



TBX Grade THIN BRICK

WWW.METROTHINBRICK.COM

METROBRICK[®]
ARCHITECTURAL THIN BRICK

Ironrock Since 1866

THIN BRICK SYSTEMS

METROBRICK manufactures TBX Grade Architectural Thin Brick to be used with the following systems: Precast Concrete Panels, Tilt-up Concrete Panels, Prefabricated Metal Panels, Field Applied Systems/ Applications and Cast in Place Concrete Elements.

POUDRE VALLEY
HOSPITAL

EMPLOYEE PARKING →
MAIN ENTRANCE ←
VISITOR PARKING →

PRECAST



TILT-UP



FIELD APPLIED



An exterior wall system's actual performance is critical to a building's life cycle cost and overall performance. Environmental awareness has forced the design and construction profession to re-evaluate how we use our material resources and has redefined our performance expectations. When the project demands a brick appearance, a thin brick wall system may help give a perfect balance between desired performance, environmental advantages, and the owner's budget.

Detailed drawings of Thin Brick Systems available online @ metrothinbrick.com

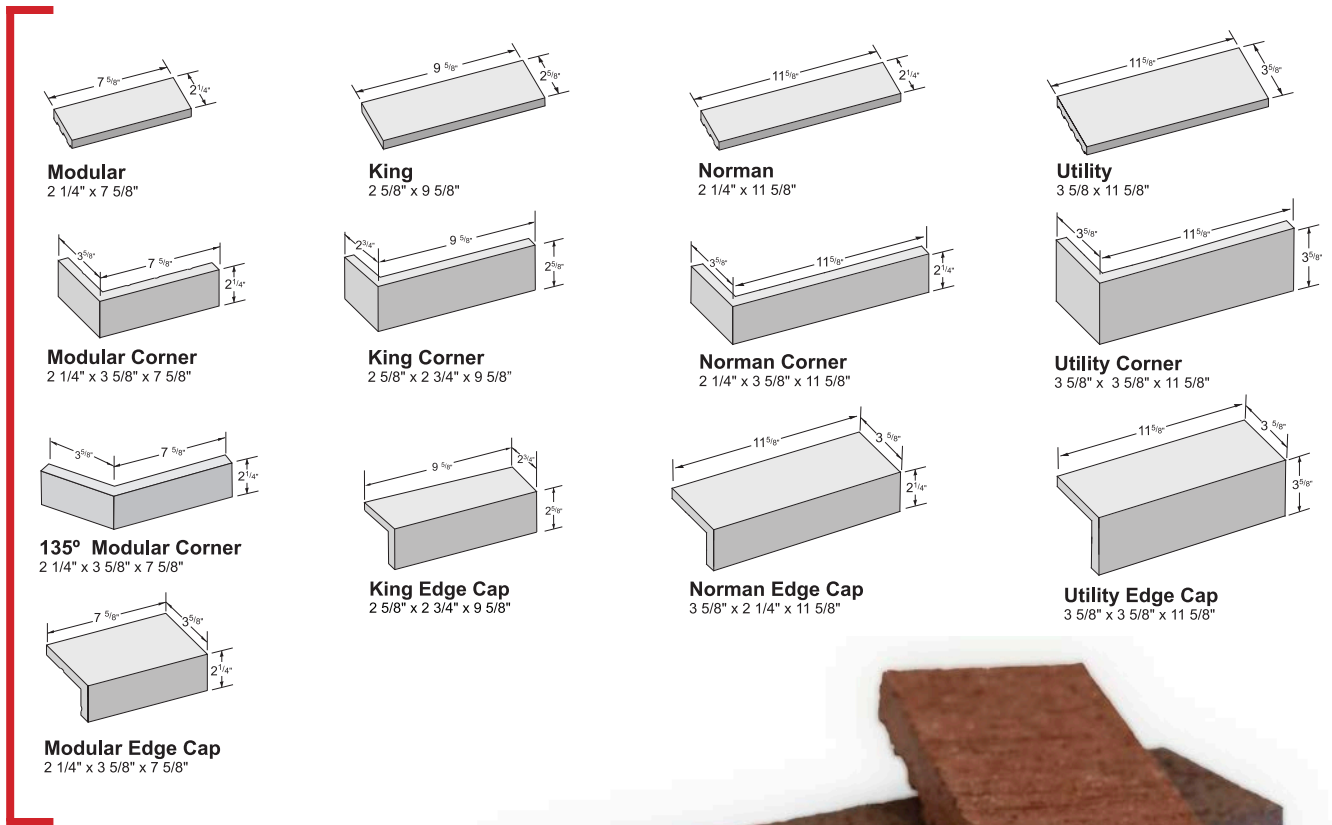
PCI STANDARD

METROBRICK® meets or exceeds all standards for thin brick set by the Precast/Prestressed Concrete Institute.

