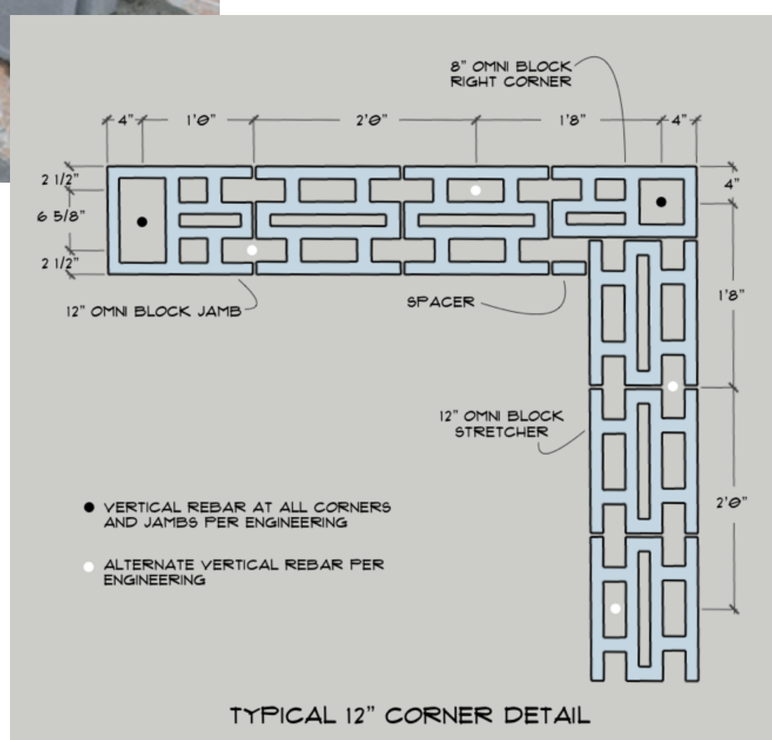
Frequently Asked Questions (FAQ's)

1. How does a mason lay a corner with the 12" system?

    (A) The mason will have to use an 8" block, with a "spacer piece". See illustrations below. If the building calls for a smooth or burnished finish, an 8" Omni Jamb block can be used. If the building calls for a split face finish, a standard CMU split face return corner is to be used.



2. How many inserts do I need?

CALCULATING INSERT REQUIREMENTS

SYSTEM 8

1. Determine the number of stretchers and the number of corner block required.
2. Calculate the number of long inserts by adding the number of stretchers and 1/2 of the number of corners together. This total provides the number of long inserts that you will require.
3. Calculate the number of short inserts by multiplying the total number of long inserts by a factor of ______ (see table below). This total provides the number of short inserts that you will require.
4. The long and the short inserts are sold in 100 count bags each weighing approximately 10 lbs. Therefore, round your totals of each insert up to the next nearest 100 count.

Sytem 8 - Short insert Table

Vertical Rebar Spacing	Factor
48" o.c.	1.70
32" o.c.	1.50
24" o.c.	1.35
16" o.c.	1.00

