

DuPont Performance Building Solutions

◀DUPONT▶      ▶DUPONT▶  
**Tyvek** | **Styrofoam**  
Brand™

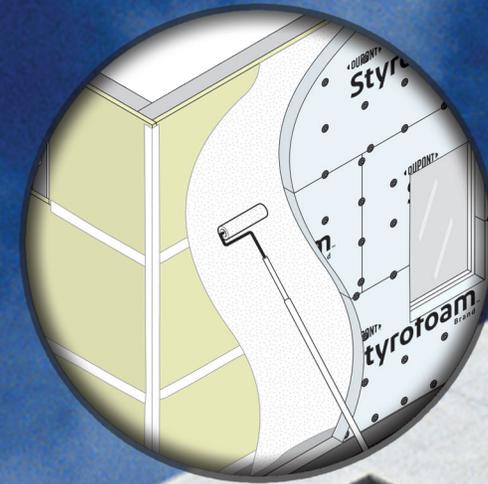
## DuPont Commercial Wall<sup>2</sup> System

### DuPont™ Tyvek® Fluid Applied WB+™ **UNDER** DuPont Exterior Continuous Insulation

Installation Bulletin

- Optimizes Thermal Efficiency and Durability Using DuPont™ Styrofoam™ Brand Extruded Polystyrene (XPS) or DuPont™ Thermax™ Brand Polyisocyanurate Board Insulation.
- Maximizes Air and Water Protection Using DuPont™ Tyvek® Fluid Applied WB+™.
- Meets Fire Performance Requirements of NFPA 285.

April 2020





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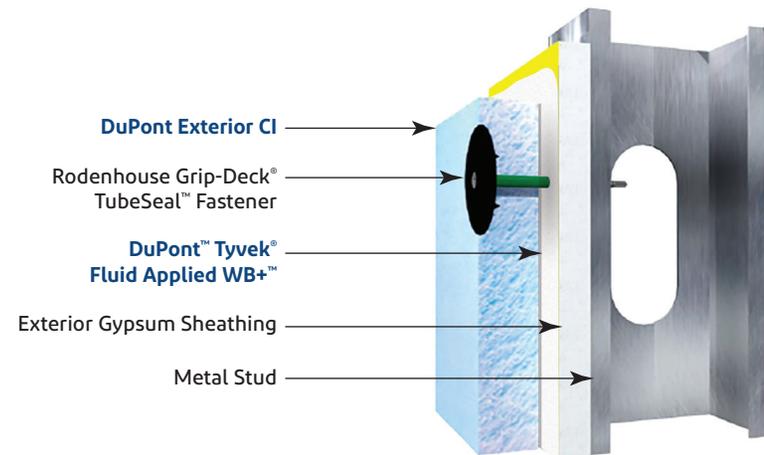


## Introduction

The DuPont Commercial Wall<sup>2</sup> System in this document is based on in-depth, rigorous testing of enhanced wall assemblies that reflect the “Power of Two” when **DuPont™ Tyvek® Fluid Applied WB+™** and **DuPont™ Styrofoam™ Brand Extruded Polystyrene (XPS)\*** or **DuPont™ Thermax™ Brand Polyisocyanurate Insulation\*** are used together to protect the building above and beyond building code minimums. This bulletin is intended for commercial buildings comprised of steel framing. Designers and building owners can enjoy greater peace of mind knowing that DuPont scientists and engineers have done the hard work to ensure assembly robustness when installers follow the methods included in this installation bulletin. Use of this bulletin is limited to construction of the DuPont Commercial Wall<sup>2</sup> System outlined herein and is designed to serve as a resource for building professionals and installers using DuPont Performance Building Solutions Products in commercial construction. It does not override or change requirements in the DuPont Performance Building Solutions Installation Guidelines or product-specific Warranties, with the exception of using Rodenhouse Grip-Deck® TubeSeal™ Fasteners to secure the **Styrofoam™** or **Thermax™ Exterior Continuous Insulation (CI)** products to qualify for the enhanced Commercial Wall<sup>2</sup> System Warranty. The DuPont Commercial Wall<sup>2</sup> System Warranty is based on use of the applicable products and components in the manner outlined in this bulletin. Please refer to the applicable DuPont Performance Building Solutions product installation guidelines for proper installation and requirements, technical specifications, codes and standards, and safe handling of **DuPont™ Tyvek® Fluid Applied Products**, **DuPont Self-Adhered Flashing Products**, or **DuPont Exterior Continuous Insulation (CI)** products. Product specific information is available at [building.dupont.com/commercial](http://building.dupont.com/commercial).

