

Veneer and Composite

Concrete Masonry Units

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Veneer and Composite Units

Description

Units within this section are typically used as veneers, or as solid cmu in composite (multiwythe) masonry. The applications and construction of each is discussed separately following the product listing. Anchored veneer/multiwythe units can be made in all available textures. Adhered veneer units are available in Precision; please contact your representative if you are looking for adhered veneer units in other textures.

Height and length dimensions of precision and split face units are expressed as nominal, compensating for a standard 3/8 inch mortar joint. That is, an 8 x 16 face is actually 7 5/8 x 15 5/8 inches. Permissible variation in overall dimensions (width, height, length) is $\pm 1/8$ inch. Slumpstone™ units are sized for 1/2 inch mortar joints, with permissible variation in height of $\pm 1/8$ inch.

Standards

All Veneer and Composite units manufactured by Angelus Block are manufactured as hollow or solid loadbearing CMU in accordance with ASTM C90.

Units in composite masonry under DSA jurisdiction must conform to ASTM C55 Concrete Building Brick.

Availability

Veneer/Composite units are generally special order items.

Colors are available on special order from an extensive palette. Contact your representative for color references and materials, or visit Colors & Textures at www.angelusblock.com.

For any special order, whether for configuration, strength, weight, or color, please contact your representative for specific information.

Specifications

Please see Specifications at www.angelusblock.com/specifications.cfm for guide specs containing informative user notes.

Website

Keep current! Visit <https://www.angelusblock.com> for up to date products and information.

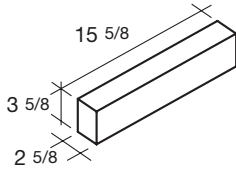
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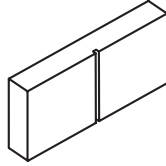
3 Wide

4 Wide

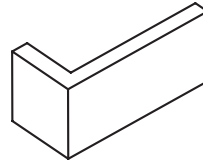
When used as veneers, these units require an **anchored masonry veneer** application.



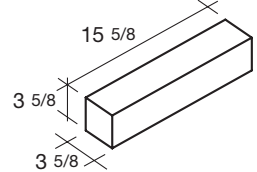
3x4x16
Solid
SPECIAL ORDER ONLY



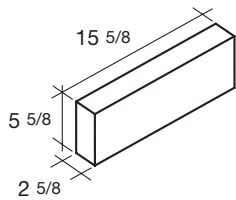
3x8x16
Vertical Score Solid
SPECIAL ORDER ONLY



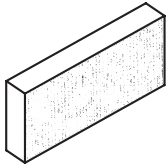
8x8x16
L-Veneer*
SPECIAL ORDER ONLY



4x4x16
Solid
SPECIAL ORDER ONLY

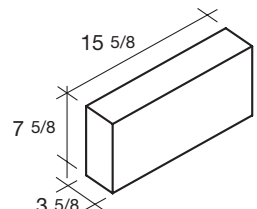


3x6x16
Solid
SPECIAL ORDER ONLY

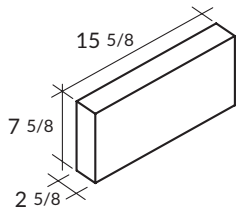


3x8x16
Veneer Combed 1-Side
SPECIAL ORDER ONLY

* May be provided as a cut from other units at manufacturer's option depending on quantities required.



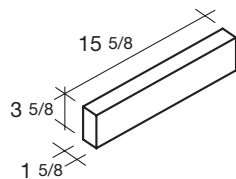
4x8x16
Solid
SPECIAL ORDER ONLY



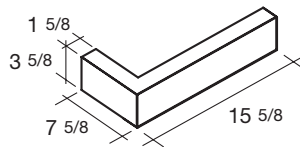
3x8x16
Solid
SPECIAL ORDER ONLY

2 Wide

Thin Veneer units require an **adhered masonry veneer** application, and must be ordered in Lightweight.



