December 2017

Alternating Exposures with **HardiePlank® Lap Siding** – Creating a modern look

Design Supplement **01**

The standard installation practice for HardiePlank® Lap Siding is to install planks with one uniform exposure width, course by course per our published instructions.

This supplement covers the installation of HardiePlank® Lap siding using alternating exposures that vary in exposure width from course to course.

This supplement must be used or followed in conjunction with current HardiePlank® Lap Siding Installation Instructions unless otherwise directed in this supplement.

The guidance and instructions provided in this technical bulletin are valid for and applicable to James Hardie® products only. James Hardie Building Products Inc. makes no warranty or representation with respect to use of the information contained herein for any use other than with James Hardie® products, including but not limited to use with fiber cement siding products made by others or siding products made of other materials.



Alternating exposures Method 1, 2 and 3



LOCATION:
Cambridge, MA

DEVELOPMENT TYPE:
Modular condominiums

ARCHITECT:
Piatt Associates Inc

DEVELOPER:
Abodez

CONTRACTOR:
Bald Hill Builders

SIDING PRODUCTS FEATURED:
HardieTrim® Boards
HardieSoffit® Panels
HardiePlank® Lap Siding
HardiePanel® Vertical Siding
Artisan® Accent Trim

The following technical information provides guidance for the specific siding layouts shown herein. It does not address all possible combinations of exposure layouts. If your siding design layout falls outside the scope of this bulletin, it is the responsibility of the design professional to ensure that the layout is engineered appropriately and complies with all applicable local codes and published installation instructions. Contact the JHinsite™ Team for additional assistance.

This bulletin illustrates three methods for achieving a good result when designing a siding layout with alternating exposures. It is always best to create a small mock up to determine if the chosen layout provides an acceptable finished aesthetic.

In Method 1, one width of plank is used to generate alternating exposures. By using one plank width the purchase and layout plan is less complicated. With this one plank method, the difference in exposures is low (less than two inches). When estimating material quantities, remember to take into account that every other plank exposure is reduced, hence more material is required versus standard installation. Table 1, lists out the general guidance for this look.

TABLE 1 – METHOD 1: CREATING TWO EXPOSURES WITH ONE PLANK WIDTH - LOW VARIATION					
Starter Strip Width (inches)	1.25				
Plank Width (inches)*	9.25	8.25	7.25	6.25	5.25
Exposure 1 (inches)	8	7	6	5	4
Exposure 2 (inches)	6	5	5	4	3

* *Allowable wind speeds are specific to plank width, consult the appropriate product approvals relevant to your project. These are listed with ICC-ES ESR, Texas Department of Insurance Windstorm EC, State of Florida Product Approvals and Miami Dade County Notice of Acceptance*



Alternating exposures Method 1



Alternating exposures Method 2



In Method 2, two different widths of plank are used to generate a large variation in alternating exposures. This requires a specific product purchase plan, layout and guidance during the design and installation phases. Table 2 provides guidance on several common layouts.

TABLE 2 – METHOD 2: CREATING TWO EXPOSURES WITH TWO PLANK WIDTHS - HIGH VARIATION										
Starter Strip Width (inches)	1.25									
Plank 1 Width (inches)*	12	12	12	12	12	9.25	9.25	8.25	8.25	8.25
Exposure 1 (inches)	10.75	10.75	10.75	10.75	10.75	8	8	7	7	8
Plank 2 Width (inches)*	5.25	5.25	6.25	7.25	8.25	5.25	5.25	5.25	5.25	6.25
Exposure 2 (inches)	4	3	5	6	7	4	3	4	3	5

* *Allowable wind speeds are specific to plank width, consult the appropriate product approvals relevant to your project. These are listed with ICC-ES ESR, Texas Department of Insurance Windstorm EC, State of Florida Product Approvals and Miami Dade County Notice of Acceptance*

In Method 3, three different widths of plank are used to three different exposures. This requires a specific product purchase plan, layout and guidance during the design and installation phases. Table 3 provides guidance on several common layouts.

