

# Brick Masonry

## Best Practices Guide



# Content

- 1. Brick**
- 2. Brick Blending**
- 3. Wall Ties**
- 4. Flashing**
- 5. Steel Lintels**
- 6. Weep Holes**
- 7. General Recommendations**



The information and suggestions contained in this Guide is intended to assist the installer in the proper installation of Claymex products and must be used with good technical judgement and a basic understanding of the properties of brick masonry. It is not intended to replace local building codes or industry standards. Installation of the products in accordance with applicable codes and standards is responsibility of the installer, and Claymex assumes no liability for products installed improperly or not in conformity with such codes and standards.

# 1.- Brick

Product	Dimensions	Weight	Compressive Strength	Brick per Square Foot
King Size	$2 \frac{5}{8}'' \times 2 \frac{1}{2}'' \times 9 \frac{5}{8}''$	2,9 lb	3000 psi	4,8
Queen Size	$2 \frac{11}{16}'' \times 2 \frac{3}{4}'' \times 7 \frac{11}{16}''$	2,64 lb	3000 psi	5,8
3x10	$3'' \times 2 \frac{3}{4}'' \times 10''$	3,86 lb	3000 psi	4,4



## 2.- Brick Blending

In order to maintain the proper color blend in the wall, please use brick from 2 or 3 packages at the same time. Unpackage the layers an angle as shown below in Figure 1 to further ensure color blending.