2x4x16
Thin Veneer
SPECIAL ORDER ONLY



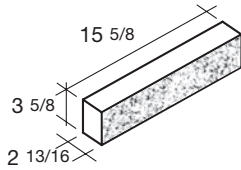
8x4x16
Thin Veneer L-Corner
SPECIAL ORDER ONLY

Split Face

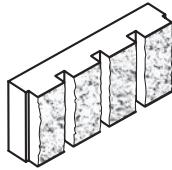
3 Wide

4 Wide

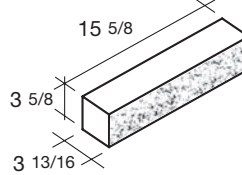
When used as veneers, these units require an **anchored masonry veneer** application.



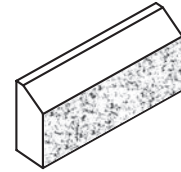
3x4x16
Solid Split 1-Side
SPECIAL ORDER ONLY



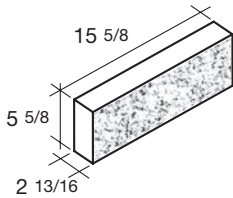
3x8x16
4-Score Solid Split 1-Side
SPECIAL ORDER ONLY



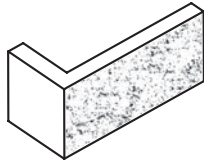
4x4x16
Solid Split 1-Side
SPECIAL ORDER ONLY



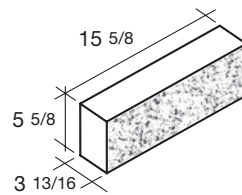
4x8x16
Solid Split 1-Side
30-Degree Chamfer
SPECIAL ORDER ONLY



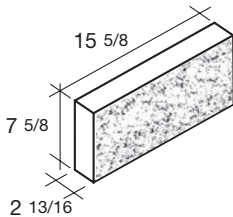
3x6x16
Solid Split 1-Side
SPECIAL ORDER ONLY



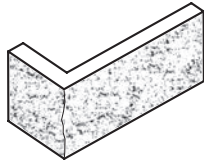
8x8x16
L-Veneer Split 1-Side*
SPECIAL ORDER ONLY



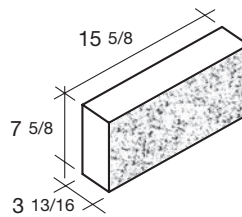
4x6x16
Solid Split 1-Side
SPECIAL ORDER ONLY



3x8x16
Solid Split 1-Side
SPECIAL ORDER ONLY

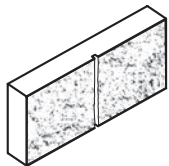


8x8x16
L-Veneer Split 1-Side 1-End*
SPECIAL ORDER ONLY



4x8x16
Solid Split 1-Side
SPECIAL ORDER ONLY

* May be provided as a cut from other units at manufacturer's option depending on quantities required.