TABLE 3 – METHOD 3: CREATING THREE EXPOSURES WITH THREE PLANK WIDTHS									
Starter Strip Width (inches)	1.25								
Plank 1 Width (inches)*	12	12	12	12	12	12	12	12	12
Exposure 1 (inches)	10.75	10.75	10.75	10.75	10.75	10.75	10.75	10.75	10.75
Plank 2 Width (inches)*	6.25	7.25	8.25	9.25	5.25	6.25	7.25	8.25	9.25
Exposure 2 (inches)	5	6	7	8	4	5	6	7	8
Plank 3 Width (inches)*	5.25	5.25	5.25	5.25	5.25	5.25	5.25	5.25	5.25
Exposure 3 (inches)	4	4	4	4	3	3	3	3	3

Starter Strip Width (inches)	1.25						
Plank 1 Width (inches)*	9.25	9.25	9.25	9.25	9.25	9.25	9.25
Exposure 1 (inches)	8	8	8	8	8	8	8
Plank 2 Width (inches)*	6.25	7.25	8.25	5.25	6.25	7.25	8.25
Exposure 2 (inches)	5	6	7	4	5	6	7
Plank 3 Width (inches)*	5.25	5.25	5.25	5.25	5.25	5.25	5.25
Exposure 3 (inches)	4	4	4	3	3	3	3

Starter Strip Width (inches)	1.25						
Plank 1 Width (inches)*	8.25	8.25	8.25	8.25	8.25	8.25	8.25
Exposure 1 (inches)	7	7	7	7	7	7	7
Plank 2 Width (inches)*	5.25	6.25	7.25	9.25	5.25	6.25	7.25
Exposure 2 (inches)	4	5	6	8	4	5	6
Plank 3 Width (inches)*	5.25	5.25	5.25	5.25	5.25	5.25	5.25
Exposure 3 (inches)	4	4	4	4	3	3	3

* *Allowable wind speeds are specific to plank width, consult the appropriate product approvals relevant to your project. These are listed with ICC-ES ESR, Texas Department of Insurance Windstorm EC, State of Florida Product Approvals and Miami Dade County Notice of Acceptance*



Alternating exposures Method 3

Remember that the each plank width has an allowable wind speed assigned based on the fastener, fastener spacing, frame type, frame spacing and fastening method (blind nail or face nail). Visit JHinsite.com and use our fastening tools to find the right assembly to meet your project's wind load requirements.

To simplify connection details, we recommend determining the appropriate fastener for the largest width plank and use throughout the assembly.

James Hardie maintains approvals with ICC-ES, Texas Department of Insurance Windstorm, State of Florida Product Approvals and Miami Dade County Notice of Acceptance. Consult JHinsite for product specific code approval documentation. Selection of the proper siding attachment system is the responsibility of the design professional.

KEY NOTES

- Follow all applicable James Hardie installation instructions not specifically addressed in this supplement.
- Each Method in this supplement requires a specific purchase plan that is unique to the product layout.
- Each layout's allowable wind speed will be dictated by each product type and width used within the layout. In general, wider planks will have lower allowable wind speeds than narrow planks. It is the design professional's responsibility to specify the appropriate siding attachment method based on the framing type and layout.
- If non-nailable sheathing is used under the siding, consult James Hardie Technical Bulletin 19.
- www.jhinsite.com offers different fastening tools that help navigate through different product assemblies based on project wind load requirements.
- James Hardie recommends constructing OR making a siding mockup prior to installation to ensure the fastening practice and/or fastening tools are properly adjusted. Fasteners must be installed in a manner to avoid overdriving, yet snug enough to remove gaps between the connected parts. Adjust driving tools and installation practice accordingly.

DISCLAIMER

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You bear all risk associated with using any of the information contained herein in any way other than with James Hardie products, including in the design or construction of structures with fiber cement siding products made by others or siding products made from other materials.

All national, state, and local building code requirements must be followed, and where they are more stringent than the James Hardie product installation requirements, state and local requirements will take precedence.

Current and detailed information on James Hardie product applications are found at www.jhinsite.com.

With regards to design advice: Any information or assistance provided by James Hardie in relation to specific projects must be approved by the relevant specialists engaged for the project, e.g., your builder, architect or engineer. James Hardie will not be responsible in connection with any such information or assistance.

It is the responsibility of the licensed architect, designer, specifier or builder to ensure that the construction details are suitable for the intended application of the project. The responsible party shall also identify moisture related risks associated with any particular building design. The wall construction design must effectively manage moisture and provide consideration to wind driven rain, wall penetrations or artificially heated and cooled spaces.