## DuPont Commercial Wall<sup>2</sup> System DuPont Exterior Continuous Insulation Fastener Considerations

When the **Tyvek® Fluid Applied WB+™** is installed under the **DuPont Exterior CI**, Rodenhouse Grip-Deck® TubeSeal™ Fasteners are required to secure the insulation to the metal framing structure as part of the **Commercial Wall<sup>2</sup> System**. The Rodenhouse Grip-Deck® TubeSeal™ Fasteners are preassembled with a plastic tube to provide a gasketed seal at each blind fastener penetration through the **Tyvek® Fluid Applied WB+™**. This eliminates the need for additional fastener treatment to prevent air and water leakage at fastener locations. The Grip-Deck® TubeSeal™ Fasteners come in lengths to accommodate insulation that is 1-4” in thickness, by increments of 1/2”. The plastic tube is sized 1/8” longer than the thickness of the insulation to ensure proper sealing when compressed during installation.



Rodenhouse Grip-Deck® TubeSeal™ Fasteners are available in 1/2” increments for installation of 1” – 4” thick insulation.

\*A former product of The Dow Chemical Company.

## DuPont Commercial Wall<sup>2</sup> System Exterior Sheathing and/or Exterior Cladding Fastener Considerations

It is important to consider minimizing the total number of fasteners used to attach the exterior sheathing, **DuPont Exterior Continuous Insulation (CI)**, and the exterior facade system. All fasteners used for the **DuPont Exterior CI** and/or exterior facade (cladding) systems should be securely fastened back to the metal framing structure per manufacturer recommendations. When cladding attachment systems are used, Project Construction Management may determine if conditions allow the fastening pattern of the exterior sheathing to be reduced with the subsequent required fasteners used to secure the designated wall system.

## DuPont Commercial Wall<sup>2</sup> System Applicable Products

### DuPont Exterior Continuous Insulation

- **Styrofoam™ Brand Extruded Polystyrene (XPS)**  
(Up to 3" depending on NFPA 285 approval and IBC)
- **Thermax™ Brand Polyisocyanurate Insulation**  
(Up to 4" depending on NFPA 285 approval and IBC)

### DuPont™ Tyvek® Fluid Applied Products

- **DuPont™ Tyvek® Fluid Applied WB+™**
- **DuPont™ Tyvek® Fluid Applied Flashing and Joint Compound+**
- **DuPont™ Sealant for Tyvek® Fluid Applied System**

### DuPont Self-Adhered Flashing Products

- **DuPont™ FlexWrap™** (formerly DuPont™ FlexWrap™ NF)
- **DuPont™ StraightFlash™**

### Installation Accessories

- Rodenhouse Grip-Deck® TubeSeal™ Fasteners for attachment of **DuPont Exterior CI**

## DuPont Commercial Wall<sup>2</sup> System Warranty Information

In order to make a claim under the [DuPont Commercial Wall<sup>2</sup> System Warranty](#), you must have met all of the terms and conditions of the warranty including use of the applicable DuPont Installation Guidelines and this *Commercial Wall<sup>2</sup> System - DuPont™ Tyvek® Fluid Applied WB+™ UNDER Exterior Insulation Installation Bulletin*, and be compliant with local building codes including assembly-specific details for NFPA 285. Please visit [building.dupont.com/warranties](http://building.dupont.com/warranties) for more information about the warranty.

## DuPont™ Tyvek® Fluid Applied WB+™ UNDER DuPont Exterior Continuous Insulation

To ensure a continuous drainage plane for optimum water management, the **Tyvek® Fluid Applied WB+™** should be integrated with the **Tyvek® Fluid Applied Flashing and Joint Compound+** and/or the **DuPont Self-Adhered Flashing Products** used for window flashing installations as part of the DuPont Commercial Wall<sup>2</sup> System. DuPont offers several flashing methods to accommodate various types of windows and installations.

Examples shown in this installation bulletin represent two common installations based on Method 1 from the [DuPont™ Tyvek® Fluid Applied Flashing Installation Guidelines](#). Installers should refer to this document for complete instructions and additional flashing methods.