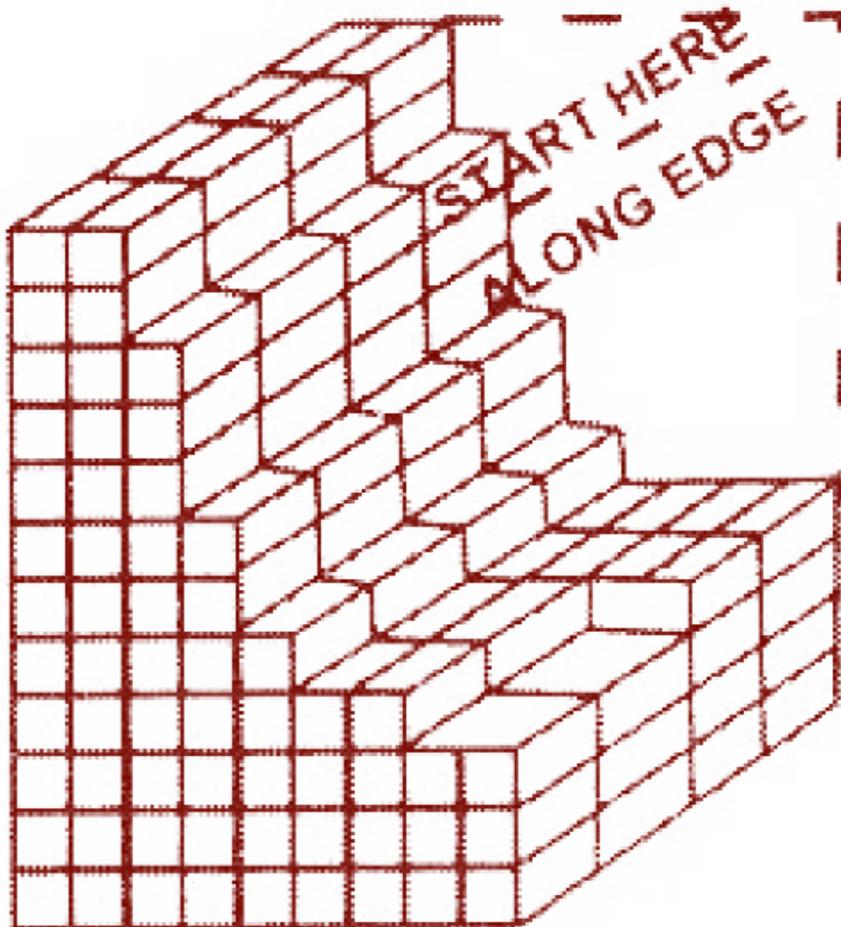


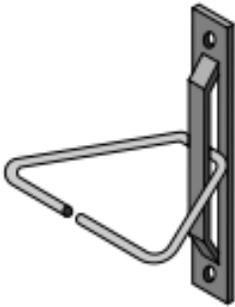
Figure 1

## 3.- Wall Ties

Brick veneer is supported laterally by wall ties (often referred to as “anchors”) and the wood stud backing. The wall ties must provide out-of-plane support while allowing in-plane movement. They should resist tension and compression resulting from forces perpendicular to the plane of the wall, but not resist shear. This permits in-plane differential movement between the frame and the veneer without causing cracking or distress. The veneer may be attached to wood studs or framing with corrugated sheet-metal anchors, sheet-metal anchors, wire anchors or adjustable anchors.

**Spacing:** There should be one anchor for every  $2 \frac{2}{3}$  sq ft of wall area. The International Residential Code (IRC) permits horizontal spacing of anchors up to 32” on center. Vertical spacing of anchors shall not exceed 24” on center. Slightly different anchor spacing requirements for buildings are covered by the International Building Code (IBC). Both the IRC and the IBC require additional anchors around openings larger than 16” in either dimension. In this case anchors should be located within 12” of the opening and spaced at a maximum of 3 ft on center.

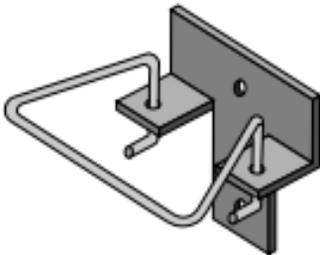
**Wall tie selection:** Corrugated anchors have historically been used to attach brick veneer to wood stud backing. However, corrugated metal anchors are more susceptible to corrosion than wire anchors. Adjustable wire anchors provide better load transfer and permit differential movement in taller structures.