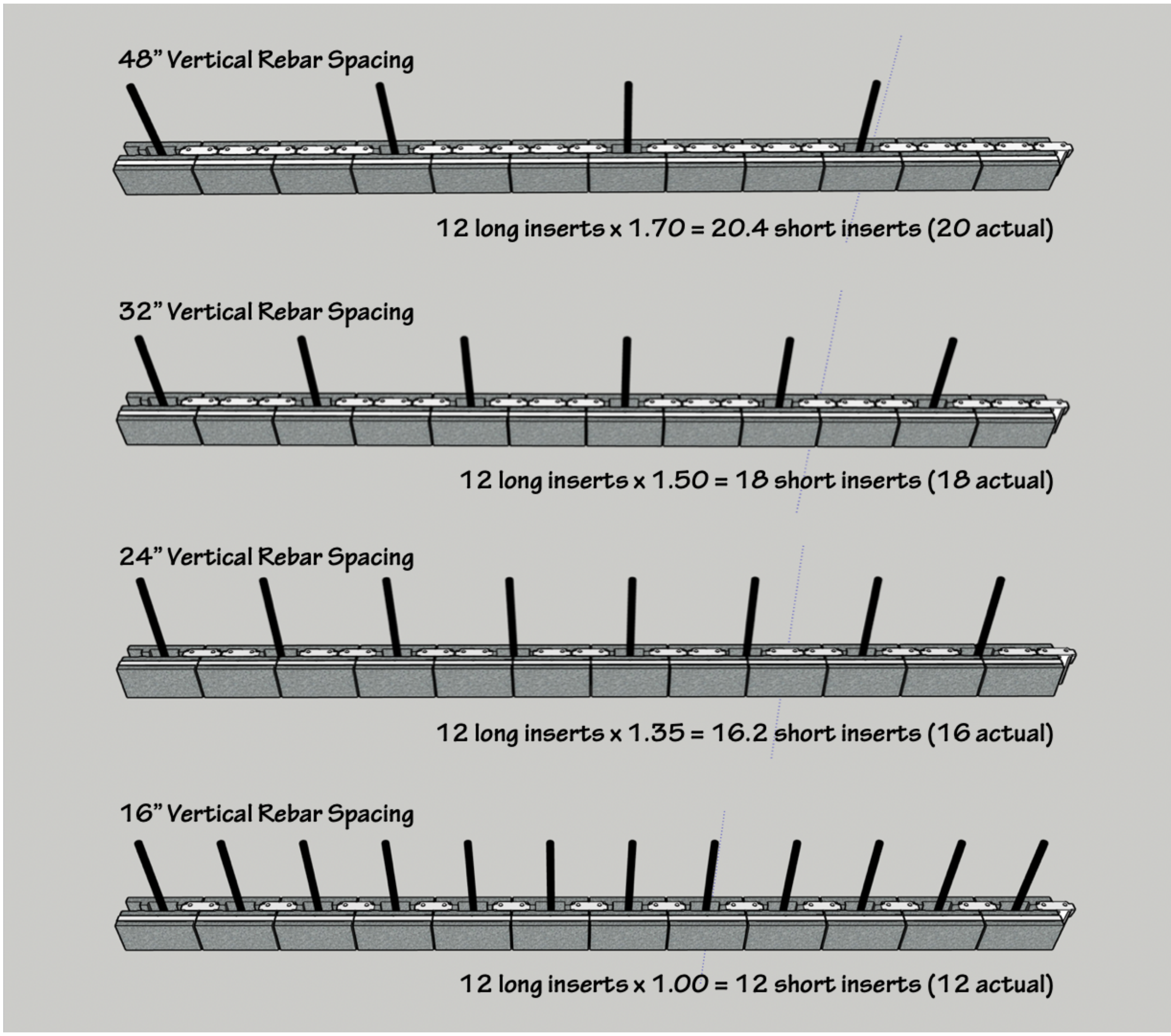
Note: see illustrations below

48" Vertical Rebar Spacing Example:

2,250 stretchers and 800 (400 of each) corners are needed to complete the job.

2,250 + 400 = 2,650 long inserts; rounded to the next 100 = 2,700 (27 bags of long inserts).

2,650 x 1.70 = 4,505 short inserts; rounded to the next 100 = 4,600 (46 bags of short inserts).


48" Vertical Rebar Spacing
12 long inserts x 1.70 = 20.4 short inserts (20 actual)
32" Vertical Rebar Spacing
12 long inserts x 1.50 = 18 short inserts (18 actual)
24" Vertical Rebar Spacing
12 long inserts x 1.35 = 16.2 short inserts (16 actual)
16" Vertical Rebar Spacing
12 long inserts x 1.00 = 12 short inserts (12 actual)

SYSTEM 12

1. Determine the number of stretchers, the number of jambs and the number of 8" corner block required.
2. Calculate the number of long inserts by adding the number of stretchers, 1/2 of the number of jambs and 1/2 of the 8" corners together. This total provides the number of long inserts that you will require.
3. Calculate the number of short inserts by multiplying the total number of long inserts by a factor of ______ (see table below). This total provides the number of short inserts that you will require.
4. The long and the short inserts are sold in 100 count bags each weighing approximately 10 lbs. Therefore, round your totals of each insert up to the next nearest 100 count.