Sizes

METROBRICK® sizes are 5/8" thick

METROBRICK® is designed with a dovetailed back and strict size tolerances for superior installation and bond performance.



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Minimum order quantities apply for non-stock items.
Contact customer service for further details | 1.888.325.3945

Estimating

METROBRICK® products are manufactured with a strict tolerance of +0” to -1/16” (brick 8” or less) and +0” to -3/32” (brick between 8” and 12”) to insure a correct fit into any liner system. Our production methods and tight quality controls insure true corner and edge cap shapes for improved installation productivity and final appearance acceptance.

| | | | | | |
|----------------------------------|-----------------|---------------------------------------|------------------|------------------|------------------|
| Modular Field (2 1/4" x 7 5/8") | 7.0 pcs./sq.ft. | Modular Corner (2 1/4" x 7 5/8") | 4.7 pcs/lin. ft. | Modular Edge Cap | 1.5 pcs/lin. ft. |
| King Field (2 5/8" x 9 5/8") | 4.8 pcs./sq.ft. | 135° Modular Corner (2 1/4" x 7 5/8") | 4.7 pcs/lin. ft. | King Edge Cap | 1.2 pcs/lin. ft. |
| Norman Field (2 1/4" x 11 5/8") | 4.8 pcs./sq.ft. | King Corner (2 5/8" x 9 5/8") | 4.5 pcs/lin. ft. | Norman Edge Cap | 1.0 pcs/lin. ft. |
| Utility Field (3 5/8" x 11 5/8") | 3.0 pcs./sq.ft. | Norman Corner (2 1/4" x 11 5/8") | 4.7 pcs/lin. ft. | Utility Edge Cap | 1.0 pcs/lin. ft. |
| | | Utility Corner (3 5/8" x 11 5/8") | 3.0 pcs/lin. ft. | | |

Test Results

Ironrock’s Thin Brick “METROBRICK®” shall be of standard grade quality and shall exceed all of the requirements of ASTM (American Society for Testing and Materials) C-1088, the standard specifications for thin veneer brick units made from clay or shale. The ASTM C-1088 standard specifications also require the ASTM C-67 Standard Test Methods for Sampling and Testing Brick and Structural Clay Tile as shown to the right:

| Specification | Test | Standard | METROBRICK® |
|--|------------------------|--------------------|---|
| Efflorescence | ASTM C-67 | None | None |
| Chipping | ASTM C-1088 | Max. 3% | <2% |
| Size | ASTM C-1088 | Max. 1% | Meets the Standard |
| Warpage | ASTM C-1088 | Max. .5% | Meets the Standard |
| Modulus of Rupture | ASTM C-67 | 250 lbs./sq.in. | >500 lbs./sq.in. |
| Compressive Strength | ASTM C-67 | No Standard | 10,000 lbs./sq.in |
| Absorption | ASTM C-67 | Max. 5% | <3% (except for 100 Alabaster which is 5%) |
| Saturation Coefficient | ASTM C-1088 | <8% - Waived | <3% - N/A (except for 100 Alabaster which is 8%) |
| Freeze-Thaw | ASTM C-67 | Min. 50 Cycles | Passed 3,000 Cycles |
| Freeze-Thaw Brick in Concrete | ASTM C-666 Procedure B | 150 PSI or Greater | Passed 300 cycles Meets the Standard |
| Shear Bond Strength to Portland Cement | ASTM C-482 | Min. 50 psi | >150 psi |
| Chemical Resistance | ASTM C-650 | Not Affected | Not Affected |

“METROBRICK” will exceed ASTM C-1088 (Type TBX Select) requirements for exterior grade
 “METROBRICK” will exceed the applicable ANSI (American National Standards Institute) requirements.