3x8x16
Vertical Score Solid Split 1-Side
SPECIAL ORDER ONLY

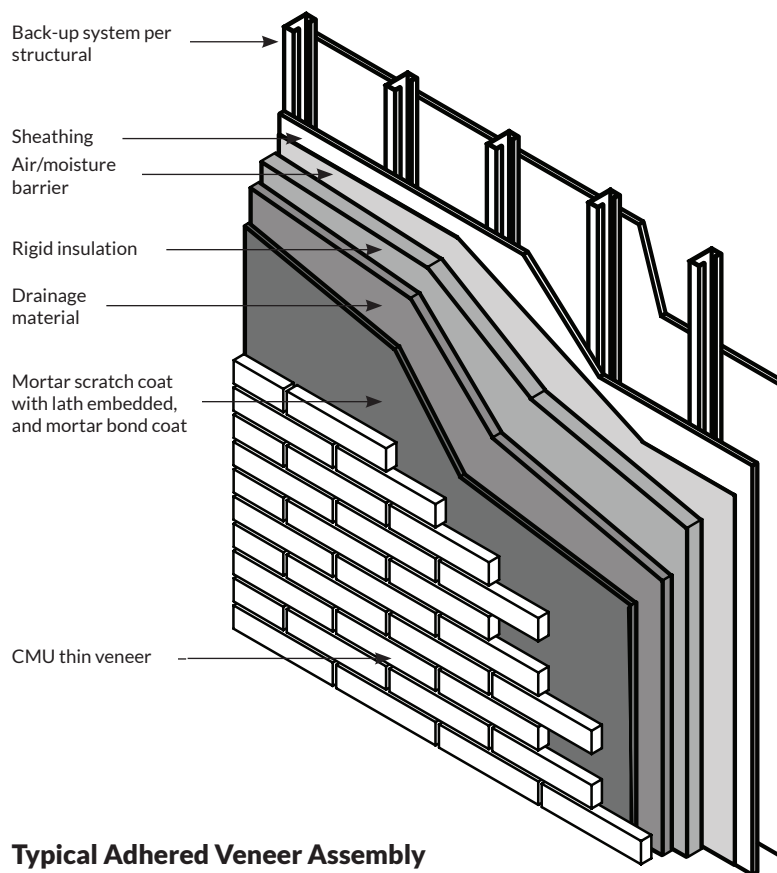
Adhered Veneer

Applications

While most cmu veneer require anchored applications, Angelus has Thin Veneer that can be adhered when made in a lightweight mix. A 4-inch high stretcher and L-corner are available in any of our colors (except Glacier White), and in Quik-Brik®, the blended color cmu that provides brick-like character with cmu economy and durability. Consult your representative for availability of other heights.

Construction

Construction and materials are governed by Chapter 14 of the California Building Code, which refers to Chapter 12 of TMS 402. Section 12.3 - Adhered veneer. Please refer to the appropriate code for specific requirements.



Note: The illustrations herein are very generalized and may not account for conditions and requirements specific to your project. Adhered veneer is not a proprietary, cmu-specific installation, but is governed by building codes. Cmu is simple and straightforward in its installation. However, other materials and layers as required for the project may be manufacturer-specific in their installation. Therefore, we recommend obtaining details and assistance from manufacturers of such specified items.