System 12 - Short insert Table

Vertical Rebar Spacing	Factor
24" o.c.	3.35
16" o.c.	3.00
8" o.c.	2.00

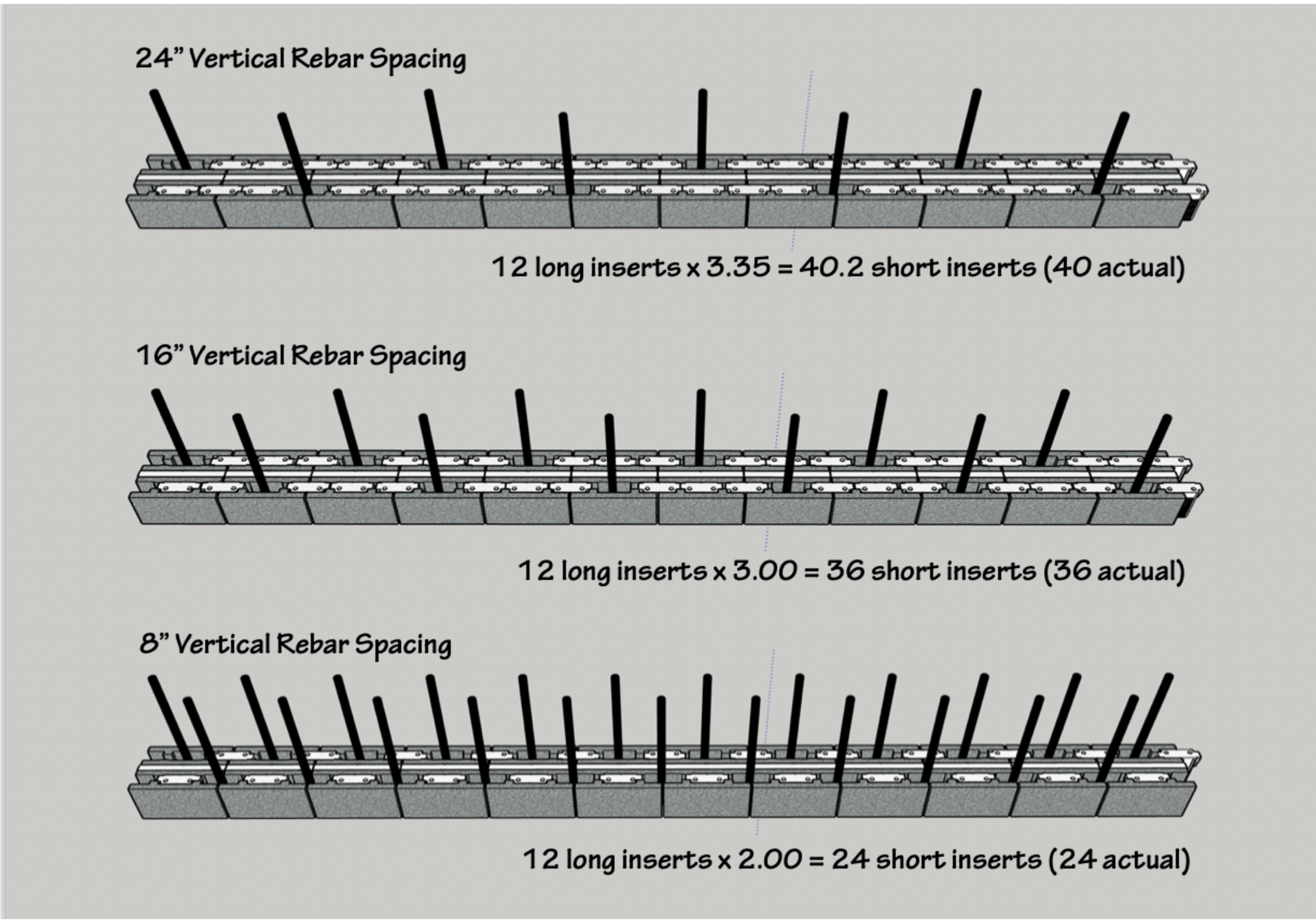
Note: see illustrations below

24" Vertical Rebar Spacing Example:

2,250 stretchers, 800 (400 of each) corner and 200 jambs are needed to complete the job.