TEXTURE OPTIONS

Textures play an important part in the look of a thin brick wall. They can have an effect on the way the light is reflected and how shadows are created. Textures can also add character to an otherwise simple installation. METROBRICK® offers a number of texture options that you can choose to create just the right feel for your project.





Vintage Texture

NEW Vintage Texture - featuring distressed edges and a heavily distressed surface. Ready for the best part? This one-of-a-kind textured brick meets the PCI Standard for thin brick.

Vintage Texture is available in modular size and all METROBRICK single tone and range colors.

VINTAGE | Vintage Texture shown in 710 Charcoal



WIRE CUT



VELOUR



SMOOTH



IRONSPOT

Finishes above shown in 350 Main Street Flashed.

May not be available in all colors. See metrothinbrick.com for availability.

COLOR OPTIONS

Range Colors



151 Commons Flashed*



255 Marketplace Flashed



155 Fieldstone Flashed*



250 Courtyard Flashed



458 Brownstone Flashed



350 Main Street Flashed



365 Schoolhouse Red Flashed
*Not available in wire cut finish.

Single Tone Colors



105 Fieldstone



205 Marketplace



320 Schoolhouse Red



100 Alabaster (premium color)



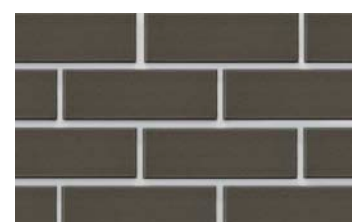
107 Parkway



220 Courtyard



505 Monument



705 Graphite (premium color)



101 Commons



108 Brownstone



310 Main Street



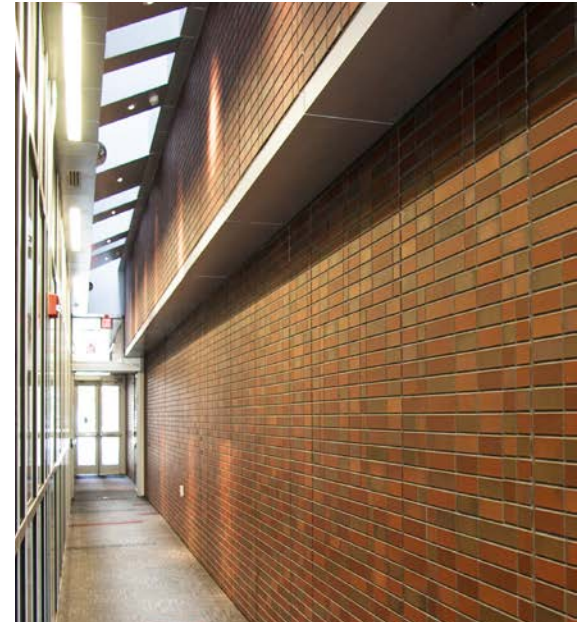
507 Empire



710 Charcoal (premium color)

Minimum order quantities apply for non-stock items. Contact customer service for further details. | 1.888.325.3945

CUSTOM BLENDING

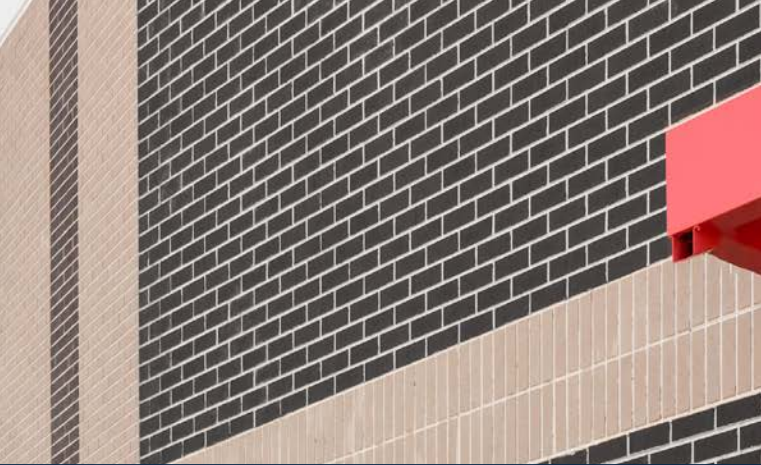


Looking for a specific blend? All METROBRICK colors are available in two, three or four color custom blends. Call customer service for details at 1.888.325.3945 or visit metrothinbrick.com to create your own custom blend with our blend generator.