Base & Vee Anchor



Corrugated Anchor

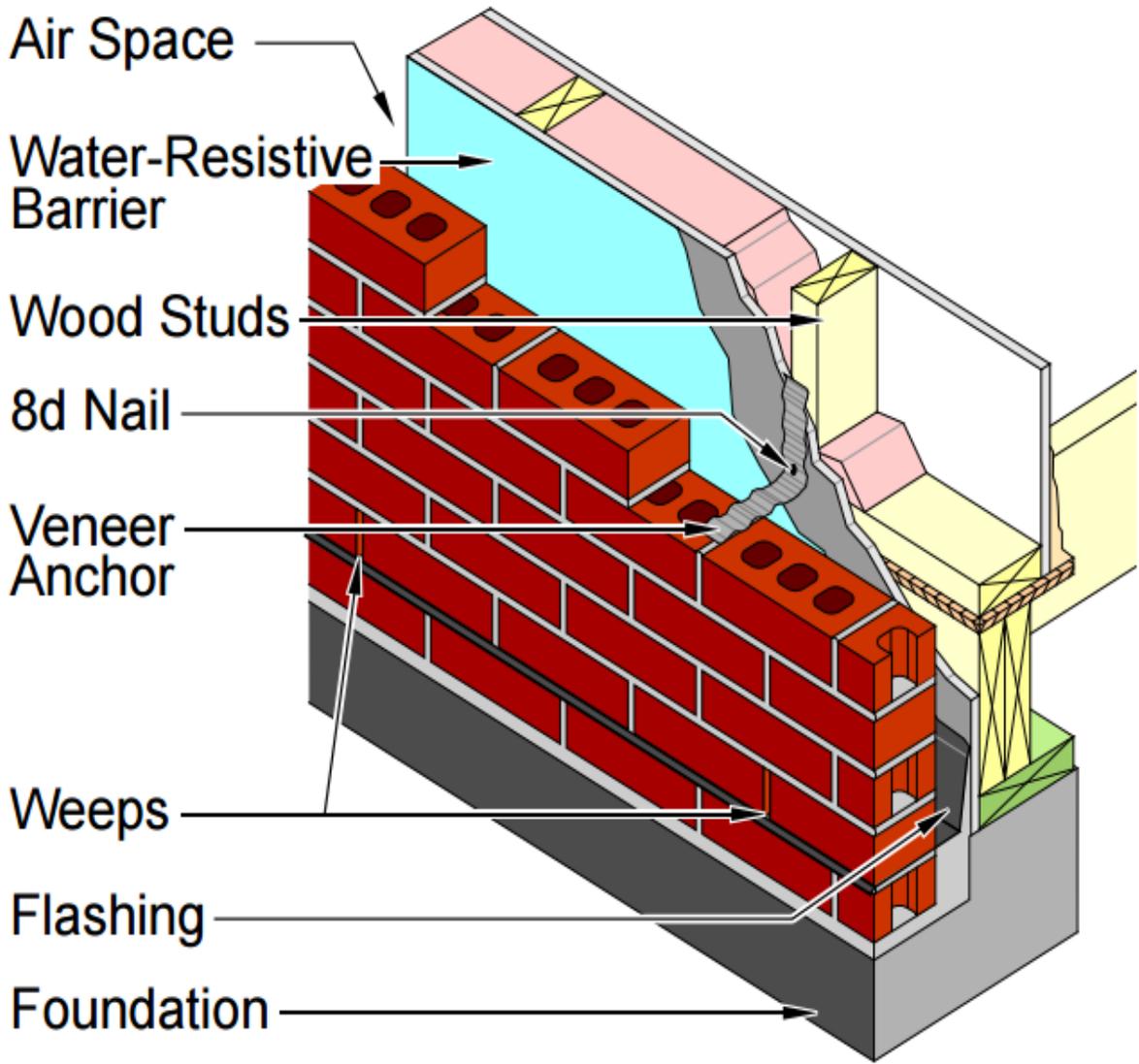


Eye & Pintle Anchor



Wire & Screw Anchor

# Wall Ties



## 4.- Flashing

Flashing is essential to collect water that has penetrated the veneer and to direct it out of the wall through the weeps at the bottom of the air space. Flashing and weeps must be placed at all locations where the air space is interrupted, including:

- Beneath the first course of brickwork above final grade;