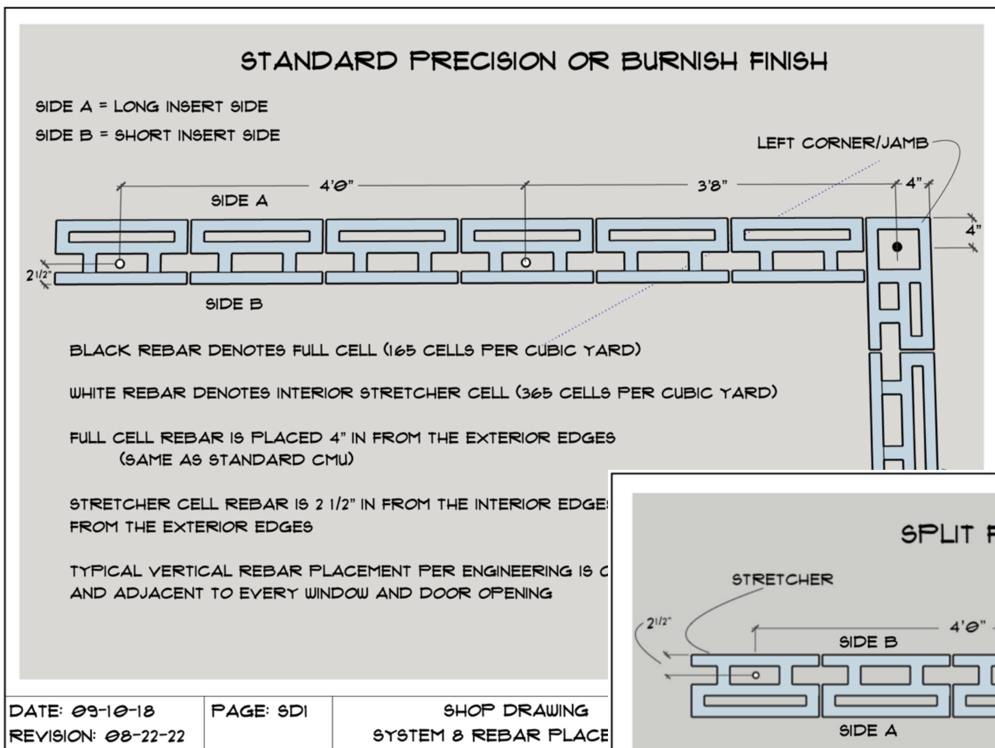
2,250 + 400 + 100 = 2,750 long inserts; rounded to the next 100 = 2,800 (28 bags of long inserts).