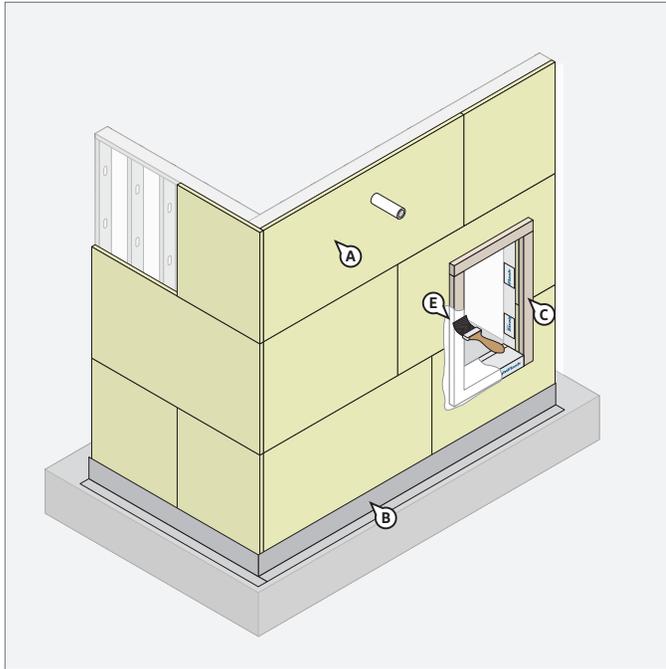
Windows aligned with the exterior finished wall typically require wood bump out framing around the window rough opening as shown in **Example 1**.

Windows installed in the same plane as the **Tyvek® Fluid Applied WB+™**, shown in **Example 2**, will be recessed from the exterior finished wall once the **DuPont Exterior CI** is installed.

## DuPont™ Tyvek® Fluid Applied WB+™ UNDER DuPont Exterior Continuous Insulation

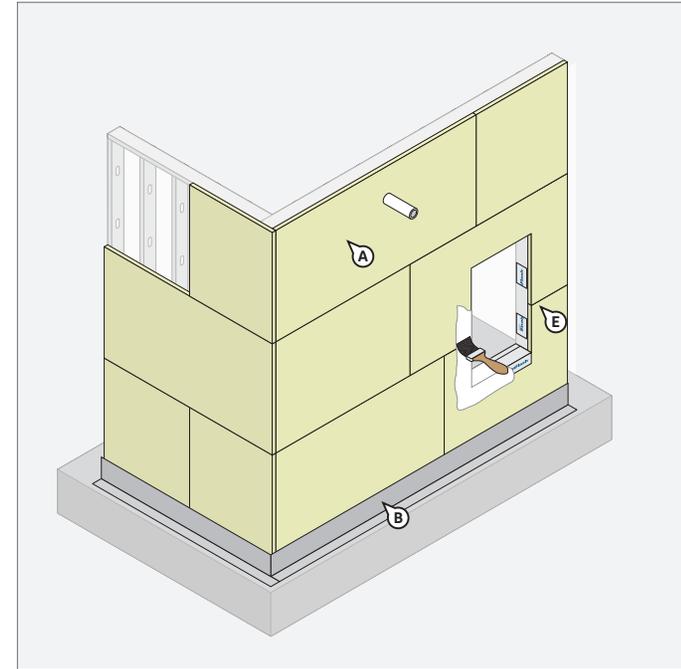
### Example 1

Windows installed onto wood bump out frame and aligned with exterior finished wall



### Example 2

Windows installed at same plane as Tyvek® Fluid Applied WB+™



## STEP 1

Install Exterior Gypsum Sheathing and Prepare Window Rough Opening with **DuPont™ Tyvek® Fluid Applied Products**

- A. Secure exterior gypsum sheathing to metal studs according to manufacturer instructions.
- B. Install through wall flashing at bottom of wall according to manufacturer instructions.
- C. Install bump out framing per plans and specifications if installing according to **Example 1**.
- D. Remove any dirt, dust, frost, oil, grease, mold, or other substance that may affect the adhesion of **Tyvek® Fluid Applied Products** and/or **DuPont Self-Adhered Flashing Products**.

