applied Products

Product	Quantity	Coverage
<b>DuPont™ Tyvek® Fluid Applied WB+™</b>	5 gal, 50 gal	50-65 ft <sup>2</sup> /gal*
<b>DuPont™ Tyvek® Fluid Applied Flashing and Joint Compound+</b>	3.5 gal	50-60 ft <sup>2</sup> /gal*
<b>Tyvek® Fluid Applied Flashing and Joint Compound+</b> (for sheathing seam treatment)	28 oz	1.8-2.3 LF/oz
<b>DuPont™ Sealant for Tyvek® Fluid Applied System</b>	28 oz	1.8-2.3 LF/oz

\*Estimated surface coverage at 25 mils thick.

### Mechanically-Fastened Water-Resistive and Air Barriers (Tyvek® WRBs)

Product	Dimensions	Area
<b>DuPont™ Tyvek® CommercialWrap®</b>	5 ft x 200 ft 10 ft x 125 ft	1,000 ft <sup>2</sup> 1,250 ft <sup>2</sup>
<b>DuPont™ Tyvek® CommercialWrap® D</b>	5 ft x 200 ft 10 ft x 125 ft	1,000 ft <sup>2</sup> 1,250 ft <sup>2</sup>

### DuPont Self-Adhered Flashing Products

Product	Width
<b>DuPont™ FlexWrap™</b>	6 in
<b>DuPont™ FlexWrap™ EZ</b>	9 in
<b>DuPont™ StraightFlash™</b>	2.75 in
	4 in
	9 in

## Installation Accessories

Product	Type	Quantity
<b>Great Stuff Pro™ Window &amp; Door Polyurethane Foam Sealant</b>	Can (reusable dispensing gun sold separately)	20 oz
<b>Great Stuff Pro™ Gaps &amp; Cracks Polyurethane Foam Sealant</b>	Can (reusable dispensing gun sold separately)	20 oz

## Required Materials Based on Project Requirements, Details, and Specifications<sup>1</sup>

- Backer Rod
- Sealant<sup>2</sup>
- Adhesive/Primer<sup>2</sup>
- Wet Mil Gauge
- Brushes for Surface Preparation
- J-Roller
- Trowels

<sup>1</sup>Apply per manufacturers' guidelines. **For non DuPont products, DuPont assumes no liability in use of recommended products** — installers need to evaluate suitability of recommended products in their end-use applications.

<sup>2</sup>For information regarding chemical compatibility of adhesive/primer, see technical bulletin [Chemical Compatibility of Representative Building Sealants and Adhesives/Primers](#).

## Coverage Rates

Coverage rates may vary depending on application technique and substrate condition. **Tyvek® Fluid Applied WB+™** applied at a minimum thickness of 25 mils wet will offer a theoretical coverage (not including waste) as shown in the table below.

Wall Substrate	Concrete Masonry Unit (CMU)	Exterior Gypsum Sheathing	Oriented Strand Board (OSB)	Plywood
<b>Theoretical Coverage Rate</b>	~ 50 ft <sup>2</sup> /gal	~ 65 ft <sup>2</sup> /gal	~ 60 ft <sup>2</sup> /gal	~ 60 ft <sup>2</sup> /gal

The installing professional should set a goal to ensure membrane is continuous (free of pinholes and voids) at an average thickness of 25 mils.

In general, the 3.5 gal bucket of **Tyvek® Fluid Applied Flashing and Joint Compound+** offers coverage of approximately 50-60 ft<sup>2</sup>/gal at 25 mils.

The 28 oz cartridge of **Tyvek® Fluid Applied Flashing and Joint Compound+** will treat approximately 1.8-2.3 LF/oz. for a 1/4" width x 1/4" depth bead (depending on substrate surface and joints). This is equivalent to approximately 11-13 ft<sup>2</sup>/gal per 28 oz cartridge @ 25 mils wet film thickness (depending on substrate surface). Rough surfaces can reduce coverage rates.



## DuPont™ Tyvek® Fluid Applied Air Barrier System

**DuPont™ Tyvek® Fluid Applied WB+™** is a silyl-terminated polyether (STPE) full-bodied (99% solids) single-component vapor permeable fluid applied that offers excellent elongation and recovery. **Tyvek® Fluid Applied WB+™** can be applied in single coat, has extremely low shrinkage during curing. **Tyvek® Fluid Applied WB+™** is non-water-soluble so it's not susceptible to freezing and/or wash off.

**DuPont™ Tyvek® Fluid Applied Flashing and Joint Compound+** is a full-bodied vapor permeable silyl-terminated polyether (STPE) liquid flashing that is brush or trowel applied. **Tyvek® Fluid Applied Flashing and Joint Compound+** offers extremely low shrinkage and excellent air and water barrier performance. **Tyvek® Fluid Applied Flashing and Joint Compound+** can be used to protect rough openings for windows and doors, to fill seams, cracks and holes in the substrate, to seal around penetrations and to treat joints and transitions between building components.

### DuPont™ Sealant for Tyvek® Fluid Applied System

Non-vapor permeable silyl-terminated polyether (STPE) sealant specifically designed to work with the **DuPont™ Tyvek® Fluid Applied System**. **DuPont™ Sealant for Tyvek® Fluid Applied System** has excellent adhesion and elongation. It should be used to seal around windows, doors, and penetrations.

## DuPont Commercial Self-Adhered Flashing Products for use with DuPont™ Tyvek® Fluid Applied Products

### DuPont™ StraightFlash™

**StraightFlash™** is a premium self-adhered flashing protects the rough opening and/or window and door units. **StraightFlash™** can be used to help address transitions and integration with other components of the wall assembly.

### DuPont™ FlexWrap™

Premium extendable self-adhered flashing membrane specifically designed to provide seamless air and water barrier protection at window and door corners. **FlexWrap™** can be installed to sill and head of standard windows or round-top/arched window as well as for wall penetrations.

### DuPont™ FlexWrap™ EZ

**FlexWrap™ EZ** is a premium flexible flashing membrane configured to be easily installed around penetrations of all sizes.

**StraightFlash™**, **FlexWrap™**, and **FlexWrap™ EZ** combine a **DuPont™ Tyvek®** topsheet with a 100% butyl-based adhesive layer.



## Safety, Handling, and Storage of DuPont™ Tyvek® Fluid Applied Products

**WARNING: FOR PROFESSIONAL USE ONLY.** Read and follow the entire *Safety, Handling, and Storage* section and the Safety Data Sheets (SDSs) carefully before use. The information below is designed to protect the user and allow for safe use and handling of **Tyvek® Fluid Applied Products**. Follow all applicable federal, state, local and employer regulations.

### Precautionary Statements

Use only as directed. Avoid inhalation of vapor aerosol. Avoid breathing dust/fumes/gas/mist/vapors/spray. Contaminated work clothing should not be allowed out of the workplace. Wear protective gloves/protective clothing/eye protection/face protection. IF ON SKIN: Wash with plenty of soap and water. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. IF EXPOSED OR CONCERNED: Get medical advice/attention. Immediately call a poison center/doctor. IF SKIN IRRITATION OR RASH OCCURS: Get medical advice/attention. Wash contaminated clothing before reuse. Store locked up. Dispose of contents/container to an approved waste disposal plant. Vapor and aerosols are harmful if using spray application. Use in a well-ventilated area. Use NIOSH approved respirator. If vapors are inhaled, immediately move from exposure to fresh air and contact a physician. Avoid contact with eyes and skin. See *Personal Protective Equipment* section below.

### Hazard Statements

May cause an allergic skin reaction. May cause serious eye damage. May cause genetic defects. May cause cancer. May damage fertility or the unborn child. May cause irritation. Repeated or prolonged skin contact may cause allergic reactions with susceptible persons. May cause irritation of respiratory tract. **Tyvek® Fluid Applied Products** are mixtures and the hazard information is based on each product's components. **KEEP OUT OF REACH OF CHILDREN**, children can fall into bucket and drown.

### Personal Protective Equipment (PPE)

Personal protective equipment (PPE) used during the handling of **Tyvek® Fluid Applied Products** must at a minimum include:

- Protective clothing or coveralls, including long sleeves and head cover (no skin should be exposed), for example, **DuPont™ Tyvek®** non-woven laminate paint protective coveralls with hood
- Chemical-resistant nitrile, butyl rubber, neoprene or PVC gloves
- Chemical splash impact safety goggles or equivalent, unless using a full-face respirator
- Protective work safety shoes
- Hearing protection such as ear plugs when spraying
- NIOSH-approved particulate filtering full-face respirator with a P95 particulate filter or half-mask respirator with a P95 particulate filter and splash impact goggles when spraying

- NIOSH-approved N95 disposable safety mask with splash impact goggles for manual application such as troweling or rolling, and for clean-up.

### Clean Up and Purge

Use appropriate personal protective equipment during clean-up (see the *Personal Protective Equipment* section). Uncured **Tyvek® Fluid Applied Products** can be cleaned from hands, tools, and equipment by using a citrus based cleaner or mineral spirits. Cured **Tyvek® Fluid Applied Products** can be removed by soaking in citrus based cleaners or using a gel-based paint stripper.

Clean sprayer components and tools with 100% mineral spirits, naphtha, citrus-based cleaners, or gel-based paint stripper. Material should not be left in the pump, hose, gun, or roller. After applying, flush system with a citrus-based cleaner, or 100% mineral spirits until the system is clean. Avoid using water for cleanup. Low pressure portions of the system should be taken apart and cleaned by hand. Before the next usage, flush any remaining solvent out of the system before applying **DuPont™ Tyvek® Fluid Applied WB+™** to the wall substrate. Be sure that system is fully clean of any residual **Tyvek® Fluid Applied Product** before introducing a different product. If system is not fully clean, ingredients can react and cause products to cure in the system. Spray tips can be cleaned in 100% mineral spirits or naphtha using airbrush cleaning tools.

### Shelf Life and Storage

The shelf life for **Tyvek® Fluid Applied Products** is 12 months for an unopened container from the date of manufacture. Reference the "Use By" date printed on the container. Store opened containers with a plastic protective liner to slow cure rate. Before reusing a previously opened container, first remove any cured material that may have formed (skinned over) at the top. **Expired material is deemed "not fit for use" and offers no warranty.**

**Tyvek® Fluid Applied Products** should be stored in a clean, dry environment, 50°- 80°F (10° - 27°C). If stored at temperatures below 65°F (18°C), the product must be warmed to a minimum of 65°F (18°C) prior to spraying using standard industry methods for proper atomization at the spray tip. Continuous storage at high temperatures will reduce the shelf life of **Tyvek® Fluid Applied Products**. **Tyvek® Fluid Applied Products** should be placed under a cover when they are temporarily stored outside.

### Disposal

Dispose of any residual **Tyvek® Fluid Applied Product**, coated debris, or solvent in accordance with applicable federal, state, and local government regulations.

### Supplemental Information

Avoid spraying **Tyvek® Fluid Applied WB+™** in very windy conditions. Installing professional should consider if structure should be tented to protect the surrounding area from overspray. Avoid spraying in very dusty conditions.

## Warranty Information

Please refer to [DuPont™ Tyvek® Fluid Applied Products Limited Warranty](#) for information relative to this guide. For commercial buildings with hybrid conditions and/or using **DuPont™ Tyvek® CommercialWrap®** or **Tyvek® CommercialWrap® D** as the water and air barrier, please refer to [DuPont Building Envelope Solutions Products 10-Year Limited Warranty for Commercial and High Performance Buildings or Any Height](#). For wood framed multi-family and light commercial buildings, please refer to the [DuPont Building Envelope Solutions Products 10-Year Limited Warranty for Single-Family, Wood-Framed Multi-Family, and Light Commercial Buildings](#).

**NOTE:** In order to make a claim under the DuPont 10-Year Limited Product and Labor Warranty on DuPont Building Envelope Solutions Products, all terms and conditions of the warranty must be met, including use of the applicable DuPont Installation Guidelines available at the date of original installation. Please contact DuPont or a DuPont Sales Representative responsible for **DuPont™ Tyvek® Fluid Applied Products** in the project area if you have any questions in connection with any DuPont Installation Guideline.

## Applicable Structures and Performance Criteria

### Applicable Structures

**These Installation Guidelines are for Commercial and High-Performance Buildings of Any Height as defined below.**

**NOTE:** The details captured within this guide can also be used for other construction types (e.g., residential single family, wood-framed multi-family, and light commercial).

DuPont categorizes structures into three primary groups:

- i.) **“Single-Family Residential Buildings”** are defined as fully-detached one or two family structures, as well as townhouse structures not more than three stories above grade plane as defined in the 2021 International Residential Code (IRC) Section R101.2, both to the extent they are exclusively Residential Use building structures.
- ii.) **“Wood-Framed Multi-Family and Light Commercial Buildings”** are defined as the following (must meet **ALL** criteria):
  - a. Constructed of wood-based structural exterior framing of Type III or Type V Construction\* (IBC Chapter 6); and
  - b. Does not exceed 2021 IBC max height (Table 504.3) for Type V construction (70 ft) or Type III construction (85 ft), including allowances for Automatic Sprinkler height increase (IBC 504.1 and Table 504.4) and ‘podium’ structures outlined in the Special Provisions\* (IBC Section 510); and
  - c. Design requirements for the building envelope do not exceed air barrier performance of ASTM E1677 (10.8 psf structural load, 65 mph equivalent wind load), and water infiltration resistance criteria of 6.24 psf (50 mph equivalent wind-driven rain) when tested in accordance with ASTM E331, ASTM E1105, or equivalent.

\*Special Provisions (IBC Section 510) allows for a “horizontal building separation”, or ‘podium’, to be built under the wood-framed Type III or Type V building. The podium is typically constructed of steel framing or concrete. Podium-style buildings are included under “Wood-Framed Multi-Family and Light Commercial Buildings”, as long as all other definition criteria (a. through c. above) are met.
- iii.) **“Commercial and High-Performance Buildings of Any Height”** can be defined as any of the following:
  - a. Structures constructed of steel-based structural exterior framing and any exterior sheathing, or
  - b. Structures with exterior above grade walls constructed of concrete or concrete masonry units (CMU), or
  - c. Structures of any height and construction type (including any framing type) that are designated as high-performance. “High-performance” is defined as air barrier performance exceeding ASTM E1677 and/or water infiltration resistance criteria exceeding 6.24 psf when tested in accordance with ASTM E331, ASTM E1105, or equivalent.

**NOTE:** “Podium” style structures with wood-framed floors built above steel-framed or concrete/CMU floors are covered under “Wood-Framed Multi-Family and Light Commercial Buildings” unless they are “high-performance”.

## Applicable Structures and Performance Criteria

### Water-Resistive Barrier Performance Requirements

Buildings with high-performance air barrier designs are defined by DuPont as those with air barrier performance equivalent to ASTM E2357 (or other exceeding ASTM E1677), and/or water infiltration resistance criteria greater than 6.24 psf when tested in accordance with ASTM E331, ASTM E1105, or equivalent. Installation of DuPont Building

Envelope Solutions Products on high-performance buildings requires the use of the [DuPont™ Tyvek® Mechanically-Fastened Water-Resistive and Air Barrier \(WRB\) and DuPont Self-Adhered Flashing Products Installation Guidelines For Commercial and High-Performance Buildings of Any Height](#).

These Installation Guidelines should be used for buildings which meet the applicable structures definitions and performance criteria on the previous page. The following table provides a summary of typical installation information.

DuPont™ Tyvek® Fluid Applied Products Installation Considerations for Commercial and High-Performance Buildings of Any Height	
<b>Performance Criteria</b>	Buildings with high-performance air barrier designs are defined by DuPont as those with air barrier performance equivalent to ASTM E2357 (or other exceeding ASTM E1677), and/or water infiltration resistance criteria greater than 6.24 psf when tested in accordance with ASTM E331, ASTM E1105, or equivalent.
<b>Air and Water Barrier</b>	<b>DuPont™ Tyvek® Fluid Applied WB+™</b>
<b>Intended Application Area</b>	<b>DuPont™ Tyvek® Fluid Applied Products</b> are intended for above grade exterior wall substrates as outlined in the <a href="#">Special Consideration</a> section. <b>Tyvek® Fluid Applied Products</b> can be used with <b>DuPont™ Tyvek® WRBs</b> and <b>DuPont Self-Adhered Flashing Products</b> as captured in the <a href="#">Hybrid Wall</a> detail in this guide and the Hybrid Condition in the <a href="#">DuPont™ Tyvek® Mechanically-Fastened Water-Resistive and Air Barrier (WRB) and DuPont Self-Adhered Flashing Products Installation Guidelines</a> .
<b>Air Barrier Details</b>	Required
<b>Sheathing Seam Treatment</b>	Where applicable, the sheathing seams should be pretreated with <b>DuPont™ Tyvek® Fluid Applied Flashing and Joint Compound+</b> or <b>DuPont™ Sealant for Tyvek® Fluid Applied System</b> as outlined in the <a href="#">Joint Treatment Methods</a> section in this guide.
<b>Cladding Fasteners</b>	Required when water infiltration resistance criteria of the building envelope design requirements exceeds ASTM E1677, 0.56 psf (15 mph) equivalent wind-driven rain water infiltration testing. Cladding and/or exterior continuous insulation shall be sealed using one of the approved options outlined in the <a href="#">Cladding/Facade Fastener Considerations</a> section of this guide.

## Water-Resistive Barrier & Energy Conservation Codes and Standards

The 2021 International Building Code (Section 1402.2 *Weather Protection*) requires that exterior walls shall provide the building with a water-resistive exterior wall envelope. The exterior wall envelope shall be designed and constructed in such a manner as to prevent the accumulation of water within the wall assembly by providing a water-resistive barrier behind the exterior veneer, as described in Section 1403.2 and a means for draining water that enters the assembly to the exterior. The exterior wall envelope shall include flashing, as described in Section 1403.2 *Water-Resistive Barrier* states that “not fewer than one layer of water-resistive barrier material shall be attached to the studs or sheathing, with flashing as described in Section 1404.4 in such a manner as to provide a continuous water-resistive barrier behind the exterior veneer.”

**DuPont™ Tyvek® Fluid Applied WB+™** meets ICC-ES AC212, *Acceptance Criteria for Water-Resistive Coatings Used as Water-Resistive Barriers Over Exterior Sheathing*, per the following:

Intertek Code Report: CCR-0307 for **Tyvek® Fluid Applied WB+™**

The DuPont™ Tyvek® Commercial Building Wraps listed below qualify as approved water-resistive barriers based on ICC-ES AC38 *Acceptance Criteria for Water Resistive Barriers* according to the associated Evaluation Report:

- ICC-ES Evaluation Report ESR 2375
  - **DuPont™ Tyvek® CommercialWrap®**
  - **DuPont™ Tyvek® CommercialWrap® D**

Air leakage control and air barriers are required in the IECC-2018 Sections R402.4 and C402.5. Specifically, Section C402.5 identifies three compliance options for air barriers. **Tyvek® WRBs** comply with the option detailed in Section C402.5.1.2.1 Materials: “Materials with an air permeability no greater than 0.004 cfm/ft<sup>2</sup> (0.02 L/s x m<sup>2</sup>) under a pressure differential of 0.3 inches water gauge (75 Pa) when tested in accordance with ASTM E2178 shall comply with this section.” **Tyvek® WRBs** have been tested in accordance with ASTM E2178 and have air permeability less than 0.004 cfm/ft<sup>2</sup> (0.02 L/s x m<sup>2</sup>).

## Additional Codes and Standards Information for DuPont™ Tyvek® Commercial Air and Water Barrier Systems

**DuPont™ Tyvek® Fluid Applied Products, Tyvek® CommercialWrap®, Tyvek® CommercialWrap® D, DuPont™ FlexWrap™**, and **DuPont™ StraightFlash™** were designed for the rigors of heavy commercial construction. These commercial products have been tested to the following standards:

- ABAA Evaluated
- ASTM E2357, *Standard Test Method for Determining Air Leakage of Air Barrier Assemblies*
- ASTM E283, *Standard Test Method for Determining Rate of Air Leakage Through Exterior Windows, Curtain Walls and Doors Under Specified Pressure Differences Across the Specimen*
- ASTM E331, *Standard Test Method for Water Penetration of Exterior Windows, Skylights, Doors, and Curtain Walls by Uniform Static Pressure*
- ASTM E1677, *Standard Specification for Air Barrier (AB) Material or System for Low-Rise Framed Building Walls*
- ASTM E2178, *Standard Test Method for Air Permeance of Building Materials*
- ASTM E96, *Standard Test Methods for Water Vapor Transmission of Materials*
- ASTM E84, *Standard Test Method for Surface Burning Characteristics of Building Materials*
- AATCC 127, *Hydrostatic Head Test for WRB Materials, measuring pressure to failure or time of failure at a given pressure*
- AAMA 711, *Specification for Self Adhering Flashing Used for Installation of Exterior Wall Fenestration Products*
- AAMA 714, *Voluntary Specification for Liquid Applied Flashing Used to Create a Water-Resistive Seal Around Exterior Wall Openings in Buildings<sup>1</sup>*
- ASTM C1305, *Standard Test Method for Crack Bridging Ability of Liquid-Applied Waterproofing Membrane*
- ASTM D412, *Standard Test Methods for Vulcanized Rubber and Thermoplastic Elastomeric – Tension*
- NFPA 285, *Standard Fire Test Method for Evaluation of Fire Propagation – Characteristics of Exterior Non-Load Bearing Wall Assemblies Containing Combustible Components*

Energy Conservation Codes for commercial buildings are being adopted in many regions across the U.S. When properly installed, **Tyvek® Fluid Applied Products** meet the following codes and guidelines.

- ASHRAE 90.1 Model Energy Code air barrier requirements
- 2018 International Energy Conservation Code® (IECC)
- 2018 International Green Construction Code™ (IgCC)

<sup>1</sup> This reference only applies to **Tyvek® Fluid Applied Flashing and Joint Compound+**

## Flashing Products Code Requirements

The 2021 International Building Code (Section 1404.4 *Flashing*) requires that “flashing shall be installed in such a manner so as to prevent moisture from entering the wall or to redirect that moisture to the surface of the exterior wall, wall finish, or to a water-resistive barrier complying with Section 1403.2 and that is part of a means of drainage complying with Section 1402.2. Flashing shall be installed at the perimeters of exterior door and window assemblies, penetrations and terminations of exterior wall assemblies, exterior wall intersections with roofs, chimneys, porches, decks, balconies and similar projections and at built-in gutters and similar locations where moisture could enter the wall. Flashing with projecting flanges shall be installed on both sides and the ends of copings, under sills and continuously above projecting trim. Where self-adhered membranes are used as flashings of fenestration in wall assemblies, those self-adhered flashings shall comply with **AAMA 711**. Where fluid applied membranes are used as flashing for exterior wall openings, those fluid applied membrane flashings shall comply with **AAMA 714**.”

- **DuPont Self-Adhered Flashing Products** comply with AAMA 711 (an FGIA Specification) *Specification for Self Adhering Flashing Used for Installation of Exterior Wall Fenestration Products*.
- **DuPont™ Tyvek® Fluid Applied Flashing and Joint Compound+** complies with AAMA 714, *Voluntary Specification for Liquid Applied Flashing Used to Create a Water-Resistive Seal around Exterior Wall*.

## Special Considerations

**NOTE: DuPont™ Tyvek® Fluid Applied Products** should only be used for wall systems that include a continuous path for drainage allowing moisture that penetrates the facade to exit to the exterior. The drainage path should be continuous throughout the wall assembly, including but not limited to areas such as eyebrows, band boards, penetrations, or other locations where transitions and changes of plane occur.

For membrane drainage wall systems, ensure that the drainage path is not blocked or disrupted to prevent excess moisture buildup in the wall cavity. Proper shingling, sealing, and integration of the **Tyvek® Fluid Applied Products** with kick-out flashings, through wall membranes, window and door flashing, and other wall transitions is essential for moisture drainage to the exterior.

**NOTE: As soon as practically possible, cap the top of the wall system to reduce the likelihood of water getting behind the facade and/or wall substrate and into the wall cavity.**

1. Suitable substrates include concrete masonry unit (CMU), concrete (>48 hours for green concrete), exterior gypsum, OSB, plywood, wood, wood-based FRT<sup>1</sup>, and metal.
2. **Tyvek® Fluid Applied Products** should be installed on clean surface that is free of dirt, grease and other debris that could interfere with adhesion.

3. **Tyvek® Fluid Applied Products** are designed for above grade application and should not be installed below grade.
4. When **DuPont™ Tyvek® Fluid Applied WB+™** is applied with a sprayer, the outer edges of all interfaces with **DuPont Self-Adhered Flashing Products** should be pretreated with **DuPont™ Tyvek® Fluid Applied Flashing and Joint Compound+** and tapered to the wall substrate to ensure smooth transitions free of pinholes and voids.
5. **Tyvek® Fluid Applied Products** can be applied to damp surfaces. A surface is considered damp if there is no visible water on the surface and no transfer of water to the skin when touched.
6. When applying **Tyvek® Fluid Applied Products** over wood-based substrates such as OSB, plywood, lumber, and treated lumber, the installing professional should ensure the moisture content, measured with a wood moisture meter in the core of the substrate, shall be below 20%. **Do not cover wood-based substrates with Tyvek® Fluid Applied Products if moisture content is 20% or above.**
7. **Tyvek® Fluid Applied Flashing and Joint Compound+** can be troweled or brushed to the required thickness in any application outlined in the guide.
8. **Tyvek® Fluid Applied Products** should be applied when air and surface temperatures are above 25°F. Do not install once the ambient temperature exceeds 95°F (35°C), unless the application surface is shaded. The maximum surface temperature for application is 140°F (60°C).
9. For best results, the temperature of the **Tyvek® Fluid Applied Products** at the spray tip of standard spray equipment should be 65°F (18°C) or higher. This may require employing measures to keep the pump and spray equipment at temperatures above 65°F (18°C) and/or using an insulated hose.
10. The maximum in-service temperature of the final cured **Tyvek® Fluid Applied Products** and **DuPont Self-Adhered Flashing Products** is 180°F (82°C).
11. **Tyvek® Fluid Applied Products** may be overcoated once a tack-free skin has formed. Exterior insulation and/or exterior facade may be installed after **Tyvek® Fluid Applied Products** have cured for 48 hours. For more information, see the [Drying/Curing](#) section of this guide.
12. **Tyvek® Fluid Applied WB+™** may be applied over and integrated with **Tyvek® Fluid Applied Flashing and Joint Compound+** once a tack-free skin has formed. Skin over time is ~1 – 2 hours at 70°F (20°C) 50% RH. Refer to table in the [Drying/Curing](#) section of this guide for more information.
13. Performance testing, included but not limited to peel adhesion, pull strength analysis, field or third party testing of air and/or water barrier properties, should be conducted after **Tyvek® Fluid Applied Products** are fully cured (~14 days).
14. DuPont requires that **Tyvek® Fluid Applied Products** be covered within nine months (270 days) of installation.

<sup>1</sup>Please contact DuPont to determine if proposed wood-based FRT product is suitable for use with **DuPont™ Tyvek® Fluid Applied Products**.

## Special Considerations

15. **DuPont Self-Adhered Flashing Products** should be applied to clean, dry surfaces that are free of frost. Wipe surfaces to remove dirt, grease and other debris that could interfere with adhesion.
16. DuPont requires that **DuPont™ FlexWrap™**, **DuPont™ FlexWrap™ EZ**, and **DuPont™ StraightFlash™** be covered within nine months (270 days) of installation.
17. **DuPont Self-Adhered Flashing Products** and **DuPont™ Tyvek® Fluid Applied Products** should **not** be used in applications where through wall flashing membranes are intended.
18. **StraightFlash™** can be used to bridge non-moving gaps up to 1". Flashing must maintain a 2" adhesive lap on both wall substrates.
19. **DuPont Self-Adhered Flashing Products** perform best when air and surface temperatures are above 25°F (-4°C).
20. For **DuPont Self-Adhered Flashing Products**, remove all wrinkles and bubbles that may allow for water intrusion by smoothing surface and repositioning as necessary during installation.
21. If **DuPont Self-Adhered Flashing Products** are used for window, doors and/or pipe penetrations, in conjunction with **Tyvek® Fluid Applied Products**, the **DuPont Self-Adhered Flashing Products** should be installed to a primed wall surface before **Tyvek® Fluid Applied Products** are applied.
22. For window or door openings greater than 6 feet wide, **StraightFlash™** can be used with **FlexWrap™** in 3-piece sill/head applications. **StraightFlash™** should be applied the length of the sill prior to placing the **FlexWrap™** corners. The **FlexWrap™** corners should be at least 12" long allowing for 6" up the jamb and 6" of overlap on the **FlexWrap™** sill flashing. When applying the 3-piece flashing detail to the head of the opening, the **StraightFlash™** head piece should be applied prior to installing the **FlexWrap™** corner flashing. The **FlexWrap™** head flashing should overlap the jamb flashing by a minimum of 6". **Registered DuPont Commercial Certified Installers may use the 3-piece sill/head flashing method on window and door openings of any size.**
23. Before applying **DuPont Self Adhered Flashing Products** to cured **Tyvek® Fluid Applied Products**, a wet bed of **Tyvek® Fluid Applied Product** must be installed. This sequence is required to ensure a robust integration between the self-adhered and fluid applied products.
24. **A recommended adhesive/primer is required when applying DuPont Self-Adhered Flashing Products on concrete, masonry, and fiber faced exterior gypsum board substrates.** Priming is generally not required for adhering **DuPont Self-Adhered Flashing Products** to wood. Please refer to the technical bulletin [Chemical Compatibility of Representative Building Sealants and Adhesives/Primers](#) for additional information.
25. Priming is only required for **Tyvek® Fluid Applied Products** when applied to cut edges of exterior gypsum sheathing.
26. Uncured **Tyvek® Fluid Applied Products** and/or competitive fluid applied/waterproofing products **must not** come in contact with **DuPont™ Tyvek® Mechanically-Fastened WRBs** due to potential impact on performance properties.
27. **Tyvek® Fluid Applied Products** should not be placed in direct contact with competitive fluid applied products. **StraightFlash™** can be used as a transitional membrane.
28. Stirring is not necessary. If separation occurs, gently fold material until mixture is uniform. Avoid any type of mixing that will introduce air into the product.
29. Asphalt based adhesives are **not recommended** for use with **Tyvek® Fluid Applied Products**.
30. Minor discoloration of the membrane at wood knots, sap, or sheathing inks may occur after curing.
31. When **Tyvek® Fluid Applied Products** are used as the primary air and water barrier, **Tyvek®** mechanically-fastened air and water barrier products may be installed as an "intervening layer" over **Tyvek® Fluid Applied Products** after 24 hours of curing at 70°F (20°C) and 50% RH. For additional information about the use of "intervening layers", see "Stucco" in the [Facade/Exterior Considerations](#) section of this guide.
32. DuPont recommends **Tyvek® Fluid Applied Products** for CMU walls with embedded brick ties.
33. **Tyvek® Mechanically-Fastened WRBs should NOT be used on CMU walls with embedded brick ties.**
34. When **DuPont™ Tyvek® CommercialWrap®** or **Tyvek® CommercialWrap® D** is installed as part of a hybrid wall condition, the **DuPont™ Tyvek® WRB** must be installed in accordance with the [DuPont™ Tyvek® Mechanically-Fastened Water-Resistive and Air Barrier \(WRB\) and DuPont Self-Adhered Flashing Products Installation Guidelines](#).
35. For guidance on the use of **Tyvek® Fluid Applied Products** with **DuPont Exterior Continuous Installation**, refer to the applicable Commercial Wall<sup>2</sup> installation bulletin, [DuPont™ Tyvek® Fluid Applied WB+™ UNDER DuPont Exterior Continuous Insulation](#) or [DuPont™ Tyvek® Fluid Applied WB+™ OVER CMU with Embedded Brick Ties and UNDER DuPont™ Styrofoam™ Brand XPS Insulation Products](#).
36. For commercial bump-out window conditions refer to [DuPont Commercial Flashing Products Installation Guidelines Bump-Out Frame Conditions](#). The hybrid details offer greater flexibility to address more complex bump-out conditions.
37. Buildings requiring NFPA 285 compliance must use **Tyvek® Fluid Applied Products**, **Tyvek® CommercialWrap®**, or **Tyvek® CommercialWrap® D** in accordance with [DuPont NFPA 285 documentation](#).
38. Please refer to the installation bulletin [Additional Considerations When Spraying DuPont™ Tyvek® Fluid Applied WB+™](#) for additional guidance when applying the product with an airless sprayer.

For additional guidance, please call 1-833-338-7668, visit our website at [www.fluidapplied.tyvek.com](http://www.fluidapplied.tyvek.com).

## Application Over Sheathing

**DuPont™ Tyvek® Fluid Applied WB+™** may be installed over exterior gypsum, OSB, and plywood sheathing. Sheathing should be clean and free from any materials that could negatively affect adhesion. When installing over sheathing, it is important that all sheathing seams be pretreated using the appropriate [Joint Treatment Methods](#) in this guide. All flashing and detailing should be completed before installation of **Tyvek® Fluid Applied WB+™**. When applying over exterior gypsum, all cut edges along outside corners and rough openings should first be primed with a recommended adhesive/primer.

When spraying **Tyvek® Fluid Applied WB+™**, pretreat all overdriven sheathing fasteners with **DuPont™ Tyvek® Fluid Applied Flashing and Joint Compound+**. Application to sheathing substrate and sheathing fasteners should be free of pinholes and voids. Installer should treat any pinholes and voids using **DuPont™ Tyvek® Fluid Applied Products**. Please refer to the bulletin [Additional Considerations When Spraying DuPont™ Tyvek® Fluid Applied WB+™](#) for more information relative to spraying.

**Tyvek® Fluid Applied WB+™** can be sprayed or rolled on nonporous substrates, such as gypsum sheathings, in a 25-mil (0.635 mm) wet coat. **Tyvek® Fluid Applied WB+™** can be rolled or sprayed on porous substrates such as CMU and non-uniform substrates such as wood sheathing and OSB. When sprayed on porous and/or non-uniform substrates back rolling may be required. When back rolling, use a roller cover with a 1/2" to 3/4" nap. **Tyvek® Fluid Applied WB+™** needs only to be applied in a single coat at 25 mils thick. Refer to table in the *Drying/Curing* section, at right, for skin and working times. The thickness should be controlled by applying the appropriate volume over a marked area and by spot checking with a wet mil gauge. Upon completion, inspect the membrane to ensure that it is continuous and free of any voids or pinholes.

**Tyvek® Fluid Applied Products** may be overcoated once a tack-free skin has formed. Refer to table in the *Drying/Curing* section for skin and working times.

## Drying/Curing

The **Tyvek® Fluid Applied Products** skin over and are dry to touch within 1 – 2 hours under normal conditions (70°F (20°C), and 50% RH). Cure time may be slower with lower ambient temperatures and/or RH.

**NOTE: Tyvek® Fluid Applied Products** installed on manufactured wall panels may require site-specific drying/curing considerations.

Uncured **Tyvek® Fluid Applied Products** should not come in contact with **DuPont™ Tyvek® WRBs**. Performance testing can commence after membrane is fully cured, approximately 14 days. See table below for additional details.

Use Recommendations	Application	Time
Skin Over <sup>1</sup>	Minor touchups	1-2 Hours
Workable <sup>2</sup>	Cladding/Façade Fasteners	24 Hours
Exterior Façade / Exterior Insulation		48 Hours
<b>DuPont™ Tyvek® CommercialWrap® / Tyvek® CommercialWrap® D</b>	When <b>DuPont™ Tyvek® Fluid Applied Flashing and Joint Compound+</b> is used as Sheathing Seam Treatment	48 Hours
	Intervening Layer	24 Hours
Complete Cure	End-Use Testing <sup>3</sup>	14 Days

<sup>1</sup> Time required for **Tyvek® Fluid Applied Products** to form a surface that is non-transferable to the touch.

<sup>2</sup> Time required for surface of **Tyvek® Fluid Applied Products** to be more resistant to minor abrasion.

<sup>3</sup> End-Use Testing include water infiltration field testing, 3rd Party assembly testing, peel adhesion and/or pull testing.

## DuPont™ Tyvek® Fluid Applied WB+™ Installation Instructions

### Installation Method for New Construction

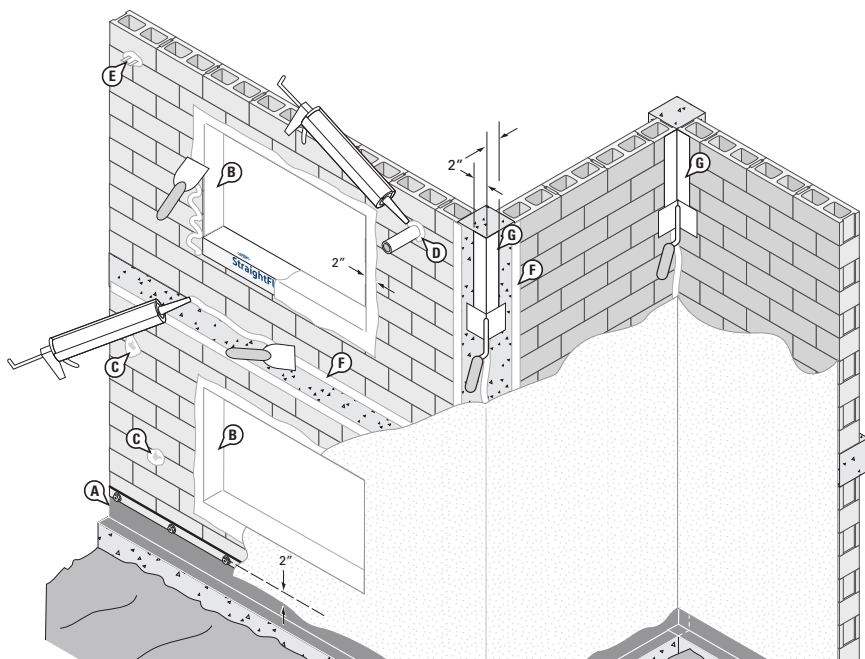
#### STEP 1: PREPARATION

Clean substrate by removing any substance that may affect the adhesion of **DuPont™ Tyvek® Fluid Applied Products**, such as frost, oil, grease, mold and efflorescence. Remove all dust, dirt and loose mortar from the substrate using a trowel or brush. CMU substrates should be free of holes and excess mortar. Fill all head and bed joints with mortar. Mortar joints should be struck flush to help limit pretreatment or post treatment of joints.

#### STEP 2: FLASHING

- Install a through wall flashing at all necessary locations (e.g. base of the wall, shelf angles, heads of windows, etc.), see [Continuity](#) section for additional information.
- Install **DuPont™ Tyvek® Fluid Applied Flashing and Joint Compound+** or **DuPont Self-Adhered Flashing Products** around windows and doors in accordance with the [Installation Methods for DuPont Flashing Products](#) section of this guide.

**NOTE:** For spray applications of **DuPont™ Tyvek® Fluid Applied WB+™**, the outer edge of **DuPont Self-Adhered Flashing Products** should be pretreated with **Tyvek® Fluid Applied Flashing and Joint Compound+** tapered to the wall substrate to help ensure installation is free of pinholes and voids.



#### STEP 3: WALL/SUBSTRATE PREPARATION

- Fill small cracks and voids in masonry with **Tyvek® Fluid Applied Flashing and Joint Compound+**. Large voids should be filled flush with mortar and allowed to cure.
- Seal around all penetrations using **Tyvek® Fluid Applied Flashing and Joint Compound+**. The fillet bead should extend 1/2" onto both surfaces (see the [Penetrations](#) section for detail).
- As a best practice, DuPont recommends that all embedded masonry anchors be treated by troweling or brushing a coat of **Tyvek® Fluid Applied WB+™** or **Tyvek® Fluid Applied Flashing and Joint Compound+** around the base of the anchor. See the [Brick Ties, Cladding Supports, and Furring Strips](#) section of this guide for additional fastener sealing recommendations.
- Treat all non-moving transition joints to beams, columns, and dissimilar materials (up to 1/4") by applying a 2" wide, 60 mil thick coat of **Tyvek® Fluid Applied Flashing and Joint Compound+** across the joint. Grouted joints between similar materials do not need to be treated. Transition joints up to 1/2" should be reinforced with fiberglass mesh tape. **DuPont™ StraightFlash™** should be used for transition joints up to 1" following the primer requirements included in the [Special Considerations](#) section of this guide. The **StraightFlash™** should extend a minimum of 2" onto each surface. Refer to the [Joint Treatment Methods](#) section of this guide for additional information about transition joints.
- Treat all inside and outside corners by applying a 25 mil thick coat of **Tyvek® Fluid Applied Flashing and Joint Compound+**, 2" onto each adjoining surface. It is recommended that a fillet bead of **Tyvek® Fluid Applied Flashing and Joint Compound+** be applied to corners to help ensure continuity. Alternately, corners may be treated using **StraightFlash™**. Be sure that **StraightFlash™** is pressed tightly into the inside corners and is fully adhered to substrate. See the [Special Considerations](#) section of this guide for priming requirements.

#### STEP 4: AIR AND WATER-RESISTIVE BARRIER

**Tyvek® Fluid Applied WB+™** can be sprayed or rolled on nonporous substrates such as gypsum sheathings, in one 25-mil (0.635 mm) wet coat, but may require back rolling. Porous substrates such as CMU and non-uniform substrates such as wood sheathing and OSB can be sprayed but may require back rolling. When back rolling, use a roller cover with a 1/2" to 3/4" nap. **Tyvek® Fluid Applied WB+™** needs only to be applied in a single coat at 25 mils thick. See table in the [Coverage Rates](#) section of this guide for substrate specific information. Thickness should be controlled by applying the appropriate volume over a marked area and by spot checking with a wet mil gauge. Integrate **Tyvek® Fluid Applied WB+™** with through wall flashing and window/door flashing by overlapping the flashing with **Tyvek® Fluid Applied WB+™** by a minimum of 2". Upon completion, inspect the membrane to ensure that it is continuous and free of any voids or pinholes.



## DuPont™ Tyvek® Fluid Applied WB+™ Installation Instructions

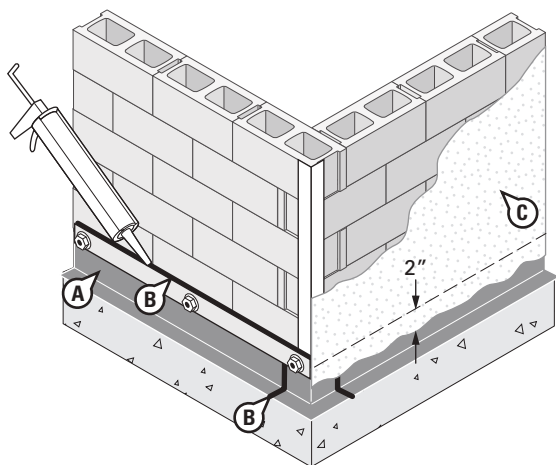
### Continuity

It is important to maintain the continuity of the water-resistive barrier from top to bottom. The entire wall surface shall be covered, including unconditioned spaces. Special attention should be given to all terminations, transitions, projections, and penetrations to ensure a proper drainage plane and continuous water-resistive barrier.

### Foundation

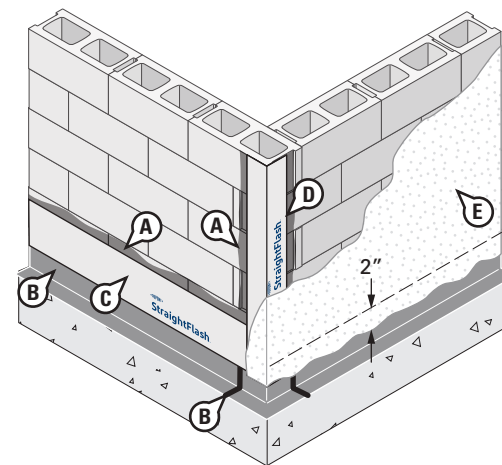
These installation methods and considerations apply to foundation and individual floor line conditions where applicable per architectural construction details.

#### Method 1: Using DuPont™ Tyvek® Fluid Applied Products



- Install through wall flashing in accordance with the through wall flashing manufacturer's installation guidelines.
- Apply **DuPont™ Sealant for Tyvek® Fluid Applied System** or **DuPont™ Tyvek® Fluid Applied Flashing and Joint Compound+** along the top edge of the through wall flashing and/or termination bar and to all seams. Allow the **DuPont™ Tyvek® Fluid Applied Product** to form a tack-free skin before applying **DuPont™ Tyvek® Fluid Applied WB+™** (refer to the [Drying/Curing](#) table for skin and working times).
- Apply **Tyvek® Fluid Applied WB+™** onto wall surface at 25 mils thick. Overlap through wall flashing by a minimum of 2".

#### Method 2: Using DuPont™ StraightFlash™



- Apply a recommended adhesive/primer to wall substrate where self-adhered flashing will be installed.
- Install through wall flashing in accordance with the through wall flashing manufacturer's installation guidelines. If through wall flashing installation guidelines require a sealant along the exposed seam and/or perimeter edges, please refer to the technical bulletin [Chemical Compatibility of Representative Building Sealants and Adhesives/Primers](#) for additional information.
- Install **StraightFlash™** along the top edge of the through wall flashing. Use of **StraightFlash™** can help address chemical compatibility concerns with asphaltic adhesives, sealant, and/or mastics.
- Apply **StraightFlash™** along outside corner.
- Apply **Tyvek® Fluid Applied WB+™** onto wall surface at 25 mils thick. Overlap **StraightFlash™** by a minimum of 2". Ensure application is continuous, free of pinholes and/or voids.

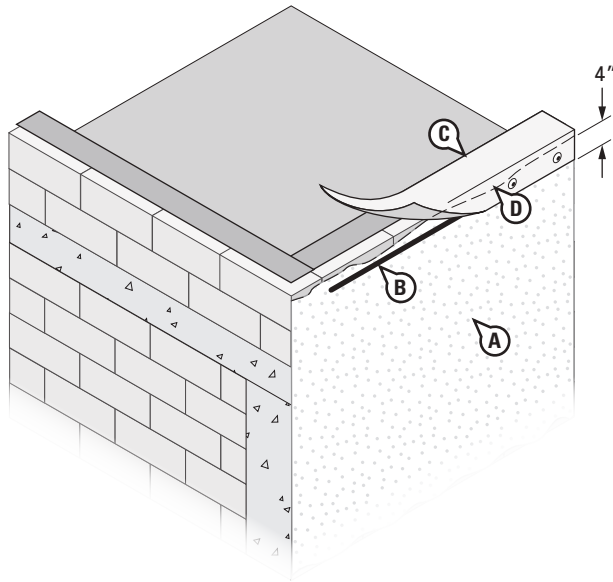
**NOTE:** When spraying, the outer edge of **DuPont Self-Adhered Flashing Products** should be treated with **Tyvek® Fluid Applied Flashing and Joint Compound+** tapered to the wall substrate to help ensure installation is free of pinholes and voids.

## DuPont™ Tyvek® Fluid Applied WB+™ Installation Instructions

### Continuity

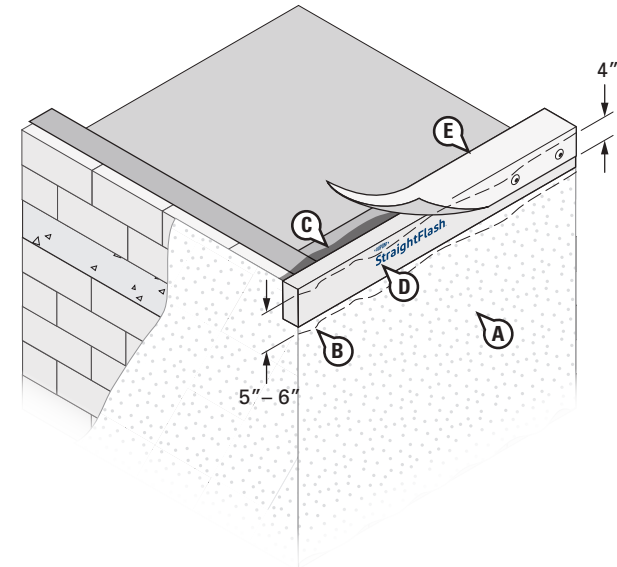
#### Top of Wall

##### Method 1: Using DuPont™ Tyvek® Fluid Applied Products



- Tyvek® Fluid Applied WB+™** should be installed prior to the installation of the parapet flashing membrane.
- Apply a liberal bead of **DuPont™ Sealant for Tyvek® Fluid Applied System** or **Tyvek® Fluid Applied Flashing and Joint Compound+** onto the **Tyvek® Fluid Applied WB+™** at a location that will be approximately 2" up from the bottom edge of the parapet flashing membrane.
- While the sealant bead is still wet, install the parapet/roofing flashing membrane over the top of the parapet, extending a minimum of 4" onto the **Tyvek® Fluid Applied WB+™**.
- Press roofing membrane into sealant and secure using mechanical fasteners installed through the membrane and sealant bead.

##### Method 2: Using DuPont™ StraightFlash™



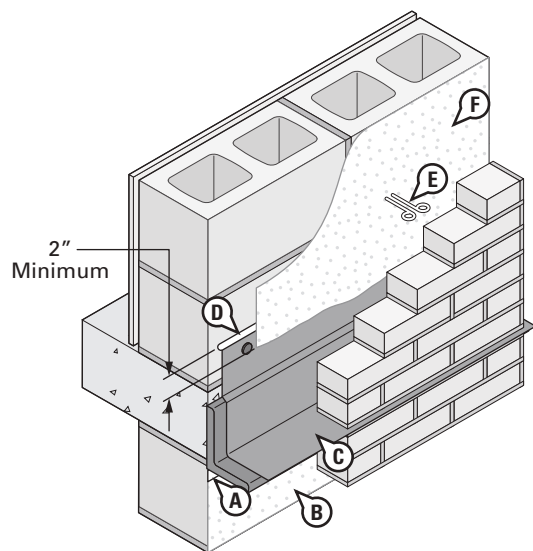
- Apply **Tyvek® Fluid Applied WB+™** prior to the installation of the **StraightFlash™** and parapet/roofing flashing membrane.
- Apply a wet bed of **Tyvek® Fluid Applied Product** onto the cured **Tyvek® Fluid Applied WB+™**. Wet bed application should extend 5"– 6" onto the cured **Tyvek® Fluid Applied WB+™** where **StraightFlash™** will be installed as a transition membrane prior the roofing membrane.
- Apply a recommended adhesive/primer to the top of wall where the **StraightFlash™** will be installed along the horizontal wall plane.
- Prepare and install 9' **StraightFlash™** for installation along the top of wall surfaces. Ensure 3"– 4" of **StraightFlash™** extends onto the primed horizontal wall plane and 5"– 6" onto the face of wall.
- Install parapet/roofing flashing membrane per manufacturer specifications. DuPont recommends extending the roofing membrane 4" onto the **StraightFlash™** transition membrane.

**NOTE:** As soon as practically possible, cap the top of wall system to reduce the likelihood of water intrusion into the wall cavity.

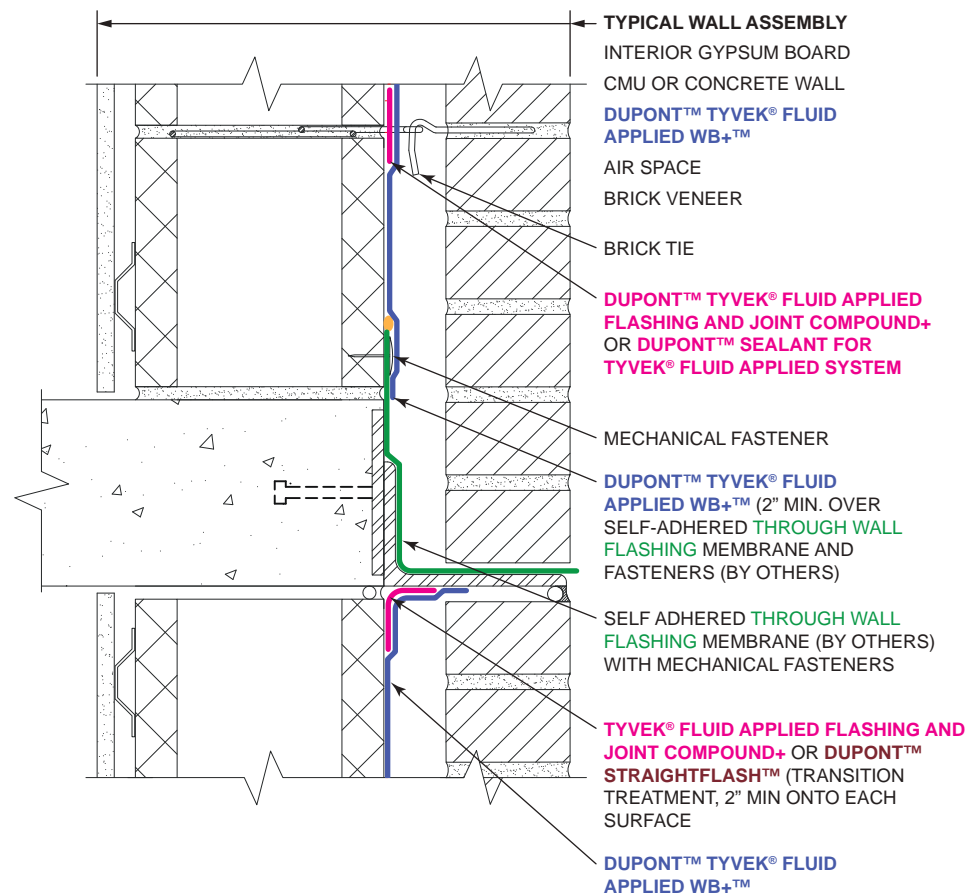
# DuPont™ Tyvek® Fluid Applied WB+™ Installation Instructions

## Continuity

### Shelf Angle



- A. Apply a bead of **DuPont™ Tyvek® Fluid Applied Flashing and Joint Compound+** along the underside of the metal angle and along the vertical wall surface. Use an inside corner trowel to spread material. Finished application should be approximately 60 mils thick and 2" wide on both surfaces. **NOTE:** **DuPont™ StraightFlash™** may be used to treat the interface between the wall and the through wall flashing. If **StraightFlash™** is used, the wall surface must be primed with recommended adhesive/primer prior to installing the **StraightFlash™**. **StraightFlash™** must be installed 2" min onto both surfaces prior to **Tyvek® Fluid Applied WB+™**.
- B. Install **Tyvek® Fluid Applied WB+™** to wall surface below the shelf angle and onto the **Tyvek® Fluid Applied Flashing and Joint Compound+** or **StraightFlash™** (when used).
- C. Install self-adhered through wall flashing membrane (by others) with mechanical fasteners.

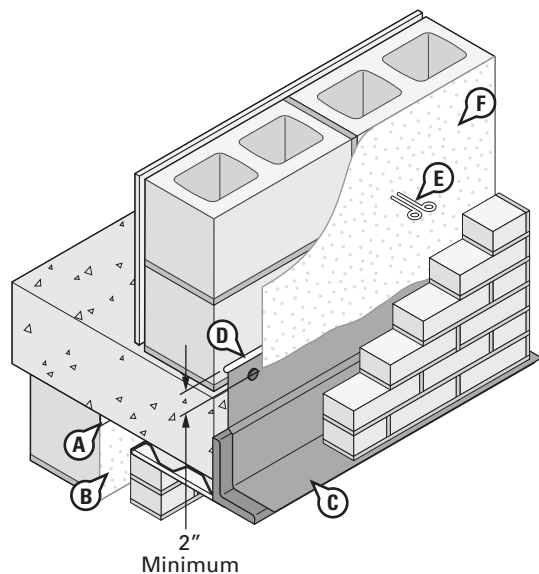


- D. Treat top edge of self-adhered through wall flashing with **Tyvek® Fluid Applied Flashing and Joint Compound+**, **DuPont™ Sealant for Tyvek® Fluid Applied System** or a recommended sealant.
- NOTE:** **StraightFlash™** may be used to pretreat the interface between the wall and the through wall flashing.
- E. Pretreat embedded brick ties with **Tyvek® Fluid Applied Flashing and Joint Compound+**.
- F. Apply **Tyvek® Fluid Applied WB+™**. Ensure membrane is continuous, free of pinholes and/or voids.