- At points of support, such as shelf angles, lintels and structural floors;
- At wall and roof intersections;
- At the heads, jambs and sills of exterior window and door openings;
- At the intersection of chimneys or other masonry construction with frame or stucco walls;
- Under and at the ends of copings and sills; and
- Where exterior porches, decks or stairs attach to a wall or floor assembly of wood frame construction.

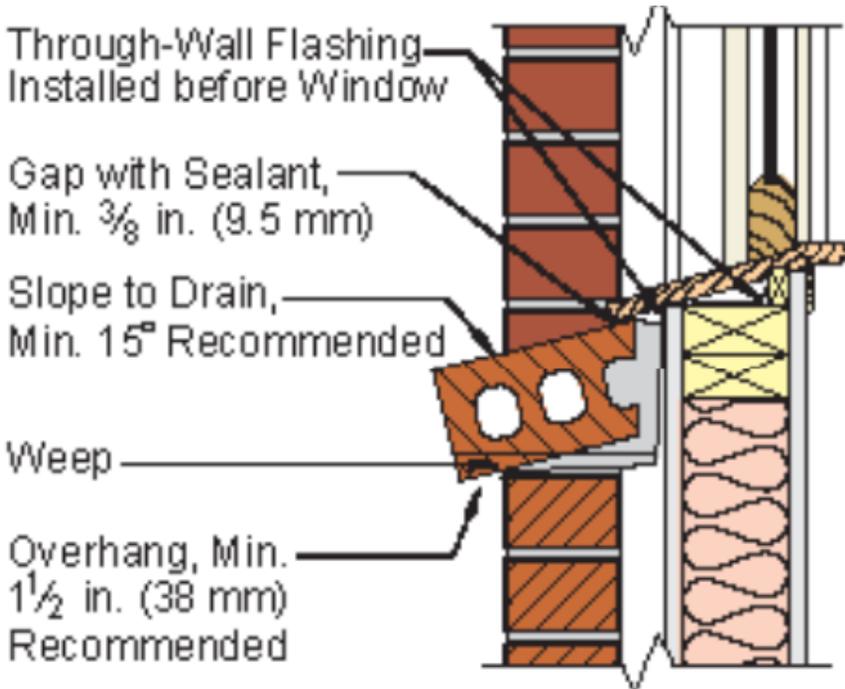
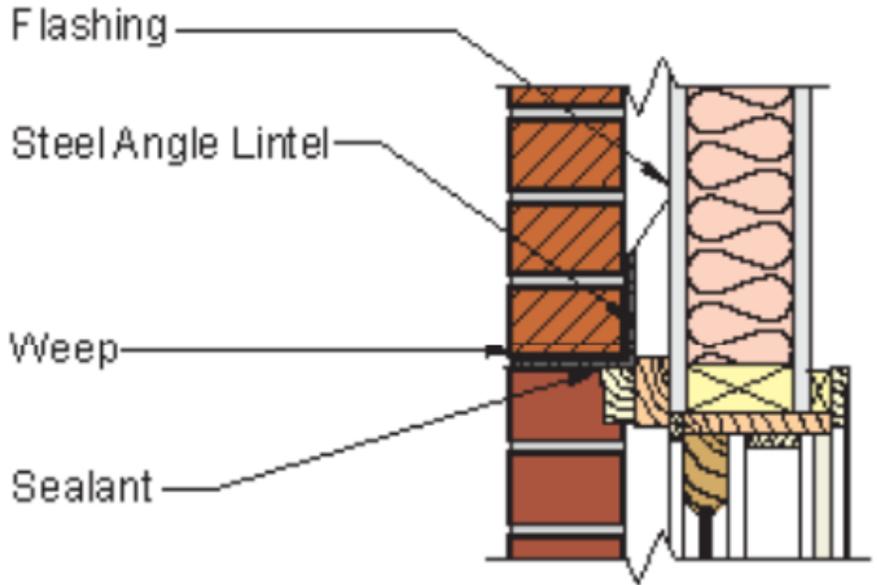
# Flashing