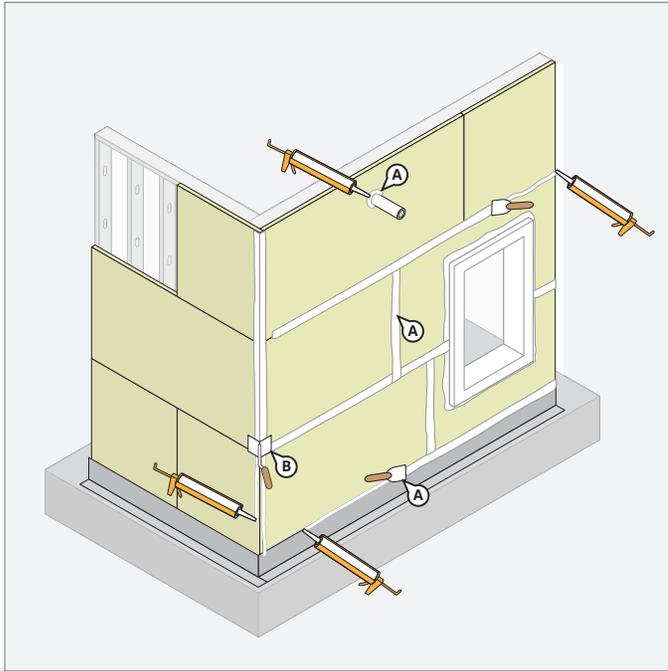
- E. Install **DuPont™ Tyvek® Fluid Applied Flashing and Joint Compound+** and/or **DuPont Self-Adhered Flashing Products** to protect the rough openings for windows and doors per the [DuPont™ Tyvek® Fluid Applied WB+™ Wall and Substrate Guidelines](#).

**Note:** See [DuPont™ Tyvek® Fluid Applied WB+™ Wall and Substrate Guidelines](#) for substrate priming requirements when **DuPont Self-Adhered Flashing Products** are used to protect the rough opening, pipe penetrations, wall substrates corners, and/or bottom of wall wall transitioning.

## DuPont™ Tyvek® Fluid Applied WB+™ UNDER DuPont Exterior Continuous Insulation

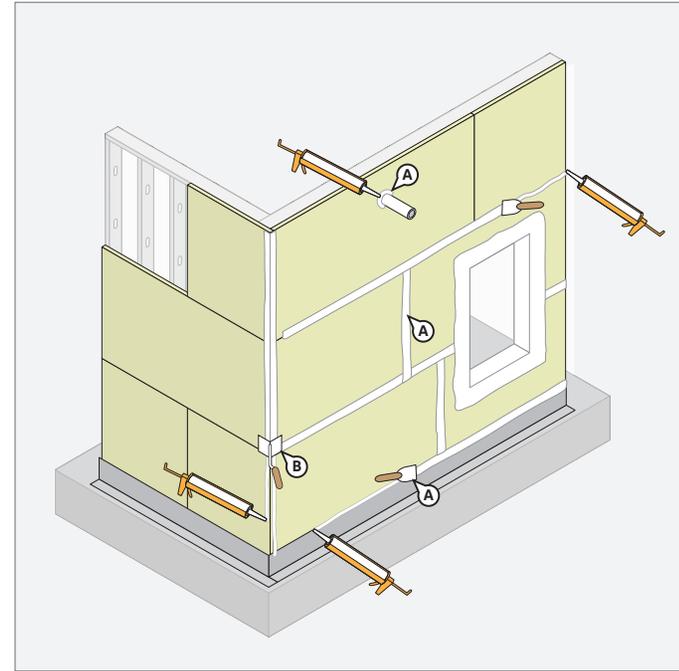
### Example 1

Windows installed onto wood bump out frame and aligned with exterior finished wall



### Example 2

Windows installed at same plane as Tyvek® Fluid Applied WB+™



## STEP 2

Prepare Exterior Gypsum Sheathing with **DuPont™ Tyvek® Fluid Applied Products**

- A. Treat exterior gypsum seams, edges of through wall flashing, and seal around penetrations, as necessary, using **DuPont™ Tyvek® Fluid Applied Flashing and Joint Compound+** or **DuPont™ Sealant for Tyvek® Fluid Applied System** according to the [DuPont™ Tyvek® Fluid Applied WB+™ Wall and Substrate Guidelines](#).
- B. 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 **DuPont™ StraighFlash™**. Installation can be done in part with a single piece of **StraighFlash™** or cut into more manageable lengths to be properly shingled and installed with 2" min overlap. Be sure the **StraighFlash™** is pressed tightly into the inside corners and is fully adhered to substrate.