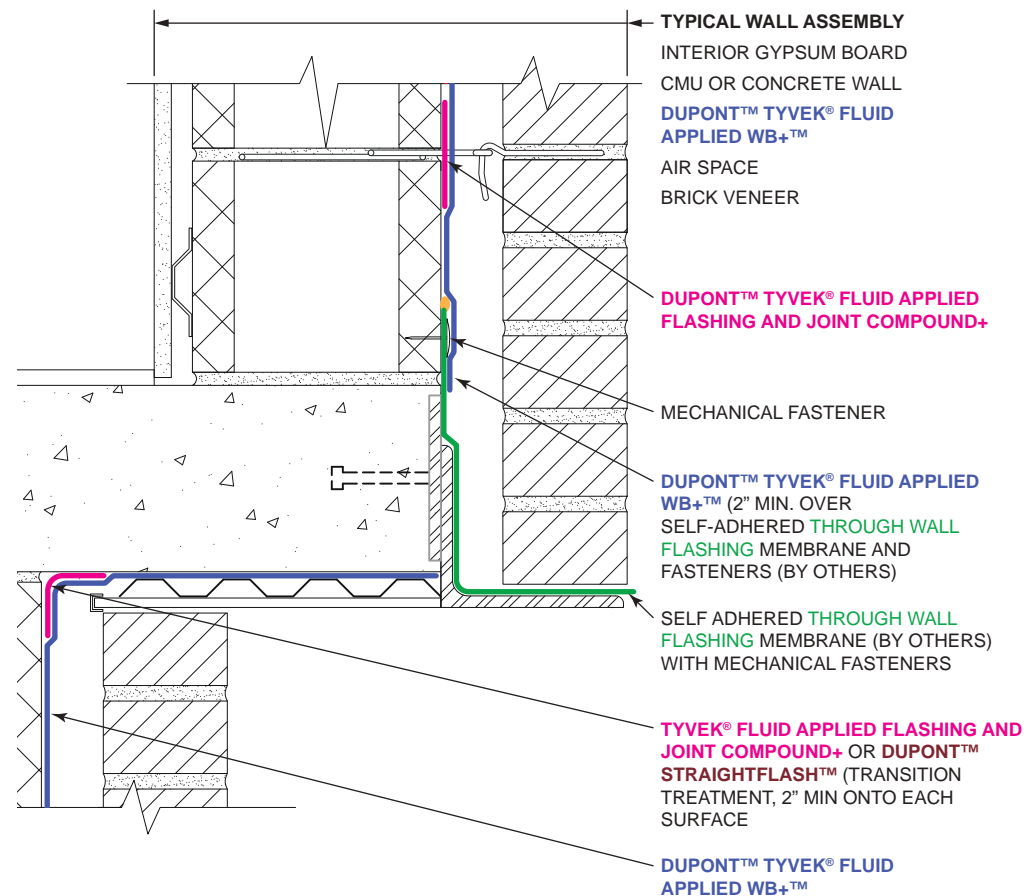
# DuPont™ Tyvek® Fluid Applied WB+™ Installation Instructions

## Continuity

### Cantilevered Floor



- A. Apply a bead of **DuPont™ Tyvek® Fluid Applied Flashing and Joint Compound+** along the underside of the metal angle and along the vertical wall surface. Use an inside corner trowel to spread material. Finished application should be approximately 60 mils thick and 2" min onto each surface. **NOTE: DuPont™ StraightFlash™** may be used to treat the interface between the wall and the through wall flashing. When **StraightFlash™** is used, the wall surface must be primed with recommended adhesive/primer prior to **StraightFlash™**. **StraightFlash™** must be installed 2" min onto both surfaces prior to **Tyvek® Fluid Applied WB+™**.
- B. Install **Tyvek® Fluid Applied WB+™** to wall surface below the shelf angle, over the **Tyvek® Fluid Applied Flashing and Joint Compound+**, and along the underside of the concrete cantilever wall surface.



- C. Install self-adhered through wall flashing membrane (by others) with mechanical fasteners.
- D. Treat top edge of self-adhered through wall flashing with **Tyvek® Fluid Applied Flashing and Joint Compound+**, **DuPont™ Sealant for Tyvek® Fluid Applied System** or recommended.
- NOTE: StraightFlash™** may be used to pretreat the interface between the wall and the through wall flashing.
- E. Pre-treat embedded brick ties with **Tyvek® Fluid Applied Flashing and Joint Compound+**.
- F. Apply **Tyvek® Fluid Applied WB+™**. Ensure membrane is continuous, free of pinholes and/or voids.

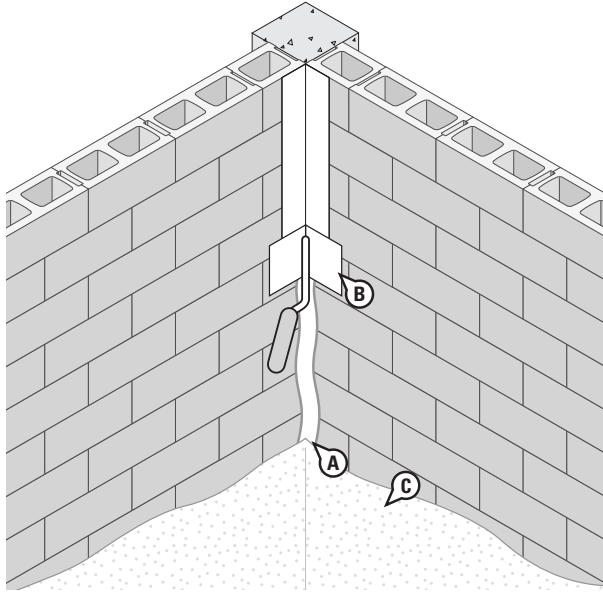
## DuPont™ Tyvek® Fluid Applied WB+™ Installation Instructions

### Continuity

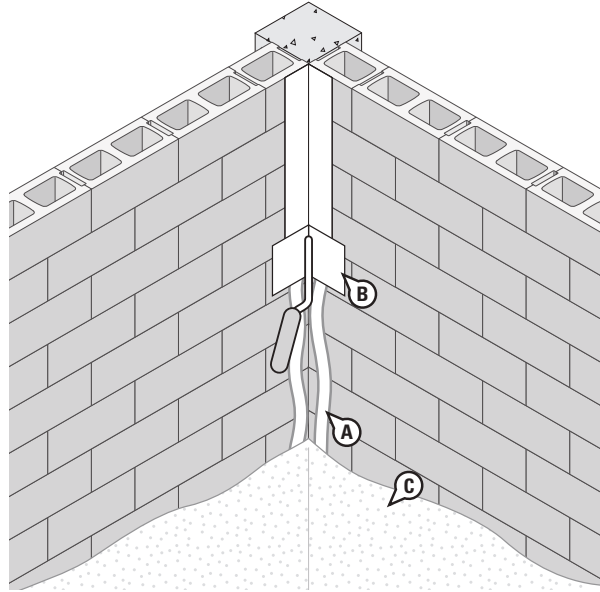
#### Inside Corner

#### Method 1: Using DuPont™ Tyvek® Fluid Applied Flashing and Joint Compound+

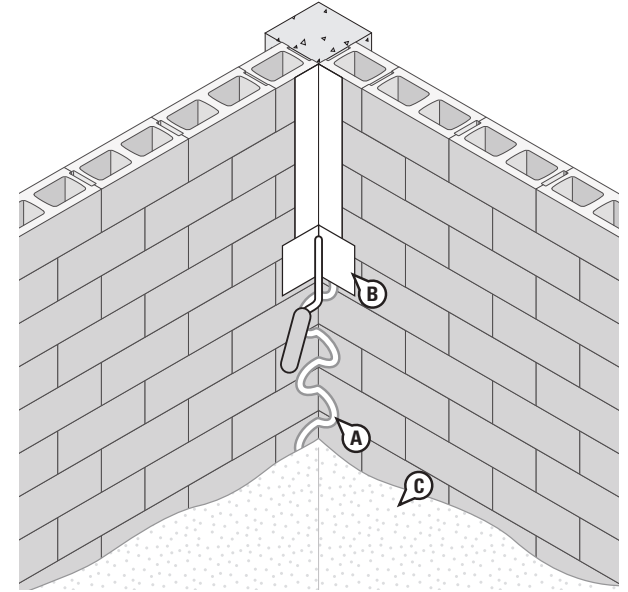
##### Application Option 1: Single Heavy Bead



##### Application Option 2: Two Liberal Beads



##### Application Option 3: S-Shaped Bead



- A. Using one of the application options shown above, apply bead(s) of **Tyvek® Fluid Applied Flashing and Joint Compound+** along the inside corner area.
- B. Use inside corner trowel to create a continuous pinhole-free 25 mils thickness of **Tyvek® Fluid Applied Flashing and Joint Compound+**. Ensure **Tyvek® Fluid Applied Flashing and Joint Compound+** extends 2" onto the adjoining/adjacent wall surfaces.

**NOTE:** **Tyvek® Fluid Applied Flashing and Joint Compound+** can be applied by trowel or brush.

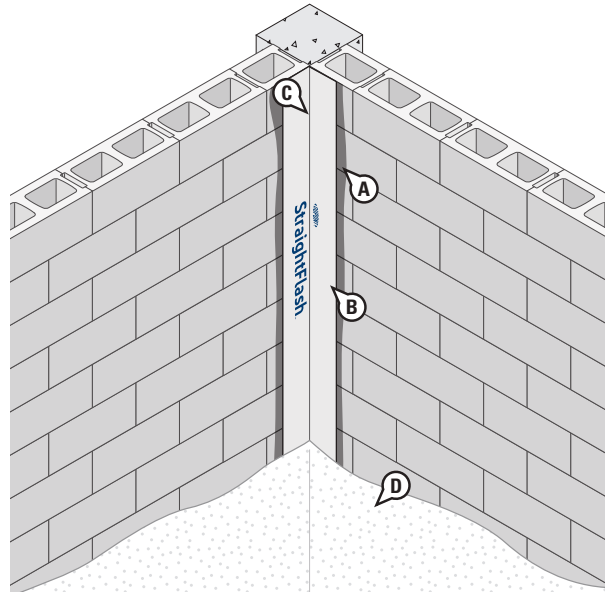
- C. Apply **Tyvek® Fluid Applied WB+™**. Ensure membrane is continuous, free of pinholes and/or voids.

## DuPont™ Tyvek® Fluid Applied WB+™ Installation Instructions

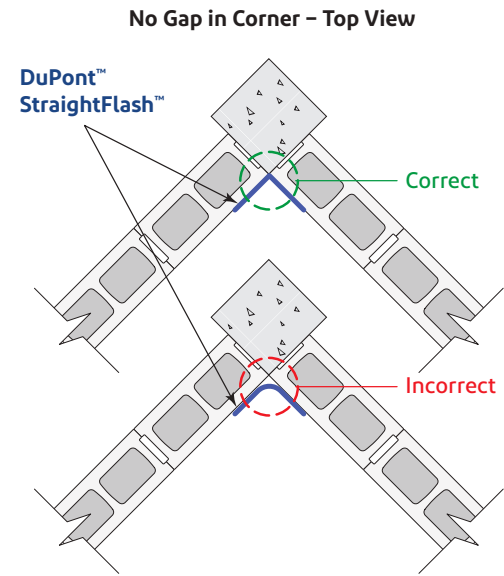
### Continuity

#### Inside Corner

#### Method 2: Using DuPont™ StraightFlash™



- A. Apply recommended adhesive/primer along the inside corner. The primer application must extend onto the adjoining/adjacent wall surfaces to completely cover the area where the **StraightFlash™** will be installed.
- B. Cut the **StraightFlash™** the length of the intended application area.



- C. Fold the **StraightFlash™** in half and crease to make inside corner application easier. Remove the release paper and install the **StraightFlash™** tightly into the inside corner without creating a radius, and fan out to the primed wall surfaces. The **StraightFlash™** should extend a min or 2" onto both wall surfaces.
- D. Apply **Tyvek® Fluid Applied WB+™**. Ensure **Tyvek® Fluid Applied WB+™** is continuous, free of pinholes and/or voids.

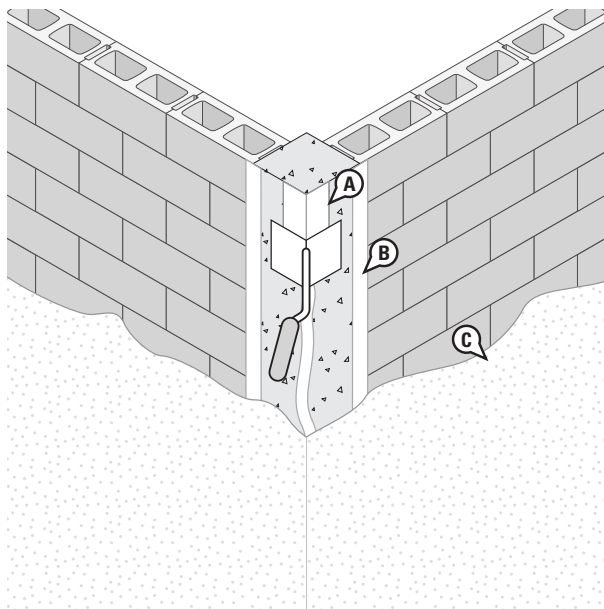
**NOTE:** When spraying, the outer edges of the **StraightFlash™** should be treated with **DuPont™ Tyvek® Fluid Applied Flashing and Joint Compound+** tapered to the wall substrate to help ensure installation is free of pinholes and voids.

## DuPont™ Tyvek® Fluid Applied WB+™ Installation Instructions

### Continuity

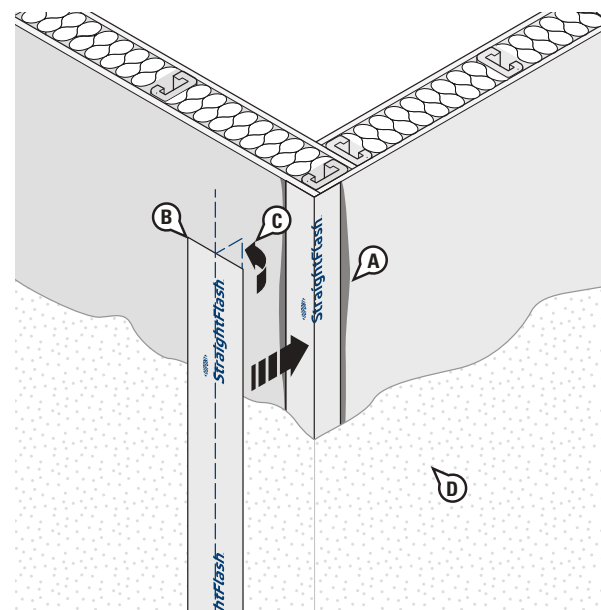
#### Outside Corner

##### Method 1\*: Using DuPont™ Tyvek® Fluid Applied Flashing and Joint Compound+



- Treat outside corner by applying a 25 mil thick coat of **Tyvek® Fluid Applied Flashing and Joint Compound+**, 2" onto each adjoining surface. It is recommended that a fillet bead of **Tyvek® Fluid Applied Flashing and Joint Compound+** be applied to corners to help ensure continuity. Alternately, corners may be treated using **DuPont™ StraightFlash™**. Be sure that the **StraightFlash™** is pressed tightly onto the corners and is fully adhered to primed wall substrate. See the [Special Considerations](#) section of this guide for priming requirements.
- Treat all non-moving transition joints to beams, columns, and dissimilar materials (up to 1/4") by applying a 2" wide, 60 mil thick coat of **Tyvek® Fluid Applied Flashing and Joint Compound+** across the joint. Grouted joints between similar materials do not need to be treated. Transition joints up to 1/2" should be reinforced with fiberglass mesh tape. **StraightFlash™** should be used for transition joints up to 1" following the primer requirements included in the [Special Considerations](#) section of this guide. The **StraightFlash™** should extend a minimum of 2" onto each surface. Refer to the [Joint Treatment Methods](#) section of this guide for additional information about transition joints.
- Apply **Tyvek® Fluid Applied WB+**. Ensure membrane is continuous, free of pinholes and/or voids.

##### Method 2\*: Using DuPont™ StraightFlash™



- Apply a recommended adhesive/primer to wall substrate where **StraightFlash™** will be installed.
- Cut **StraightFlash™** the length of the intended application area.
- Fold the **StraightFlash™** in half and crease to make inside corner application easier. Remove the release paper and install the **StraightFlash™** along the outside corner. **StraightFlash™** should extend a min or 2" onto both wall surfaces.
- Apply **Tyvek® Fluid Applied WB+™** onto wall surface at 25 mils thick. Ensure **Tyvek® Fluid Applied WB+™** is continuous, free of pinholes and/or voids.

**NOTE:** The Method 2 detail shows steel framing and exterior gypsum sheathing with **StraightFlash™** along the outside corner, but **Tyvek® Fluid Applied Flashing and Joint Compound+** can be used.

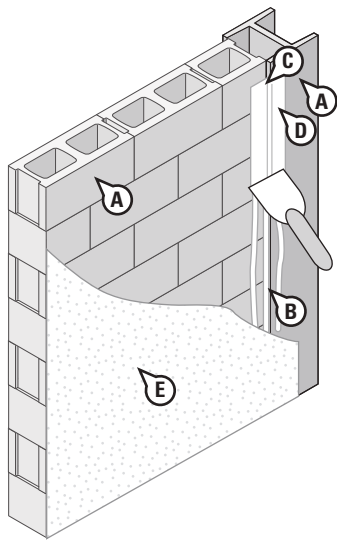
\* For non-moving joints only.

## DuPont™ Tyvek® Fluid Applied WB+™ Installation Instructions

### Continuity

#### Transitions

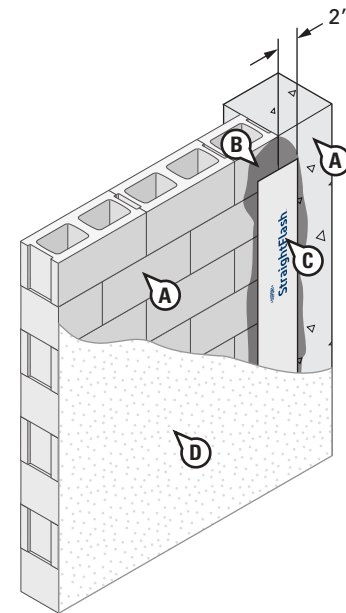
##### Method 1\*: Using DuPont™ Tyvek® Fluid Applied Flashing and Joint Compound+



- Clean both substrates thoroughly. Remove any substance that could negatively affect adhesion.
- Fill seam between adjoining substrates flush with the surface using **Tyvek® Fluid Applied Flashing and Joint Compound+**. Joints up to 1/4" can be treated with **Tyvek® Fluid Applied Flashing and Joint Compound+** only. Joints from 1/4" to 1/2" should first be reinforced with fiberglass mesh tape or filled with mortar.
- Apply a bead of **Tyvek® Fluid Applied Flashing and Joint Compound+** to both adjoining surfaces and spread material across transition seam to a width of approximately 2"– 3" and 60 mils thick. Upon completion, inspect transition treatment for thin spots, gaps or pinholes and repair as necessary.
- Allow the **Tyvek® Fluid Applied Flashing and Joint Compound+** to form a tack-free skin before applying **DuPont™ Tyvek® Fluid Applied WB+™**. Refer to table in the [Drying/Curing](#) section of this installation guide for skin and working times.
- Apply **Tyvek® Fluid Applied WB+™** onto wall surface at 25 mils thick.

\* For non-moving joints only.

##### Method 2\*: Using DuPont™ StraightFlash™



- Clean both substrates thoroughly. Remove any substance that could negatively affect adhesion.
- Prime both substrates using a recommended adhesive/primer.
- Install **StraightFlash™** to the primed substrates, extending a minimum of 2" onto each surface. Press **StraightFlash™** firmly onto both surfaces, working it into any irregularities using a J-roller or firm hand pressure.
- Apply **Tyvek® Fluid Applied WB+™** onto wall surface at 25 mils thick.

**NOTE:** When spraying, the outer edges of **DuPont Self-Adhered Flashing Products** should be treated with **Tyvek® Fluid Applied Flashing and Joint Compound+** tapered to the wall substrate to help ensure installation is free of pinholes and voids.

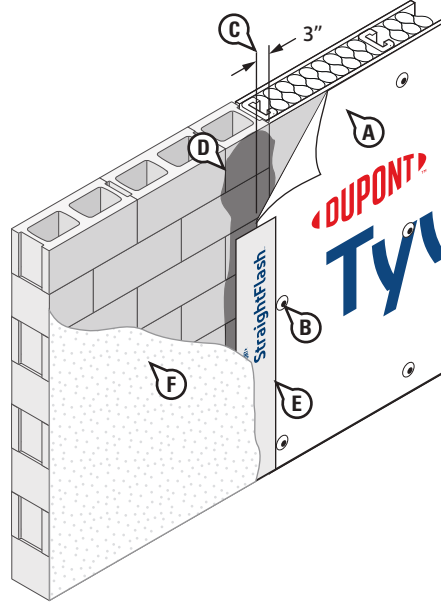
\* For non-moving joints only.



## DuPont™ Tyvek® Fluid Applied WB+™ Installation Instructions

### Continuity

#### Hybrid Wall – Transition to DuPont™ Tyvek® WRBs\*



- A. Install **Tyvek® WRB** per the [DuPont™ Tyvek® Mechanically-Fastened Water-Resistive and Air Barrier \(WRB\) and DuPont Self-Adhered Flashing Products Installation Guidelines For Commercial and High-Performance Buildings of Any Height](#) prior to application of **DuPont™ Tyvek® Fluid Applied WB+™**.
- B. Fasten the **Tyvek® WRB** to the stud adjoining the transition substrate. Avoid placing **DuPont™ Tyvek® Wrap Cap Fasteners**, or recommended fasteners, where flashing will be installed; however, fasteners can be installed over the flashing.
- C. Cut the **Tyvek® WRB** so that approximately 3" will overlap the adjoining substrate.
- D. Fold back the 3" flap of **Tyvek® WRB** and prime adjoining substrate with a recommended adhesive/primer.
- E. Fold the **Tyvek® WRB** back down over the interface and seal it to the primed substrate using **DuPont™ StraightFlash™**, overlapping both surfaces evenly by approximately 2". Apply pressure along entire surface of flashing. Refer to the [Special Considerations](#) section for additional information.

- F. Apply **Tyvek® Fluid Applied WB+™** onto wall surface, overlapping the **StraightFlash™** by a minimum of 2".

**NOTE:** Uncured **DuPont™ Tyvek® Fluid Applied Products** must not come in contact with **Tyvek® WRB** due to potential impact on performance properties. Therefore, use of a spray guard or other physical barrier to avoid overspray onto the **Tyvek® WRB** is recommended.

- G. Upon completion, inspect surface to ensure that **Tyvek® Fluid Applied WB+™** is continuous and free of any voids or pinholes.

**NOTE:** When spraying, the outer edge of **StraightFlash™** at the interface with the **Tyvek® Fluid Applied WB+™** should be treated with **DuPont™ Tyvek® Fluid Applied Flashing and Joint Compound+** tapered to the wall substrate to help ensure installation is free of pinholes and voids.

**NOTE:** This hybrid wall installation sequence is recommended when **Tyvek® WRB** is used with a competitive fluid applied membrane.

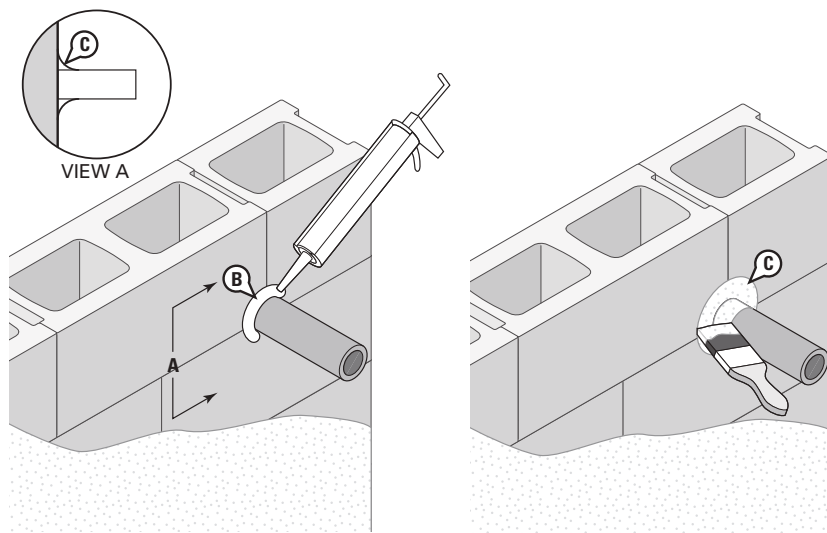
\*The proper installation of DuPont Commercial **Tyvek® WRBs** (i.e. **DuPont™ Tyvek® CommercialWrap®** and **Tyvek® CommercialWrap® D**) with **Tyvek® Fluid Applied WB+™** provides a high-performance installation and offers [NFPA 285 compliant wall assemblies](#).

# DuPont™ Tyvek® Fluid Applied WB+™ Installation Instructions

## Continuity

### Penetrations

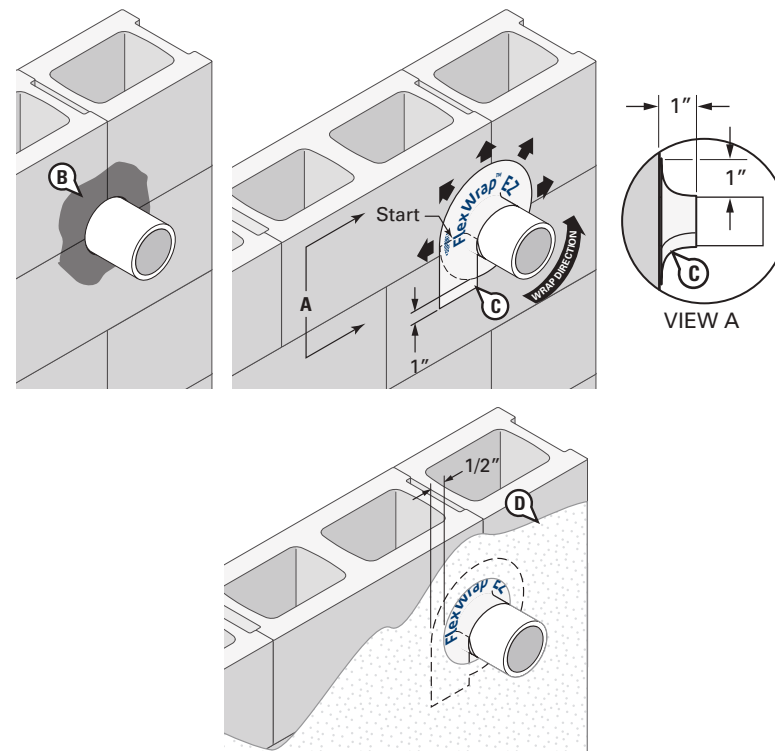
#### Option 1: Using DuPont™ Tyvek® Fluid Applied Flashing and Joint Compound+



- A. Clean both substrates of any substance that could negatively affect adhesion and remove any sharp protrusions.
- B. Seal around the penetration using **Tyvek® Fluid Applied Flashing and Joint Compound+** and inserting a backer rod as necessary. Upon completion, inspect **DuPont™ Tyvek® Fluid Applied Product** for gaps or pinholes and repair as necessary.
- C. Brush **Tyvek® Fluid Applied Flashing and Joint Compound+** 1" minimum onto pipe and minimum 2" onto face of wall. Ensure application is at least 25 mils.

**NOTE:** Allow product to form a tack-free skin before applying **DuPont™ Tyvek® Fluid Applied WB+™** (refer to the [Drying/Curing](#) table for skin and working times).

#### Option 2: Using DuPont™ FlexWrap™ EZ for Non-Flanged Products with Outer Diameter (OD) GREATER Than 2 Inches\*



- A. Clean both substrates of any material that could negatively affect adhesion and remove any sharp protrusions.
- B. Apply a recommended adhesive/primer onto face of the wall, around the opening.
- C. Seal around penetration with **FlexWrap™ EZ**. **FlexWrap™ EZ** should extend onto both surfaces by a minimum of 1", and also overlap the layer below by 1".
- D. Apply **Tyvek® Fluid Applied WB+™**, overlapping the **FlexWrap™ EZ** by 1/2" min.\*\*
- E. \*Use **FlexWrap™ EZ** only when the penetration rough opening is not more than 1/2" larger than the outside diameter/dimension of the non-flanged product.

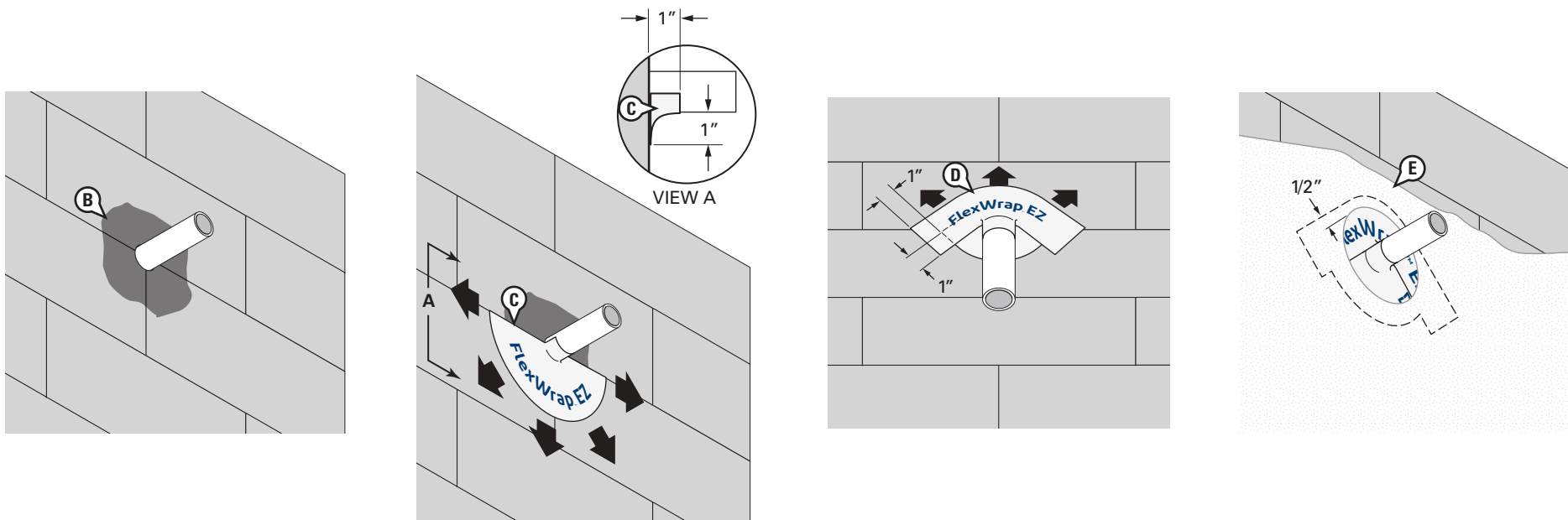
\*\*When spraying, the outer edge of **FlexWrap™ EZ** at the interface with the **Tyvek® Fluid Applied WB+™** should be treated with **Tyvek® Fluid Applied Flashing and Joint Compound+** tapered to the wall substrate to help ensure installation is free of pinholes and voids.

## DuPont™ Tyvek® Fluid Applied WB+™ Installation Instructions

### Continuity

#### Penetrations (continued)

#### Option 3: Using DuPont™ FlexWrap™ EZ for Non-Flanged Products with OD LESS Than 2 Inches\*



A. Clean both substrates of any material that could negatively affect adhesion and remove any sharp protrusions.

B. Apply a recommended adhesive/ primer onto face of the wall, around the opening.

C. Adhere a piece of **FlexWrap™ EZ** the length of 1/2 the circumference of the non-flanged product onto bottom section, extending onto both surfaces by a minimum of 1" and fan out onto primed substrate.

D. Adhere a second piece of **FlexWrap™ EZ** the length of the pipe circumference onto top section extending onto both surfaces by a minimum of 1" and fan out onto face of wall with a minimum of 1" overlap of the edges of **FlexWrap™ EZ** below.

E. Apply **DuPont™ Tyvek® Fluid Applied WB+™**, overlapping the **FlexWrap™ EZ** by 1/2" min.\*\*

\*Use **FlexWrap™ EZ** only when the penetration rough opening is not more than 1/2" larger than the outside diameter/dimension of the non-flanged product.

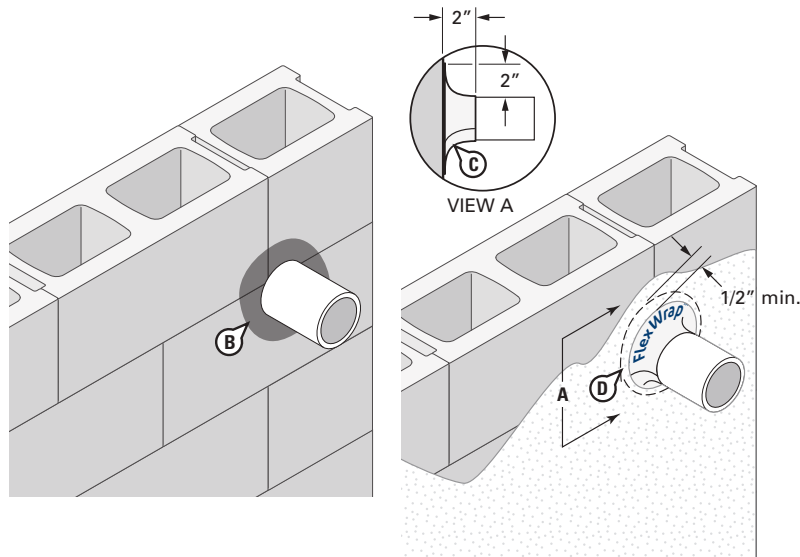
\*\*When spraying, the outer edge of **FlexWrap™ EZ** at the interface with the **DuPont™ Tyvek® Fluid Applied WB+™** should be treated with **DuPont™ Tyvek® Fluid Applied Flashing and Joint Compound+** tapered to the wall substrate to help ensure installation is free of pinholes and voids.

## DuPont™ Tyvek® Fluid Applied WB+™ Installation Instructions

### Continuity

#### Penetrations (continued)

#### Option 4: Using DuPont™ FlexWrap™



- A. Clean both substrates of any material that could negatively affect adhesion and remove any sharp protrusions.
- B. Apply a recommended adhesive/primer onto face of the wall, around the opening.
- C. Seal around penetration with FlexWrap™. FlexWrap™ should extend onto both surfaces by 2".
- D. Apply DuPont™ Tyvek® Fluid Applied WB+™, overlapping the FlexWrap™ by 1/2" min.\*

**NOTE:** When spraying, the outer edge of FlexWrap™ should be treated with DuPont™ Tyvek® Fluid Applied Flashing and Joint Compound+ tapered to the wall substrate to help ensure installation of Tyvek® Fluid Applied WB+™ is free of pinholes and voids.

## Cladding/Facade Fastener Considerations

### Brick Ties, Cladding Supports, and Furring Strips

As a best practice, DuPont recommends that all embedded masonry anchors be treated by brushing or troweling a coat of Tyvek® Fluid Applied WB+™ or Tyvek® Fluid Applied Flashing and Joint Compound+ around the base of the anchor.

When installing mechanically attached supports or furring strips in high performance building envelope designs (building envelope design requirements exceeding ASTM E1677, 65 mph equivalent structural load and 15 mph equivalent wind-driven rain water infiltration testing), fasteners shall be sealed by:

- Embedding support bracket or brick tie base plate into an additional wet bed of DuPont™ Tyvek® Fluid Applied Product
- Applying DuPont™ StraightFlash™ patch over cured Tyvek® Fluid Applied WB+™ at prescribed cladding fastener locations
- Applying a piece of double-sided butyl tape (by others) to the back of support bracket at fastener location
- An alternate DuPont-approved method.

**NOTE:** If using the StraightFlash™ option, the patch may be placed in an additional wet bed of Tyvek® Fluid Applied Product to increase adhesion.

When installing mechanically attached supports or furring strips in building envelope design requirements equivalent to ASTM E1677 conditions or less, no pretreatment is necessary.

### Blind Sealing

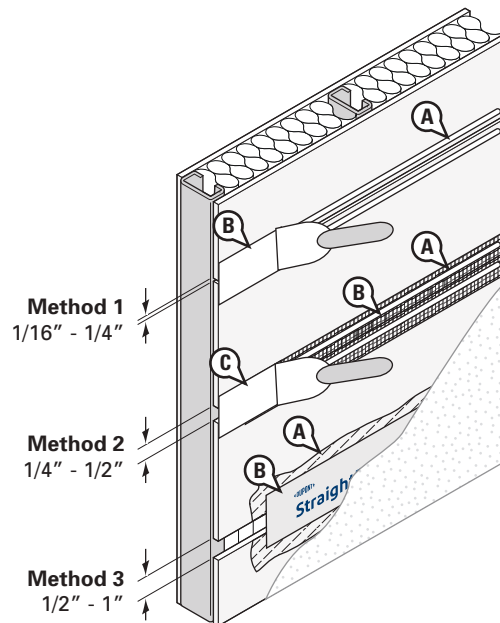
When a fastener penetrates the air and water barrier that cannot be seen (i.e. Tyvek® Fluid Applied WB+™ under exterior insulation). The following fasteners have been tested with Tyvek® Fluid Applied WB+™ and are approved for use as "blind seal fasteners" without additional fastener treatment:

- Heckmann™ Posi-I-Tie® Brick Veneer Anchoring System
- Hohmann & Barnard, Inc. 2-Seal™ Ties
- TRUFAS™ Walls Grip-Deck Tube Seal™ Cap Fasteners
- TRUFAS™ Walls Thermal-Grip® MVA (Masonry Veneer Anchor)

## DuPont™ Tyvek® Fluid Applied WB+™ Installation Instructions

### Joint Treatment Methods\*

When rolling or backrolling, joint treatment is not necessary for gaps 1/16" wide or less. When spraying, backrolling or joint pretreatment is required for gaps 1/16" wide or less. Upon completion of application, wall substrate should be free of pinholes and voids.



#### Method 1 (For Gaps Up to 1/4")

- Apply a bead of **DuPont™ Tyvek® Fluid Applied Flashing and Joint Compound+** above and below the sheathing seam.
- Trowel **Tyvek® Fluid Applied Flashing and Joint Compound+** across the joint to a smooth finish of 15 to 25 mils thick and extend a minimum of 1" on either side of the joint.

#### Optional Method (For Joints Up to 1/4")

Apply a bead **Tyvek® Fluid Applied Flashing and Joint Compound+** to both adjoining surfaces and spread material across transition seam to a width of approximately 2". Make sure the seam is filled. Scrape the **Tyvek® Fluid Applied Flashing and Joint Compound+** flush to the surface.

- Check joint for thin spots and pinholes, repair as necessary.
- Allow the **DuPont™ Tyvek® Fluid Applied Product** to form a tack-free skin before applying **DuPont™ Tyvek® Fluid Applied WB+™**. Refer to table in the [Drying/Curing](#) section of this installation guide for skin and working times.

#### Method 2 (For Gaps Up to 1/2")

- Firmly apply self-adhered reinforcing mesh tape.
- Apply a bead of **Tyvek® Fluid Applied Flashing and Joint Compound+** above and below the sheathing seam.
- Trowel **Tyvek® Fluid Applied Flashing and Joint Compound+** across the mesh tape to a smooth finish of 15 to 25 mils thick and extend a minimum of 1" on either side of the joint.
- Check joint for thin spots and pinholes, repair as necessary.

#### Method 3 (For Gaps Up to 1")

- Apply a recommended adhesive/primer above and below sheathing joint.
- Center **DuPont™ StraightFlash™** over joint and firmly press onto sheathing using a J-roller or firm hand pressure.

**NOTE:** When spraying, the outer edge of **DuPont Self-Adhered Flashing Products** should be treated with **Tyvek® Fluid Applied Flashing and Joint Compound+** tapered to the wall substrate to help ensure installation is free of pinholes and voids.

\* For non-moving joints only.

## DuPont™ Tyvek® Fluid Applied WB+™ Installation Instructions

### Repair

Small repairs can be made by coating the damaged area with a layer of **DuPont™ Tyvek® Fluid Applied Product**. Larger damaged areas may need to be reinforced using fiberglass mesh or by replacing damaged substrate before reapplying **Tyvek® Fluid Applied Product**.

## Equipment Recommendations

**Tyvek® Fluid Applied WB+™** can be applied using a pressure roller or airless sprayer in conjunction with a variety of pumps, such as the Graco® Mark V, GMAX II 7900, IronMan 300E, IronMan 500G, GH 733, GH 833, GH 933, DutyMax GH675DI, or equivalent. All manufacturer limitations should be followed.

### Roller Applied

Apply **Tyvek® Fluid Applied WB+™** using a pressure roller with a 1/2" – 3/4" nap roller cover. **NOTE:** Some roller covers may have loose fibers at the start of use that may need to be worked off to limit and/or minimize loose fibers on the wall substrate.

Foam-type rollers and shorter naps **should not be used**, as they tend to slide across the wall substrate.

### Spray Applied

**Tyvek® Fluid Applied WB+™** can be spray applied using electric or gas hydraulic airless sprayers. Always ensure water is not present in the spray system prior to the introduction of **Tyvek® Fluid Applied WB+™**. A pre-flush of the sprayer with 100% mineral spirits is recommended.

A Graco® Silver Plus spray gun or a heavy duty texture gun along with Graco® RAC 5 or XHD-RAC tips are recommended for spray operations at temperatures above 70°F (21°C). The Graco® G-40 air assisted spray gun (with 90 psi at the spray tip) can be used to improve atomization when the **Tyvek® Fluid Applied WB+™** temperature is between 65°F (18°C) and 70°F (21°C).

All internal filters should be removed from the pump, spray gun, and pressure roller assembly, before applying product. The pump intake screen should be installed when applying product. The condition of the pump, as well as the size, length, and condition of the hoses used can affect the systems performance.

The diameter of some hose sections may need to be increased, depending on the pumping distance desired. Refer to pump manufacturer's representative and guidelines regarding the operation and maintenance of the pump system. Operation of pump equipment can be hazardous. All manufacturer limitations, warnings, and safety recommendations should be followed.

When spraying **Tyvek® Fluid Applied WB+** at low temperatures, the optimum hose configuration is 50' of 1/2" diameter hose in combination with a 50' section of 3/8" diameter hose. The maximum recommended hose length for spray operations is 100 ft. If site conditions require greater hose lengths, pressure rolling is recommended. **NOTE:** If using a whip for hose mobility, the diameter of the whip should be the same as the hose. For example, a 3/8" diameter whip should be used when connecting to a 3/8" diameter hose.

Please refer to the installation bulletin [Additional Considerations When Spraying DuPont™ Tyvek® Fluid Applied WB+™](#) for additional guidance when applying **Tyvek® Fluid Applied WB+™** with an airless sprayer.

## Installation Methods for DuPont Flashing Products

### Key Installation Requirements for Drainable Window / Door Installation

#### When flashing windows or doors, the following principles must be followed:

- An integral flanged window/door is defined as a window/door unit with a nailing fin or flange that is continuous around the perimeter of the window and that is a direct extrusion of the window frame.
- A non-integral flanged window/door is defined as a window/door unit with a nailing fin or flange that is **not continuous** around the perimeter of the window/door or the fin/flange is not a direct extrusion of the frame (e.g. field-applied flanges).
- When installed properly, **DuPont™ StraightFlash™** and **DuPont™ FlexWrap™** provide nail sealability at window/door openings to help protect critical window-wall interfaces. Metal sill pan flashing may be used, but must not replace flexible sill flashing that provides nail sealability.
- **DuPont Self-Adhered Flashing Products** comply with AAMA 711, *Voluntary Specification for Self Adhering Flashing Used for Installation of Exterior Wall Fenestration Products*, which has a modified version of ASTM D1970 and it is more representative for vertical wall applications.
- **DuPont™ Tyvek® Fluid Applied Flashing and Joint Compound+** complies with AAMA 714, *Voluntary Specification for Liquid Applied Flashing Used to Create a Water-Resistive Seal around Exterior Wall Openings in Buildings*.
- Ensure that sill flashing does not slope to the interior. An exterior slope is recommended, but not required.
- Direct water onto an acceptable air and water barrier drainage plane with an unobstructed path to the exterior of the wall. Provide a drainage path for any water intrusion through the window/door attachment system that collects at the sill.
- **DuPont Flashing Products** must be installed as captured within this guide to allow **DuPont™ Tyvek® Fluid Applied WB+™** to be properly integrated to ensure the continuity of the air and water barrier system. **DuPont Flashing Products** must be applied with a minimum 2" extension onto the face of wall substrate.
- DuPont requires **FlexWrap™**, **FlexWrap™ EZ**, **StraightFlash™**, and **Tyvek® Fluid Applied Flashing and Joint Compound+** be covered within nine months (270 days) of installation.
- Properly prepare all surfaces (remove dirt, dust, or moisture, etc.) per manufacturer's recommendations.
- Barrier installations (full perimeter seal on exterior) are acceptable only in the

following instances:

- Slab on grade doors, store front windows, or other systems with built-in drainage mechanisms that have potential for exposure to standing water
- Surface barrier wall systems with non-water sensitive framing material (i.e., CMU walls)
- Very low wind / rain exposure regions (southwest / desert) that follow AAMA 2400 installation guideline
- Ensure that window / door and flashing system design takes into account common factors that will impact performance, such as:
  - Climate considerations: Rainfall, Wind, Temperature (hot / cold cycles), Humidity
  - Building design: Window / Wall Design (overhangs, recessed openings, bump-outs), Wall Assembly (steel frame or masonry), Window System (non-flanged, storefront, curtain-wall, wood, or vinyl), Method of Attachment, New Construction or Replacement Window drainage path
  - UV exposure prior to the construction of the exterior facade
  - Compliance with fire resistance code requirements. For more information about NFPA 285 compliant wall assemblies utilizing **Tyvek® Fluid Applied WB+™** and **DuPont™ Tyvek® Mechanically-Fastened WRBs** visit [building.dupont.com](http://building.dupont.com).
- Field testing the window / door and wall installation as a complete system is a recommended best practice.
- Use of trained installers is highly recommended. DuPont offers a DuPont™ Tyvek® Fluid Applied Certified Installer program. Please refer to the DuPont Sales Representative responsible for **DuPont™ Tyvek® Fluid Applied Products** in the project area for additional information.

#### Sealants and Adhesives/Primers

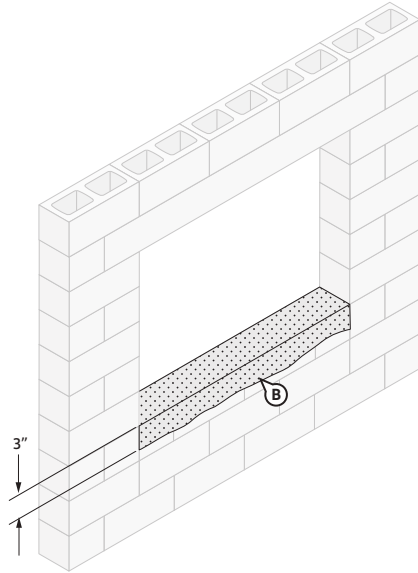
Review the manufacturers' literature or label to confirm that the product(s) used have the chemical and adhesive properties necessary for use with **Tyvek® Fluid Applied Products**, **DuPont Self-Adhered Flashing Products**, and **Tyvek® WRBs**. Ensure the sealant materials meet the installation temperature requirements of the sealant manufacturer. Refer to [Chemical Compatibility of Representative Building Sealants and Adhesives/Primers](#) for more information about chemical compatibility.

## Installation Methods for DuPont Flashing Products

### Storefront Window

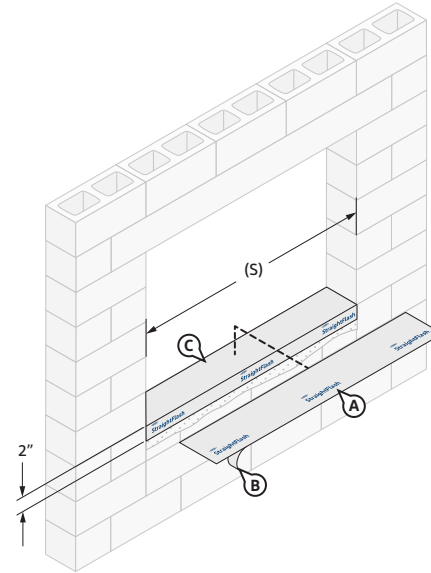
#### Method 1: Using DuPont™ Tyvek® Fluid Applied Flashing and Joint Compound+ and DuPont™ StraightFlash™

The steps below for Methods 1, 2, and 3 can be used for the following conditions: Storefront Windows on Knee-Walls Storefront Windows on Slab\*, Non-Flanged Windows and Non-Flanged Doors.



#### STEP 1

- A. Clean substrate of any material that could negatively affect adhesion as well as any sharp protrusions.
- B. Apply a recommended adhesive/primer to wall substrate area where sill flashing will be installed



#### STEP 2

- A. Cut 9" **StraightFlash™** the width of rough opening sill (S). Ensure a minimum of 1" adhesion **BEYOND** where the back of the window frame will be located, and 2"– 3" adhesion onto the face of the wall.
- B. Remove the release paper and position **StraightFlash™** onto the sill and 2" minimum onto the face of the wall.
- C. Apply pressure along the entire surface of **StraightFlash™** for a good bond using firm hand pressure or J-roller (or alternate tool without sharp edges such as a plastic carpet tuck tool) to assist with application of uniform pressure.

**NOTE:** 9" **DuPont™ FlexWrap™** may be used to protect the sill and sill/jamb corners. If used, **FlexWrap™** installation along the sill should be aligned with [STEPS 2 and 3](#) of Method 2.

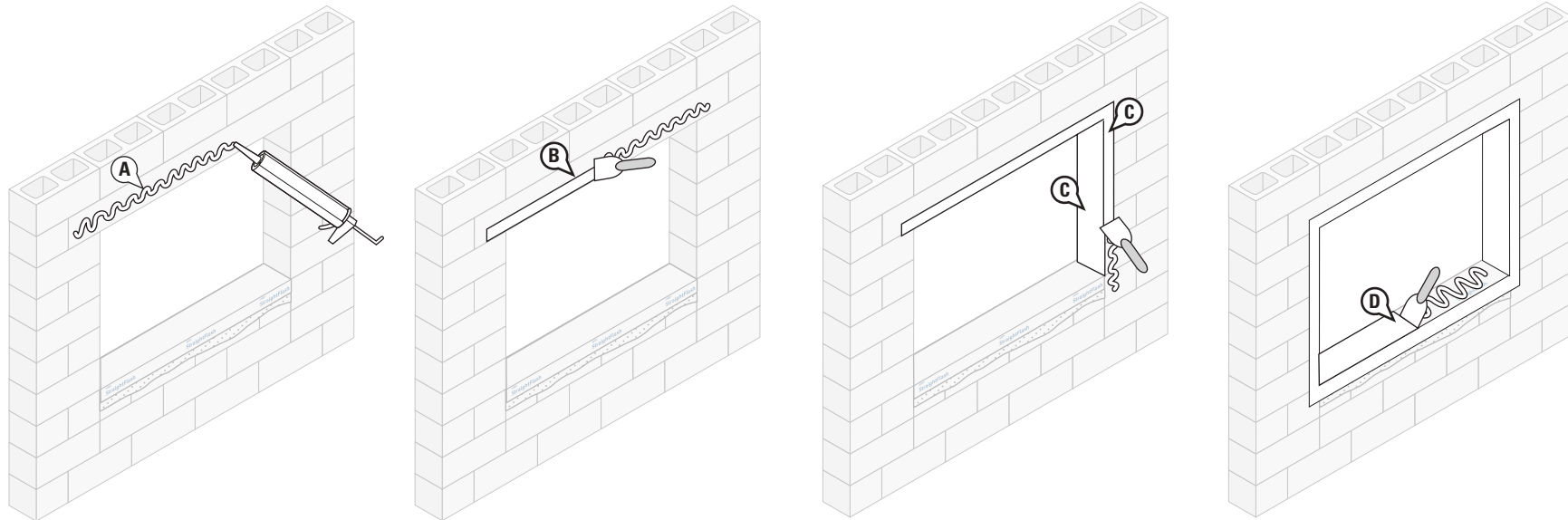
**NOTE:** Storefront Windows on Slab are not required to use **StraightFlash™**, **FlexWrap™** and/or **Tyvek® Fluid Applied Flashing and Joint Compound+** along the sill if a receiving unit or flashing components are required as part of storefront window manufacturer specifications.



## Installation Methods for DuPont Flashing Products

### Storefront Window

#### Method 1: Using DuPont™ Tyvek® Fluid Applied Flashing and Joint Compound+ and DuPont™ StraightFlash™



### STEP 3

- A. Starting at the window head, apply a bead of **Tyvek® Fluid Applied Flashing and Joint Compound+** onto the inside surface of the rough opening and onto the face of the wall.
- B. Use a trowel or brush to smooth out flashing to a thickness of approximately 25 mils. The flashing should cover the inside of the rough opening and extend a minimum of 2" onto the face of the wall.

- C. Continue the application process outlined above for the jambs.
- D. The **Tyvek® Fluid Applied Flashing and Joint Compound+** should be applied on top of the **StraightFlash™** on the sill and at least 2" min on the face of the wall substrate. Be sure all inside corners are filled and integrated with the **StraightFlash™**. A corner trowel may be used to smooth outside corners.

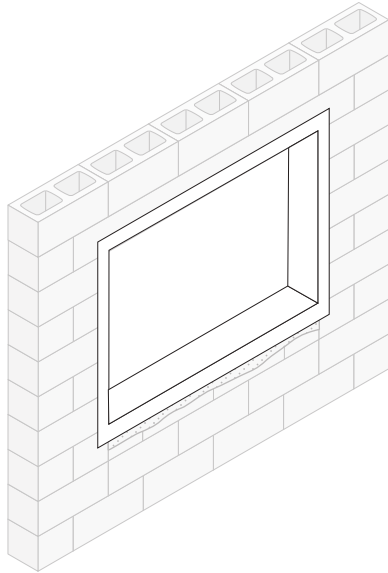
**NOTE:** **Tyvek® Fluid Applied Flashing and Joint Compound+** is not required along the entire sill when **StraightFlash™** is installed as previously captured, provided **Tyvek® Fluid Applied Flashing and Joint Compound+** is applied a minimum 4"– 6" along the sill from the jamb corner.

**NOTE:** If **DuPont™ FlexWrap™** is used along the sill and a minimum of 6" up the jambs, **Tyvek® Fluid Applied Flashing and Joint Compound+** is not required along the sill to jamb interface but must be applied to head and jamb areas.

## Installation Methods for DuPont Flashing Products

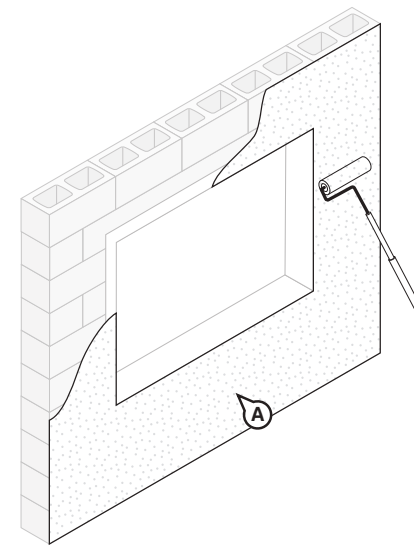
### Storefront Window

#### Method 1: Using DuPont™ Tyvek® Fluid Applied Flashing and Joint Compound+ and DuPont™ StraightFlash™



#### STEP 4

Upon completion, inspect surface, including all corners, to ensure that **Tyvek® Fluid Applied Flashing and Joint Compound+** is continuous and **free of any voids or pinholes**. **DuPont™ Tyvek® Fluid Applied WB+™** may be applied over and integrated with **Tyvek® Fluid Applied Flashing and Joint Compound+** once a tack-free skin has formed. Skin time is 1-2 hrs at 70°F (20°C), 50% RH.