Flashing should extend to the exterior face of the brick veneer, with the back edge turned up at least 8" vertically. When the flashing is installed after the moisture barrier or air barrier, the flashing should be attached to the wall with a termination bar. Extending flashing beyond the face of the brickwork to form a dip is recommended when using a flashing that deteriorates with UV exposure, a separate drip edge can accomplish this. When drip edge is not used, the flashing should stop, or be cut, flush with the face of the wall.

If drainage materials that catch mortar are placed at the bottom of the air space, then flashing at the base of the wall should extend farther up the backing. This ensures that the flashing extends above the height of the drainage material and helps deter water that migrates across mortar on top of the drainage material from entering the backing. The water-resistant barrier should lap the top of the flashing a minimum of 4". Where the flashing is not continuous, such as over and under openings in the wall, the ends should be turned up at least 1" into a head joint to form a dam.

## Flashing

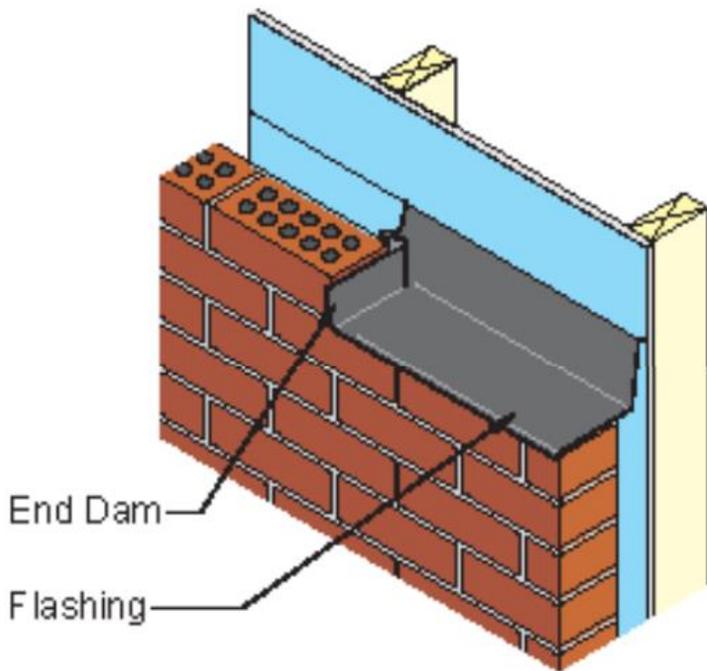
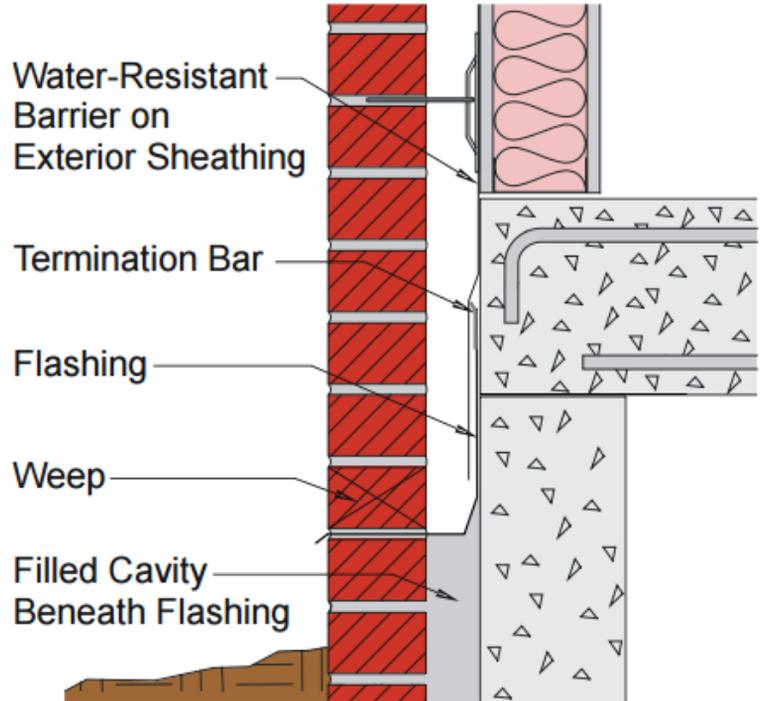
Window head detail



Window sill detail

# Flashing

Wall base detail



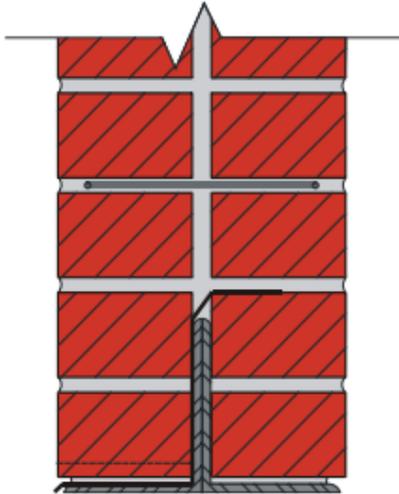
End dam detail

## 5.- Steel Lintels

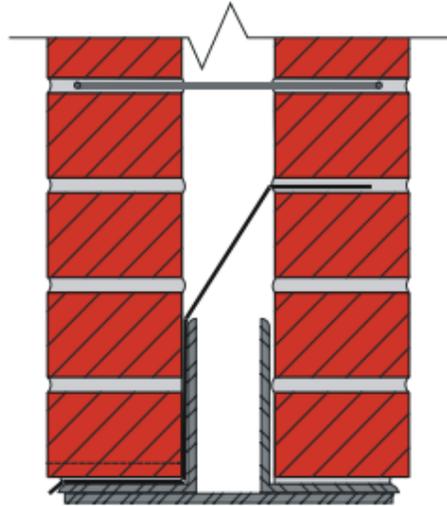
Through-wall flashing should be installed over all openings including door and window heads. An exception may be those completely protected by overhangs. The flashing should be placed on a thin bed of mortar directly on top of the lintels and turned up at the ends to form dams. Weeps are recommended above all lintels which require flashing.