- C. 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.

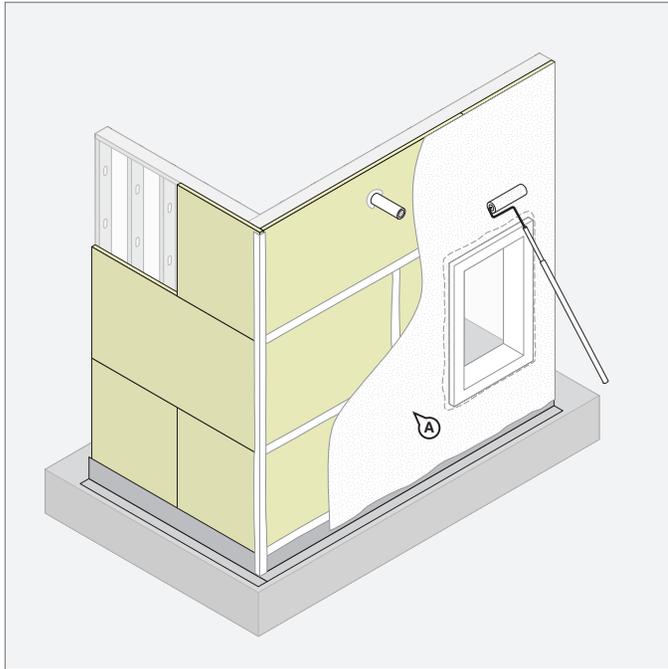
### Notes:

- For spray applications of **Tyvek® Fluid Applied WB+™**, 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.
- When using **StraighFlash™** as a transitional membrane along the corners and/or bottom of wall, ensure the wall substrate is clean, dry, and primed with DuPont recommended primer prior to the installation of **StraighFlash™**. When treating/flashing the corners, remember to start from the bottom up.

## DuPont™ Tyvek® Fluid Applied WB+™ UNDER DuPont Exterior Continuous Insulation

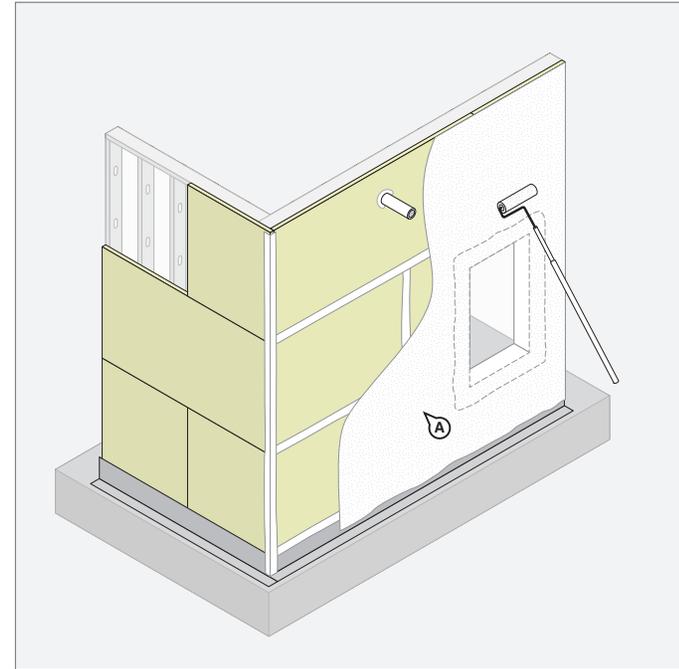
### Example 1

Windows installed onto wood bump out frame and aligned with exterior finished wall