#### STEP 5

A. Install **Tyvek® Fluid Applied WB+™** up to the edge of the rough opening, overlapping the **Tyvek® Fluid Applied Flashing and Joint Compound+**.

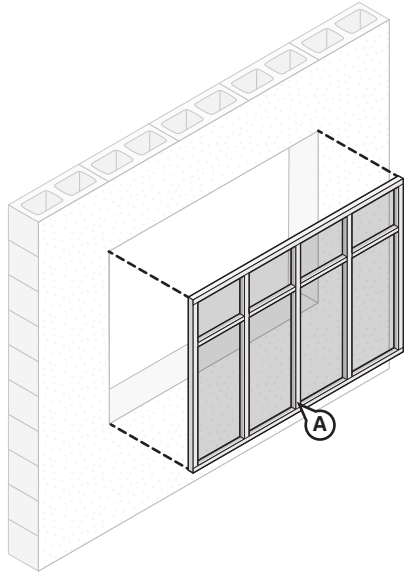
**NOTE:** When spraying, the outer edge of **DuPont Self-Adhered Flashing Product** should be treated with **Tyvek® Fluid Applied Flashing and Joint Compound+** or **Tyvek® Fluid Applied WB+™** tapered to the wall substrate to help ensure installation is free of pinholes and voids.

Refer to the [DuPont™ Tyvek® Fluid Applied WB+™ Installation Instructions](#) section of this document. Exterior insulation and/or cladding may be installed once the membrane has cured sufficiently to resist damage during installation. Skin time is 1-2 hours, and 25 mil is workable in 24 hours at 70°F (20°C), 50% RH.

## Installation Methods for DuPont Flashing Products

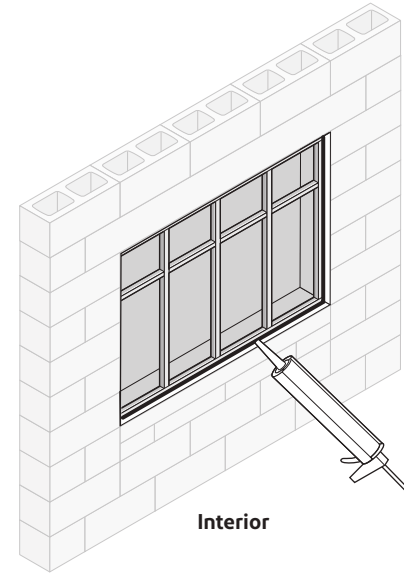
### Storefront Window

Method 1: Using DuPont™ Tyvek® Fluid Applied Flashing and Joint Compound+ and DuPont™ StraightFlash™



#### STEP 6

A. Install window per manufacturer's installation instructions.



#### STEP 7

##### Create Interior Perimeter Seal

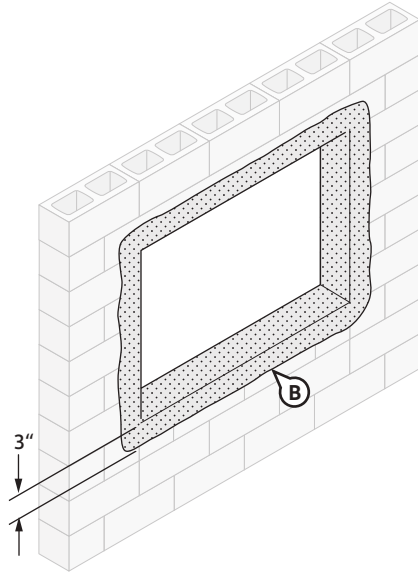
Create a continuous perimeter seal using backer rod and **DuPont™ Sealant for Tyvek® Fluid Applied System**, recommended sealant, or **Great Stuff Pro™ Window and Door Polyurethane Foam Sealant** on window interior to resist air and water infiltration. When using **Great Stuff Pro™ Window and Door Polyurethane Foam Sealant** in perimeter openings less than 1/2", apply using the plastic extension tip for the **Great Stuff Pro™ Dispenser Gun** during installation.

**NOTE:** For high performance installations exceeding ASTM E1677 wind loading pressures (10.8 psf, 65 mph equivalent structural load) and ASTM E331 water infiltration resistance of 6.24 psf, a recommended sealant **must be** installed over the cured foam when using **Great Stuff Pro™ Window and Door Polyurethane Foam Sealant** or other recommended foam. Sealant should be installed over the foam between the window frame and rough opening around the entire interior perimeter. If **Great Stuff Pro™ Window and Door Polyurethane Foam Sealant** or other recommended foam extends beyond the window frame, shave the excess cured foam flush with the window frame before applying sealant. Avoid damaging the **DuPont™ Tyvek® Fluid Applied Flashing and Joint Compound+** and/or **DuPont Self-Adhered Flashing Products**.

**NOTE:** Refer to the *Storefront Window* CAD details at [building.dupont.com](http://building.dupont.com) for more detailed information.

## Installation Methods for DuPont Flashing Products Storefront Window

### Method 2: Self-Adhered Flashing Using DuPont™ FlexWrap™ and DuPont™ StraightFlash™



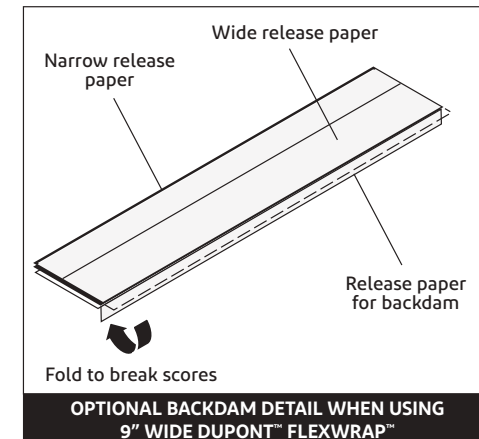
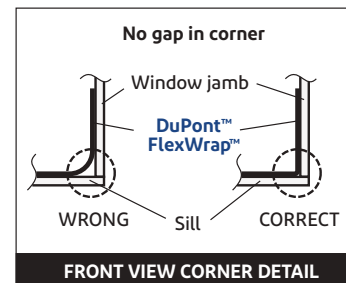
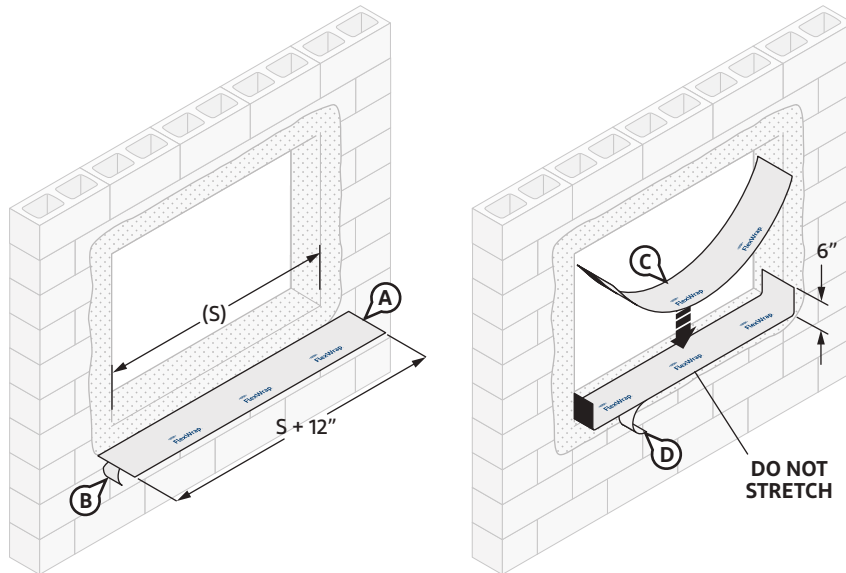
#### STEP 1

- A. Clean substrate of any material that could negatively affect adhesion, as well as any sharp protrusions.
- B. Apply a recommended adhesive/primer approximately 3" onto the exterior face of the wall and onto the inside perimeter of the rough opening for masonry and concrete surfaces.

## Installation Methods for DuPont Flashing Products

### Storefront Window

#### Method 2: Self-Adhered Flashing Using DuPont™ FlexWrap™ and DuPont™ StraightFlash™



## STEP 2

- Cut **FlexWrap™** at least 12" **LONGER** than the width of rough opening sill (S). Use roll widths sufficient to achieve a minimum of 1" adhesion **BEYOND** where the back of the window frame will be located, ensuring 2"– 3" adhesion onto the face of the wall.
- Remove wide piece of release paper.
- Position **FlexWrap™** along the sill by aligning the inside of the narrow release paper with the face of the wall to ensure 2"– 3" of the **FlexWrap™** will be adhered to the face of the wall with a minimum of 6" up each jamb. Adhere into rough opening.

**Optional Back Dam:** Fold 9" **FlexWrap™** to break perforation. Remove center piece of release paper. Cover horizontal sill to accommodate back dam as appropriate, and adhere into rough opening along sill and up jambs (min 6" on each side). Leave 1" release paper on **FlexWrap™** inside rough opening to finish back dam after window installation.

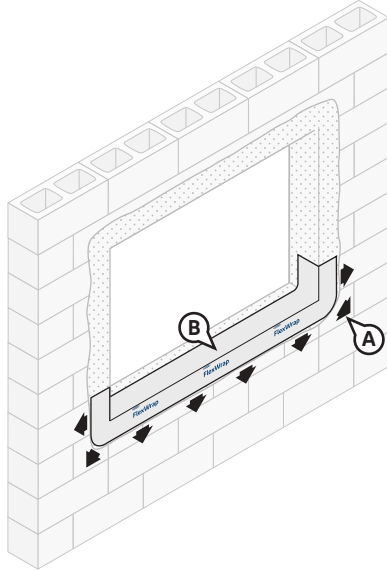
**NOTE:** Use of the optional back dam **must not** interfere with the installation of a continuous interior perimeter seal.

- Remove the remaining release paper.

**NOTE:** DuPont™ Tyvek® Commercial Certified Installers may install a 3-piece head (and sill) detail for window openings less than 6 ft wide. Installers who **are not** DuPont™ Tyvek® Commercial Certified Installers should refer to the [Special Considerations](#) section for more information regarding the 3-piece head/sill detail. Contact your local DuPont Building Envelope Specialist for more information about the Certified Installer program.

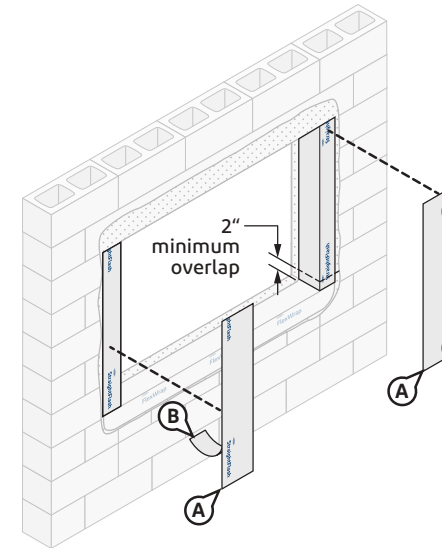
## Installation Methods for DuPont Flashing Products Storefront Window

### Method 2: Self-Adhered Flashing Using DuPont™ FlexWrap™ and DuPont™ StraightFlash™



#### STEP 3

- A. Fan out the **FlexWrap™** at corners and adhere onto face of wall. Continue adhering onto face of wall along sill.
- B. Firmly press sill flashing to ensure full adhesion on all surfaces. Eliminate wrinkles and bubbles by smoothing surface and repositioning as necessary.



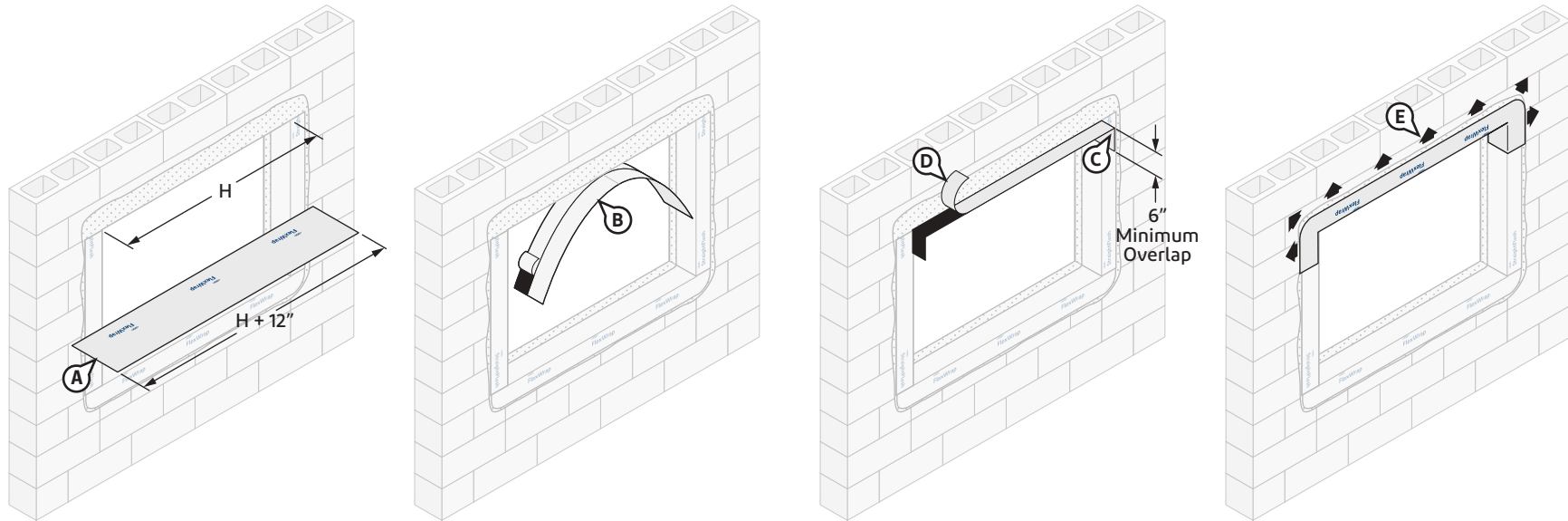
#### STEP 4

- A. Cut two pieces of 9" **StraightFlash™** to the length of the jamb. Jamb flashing should overlap the sill flashing by at least 2" and be overlapped by future head flashing by at least 2".
- B. Remove release paper and position **StraightFlash™** so that 2"–3" extend onto the face of the wall. Wrap jamb flashing into the rough opening at each jamb and onto face of wall. Apply pressure along entire surface of flashing for a good bond using firm hand pressure, J-roller, or alternate tool without sharp edges (such as a plastic carpet tuck tool) to assist with application of uniform pressure during installation of **DuPont Self-Adhered Flashing Products**. Eliminate wrinkles and bubbles by smoothing surface.

## Installation Methods for DuPont Flashing Products

### Storefront Window

#### Method 2: Self-Adhered Flashing Using DuPont™ FlexWrap™ and DuPont™ StraightFlash™



#### STEP 5

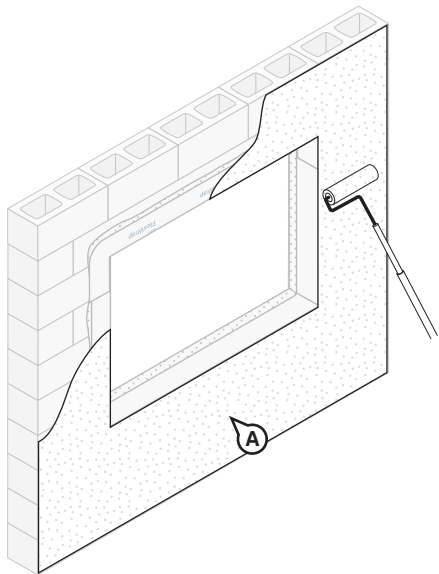
- A. Cut **FlexWrap™** at least 12" **LONGER** than the width of rough opening head (H). Use roll widths sufficient to achieve a minimum of 1" adhesion **BEYOND** where the back of the window frame will be located, ensuring 2"– 3" adhesion onto the face of the wall.
- B. Fold the **FlexWrap™** in half lengthwise to create a slight crease at the center. Remove the wide piece of release paper on one side of the fold. Align the inside edge of the narrow release paper with the face of the wall to ensure 2"– 3" of the **FlexWrap™** will be adhered to the face of the wall.
- C. Starting at the crease, adhere the exposed butyl adhesive to the center of the head and a minimum of 6" down the jamb. Remove the remaining release paper and continue process of adhering **FlexWrap™** along the head of the rough opening and 6" down the opposite jamb.
- D. Remove remaining release paper.
- E. Fan out the **FlexWrap™** at corners and adhere onto the face of the wall along the head.

**NOTE:** DuPont™ Tyvek® Commercial Certified Installers may install a 3-piece head (and sill) detail for window openings less than 6 ft wide. Installers who **are not** DuPont™ Tyvek® Commercial Certified Installers should refer to the [Special Considerations](#) section for more information regarding the 3-piece head/sill detail. Contact your local DuPont Building Envelope Specialist for more information about the Certified Installer program.

## Installation Methods for DuPont Flashing Products

### Storefront Window

#### Method 2: Self-Adhered Flashing Using DuPont™ FlexWrap™ and DuPont™ StraightFlash™

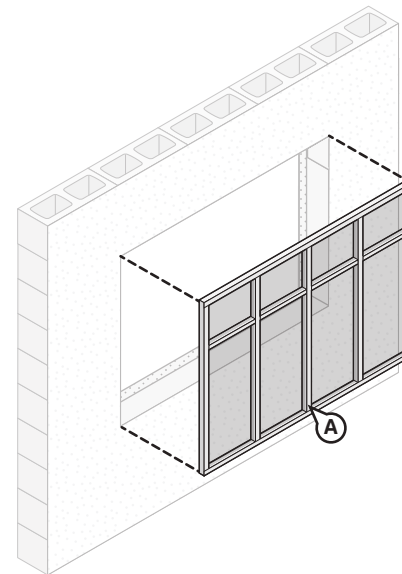


#### STEP 6

- A. Install **DuPont™ Tyvek® Fluid Applied WB+™** onto wall at 25 mils thick. Upon completion, inspect all surfaces to ensure that they are covered and **free of any voids or pinholes**.

**NOTE:** When spraying, the outer edge of **DuPont Self-Adhered Flashing Product** should be pretreated with a **DuPont™ Tyvek® Fluid Applied Product**, and tapered to wall substrate to help ensure installation is free of pinholes and voids.

Refer to the [DuPont™ Tyvek® Fluid Applied WB+™ Installation Instructions](#) section of this document. Exterior insulation and/or cladding may be installed once the membrane has cured sufficiently to resist damage during installation. Skin time is 1-2 hours, and 25 mil is workable in 24 hours at 70°F (20°C), 50% RH.



#### STEP 7

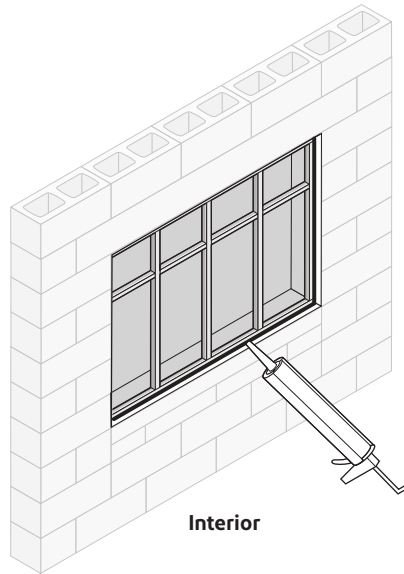
- A. Install window per manufacturer's installation instructions.



## Installation Methods for DuPont Flashing Products

### Storefront Window

#### Method 2: Self-Adhered Flashing Using DuPont™ FlexWrap™ and DuPont™ StraightFlash™



## STEP 8

### Create Interior Perimeter Seal

Create a continuous perimeter seal using backer rod and **DuPont™ Sealant for Tyvek® Fluid Applied System**, recommended sealant, or **Great Stuff Pro™ Window and Door Polyurethane Foam Sealant** on window interior to resist air and water infiltration.

When using **Great Stuff Pro™ Window and Door Polyurethane Foam Sealant** in perimeter openings less than 1/2", apply using the plastic extension tip for the **Great Stuff Pro™ Dispenser Gun** during installation.

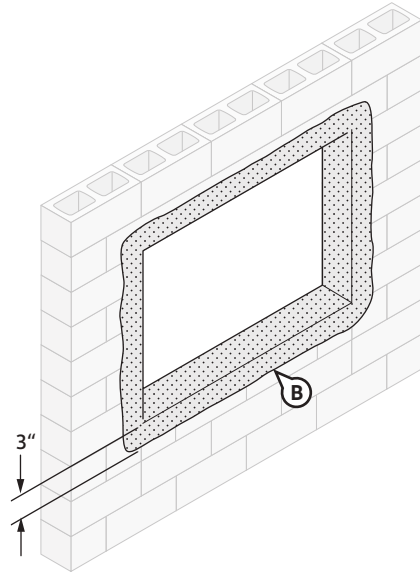
**NOTE:** For high performance installations exceeding ASTM E1677 wind loading pressures (10.8 psf, 65 mph equivalent structural load) and ASTM E331 water infiltration resistance of 6.24 psf, a recommended sealant **must be** installed over the cured foam when using **Great Stuff Pro™ Window and Door Polyurethane Foam Sealant** or other recommended foam. Sealant should be installed over the foam between the window frame and rough opening around the entire interior perimeter. If **Great Stuff Pro™ Window and Door Polyurethane Foam Sealant** or other recommended foam extends beyond the window frame, shave the excess cured foam flush with the window frame before applying sealant. Avoid damaging the **DuPont™ Tyvek® Fluid Applied Flashing and Joint Compound+** and/or **DuPont Self-Adhered Flashing Products**.

**NOTE:** Refer to the Storefront Window CAD details at [building.dupont.com](http://building.dupont.com) for more detailed information.

## Installation Methods for DuPont Flashing Products

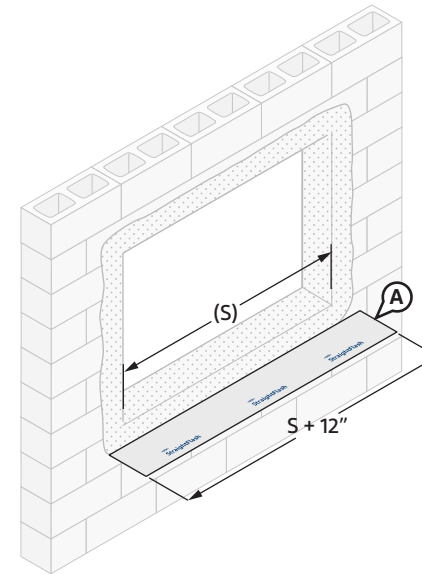
### Storefront Window

#### Method 3: Alternate Self-Adhered Flashing Option Using DuPont™ StraightFlash™ Only



#### STEP 1

- A. Clean substrate of any material that could negatively affect adhesion, as well as any sharp protrusions.
- B. Apply a recommended adhesive/primer approximately 3" onto the exterior face of the wall and onto the inside perimeter of the rough opening for masonry and concrete surfaces. Refer to [Chemical Compatibility of Representative Building Sealants and Adhesives/Primers](#) for more information on recommended adhesives/primers.



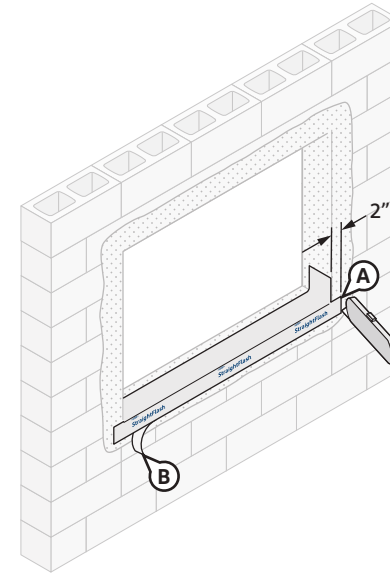
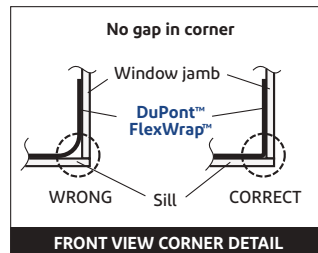
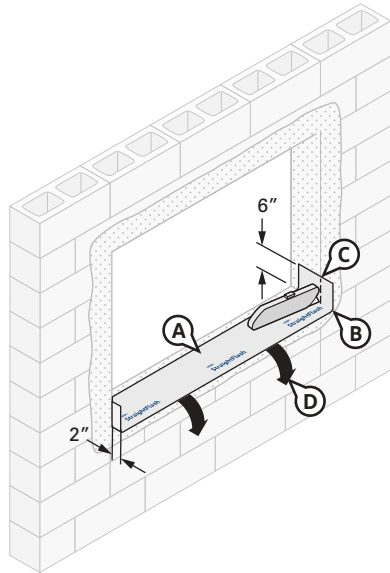
#### STEP 2

- A. Cut a piece of 9" **StraightFlash™** the length of the sill (S) plus an additional 12"

## Installation Methods for DuPont Flashing Products

### Storefront Window

#### Method 3: Alternate Self-Adhered Flashing Option Using DuPont™ StraightFlash™ Only



#### STEP 3

- Install the **StraightFlash™** by removing the widest strip of release paper, and aligning the flashing so it extends 1" **BEYOND** where the back of the window frame would be located, a minimum of 2" onto the face of the wall, and 6" up the jambs.
- Secure flashing tightly into the corners by first working it in along the sill before adhering it up the jambs. (See front view corner detail below).
- Cut the jamb portion of the sill flashing even with the face of the wall.
- With release paper still attached, fold flashing down onto the face of the wall.

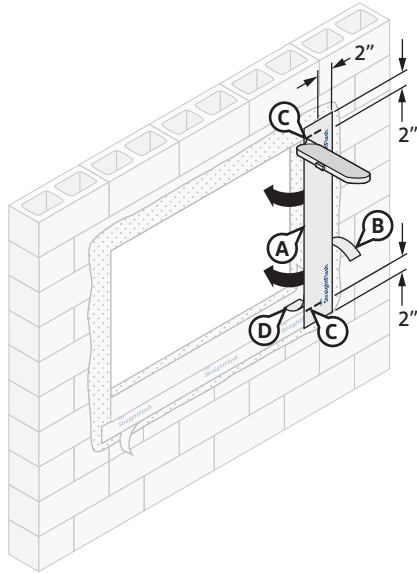
#### STEP 4

- Flaps created from vertical cuts in **StraightFlash™** should be trimmed so they do not extend more than 2" beyond jamb rough opening onto the face of the wall.
- Remove remaining release paper and firmly press flashing onto the face of the wall.

## Installation Methods for DuPont Flashing Products

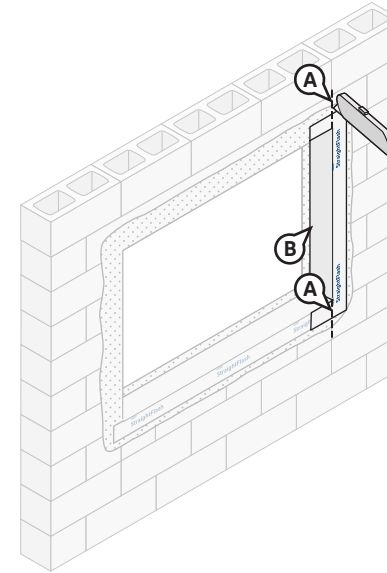
### Storefront Window

#### Method 3: Alternate Self-Adhered Flashing Option Using DuPont™ StraightFlash™ Only



#### STEP 5

- Prepare the jamb flashing by cutting two pieces of **StraightFlash™** that are 4" longer than the jamb length.
- Remove the 2" wide portion of the release paper. Place the flashing onto the face of the wall so that it extends a minimum of 2" past the jamb, head, and sill of the rough opening.
- Cut the **StraightFlash™** along the head and the sill of the rough opening. Flaps created from horizontal cuts in **StraightFlash™** should be trimmed so they do not extend more than 2"– 3" along the face of the wall.
- Remove the remaining release paper. Fold the flashing into the rough opening and adhere it to the jamb.



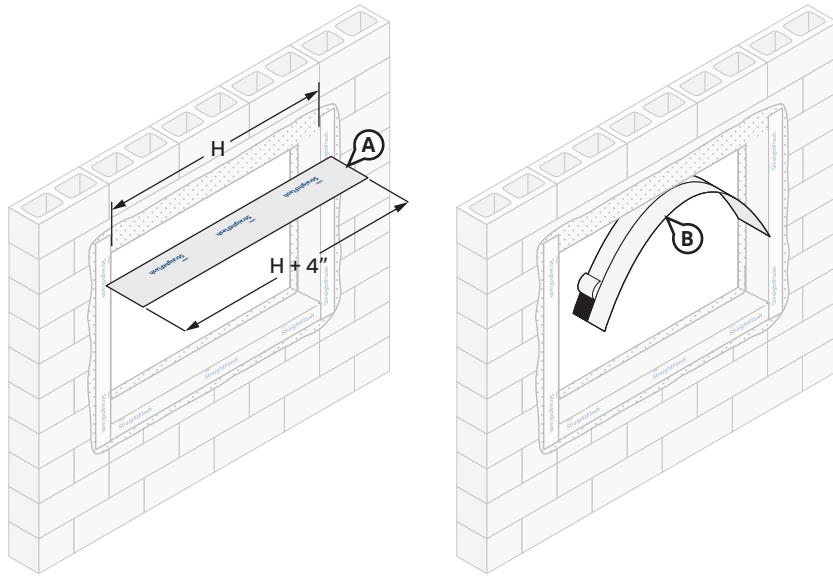
#### STEP 6

- Cut vertically along the remaining release paper and remove the excess flashing from the head and the sill.
- Apply firm pressure along the entire surface to ensure full adhesion on all surfaces.
- Install second piece of **StraightFlash™** to opposite jamb.

## Installation Methods for DuPont Flashing Products

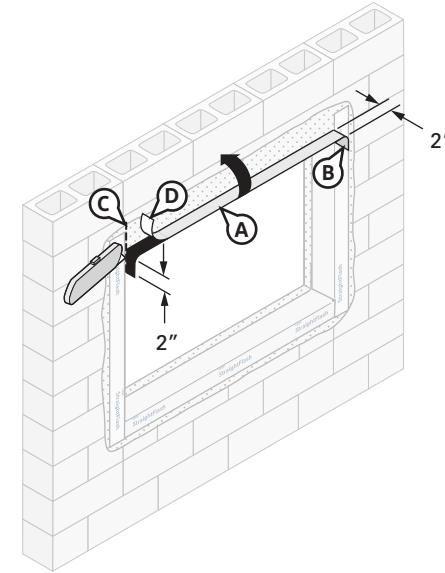
### Storefront Window

#### Method 3: Alternate Self-Adhered Flashing Option Using DuPont™ StraightFlash™ Only



#### STEP 7

- Prepare the head flashing by cutting a piece of **StraightFlash™** that is at least 4" longer than the length of the rough opening head (H).
- Remove wide piece of release paper and position **StraightFlash™** underneath the head of the rough opening.



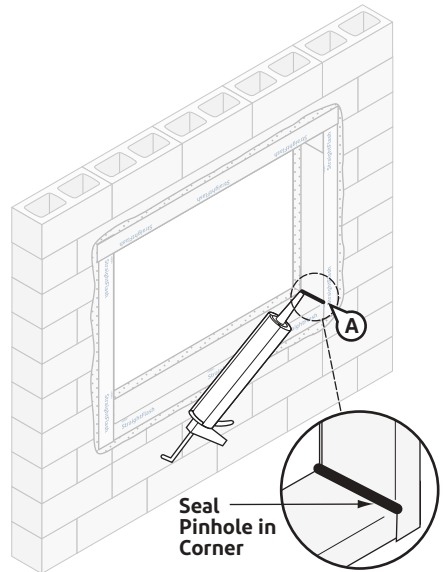
#### STEP 8

- Install the **StraightFlash™** by aligning the flashing so it extends 1" **BEYOND** where the back of the window frame will be located, 2"- 3" onto the face of the wall, and 6" up the jambs.
- Secure flashing tightly into the corners by first working it in along the head before adhering it down the jambs.
- Cut the jamb portion of the head flashing even with the face of the wall.
- Remove the remaining release paper, fold the flashing up, and firmly press **StraightFlash™** onto the face of the wall and jamb flashing overlaps. Apply pressure along entire surface of **StraightFlash™** for a good bond using firm hand pressure, J-roller, or alternate tool without sharp edges (such as a plastic carpet tuck tool) to assist with application of uniform pressure.

## Installation Methods for DuPont Flashing Products

### Storefront Window

#### Method 3: Alternate Self-Adhered Flashing Option Using DuPont™ StraightFlash™ Only

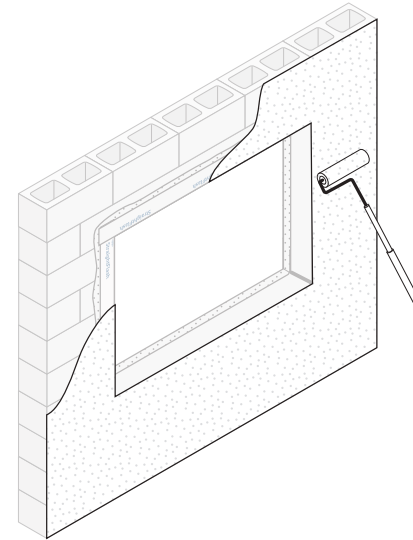


#### STEP 9

- A. Seal all four inside corners with **DuPont™ Tyvek® Fluid Applied Flashing and Joint Compound+** or **DuPont™ Sealant for DuPont™ Tyvek® Fluid Applied System**. Extend sealant approximately 1/2" onto the face of the wall flashing.

**NOTE:** Be sure that the pinholes in the flashing corners are fully covered with sealant.

**NOTE:** **DuPont™ Tyvek® Fluid Applied Products** may be overcoated once a tack-free skin has formed. Skin time is 1-2 hrs at 70°F (20°C), 50% RH.



#### STEP 10

- A. Install **DuPont™ Tyvek® Fluid Applied WB+™** onto wall at 25 mils thick. Coat wood buck, if applicable, up to the edge of the rough opening, overlapping the **DuPont Self-Adhered Flashing Product**. Coating the **DuPont Self-Adhered Flashing Product** into the sill is also acceptable. Upon completion, inspect all surfaces to ensure that they are covered and **free of any voids or pinholes**.

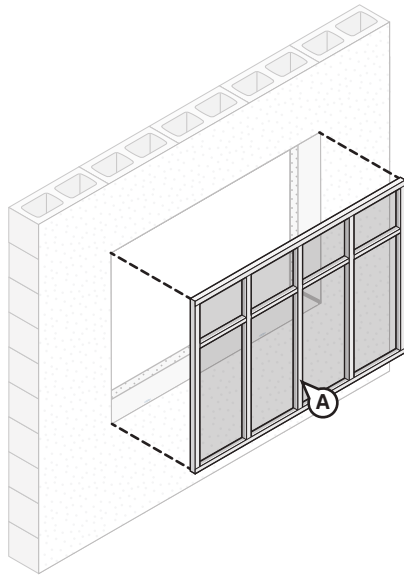
**NOTE:** When spraying, the outer edge of **DuPont Self-Adhered Flashing Product** should be treated with **Tyvek® Fluid Applied Flashing and Joint Compound+**, and tapered to wall substrate to help ensure installation is free of pinholes and voids.

Refer to the [DuPont™ Tyvek® Fluid Applied WB+™ Installation Instructions](#) section of this document. Skin time is 1-2 hours, and 25 mils is workable in 24 hours at 70°F (20°C), 50% RH.

## Installation Methods for DuPont Flashing Products

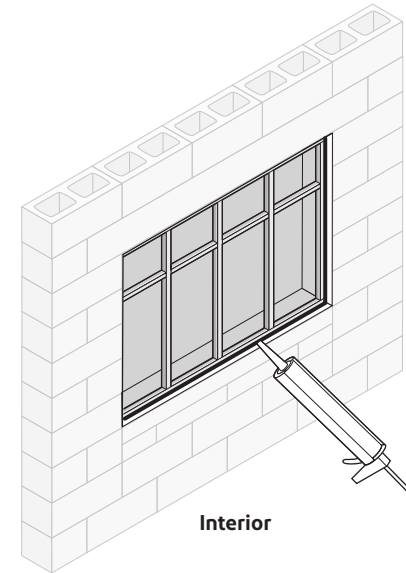
### Storefront Window

#### Method 3: Alternate Self-Adhered Flashing Option Using DuPont™ StraightFlash™ Only



#### STEP 11

A. Install window per manufacturer's installation instructions.



#### STEP 12

##### Create Interior Perimeter Seal

Create a continuous perimeter seal using backer rod and **DuPont™ Sealant for Tyvek® Fluid Applied System**, recommended sealant, or **Great Stuff Pro™ Window and Door Polyurethane Foam Sealant** on window interior to resist air and water infiltration. When using **Great Stuff Pro™ Window and Door Polyurethane Foam Sealant** in perimeter openings less than 1/2", apply using the plastic extension tip for the **Great Stuff Pro™ Dispenser Gun** during installation.

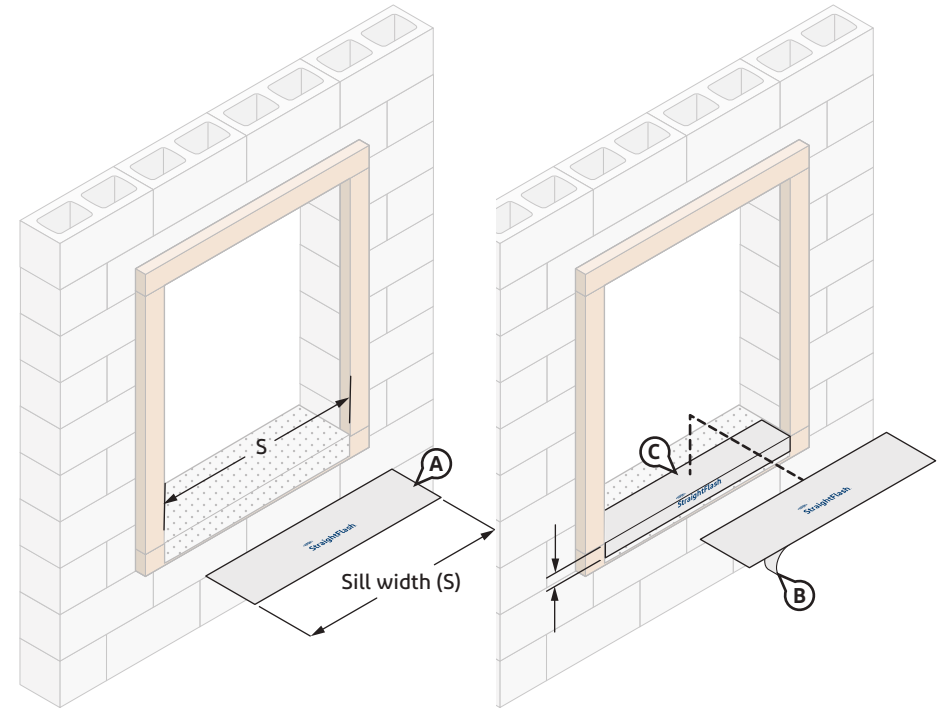
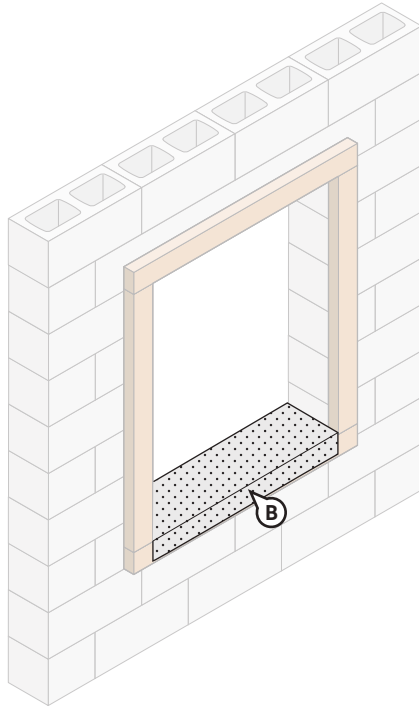
**NOTE:** For high performance installations exceeding ASTM E1677 wind loading pressures (10.8 psf, 65 mph equivalent structural load) and ASTM E331 water infiltration resistance of 6.24 psf, a recommended sealant **must be** installed over the cured foam when using **Great Stuff Pro™ Window and Door Polyurethane Foam Sealant** or other recommended foam. Sealant should be installed over the foam between the window frame and rough opening around the entire interior perimeter. If **Great Stuff Pro™ Window and Door Polyurethane Foam Sealant** or other recommended foam extends beyond the window frame, shave the excess cured foam flush with the window frame before applying sealant. Avoid damaging the **DuPont™ Tyvek® Fluid Applied Flashing and Joint Compound+** and/or **DuPont Self-Adhered Flashing Products**.

**NOTE:** Refer to the Storefront Window CAD details at [building.dupont.com](http://building.dupont.com) for more detailed information.

## Installation Methods for DuPont Flashing Products

### Wood Bump-Out Frame with Non-Flanged Window

Method 1: Using DuPont™ Tyvek® Fluid Applied Flashing and Joint Compound+ and DuPont™ StraightFlash™



#### STEP 1

- A. Clean substrate of any material that could negatively affect adhesion as well as any sharp protrusions.
- B. When using **StraightFlash™** at the sill of the window, apply a recommended adhesive/primer approximately 3" onto the face of the bump-out framing and onto the inside of the sill for masonry and concrete surfaces.

#### STEP 2

- A. Cut 9" **StraightFlash™** the width of rough opening sill (S). Ensure a minimum of 1" adhesion **BEYOND** where the back of the window frame will be located, and 2"- 3" adhesion onto the face of the bump-out framing.
- B. Remove the release paper and position **StraightFlash™** onto the sill and 2" minimum onto the face of the bump-out framing.
- C. Apply pressure along the entire surface of **StraightFlash™** for a good bond using firm hand pressure or J-roller (or alternate tool without sharp edges such as a plastic carpet tuck tool) to assist with application of uniform pressure.

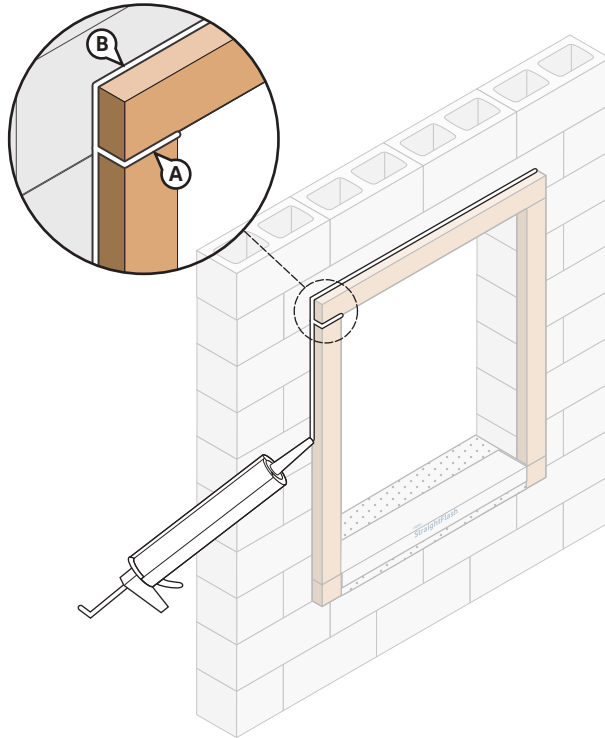
**NOTE:** **StraightFlash™** is not required in cases where no fasteners are being installed through the window sill.



## Installation Methods for DuPont Flashing Products

### Wood Bump-Out Frame with Non-Flanged Window

Method 1: Using DuPont™ Tyvek® Fluid Applied Flashing and Joint Compound+ and DuPont™ StraightFlash™



#### STEP 3

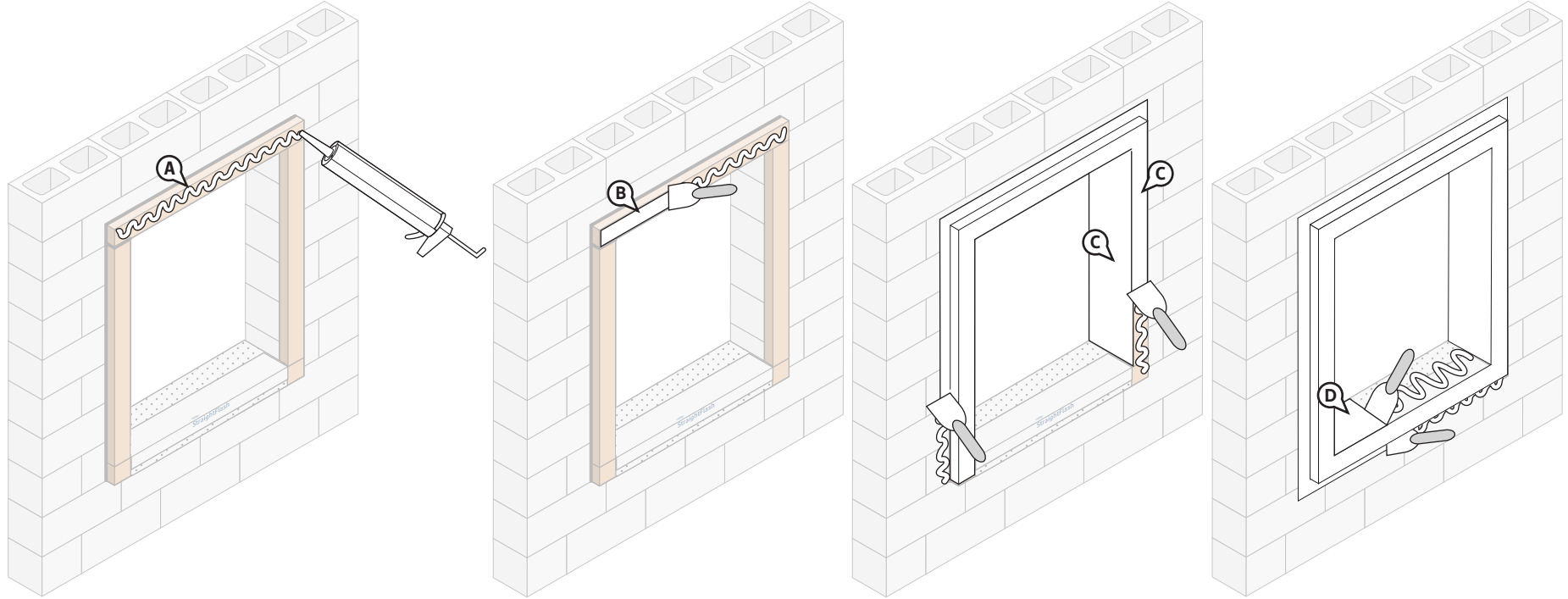
- A. Apply a bead of **Tyvek® Fluid Applied Flashing and Joint Compound+** or **DuPont™ Sealant for DuPont™ Tyvek® Fluid Applied System** to all the seams, and fill any holes or cracks in the bump-out framing and tool flat.
- B. Apply a fillet bead of **Tyvek® Fluid Applied Flashing and Joint Compound+** or **Sealant for Tyvek® Fluid Applied System** around the perimeter of the wood bump-out framing, at the bump-out framing / wall interface. The fillet bead should extend approximately 1/2" onto both surfaces.
- C. Tool sealant to achieve optimal joint design.

**NOTE:** DuPont™ Tyvek® Fluid Applied Products may be overcoated once a tack-free skin has formed. Skin time is 1–2 hrs at 70°F (20°C), 50% RH.

## Installation Methods for DuPont Flashing Products

### Wood Bump-Out Frame with Non-Flanged Window

#### Method 1: Using DuPont™ Tyvek® Fluid Applied Flashing and Joint Compound+ and DuPont™ StraightFlash™



#### STEP 4

- A. Starting at the window head, apply a bead of **Tyvek® Fluid Applied Flashing and Joint Compound+** onto the inside surface of the rough opening and onto the face of the wood bump-out framing.
- B. Use a trowel or brush to smooth out flashing to a thickness of approximately 25 mils. The flashing should cover the inside of the rough opening and extend a minimum of 2" onto the face of the bump-out framing.

- C. Continue the application process outlined above for the jambs.

**NOTE:** Apply **Tyvek® Fluid Applied Flashing and Joint Compound+** onto the outside edges of the bump-out framing and onto the wall substrate by a minimum of 2".

- D. The **Tyvek® Fluid Applied Flashing and Joint Compound+** should be applied on top of the **StraightFlash™** on the sill and minimum 2" on the face of the bump-out framing. Be sure all inside corners are filled and integrated with the **StraightFlash™**. A corner trowel may be used to smooth outside corners.

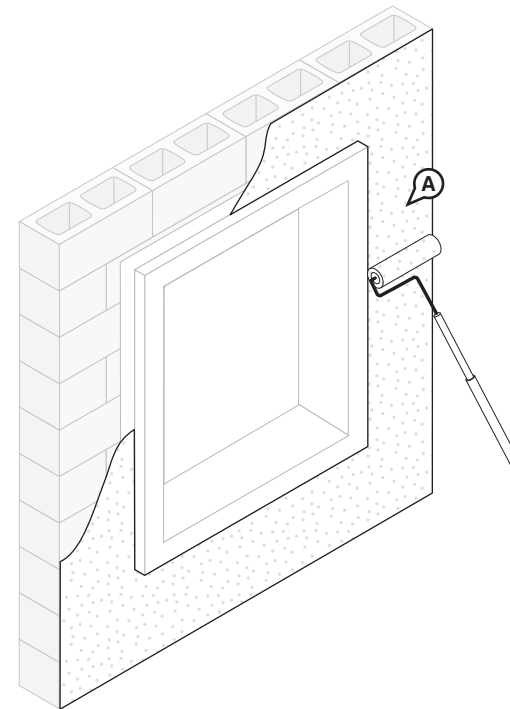
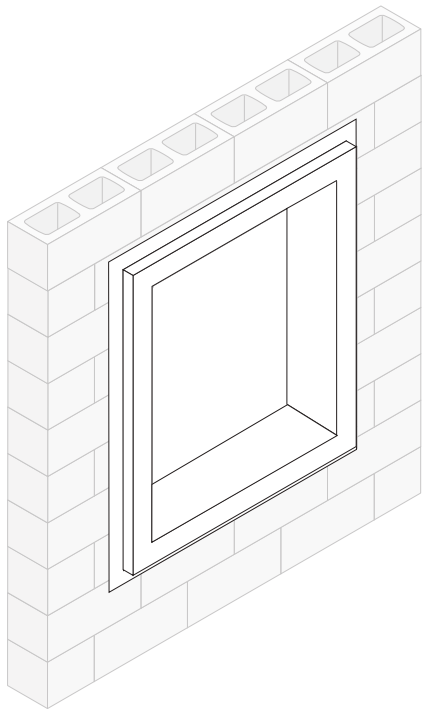
**NOTE:** **Tyvek® Fluid Applied Flashing and Joint Compound+** is **not required** along the entire sill when **StraightFlash™** is installed as previously captured, provided **Tyvek® Fluid Applied Flashing and Joint Compound+** is applied a minimum 4"– 6" along the sill from the jamb corner.

**NOTE:** If **DuPont™ FlexWrap™** is used along the sill and 6" up the jambs, **Tyvek® Fluid Applied Flashing and Joint Compound+** is not required along the sill to jamb interface but must be applied to head and jamb area.

## Installation Methods for DuPont Flashing Products

### Wood Bump-Out Frame with Non-Flanged Window

Method 1: Using DuPont™ Tyvek® Fluid Applied Flashing and Joint Compound+ and DuPont™ StraightFlash™



#### STEP 5

Upon completion, inspect surface, including all corners, to ensure that **Tyvek® Fluid Applied Flashing and Joint Compound+** is continuous and **free of any voids or pinholes**. **DuPont™ Tyvek® Fluid Applied WB+™** may be applied over and integrated with **Tyvek® Fluid Applied Flashing and Joint Compound+** once a tack-free skin has formed. Skin time is 1-2 hrs at 70°F (20°C), 50% RH.

#### STEP 6

A. Install **Tyvek® Fluid Applied WB+™** up to the edge of the rough opening, overlapping the **Tyvek® Fluid Applied Flashing and Joint Compound+**.

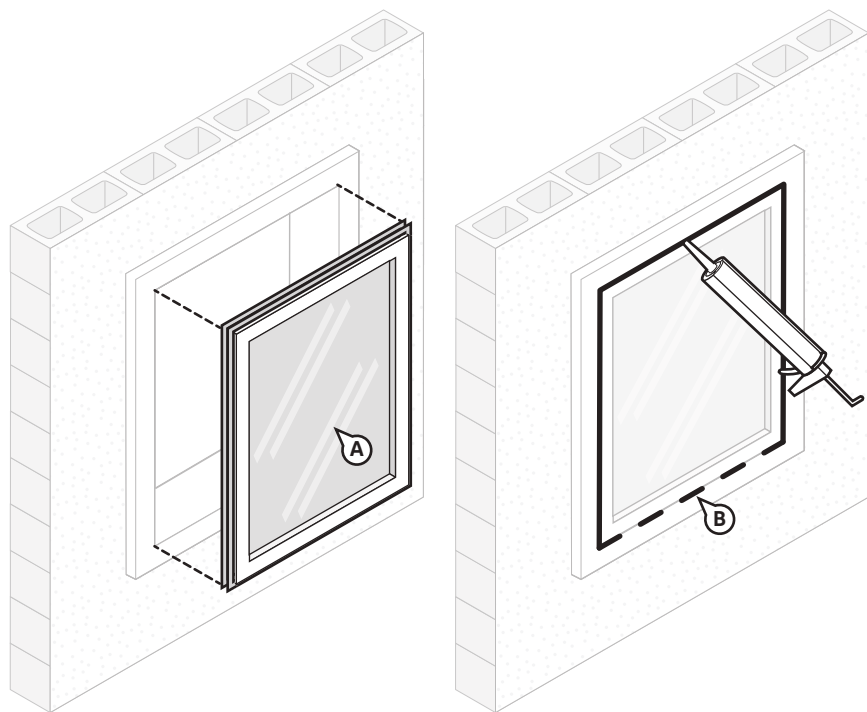
**NOTE:** When spraying, the outer edge of **DuPont Self-Adhered Flashing Product** should be treated with **Tyvek® Fluid Applied Flashing and Joint Compound+** or **Tyvek® Fluid Applied WB+™** tapered to the wall substrate to help ensure installation is free of pinholes and voids.

Refer to the [DuPont™ Tyvek® Fluid Applied WB+™ Installation Instructions](#) section of this document. Exterior insulation and/or cladding may be installed once the membrane has cured sufficiently to resist damage during installation. Skin time is 1-2 hours, and 25 mil is workable in 24 hours at 70°F (20°C), 50% RH.