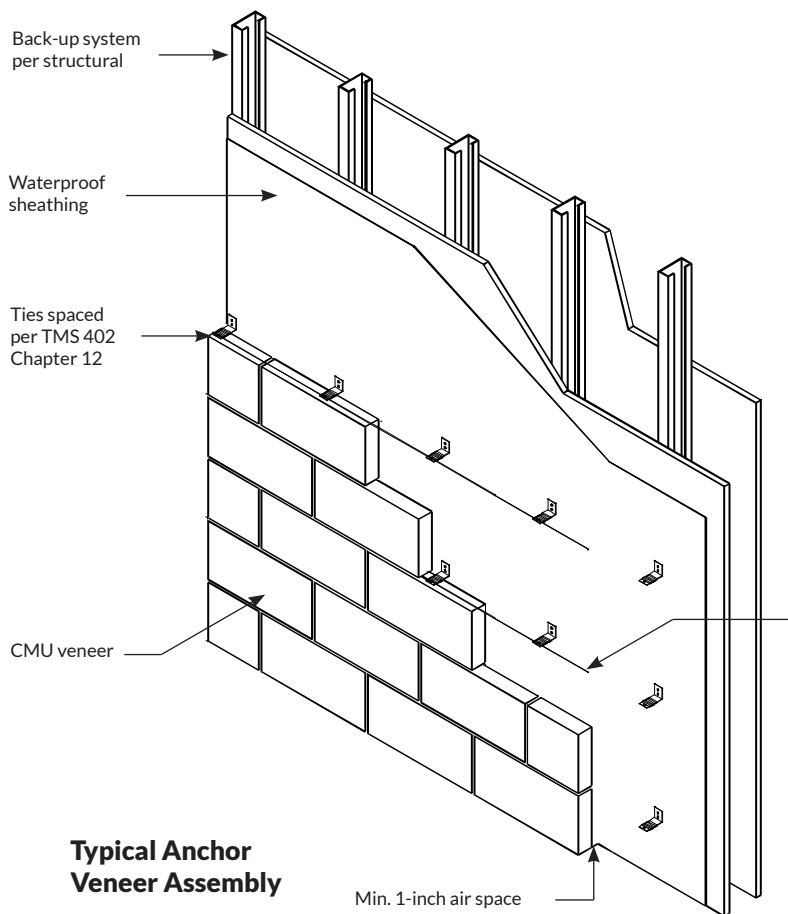
Anchored Veneer

Applications

Where a full concrete masonry wall is not practical or possible, Veneer units manufactured by Angelus Block afford the same attractive and maintenance-free wall surface as a structural cmu wall. Certain conditions may exist that would dictate use of Veneers instead of a full cmu wall, such as weight limitations in a wall, cantilever, long spans, existing walls, etc. Otherwise, it is generally more economical to construct a conventional structural cmu wall. The installed cost of concrete masonry veneer is very near that of a full hollow unit wall of like face texture, and, added to the cost of the structural backing, will likely total more than a self-supporting cmu wall.

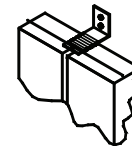
Construction

Anchored veneer construction and materials are governed by Chapter 14 of the California Building Code, and Chapter 12 of TMS 402. See Code References at www.angelusblock.com. Please refer to the appropriate code for specific requirements.

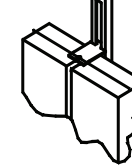


Basic Wall Tie Types

Corrugated



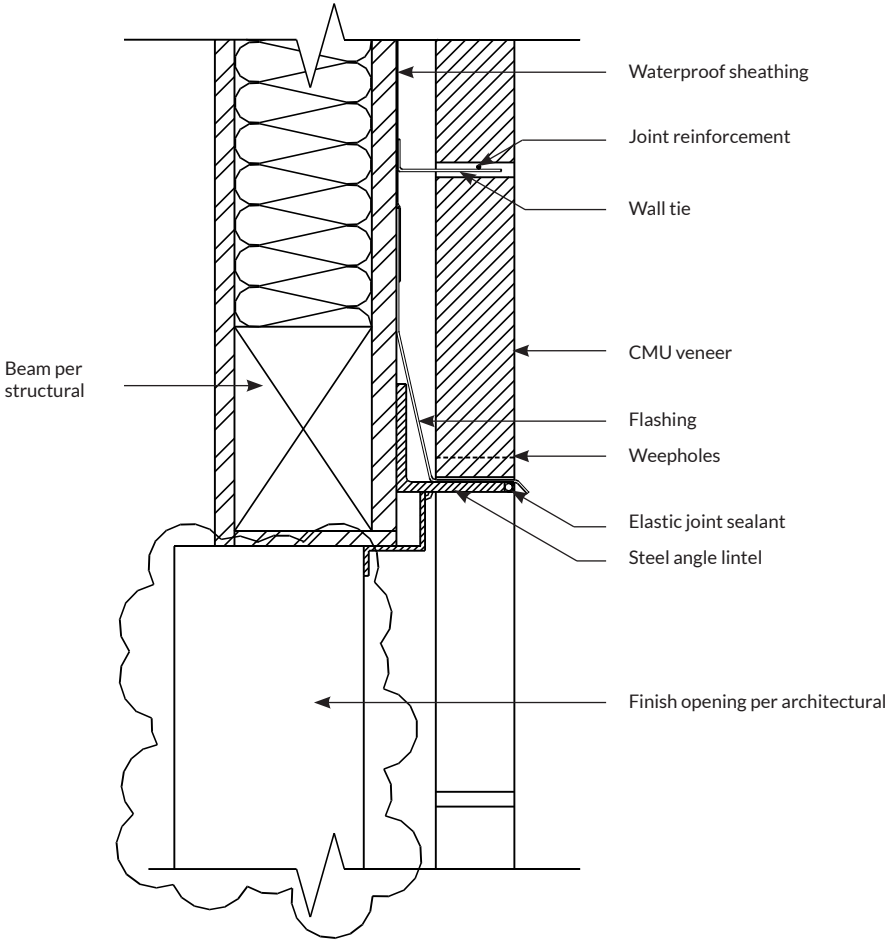
Slot



No. 9 gage or equivalent wire, continuous with butt splices between ties permitted

Anchored Veneer

Typical Shelf Angle Above Opening



Standards

Though veneer by definition is non-structural, Angelus Block manufactures concrete masonry veneers of the same methods and materials as hollow load-bearing cmu. Chapter 14 of the code refers non-specifically to Chapter 21 for the masonry unit requirements.