METROBRICK Blend Generator. Nothing to Download. Just Click & Blend



Please Note: Colors are as accurate as printed representations can be. For final color selection refer to current actual color samples.



Fast Ship Program

With the Fast Ship program, METROBRICK's nine most popular colors and seven blend options - in modular size - ship to you FAST.



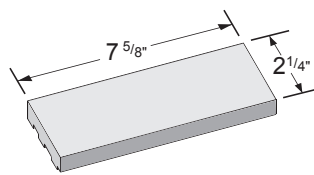
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Thin Brick **Fast**

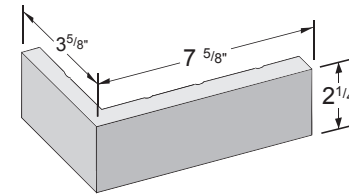
On construction projects, tight deadlines are always an issue. Often, long lead times just won't work and anxiously waiting for material is never a good thing. Sometimes delays can't be helped but as the old saying goes, "time is money".

That's why METROBRICK® created the Fast Ship Program, with quick turnaround for small orders in mind.

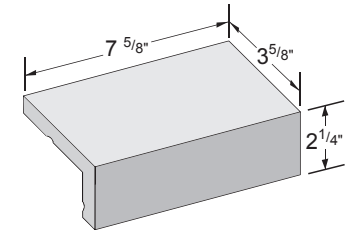
Available SHAPES



Modular
2 1/4" x 7 5/8"



Modular Corner
2 1/4" x 3 5/8" x 7 5/8"



Modular Edge Cap
2 1/4" x 3 5/8" x 7 5/8"
(Excludes 710 Charcoal)

Finish OPTIONS

Fast Ship products are available in smooth and wire cut finish. See chart for details.

| Colors | Smooth | Wire Cut |
|------------------------------|--------|----------|
| 105 Fieldstone | n/a | ✓ |
| 458 Brownstone Flashed | n/a | ✓ |
| 310 Main Street | n/a | ✓ |
| 350 Main Street Flashed | n/a | ✓ |
| 320 Schoolhouse Red | ✓ | ✓ |
| 365 Schoolhouse Red Flashed | ✓ | ✓ |
| 505 Monument | ✓ | ✓ |
| 507 Empire | n/a | ✓ |
| 710 Charcoal (Premium Color) | ✓ | ✓ |
| ALL Color Blends | n/a | ✓ |

Single & Range Color OPTIONS

Usually ships within 5 days*



105 Fieldstone



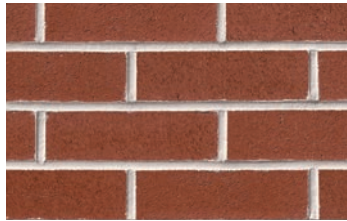
505 Monument



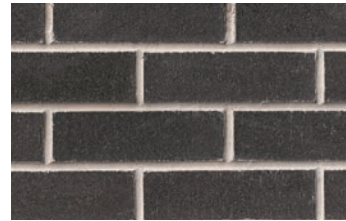
507 Empire



310 Main Street



320 Schoolhouse Red



710 Charcoal (Premium Color)



350 Main Street Flashed



365 Schoolhouse Red Flashed



458 Brownstone Flashed

*Levels of inventory vary. Our ability to fast ship is based on a first-come first-served basis. Levels of inventoried items will fluctuate. Inventory is designed to assist in quick turn around for smaller quantity orders- normally under 10,000 sq. ft. Lead time for blends is approximately two to four weeks.

Please Note: Colors are as accurate as printed representations can be. For final color selection refer to current actual color samples.