## Installation Methods for DuPont Flashing Products

### Wood Bump-Out Frame with Non-Flanged Window

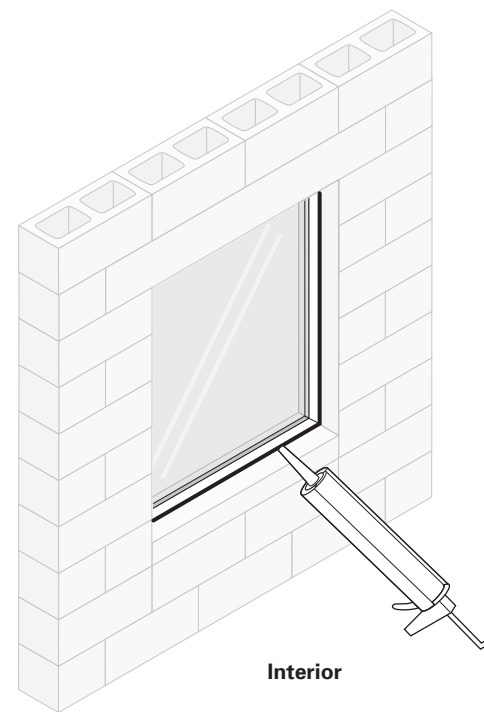
Method 1: Using DuPont™ Tyvek® Fluid Applied Flashing and Joint Compound+ and DuPont™ StraightFlash™



#### STEP 7

- A. Install window per manufacturer's installation instructions.
- B. Apply an exterior perimeter seal using backer rod and recommended sealant along the jambs and head of the window opening. Refer to [Chemical Compatibility of Representative Building Sealants and Adhesives/Primers](#) for more information on recommended sealants.

**NOTE:** Ensure window and sealant installation allows for drainage at the sill. If sealant is applied at the sill, as a best practice, ensure that there are at least two (2) 2" gaps in the sealant bead for every 4" of window to allow for drainage.



#### STEP 8

##### Create Interior Perimeter Seal

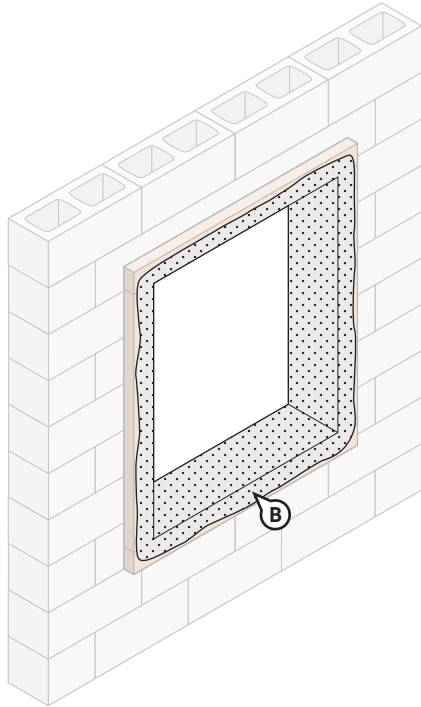
Create a continuous perimeter seal using backer rod and **DuPont™ Sealant for Tyvek® Fluid Applied System**, recommended sealant, or **Great Stuff Pro™ Window and Door Polyurethane Foam Sealant** on window interior to resist air and water infiltration. When using **Great Stuff Pro™ Window and Door Polyurethane Foam Sealant** in perimeter openings less than 1/2", apply using the plastic extension tip for the **Great Stuff Pro™ Dispenser Gun** during installation.

**NOTE:** For high performance installations exceeding ASTM E1677 wind loading pressures (10.8 psf, 65 mph equivalent structural load) and ASTM E331 water infiltration resistance of 6.24 psf, a recommended sealant **must be** installed over the cured foam when using **Great Stuff Pro™ Window and Door Polyurethane Foam Sealant** or other recommended foam. Sealant should be installed over the foam between the window frame and rough opening around the entire interior perimeter. If **Great Stuff Pro™ Window and Door Polyurethane Foam Sealant** or other recommended foam extends beyond the window frame, shave the excess cured foam flush with the window frame before applying sealant. Avoid damaging the **Tyvek® Fluid Applied Flashing and Joint Compound+** and/or **DuPont Self-Adhered Flashing Products**.

## Installation Methods for DuPont Flashing Products

### Wood Bump-Out Frame with Non-Flanged Window

#### Method 2: Self-Adhered Flashing Using DuPont™ FlexWrap™ and DuPont™ StraightFlash™



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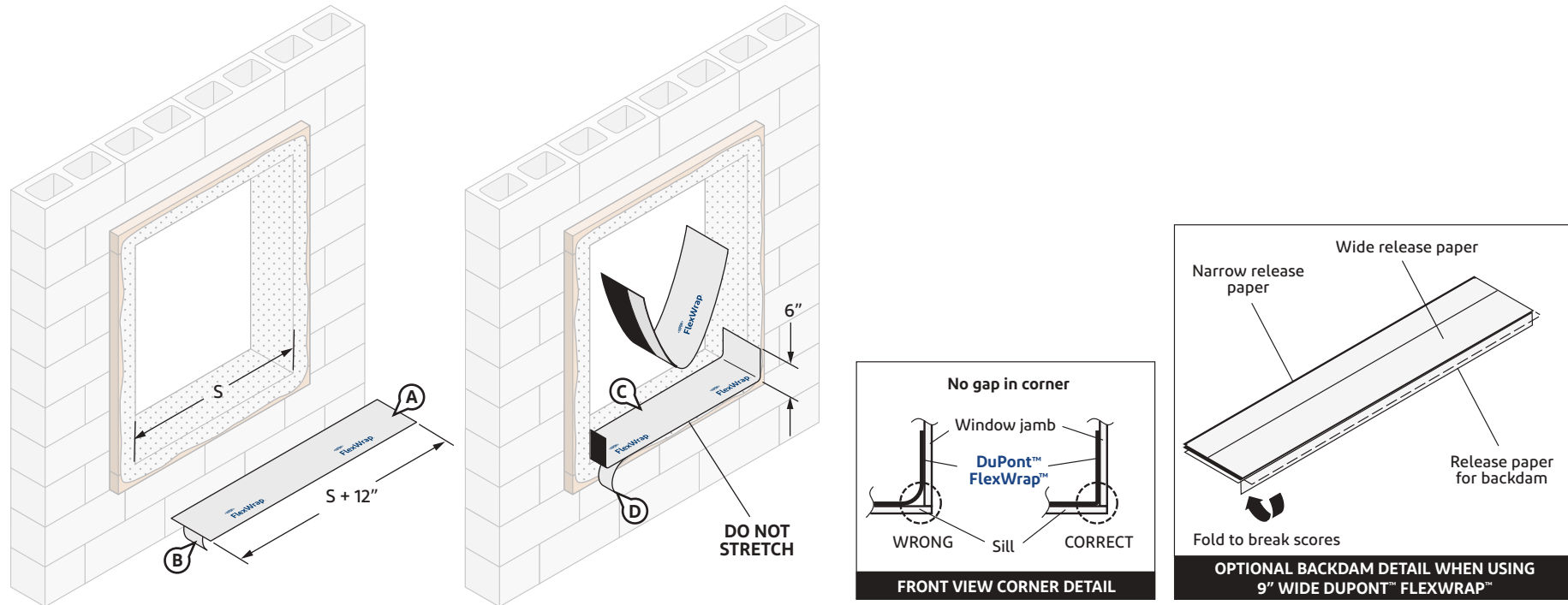
#### STEP 1

- A. Clean substrate of any material that could negatively affect adhesion, as well as any sharp protrusions.
- B. Apply a recommended adhesive/primer approximately 3" onto the exterior face of bump-out framing surrounding the rough opening, and onto the inside perimeter of the rough opening for masonry and concrete surfaces.

## Installation Methods for DuPont Flashing Products

### Wood Bump-Out Frame with Non-Flanged Window

#### Method 2: Self-Adhered Flashing Using DuPont™ FlexWrap™ and DuPont™ StraightFlash™



## STEP 2

- Cut **FlexWrap™** at least 12" **LONGER** than the width of rough opening sill (S). Use roll widths sufficient to achieve a minimum of 1" adhesion **BEYOND** where the back of the window frame will be located, ensuring 2"– 3" adhesion onto the face of the wood bump-out framing.
- Remove wide piece of release paper.
- Position **FlexWrap™** along the sill by aligning the inside of the narrow release paper with the face of the bump-out framing to ensure 2"– 3" of the **FlexWrap™** will be adhered to the face of the bump-out framing with a minimum of 6" up each jamb. Adhere into rough opening.

**Optional Back Dam:** Fold 9" **FlexWrap™** to break perforation. Remove center piece of release paper. Cover horizontal sill to accommodate back dam as appropriate, and adhere into rough opening along sill and up jambs (min 6" on each side). Leave 1" release paper on **FlexWrap™** inside rough opening to finish back dam after window installation.

- Remove remaining release paper.

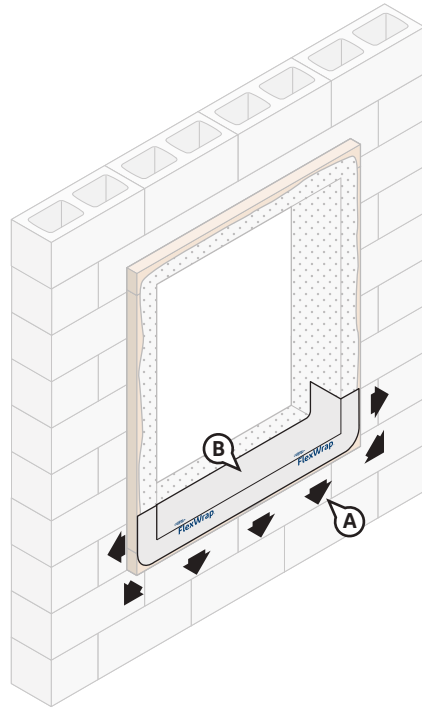
**NOTE:** Use of the optional back dam **must not** interfere with the installation of a continuous interior perimeter seal.

**NOTE:** DuPont™ Tyvek® Commercial Certified Installers may install a 3-piece head (and sill) detail for window openings less than 6 ft wide. Installers who **are not** DuPont™ Tyvek® Commercial Certified Installers should refer to the [Special Considerations](#) section for more information regarding the 3-piece head/sill detail. Contact your local DuPont Building Envelope Specialist for more information about the Certified Installer program.

## Installation Methods for DuPont Flashing Products

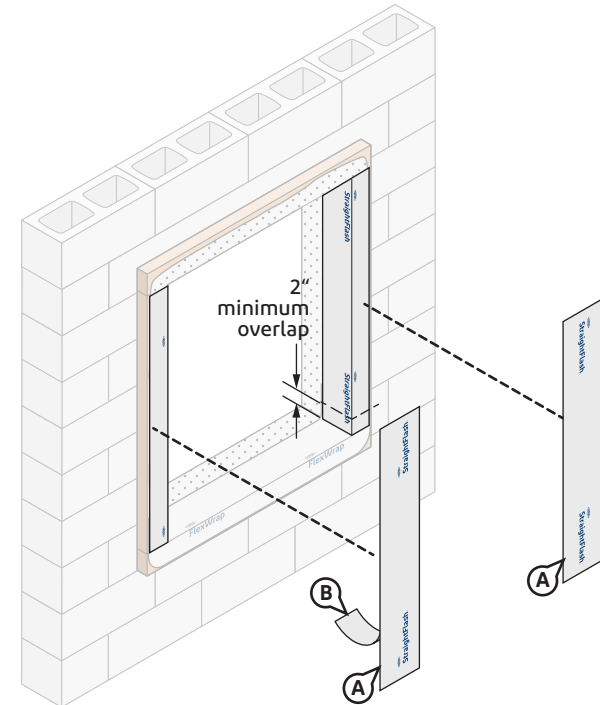
### Wood Bump-Out Frame with Non-Flanged Window

#### Method 2: Self-Adhered Flashing Using DuPont™ FlexWrap™ and DuPont™ StraightFlash™



#### STEP 3

- Fan out the **FlexWrap™** at corners and adhere onto face of bump-out framing. Continue adhering onto face of bump-out framing along sill.
- Firmly press sill flashing to ensure full adhesion on all surfaces. Eliminate wrinkles and bubbles by smoothing surface and repositioning as necessary.



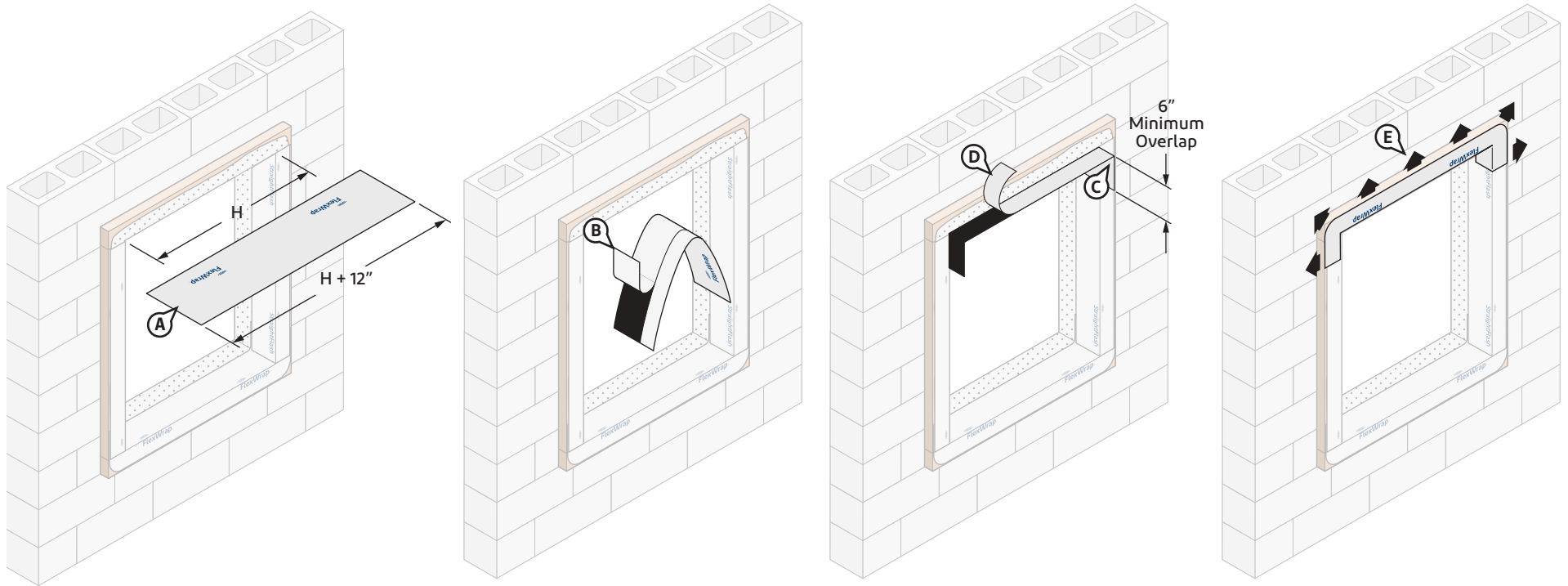
#### STEP 4

- Cut two pieces of 9" **StraightFlash™** to the length of the jamb. Jamb flashing should overlap the sill flashing by at least 2" and be overlapped by future head flashing by at least 2".
- Remove release paper and position **StraightFlash™** so that 2" will extend onto the bump-out framing. Wrap jamb flashing into the rough opening at each jamb and onto the face of the bump-out framing. Apply pressure along entire surface of flashing for a good bond using firm hand pressure, J-roller, or alternate tool without sharp edges (such as a plastic carpet tuck tool) to assist with application of uniform pressure during installation of **DuPont Self-Adhered Flashing Products**. Eliminate wrinkles and bubbles by smoothing surface.

## Installation Methods for DuPont Flashing Products

### Wood Bump-Out Frame with Non-Flanged Window

#### Method 2: Self-Adhered Flashing Using DuPont™ FlexWrap™ and DuPont™ StraightFlash™



#### STEP 5

- Cut **FlexWrap™** at least 12" **LONGER** than the width of rough opening head (H). Use roll widths sufficient to achieve a minimum of 1" adhesion **BEYOND** where the window frame will be located, ensuring 2"– 3" adhesion onto the face of the wood bump-out framing.
- Fold the **FlexWrap™** in half lengthwise to create a slight crease at the center. Remove the wide piece of release paper on one side of the fold. Align the inside edge of the narrow release paper with the face of the bump-out to ensure 2"– 3" of the **FlexWrap™** will be adhered to the face of the bump-out framing.
- Starting at the crease, adhere the the exposed butyl adhesive to the center of the head and a minimum of 6" down the jamb. Remove the remaining release paper and continue process of adhering **FlexWrap™** along the head of the rough opening and 6" down the opposite jamb.
- Remove remaining release paper.
- Fan out the **FlexWrap™** at corners and adhere onto face of bump-out framing.

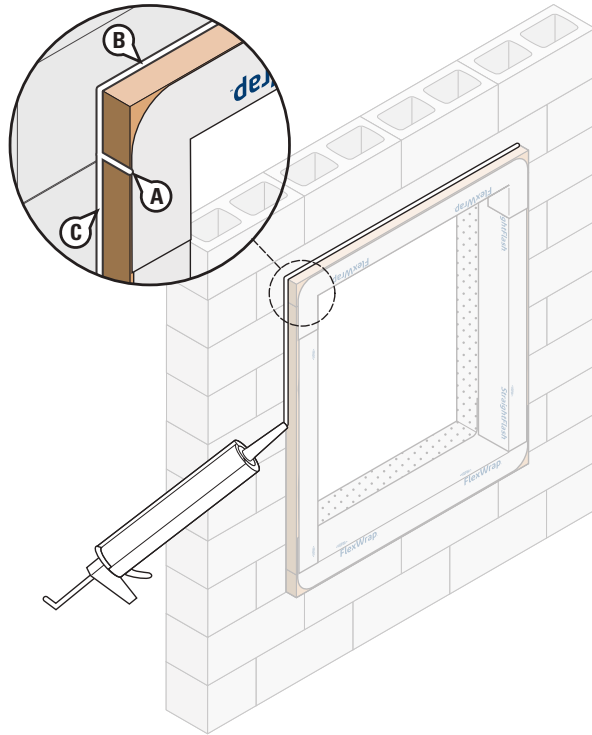
**NOTE:** DuPont™ Tyvek® Commercial Certified Installers may install a 3-piece head (and sill) detail for window openings less than 6 ft wide. Installers who **are not** DuPont™ Tyvek® Commercial Certified Installers should refer to the [Special Considerations](#) section for more information regarding the 3-piece head/sill detail. Contact your local DuPont Building Envelope Specialist for more information about the Certified Installer program.



## Installation Methods for DuPont Flashing Products

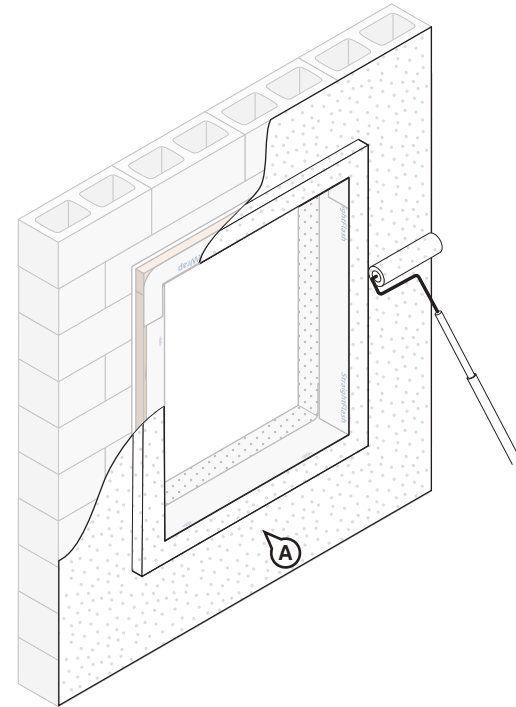
### Wood Bump-Out Frame with Non-Flanged Window

#### Method 2: Self-Adhered Flashing Using DuPont™ FlexWrap™ and DuPont™ StraightFlash™



#### STEP 6

- Apply a bead of **DuPont™ Tyvek® Fluid Applied Flashing and Joint Compound+** or **DuPont™ Sealant for DuPont™ Tyvek® Fluid Applied System** to the seams in the bump-out framing. Fill any remaining holes or cracks in bump-out framing using the joint compound or sealant, and tool flat.
- Apply a fillet bead of **Tyvek® Fluid Applied Flashing and Joint Compound+** or **Sealant for Tyvek® Fluid Applied System** to the perimeter of the bump-out framing / wall interface. Fillet bead should extend approximately 1/2" onto both surfaces.
- Tool **Tyvek® Fluid Applied Flashing and Joint Compound+** or sealant to achieve optimal joint design.



#### STEP 7

- Install **DuPont™ Tyvek® Fluid Applied WB+™** onto wall and bump-out framing at 25 mils thick. Coat bump-out framing up to the edge of the rough opening, overlapping the **DuPont Self-Adhered Flashing Product**. Coating the **DuPont Self-Adhered Flashing Product** into the sill, is also acceptable. Upon completion, inspect all surfaces to ensure that they are covered and **free of any voids or pinholes**.

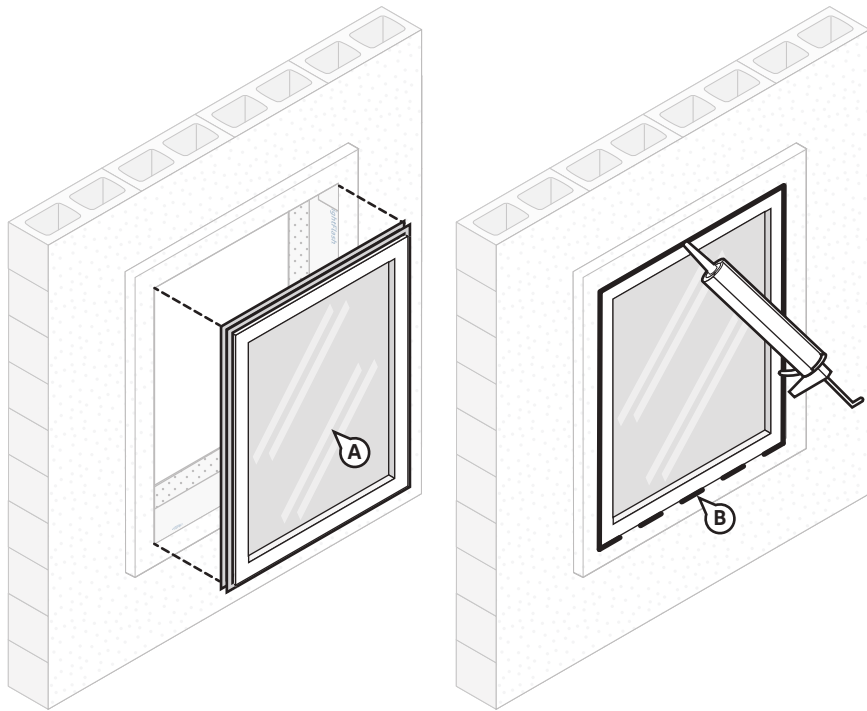
**NOTE:** When spraying, the outer edge of **DuPont Self-Adhered Flashing Product** may need to be pretreated with a **DuPont™ Tyvek® Fluid Applied Product** tapered to wall substrate to help ensure installation is free of pinholes and voids.

Refer to the [DuPont™ Tyvek® Fluid Applied WB+™ Installation Instructions](#) section of this document. Exterior insulation and/or cladding may be installed once the membrane has cured sufficiently to resist damage during installation. Skin time is 1-2 hours, and 25 mil is workable in 24 hours at 70°F (20°C), 50% RH.

## Installation Methods for DuPont Flashing Products

### Wood Bump-Out Frame with Non-Flanged Window

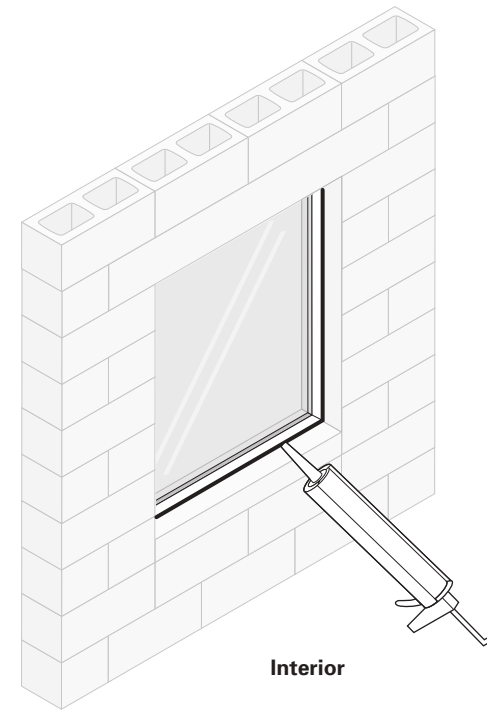
#### Method 2: Self-Adhered Flashing Using DuPont™ FlexWrap™ and DuPont™ StraightFlash™



#### STEP 8

- Install window per manufacturer's installation instructions.
- Apply an exterior perimeter seal using backer rod and recommended sealant along the jambs and head of the window opening. Refer to [Chemical Compatibility of Representative Building Sealants and Adhesives/Primers](#) for more information on recommended sealants.

**NOTE:** Ensure window and sealant installation allows for drainage at the sill. If sealant is applied at the sill, as a best practice, ensure that there are at least two (2) 2" gaps in the sealant bead for every 4" of window to allow for drainage.



#### STEP 9

##### Create Interior Perimeter Seal

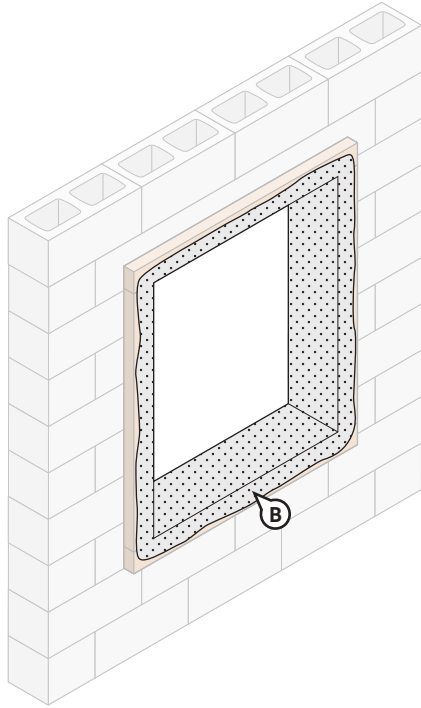
Create a continuous perimeter seal using backer rod and **DuPont™ Sealant for Tyvek® Fluid Applied System**, recommended sealant, or **Great Stuff Pro™ Window and Door Polyurethane Foam Sealant** on window interior to resist air and water infiltration. When using **Great Stuff Pro™ Window and Door Polyurethane Foam Sealant** in perimeter openings less than 1/2", apply using the plastic extension tip for the **Great Stuff Pro™ Dispenser Gun** during installation.

**NOTE:** For high performance installations exceeding ASTM E1677 wind loading pressures (10.8 psf, 65 mph equivalent structural load) and ASTM E331 water infiltration resistance of 6.24 psf, a recommended sealant **must be** installed over the cured foam when using **Great Stuff Pro™ Window and Door Polyurethane Foam Sealant** or other recommended foam. Sealant should be installed over the foam between the window frame and rough opening around the entire interior perimeter. If **Great Stuff Pro™ Window and Door Polyurethane Foam Sealant** or other recommended foam extends beyond the window frame, shave the excess cured foam flush with the window frame before applying sealant. Avoid damaging the **DuPont™ Tyvek® Fluid Applied Flashing and Joint Compound+** and/or **DuPont Self-Adhered Flashing Products**.

## Installation Methods for DuPont Flashing Products

### Wood Bump-Out Frame with Non-Flanged Window

#### Method 3: Alternate Self-Adhered Flashing Option Using DuPont™ StraightFlash™ Only



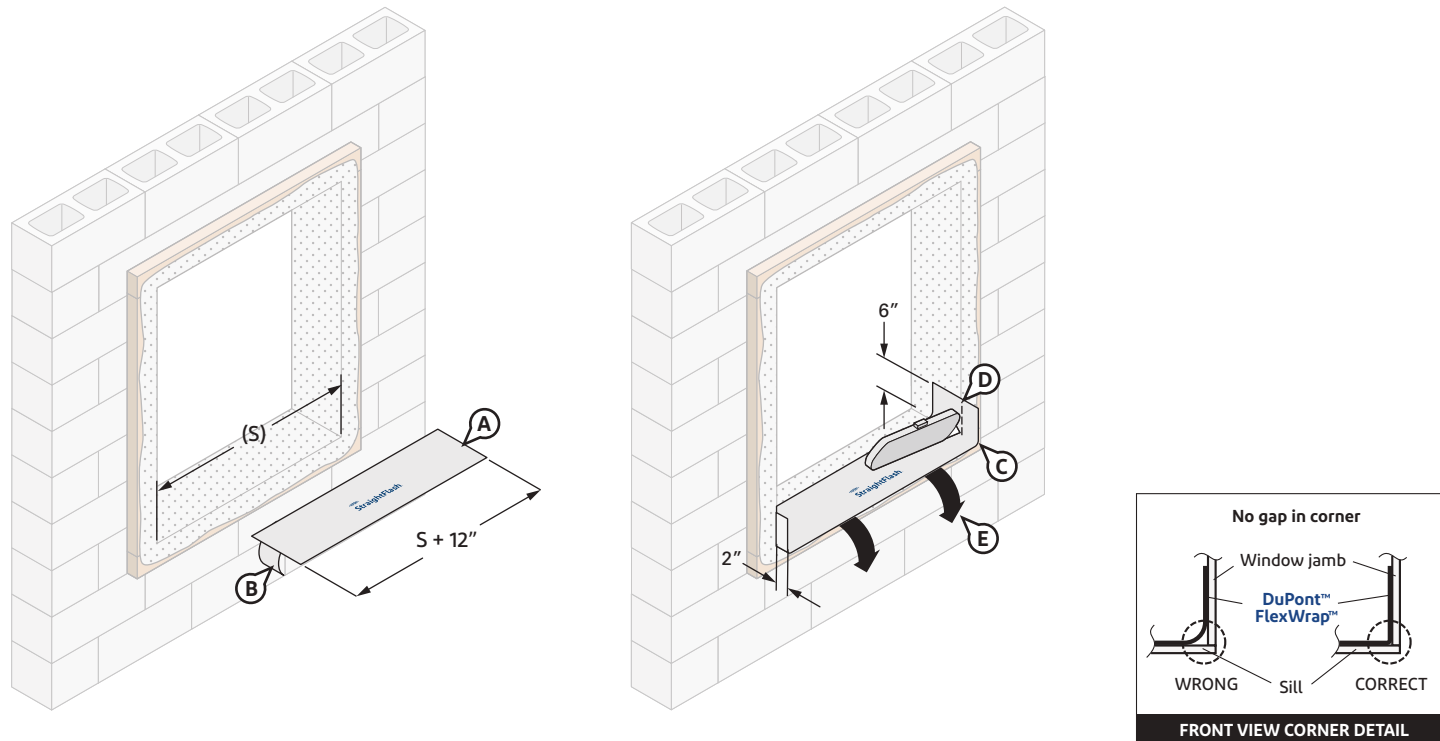
#### STEP 1

- A. Clean substrate of any material that could negatively affect adhesion, as well as any sharp protrusions.
- B. Apply a recommended adhesive/primer approximately 3" onto the exterior face of the wood bump-out framing surrounding the rough opening, and onto the inside perimeter of the rough opening for masonry and concrete surfaces.

## Installation Methods for DuPont Flashing Products

### Wood Bump-Out Frame with Non-Flanged Window

#### Method 3: Alternate Self-Adhered Flashing Option Using DuPont™ StraightFlash™ Only



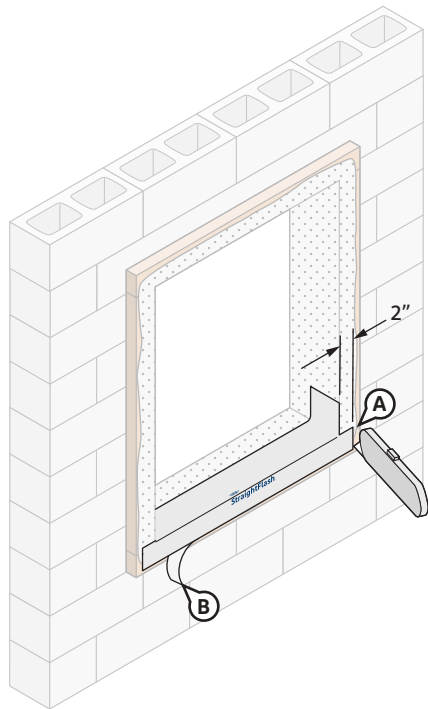
## STEP 2

- A. Prepare the sill flashing by cutting a piece of **StraightFlash™** that is at least 12" **LONGER** than the sill width.
- B. Install the **StraightFlash™** by removing the widest strip of release paper, and aligning the flashing so it extends 1" **BEYOND** where the back of the window frame will be located, 2"– 3" onto the face of the wall, and 6" up the jambs.
- C. Secure flashing tightly into the corners by first working it in along the sill before adhering it up the jambs. (See front view corner detail above).
- D. Cut the jamb portion of the sill flashing even with the face of the bump-out-framing.
- E. With release paper still attached, fold flashing down onto the face of the bump-out framing.

## Installation Methods for DuPont Flashing Products

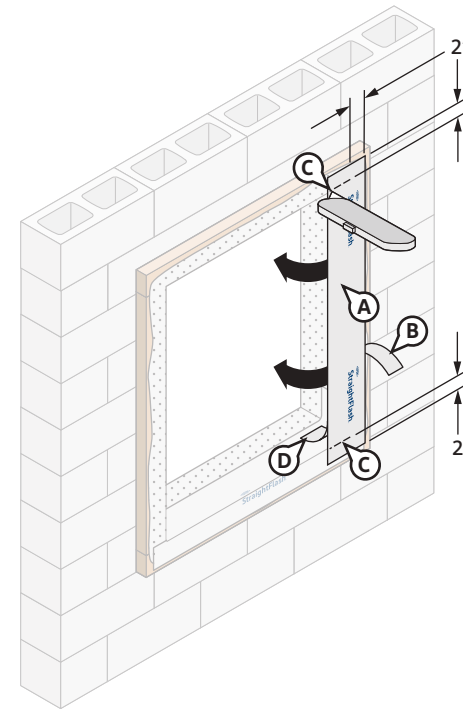
### Wood Bump-Out Frame with Non-Flanged Window

#### Method 3: Alternate Self-Adhered Flashing Option Using DuPont™ StraightFlash™ Only



#### STEP 3

- Flaps created from vertical cuts in **StraightFlash™** should be trimmed so they do not extend more than 2" beyond jamb rough opening onto the face of the bump-out framing.
- Remove remaining release paper and firmly press flashing onto the face of the bump-out framing.

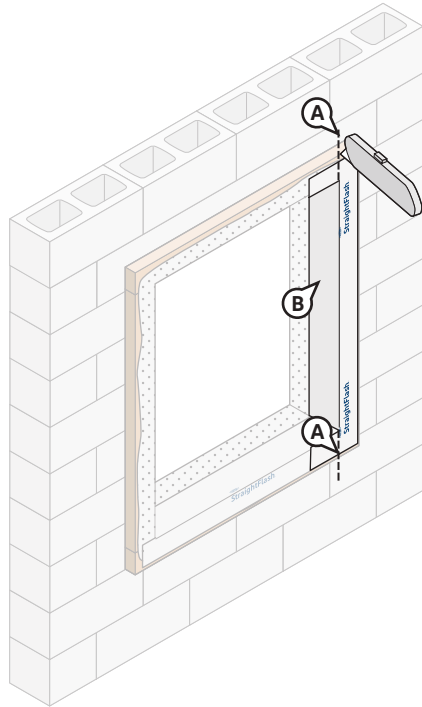


#### STEP 4

- Prepare the jamb flashing by cutting two pieces of **StraightFlash™** that are 4" longer than the jamb length.
- Remove the 2" wide portion of the release paper. Place the flashing onto the face of the bump-out so that it extends a minimum of 2" past the jamb, head, and sill of the rough opening.
- Cut the **StraightFlash™** along the head and the sill of the rough opening. Flaps created from horizontal cuts in **StraightFlash™** should be trimmed so they do not extend more than 2"– 3" along the face of bump-out framing beyond sill-to-jamb and head-to-jamb interfaces.
- Remove the remaining release paper. Fold the **StraightFlash™** into the rough opening and adhere it to the jamb.

## Installation Methods for DuPont Flashing Products Wood Bump-Out Frame with Non-Flanged Window

### Method 3: Alternate Self-Adhered Flashing Option Using DuPont™ StraightFlash™ Only



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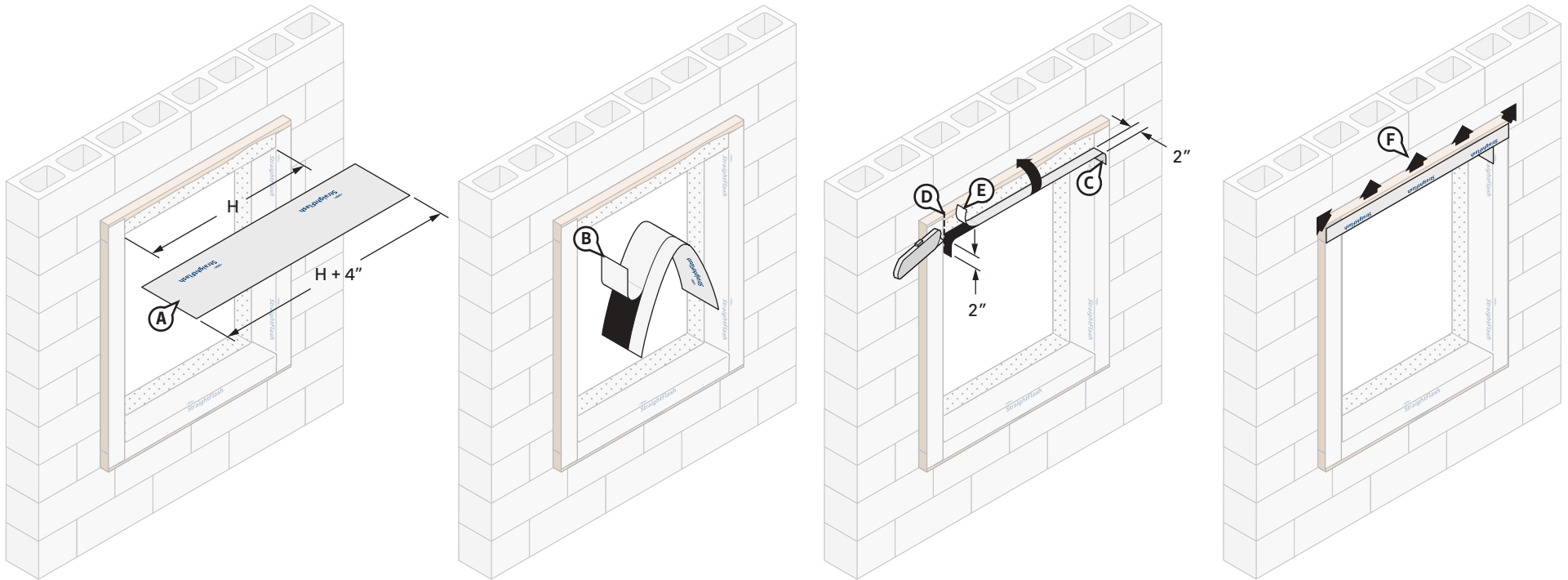
#### STEP 5

- A. Cut vertically along the remaining release paper and remove the excess flashing from the head and the sill.
- B. Firmly press flashing onto the jamb, face of bump-out framing and the sill flashing overlaps.
- C. Install second piece of **StraightFlash™** to opposite jamb.

## Installation Methods for DuPont Flashing Products

### Wood Bump-Out Frame with Non-Flanged Window

#### Method 3: Alternate Self-Adhered Flashing Option Using DuPont™ StraightFlash™ Only



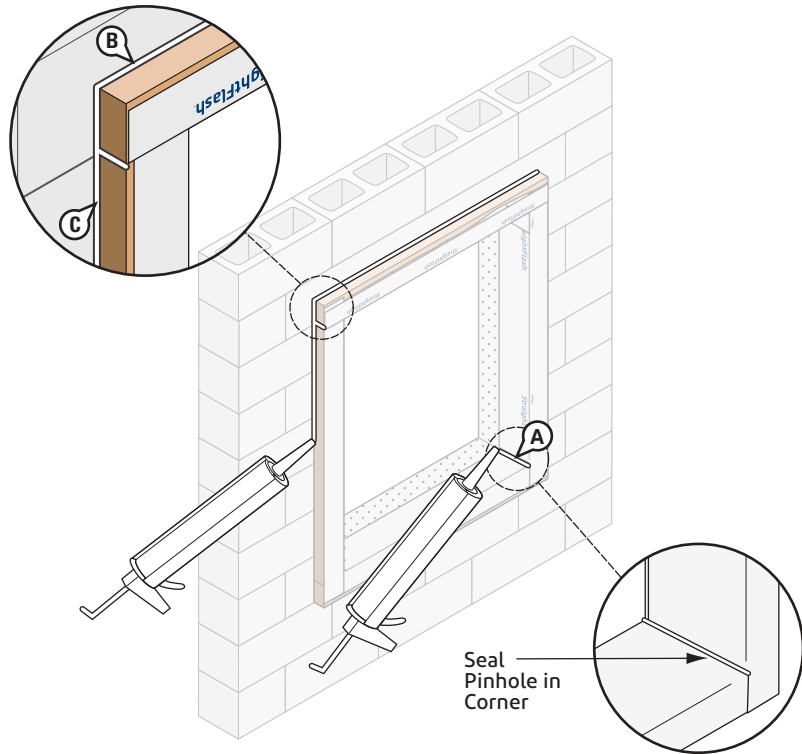
#### STEP 6

- A. Prepare the head flashing by cutting a piece of **StraightFlash™** that is at least 4" longer than the length of the rough opening head (H).
- B. Install the **StraightFlash™** by removing the widest strip of release paper, and aligning the flashing so that a minimum of 2" will extend onto the face of the bump-out framing and will overlap the jamb flashing by at least 2".
- C. Secure flashing tightly into the corners by first working it in along the head before adhering it down the jambs.
- D. Cut the jamb portion of the head flashing even with the face of the bump-out frame.
- E. Remove the remaining release paper.
- F. Fold **StraightFlash™** up and firmly press flashing onto the face of the bump-out framing and jamb flashing overlaps. Apply pressure along entire surface of flashing for a good bond using firm hand pressure, J-roller, or alternate tool without sharp edges (such as a plastic carpet tuck tool) to assist with application of uniform pressure.

## Installation Methods for DuPont Flashing Products

### Wood Bump-Out Frame with Non-Flanged Window

#### Method 3: Alternate Self-Adhered Flashing Option Using DuPont™ StraightFlash™ Only



#### STEP 7

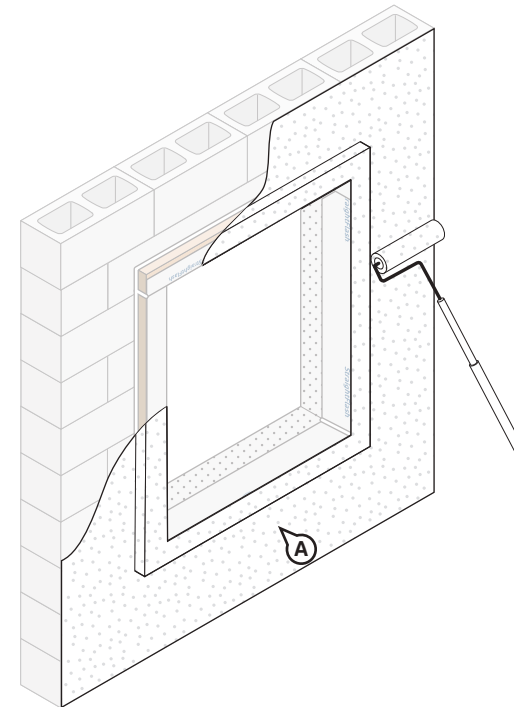
- A. Seal all four inside corners with **DuPont™ Tyvek® Fluid Applied Flashing and Joint Compound+** or **DuPont™ Sealant for DuPont™ Tyvek® Fluid Applied System**. Extend sealant approximately 1/2" onto the face of the bump-out framing flashing.

**NOTE:** Be sure that the pinholes in the flashing corners are fully covered with sealant.

- B. Apply a fillet bead of **Tyvek® Fluid Applied Flashing and Joint Compound+** or **Sealant for Tyvek® Fluid Applied System** around the perimeter of the wood bump-out frame wall interface. The fillet bead should extend approximately 1/2" onto both surfaces, and tool flat.

- C. Tool sealant to achieve optimal joint design.

**NOTE:** **DuPont™ Tyvek® Fluid Applied Products** may be overcoated once a tack-free skin has formed. Skin time is 1-2 hrs at 70°F (20°C), 50% RH.



#### STEP 8

- A. Install **DuPont™ Tyvek® Fluid Applied WB+™** onto wall at 25 mils thick. Coat wood buck, if applicable, up to the edge of the rough opening, overlapping the **DuPont Self-Adhered Flashing Product**. Coating the **DuPont Self-Adhered Flashing Product** into the sill is also acceptable. Upon completion, inspect all surfaces to ensure that they are covered and **free of any voids or pinholes**.

**NOTE:** When spraying, the outer edge of **DuPont Self-Adhered Flashing Product** should be treated with **Tyvek® Fluid Applied Flashing and Joint Compound+**, and tapered to wall substrate to help ensure installation is free of pinholes and voids.

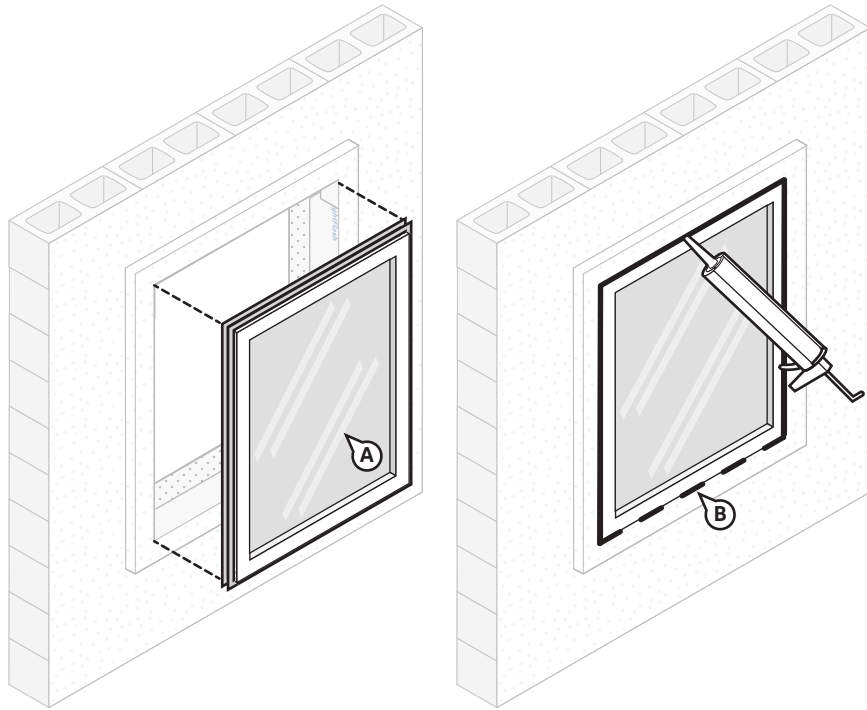
Refer to the [DuPont™ Tyvek® Fluid Applied WB+™ Installation Instructions](#) section of this document. Skin time is 1-2 hours, and 25 mils is workable in 24 hours at 70°F (20°C), 50% RH.



## Installation Methods for DuPont Flashing Products

### Wood Bump-Out Frame with Non-Flanged Window

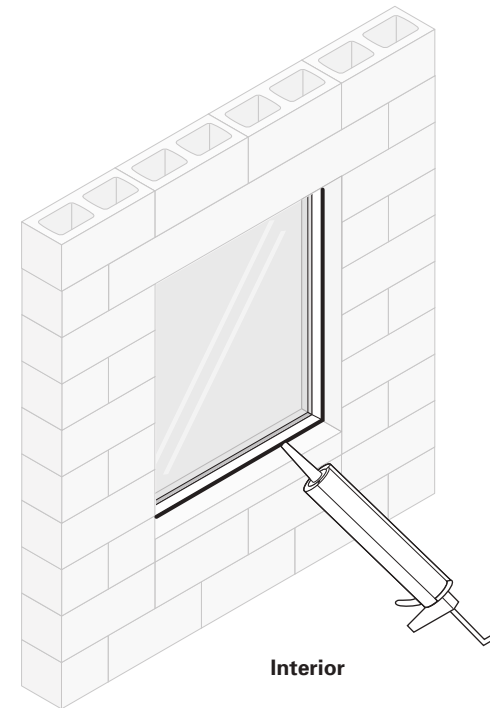
#### Method 3: Alternate Self-Adhered Flashing Option Using DuPont™ StraightFlash™ Only



#### STEP 9

- A. Install window per manufacturer's installation instructions.
- B. Apply an exterior perimeter seal using backer rod and recommended sealant along the jambs and head of the window opening. Refer to [Chemical Compatibility of Representative Building Sealants and Adhesives/Primers](#) for more information on recommended sealants.

**NOTE:** Ensure window and sealant installation allows for drainage at the sill. If sealant is applied at the sill, as a best practice, ensure that there are at least two (2) 2" gaps in the sealant bead for every 4" of window to allow for drainage.



#### STEP 10

##### Create Interior Perimeter Seal

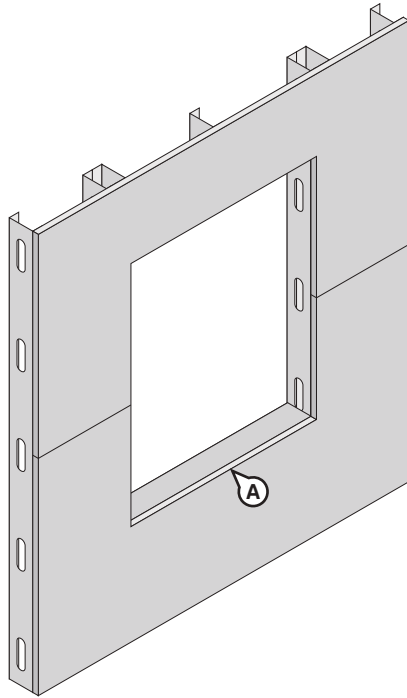
Create a continuous perimeter seal using backer rod and **DuPont™ Sealant for Tyvek® Fluid Applied System**, recommended sealant, or **Great Stuff Pro™ Window and Door Polyurethane Foam Sealant** on window interior to resist air and water infiltration. When using **Great Stuff Pro™ Window and Door Polyurethane Foam Sealant** in perimeter openings less than 1/2", apply using the plastic extension tip for the **Great Stuff Pro™ Dispenser Gun** during installation.

**NOTE:** For high performance installations exceeding ASTM E1677 wind loading pressures (10.8 psf, 65 mph equivalent structural load) and ASTM E331 water infiltration resistance of 6.24 psf, a recommended sealant **must be** installed over the cured foam when using **Great Stuff Pro™ Window and Door Polyurethane Foam Sealant** or other recommended foam. Sealant should be installed over the foam between the window frame and rough opening around the entire interior perimeter. If **Great Stuff Pro™ Window and Door Polyurethane Foam Sealant** or other recommended foam extends beyond the window frame, shave the excess cured foam flush with the window frame before applying sealant. Avoid damaging the **DuPont™ Tyvek® Fluid Applied Flashing and Joint Compound+** and/or **DuPont Self-Adhered Flashing Products**.

## Installation Methods for DuPont Flashing Products

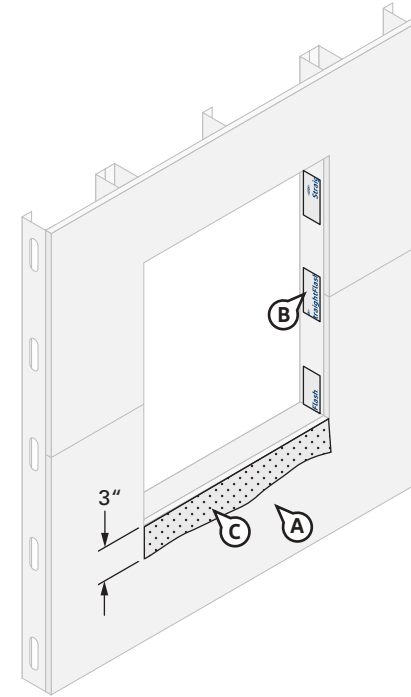
### Steel Stud with Integral Flanged Window

Method 1: Using DuPont™ Tyvek® Fluid Applied Flashing and Joint Compound+ and DuPont™ StraightFlash™



#### STEP 1

A. Cut rough opening in sheathing for window. Ensure that sheathing is cut flush with, or slightly below, the sill framing to allow for positive drainage.



#### STEP 2

- A. Clean substrate of any material that could negatively affect adhesion as well as any sharp protrusions.
- B. Cover any pre-punched holes in the steel studs with patches of **StraightFlash™**.
- C. When using **StraightFlash™** at the sill of the window, apply a recommended adhesive/primer approximately 3" onto the exterior face of the wall and along the interior sill for masonry and/or concrete surfaces.

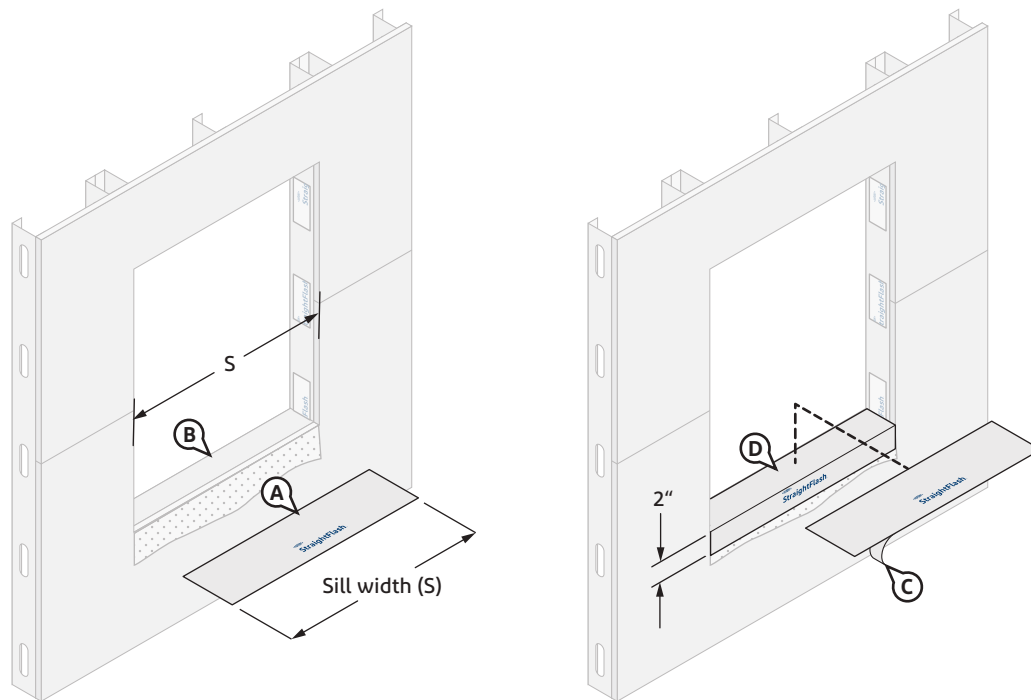
**NOTE:** If applying to exterior gypsum sheathing, the cut edge of the gypsum should be primed using a recommended adhesive/primer on all four sides prior to application of **Tyvek® Fluid Applied Flashing and Joint Compound+**.

**NOTE:** A recommended adhesive/primer is required when applying **DuPont Self-Adhered Flashing Products** on concrete, masonry, and fiber faced exterior gypsum board substrates. The use of a recommended adhesive/primer, is a recommended best practice for application of **DuPont Self-Adhered Flashing Products** onto wood substrates.