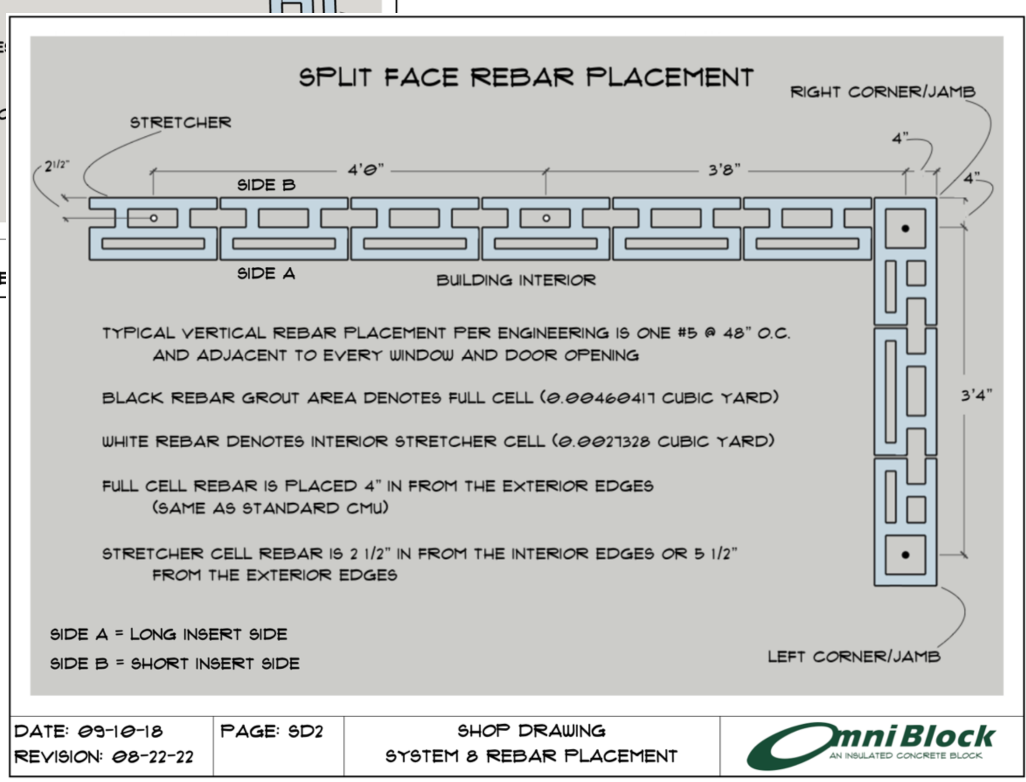
2,750 x 3.35 = 9,213 short inserts; rounded to the next 100 = 9,300 (93 bags of short inserts).


24” Vertical Rebar Spacing
12 long inserts x 3.35 = 40.2 short inserts (40 actual)
16” Vertical Rebar Spacing
12 long inserts x 3.00 = 36 short inserts (36 actual)
8” Vertical Rebar Spacing
12 long inserts x 2.00 = 24 short inserts (24 actual)

3. For the 8” system only, which side of the block faces the exterior of the building, and which side faces the interior of the building?