### Example 2

Windows installed at same plane as Tyvek® Fluid Applied WB+™



## STEP 3

Install **Tyvek® Fluid Applied WB+™**

**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.

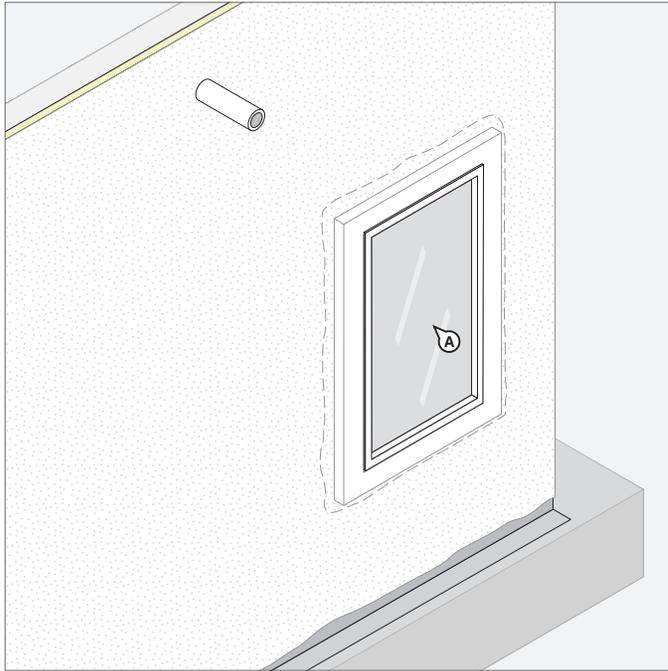
- Apply **Tyvek® Fluid Applied WB+™** by spraying or rolling a 25-mil (0.635 mm) wet coat onto exterior gypsum sheathing. See [DuPont™ Tyvek® Fluid Applied WB+™ Wall and Substrate Guidelines](#) for coverage rates and cure times. Thickness should be controlled by applying the appropriate volume over 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+™ UNDER DuPont Exterior Continuous Insulation

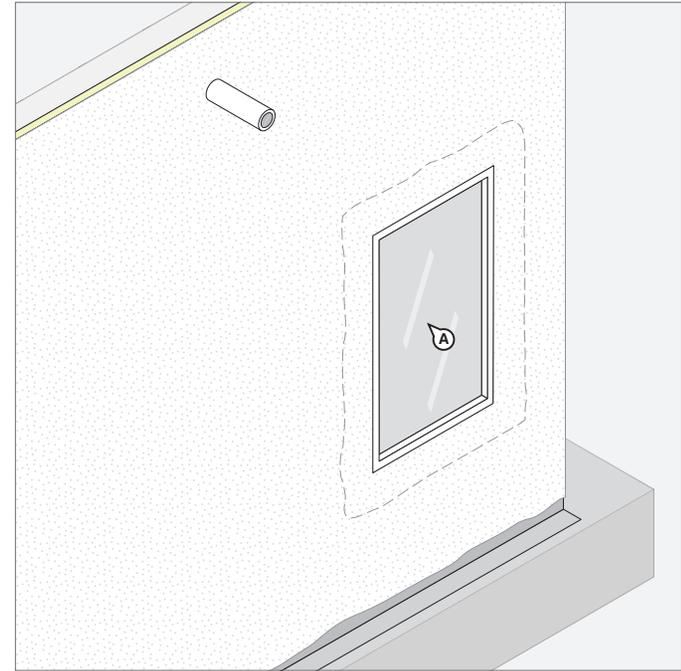
### Example 1

Windows installed onto wood bump out frame and aligned with exterior finished wall



### Example 2

Windows installed at same plane as Tyvek® Fluid Applied WB+™



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### STEP 4

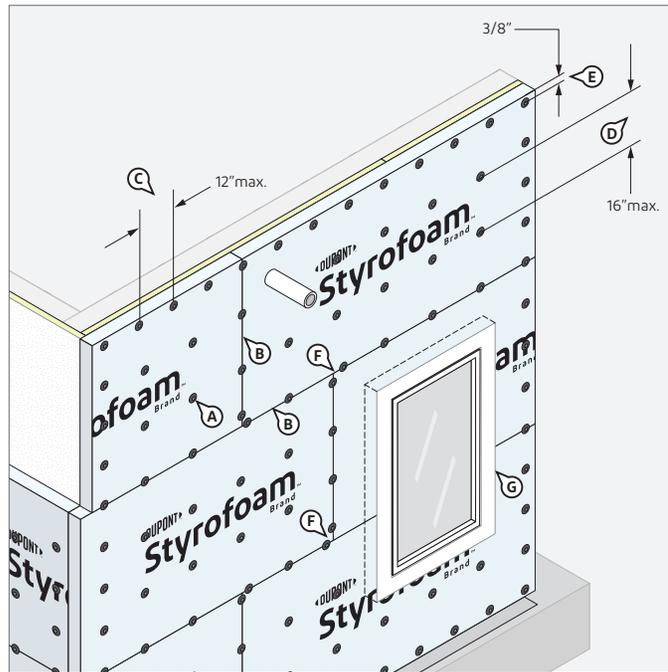
Install Window

- A. After the **Tyvek® Fluid Applied WB+™** has cured, Install window per the applicable Method in [DuPont™ Tyvek® Fluid Applied Flashing Installation Guidelines](#).