## Installation Methods for DuPont Flashing Products

### Steel Stud with Integral Flanged Window

Method 1: Using DuPont™ Tyvek® Fluid Applied Flashing and Joint Compound+ and DuPont™ StraightFlash™



#### STEP 3

- A. Cut 9" **StraightFlash™** the width of rough opening sill (S). Ensure a minimum of 1" adhesion **BEYOND** where the back of the window frame will be located, and 2"- 3" adhesion onto the face of the wall.
- B. Inspect installation surface to ensure surface is free of dirt or substances that could interfere with adhesion as well as any sharp protrusions.
- C. Remove the release paper and position **StraightFlash™** onto the sill and 2" minimum onto the face the wall.
- D. Apply pressure along the entire surface of **StraightFlash™** for a good bond using firm hand pressure or J-roller (or alternate tool without sharp edges such as a plastic carpet tuck tool) to assist with application of uniform pressure.

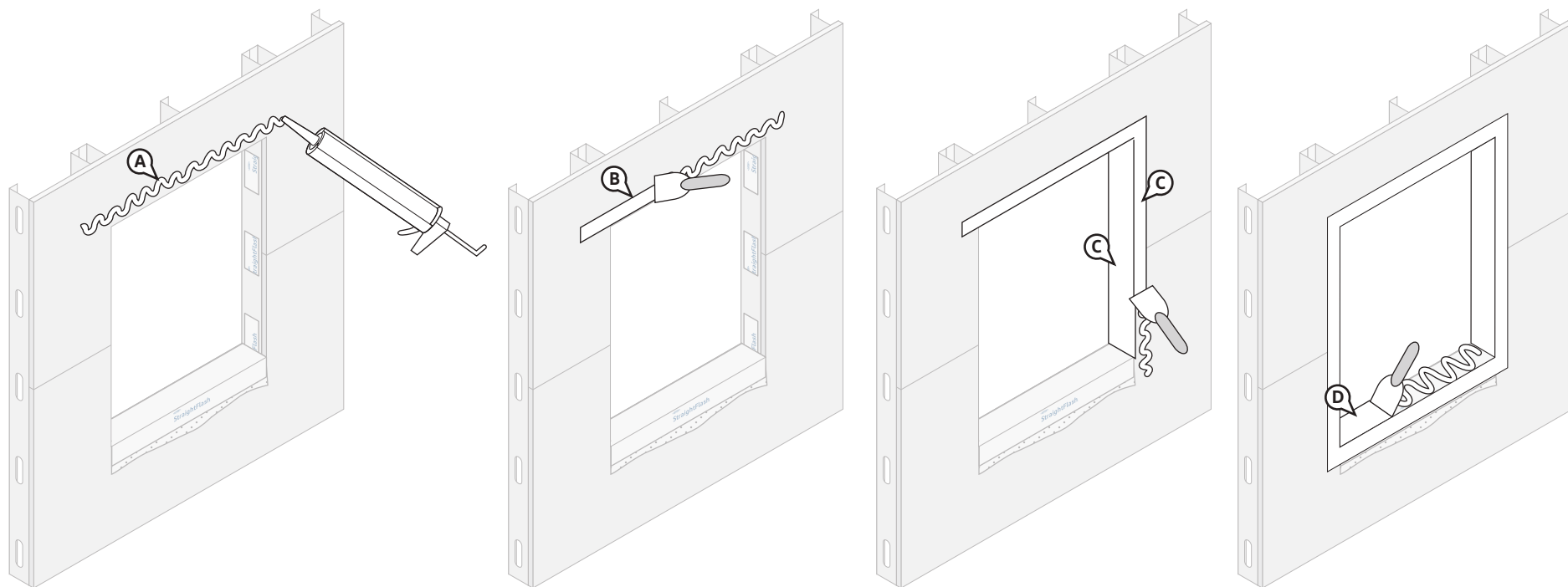
**NOTE:** **StraightFlash™** is not required in cases where no fasteners are being installed through the window sill.

**NOTE:** **DuPont™ FlexWrap™** can be used in place of **StraightFlash™**. When used, **FlexWrap™** should be cut and installed to accommodate the sill, 6" up each jamb, and 2"- 3" onto the face of the wall substrate.

## Installation Methods for DuPont Flashing Products

### Steel Stud with Integral Flanged Window

#### Method 1: Using DuPont™ Tyvek® Fluid Applied Flashing and Joint Compound+ and DuPont™ StraightFlash™



#### STEP 4

- A. Starting at the window head, apply a bead of **Tyvek® Fluid Applied Flashing and Joint Compound+** onto the inside surface of the rough opening and onto the face of the wall.
- B. Use a trowel or brush to smooth out flashing to a thickness of approximately 25 mils. The flashing should cover the inside of the rough opening and extend a minimum of 2" onto the face of the wall.

C. Continue the application process outlined in STEP 4B for the jambs.

- D. The **Tyvek® Fluid Applied Flashing and Joint Compound+** should be applied on top of the **StraightFlash™** along the sill and a minimum 2" on the face of the wall substrate. Be sure all inside corners are filled and integrated with the **StraightFlash™**. A corner trowel may be used to smooth outside corners.

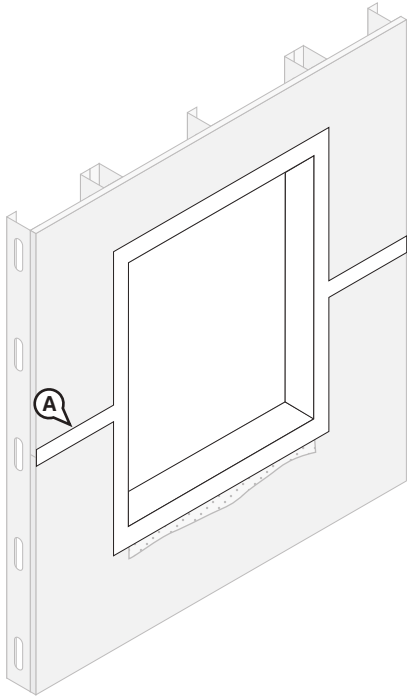
**NOTE:** **Tyvek® Fluid Applied Flashing and Joint Compound+** is not required along the entire sill when **StraightFlash™** is installed as previously captured, provided **Tyvek® Fluid Applied Flashing and Joint Compound+** is applied a minimum 4"– 6" along the sill from the jamb corner.

**NOTE:** If **DuPont™ FlexWrap™** is used along the sill, **Tyvek® Fluid Applied Flashing and Joint Compound+** is not required along the sill to jamb interface but must be applied to head and jamb areas.

## Installation Methods for DuPont Flashing Products

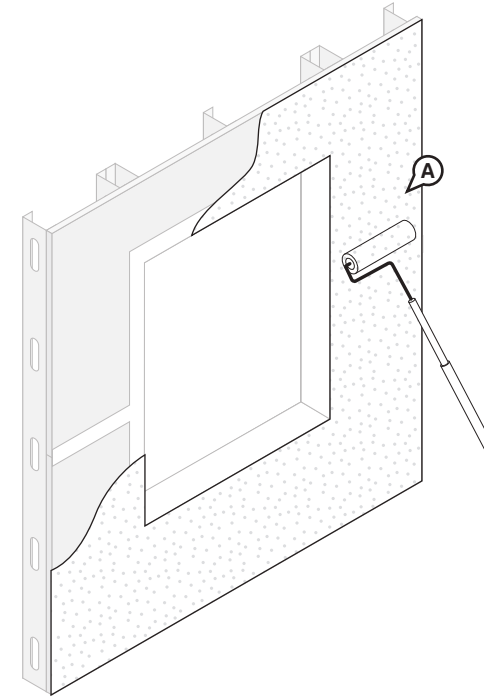
### Steel Stud with Integral Flanged Window

Method 1: Using DuPont™ Tyvek® Fluid Applied Flashing and Joint Compound+ and DuPont™ StraightFlash™



#### STEP 5

- A. Treat sheathing seam joints with **Tyvek® Fluid Applied Flashing and Joint Compound+** in accordance with the [Joint Treatment Methods](#) where applicable.
- B. Upon completion, inspect surface, including all corners, to ensure that **Tyvek® Fluid Applied Flashing and Joint Compound+** is continuous and **free of any voids or pinholes**. **NOTE: DuPont™ Tyvek® Fluid Applied WB+™** may be applied over and integrated with **Tyvek® Fluid Applied Flashing and Joint Compound+** once a tack-free skin has formed. Skin time is 1-2 hrs at 70°F (20°C), 50% RH.



#### STEP 6

- A. Install **Tyvek® Fluid Applied WB+™** up to the edge of the rough opening, overlapping the **Tyvek® Fluid Applied Flashing and Joint Compound+**.

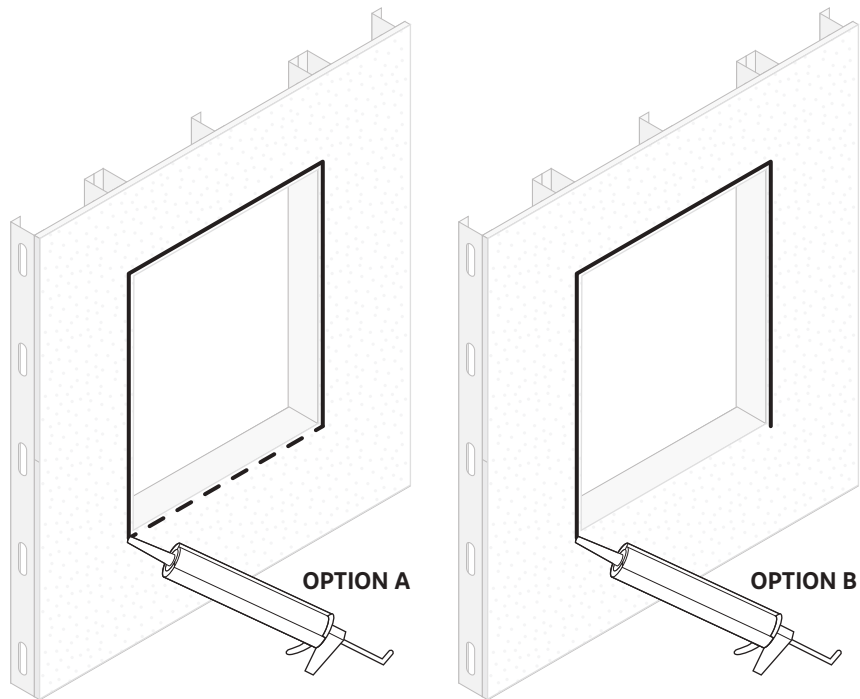
**NOTE:** When spraying, the outer edge of **DuPont Self-Adhered Flashing Product** should be treated with **Tyvek® Fluid Applied Flashing and Joint Compound+** or **Tyvek® Fluid Applied WB+™** tapered to the wall substrate to help ensure installation is free of pinholes and voids.

Refer to the [DuPont™ Tyvek® Fluid Applied WB+™ Installation Instructions](#) section of this document. Exterior insulation and/or cladding may be installed once the membrane has cured sufficiently to resist damage during installation. Skin time is 1 – 2 hours, and 25 mil is workable in 24 hours at 70°F (20°C), 50% RH.

## Installation Methods for DuPont Flashing Products

### Steel Stud with Integral Flanged Window

Method 1: Using DuPont™ Tyvek® Fluid Applied Flashing and Joint Compound+ and DuPont™ StraightFlash™

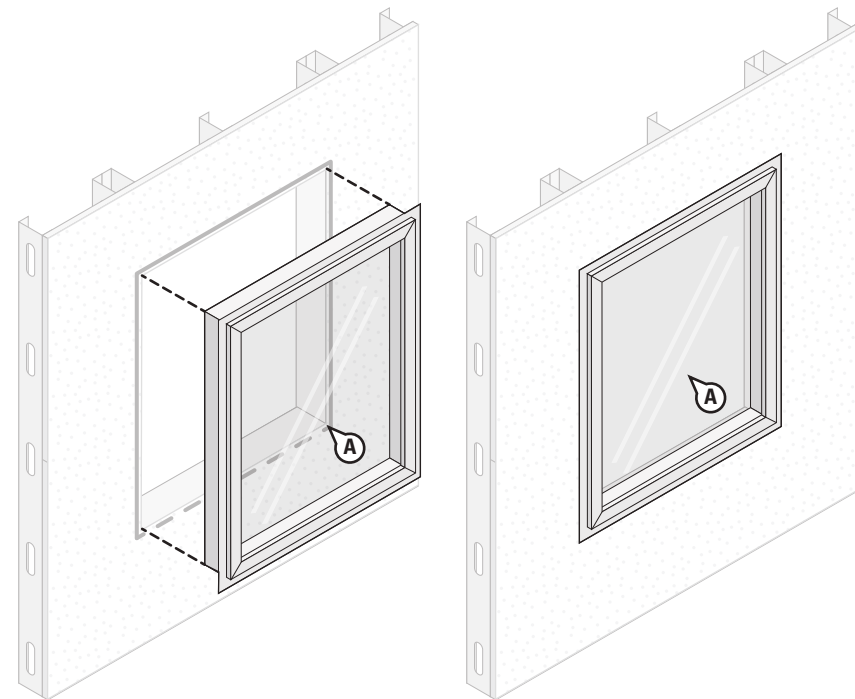


#### STEP 7

After DuPont™ Tyvek® Fluid Applied WB+™ has cured, apply DuPont™ Sealant for DuPont™ Tyvek® Fluid Applied System, or recommended sealant, using one of the following options.

**OPTION A:** Apply a continuous bead of a recommended sealant at window head and jambs to wall or back side of window mounting flange. To allow for drainage, do **NOT** apply continuous sealant bead along sill. Ensure a minimum 2" wide drainage gap in the sealant bead within 4" from each corner of the jamb-sill interface. Continue applying sealant along the sill with additional 2" wide (min.) drainage gaps for every 6"– 12" (on center) of sill width. Refer to [Chemical Compatibility of Representative Building Sealants and Adhesive/Primer](#) for more information on recommended sealants.

**OPTION B:** Apply a continuous bead of a recommended sealant at window head and jambs to wall or back side of window flanges. To allow for drainage, do **NOT** apply sealant bead along sill.



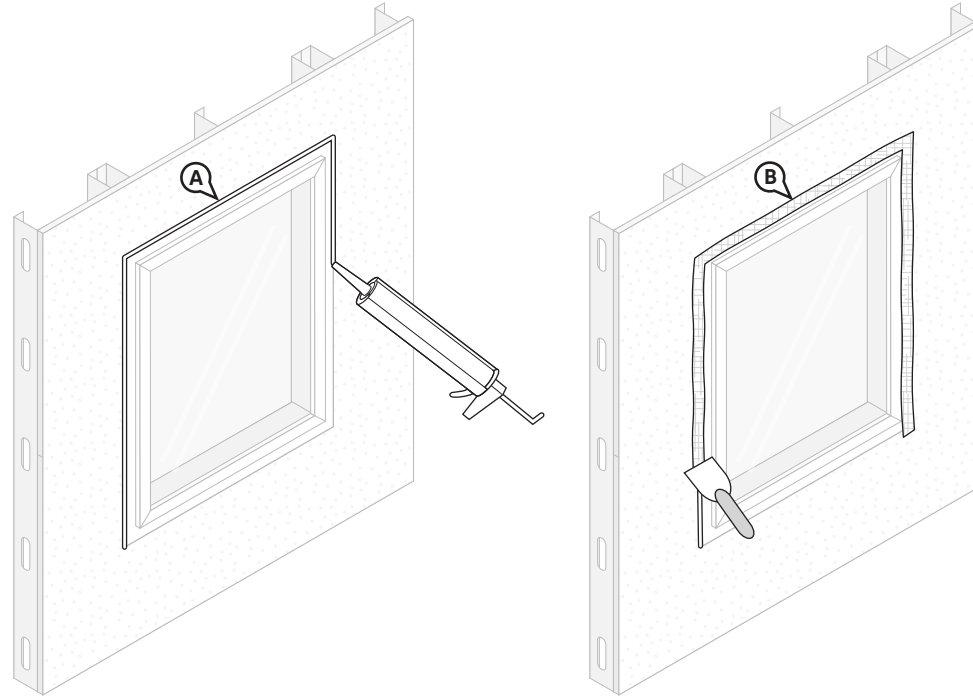
#### STEP 8

A. Install window per manufacturer's installation instructions.

## Installation Methods for DuPont Flashing Products

### Steel Stud with Integral Flanged Window

Method 1: Using DuPont™ Tyvek® Fluid Applied Flashing and Joint Compound+ and DuPont™ StraightFlash™



#### STEP 9

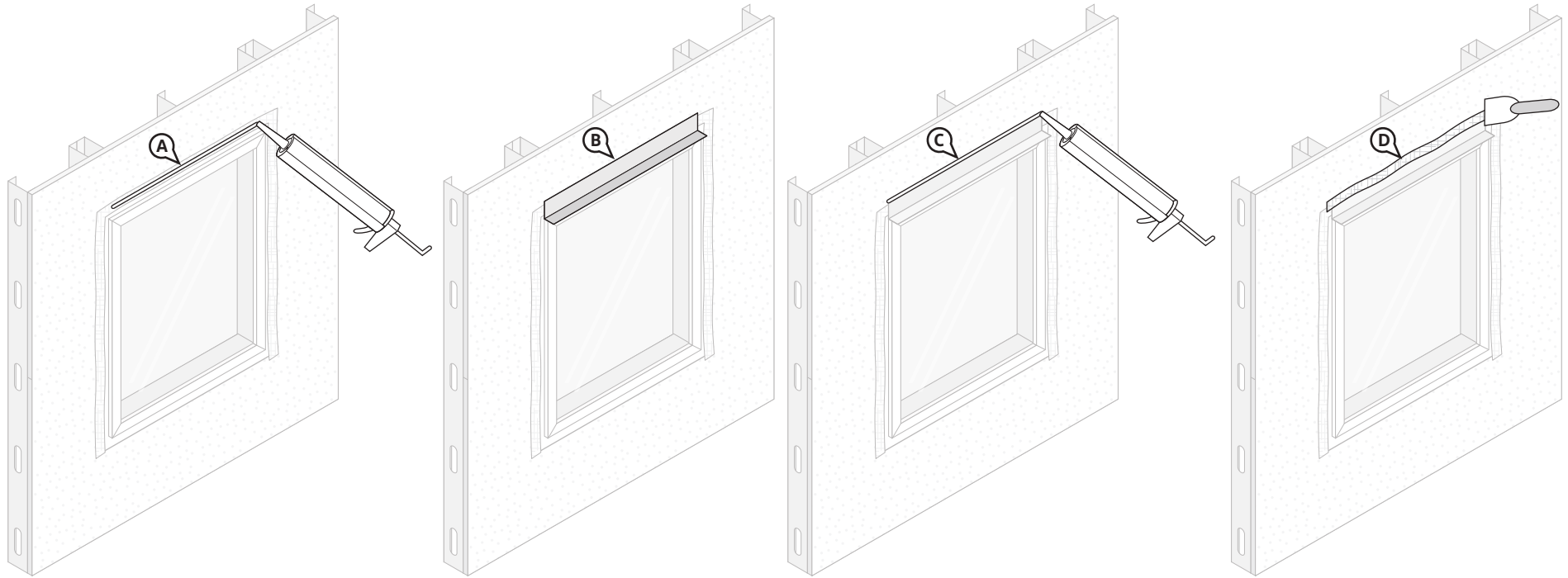
A. Apply a continuous bead of **Tyvek® Fluid Applied Flashing and Joint Compound+** along the interface between the window flange and the wall on the jambs and head of the window.

B. Use a trowel to smooth **Tyvek® Fluid Applied Flashing and Joint Compound+** to approximately 2" wide x 60 mils thick. The **Tyvek® Fluid Applied Flashing and Joint Compound+** should extend onto the window flange a minimum of a 1/2" past the flange fasteners (approximately 1" onto either side of the flange/wall interface). Upon completion, inspect surface to ensure that **Tyvek® Fluid Applied Flashing and Joint Compound+** application is continuous and **free of any voids or pinholes**.

## Installation Methods for DuPont Flashing Products

### Steel Stud with Integral Flanged Window

Method 1: Using DuPont™ Tyvek® Fluid Applied Flashing and Joint Compound+ and DuPont™ StraightFlash™



## STEP 10

### Drip Cap Installation

**NOTE:** The following steps may be used to install a drip cap over the head flashing for any of the window types included in this guide.

A. Apply a wet bed of **Tyvek® Fluid Applied Flashing and Joint Compound+** along the location where the fastener for the drip cap will be positioned. Wet bed can be troweled to 25 mils ±5 mils.

B. Install metal drip cap per project details and/or manufacturer's recommendation.

C. Apply **Tyvek® Fluid Applied Flashing and Joint Compound+** along the top edge of the metal drip cap.

D. Trowel **Tyvek® Fluid Applied Flashing and Joint Compound+** to continuous 25 mils.

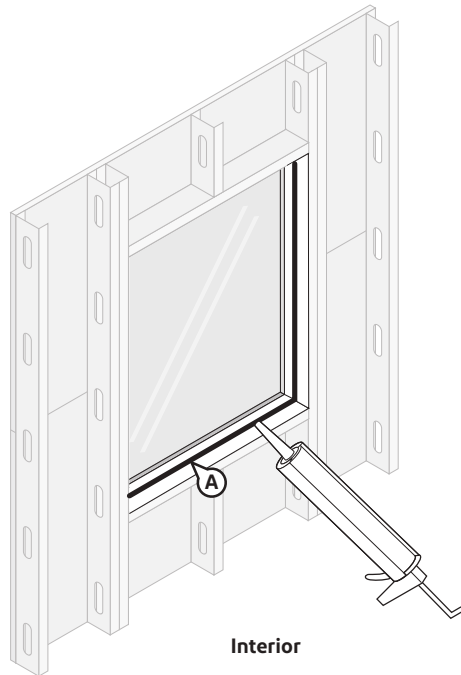


## Installation Methods for DuPont Flashing Products

### Steel Stud with Integral Flanged Window

Ensure a minimum of 1" of coverage onto either side of the drip cap to wall interface.

**Method 1: Using DuPont™ Tyvek® Fluid Applied Flashing and Joint Compound+ and DuPont™ StraightFlash™**



#### STEP 11

##### Create Interior Perimeter Seal

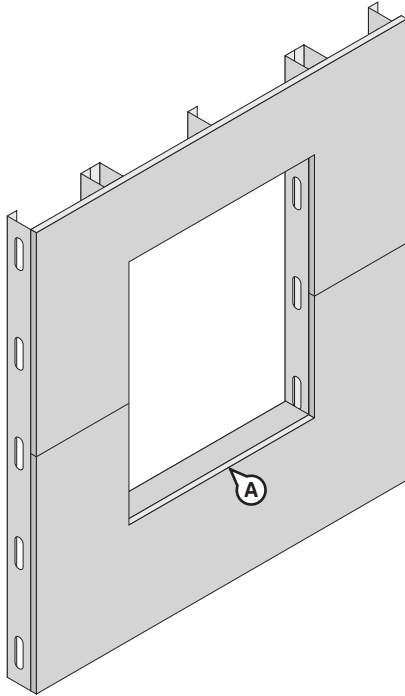
- A. Create a continuous perimeter seal using backer rod and **DuPont™ Sealant for Tyvek® Fluid Applied System**, recommended sealant, or **Great Stuff Pro™ Window and Door Polyurethane Foam Sealant** on window interior to resist air and water infiltration. When using **Great Stuff Pro™ Window and Door Polyurethane Foam Sealant** in perimeter openings less than 1/2", apply using the plastic extension tip for the **Great Stuff Pro™ Dispenser Gun** during installation.

**NOTE:** For high performance installations exceeding ASTM E1677 wind loading pressures (10.8 psf, 65 mph equivalent structural load) and ASTM E331 water infiltration resistance of 6.24 psf, a recommended sealant **must be** installed over the cured foam when using **Great Stuff Pro™ Window and Door Polyurethane Foam Sealant** or other recommended foam. Sealant should be installed over the foam between the window frame and rough opening around the entire interior perimeter. If **Great Stuff Pro™ Window and Door Polyurethane Foam Sealant** or other recommended foam extends beyond the window frame, shave the excess cured foam flush with the window frame before applying sealant. Avoid damaging the **Tyvek® Fluid Applied Flashing and Joint**

## Installation Methods for DuPont Flashing Products

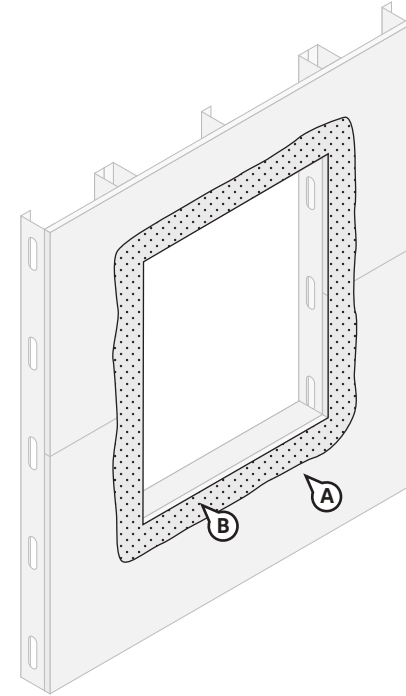
### Steel Stud with Integral Flanged Window

Method 2: Self-Adhered Flashing Using DuPont™ FlexWrap™ and DuPont™ StraightFlash™



#### STEP 1

- A. Cut rough opening in sheathing for window. Ensure that sheathing is cut flush with, or slightly below, the sill framing to allow for positive drainage.



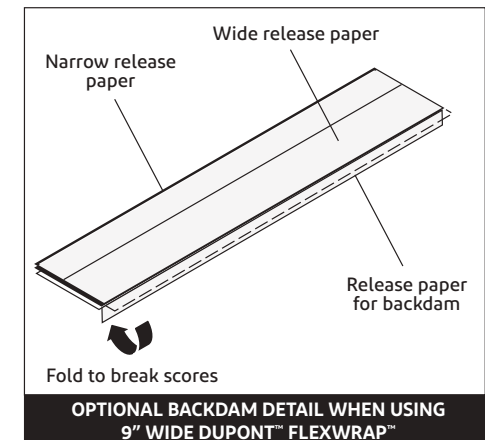
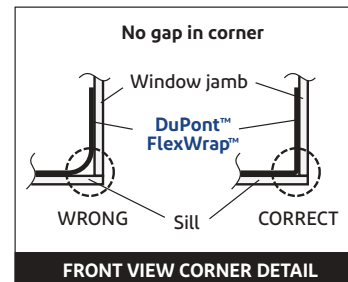
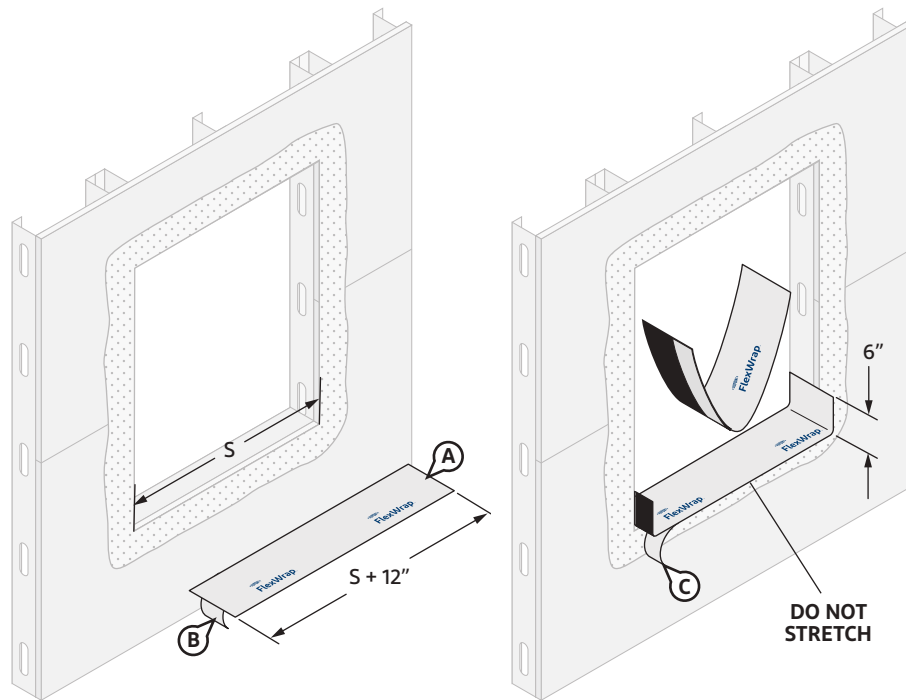
#### STEP 2

- A. Clean substrate of any material that could negatively affect adhesion, as well as any sharp protrusions.
- B. Apply a recommended adhesive/primer approximately 3" onto the exterior face of the wall.

## Installation Methods for DuPont Flashing Products

### Steel Stud with Integral Flanged Window

#### Method 2: Self-Adhered Flashing Using DuPont™ FlexWrap™ and DuPont™ StraightFlash™



### STEP 3

- Cut **FlexWrap™** at least 12" **LONGER** than the width of rough opening sill (S). Use roll widths sufficient to achieve a minimum of 1" adhesion **BEYOND** where the back of the window frame will be located, ensuring 2"– 3" adhesion onto the face of the wall.
- Remove the wide piece of release paper.
- Remove wide piece of release paper. Position on horizontal sill by aligning the inside edge of the narrow release paper with the face of the wall to ensure 2"– 3" of the **FlexWrap™** will be adhered to the face of the wall with a minimum of 6" up each jamb. Adhere into rough opening.

**Optional Back Dam:** Fold 9" **FlexWrap™** to break perforation. Remove center piece of release paper. Cover horizontal sill to accommodate back dam as appropriate, and adhere into rough opening along sill and up jambs (min 6" on each side). Leave 1" release paper on **FlexWrap™** inside rough opening to finish back dam after window installation.

**NOTE:** Use of the optional back dam **must not** interfere with the installation of a continuous interior perimeter seal.

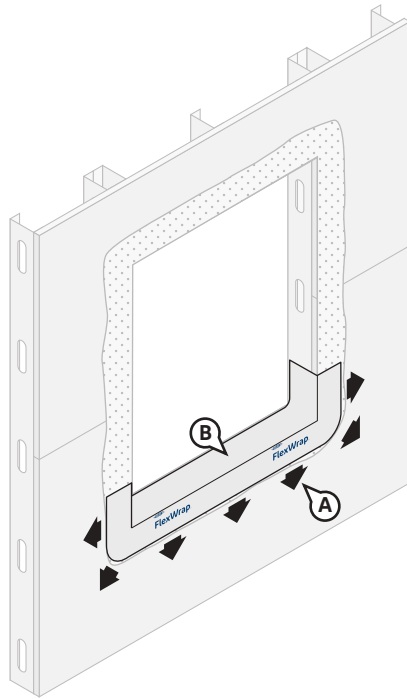
- Remove the remaining release paper.

**NOTE:** DuPont™ Tyvek® Commercial Certified Installers may install a 3-piece head (and sill) detail for window openings less than 6 ft wide. Installers who **are not** DuPont™ Tyvek® Commercial Certified Installers should refer to the [Special Considerations](#) section for more information regarding the 3-piece head/sill detail. Contact your local DuPont Building Envelope Specialist for more information about the Certified Installer program

## Installation Methods for DuPont Flashing Products

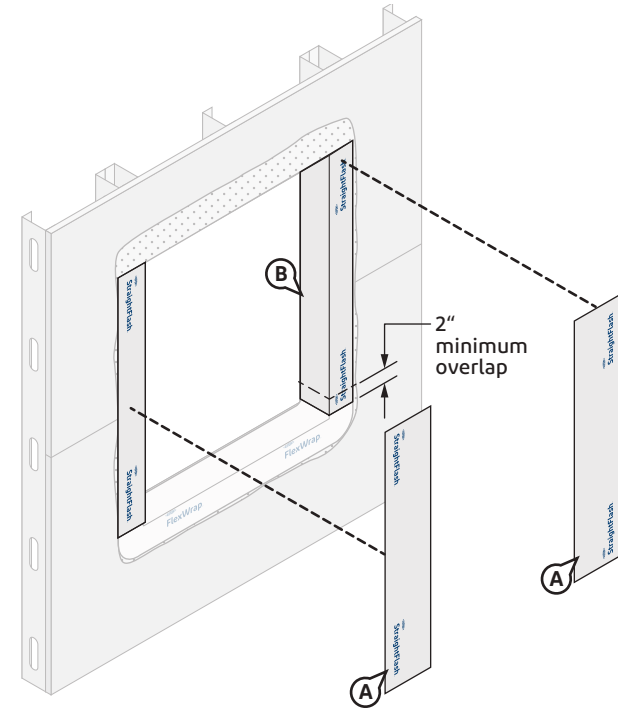
### Steel Stud with Integral Flanged Window

#### Method 2: Self-Adhered Flashing Using DuPont™ FlexWrap™ and DuPont™ StraightFlash™



#### STEP 4

- Fan out the **FlexWrap™** at corners and adhere onto face of wall. Continue adhering onto face of wall along sill.
- Firmly press sill flashing to ensure full adhesion on all surfaces. Eliminate wrinkles and bubbles by smoothing surface and repositioning as necessary.



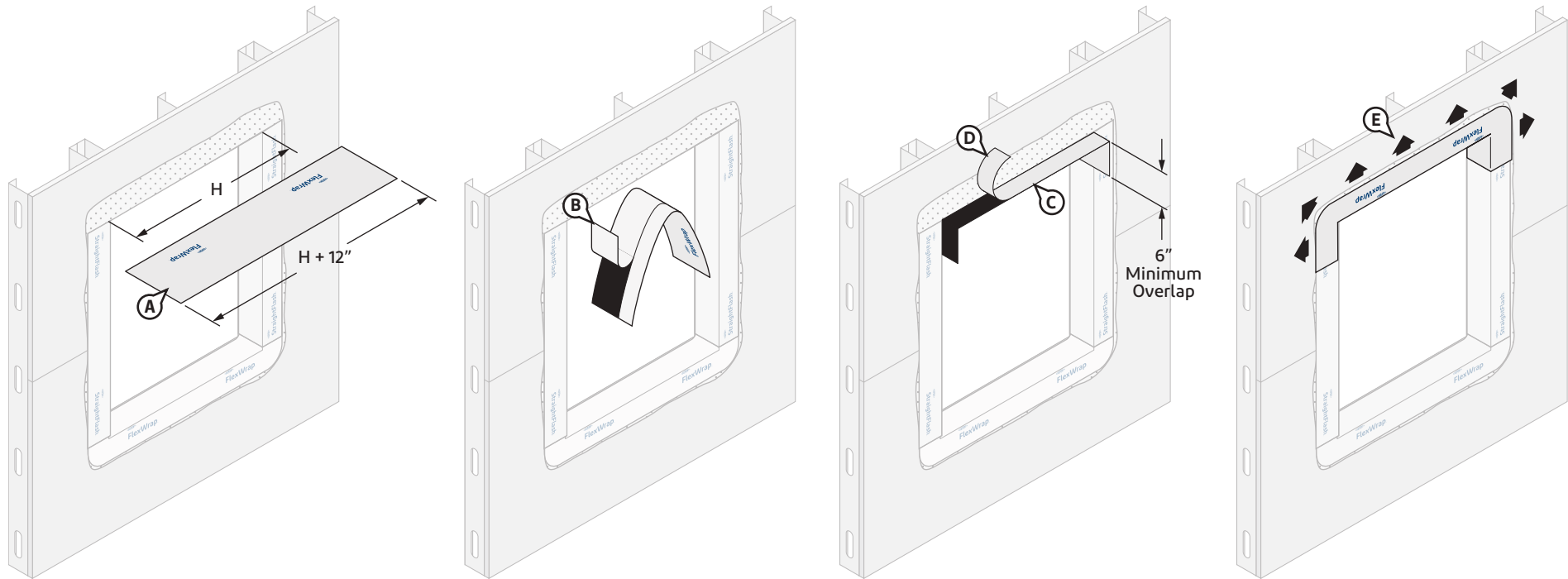
#### STEP 5

- Cut two pieces of 9" **StraightFlash™** the vertical length of the rough opening. Jamb flashing should be long enough to overlap the sill flashing by at least 2" and be overlapped by future head flashing by at least 2".
- Wrap the **StraightFlash™** into the rough opening at each jamb and 2"– 3" onto the face of wall. As a general reference, **DuPont Self-Adhered Flashing Products** should align with the interior edge of the jamb framing.

## Installation Methods for DuPont Flashing Products

### Steel Stud with Integral Flanged Window

#### Method 2: Self-Adhered Flashing Using DuPont™ FlexWrap™ and DuPont™ StraightFlash™



#### STEP 6

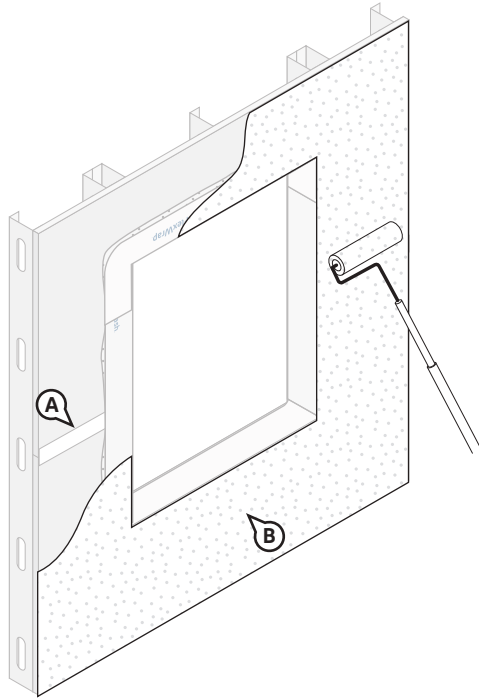
- A. Cut **FlexWrap™** at least 12" **LONGER** than the width of rough opening head (H). Use roll widths sufficient to achieve a minimum of 1" adhesion **BEYOND** where the back of the window frame will be located, ensuring 2"– 3" adhesion onto the face of the wall.
- B. Fold the **FlexWrap™** in half lengthwise to create a slight crease at the center. Remove the wide piece of release paper on one side of the fold. Align the inside edge of the narrow release paper with the face of the wall to ensure 2"– 3" of the **FlexWrap™** will be adhered to the face of the wall.
- C. Starting at the crease, adhere the exposed butyl adhesive to the center of the head and a minimum of 6" down the jamb. Remove the remaining release paper and continue process of adhering **FlexWrap™** along the head of the rough opening and 6" down the opposite jamb.
- D. Remove the remaining release paper.
- E. Fan out the **FlexWrap™** at corners and adhere onto face of wall. Continue adhering onto face of wall along the head. Apply pressure along entire surface of flashing for a good bond using firm hand pressure, J-roller, or alternate tool without sharp edges (such as a plastic carpet tuck tool) to assist with application of uniform pressure.

**NOTE:** DuPont™ Tyvek® Commercial Certified Installers may install a 3-piece head (and sill) detail for window openings less than 6 ft wide. Installers who **are not** DuPont™ Tyvek® Commercial Certified Installers should refer to the [Special Considerations](#) section for more information regarding the 3-piece head/sill detail. Contact your local DuPont Building Envelope Specialist for more information about the Certified Installer program

## Installation Methods for DuPont Flashing Products

### Steel Stud with Integral Flanged Window

#### Method 2: Self-Adhered Flashing Using DuPont™ FlexWrap™ and DuPont™ StraightFlash™

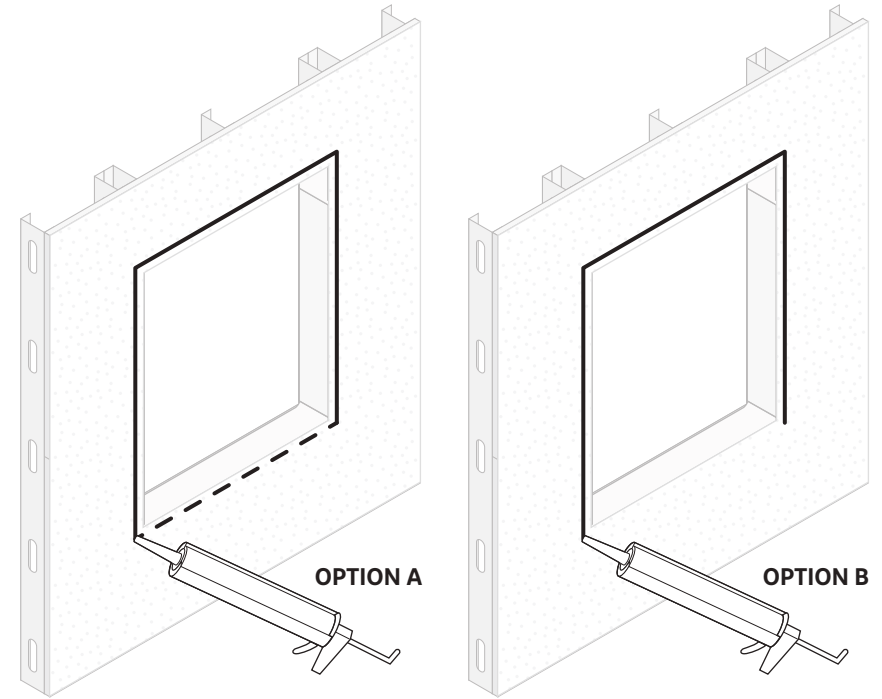


#### STEP 7

- A. Treat sheathing seam joints with **DuPont™ Tyvek® Fluid Applied Flashing and Joint Compound+** in accordance with the [Joint Treatment Methods](#) where applicable.
- B. Install **DuPont™ Tyvek® Fluid Applied WB+™** onto wall at 25 mils thick, overlapping the **DuPont Self-Adhered Flashing Product** up to the edge of the rough opening. Upon completion, inspect all surfaces to ensure that they are covered and free of any voids or pinholes.

#### NOTES:

- **Tyvek® Fluid Applied WB+™** may be applied over and integrated with **Tyvek® Fluid Applied Flashing and Joint Compound+** once a tack-free skin has formed. Skin time is 1–2 hours, and 25 mil is workable in 24 hours at 70°F (20°C), 50% RH.
- When spraying, the outer edge of **DuPont Self-Adhered Flashing Product** should be treated with **DuPont™ Tyvek® Fluid Applied Flashing and Joint Compound+**, and tapered to wall substrate to help ensure installation is free of pinholes and voids..
- Refer to the [DuPont™ Tyvek® Fluid Applied WB+™ Installation Instructions](#) section of this document. Exterior insulation and/or cladding may be installed once the membrane has cured sufficiently to resist damage during installation.



#### STEP 8

After **Tyvek® Fluid Applied WB+™** has cured, one of the sealant options **MUST** be used prior to installation of the integral flanged window.

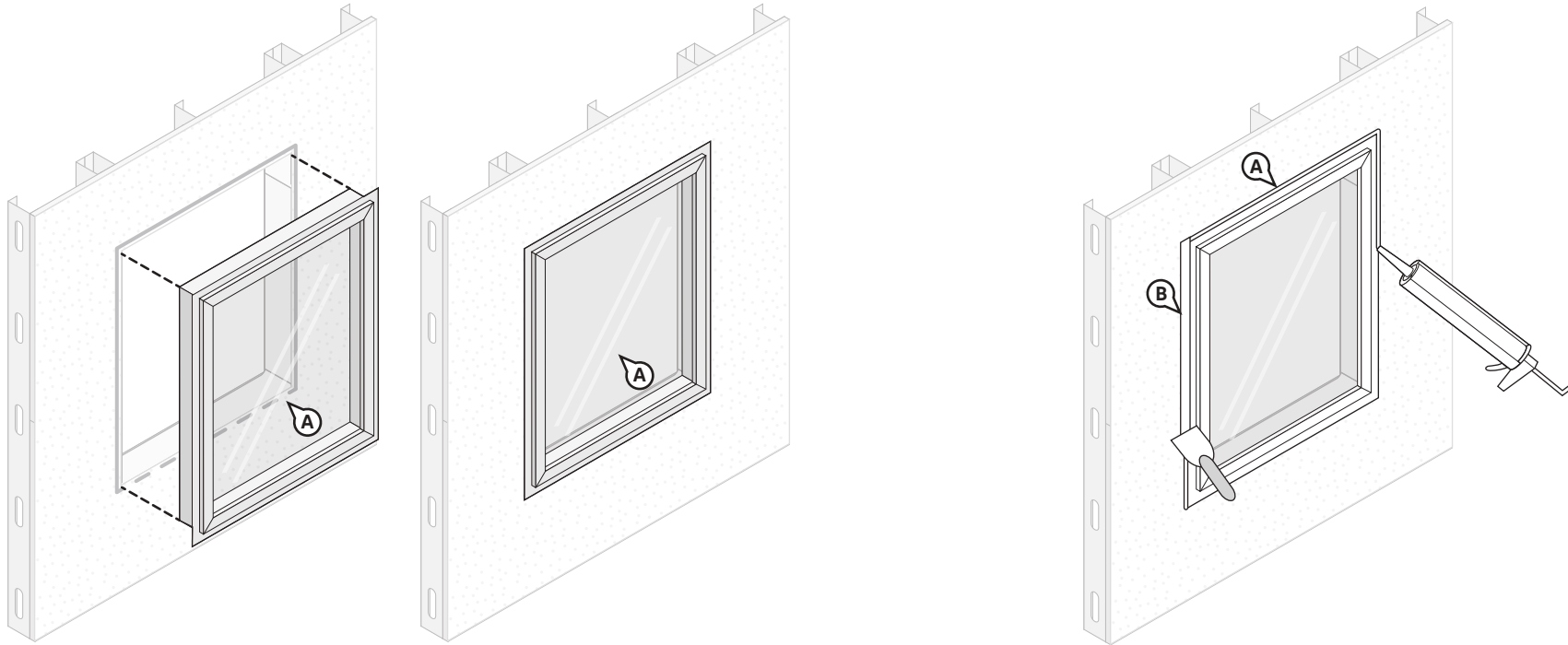
**OPTION A:** Apply a continuous bead of **DuPont™ Sealant for Tyvek® Fluid Applied System** or a recommended sealant at window head and jamb to wall or back side of window mounting flange. To allow for drainage, do **NOT** apply continuous sealant bead along sill. Ensure a minimum 2" wide drainage gap in the sealant bead within 4" from each corner of the jamb-sill interface. Continue applying sealant along the sill with additional 2" wide (min.) drainage gaps for every 6"– 12" (on center) of sill width. Refer to [Chemical Compatibility of Representative Building Sealants and Adhesive/Primer](#) for more information on recommended sealants.

**OPTION B:** Apply a continuous bead of **DuPont™ Sealant for Tyvek® Fluid Applied System** or a recommended sealant at window head and jamb to wall or back side of window flanges. To allow for drainage, do **NOT** apply sealant bead along sill.

## Installation Methods for DuPont Flashing Products

### Steel Stud with Integral Flanged Window

#### Method 2: Self-Adhered Flashing Using DuPont™ FlexWrap™ and DuPont™ StraightFlash™



#### STEP 9

A. Install window per manufacturer's installation instructions.

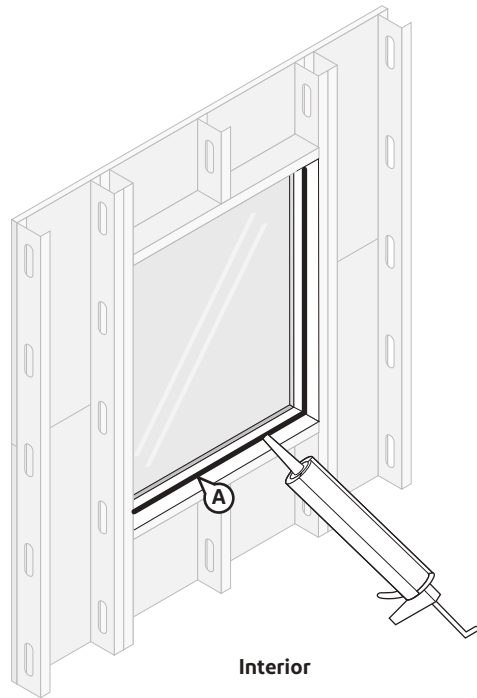
#### STEP 10

- A. Apply a continuous bead of **DuPont™ Tyvek® Fluid Applied Flashing and Joint Compound+** along the interface between the window flange and the wall on the jambs and head of the window.
- B. Use a trowel to smooth flashing to approximately 2" wide x 60 mils thick. The **Tyvek® Fluid Applied Flashing and Joint Compound+** should extend onto the window flange a minimum of a 1/2" past the flange fasteners (approximately 1" onto either side of the flange / wall interface). Upon completion, inspect surface to ensure that **Tyvek® Fluid Applied Flashing and Joint Compound+** application is continuous and **free of any voids or pinholes**.

## Installation Methods for DuPont Flashing Products

### Steel Stud with Integral Flanged Window

#### Method 2: Self-Adhered Flashing Using DuPont™ FlexWrap™ and DuPont™ StraightFlash™



## STEP 11

### Create Interior Perimeter Seal

- A. Create a continuous perimeter seal using backer rod and **DuPont™ Sealant for Tyvek® Fluid Applied System**, recommended sealant, or **Great Stuff Pro™ Window and Door Polyurethane Foam Sealant** on window interior to resist air and water infiltration. When using **Great Stuff Pro™ Window and Door Polyurethane Foam Sealant** in perimeter openings less than 1/2", apply using the plastic extension tip for the **Great Stuff Pro™ Dispenser Gun** during installation.

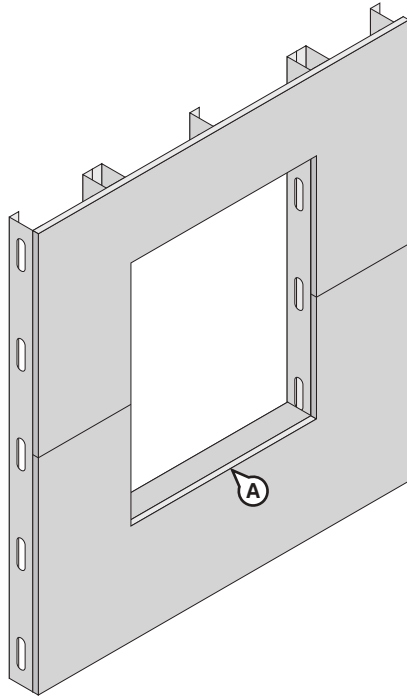
**NOTE:** For high performance installations exceeding ASTM E1677 wind loading pressures (10.8 psf, 65 mph equivalent structural load) and ASTM E331 water infiltration resistance of 6.24 psf, recommended sealant **must be** installed over the cured foam when using **Great Stuff Pro™ Window and Door Polyurethane Foam Sealant** or other recommended foam. Sealant should be installed over the foam between the window frame and rough opening around the entire interior perimeter. If **Great Stuff Pro™ Window and Door Polyurethane Foam Sealant** or other recommended foam extends beyond the window frame, shave the excess cured foam flush with the window frame before applying sealant. Avoid damaging the **DuPont Self-Adhered Flashing Products**.



## Installation Methods for DuPont Flashing Products

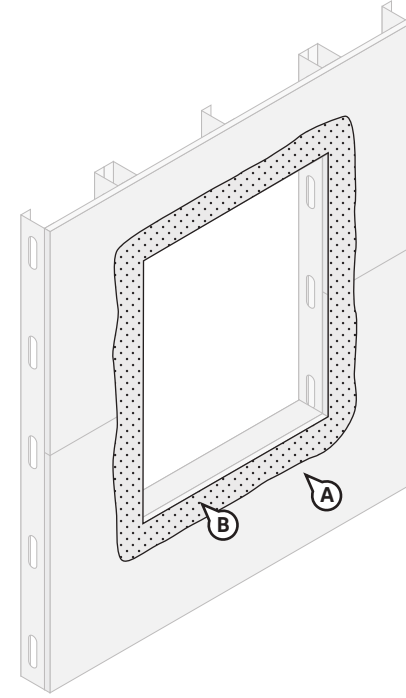
### Steel Stud with Integral Flanged Window

#### Method 3: Alternate Self-Adhered Flashing Option Using DuPont™ StraightFlash™ Only



#### STEP 1

- A. Cut rough opening in sheathing for window. Ensure that sheathing is cut flush with, or slightly below, the sill framing to allow for positive drainage.



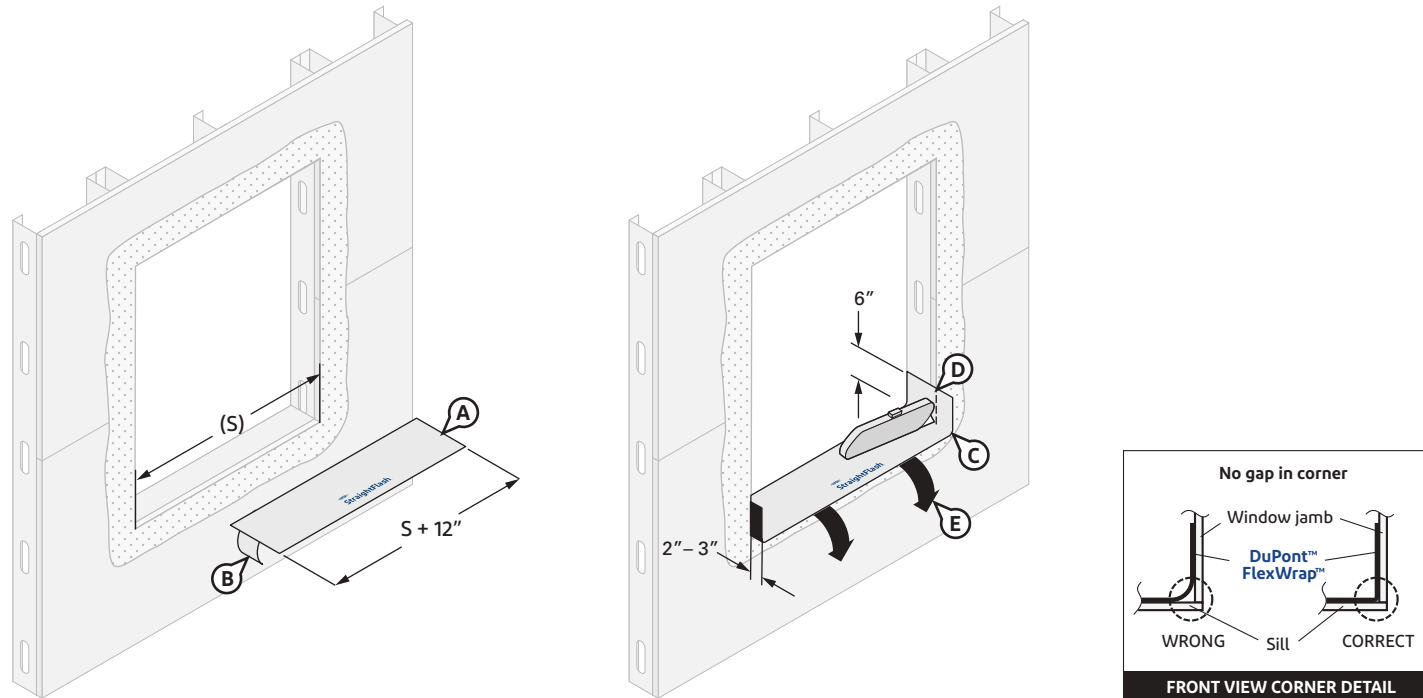
#### STEP 2

- A. Clean substrate of any material that could negatively affect adhesion, as well as any sharp protrusions.
- B. Apply a recommended adhesive/primer approximately 3" onto the exterior face of the wall.