Blend OPTIONS

Lead time for blends is approximately two to four weeks.*



Fast Ship Blend 1

60% #350 Main Street Flashed
30% #458 Brownstone Flashed
10% #710 Charcoal



Fast Ship Blend 2

70% #105 Fieldstone
20% #505 Monument
10% #507 Empire



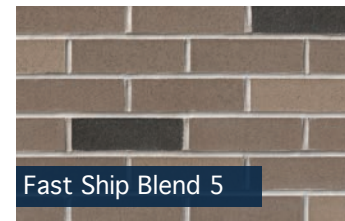
Fast Ship Blend 3

90% #458 Brownstone Flashed
10% #710 Charcoal



Fast Ship Blend 4

70% #505 Monument
30% #507 Empire



Fast Ship Blend 5

70% #507 Empire
20% #505 Monument
10% #710 Charcoal



Fast Ship Blend 6

50% #350 Main Street Flashed
30% #310 Main Street
20% #458 Brownstone Flashed



Fast Ship Blend 7

70% #320 Schoolhouse Red
20% #458 Brownstone Flashed
10% #710 Charcoal

**Custom blending
also available.**

Call customer
service for details

1.888.325.3945

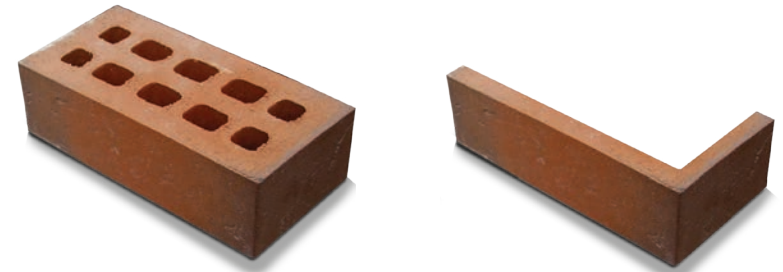
ENVIRONMENTAL ADVANTAGES

Sustainability

Because METROBRICK® absorptions are much less than full bed brick, spalling and efflorescence are reduced or eliminated. The building facade can basically last forever. With the thin brick attached to the wall system, minor repairs require only the removal of the affected bricks. Full bed brick building repairs are much more costly and difficult. Since thin brick is not a structural element and each brick is independently adhered to the wall, cracks don't form between bricks like in full bed brick.

Weight Advantage (Full Brick Comparison)

- METROBRICK® weighs 20% of full bed brick.
 - METROBRICK® uses 20% of the raw material - clay and shale - to produce.
 - Only 20% of the trucking is used to get the raw material from the mine to the factory.
 - METROBRICK® uses 20% of the amount of fuel (normally natural gas) to fire thin brick.
 - Kiln emissions from thin brick are 20% of full bed brick.
 - Delivery of finished thin brick can be done on any type of truck (Flat-bed, Box, etc.) allowing back hauls. Full bed brick delivery trucks are normally owned by the brick manufacturer and haul empty back to the brick plant.
- Trucks hauling full bed brick normally carry only 12,000 bricks. Trucks hauling thin brick typically haul over 60,000 bricks.
- Special cuts and sizes are available from METROBRICK® thus saving shipping of full pieces that have to be cut at the job site and the excess discarded in landfills.



RECYCLED CONTENT

All METROBRICK® colors contain a minimum of **23% pre-consumer recycled material.**

Site Disturbance

- No special or additional foundation is required for the structural support of METROBRICK®.
- The weight of METROBRICK® is engineered in the wall system. Full bed brick requires additional foundation for its support, requiring additional steel and concrete.
- Post installation clean-up for thin brick is significantly less than full bed brick. Little or no cleaning agents are required at the job site when using thin brick.
- If thin brick is used in precast concrete or tilt-up construction, scaffolding is not needed for brick work. Panels can be erected from either outside or within the perimeter of the structure, thus allowing more existing trees to remain.

Manufacturing Process

Ironrock, through its METROBRICK® brand, is proud to say we are doing our part to be good stewards of our environment in the following ways:

- All unfired clay is reground into our finished products.
- The heat from our kilns is also a heat source for our dryers.
- Our fired scrap is made available for use in making roadbeds as well as being reground and reused in our finished products.





LEED v4 and METROBRICK® by credit category

Please Note: To the right are generalizations only. We do not currently have 3rd party certification for these specific LEED credits.

MATERIALS AND RESOURCES

Building Life Cycle Impact Reduction | METROBRICK products have a 60+ year lifespan and can last the life of the building.

Product Disclosure {Source of Raw Material} | METROBRICK products contain pre-consumer recycled waste material. Additionally, 92% or more of all raw materials are extracted within a 50 mile radius of the manufacturing facility.

Product Disclosure {Material Ingredients} | METROBRICK products are fired in kilns at temperatures above 2,000 degrees Fahrenheit and are inert ceramic material.