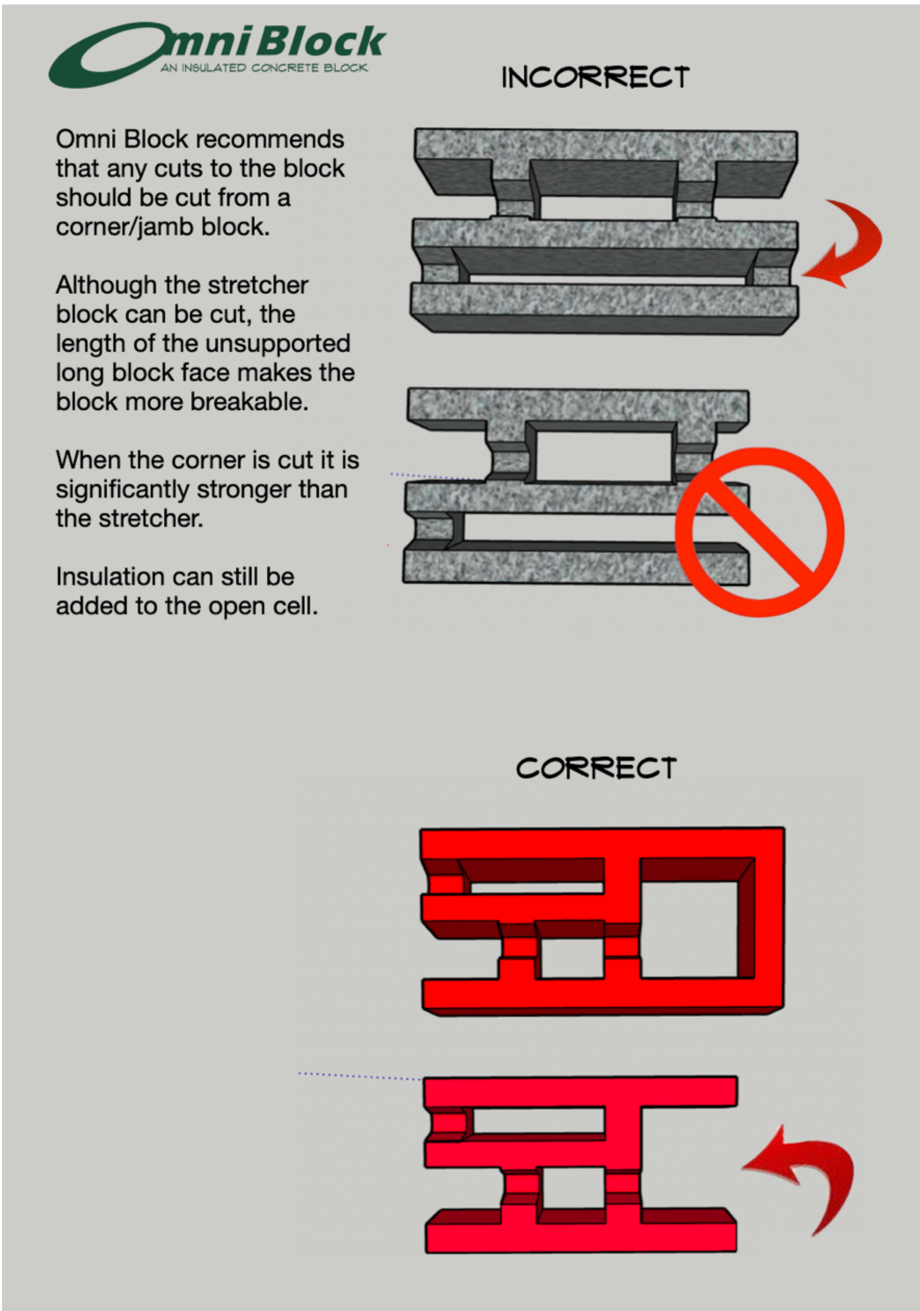
   (A) The reason that split face Omni Block is reversed or rotated (so that the normal interior of the block becomes the exterior) is due to manufacturing concerns. The long cell side of the stretcher block does not split well and there is too much breakage (“cull rate” in masonry) during the splitting process. Therefore, the block molds are set-up so that the two interior sides about each other and are effectively split from one another. This is the only reason that split face Omni Block is reversed or rotated. This situation only applies to the System 8 and the Omni Brick 8. The illustrations below depict the effect regarding rebar placement of the block being reversed of rotated.