## Installation Methods for DuPont Flashing Products

### Steel Stud with Integral Flanged Window

#### Method 3: Alternate Self-Adhered Flashing Option Using DuPont™ StraightFlash™ Only



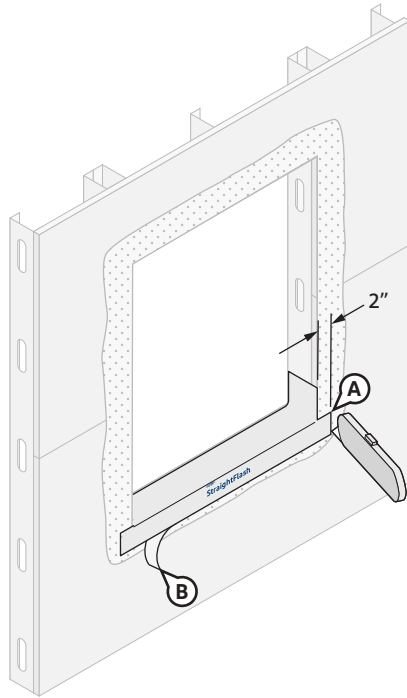
### STEP 3

- A. Cut a piece of 9" **StraightFlash™** the length of the sill (S) plus an additional 12".
- B. Install the **StraightFlash™** by removing the widest strip of release paper, and aligning the flashing so it extends 1" **BEYOND** where the back of the window frame will be located, 2"– 3" onto the face of the wall, and 6" up the jambs.
- C. Secure **StraightFlash™** tightly into the corners by first working it in along the sill before adhering it up the jambs. (See front view corner detail).
- D. Cut the jamb portion of the sill flashing even with the face of the wall.
- E. With release paper still attached, fold flashing down onto the face of the wall.

## Installation Methods for DuPont Flashing Products

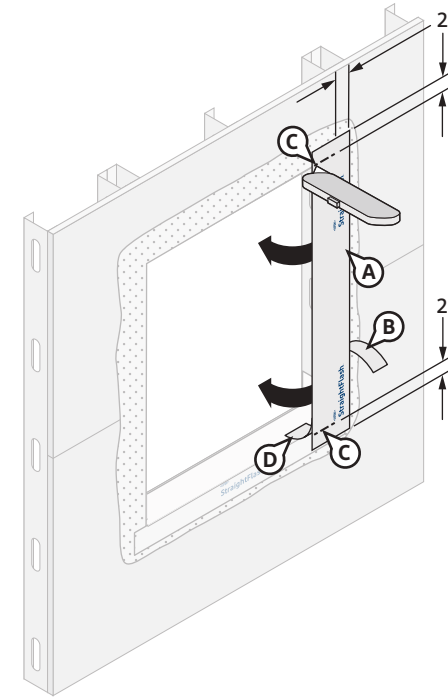
### Steel Stud with Integral Flanged Window

#### Method 3: Alternate Self-Adhered Flashing Option Using DuPont™ StraightFlash™ Only



#### STEP 4

- Flaps created from vertical cuts in **StraightFlash™** should be trimmed so they do not extend more than 2" beyond jamb rough opening onto the face of the wall.
- Remove remaining release paper and firmly press flashing onto the face of the wall.



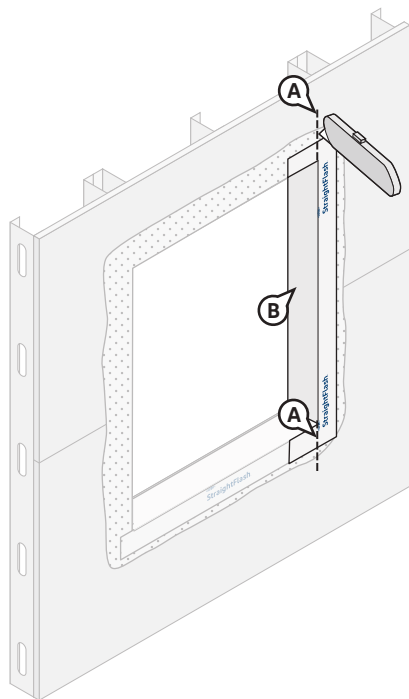
#### STEP 5

- Prepare the jamb flashing by cutting two pieces of **StraightFlash™** that are 4" longer than the jamb length.
- Use perforated release paper that allows **StraightFlash™** installed along the jambs to be aligned with **StraightFlash™** on sill that extends onto face of the wall. Place the flashing onto the face of the wall so that it extends a minimum of 2" past the jamb, head, and sill of the rough opening.
- Cut the **StraightFlash™** along the head and the sill of the rough opening. Flaps created from horizontal cuts in **StraightFlash™** should be trimmed so they do not extend more than 2"- 3" along the face of bump-out framing beyond sill-to-jamb and head-to-jamb interfaces.
- Remove the remaining release paper. Fold the flashing into the rough opening and adhere it to the jamb.

## Installation Methods for DuPont Flashing Products

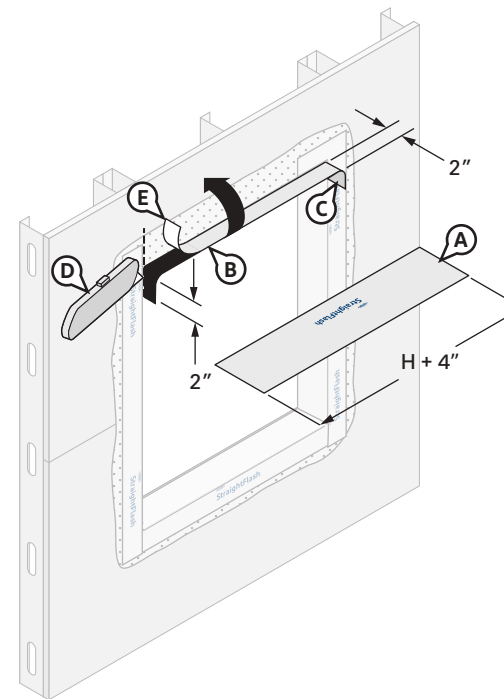
### Steel Stud with Integral Flanged Window

#### Method 3: Alternate Self-Adhered Flashing Option Using DuPont™ StraightFlash™ Only



#### STEP 6

- A. Cut vertically along the remaining release paper and remove the excess flashing from the head and the sill. While trimming excess, ensure previously installed **StraightFlash™** remains continuous without surface cuts and/or gouges.
- B. Apply firm pressure along the entire surface to ensure full adhesion on all surfaces.



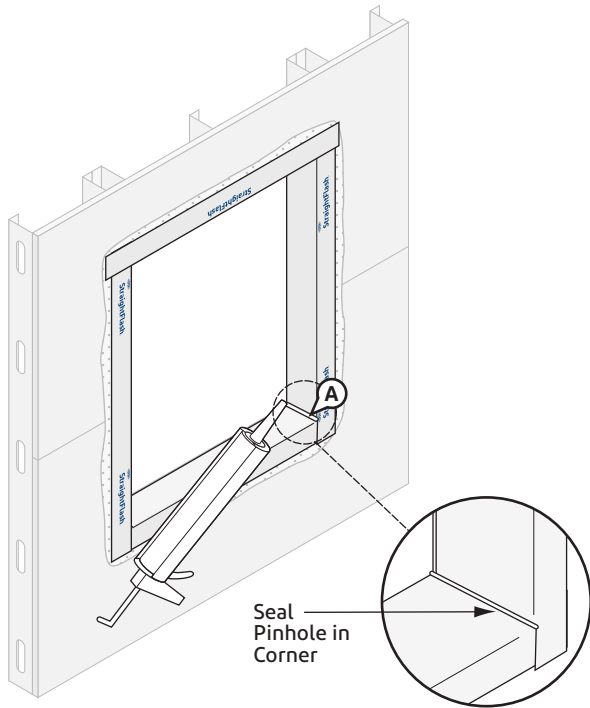
#### STEP 7

- A. Cut a piece of **StraightFlash™** that is at least 4" longer than the length of the rough opening head (H).
- B. Install the **StraightFlash™** by removing the widest strip of release paper, and aligning the flashing so it extends 2"– 3" onto the face of the wall and overlaps the jamb flashing by at least 2".
- C. Secure flashing tightly into the corners by first working it in along the head before adhering it down the jambs.
- D. Cut the jamb portion of the head flashing even with the face of the wall.
- E. Remove the remaining release paper, fold the flashing up, and firmly press flashing onto the face of the wall and jamb flashing overlaps. Apply pressure along entire surface of flashing for a good bond using firm hand pressure, J-roller, or alternate tool without sharp edges (such as a plastic carpet tuck tool) to assist with application of uniform pressure.

## Installation Methods for DuPont Flashing Products

### Steel Stud with Integral Flanged Window

#### Method 3: Alternate Self-Adhered Flashing Option Using DuPont™ StraightFlash™ Only

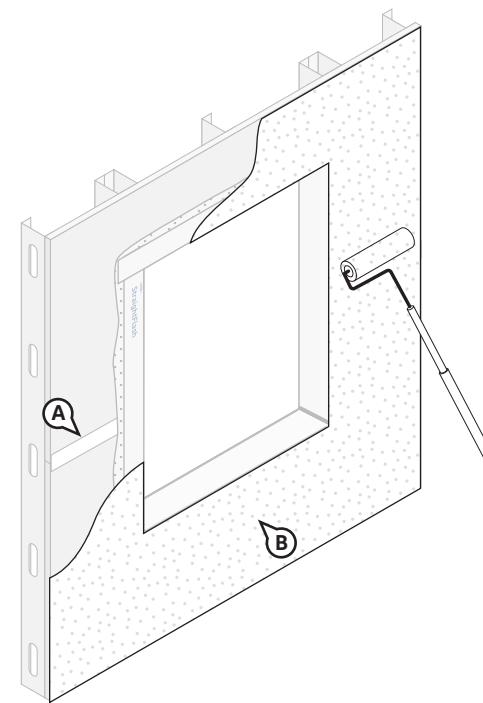


#### STEP 8

- A. Seal all four inside corners with **DuPont™ Tyvek® Fluid Applied Flashing and Joint Compound+** or **DuPont™ Sealant for DuPont™ Tyvek® Fluid Applied System**. Extend applied product approximately 1/2" onto the face of the wall flashing.

**NOTE:** Be sure that the pinholes in the flashing corners are fully covered with sealant.

**NOTE:** **DuPont™ Tyvek® Fluid Applied Products** may be overcoated once a tack-free skin has formed. Skin time is 1-2 hrs at 70°F (20°C), 50% RH.



#### STEP 9

- A. Treat sheathing seam joints with **DuPont™ Tyvek® Fluid Applied Flashing and Joint Compound+** in accordance with the [Joint Treatment Methods](#) where applicable.
- B. Install **DuPont™ Tyvek® Fluid Applied WB+™** onto wall at 25 mils thick, overlapping the **DuPont Self-Adhered Flashing Product** up to the edge of the rough opening. Upon completion, inspect all surfaces to ensure that they are covered and free of any voids or pinholes.

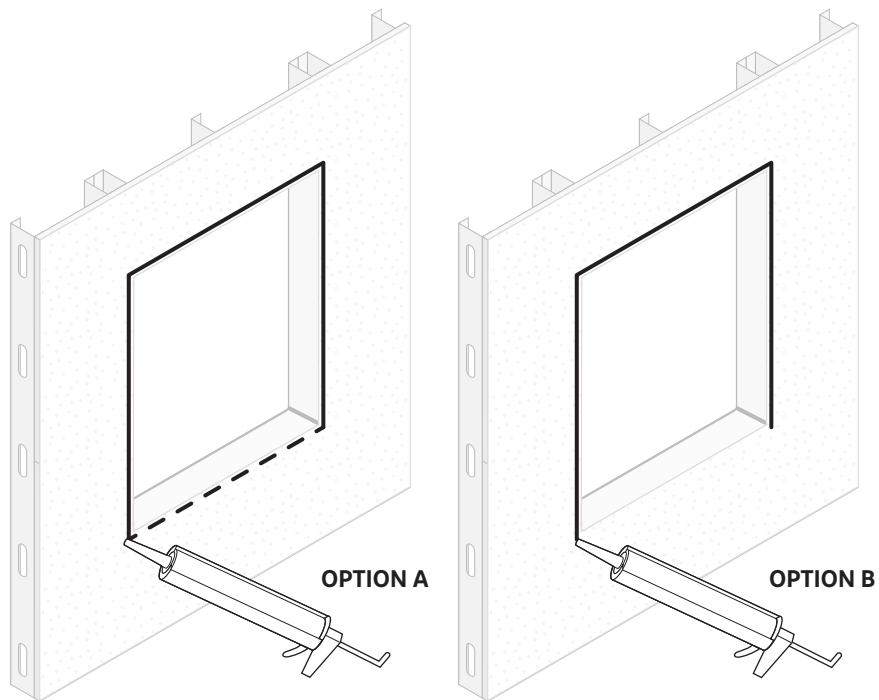
#### NOTES:

- **Tyvek® Fluid Applied WB+™** may be applied over and integrated with **Tyvek® Fluid Applied Flashing and Joint Compound+** once a tack-free skin has formed. Skin time is 1–2 hours, and 25 mil is workable in 24 hours at 70°F (20°C), 50% RH.
- When spraying, the outer edge of **DuPont Self-Adhered Flashing Product** should be treated with **DuPont™ Tyvek® Fluid Applied Flashing and Joint Compound+**, and tapered to wall substrate to help ensure installation is free of pinholes and voids.
- Refer to the [DuPont™ Tyvek® Fluid Applied WB+™ Installation Instructions](#) section of this document. Exterior insulation and/or cladding may be installed once the membrane has cured sufficiently to resist damage during installation.

## Installation Methods for DuPont Flashing Products

### Steel Stud with Integral Flanged Window

#### Method 3: Alternate Self-Adhered Flashing Option Using DuPont™ StraightFlash™ Only

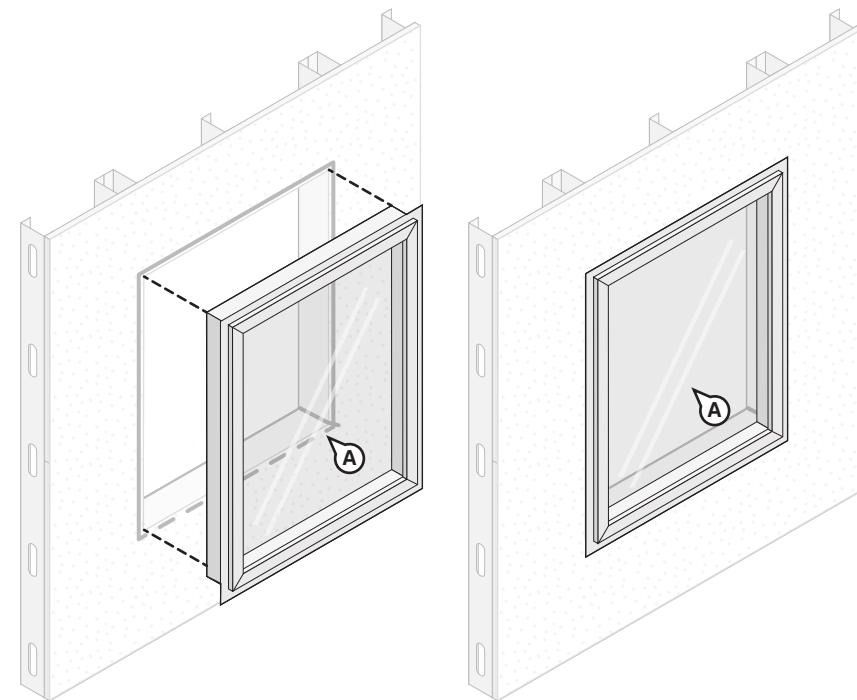


#### STEP 10

After the **DuPont™ Tyvek® Fluid Applied WB+™** has cured, one of the sealant options captured must be used prior to installation of the integral flanged window.

**OPTION A:** Apply a continuous bead of **DuPont™ Sealant for Tyvek® Fluid Applied System** or a recommended sealant at window head and jamba to wall or back side of window flanges. To allow for drainage, do not apply continuous sealant bead along sill. Ensure a minimum 2" wide drainage gap in the sealant bead within 4" from each corner of the jamb-sill interface. Continue applying sealant along the sill with additional 2" wide (min.) drainage gaps for every 6"– 12" (on center) of sill width. Refer to [Chemical Compatibility of Representative Building Sealants and Adhesive/Primer](#) for more information on recommended sealants.

**OPTION B:** Apply a continuous bead of **DuPont™ Sealant for Tyvek® Fluid Applied System** or a recommended sealant at window head and jamba to wall or back side of window flanges. To allow for drainage, do not apply sealant bead along sill.



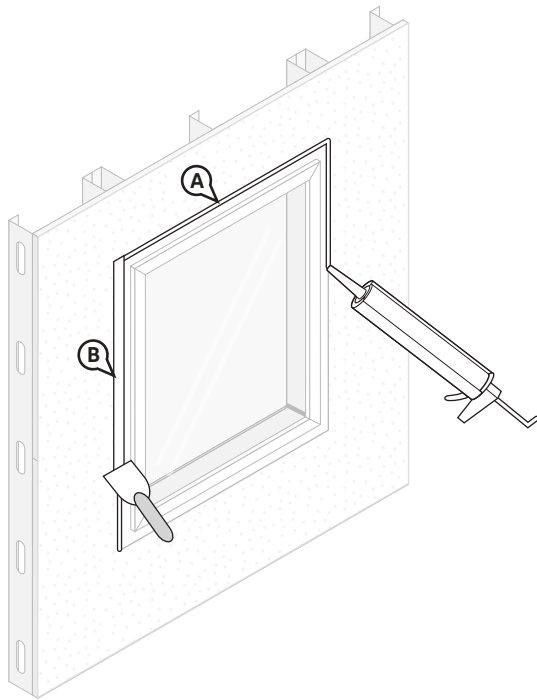
#### STEP 11

A. Install window per manufacturer's installation instructions.

## Installation Methods for DuPont Flashing Products

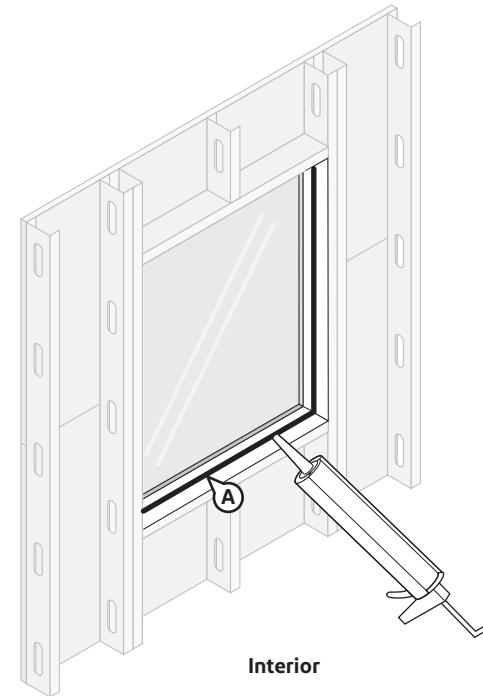
### Steel Stud with Integral Flanged Window

#### Method 3: Alternate Self-Adhered Flashing Option Using DuPont™ StraightFlash™ Only



#### STEP 12

- A. Apply a continuous bead of **DuPont™ Tyvek® Fluid Applied Flashing and Joint Compound+** along the interface between the window flange and the wall on the jambs and head of the window.
- B. Use a trowel to smooth flashing to approximately 2" wide x 60 mils thick. The **Tyvek® Fluid Applied Flashing and Joint Compound+** should extend onto the window flange a minimum of a 1/2" past the flange fasteners (approximately 1" onto either side of the flange / wall interface). Upon completion, inspect surface to ensure that **Tyvek® Fluid Applied Flashing and Joint Compound+** application is continuous and **free of any voids or pinholes**.



#### STEP 13

##### Create Interior Perimeter Seal

- A. Create a continuous perimeter seal using backer rod and **DuPont™ Sealant for Tyvek® Fluid Applied System**, recommended sealant, or **Great Stuff Pro™ Window and Door Polyurethane Foam Sealant** on window interior to resist air and water infiltration. When using **Great Stuff Pro™ Window and Door Polyurethane Foam Sealant** in perimeter openings less than 1/2", apply using the plastic extension tip for the **Great Stuff Pro™ Dispenser Gun** during installation.

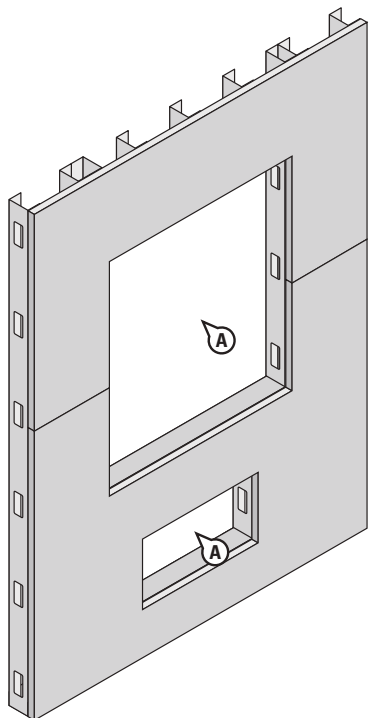
**NOTE:** For high performance installations exceeding ASTM E1677 wind loading pressures (10.8 psf, 65 mph equivalent structural load) and ASTM E331 water infiltration resistance of 6.24 psf, a recommended sealant **must be** installed over the cured foam when using **Great Stuff Pro™ Window and Door Polyurethane Foam Sealant** or other recommended foam. Sealant should be installed over the foam between the window frame and rough opening around the entire interior perimeter. If **Great Stuff Pro™ Window and Door Polyurethane Foam Sealant** or other recommended foam extends beyond the window frame, shave the excess cured foam flush with the window frame before applying sealant. Avoid damaging the **StraightFlash™**.

## Installation Methods for DuPont Flashing Products

### Packaged Terminal Air Conditioner (PTAC) Unit

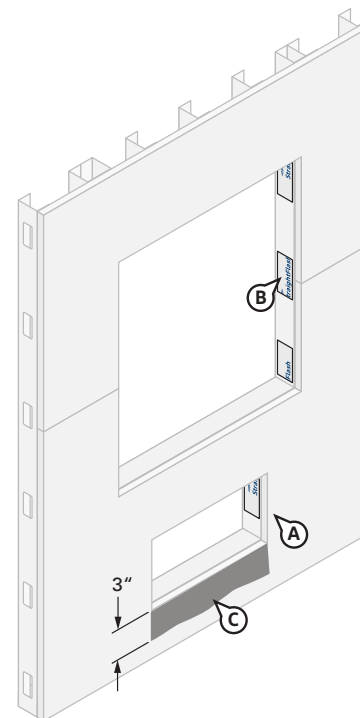
This method is for flashing/protecting the rough opening of a Packaged Terminal Air Conditioner (PTAC) Unit.

**Method 1: Using DuPont™ Tyvek® Fluid Applied Flashing and Joint Compound+ and DuPont™ StraightFlash™**



#### STEP 1

- A. Cut rough openings in sheathing for the PTAC unit and window. Ensure that sheathing is cut flush with, or slightly below the sill framing to allow for positive drainage.



#### STEP 2

- A. Clean substrate of any material that could negatively affect adhesion as well as any sharp protrusions.
- B. Cover any pre-punched holes in the steel studs with patches of **StraightFlash™**.
- C. When using **StraightFlash™** at the sill, apply a recommended adhesive/primer approximately 3" onto the exterior face of the wall and along the interior sill for masonry and/or concrete surfaces.

**NOTE:** If applying to exterior gypsum sheathing, the cut edge of the gypsum should be primed using a recommended adhesive/primer on all four sides prior to application of **Tyvek® Fluid Applied Flashing and Joint Compound+**.

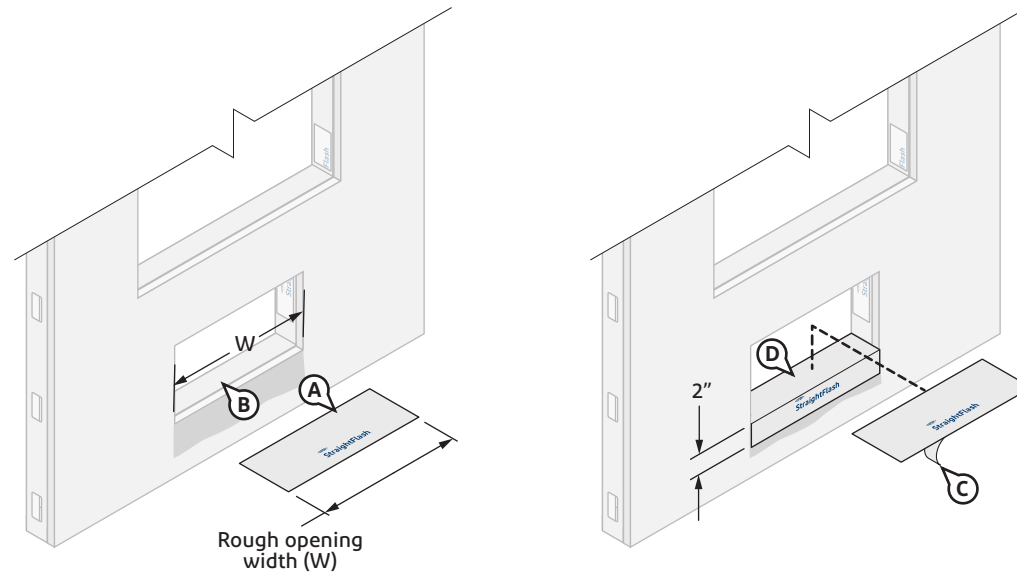
**NOTE:** A recommended adhesive/primer is required when applying **DuPont Self-Adhered Flashing Products** on concrete, masonry, and fiber faced exterior gypsum board substrates. The use of a recommended adhesive/primer, is a recommended best practice for application of **DuPont Self-Adhered Flashing Products** onto wood substrates.



## Installation Methods for DuPont Flashing Products

### Packaged Terminal Air Conditioner (PTAC) Unit

#### Method 1: Using DuPont™ Tyvek® Fluid Applied Flashing and Joint Compound+ and DuPont™ StraightFlash™



### STEP 3

- A. Cut 9" **StraightFlash™** the width of the PTAC rough opening (W). Ensure a minimum of 1" adhesion **BEYOND** where the PTAC frame will be located, and 2"– 3" adhesion onto the face of the wall.
- B. Inspect installation surface to ensure surface is free of dirt or substances that could interfere with adhesion as well as any sharp protrusions.

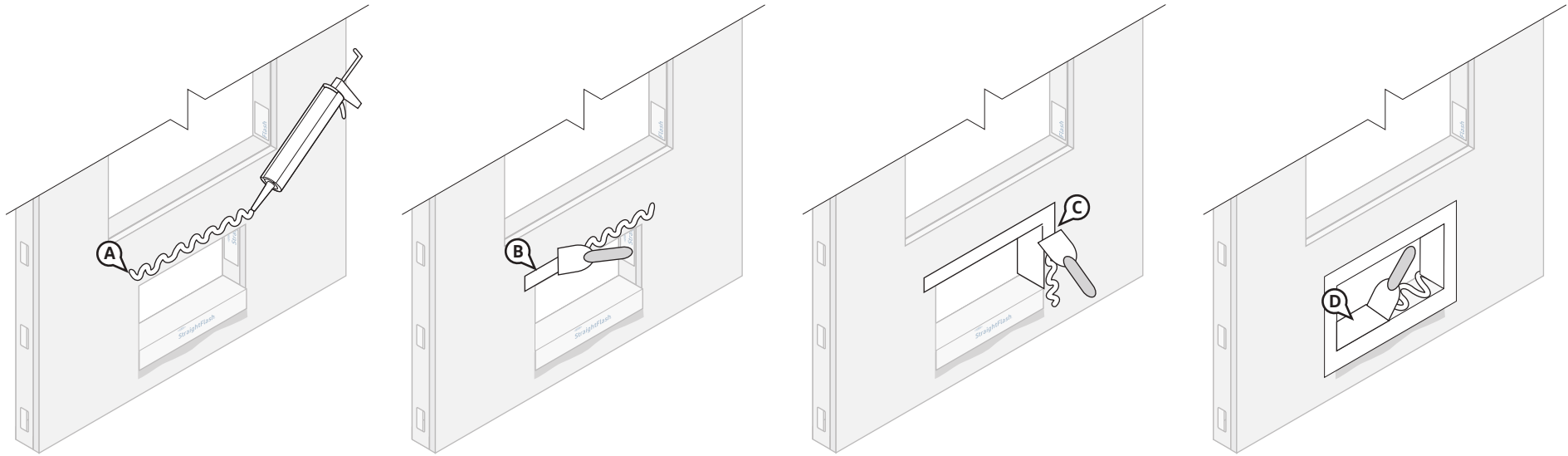
- C. Remove the release paper and position **StraightFlash™** onto the sill and 2" minimum onto the face the wall.
- D. Apply pressure along the entire surface of **StraightFlash™** for a good bond using firm hand pressure or J-roller (or alternate tool without sharp edges such as a plastic carpet tuck tool) to assist with application of uniform pressure.

**NOTE:** **StraightFlash™** is not required in cases where no fasteners are being installed through the sill.

**NOTE:** **DuPont™ FlexWrap™** can be used in place of **StraightFlash™**. When used, **FlexWrap™** should be cut and installed to accommodate the sill, 6" up each jamb, and 2"– 3" onto the face of the wall substrate.

## Installation Methods for DuPont Flashing Products Packaged Terminal Air Conditioner (PTAC) Unit

### Method 1: Using DuPont™ Tyvek® Fluid Applied Flashing and Joint Compound+ and DuPont™ StraightFlash™



#### STEP 4

- A. Starting at the head of the PTAC opening, apply a bead of **Tyvek® Fluid Applied Flashing and Joint Compound+** onto the inside surface of the rough opening and onto the face of the wall.
- B. Use a trowel or brush to smooth out flashing to a thickness of approximately 25 mils. The flashing should cover the inside of the rough opening and extend a minimum of 2" onto the face of the wall.

C. Continue the application process outlined in STEP 4B for the jambs.

- D. The **Tyvek® Fluid Applied Flashing and Joint Compound+** should be applied on top of the **StraightFlash™** along the sill and a minimum 2" on the face of the wall substrate. Be sure all inside corners are filled and integrated with the **StraightFlash™**. A corner trowel may be used to smooth outside corners.

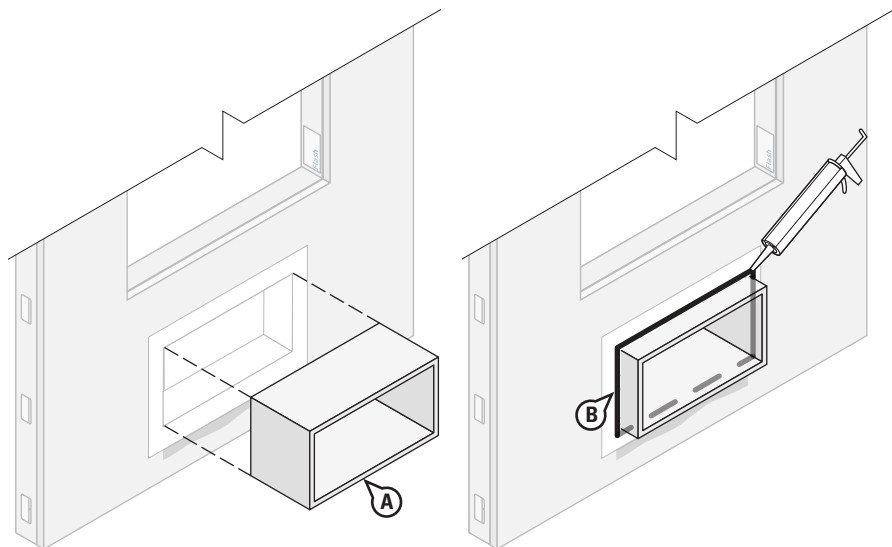
**NOTE:** **Tyvek® Fluid Applied Flashing and Joint Compound+** is not required along the entire sill when **StraightFlash™** is installed as previously captured, provided **Tyvek® Fluid Applied Flashing and Joint Compound+** is applied a minimum 4"– 6" along the sill from the jamb corner.

**NOTE:** If **DuPont™ FlexWrap™** is used along the sill, **Tyvek® Fluid Applied Flashing and Joint Compound+** is not required along the sill to jamb interface but must have 2" min overlap with **FlexWrap™** extending up the jambs and be applied to head and jamb areas.

## Installation Methods for DuPont Flashing Products

### Packaged Terminal Air Conditioner (PTAC) Unit

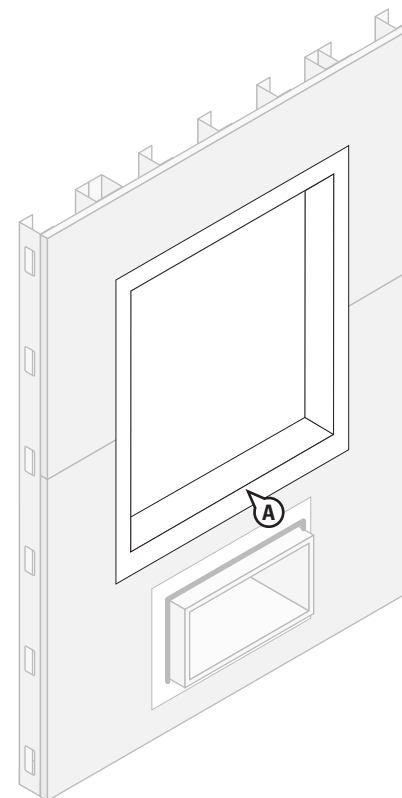
Method 1: Using DuPont™ Tyvek® Fluid Applied Flashing and Joint Compound+ and DuPont™ StraightFlash™



#### STEP 5

##### Install PTAC Unit

- Install PTAC Unit sleeve per manufacturer's installation instructions.
- Apply an exterior perimeter seal using backer rod and recommended sealant along the jambs and head of the PTAC opening. Refer to [Chemical Compatibility of Representative Building Sealants and Adhesives/Primers](#) for more information on recommended sealants.



#### STEP 6

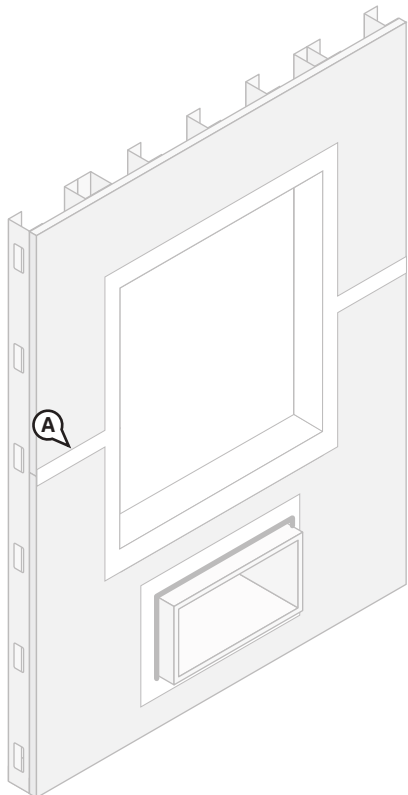
- Prepare window rough opening and flash per the [Storefront Window; Method 2: Self-Adhered Flashing Using DuPont™ FlexWrap™ and DuPont™ StraightFlash™](#) details section in this guide.

**NOTE:** A non-flanged window is shown. If an integral flanged window is installed above the PTAC unit, follow the applicable section within this guide.

## Installation Methods for DuPont Flashing Products

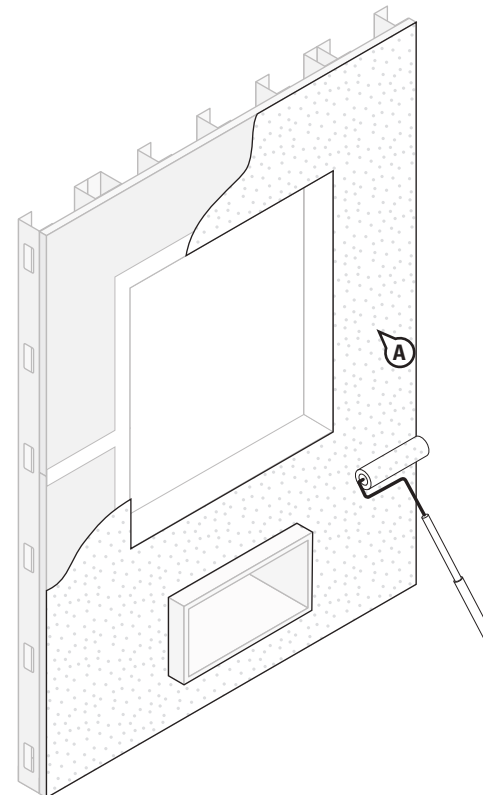
### Packaged Terminal Air Conditioner (PTAC) Unit

Method 1: Using DuPont™ Tyvek® Fluid Applied Flashing and Joint Compound+ and DuPont™ StraightFlash™



#### STEP 7

- A. Treat sheathing seam joints with **DuPont™ Tyvek® Fluid Applied Flashing and Joint Compound+** in accordance with the [Joint Treatment Methods](#) where applicable.



#### STEP 8

- A. Install **Tyvek® Fluid Applied WB+™** at 25 mils thick up to the edge of the rough opening, overlapping the **Tyvek® Fluid Applied Flashing and Joint Compound+**.

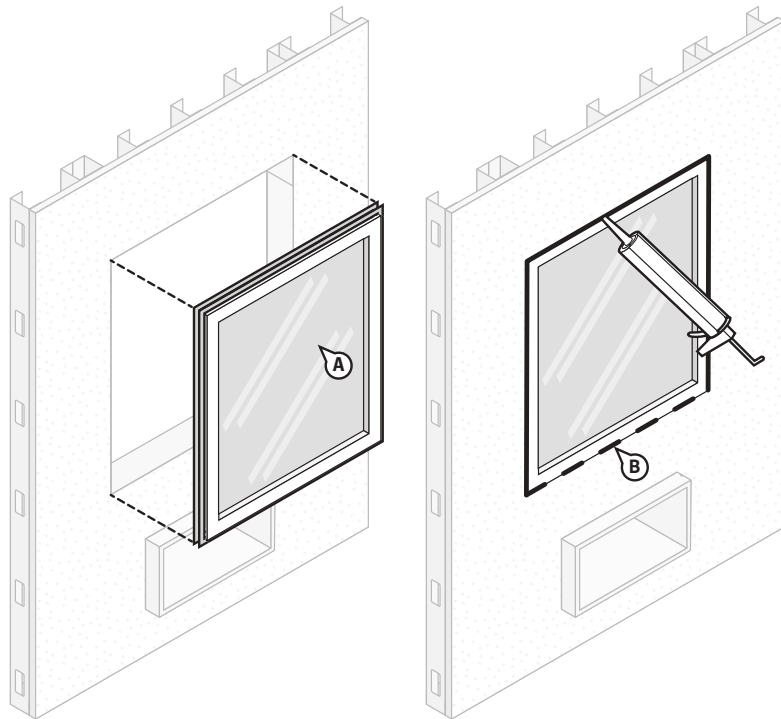
**NOTE:** When spraying, the outer edge of **DuPont Self-Adhered Flashing Product** should be treated with **Tyvek® Fluid Applied Flashing and Joint Compound+** or **Tyvek® Fluid Applied WB+™** tapered to the wall substrate to help ensure installation is free of pinholes and voids.

Refer to the [DuPont™ Tyvek® Fluid Applied WB+™ Installation Instructions](#) section of this document. Exterior insulation and/or cladding may be installed once the membrane has cured sufficiently to resist damage during installation. Skin time is 1 – 2 hours, and 25 mil is workable in 24 hours at 70°F (20°C), 50% RH.

## Installation Methods for DuPont Flashing Products

### Packaged Terminal Air Conditioner (PTAC) Unit

Method 1: Using DuPont™ Tyvek® Fluid Applied Flashing and Joint Compound+ and DuPont™ StraightFlash™

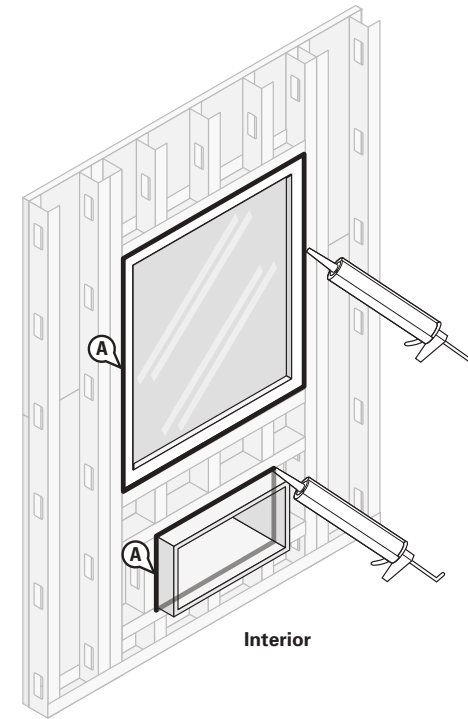


#### STEP 9

- Install window per manufacturer's installation instructions.
- Apply an exterior perimeter seal using backer rod and recommended sealant along the jambs and head of the window opening. Refer to [Chemical Compatibility of Representative Building Sealants and Adhesives/Primers](#) for more information on recommended sealants.

**NOTE:** Ensure window and sealant installation allows for drainage at the sill. If sealant is applied at the sill, as a best practice, ensure that there are at least two (2) 2" gaps in the sealant bead for every 4" of window to allow for drainage.

**NOTE:** A non-flanged window is shown. If an integral flanged window is installed above the PTAC unit, follow the applicable section within this guide.



#### STEP 10

##### Final Step

- Create a continuous perimeter seal using backer rod and recommended sealant or **Great Stuff Pro™ Window and Door Polyurethane Foam Sealant** around both the window and PTAC openings at the interior to resist air and water infiltration. When using **Great Stuff Pro™ Window and Door Polyurethane Foam Sealant** in perimeter openings less than 1/2", apply using the plastic extension tip for the **Great Stuff Pro™ Dispenser Gun** during installation.

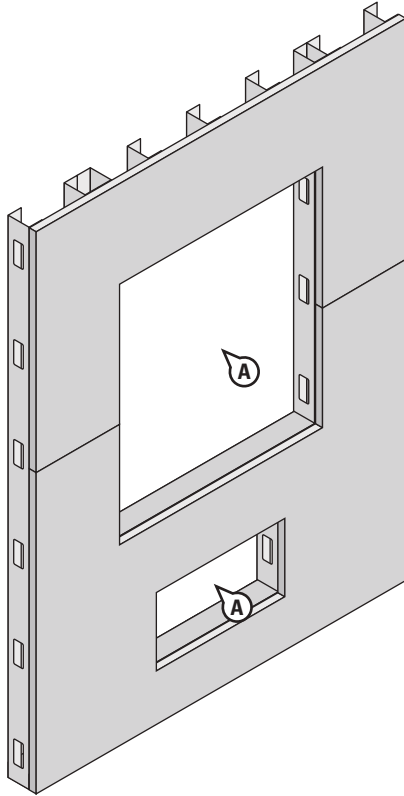
**NOTE:** For high performance installations exceeding ASTM E1677 wind loading pressures (10.8 psf, 65 mph equivalent structural load) and ASTM E331 water infiltration resistance of 6.24 psf, it is necessary to install sealant over the cured foam when using **Great Stuff Pro™ Window and Door Polyurethane Foam Sealant** or other recommended foam. Sealant should be installed over the foam between the window frame and rough opening around the entire interior perimeter. If **Great Stuff Pro™ Window and Door Polyurethane Foam Sealant** or other recommended foam extends **BEYOND** the window frame, shave the excess cured foam flush with the window frame before applying sealant. Avoid damaging the **Tyvek® Fluid Applied Flashing and Joint Compound+** and/or **DuPont Self-Adhered Flashing Products**.

## Installation Methods for DuPont Flashing Products

### Packaged Terminal Air Conditioner (PTAC) Unit

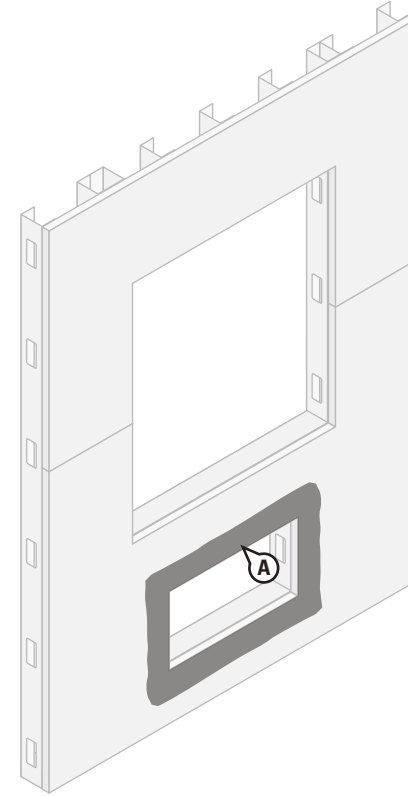
This method is for flashing/protecting the rough opening of a Packaged Terminal Air Conditioner (PTAC) Unit.

**Method 2: "Wrap the Cavity" Method Using DuPont™ FlexWrap™ and DuPont™ StraightFlash™**



#### STEP 1

- A. Cut rough openings in sheathing for the PTAC unit and window.. Ensure that sheathing is cut flush with, or slightly below the sill framing to allow for positive drainage.



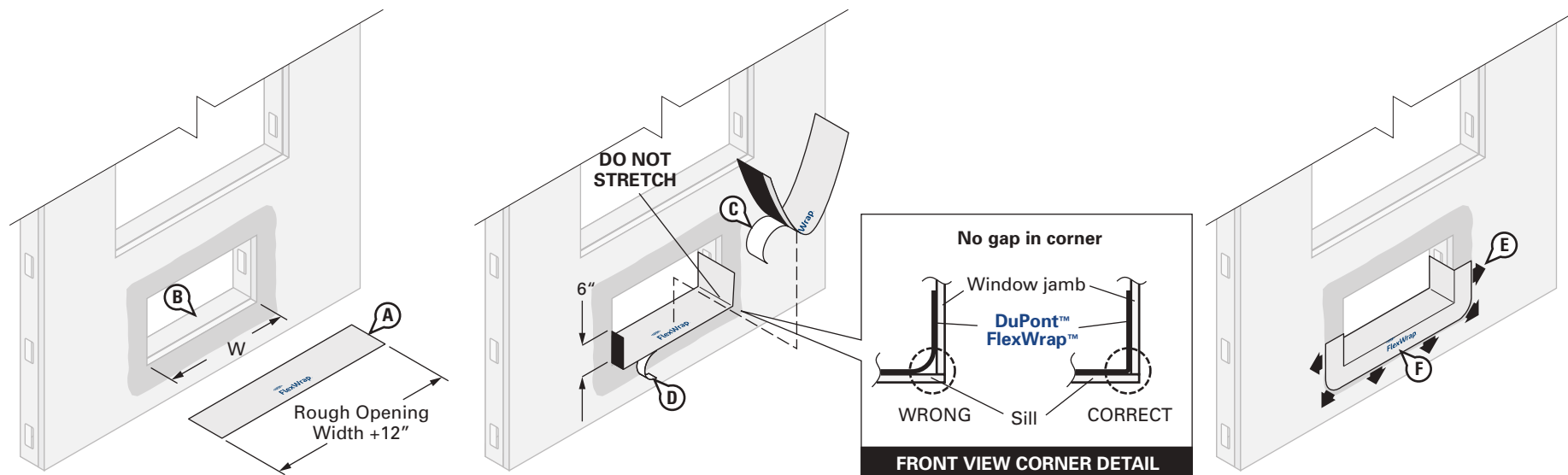
#### STEP 2

- A. Apply a recommended adhesive/primer to the approximately 3" onto the face of the wall around the rough opening for the PTAC Unit. Refer to [Chemical Compatibility of Representative Building Sealants and Adhesives/Primers](#) for more information on recommended adhesives/primers.

## Installation Methods for DuPont Flashing Products

### Packaged Terminal Air Conditioner (PTAC) Unit

#### Method 2: "Wrap the Cavity" Method Using DuPont™ FlexWrap™ and DuPont™ StraightFlash™



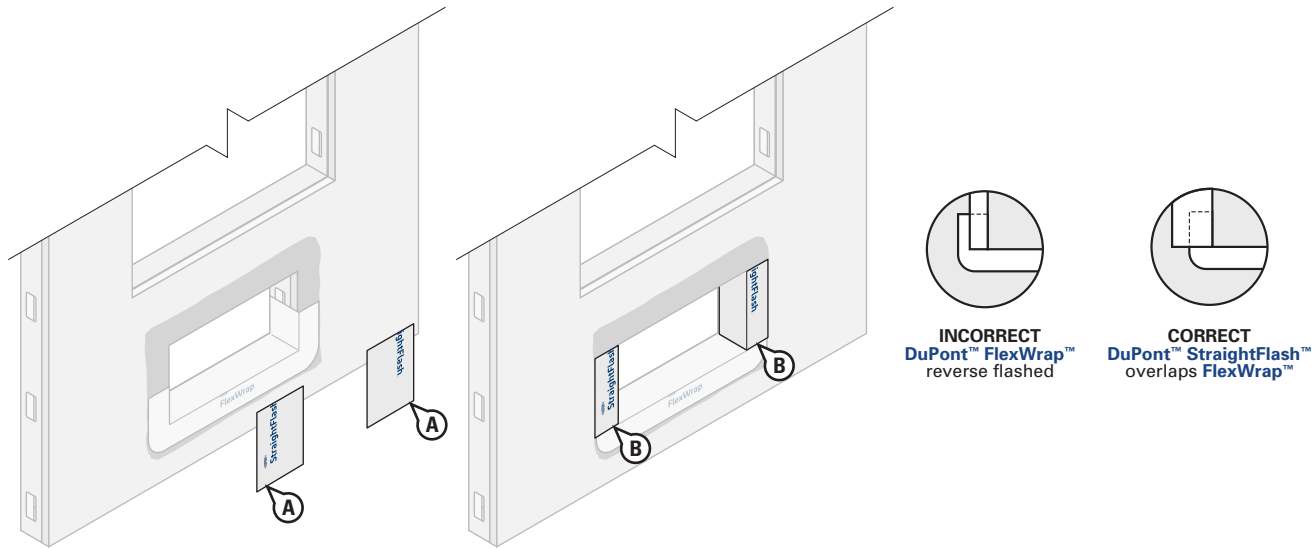
### STEP 3

- A. Cut **FlexWrap™** at least 12" **LONGER** than width of rough opening (W). Use 6" **FlexWrap™** for 2" x 4" framing and 9" **FlexWrap™** for 2" x 6" framing.
- B. Inspect installation surface to ensure surface is free of dirt or substances that could interfere with adhesion as well as any sharp protrusions.
- C. Remove wide piece of release paper. Position on horizontal sill by aligning the inside edge of the narrow release paper with the face of the wall to ensure 2"- 3" of the **FlexWrap™** will be adhered to the face of the wall with a minimum of 6" up each jamb. Adhere into rough opening.
- D. Remove narrow release paper.
- E. Fan out the **FlexWrap™** at corners and adhere onto face of wall. Continue adhering onto face of wall along sill.
- F. Firmly press sill flashing to ensure full adhesion on all surfaces. Eliminate wrinkles and bubbles by smoothing surface and repositioning as necessary.

## Installation Methods for DuPont Flashing Products

### Packaged Terminal Air Conditioner (PTAC) Unit

#### Method 2: "Wrap the Cavity" Method Using DuPont™ FlexWrap™ and DuPont™ StraightFlash™



#### STEP 4

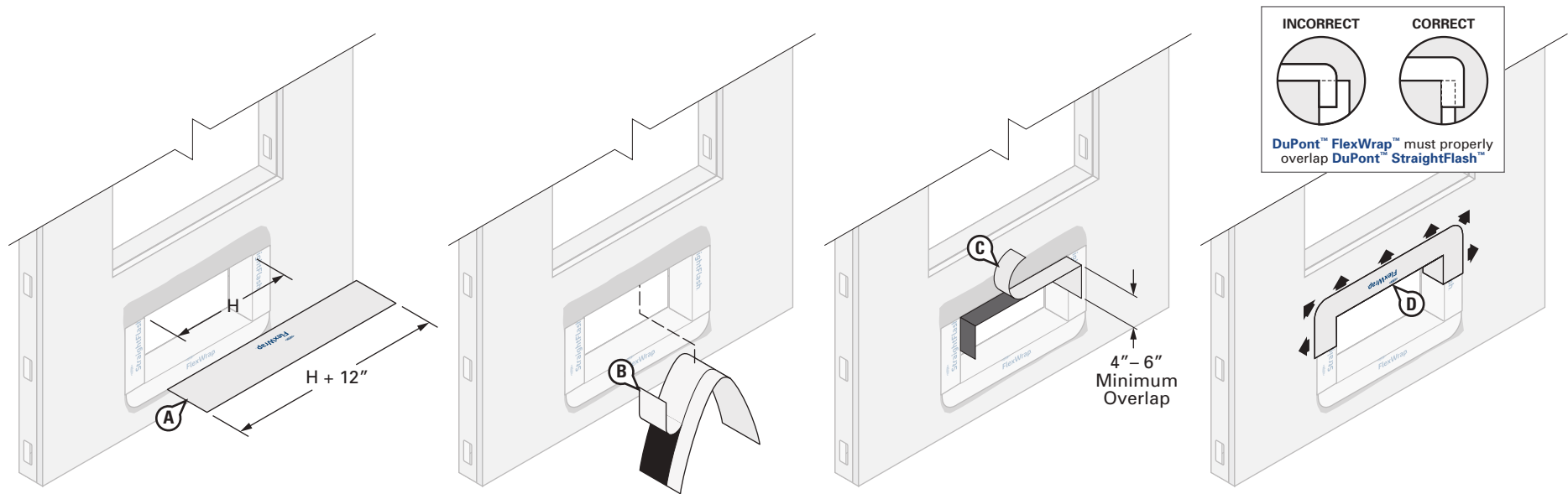
- A. Cut two pieces of 9" **StraightFlash™** the height of the rough opening for the PTAC Unit. Jamb flashing should be long enough to overlap the sill flashing by at least 2" and be overlapped by future head flashing by at least 2".
- B. Wrap the **StraightFlash™** into the rough opening at each jamb and onto wall face. As a general reference, the flashing should align with the interior edge of the jamb framing.