## DuPont™ Tyvek® Fluid Applied WB+™ UNDER DuPont Exterior Continuous Insulation

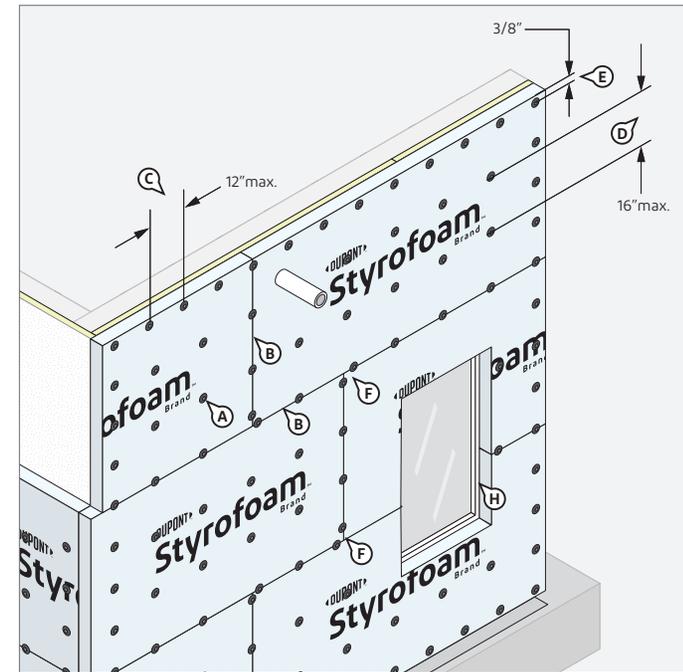
### Example 1

Windows installed onto wood bump out frame and aligned with exterior finished wall



### Example 2

Windows installed at same plane as Tyvek® Fluid Applied WB+™



## STEP 5

Install **DuPont™ Styrofoam™ Brand Extruded Polystyrene (XPS) Insulation** or **DuPont™ Thermax™ Brand Polyisocyanurate Board Insulation**

- Secure the **DuPont Exterior Continuous Insulation (CI)** boards to metal studs with printed side facing to the exterior using Rodenhouse Grip-Deck® TubeSeal™ Fasteners.
- Abut **DuPont Exterior CI** boards tightly together. Common practice is to stagger boards but, it is not required.
- Fasten **DuPont Exterior CI** boards @ max. 12" o.c. at wall perimeters.
- Fasten **DuPont Exterior CI** boards @ max. 16" o.c. around openings and in field of wall.
- Set back perimeter fasteners 3/8" from **DuPont Exterior CI** board edges and ends.
- One fastener can be used at intersection of 2 boards but, use at least 2 fasteners at intersection of 3 or more boards.

- Example 1:** If windows are installed onto a wood bump out frame and aligned with the exterior finished wall, cut the **DuPont Exterior CI** so it will fit flush around bump-out frame.
- Example 2:** If windows were installed in the plane of the **Tyvek® Fluid Applied WB+™**, cut the **DuPont Exterior CI** so it is flush with rough opening.

### Notes:

- Refer to the applicable installation guidelines for the specified **DuPont Exterior CI** product.
- If the windows are recessed from the exterior wall per **Example 2**, ensure any exposed edges of the DuPont Exterior CI are protected during exterior wall finishing.



*This bulletin is limited to the installation details for construction of the DuPont Commercial Wall<sup>2</sup> System outlined herein. Please refer to the applicable DuPont Performance Building Solutions Installation Guidelines available at [building.dupont.com](http://building.dupont.com) for details not included in this bulletin. DuPont believes this information to be reliable and accurate. The information may be subject to revision as additional experience and knowledge is gained. It is the user's responsibility to determine the proper construction materials needed.*

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