Construction and Demolition Waste Management | METROBRICK products are inert material after firing and can be reused or reclaimed as fill or road bed material. Sizing of the product is such that there is little job site waste of material. Packaging material is recyclable.

INDOOR ENVIRONMENTAL QUALITY

Low Emitting Materials | Ceramic products are cited as an “inherent non emitting source” for this credit. METROBRICK may be used for this credit without testing.

Construction Indoor Air Quality | METROBRICK products are VOC- free and are resistant to mold and mildew.

Indoor Air Quality Assessment | METROBRICK products are inert. They are VOC- free and are formaldehyde free.

Thermal Comfort | The thermal mass of METROBRICK products allows them to aid in creating a more consistent indoor environment.

INTEGRATIVE PROCESS

Integrative Process | METROBRICK thin brick used as part of an installation wall system can have a positive impact on other building systems. The wall system that includes METROBRICK should be evaluated as part of a project’s integrative analysis.

PILOT CREDIT

Certified Multi-Attribute Products & Materials | Green Squared is included in this pilot credit. METROBRICK G2 products meet the criteria of this credit because METROBRICK is part of an industry wide EPD.

ENERGY AND ATMOSPHERE

Optimize Energy Performance | The thermal mass of METROBRICK products may help in the moderation of indoor temperature swings.

A photograph of a modern brick building with large windows, overlaid with a semi-transparent red banner containing the word 'SPECIFICATIONS'. The building is constructed of red brick and features long, narrow windows. The red banner is positioned horizontally across the middle of the image. The background shows a clear blue sky and some greenery in the distance.

SPECIFICATIONS

Specifications

This section is intended as an informational resource to aid in selecting and specifying METROBRICK® Architectural Thin Brick material only. METROBRICK® is to be used as part of an entire wall system. Therefore, please refer to selected system(s) components, including but not limited to their substrate materials, for complete system specification, product guides and installation procedures.

METROBRICK® is a kiln fired clay unit used anywhere a masonry appearance is desired. We produce our modular units to a very tight dimensional variance (+0" to -1/16" for brick 8" or less and +0" to -3/32" for brick between 8" and 12"), with a density of less than 3% water absorption and with no efflorescence.

The following is a typical specification to assure the use of METROBRICK® Architectural Thin Brick on your next project. Please incorporate the following language into the thin brick system section of the specification:

A. Thin brick shall be "METROBRICK®" as manufactured by Ironrock Capital, Canton, Ohio, 44711.

Customer Service: 1-888-325-3945

B. The body composition shall be of the finest shales and clays producing a uniform dense body.

C. Color(s) shall be: _____

D. Size(s) shall be: _____

E. Test results shall be available upon request.

F. Mix bricks from several cartons for best shading during installation.

G. When used in precast or tilt-up concrete applications:

1. Thin brick shall be waxed sufficiently on face to be exposed to prevent adhesion by concrete/mortar.
2. Clean with 200 degree F. low pressure washer using water. Some acid based cleaners may damage grout joints. If necessary to use, test a small area first. Wet with clean water before applying any acid cleaner. Do not use any product containing Hydrofluoric acid as it will attack both grout and bricks.

METROBRICK® Architectural Thin Brick is incorporated into a variety of shop fabricated, field assembled or field applied wall panel systems to create a traditional masonry appearance. When specifying thin brick into one of these systems, the specification writer shall add the thin brick material selection criteria into the appropriate system's specification.

METROBRICK® can also be field applied using traditional tile set methods to a variety of interior and exterior substrates such as concrete, concrete unit masonry, gypsum sheathing, cementitious backer board and plywood. METROBRICK® Architectural Thin Brick should be field applied according to The Tile Council of North America standards, ANSI standards and local building codes. Use only reputable installers and the correct installation products to suit the application.



Thin Brick Field Installation

The recommended installation methods in the Tile Council of North America's "Handbook for Ceramic Tile Installation", and ANSI (American National Standards Institute) standards should be followed.

TCNA (Tile Council of North America) installation methods W201, W202 and W244E are recommended for exterior or wet applications.

Methods W211, W221, W222, W223, W231, W241, W242, W243, W244C, W244F, W245, W246 and W247 may be used for dry interior applications. Some of these methods are suitable for interior wet applications when the proper water resistive barrier is used.

Flashing, expansion joints (soft joints) and consideration for climate and exposure should be considered when choosing the correct method to be used.



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