## Installation Methods for DuPont Flashing Products

### Packaged Terminal Air Conditioner (PTAC) Unit

#### Method 2: "Wrap the Cavity" Method Using DuPont™ FlexWrap™ and DuPont™ StraightFlash™



## STEP 5

### Install FlexWrap™ along the Head of PTAC Unit

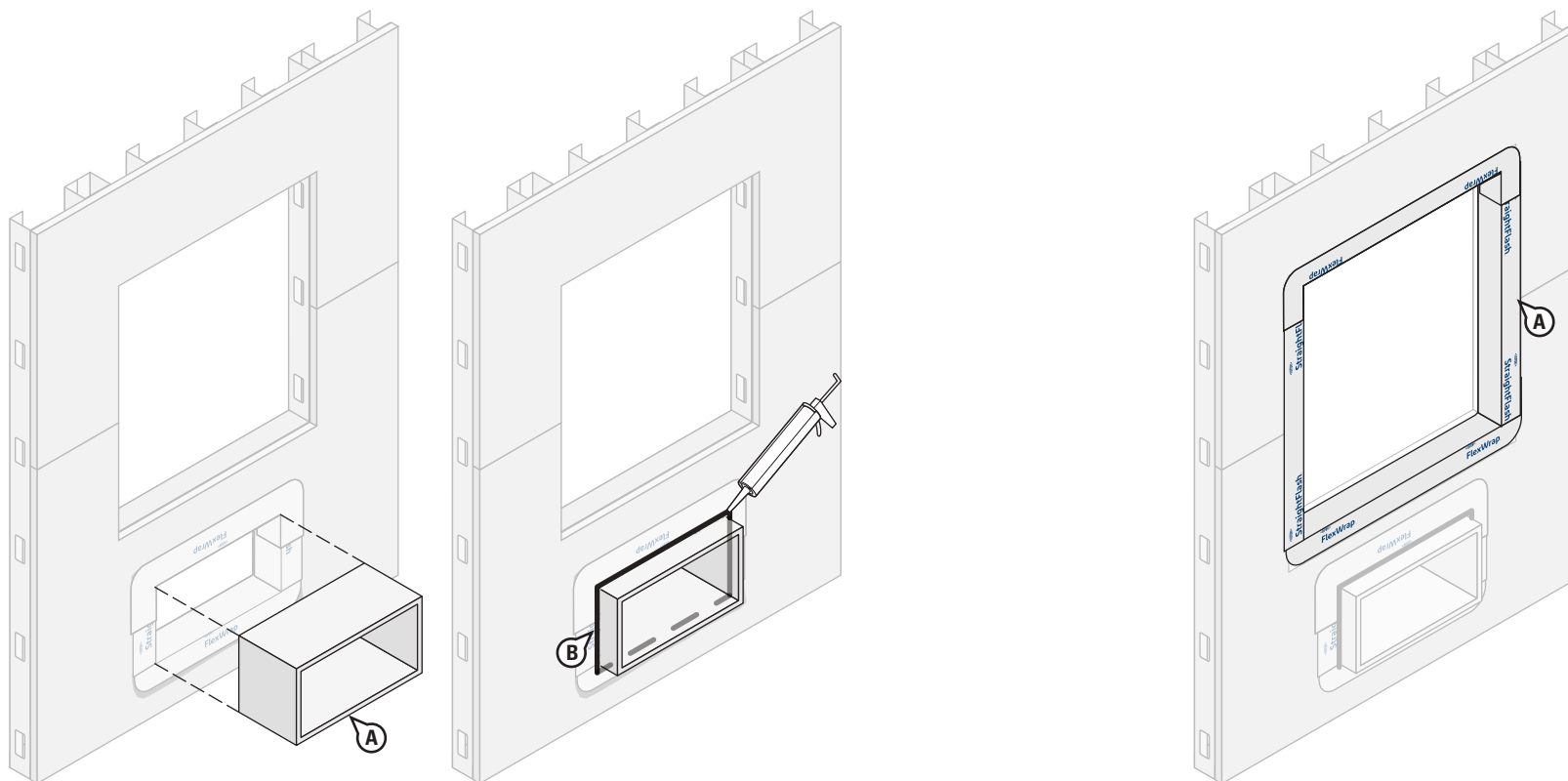
- Cut **FlexWrap™** at least 8"– 12" **LONGER** than the width of rough opening head (H). Use roll widths sufficient to achieve a minimum of 1" adhesion **BEYOND** where the window frame will be located, ensuring 2"– 3" adhesion onto the face of the wall.
- Fold the **FlexWrap™** in half lengthwise to create a slight crease at the center. Remove the wide piece of release paper on one side of the fold. Align the inside edge of the narrow release paper with the face of the wall to ensure 2"– 3" of the **FlexWrap™** will be adhered to the face of the wall. Starting at the crease, adhere the **FlexWrap™** at the center of the horizontal portion of the head framing to ensure a minimum of 6" down each jamb. Adhere into rough opening at one corner and down the jamb. Remove the remaining release paper and repeat at opposite corner.
- Remove narrow release paper.
- Fan out the **FlexWrap™** at corners and adhere onto face of wall. Continue adhering onto face of wall along the head.

**NOTE:** DuPont™ Tyvek® Commercial Certified Installers may install a 3-piece head (and sill) detail for PTAC and window openings less than 6 ft wide. Installers who **are not** DuPont™ Tyvek® Commercial Certified Installers should refer to the [Special Considerations](#) section for more information regarding the 3-piece head/sill detail. Contact your local DuPont Building Envelope Specialist for more information about the Certified Installer program.

## Installation Methods for DuPont Flashing Products

### Packaged Terminal Air Conditioner (PTAC) Unit

#### Method 2: “Wrap the Cavity” Method Using DuPont™ FlexWrap™ and DuPont™ StraightFlash™



#### STEP 6

##### Install PTAC Unit

- Install PTAC Unit sleeve per manufacturer's installation instructions.
- Apply an exterior perimeter seal using backer rod and recommended sealant along the jambs and head of the PTAC opening. Refer to [Chemical Compatibility of Representative Building Sealants and Adhesives/Primers](#) for more information on recommended sealants.

#### STEP 7

A. Prepare window rough opening, and flash per the [Storefront Window; Method 2: Self-Adhered Flashing Using DuPont™ FlexWrap™ and DuPont™ StraightFlash™](#) details section in this guide.

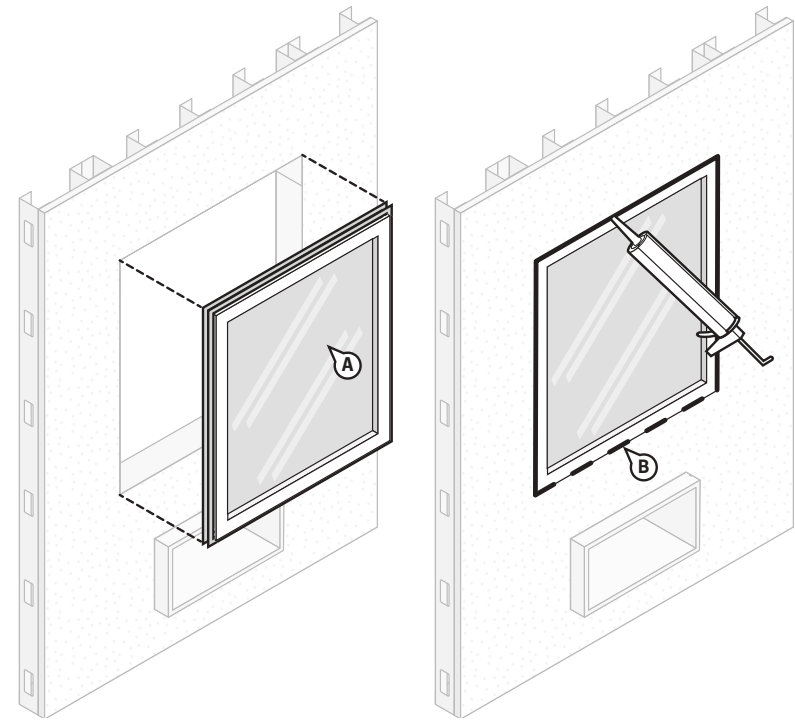
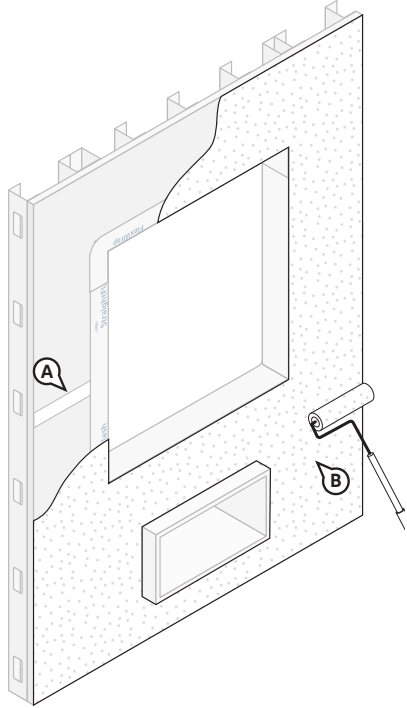
**NOTE:** A non-flanged window is shown. If an integral flanged window is installed above the PTAC unit, follow the applicable section within this guide.

**NOTE:** For a more robust install, areas with extreme wind load exposures, or high performance testing use 4" **StraightFlash™** to seal the head flap and install additional mechanical fasteners through the flashing at the head flap and perimeter of window.

## Installation Methods for DuPont Flashing Products

### Packaged Terminal Air Conditioner (PTAC) Unit

#### Method 2: “Wrap the Cavity” Method Using DuPont™ FlexWrap™ and DuPont™ StraightFlash™



#### STEP 8

- Treat sheathing seam joints with **DuPont™ Tyvek® Fluid Applied Flashing and Joint Compound+** in accordance with the [Joint Treatment Methods](#) where applicable.
- Install **DuPont™ Tyvek® Fluid Applied WB+™** onto wall at 25 mils thick, overlapping the **DuPont Self-Adhered Flashing Product** up to the edge of the rough opening. Upon completion, inspect all surfaces to ensure that they are covered and free of any voids or pinholes.

#### NOTES:

- Tyvek® Fluid Applied WB+™** may be applied over and integrated with **Tyvek® Fluid Applied Flashing and Joint Compound+** once a tack-free skin has formed. Skin time is 1–2 hours, and 25 mil is workable in 24 hours at 70°F (20°C), 50% RH.
- When spraying, the outer edge of **DuPont Self-Adhered Flashing Product** should be treated with **DuPont™ Tyvek® Fluid Applied Flashing and Joint Compound+**, and tapered to wall substrate to help ensure installation is free of pinholes and voids..
- Refer to the [DuPont™ Tyvek® Fluid Applied WB+™ Installation Instructions](#) section of this document. Exterior insulation and/or cladding may be installed once the membrane has cured sufficiently to resist damage during installation.

#### STEP 9

- Install window per manufacturer’s installation instructions.
- Apply an exterior perimeter seal using backer rod and recommended sealant along the jambs and head of the window opening. Refer to [Chemical Compatibility of Representative Building Sealants and Adhesives/Primers](#) for more information on recommended sealants.

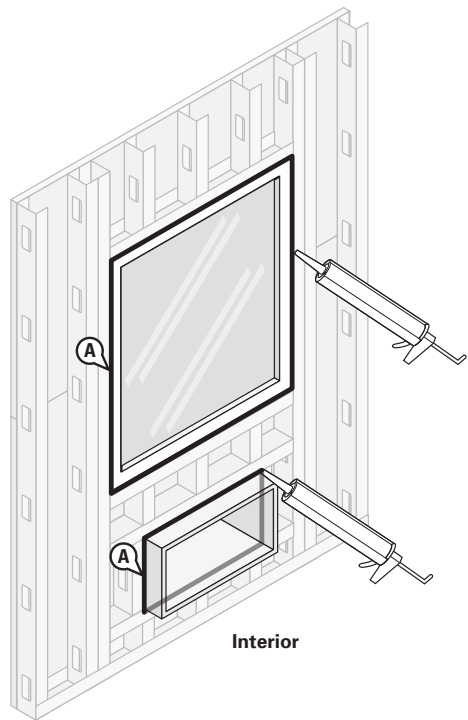
**NOTE:** Ensure window and sealant installation allows for drainage at the sill. If sealant is applied at the sill, as a best practice, ensure that there are at least two (2) 2” gaps in the sealant bead for every 4” of window to allow for drainage.

**NOTE:** A non-flanged window is shown. If an integral flanged window is installed above the PTAC unit, follow the applicable section within this guide.

#### Method 2: “Wrap the Cavity” Method Using DuPont™ FlexWrap™ and DuPont™ StraightFlash™

## Installation Methods for DuPont Flashing Products

### Packaged Terminal Air Conditioner (PTAC) Unit



## STEP 10

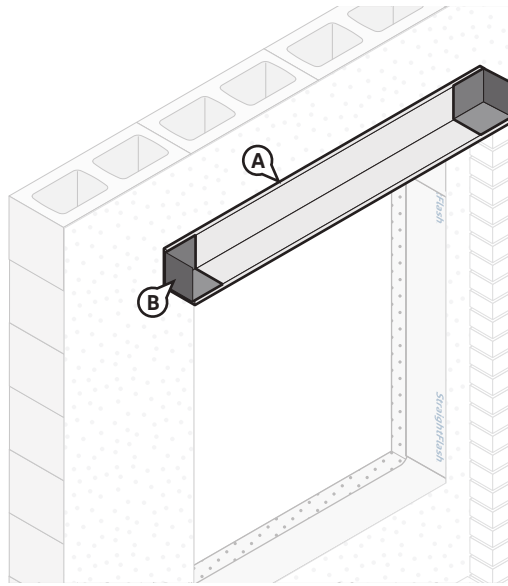
### Final Step

- A. Create a continuous perimeter seal using backer rod and recommended sealant or **Great Stuff Pro™ Window and Door Polyurethane Foam Sealant** around both the window and PTAC openings at the interior to resist air and water infiltration. When using **Great Stuff Pro™ Window and Door Polyurethane Foam Sealant** in perimeter openings less than 1/2", apply using the plastic extension tip for the **Great Stuff Pro™ Dispenser Gun** during installation.

**NOTE:** For high performance installations exceeding ASTM E1677 wind loading pressures (10.8 psf, 65 mph equivalent structural load) and ASTM E331 water infiltration resistance of 6.24 psf, it is necessary to install sealant over the cured foam when using **Great Stuff Pro™ Window and Door Polyurethane Foam Sealant** or other recommended foam. Sealant should be installed over the foam between the window frame and rough opening around the entire interior perimeter. If **Great Stuff Pro™ Window and Door Polyurethane Foam Sealant** or other recommended foam extends **BEYOND** the window frame, shave the excess cured foam flush with the window frame before applying sealant. Avoid damaging the **DuPont Self-Adhered Flashing Products**.

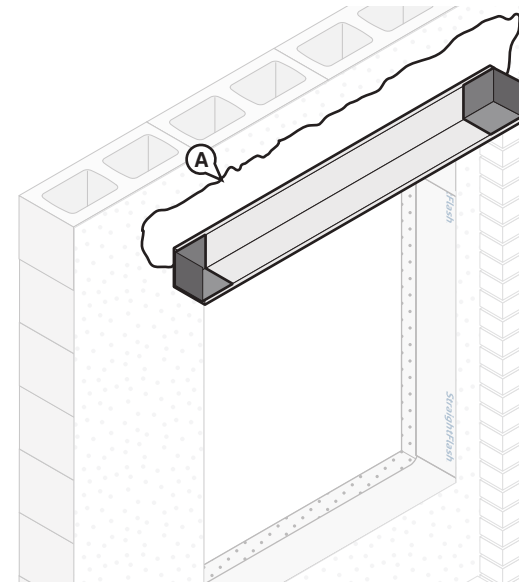
## Installation Methods for DuPont Flashing Products Through Wall Flashing for Lintel Conditions

Lintel at Window Head (After Installation of DuPont™ Tyvek® Fluid Applied WB+™)



### STEP 1

- A. Install lintel on masonry as required.
- B. Install end dams embedded in recommended sealant onto the lintel. End dams should extend a minimum of 4" beyond the edge of the window opening.

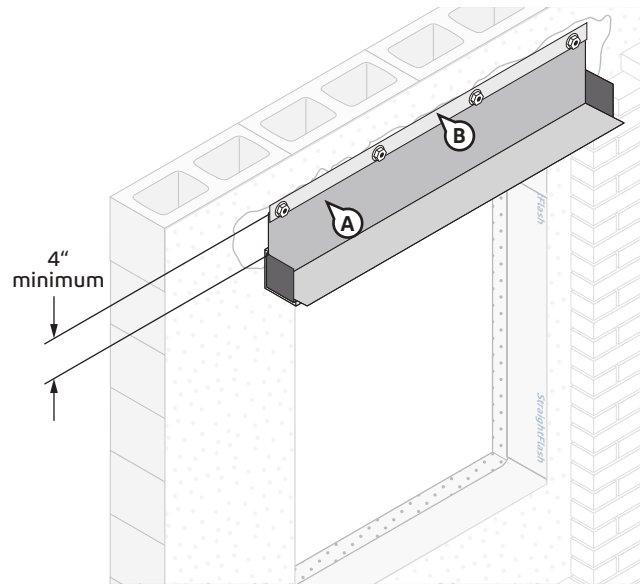


### STEP 2

- A. Apply a 25 mil coat of DuPont™ **DuPont™ Tyvek® Fluid Applied Product** onto the face of the wall, extending approximately 5" above the lintel.
- B. Cut through wall flashing to the length needed to fit between the end dams. Use wide enough through wall flashing to extend 4" up onto the face of the wall when installed.

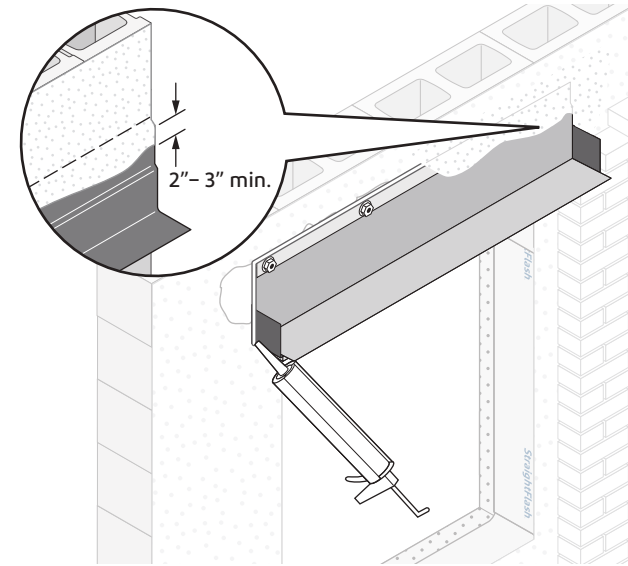
## Installation Methods for DuPont Flashing Products Through Wall Flashing for Lintel Conditions

### Lintel at Window Head (After Installation of DuPont™ Tyvek® Fluid Applied WB+™)



#### STEP 3

- A. Install through wall flashing on to the wall and lintel with a minimum of 4" adhering to the wall surface.
- B. Terminate the top edge of flashing using mechanical fasteners. As a best practice, DuPont recommends using a termination bar to terminate flashing.



#### STEP 4

- A. Seal the through wall flashing perimeter, seams, and fasteners using **DuPont™ Tyvek® Fluid Applied Flashing and Joint Compound+** or **DuPont™ Sealant for DuPont™ Tyvek® Fluid Applied System**.
- B. Apply a transition coat of **DuPont™ Tyvek® Fluid Applied Product** across the top edge of the through wall flashing membrane and 1"-2" beyond the bottom of the termination bar.

## Facade/Exterior Considerations

**NOTE:** Refer to table in the [Drying/Curing](#) section of this guide for exterior insulation and cladding installation recommendations.

### Brick

The Brick Industry Association recommends a 1" air space in front of wood stud construction and a 2" air space in front of steel stud construction. Consistent with these requirements and recommendations, **Tyvek® Fluid Applied WB+™** shall be separated from the brick veneer by a minimum 1" air space. Window and door flashing and through wall flashing shall be integrated with the **Tyvek® Fluid Applied WB+™** in accordance with these installation guides. For maximum moisture management and drying of the wall system, the air space in front of the **Tyvek® Fluid Applied WB+™** shall be vented to the exterior at the top and bottom of the wall.

### Stucco

When stucco is installed over wood-based sheathing the 2021 International Building Code (Section 2510.6) requires "a water-resistive barrier be installed as required in Section 1403.2, and, where applied over wood-based sheathing, shall comply with Section 2510.6.1 or 2510.6.2. In a two layer system, the individual layers shall be installed independently such that each layer provides a separate continuous plan and any flashing, installed in accordance with Section 1404.1 and intended to drain to the water-resistive barrier, is directed between the layers". When the **Tyvek® Fluid Applied WB+™** is used behind stucco, it should be separated from the stucco by an intervening layer per section 2510.6 of the 2018/2021 International Building Code. **Tyvek® Fluid Applied WB+™** should be installed as the first air and water barrier directly over the face of the substrate, and should be integrated with the window and door flashings, the weep screed at the bottom of the wall and any through wall flashings or expansion joints. **DuPont™ Tyvek® Mechanically-Fastened Air and Water Barriers** can be used with **Tyvek® Fluid Applied WB+™** as the intervening layer (or second layer). Lath shall be installed over the intervening layer in accordance with ASTM C1063-03 *Standard Specification for Installation of Lathing and Furring to Receive Interior and Exterior Portland Cement-Based Plaster* and applicable codes.

### Metal Panel

When used with **DuPont™ Tyvek® Fluid Applied WB+™**, metal panel cladding systems shall be installed according to manufacturer's instructions and industry standards. Window and door flashing and through wall flashing shall be integrated with the **Tyvek® Fluid Applied WB+™**.

### Stone Veneer

The 2018 International Building Code (Section 1404.7) requires two layers of a water-resistive barrier in accordance with Section 1403.2 behind stone veneers over framed construction. When used behind stone veneer, **Tyvek® Fluid Applied WB+™** shall be

installed in a similar manner as it is behind stucco. When installed over wood frame construction, **Tyvek® Fluid Applied WB+™** should be separated from the stone and mortar by an intervening layer (second layer) of a **DuPont™ Tyvek® Mechanically-Fastened Air and Water Barrier**, a layer of grade D building paper, felt, rigid foam board or the paper backing of paper-backed lath. **Tyvek® Fluid Applied WB+™** should be installed as the first air and water barrier layer directly over the face of the substrate, and should be integrated with the window and door flashings, the weep screeds at the bottom of the wall and any through wall flashings or expansion joints. Lath shall be installed over the intervening layer (second layer) in accordance with ASTM C1063-03 *Standard Specification for Installation of Lathing and Furring to Receive Interior and Exterior Portland Cement-Based Plaster* and applicable codes.

### Wood Siding

When used with **Tyvek® Fluid Applied WB+™**, wood siding shall be installed according to manufacturer's instructions, industry standards and applicable codes. As recommended by the Western Red Cedar Lumber Association and U. S. Forest Product Laboratory, wood siding should be primed on all six sides before installation. In high exposure installations, enhanced drainage and water management may be provided by using **DuPont™ Tyvek® CommercialWrap® D** or by creating rainscreen cladding with a larger air space behind the siding using furring strips. **DuPont™ Tyvek® CommercialWrap® D** offers > 98% drainage efficiency when evaluated in accordance with ASTM E2273 *Standard Test Method for Determining the Drainage Efficiency of Exterior Insulation and Finish Systems (EIFS) Clad Wall Assemblies*.

### Fiber Cement Siding

When used with **Tyvek® Fluid Applied WB+™**, fiber cement siding shall be installed according to manufacturer's instructions and industry standards. In high exposure installations, enhanced drainage and water management may be provided by using **Tyvek® CommercialWrap® D** or by creating rainscreen cladding with a larger air space behind the siding using furring strips. **Tyvek® CommercialWrap® D** offers > 98% drainage efficiency when evaluated in accordance with ASTM E2273 *Standard Test Method for Determining the Drainage Efficiency of Exterior Insulation and Finish Systems (EIFS) Clad Wall Assemblies*.

### Exterior Insulation

Exterior Insulation should be installed after the appropriate flashing materials have been installed and **Tyvek® Fluid Applied WB+™** has been applied and properly integrated with flashing. Exterior insulation shall be installed in accordance with manufacturer's guidelines and industry standards. The level of performance of exterior insulation (continuous insulation) is dependent upon proper installation and continuity limitations due to the design of the building envelope.

## Product Composition and UV Stability

**DuPont™ Tyvek® Fluid Applied Products** are silyl-terminated polyether based. They are formulated to include elastomeric polymers that cure to a continuous, fully-adhered, tough, durable membrane. Additives have been incorporated to provide ultraviolet light resistance. DuPont requires that the **DuPont™ Tyvek® Fluid Applied WB+™** and **DuPont™ Tyvek® Fluid Applied Flashing and Joint Compound+** are to be covered within 9 months (270 days) of installation.

**DuPont Self-Adhered Flashing Products** are made from a synthetic rubber adhesive and a top sheet of flash spunbonded high density polyethylene fibers or polypropylene film. Additives have been incorporated into these materials to provide ultraviolet light resistance. DuPont requires that **DuPont™ FlexWrap™**, **DuPont™ FlexWrap™ EZ**, and **DuPont™ StraightFlash™** be covered within nine months (270 days) of installation.

**DuPont™ Tyvek® WRBs** used in construction products are made from 100% flash spunbonded high density polyethylene fibers which have been bonded together by heat and pressure, without binders or fillers, into a tough durable sheet structure. Additives have been incorporated into the polyethylene to provide ultraviolet light resistance. DuPont requires that **DuPont™ Tyvek® CommercialWrap®** and **Tyvek® CommercialWrap® D** be covered within 9 months (270 days) of installation.

## Design Considerations

DuPont Building Envelope Solutions Products are to be used as outlined in this installation guideline. **DuPont Self-Adhered Flashing Products** and **Tyvek® Fluid Applied Flashing and Joint Compound+** should only be used to seal penetrations and flash openings in buildings. **Tyvek® WRBs**, **Tyvek® Fluid Applied Products**, and **DuPont Self-Adhered Flashing Products** are not to be used in roofing applications.

When installed in conjunction with other building materials, **Tyvek® WRBs**, **DuPont Self-Adhered Flashing Products**, and **Tyvek® Fluid Applied Products** must be properly shingled with these materials such that water is diverted to the exterior of the wall system. **Tyvek® WRBs** and **Tyvek® Fluid Applied WB+™** are secondary weather barriers. The outer facade is the primary barrier.

Follow facade manufacturer's installation and maintenance requirements for all facade systems in order to maintain water holdout properties and ensure performance of **Tyvek® WRBs** and **Tyvek® Fluid Applied WB+™**.

Do not install on a wall that does not feature a continuous path for moisture drainage. Any standing water must be allowed to drain off the membrane.

Use of additives, coatings or cleansers on or in the facade system may impact the performance of **Tyvek® WRBs** and **Tyvek® Fluid Applied WB+™**.

For superior protection against bulk water penetration, DuPont suggests a system combining a quality exterior facade, a good secondary air and water barrier and exterior sheathing, high quality windows and doors, and appropriate flashing materials paying attention to proper installation of each component.

Depending on job site conditions, stains may appear on the **Tyvek® Fluid Applied Products**. These discolorations will not alter the products' performance.

## Safety and Handling

### Warning

**Tyvek® Fluid Applied Products** may cause irritation. Repeated or prolonged skin contact may cause allergic reactions with susceptible persons. May cause irritation of respiratory tract. **Tyvek® Fluid Applied Products** are mixtures. *Safety and Handling* information is based on the products' components. Refer to each product's Safety Data Sheet (SDS) for further information.

### KEEP OUT OF REACH OF CHILDREN.

Children can fall in to bucket and drown. Keep children away from bucket with even a small amount of liquid.

Use only as directed. Avoid inhalation of vapor aerosol.

### Caution

Do not handle until all safety precautions have been read and understood. Avoid breathing dust/fumes/gas/mist/vapors/spray. Vapor and aerosols are harmful when using a spray application. If airborne particles are inhaled while spraying, immediately move from exposure to fresh air and contact a physician. Use in a well-ventilated area. A NIOSH approved particulate filtering full-face respirator with a P95 particulate filter or half-mask respirator with a P95 particulate filter and splash impact goggles must be used when spraying. NIOSH-approved N95 disposable safety mask with splash impact goggles can be used for manual application such as troweling or rolling, and for clean-up.

Contaminated work clothing should not be allowed out of the workplace. Wear protective gloves/protective clothing/eye protection/face protection. IF ON SKIN: Wash with plenty of soap and water. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. IF EXPOSED OR CONCERNED: Get medical advice/attention. Immediately call a poison center/doctor. IF SKIN IRRITATION OR RASH OCCURS: Get medical advice/ attention. Wash contaminated clothing before reuse. Store locked up. Dispose of contents/ container to an approved waste disposal plant. Avoid contact with eyes and skin.

**DuPont Self-Adhered Flashing Products** and their release paper are slippery and should not be walked on. Remove release paper from work area immediately.

**DuPont Self-Adhered Flashing Products** will melt at temperatures greater than 250°F (121°C). **DuPont Self-Adhered Flashing Products** are combustible and should be protected from flames and other high heat sources. **DuPont Self-Adhered Flashing Products** will not support combustion if the heat source is removed. However, if burning occurs, ignited droplets may fall away from the point of ignition. For more information, call 1-833-338-7668.

**DuPont™ Tyvek® WRBs** are slippery and should not be used in any application where they will be walked on. In addition, because they are slippery, DuPont recommends using kickjacks, scaffolding, or lifts for exterior work above the first floor. If ladders must be used, extra caution must be taken to use them safely by following the requirements set forth in ANSI Standards 14.1, 14.2, and 14.5 for ladders made of wood, aluminum, and fiberglass, respectively. **DuPont™ Tyvek®**



is combustible and should be protected from flames and other high heat sources. **DuPont™ Tyvek®** will melt at 275°F (135°C) and if the temperature of **DuPont™ Tyvek®** reaches 750°F (400°C), it will burn and the fire may spread and fall away from the point of ignition. For more information, call 1-833-338-7668.

When cured, **Great Stuff Pro™ Window & Door Polyurethane Foam Sealant** is combustible and will burn if exposed to open flame or sparks from high-energy sources. Do not expose to temperatures above 240°F (116°C). For more information, consult (Material) Safety Data Sheet ((M)SDS), call DuPont at 1-866-583-2583. When air sealing buildings, ensure that combustion appliances, such as furnaces, water heaters, wood burning stoves, gas stoves and gas dryers are properly vented to the outside. See website: <https://www.nrel.gov/docs/fy14osti/61326.pdf>.

In Canada visit: <https://nrc-publications.canada.ca/eng/view/ft/?id=96acba7c-afd4-4ea1-94b0-1f8f3500c582>.

**Great Stuff Pro™** polyurethane foam sealant and adhesive products contain isocyanate and a flammable blowing agent. Read all instructions and (Material) Safety Data Sheet ((M)SDS), carefully before use. Eliminate all sources of ignition before use. Cover all skin. Wear long sleeves, gloves, and safety glasses or goggles. Not for use in aviation, or food/ beverage contact, or as structural support in marine applications. Provide adequate ventilation or wear proper respiratory

protection. Contents under pressure. Not to be used for filling closed cavities or voids such as behind walls and under tub surrounds; this improper use of the product could result in the accumulation of flammable vapors and/or uncured material. Failure to follow the warnings and instructions provided with the product, and/or all applicable rules and regulations, can result in injury or death.

Building and/or construction practices unrelated to building materials could greatly affect moisture and the potential for mold formation. No material supplied by DuPont can give assurance that mold will not develop in any specific system.

Read all instructions and (Material) Safety Data Sheet ((M)SDS) carefully before use.

For more information, visit [greatstuffpro.com](http://greatstuffpro.com) or [building.dupont.com](http://building.dupont.com)

## Hazard Statement

**Tyvek® Fluid Applied Products** may cause an allergic skin reaction. May cause serious eye damage. May cause genetic defects. May damage fertility or the unborn child. As it relates to California Prop 65, **Tyvek® Fluid Applied Products** can expose you to substances including Crystalline silica, which is /are known to the State of California to cause cancer. For more information, visit [p65Warnings.ca.gov](http://p65Warnings.ca.gov).

For complete warranty information please call 1-833-338-7668 or visit us at [building.dupont.com](http://building.dupont.com).

## For More Information

Visit the *Quick Links* section of our website (<https://www.dupont.com/building/resources.html>) where you'll find links to essential documents and resources to help you get the job done right:

- Installation Guidelines
- Safety Data Sheets (SDS)
- CAD Drawings
- DuPont Performance Building
- Solutions Document Library

For complete warranty information please call 1-833-338-7668 or visit us at [building.dupont.com](http://building.dupont.com).



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43-D101091-enUS-0722

For more information about DuPont Performance Building Solutions Systems, please call 1-833-338-7668 or visit us at [building.dupont.com](https://building.dupont.com)

## Product Information Sheet

# DuPont™ Tyvek® Fluid Applied WB+™

Fluid Applied Weather Barrier for Commercial Wall Substrates Including CMU and Gypsum Sheathing



## FEATURES

### Description

DuPont™ Tyvek® Fluid Applied WB+™ is a fluid applied air barrier protection engineered for the unique demands of heavy commercial construction projects. Based on a unique formulation using silyl-terminated polyether polymer technology, Tyvek® Fluid Applied WB+™ offers low shrinkage during curing, superior elongation and recovery and can be easily applied in one coat.

### Air and Water Barrier Performance

- Offers an ideal combination of air and water holdout with vapor permeability.
- Air Barrier Association of America evaluated to exceed ABAA, ASHRAE 90.1 and IECC air leakage requirements when tested in accordance with ASTM E2357.

### Ease of Installation

- Single component, one-coat application.
- Offers 2 to 3 times the coverage of competitive products. Approximately 50 to 65 sq. ft./gallon in one coat, depending on substrate conditions (temperature and moisture), substrate porosity, and uniformity of application.
- Spray or pressure roll for fast and easy application.
- Installation temperature range 25°F ambient (-4°C) to a maximum surface temperature 140°F (60°C). Do not install once ambient temperature exceeds 95°F (35°C), unless surface is shaded. Max in-service temperature 180°F (82°C).
- Exhibits low shrinkage during curing, helping to minimize the risk of cracking and pin-holing.

**High Performance Durability**

- This formulation of Tyvek® Fluid Applied is not water soluble and will not wash off the wall when exposed to bulk water, even before curing. DuPont™ Tyvek® Fluid Applied WB+™ can be installed on damp surfaces which is defined as when no moisture is transferred to the skin when the substrate is touched.
- The cured membrane exhibits exceptional elongation and recovery properties. When stretched it acts like a rubber band allowing the membrane to move with the building.
- Approved for up to 9 months of UV exposure.

**Sustainable Solutions**

- DuPont™ Tyvek® Fluid Applied products may contribute toward LEED® points in the areas of Energy and Atmosphere (EA): Optimizing the Building Envelope and Indoor Environmental Air Quality (EQ): Construction IAQ Management Plan and Low

Emitting Materials: Product-Specific EPD (Environmental Product Declaration) Validation. In addition, the use of a continuous air barrier is a prerequisite for LEED applications requiring compliance with ASHRAE 90.1-2010.

- By helping to effectively seal the building envelope and reducing air leakage, the DuPont™ Tyvek® Fluid Applied system helps reduce the amount of energy required for heating and cooling.
- Low VOC (25–30 g/l).

**Complete System**

Part of a complete, integrated fluid applied weather barrier system, all backed by a limited warranty from DuPont. For best results, use with DuPont™ Tyvek® Fluid Applied Flashing & Joint Compound+ and DuPont™ Sealant for Tyvek® Fluid Applied System.

**PROPERTIES**

Please contact DuPont at 1-800-448-9835 when additional guidance is required for writing specifications that include this product.

Test Method	Property	Typical Value	Units
ASTM D2369	Solids	99	%
ASTM C679	Skin Over Time @50% R.H. and 70° F	1 to 2	Hrs
ASTM E2178	Air Penetration Resistance	0.0002	cfm/ft² @ 75 Pa (1.57 psf)
Gurley Hill (Tappi T-460)	Air Penetration Resistance	>10,000	sec / 100 cc
ASTM E2357	Wall Assembly Air Penetration Resistance	<0.0002	cfm/ft² @ 75 Pa
ASTM E283	Wall Assembly Air Penetration Resistance	<0.0002	cfm/ft² @ 75 Pa
ASTM E1677	Wall Assembly Air & Water Leakage	Type I	Type
AATCC 127	Water Penetration Resistance	>1000	cm
ASTM E331	Wall Assembly Water Penetration Resistance	No Leakage	Tested to 15 psf
ASTM E96-00	Water Vapor Transmission	22 @ 25 mils Thick	Method B Perms
ASTM C1305	Low Temperature Crack Bridging	PASS	No Cracking at 25 mil Thickness
ASTM D7234	Adhesion Strength - Concrete	>33	psi
ASTM D4541	Adhesion Strength - Exterior Gypsum (delaminates fiber glass top sheet)	>25	psi
ASTM D903	Peel Strength	13 Cohesive Failure	lbf/in (aluminum)
ASTM C794	Adhesion - in - Peel	PASS	lbf/in (mortar)
ASTM D412	Tensile	140	psi
ASTM D412	Elongation at Break	320	%
ASTM D412	Recovery (held at 300% elongation)	99	%
ASTM D2240	Hardness	34	Shore A
Accelerated Weathering (ASTM G-155)	Ultraviolet Light Exposure (UV)	9	Months
ASTM D1970	Nail Sealability	PASS	No Leakage
NFPA 285	Flame Propagation, Multiple Assemblies	PASS	
ASTM E84	Surface Burning Characteristics	Class A	Class
		15	Flame Spread Index
		10	Smoke Developed Index
ASTM C1250	VOC	<2 25-30	% (by wt) g/L
AC 212	Acceptance Criteria for Water Resistive Barriers over Exterior Sheathing	Pass	

Test results shown represent averages. Individual results may vary either above or below averages due to normal manufacturing variations, while continuing to meet product specifications.

## INSTALLATION

Please refer to DuPont™ Tyvek® Fluid Applied WB+™ Wall and Substrate Guidelines and DuPont Tyvek Fluid Applied Flashing Installation Guidelines.

### Use Conditions

- Tyvek® Fluid Applied WB+™ is intended to be installed as part of membrane drainage wall system. Do not install on a wall that does not feature a continuous path for moisture drainage (as defined below\*).
- Stirring is not necessary. If separation should occur, gently fold material until mixture is uniform. Avoid any type of mixing that will introduce air into the product.
- The temperature of the Tyvek® Fluid Applied WB+™ at the spray tip of standard spray equipment should be 65°F (18°C) or higher. Avoid spraying in very dusty conditions.
- Tyvek® Fluid Applied WB+™ should be covered with the façade within the 9-month approved UV exposure limit. Follow façade manufacturer's installation and maintenance requirements in order to maintain water holdout. Depending on job site conditions, stains may appear, but will not alter the performance of the product.
- For more information, refer to the DuPont™ Tyvek® Commercial Solutions Technical Bulletin Additional Considerations When Spraying DuPont™ Tyvek® Fluid Applied WB+™. See DuPont™ Tyvek® Fluid Applied WB+™ Wall and Substrate Guidelines as well for detailed application instructions.

\*A "Continuous Path for Moisture Drainage to the Exterior" consists of a designed path for continuous moisture drainage which must allow moisture to drain freely and without interruption along the drainage plane. Examples of obstructions that can interrupt drainage are: eyebrows, band boards, building returns, etc. The intent is to ensure that any moisture that penetrates the exterior cladding and reaches DuPont™ Tyvek® Fluid Applied WB+™ can drain and exit the building envelope. The wall system should be designed to prevent moisture accumulation (trapping moisture) within the assembly. Materials should be installed in shingle fashion to provide positive drainage; with sealed penetrations, kick-out or diverter flashing at windows, doors, and any vertical to horizontal changes of the building plane. Proper shingling and integration with kick-out or diverter flashings and/or through wall membranes is essential to moisture management.

### Preparation

- Surface must be clean, free from frost, grease, dirt, or other contaminants and must be reasonably smooth. Remove all surface dust, dirt, fins, ridges, mortar, and other projections and fill honeycomb, aggregate pockets, holes, recessed mortar joints and other voids in concrete with substrate-patching material.

- Mortar joints in concrete block and voids in poured concrete should be filled flush and smooth and allowed to cure for a minimum of 48 hours.
- Product can be installed on damp surfaces provided no moisture is transferred to the skin when the substrate is touched. This flexibility reduces substrate preparation and protection requirements.

### Application

- Complete all joint treatment and flashing prior to any spraying or rolling of Tyvek® Fluid Applied WB+™.
- Tyvek® Fluid Applied WB+™ can be applied in a single application at 25 mils thick; spot check with a wet mil gauge. Inspect surface for voids and pinholes and repair as necessary.
- Refer to the Wall and Substrate Guidelines for complete information.

### Curing

- Tyvek® Fluid Applied WB+™ skins over and is tack free or dry to touch within 2 hours at 70°F and 50% relative humidity. Tack free time and complete cure can vary with temperature, humidity and substrate conditions.
- Uncured DuPont™ Tyvek® Fluid Applied products should not come in contact with DuPont™ Tyvek® Wrap products.
- Performance testing should be done after product is fully cured (~14 days). See curing table in DuPont™ Tyvek® Fluid Applied WB+™ Wall and Substrate Guidelines (K29398) for details.

### Equipment

Tyvek® Fluid Applied WB+™ may be sprayed using a high-pressure, airless sprayer or applied using a pressure roller in conjunction with a variety of pumps. See DuPont™ Tyvek® Fluid Applied WB+™ Wall and Substrate Guidelines (K29398), for pump, equipment and tip configurations. All manufacturer limitations should be followed.

## TESTING

### Moisture Protection – Weather-Resistant Barriers

The 2012/2015 International Building Code (IBC, Section 1403.2 Weather Protection) requires that exterior walls shall provide the building with a weather-resistant exterior wall envelope. This shall include flashing as described in Section 1405.4. Tyvek® Fluid Applied System products have been tested and meet weather-resistant barrier codes and standards requirements. The following test methodologies were used:

- ASTM E96-00, Standard Test Methods for Water Vapor Transmission of Materials; Water resistive barriers are typically vapor permeable, which is generally desirable because it allows for drying of incidental moisture intrusion into the wall assembly
- AATCC 127, Hydrostatic Head Test for WRB Materials, measuring pressure to failure or time of failure at a given pressure
- ASTM E331, Standard Test Method for Water Penetration of Exterior Windows, Skylights, Doors, And Curtain Walls by Uniform Static Pressure.

### Air Leakage Control – Air Barriers

ASHRAE 90.1 2010 requires that the entire building envelope shall be designed and constructed with a continuous air barrier. This is a mandatory provision for the building envelope. IECC 2012/2015 (International Energy Conservation Code) for commercial buildings also requires a continuous air barrier. These codes are being adopted in many states across the United States. Tyvek® Fluid Applied System products have been tested and meet air barrier codes and standard requirements. The following test methodologies were used:

- ASTM E2178, Standard Test Method for Air Permeance of Building Materials
- ASTM E283, Standard Test Method for Determining Rate of Air Leakage Through Exterior Windows, Curtain Walls, and Doors Under Specified Pressure Differences Across the Specimen
- ASTM E2357 Standard Test Method for Determining Air Leakage of Air Barrier Assemblies
- ASTM E1677, Standard Specification for Air Barrier (AB) Material or System for Low-Rise Framed Building Walls
- ASTM E779-10 Standard Test Method for Determining Air Leakage Rate by Fan Pressurization (whole building)
- ASTM E96 Standard Test Methods for Water Vapor Transmission of Materials

### Other

- ASTM E 84 Standard Test Method for Surface Burning Characteristics of Building Materials
- NFPA 285 Standard Fire Test Method for Evaluation of Fire Propagation Characteristics of Exterior Non-Load-Bearing Wall Assemblies Containing Combustible Components
- AC 212 Acceptance Criteria for Water Resistive Coatings used as Water Resistive Barriers over Exterior Sheathing

Tyvek® Fluid Applied System products have been evaluated according to Air Barrier Association of America (ABAA) protocol and are listed at the ABAA website under "ABAA evaluated Air Barrier Assemblies."

### Packaging

DuPont™ Tyvek® Fluid Applied WB+™ is available in 5 gallon pails or 55 gallon drums. The lid contains a reclosable integrated pouring spout / hose inlet designed to assist with spraying and pressure rolling applications while minimizing waste generation.

### Warranty

Backed by a limited product warranty, visit [building.dupont.com/warranties](http://building.dupont.com/warranties) or contact your DuPont representative for details.

### Limitation

Tyvek® Fluid Applied WB+™ should not be used for below grade applications or in applications in which it will be permanently exposed. Asphalt based adhesives and/or mastics are not recommended for use with this product.

## HANDLING

**WARNING: For Professional Use Only.** Read and follow the entire *Safety, Handling, and Storage* section and the Safety Data Sheets (SDSs, formerly MSDSs or Material Safety Data Sheets) carefully before use. The information below is designed to protect the user and allow for safe use and handling of DuPont™ Fluid Applied products. Follow all applicable federal, state, local and employer regulations.

### Precautionary Statements

- Use only as directed. Avoid inhalation of vapor aerosol. Avoid breathing dust/fumes/gas/mist/vapors/spray.
- Wear protective gloves/protective clothing/eye protection/face protection/respirator. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reuse.
- IF ON SKIN: Wash with plenty of soap and water. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. IF exposed or concerned: Get medical advice/attention. Immediately call a POISON CENTER/doctor. If skin irritation or rash occurs: Get medical advice/ attention.
- Store locked up. Dispose of contents/container to an approved waste disposal plant.
- Vapor and aerosols are harmful if using spray application. Use in a well-ventilated area. Use NIOSH approved respirator. If vapors are inhaled, immediately move from exposure to fresh air and contact a physician. Avoid contact with eyes and skin. See Personal Protective Equipment section below.

### Hazard Statements

- May cause an allergic skin reaction. May cause serious eye damage. May cause genetic defects. May cause cancer. May damage fertility or the unborn child. May cause irritation.

- Repeated or prolonged skin contact may cause allergic reactions with susceptible persons. May cause irritation of respiratory tract.
- This product is a mixture. Health Hazard information is based on its components.
- **KEEP OUT OF REACH OF CHILDREN**, children can fall in to bucket and drown. Keep children away from bucket with even a small amount of liquid.

### Personal Protective Equipment (PPE)

Personal protective equipment (PPE) used during the handling of DuPont™ Fluid Applied products must at a minimum include:

- Protective clothing or coveralls, including long sleeves and head cover (no skin should be exposed), for example, Tyvek® non-woven laminate paint protective coveralls with hood
- Chemical-resistant nitrile, butyl rubber, neoprene or PVC gloves
- Chemical splash impact safety goggles or equivalent, unless using a full-face respirator
- Protective work safety shoes
- Hearing protection such as ear plugs when spraying
- NIOSH-approved particulate filtering full-face respirator with a P95 particulate filter or half-mask respirator with a P95 particulate filter and splash impact goggles when spraying
- NIOSH-approved N95 disposable safety mask with splash impact goggles for manual application such as troweling or rolling, and for clean-up.

### Clean Up and Purge

- Use appropriate personal protective equipment during clean-up (see Personal Protective Equipment section).
- Uncured Tyvek® Fluid Applied products can be cleaned from hands, tools, and equipment by using a citrus based cleaner or mineral spirits.
- Cured Tyvek® Fluid Applied products can be removed by soaking in citrus based cleaners or using a gel-based paint stripper.
- Clean sprayer components and tools with 100% mineral spirits, naphtha, citrus-based cleaners, or gel-based paint stripper.
- Spray tips can be cleaned in 100% mineral spirits or naphtha using airbrush cleaning tools.
- Material should not be left in the pump, hose, gun, or roller. After applying, flush system with a citrus-based cleaner, or 100% mineral spirits until the system is clean. Avoid using water for cleanup.
- Low pressure portions of the system should be taken apart and cleaned by hand. Before the next usage, flush any remaining solvent out of the system before applying DuPont™ Tyvek® Fluid Applied WB+™ to the wall substrate.
- Be sure that system is fully clean of any residual Tyvek® Fluid Applied product before introducing a different product. If system is not fully clean, ingredients can react and cause products to cure in the system.

### Shelf Life and Storage

- The shelf life is 12 months for an unopened container from the date of manufacture. Reference the "Use By" date printed on the container.
- Store opened containers with a plastic protective liner to slow cure rate. Before reusing a previously opened container, first remove any cured material that may have formed (skinned over) at the top.
- DuPont™ Tyvek® Fluid Applied products should be stored in a clean, dry environment, 50° - 80°F (10° - 27°C). If stored at temperatures below 65°F (18°C), the product must be warmed to a minimum of 65°F (18°C) using standard industry methods prior to spraying for proper atomization at the spray tip.
- Continuous storage at high temperatures will reduce the shelf life of DuPont™ Tyvek® Fluid Applied products.
- Tyvek® Fluid Applied products temporarily stored outside should be stored under cover.

### Disposal

Dispose of any residual Tyvek® Fluid Applied product, coated debris, or solvent in accordance with applicable federal, state, and local government regulations.

### Supplemental Information

Avoid spraying Tyvek® Fluid Applied WB+™ in very windy conditions. Installing professional should consider if structure should be tented to protect the surrounding area from overspray. Avoid spraying in very dusty conditions.



For more information visit us at  
[tyvek.com/fluidapplied](http://tyvek.com/fluidapplied)  
or call 1-800-448-9835

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43-D100066-enNA-1119 CDP

*FullView is the most innovative and comprehensive low-profile sign system available, featuring a slim 7/16" depth\*, a high degree of tamper resistance, and solutions for all interior signage needs and budgets.*



*Winner of an award for Design Excellence by the Industrial Designers Society of America, FullView is well-engineered and has been proven in facilities around the world.*



*FullView is also compatible with the Elements 2 range of decorative shapes and finishes vastly expanding the design options available.*

*\* Large Assembly (LA) modules feature a 5/8" depth.*





**4.3.101**  
7/23

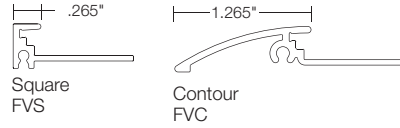
**System Overview**

FullView is 100% modular and compatible with a wide range of insert and graphics options.

There are two edge profiles from which to choose and a host of other decorative options which make FullView an ideal solution for any interior environment.

FullView is available in five unique versions (described following) depending upon the project needs and budget. In addition, FullView is aesthetically compatible with APCO's Accord 15 modular sign system thus truly making it a Total System Solution.

**Frame Profiles**



**Frame Finishes**

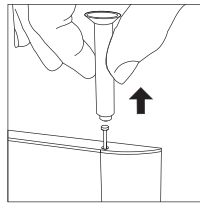
*Standard*  
Natural Satin Anodized

*Custom*  
Polyurethane Coated  
- 44+ standard colors  
- custom

**Standard Assembly**

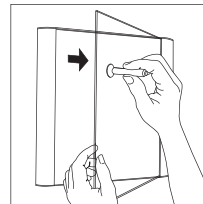
The original and most tamper resistant FullView option, the Standard Assembly features 1/8" thick insert material (typically a non-glare lens protecting a digitally printed display) and a frame with a concealed locking pin. Using a special magnet/suction cup tool, displays can be updated as needed. By incorporating an 1/8" thick rigid non-glare lens, the Standard Assembly FullView offers maximum display compression and clarity.

Patent Protected



**Vertical Configuration**

A concealed Locking Pin, located in the upper right corner of the sign, is removed using a special Magnet Tool. Then, using the Suction Cup Tool provided, the insert is shifted to the right and pulled outward from the frame

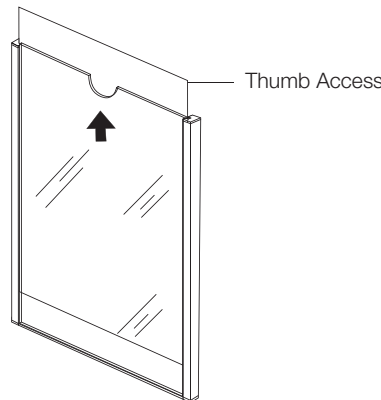


**Horizontal Configuration**

A concealed Locking Pin, located in the upper left corner of the sign, is removed using a special Magnet Tool. Note: A Locking Pin is optional when using the FullView Horizontal Configuration. Then, using the Suction Cup Tool provided, the Sign Insert is lifted up and pulled outward from the frame.

**Top Access & Inner Access Assemblies**

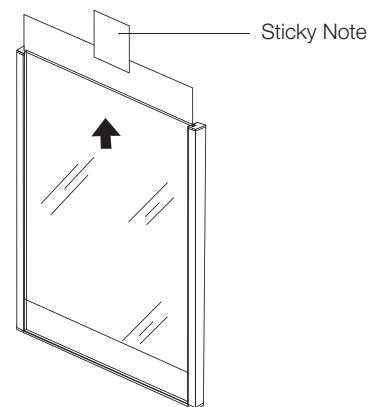
FullView's Top Access and Inner Access assemblies are ideal for situations where more frequent display updates may be needed. Signs feature a 1/16" thick non-glare lens that is not removable from the frame. With the Inner Access assembly, subsurface displays are removed with a sticky note or similar. The Top Access assembly lens features a thumb slot for easy removal of displays.



**Top Access Assembly**

A Thumb Slot at the top of the non-glare lens makes display updates fast and easy.

Maximum display size for the Top Access Assembly is 17"h x 11"w.



**Inner Access Assembly**

Displays are changed by inserting a sticky note or similar between the display and non-glare lens, applying pressure to create a bond between the sticky note and the display and then pulling the display up/out of the frame.

Maximum display size for the Inner Access Assembly is 17"h x 11"w.

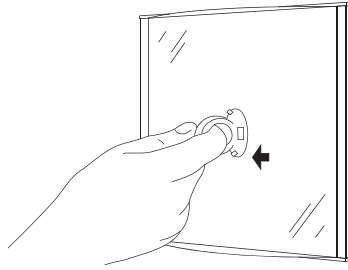
## System Overview

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### E-Series Assembly

The FullView E-Series features the same aluminum frames and profiles as the Standard Assembly but uses 1/16" thick flexible inserts (vs. the 1/8" thick rigid inserts of the Standard Assembly) which flex-in and flex-out of the frame via a Suction Cup Tool. E-Series frames do not incorporate a concealed security pin but offer a high degree of tamper resistance nonetheless.

Maximum display size for E-Series assemblies is 17"h x 11"w.



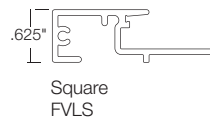
A Suction Cup Tool is used to pull the flexible sign insert directly outward from the frame.

### Large Assembly

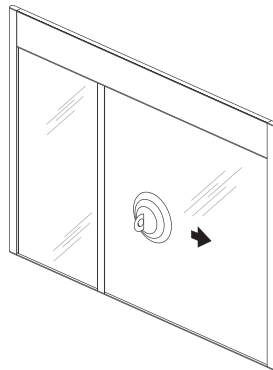
The FullView Large Assembly is an expansion of the FullView System which allows for larger display sizes up to 36" x 60" and beyond.

Frames feature a 5/8" depth and offer two aluminum profile options, Square and Radius.

#### Frame Profiles



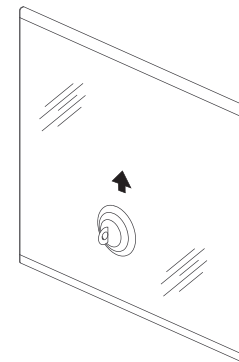
Square  
FVLS



#### Vertical Configuration

*(edge profiles on left/right of frame)*

Frames feature concealed spring mechanisms in the right aluminum profile which allow the 1/8" thick non-glare lenses to shift right and then pull outward using a Large Suction Cup Tool (shown above).



#### Horizontal Configuration

*(edge profiles on top/bottom of frame)*

Lenses are removed from the frame with a Suction Cup Tool using a lift/pull technique. The Horizontal Configuration also offers a unique "4-Side Capture" feature enabling very large displays and adding extra tamper resistance.

### Stanchions & Kiosks

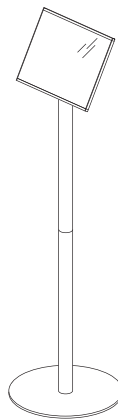
#### Stanchion FV300

FullView Standard Assembly, Top Access, Inner Access or E-Series signs are affixed to APCO's light-weight FS300 Series stanchion providing a cost-effective and easily portable free-standing solution. The stanchion features a 42" 2-part aluminum post with a powder coated steel base for stability and can accommodate displays up to 17"h x 11"w. Displays can be angled, vertical, single-sided or double sided.

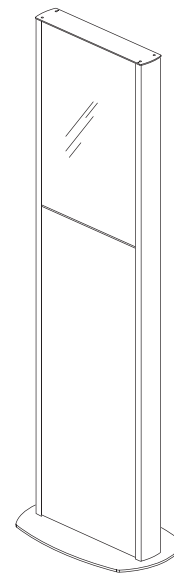
#### Kiosk FVKS

The FullView Kiosk is a versatile free-standing sign & display solution allowing maps, directional information, meeting schedules, announcements and other information to be strategically placed within a facility.

Sizes range from 48"h x 11"w to 72"h x 22"w and display options include non-glare lenses protecting subsurface digitally printed graphics, decorative wood laminates, decorative metal laminates and more. Displays are secure yet easily updatable.