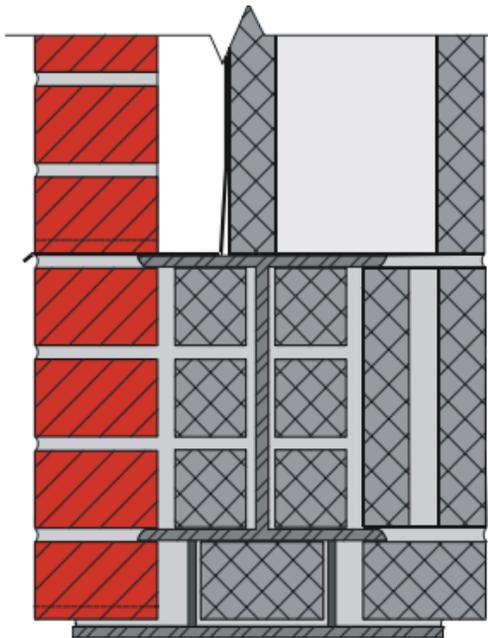
# Structural steel lintels



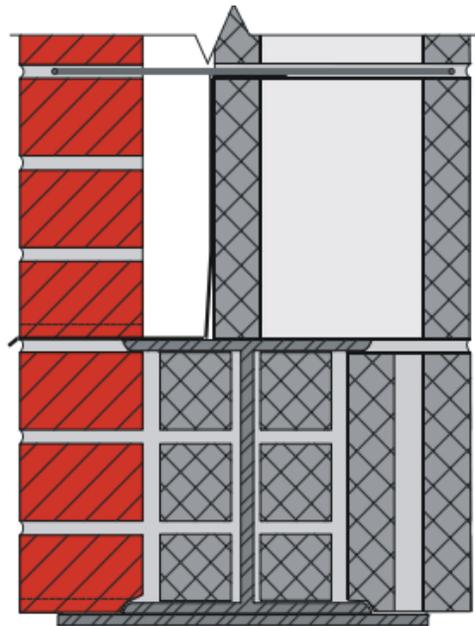
Double Angle  
Solid Wall



Double Angle  
Hollow Wall



Steel Shape  
Suspended Plate



Steel Shape  
Attached Plate

## 6.- Weep Holes

Weeps are required, and should be formed in mortar joints immediately above the flashing.

Open head joints, formed by leaving mortar out of a joint, are the recommended type of weep.

Open head joint weeps should be at least 2" high.

Weep openings are permitted by most building codes to have a minimum diameter of 3/16".

The practice of specifying the installation of weeps one or more courses of brick above the flashing can cause a backup of water and is not recommended.

Non-corrosive metal, mesh or plastic screens can be installed in open head joint weeps if desired.

Spacing of open head joint weeps at no more than 24" on center is recommended. Spacing of wick and tube weeps is recommended at no more than 16" on center.

Weep spacing is permitted by most building codes up to 33" on center. If other than an open head joint weep is used, be sure the weep is clear of all mortar to allow the wall to drain.

# Weep Holes

Rope wicks should be flush with, or extend  $\frac{1}{2}$ " beyond the face of the wall to promote evaporation.

The rope should continue into the bottom of the air space, placed along the back of the brick and be at least 16" long.

## Examples of weep devices



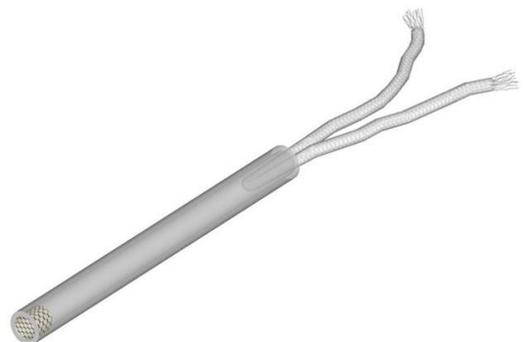
Weep hole screen



Weep hole cover



Plastic weep vent



Weep tube with screen and rope wick

## 7.- General Recommendations

Avoid installing the brick in direct contact with moist areas such as: flower beds, steps, sewers, puddles of water, humidity due to garden sprinklers and in any construction where the brick remains in direct contact with soil humidity.

Please make sure all grout joints are free of cracks and without void areas. Immediately apply a hydro repellent sealer to mortar joints to avoid water filtrations. Filtrations may cause, under low temperatures, freezing of water and damage of the brick face.

Do not use acid or acid base cleaners on these bricks. Inhaling the dust generated may be a potential health hazard. Wet sawing is recommended. After these bricks are used, it is impossible to make corrections, therefore use constitutes their acceptance.