Specification

Please see the Guide Specifications at www.angelusblock.com/specifications.cfm.

Note: The illustrations herein are very generalized and may not account for conditions and requirements specific to your project. Anchored veneer is not a proprietary, cmu-specific installation, but is governed by building codes. Cmu is simple and straightforward in its installation. However, other materials and layers as required for the project may be manufacturer-specific in their installation. Therefore, we recommend obtaining details and assistance from manufacturers of such specified items.

Composite Masonry

Applications

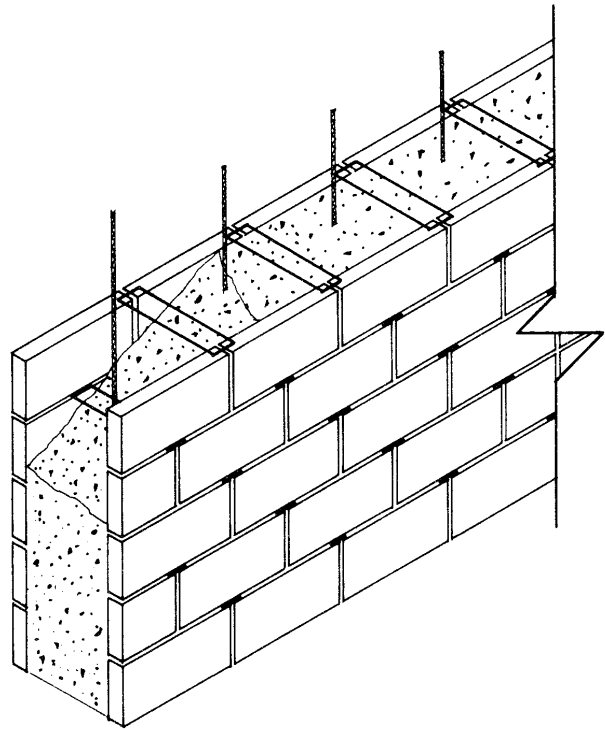
Composite, multiwythe grouted masonry is a versatile solution for a variety of construction situations. Variable wall widths from 8 inches to 24 inches, or more, in 1 inch increments, are facilitated by the length of wall tie used. Note that for normal design conditions, standard types of hollow load-bearing cmu are best for wall construction up through 12-inch or 16-inch widths. For greater wall widths or for certain design considerations, composite masonry may be considered.

The challenge of limited construction clearance due to zero lot line or existing structures can be mitigated with composite masonry. Where it would be impossible to build and strip conventional forms for poured-in-place concrete, multiwythe units can be laid up from one side of the wall after reinforcement is in place.

Extreme reinforcement requirements are not a hindrance as multiwythe construction provides a continuous grout space. These thinner, solid units maneuver through and around in-place reinforcing bars.

Construction

Construction consists of solid units, manufactured to the standard appropriate for the code jurisdiction, in two wythes, and tied together by approved wall ties embedded in the mortar joints. The grout space between the wythes contains the reinforcement and is solid grouted. Please see Code References at www.angelusblock.com/products/concrete_masonry_code_reference.cfm.



Standards

Angelus units for use in composite construction are manufactured to the appropriate standard specified for a given project:

ASTM C90, Hollow and Solid Load-Bearing Concrete Masonry Units.

ASTM C55, Concrete Building Brick, for projects designed to Chapter 21A of the California Building Code.

Specification

Please see Guide Specifications at www.angelusblock.com.