FV300 Stanchion

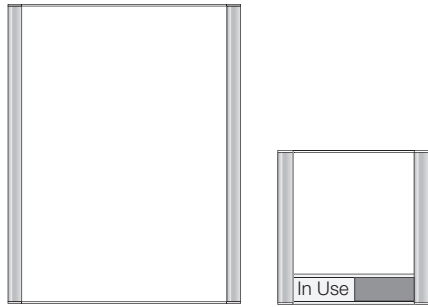


FVKS Kiosk

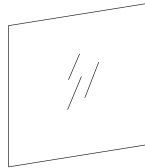
4.3.103  
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## Standard Assembly Vertical Configuration

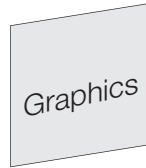
### Wall Mount



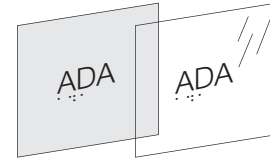
### Standard Display Options



**ClearLens**  
(FVCL)  
1/8" Non-Glare Acrylic  
with Subsurface Digitally  
Printed Graphics



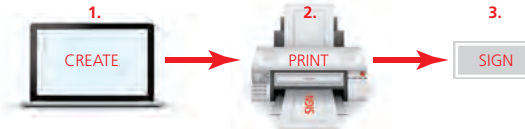
**Painted Plaque**  
(FVOP)  
1/8" Acrylic with  
Direct-Print  
Graphics



**ADA Plaque**  
(FV341A-DPT)  
1/8" Acrylic with  
UF-Cured, Direct-Print  
Raised Characters and Fully  
Domed Braille

### Installation/Mounting

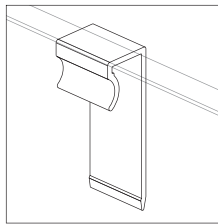
Standard mounting is via vinyl tape (VT).  
Mechanical fastening via concealed holes  
within the frame's core is optional for small  
sizes and standard for large sizes as  
indicated by an "MF" suffix in the product  
code.



Perforated SignWord  
Paper Available for  
These Sizes.

### User Lettering Solutions Make Sign Maintenance Easy!

With APCO's FREE SignWord Pro software, enter your sign message and symbols using  
pre-established formats or your own custom layouts. Print the image on pre-colored SignWord  
paper or your own paper and the sign update is complete.



### Retention Clip

For large FullView modules, a discreet  
Retention Clip provides extra security in  
retaining the insert material within the frame.  
The clear matte plastic clip snaps onto the  
center of the aluminum closure extrusion at  
the top and bottom of the sign and is easily  
removed when display changes are  
necessary.

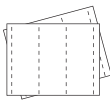
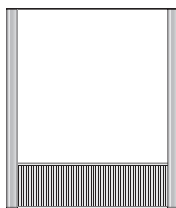
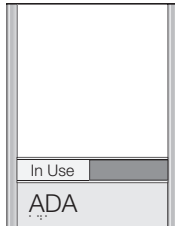
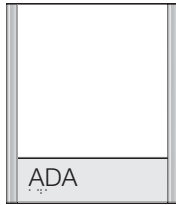
Width*	Height*	Frame Code	Insert Height	Insert Width
4"	4"	FV_0404(V)	4.08"	4.08"
4"	6"	FV_0604(V)	6"	4.08"
4"	8"	FV_0804(V)	8"	4.08"
6"	3"	FV_0306(V)	3"	6"
6"	4"	FV_0406(V)	4"	6"
6"	6"	FV_0606(V)	6"	6"
6"	7"	FV_0706(V)SL w/ Slider	6"	6"
6"	8"	FV_0806(V)	8"	6"
6"	10"	FV_1006(V)	10"	6"
8.5"	3"	FV_0385(V)	3"	8.5"
8.5"	4"	FV_0485(V)	4"	8.5"
8.5"	5.5"	FV_5585(V)	5.5"	8.5"
8.5"	6.5"	FV_6585(V)	6.5"	8.5"
8.5"	8.5"	FV_8585(V)	8.5"	8.5"
8.5"	9.6"	FV_9685(V)SL w/ Slider	8.5"	8.5"
8.5"	11"	FV_1185(V)	11"	8.5"
8.5"	14"	FV_1485(V)	14"	8.5"
11"	8.5"	FV_8511(V)	8.5"	11"
11"	11"	FV_1111(V)	11"	11"
11"	12"	FV_1211(V)	12"	11"
11"	14"	FV_1411(V)	14"	11"
11"	17"	FV_1711(V)	17"	11"
14"	8.5"	FV_8514(V)	8.5"	14"
17"	11"	FV_1117(V)	11"	17"
17"	14"	FV_1417(V)	14"	17"
17"	17"	FV_1717(V)MF	17"	17"
17"	22"	FV_2217(V)MF	22"	17"
22"	22"	FV_2222(V)MF	22"	22"
22"	30"	FV_3022(V)MF	30"	22"

\* All dimensions are nominal display sizes.

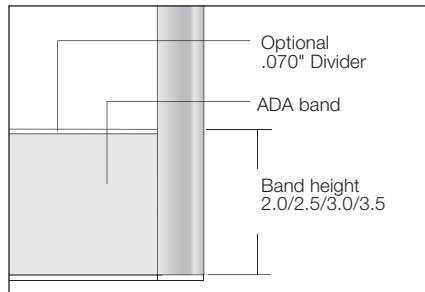
# Standard Assembly Vertical Configuration

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## Wall Mount With ADA or Decorative Bottom Plaque

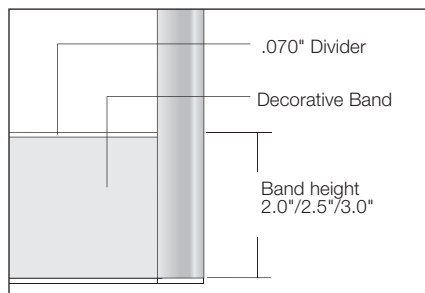


Perforated SignWord Paper Available for These Sizes.



### ADA Plaque Divider

A .070" anodized aluminum Divider Bar is an optional feature to separate the ADA plaque from the top display.



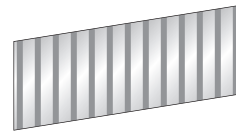
### Decorative Plaque Divider

All Decorative Plaques feature a .070" anodized aluminum Divider Bar.

## Standard Display Options



**ADA Bottom Plaque**  
(FV341A-DPT) without Divider  
(FV241A-DPT) with Divider  
1/8" or 1/16" Plaque with  
Direct-Print Raised Charac-  
ters/Braille, Permanently  
Attached to Frame



**Decorative Metal Plaque**  
(FVDM\_\_)  
DMP3 MicroPerf  
DMS4 Dimpled



**Direct-Print Decorative Wood Plaque**  
(FVDW\_\_)  
DWM1 Maple  
DWW2 Walnut  
DWO3 Oak  
DWC4 Cherry  
DWM5 Mahogany

### Frame Size \*

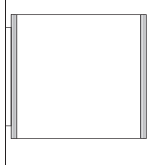
(Top Display)	Frame Code	Description
6"h x 4"w (4.08" x 4.08")	FV__0604(V)A2.0	Frame with 2" ADA Bottom Plaque
	FV__0604(V)AD2.0	Frame with 2" ADA Bottom Plaque w/ Divider
	FV__0604(V)DWD2.0	Frame with 2" Decorative Wood Plaque w/ Divider
	FV__0604(V)DMD2.0	Frame with 2" Decorative Metal Plaque w/ Divider
6"h x 6"w (4" x 6")	FV__0606(V)A2.0	Frame with 2" ADA Bottom Plaque
	FV__0606(V)AD2.0	Frame with 2" ADA Bottom Plaque w/ Divider
	FV__0606(V)DWD2.0	Frame with 2" Decorative Wood Plaque w/ Divider
	FV__0606(V)DMD2.0	Frame with 2" Decorative Metal Plaque w/ Divider
8"h x 6"w (6" x 6")	FV__0806(V)A2.0	Frame with 2" ADA Bottom Plaque
	FV__0806(V)AD2.0	Frame with 2" ADA Bottom Plaque w/ Divider
	FV__0806(V)DWD2.0	Frame with 2" Decorative Wood Plaque w/ Divider
	FV__0806(V)DMD2.0	Frame with 2" Decorative Metal Plaque w/ Divider
5.5"h x 8.5"w (3" x 8.5")	FV__5585(V)A2.5	Frame with 2" ADA Bottom Plaque
	FV__5585(V)AD2.5	Frame with 2" ADA Bottom Plaque w/ Divider
	FV__5585(V)DWD2.5	Frame with 2" Decorative Wood Plaque w/ Divider
	FV__5585(V)DMD2.5	Frame with 2" Decorative Metal Plaque w/ Divider
6.5"h x 8.5"w (4" x 8.5")	FV__6585(V)A2.5	Frame with 2.5" ADA Bottom Plaque
	FV__6585(V)AD2.5	Frame with 2.5" ADA Bottom Plaque w/ Divider
	FV__6585(V)DWD2.5	Frame with 2.5" Decorative Wood Plaque w/ Divider
	FV__6585(V)DMD2.5	Frame with 2.5" Decorative Metal Plaque w/ Divider
11"h x 8.5"w (8.5" x 8.5")	FV__1185(V)A2.5	Frame with 2.5" ADA Bottom Plaque
	FV__1185(V)AD2.5	Frame with 2.5" ADA Bottom Plaque w/ Divider
	FV__1185(V)DWD2.5	Frame with 2.5" Decorative Wood Plaque w/ Divider
	FV__1185(V)DMD2.5	Frame with 2.5" Decorative Metal Plaque w/ Divider
14"h x 8.5"w (11" x 8.5")	FV__1485(V)A3.0	Frame with 3" ADA Bottom Plaque
	FV__1485(V)AD3.0	Frame with 3" ADA Bottom Plaque w/ Divider
	FV__1485(V)DWD3.0	Frame with 3" Decorative Wood Plaque w/ Divider
	FV__1485(V)DMD3.0	Frame with 3" Decorative Metal Plaque w/ Divider
12"h x 11"w (8.5" x 11")	FV__1211(V)A3.5	Frame with 3.5" ADA Bottom Plaque
	FV__1211(V)AD3.5	Frame with 3.5" ADA Bottom Plaque w/ Divider
	FV__1211(V)DWD3.5	Frame with 3.5" Decorative Wood Plaque w/ Divider
	FV__1211(V)DMD3.5	Frame with 3.5" Decorative Metal Plaque w/ Divider
9"h x 6"w (6" x 6")	FV__0906(V)A2.0SL	Frame w/ 2" ADA Bottom Plaque and Slider
12" x 8.5"w (8.5" x 8.5")	FV__1285(V)A2.5SL	Frame w/ 2.5" ADA Bottom Plaque and Slider
15" x 8.5"w (11" x 8.5"w)	FV__1585(V)A3.0SL	Frame with 3" ADA Bottom Plaque and Slider

\* All dimensions are nominal display sizes.

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## Standard Assembly Vertical Configuration

### Projection Wall Mount



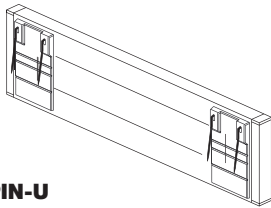
Two FullView modules are attached back-to-back via a unique, high-quality aluminum wall projection extrusion with a square profile. (CMT-M)

Width*	Height	Frame Code	Insert Height	Insert Width
8.5"	8.5"	FV__8585(V)PWM	8.5"	8.5"
8.5"	11"	FV__1185(V)PWM	11"	8.5"
11"	11"	FV__1111(V)PWM	11"	11"
11"	12"	FV__1211(V)PWM	12"	11"
11"	14"	FV__1411(V)PWM	14"	11"
11"	17"	FV__1711(V)PWM	17"	11"

\* All dimensions are nominal display sizes.

### Pin Attachment

For Fabric Mounting



#### PIN-U

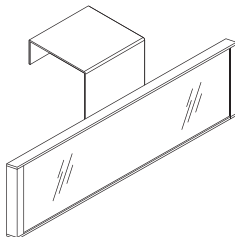
A unique dual-pin feature allows smaller FullView frames to attach to fabric surfaces.

Compatible with the following FullView Standard Assembly, Top Access, Inner Access or E-Series frame sizes:

- 3"h x 6"w
- 3"h x 8.5"w
- 4"h x 4"w
- 4"h x 6"w
- 6"h x 4"w

### Panel Clip Attachment

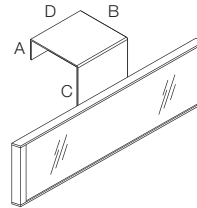
For Office Partitions



Aluminum clips are custom fabricated to specified dimensions and adhered to the back of the FullView frame.

Compatible with the following FullView Standard Assembly, Top Access, Inner Access or E-Series frame sizes:

- 3"h x 6"w
- 3"h x 8.5"w
- 4"h x 4"w
- 4"h x 6"w
- 4"h x 8.5"w
- 6"h x 4"w
- 6"h x 6"w

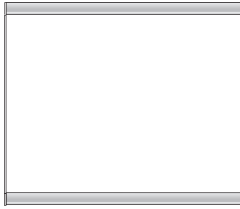


Dimension	Min.	Max.
A	1/2"	1"
B	1"	3"
C (Visible)	0"	3"
D	2"	4"

# Standard Assembly Horizontal Configuration

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## Wall Mount



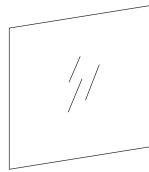
The Standard Assembly Horizontal Configuration features the aluminum edge profiles at the top/bottom of the sign frame. Inserts are removed from the frame using a lift/pull technique with a Suction Cup Tool.

The Standard Assembly Security Pin Feature is optional with the Horizontal Configuration. If specified, it will be located in the top-left corner of the frame.

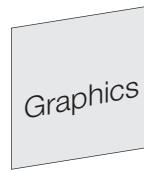
## Installation/Mounting

Standard mounting is via vinyl tape (VT). Mechanical fastening via concealed holes within the frame's core is optional for small sizes and standard for large sizes as indicated by an "MF" suffix in the product code.

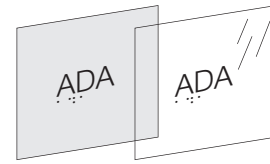
## Standard Display Options



**ClearLens (FVCL)**  
1/8" Non-Glare Acrylic with Subsurface Digitally Printed Graphics



**Painted Plaque (FVOP)**  
1/8" Acrylic with Direct-Print Graphics



**ADA Plaque (FV341A-DPT)**  
1/8" Acrylic Plaque with UF-Cured, Direct-Print Raised Characters and Fully Domed Braille



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With APCO's FREE SignWord Pro software, enter your sign message and symbols using pre-established formats or your own custom layouts. Print the image on pre-colored SignWord paper or your own paper and the sign update is complete.

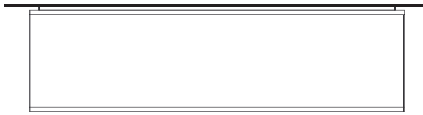
Height *	Width *	Frame Code	Insert Height	Insert Width
4"	4"	FV_0404(H)	4.08"	4.08"
4"	6"	FV_0406(H)	4.08"	6"
4"	8"	FV_0408(H)	4.08"	8"
4"	12"	FV_0412(H)	4.08"	12"
4"	18"	FV_0418(H)	4.08"	18"
6"	6"	FV_0606(H)	6"	6"
6"	8"	FV_0608(H)	6"	8"
6"	12"	FV_0612(H)	6"	12"
6"	18"	FV_0618(H)	6"	18"
6"	24"	FV_0624(H)	6"	24"
8"	24"	FV_0824(H)	8"	24"
8"	36"	FV_0836(H)	8"	36"
8"	48"	FV_0848(H)	8"	48"
8.5"	11"	FV_8511(H)	8.5"	11"
8.5"	14"	FV_8514(H)	8.5"	14"
11"	8.5"	FV_1185(H)	11"	8.5"
11"	11"	FV_1111(H)	11"	11"
11"	17"	FV_1117(H)	11"	17"
12"	24"	FV_1224(H)MF	12"	24"
12"	36"	FV_1236(H)MF	12"	36"
12"	48"	FV_1248(H)MF	12"	48"
18"	24"	FV_1824(H)MF	18"	24"
18"	36"	FV_1836(H)MF	18"	36"
18"	48"	FV_1848(H)MF	18"	48"

\* All dimensions are nominal display sizes.

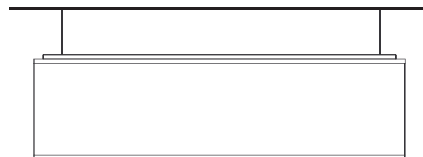
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## Standard Assembly Horizontal Configuration

### Ceiling Mount



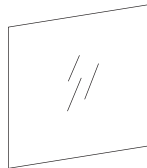
**Flush Mount (CMF)**



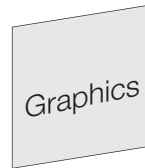
**Wire Suspended (CMW)**

Two FullView modules are attached back-to-back via a unique extruded aluminum mounting bracket with a square profile. CMT-M

### Standard Display Options



**ClearLens (FVCL)**  
1/8" Non-Glare Acrylic with Subsurface Digitally Printed Graphics



**Painted Plaque (FVOP)**  
1/8" Acrylic with Direct-Print Graphics

Height *	Width *	Frame Code	Description
8"	24"	FV__0824(H)CMF	Flush Mount
		FV__0824(H)CMW	Wire Suspended
8"	36"	FV__0836(H)CMF	Flush Mount
		FV__0836(H)CMW	Wire Suspended
8"	48"	FV__0848(H)CMF	Flush Mount
		FV__0848(H)CMW	Wire Suspended
12"	24"	FV__1224(H)CMF	Flush Mount
		FV__1224(H)CMW	Wire Suspended
12"	36"	FV__1236(H)CMF	Flush Mount
		FV__1236(H)CMW	Wire Suspended
12"	48"	FV__1248(H)CMF	Flush Mount
		FV__1248(H)CMW	Wire Suspended
18"	24"	FV__1824(H)CMF	Flush Mount
		FV__1824(H)CMW	Wire Suspended
18"	36"	FV__1836(H)CMF	Flush Mount
		FV__1836(H)CMW	Wire Suspended
18"	48"	FV__1848(H)CMF	Flush Mount
		FV__1848(H)CMW	Wire Suspended

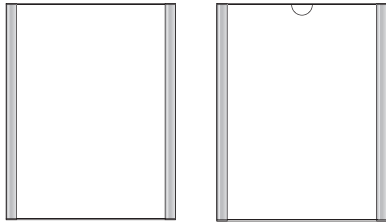
\* All dimensions are nominal display sizes.

# Inner Access & Top Access Assemblies

## Vertical Configuration

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### Inner & Top Access



#### Inner Access (FV-IA)

Above Left

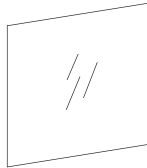
Inserts are removed from the top of the frame by using a sticky note or similar. The ClearLens is not removed from the frame.

#### Top Access (FV-TA)

Above Right

Inserts are removed from the top of the frame by using the thumb slot for quick access. The ClearLens is not removed from the frame.

### Standard Display Options



#### ClearLens

(FVCL-IA or FVCL-TA)  
1/16" Non-Glare Acrylic with Subsurface Digitally Printed Graphics



#### ADA Band

(FVADA-DPT)

Flatbed Direct-Print or Painted Band\* with APCO's DP-Tactile process Direct-Print UV-cured raised characters or Braille applied to non-glare, acrylic lens.

\* For non-metallic colors, band is printed directly onto non-glare lens. For metallic colors, a painted band is applied to a non-glare lens.



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### Installation/Mounting

Top Access and Inner Access modules can only be installed via vinyl tape (VT). *Mechanical fastening is not an option with the Inner Access or Top Access assemblies.*

Width *	Height *	Frame Code	Compatible ADA Bands & Sizes
4"	4"	FV__0404(V)-IA or -TA	FVADA-DPT-0204(V) 2"h x 4"w
4"	6"	FV__0604(V)-IA or -TA	
4"	8"	FV__0804(V)-IA or -TA	
6"	3"	FV__0306(V)-IA or -TA	FVADA-DPT-0206(V) 2"h x 6"w
6"	4"	FV__0406(V)-IA or -TA	FVADA-DPT-2506(V) 2.5"h x 6"w
6"	6"	FV__0606(V)-IA or -TA	FVADA-DPT-0306(V) 3"h x 6"w
6" <sup>1</sup>	7" <sup>1</sup>	FV__0706(V)SL-IA or -TA w/ Slider <sup>1</sup>	
6"	8"	FV__0806(V)-IA or -TA	
8.5"	3"	FV__0385(V)-IA or -TA	FVADA-DPT-2585(V) 2.5"hx8.5"w
8.5"	4"	FV__0485(V)-IA or -TA	FVADA-DPT-0385(V) 3"h x 8.5"w
8.5"	5.5"	FV__5585(V)-IA or -TA	
8.5"	6.5"	FV__6585(V)-IA or -TA	
8.5"	8.5"	FV__8585(V)-IA or -TA	
8.5" <sup>2</sup>	9.6" <sup>2</sup>	FV__9685(V)SL-IA or -TA w/ Slider <sup>2</sup>	
8.5"	11"	FV__1185(V)-IA or -TA	
8.5"	14"	FV__1485(V)-IA or -TA	
11"	8.5"	FV__8511(V)-IA or -TA	FVADA-DPT-2511(V) 2.5"hx11"w
11"	11"	FV__1111(V)-IA or -TA	FVADA-DPT-0311(V) 3"h x 11"w
11"	12"	FV__1211(V)-IA or -TA	FVADA-DPT-3511(V) 3.5"hx11"w
11"	17"	FV__1711(V)-IA or -TA	

\* All dimensions are nominal display sizes.

<sup>1</sup> Modular display sizes is 6" x 6"

<sup>2</sup> Modular display size is 8.5" x 8.5"

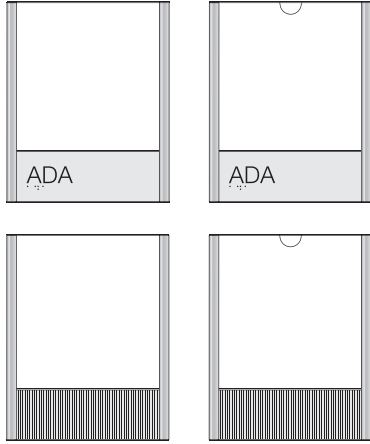


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## Inner Access & Top Access Assemblies Vertical Configuration



### Inner & Top Access With ADA or Decorative Bottom Plaque



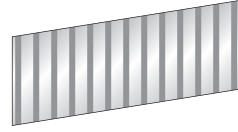
**Inner Access (FV-IA) Above Left**  
Inserts are removed from the top of the frame by using a sticky note or similar. The ClearLens is not removed from the frame.

**Top Access (FV-TA) Above Right**  
Inserts are removed from the top of the frame by using the thumb slot for quick access. The ClearLens is not removed from the frame.

### Standard Display Options



**ADA Bottom Plaque**  
(FV341A-DPT) without Divider  
(FV241A-DPT) with Divider  
1/8" or 1/16" Plaque with  
Direct-Printed Raised  
Character/Braille, Permanently  
Attached to Frame



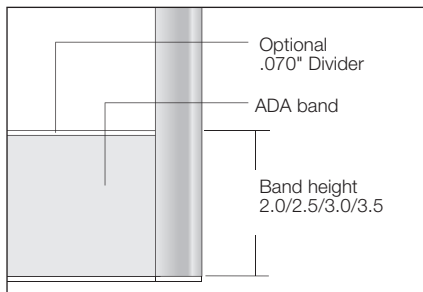
**Decorative Metal Plaque**  
(FVDM\_\_\_)  
DMP3 MicroPerf  
DMS4 Dimpled



**Direct-Printed  
Decorative Wood Plaque**  
(FVDW\_\_\_)  
DWM1 Maple  
DWW2 Walnut  
DWO3 Oak  
DWC4 Cherry  
DWM5 Mahogany

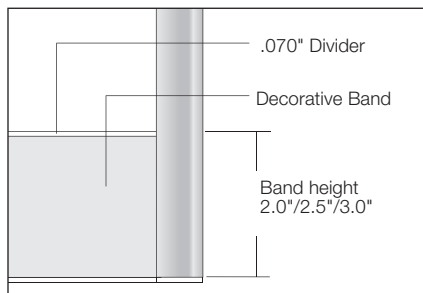
### Frame Size

(Top Display)	Frame Code	Description
6"h x 4"w (4.08" x 4.08")	FV__0604(V)A2.0-IA or -TA	with 2" ADA Bottom Plaque
	FV__0604(V)AD2.0-IA or -TA	with 2" ADA Bottom Plaque w/ Divider
	FV__0604(V)DWD2.0-IA or -TA	with 2" Decorative Wood Plaque+Divider
	FV__0604(V)DMD2.0-IA or -TA	with 2" Decorative Metal Plaque+Divider
6"h x 6"w (4" x 6")	FV__0606(V)A2.0-IA or -TA	with 2" ADA Bottom Plaque
	FV__0606(V)AD2.0-IA or -TA	with 2" ADA Bottom Plaque+Divider
	FV__0606(V)DWD2.0-IA or -TA	with 2" Decorative Wood Plaque+Divider
	FV__0606(V)DMD2.0-IA or -TA	with 2" Decorative Metal Plaque+Divider
8"h x 6"w (6" x 6")	FV__0806(V)A2.0-IA or -TA	with 2" ADA Bottom Plaque
	FV__0806(V)AD2.0-IA or -TA	with 2" ADA Bottom Plaque+Divider
	FV__0806(V)DWD2.0-IA or -TA	with 2" Decorative Wood Plaque+Divider
	FV__0806(V)DMD2.0-IA or -TA	with 2" Decorative Metal Plaque+Divider
5.5"h x 8.5"w (3" x 8.5")	FV__5585(V)A2.5-IA or -TA	with 2.5" ADA Bottom Plaque
	FV__5585(V)AD2.5-IA or -TA	with 2.5" ADA Bottom Plaque+Divider
	FV__5585(V)DWD2.5-IA or -TA	with 2.5" Decorative Wood Plaque+Divider
	FV__5585(V)DMD2.5-IA or -TA	with 2.5" Decorative Metal Plaque+Divider
6.5"h x 8.5"w	FV__6585(V)A2.5-IA or -TA	with 2.5" ADA Bottom Plaque
	FV__6585(V)AD2.5-IA or -TA	with 2.5" ADA Bottom Plaque+Divider
	FV__6585(V)DWD2.5-IA or -TA	with 2.5" Decorative Wood Plaque+Divider
	FV__6585(V)DMD2.5-IA or -TA	with 2.5" Decorative Metal Plaque+Divider
11"h x 8.5"w (8.5" x 8.5")	FV__1185(V)A2.5-IA or -TA	with 2.5" ADA Bottom Plaque
	FV__1185(V)AD2.5-IA or -TA	with 2.5" ADA Bottom Plaque+Divider
	FV__1185(V)DWD2.5-IA or -TA	with 2.5" Decorative Wood Plaque+Divider
	FV__1185(V)DMD2.5-IA or -TA	with 2.5" Decorative Metal Plaque+Divider
14"h x 8.5"w (11" x 8.5")	FV__1485(V)A3.0-IA or -TA	with 3" ADA Bottom Plaque
	FV__1485(V)AD3.0-IA or -TA	with 3" ADA Bottom Plaque+Divider
	FV__1485(V)DWD3.0-IA or -TA	with 3" Decorative Wood Plaque+Divider
	FV__1485(V)DMD3.0-IA or -TA	with 3" Decorative Metal Plaque+Divider
12"h x 11"w (8.5" x 11")	FV__1211(V)A3.5-IA or -TA	with 3.5" ADA Bottom Plaque
	FV__1211(V)AD3.5-IA or -TA	with 3.5" ADA Bottom Plaque+Divider
	FV__1211(V)DWD3.5-IA or -TA	with 3.5" Decorative Wood Plaque+Divider
	FV__1211(V)DMD3.5-IA or -TA	with 3.5" Decorative Metal Plaque+Divider
9"h x 6"w (6" x 6")	FV__0906(V)A2.0SL-IA or -TA	with 2" ADA Bottom Plaque+Slider
	FV__1285(V)A2.5SL-IA or -TA	with 2.5" ADA Bottom Plaque+Slider
12"h x 8.5"w (8.5" x 8.5")	FV__1285(V)A2.5SL-IA or -TA	with 2.5" ADA Bottom Plaque+Slider
	FV__1585(V)A3.0SL-IA or -TA	with 3" ADA Bottom Plaque+Slider



### ADA Plaque Divider

A .070" anodized aluminum Divider Bar is an optional feature to separate the ADA plaque from the top display.



### Decorative Plaque Divider

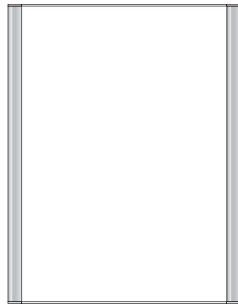
All Decorative Plaques feature a .070" anodized aluminum Divider Bar.

# E Series Assembly

## Vertical Configuration

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### Wall Mount



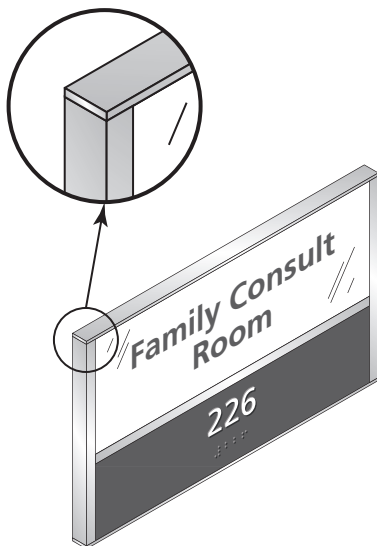
The FullView E-Series features the same aluminum frames and profiles as the Standard Assembly but uses 1/16" thick flexible inserts (vs. the 1/8" thick rigid inserts of the Standard Assembly) which flex-in and flex-out of the frame via a Suction Cup Tool. E-Series frames do not incorporate a concealed security pin but offer a high degree of tamper resistance nonetheless.

### Installation/Mounting

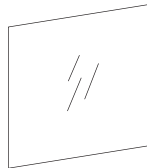
Standard mounting is via vinyl tape (VT). Mechanical fastening (MF) via concealed holes within the frame's core is optional.

### FullView E-Series with Square Shape Edge Profile

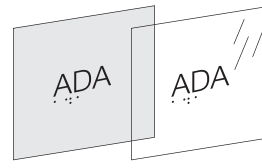
Features a single piece aluminum cap at the top and bottom of the frame.



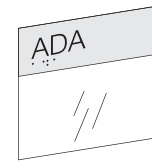
### Standard Display Options



**ClearLens**  
(FVECL)  
1/16" Non-Glare Acrylic with Subsurface Digitally Printed Graphics

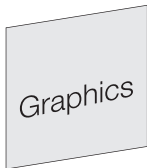


**ADA Plaque**  
(FV241A-DPT)  
1/16" Acrylic Plaque with UF-Cured, Direct-Print Raised Characters and Fully Domed Braille

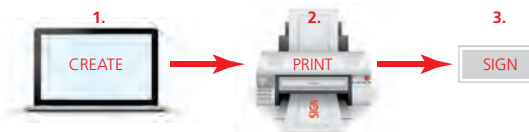


**ADA Band**  
(FVADA-DPT)  
Flatbed Direct-Print or Painted Band\* with APCO's DP-Tactile process Direct-Print UV-cured raised characters or Braille applied to non-glare, acrylic lens.

\* For non-metallic colors, band is printed directly onto non-glare lens. For metallic colors, a painted band is applied to a non-glare lens.



**Painted Plaque**  
(FVEOP)  
1/16" PETG with Direct-Printed Graphics



Perforated SignWord Paper Available for These Sizes.

### User Lettering Solutions Make Sign Maintenance Easy!

With APCO's FREE SignWord Pro software, enter your sign message and symbols using pre-established formats or your own custom layouts. Print the image on pre-colored SignWord paper or your own paper and the sign update is complete.

Width *	Height *	Frame Code	Compatible ADA Bands
4"²	4"²	FVE_0404(V)	FVADA-DPT-0204(V) 2"h x 4"w
4"²	6"	FVE_0604(V)	
4"²	8"	FVE_0804(V)	
6"	3"	FVE_0306(V)	FVADA-DPT-0206(V) 2"h x 6"w
6"	4"	FVE_0406(V)	FVADA-DPT-2506(V) 2.5"h x 6"w
6"	6"	FVE_0606(V)	
6"	8"	FVE_0806(V)	
6"	10"	FVE_1006(V)	
8.5"	3"	FVE_0385(V)	FVADA-DPT-2585(V) 2.5"h x 8.5"w
8.5"	4"	FVE_0485(V)	FVADA-DPT-0385(V) 3"h x 8.5"w
8.5"	5"	FVE_0585(V)	
8.5"	5.5"	FVE_5585(V)	
8.5"	6.5"	FVE_6585(V)	
8.5"	8.5"	FVE_8585(V)	
8.5"¹	9.6"¹	FVE_9685(V)SL w/ Slider¹	
8.5"	11"	FVE_1185(V)	
8.5"	14"	FVE_1485(V)	
11"	8.5"	FVE_8511(V)	FVADA-DPT-2511(V) 2.5"h x 11"w
11"	11"	FVE_1111(V)	FVADA-DPT-0311(V) 3"h x 11"w
11"	12"	FVE_1211(V)	FVADA-DPT-3511(V) 3.5"h x 11"w
11"	14"	FVE_1411(V)	
11"	17"	FVE_1711(V)	

\* All dimensions are nominal display sizes.

¹ Modular display sizes is 6" x 6"

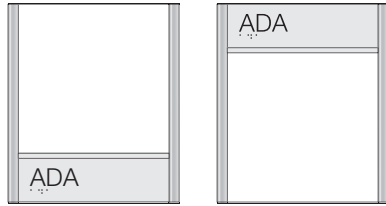
² Actual dimension is 4.08"

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## E Series Assembly Vertical Configuration

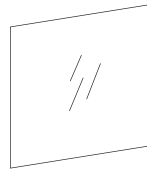
### Wall Mount

With Divider Bar & ADA Plaque

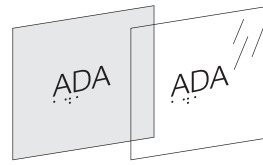


The FullView E-Series with Top or Bottom ADA Plaques features a removable ADA plaque separated from the display insert by a permanently affixed 1/4" aluminum divider bar (FVDB).

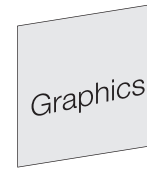
### Standard Display Options



**ClearLens**  
(FVECL)  
1/16" Non-Glare Acrylic with Subsurface Digitally Printed Graphics



**ADA Plaque**  
(FV241A-DPT)  
1/16" Acrylic Plaque with UF-Cured, Direct-Print Raised Characters and Fully Domed Braille







**Painted Plaque**  
(FVEOP)  
1/16" Acrylic with Direct-Printed Graphics







Perforated SignWord Paper Available for These Sizes.

### ADA TOP Plaque Modules

Width	Height	Frame Code	Description
6"	5.75"	FVE__57506(V)ATD2.5 	with 2.5" ADA Plaque at Top and a 3"h x 6"w Display at Bottom
6"	6.75"	FVE__67506(V)ATD2.5 	with 2.5" ADA Plaque at Top and a 4"h x 8.5"w Display at Bottom
8.5"	5.75"	FVE__57585(V)ATD2.5 	with 2.5" ADA Plaque at Top and a 3"h x 8.5"w Display at Bottom
8.5"	6.75"	FVE__67585(V)ATD2.5 	with 2.5" ADA Plaque at Top and a 4"h x 8.5"w Display at Bottom
8.5"	8.75"	FVE__87585(V)ATD2.5	with 2.5" ADA Plaque at Top and a 6"h x 8.5"w Display at Bottom
8.5"	11.75"	FVE__117585(V)ATD3.0	with 3" ADA Plaque at Top and a 8.5"h x 8.5"w Display at Bottom

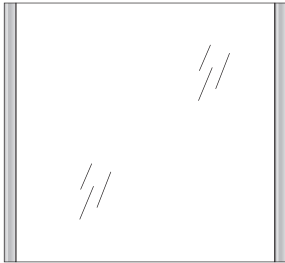
### ADA BOTTOM Plaque Modules

Width	Height	Frame Code	Description
6"	5.75"	FVE__57506(V)ABD2.5 	with 2.5" ADA Plaque at Bottom and a 3"h x 6"w Display at Top
6"	6.75"	FVE__67506(V)ABD2.5 	with 2.5" ADA Plaque at Bottom and a 4"h x 6"w Display at Top
8.5"	5.75"	FVE__57585(V)ABD2.5 	with 2.5" ADA Plaque at Bottom and a 3"h x 8.5"w Display at Top
8.5"	6.75"	FVE__67585(V)ABD2.5 	with 2.5" ADA Plaque at Bottom and a 4"h x 8.5"w Display at Top
8.5"	8.75"	FVE__87585(V)ABD2.5	with 2.5" ADA Plaque at Bottom and a 6"h x 8.5"w Display at Top
8.5"	11.75"	FVE__117585(V)ABD3.0	with 3" ADA Plaque at Bottom and a 8.5"h x 8.5"w Display at Top

# Large Assembly Vertical Configuration

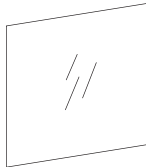
4.3.112  
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## Single & Multi Column



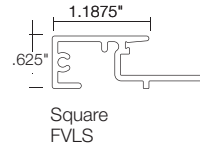
The Large Assembly Vertical Configuration Frame FVL(V) features concealed spring mechanisms within the right side aluminum profile which enable the 1/8" non-glare lens to be removed from the frame using a Large Suction Cup Tool and a shift-right/pull-out technique.

## Standard Display Options

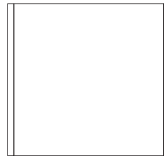


**ClearLens**  
(FVLCL)  
1/8" Non-Glare Acrylic  
with Subsurface Digitally  
Printed Graphics

## Frame Profile



## Single Column



Width *	Height *	Frame Code
22"	22"	FVL_2222(V)
22"	28"	FVL_2822(V)
24"	24"	FVL_2424(V)
24"	28"	FVL_2824(V)
24"	32"	FVL_3224(V)
24"	36"	FVL_3624(V)

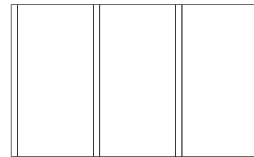
\* All dimensions are nominal display sizes.

## Multi Column



**FVL\_-24MC1(V)**  
24"h x 25"w (Nominal)  
(2) 24"h x 12"w Display Size

**FVL\_-36MC1(V)**  
36"hx 25"w (Nominal)  
(2) 36"h x 12"w Display Size



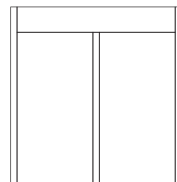
**FVL\_-24MC2(V)**  
24"h x 38"w (Nominal)  
(3) 24"h x 12"w Display Size

**FVL\_-36MC2(V)**  
36"hx 38"w (Nominal)  
(3) 36"h x 12"w Display Size



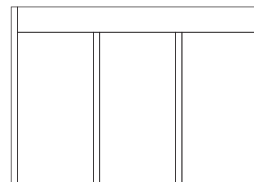
**FVL\_-24MC3(V)**  
24"h x 37"w (Nominal)  
(1) 24"h x 12"w &  
(1) 24"h x 24"w Display Size

**FVL\_-36MC3(V)**  
36"hx 37"w (Nominal)  
(1) 36"h x 12"w &  
(1) 36"h x 24"w Display Size



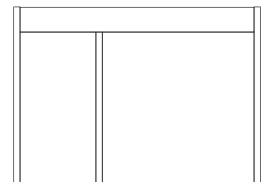
**FVL\_-28MCH1(V)**  
28-1/16"h x 25"w (Nominal)  
(2) 24"h x 12" Display Size  
(1) 4" h x 25"w Header

**FVL\_-36MC1(V)**  
40-1/16"h x 25"w (Nominal)  
(2) 36"h x 12" Display Size  
(1) 4" h x 25"w Header



**FVL\_-28MCH2(V)**  
28-1/16"h x 38"w (Nominal)  
(3) 24"h x 12" Display Size  
(1) 4" h x 38"w Header

**FVL\_-40MCH1(V)**  
40-1/16"h x 38"w (Nominal)  
(3) 36"h x 12" Display Size  
(1) 4" h x 38"w Header



**FVL\_-28MCH3(V)**  
28-1/16"h x 37"w (Nominal)  
(1) 24"h x 12" &  
(1) 24"h x 24"w Display Size  
(1) 4" h x 37"w Header

**FVL\_-40MCH1(V)**  
40-1/16"h x 37"w (Nominal)  
(1) 36"h x 12" &  
(1) 36"h x 24"w Display Area  
(1) 4" h x 37" Size

### INSTALLATION NOTE

ALL FullView Large Assembly modules feature concealed recessed mounting holes for mechanical fastening (MF) to the wall surface. Vinyl Tape mounting is not recommended.

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## Large Assembly Horizontal Configuration

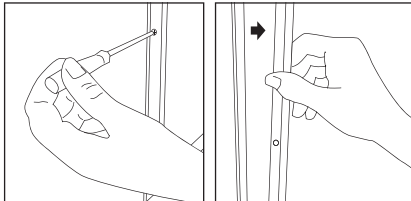
### Single Column



The Large Assembly Horizontal Configuration Frame FVL(H) features the aluminum edge profiles on the Top/Bottom of the frame and an 1/8" thick non-glare lens that is removed from the frame using a Large Suction Cup Tool and a Lift/Pull technique.

Frames larger than 24"h x 48"w will feature a side locking extrusion (4-Side Capture) on both the left and right sides of the frame as shown in the images below. This feature is optional for smaller sizes as well for additional tamper resistance.

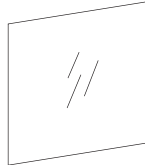
### 4-Side Locking Feature Capture



4-Side Capture extrusion is removed from the frame using a Phillips screwdriver.

Once both capture extrusions are removed, the non-glare lens can be shifted up and the pulled outward from the frame using a Large Suction Cup Tool.

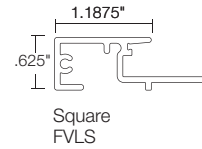
### Standard Display Options



### ClearLens

(FVLCL)  
1/8" Non-Glare Acrylic  
with Subsurface Digitally  
Printed Graphics

### Frame Profile



Height *	Width *	Frame Code
22"	22"	FVL_2222(H)
	28"	FVL_2228(H)
	36"	FVL_2236(H)
24"	24"	FVL_2424(H)
	36"	FVL_2436(H)
	48"	FVL_2448(H)
36"	36"	FVL_3636(H)4C with 4-Side Capture Feature
	42"	FVL_3642(H)4C with 4-Side Capture Feature
	48"	FVL_3648(H)4C with 4-Side Capture Feature
	54"	FVL_3654(H)4C with 4-Side Capture Feature
	60"	FVL_3660(H)4C with 4-Side Capture Feature

\* All dimensions are nominal display sizes.

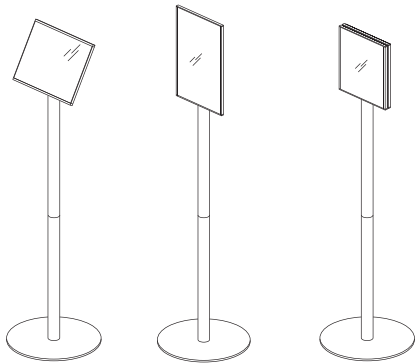
## INSTALLATION NOTE

ALL FullView Large Assembly modules feature concealed recessed mounting holes for mechanical fastening (MF) to the wall surface. Vinyl Tape mounting is not recommended.

# Free Standing Pedestal FS300

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7/23

## FS300 Series Free Standing Pedestal

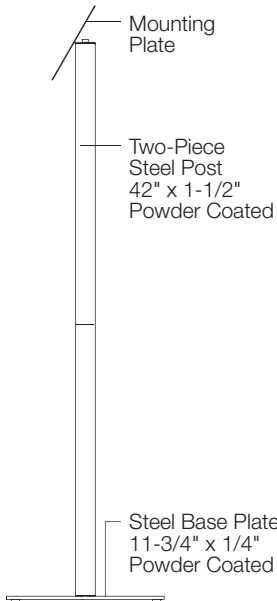


**FS300**  
Incline  
Single-sided

**FS301**  
Vertical  
Single-sided

**FS301.2**  
Vertical  
Double-sided

Signs are easily affixed to a two-piece 42" aluminum post via a modular steel mounting plate. A 1/4" steel base plate acts as a counter weight at the bottom of the post. The FS300 Series accepts both Vertical (portrait) and Horizontal (landscape) display configurations.



- ### Standard Post Finishes
- Natural Satin Anodized (recommended)
  - Painted: (not recommended)
    - Standard (44+)
    - Custom

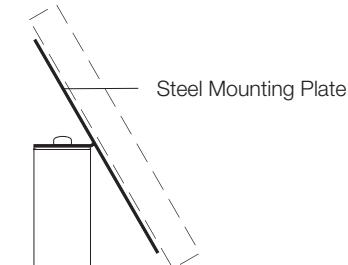
- ### Standard Base Plate Finishes
- Powder Coated
    - Silver (recommended)
  - Painted (not recommended)
    - Standard (44+)
    - Custom

### Compatible FullView Holders\*

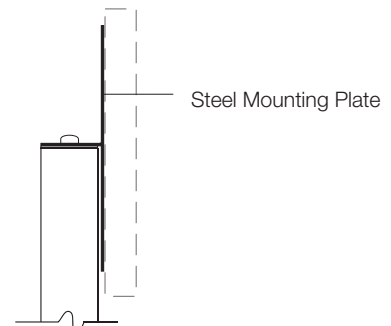
Code	Insert Size
<b>FV1185(V)</b>	11" x 8.5"
<b>FV8511(H)</b>	8.5" x 11"
<b>FV1485(V)</b>	14" x 8.5"
<b>FV8514(H)</b>	8.5" x 14"
<b>FV1117(V)</b>	11" x 17"
<b>FV1711(H)</b>	17" x 11"

\* Also compatible with Top Access, Inner Access and E Series holders of the same sizes shown here.

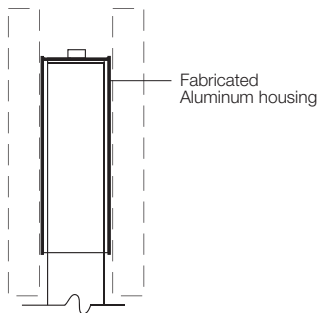
### FS300 Series Mounting Plates



**FS300**  
60 Degree Inclined



**FS301**  
Vertical Single Sided

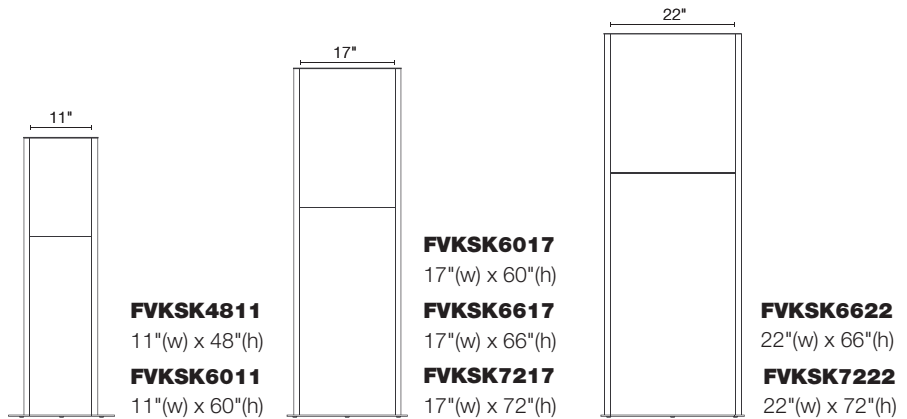
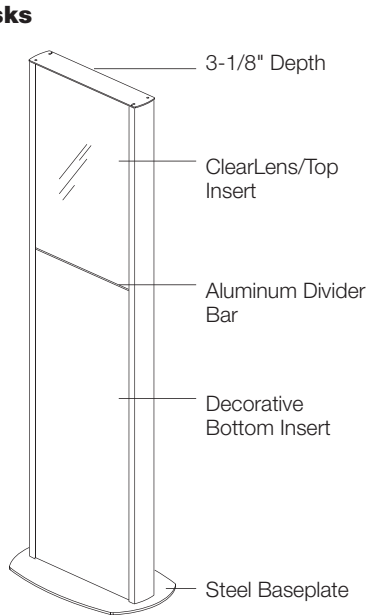


**FS301.2**  
Vertical Double Sided

4.3.115  
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**Kiosks**  
FVKSK

**Kiosks**



The FullView Kiosk is a versatile free-standing sign & display solution allowing maps, directions, meeting schedule, announcements and other information to be strategically placed within a facility.

Digitally printed displays are housed behind a secure yet modular non-glare lens. Change displays by removing the lens using a Large Suction Cup Tool and a shift-right/pull-out technique. A range of decorative panels and other graphics options are also available.

**Aluminum Divider Bar**

When there are two inserts within the same side of the a FullView Kiosk, there will be a satin anodized aluminum divider bar to separate the top insert from the bottom. This bar prevents the insert from sliding down. The top insert/ClearLens size will be kept to exact dimensions and the aluminum divider bar height will be subtracted from the bottom insert height as needed.

**Direct Print Wood Options**

- DWM1 Maple
- DWW2 Walnut
- DWO3 Oak
- DWC4 Cherry
- DWM5 Mahogany

**Decorative Metal Options**

- DMP5 Ribbed Silver Finish
- DMS4 Dimpled Silver Finish

\* .070" to .25" may be subtracted from bottom insert height to account for optional divider bar

Width	Height	Code	Top Insert Height	Corresponding Bottom Insert Height *			
11"	48"	<b>FVKSK4811</b>	48"	n/a			
			22"	26"			
			17"	31"			
			11"	37"			
			8.5"	39.5"			
11"	60"	<b>FVKSK6011</b>	60"	n/a			
			22"	38"			
			17"	43"			
			11"	49"			
17"	60"	<b>FVKSK6017</b>	60"	n/a			
			36"	24"			
			30"	30"			
			24"	36"			
			22"	38"			
			17"	43"			
			11"	49"			
			17"	66"	<b>FVKSK6617</b>	66"	n/a
						36"	30"
						30"	36"
24"	42"						
22"	44"						
17"	49"						
11"	55"						
17"	72"	<b>FVKSK7217</b>	72"	n/a			
			42"	30"			
			36"	36"			
			30"	42"			
			24"	48"			
			22"	50"			
			17"	55"			
			11"	61"			
			22"	66"	<b>FVKSK6622</b>	66"	n/a
						36"	30"
30"	36"						
24"	42"						
22"	44"						
17"	49"						
11"	55"						
22"	72"	<b>FVKSK7222</b>	72"	n/a			
			42"	30"			
			36"	36"			
			30"	42"			
			24"	48"			
			22"	50"			
			17"	55"			

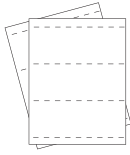
# SignWord Paper

4.3.116

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## SignWord® Paper Inserts

Sold in packages of 50 sheets



FREE SignWord Pro software download at  
www.apcosigns.com.

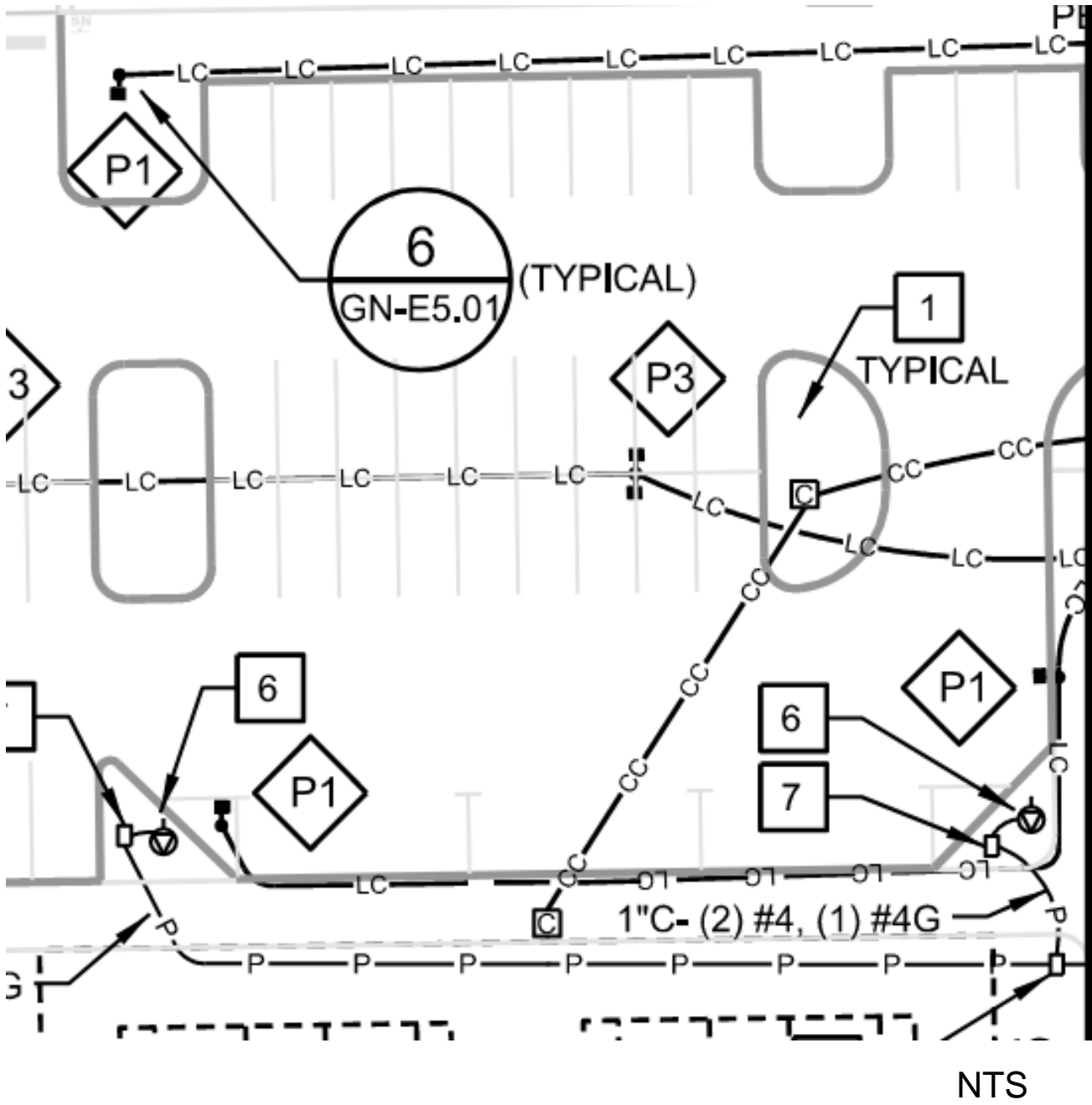
### Standard Paper Colors

A43 Putty / A94 Sand  
A72 Bone White / A00 White  
A78 Pearl Gray / A98 Pearl Gray Light

Insert Width	Insert Height	Paper/Sheet Code	Inserts Per Sheet	Notes
6"	3"	<b>SWFV3085</b>	3	must be cut to width
	4"	<b>SWFV4085</b>	2	must be cut to width
8-1/2"	3"	<b>SWFV3085</b>	3	
	4"	<b>SWFV4085</b>	2	
	8-1/2"	<b>SWFV8511</b>	1	must be cut to width
	11"	<b>SWFV8511</b>	1	
11"	14"	<b>SWFV8514</b>	1	
	8-1/2"	<b>SWFV8511</b>	1	
	11"	<b>SWFV1117</b>	1	must be cut to height
17"	17"	<b>SWFV1117</b>	1	
	11"	<b>SWFV1117</b>	1	

**NOTE:** Consult APCO for colors and availability of non-SignWord paper, i.e. 8-1/2" x 11", 11" x 17", etc.





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SK-1 / ES-1.05

ADDENDUM 3  
SOUTHEAST MUNICIPAL COMPLEX  
CITY OF FRANKLIN, TENNESSEE