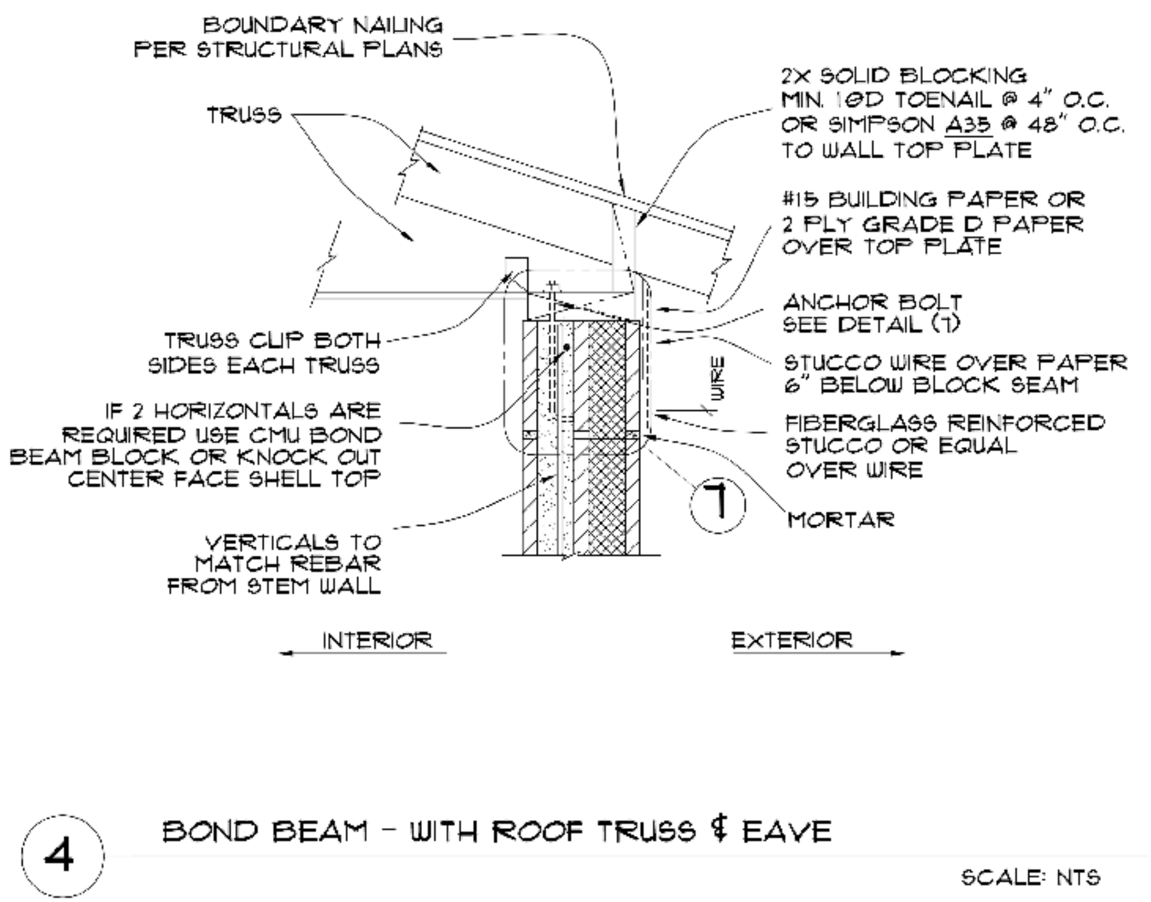


4. What is the proper rebar placement for the Omni Block system?
   (A) On Omni Block builds, it is most efficient for the mason to dowel and epoxy structural rebar based on the Omni Block layout.

5. Can I cut an Omni Block?
   (A) See illustration below.



6. Can Omni Block be used as a bond beam?
   (A) Yes. Please see details below.



7. Do concrete masonry walls require continuous insulation?

Do concrete masonry walls require continuous insulation?

For those that know and understand the International Energy Conservation Code (IECC), this is an easy answer, **NO**. This is a common "misconception" that is fueled by many of those in the concrete masonry industry that do not have accurate knowledge. Some of these individuals represent companies with products that claim to have continous insulation. Discernment is encouraged.

One particular compliance path (prescriptive) from the IECC Table C402.2 requires insulation to be continuous, however there are several other paths that do not require continuous insulation. The following references specific sections and subsequent requirements of the 2012 IECC, but applies equally to other editions of the IECC as well. The IECC allows three different methods (paths) that may be used to show compliance with minimum energy efficiency requirements: prescriptive, trade-off or system performance and whole building energy analysis. A specific building need only to comply with one of these methods, not all three.

It is true that of the three compliance methods, the prescriptive path has historically been used the most and is therefore the most recognized. The IECC however, understands that this path has its shortcomings and has shown a tendency over the years of increasing the minimum requirements of this option. Increasing the minimum requirements also tends to increase construction costs thus making the other options more palatable. Prescriptive requirements for building envelope elements are listed below in **Table 1**. As an example, **Table 1** shows that in Chicago (Climate Zone 5), a flat-roofed building (other than Group R) must have R-25 continuous insulation and masonry walls (mass) must have R-11.4 continuous insulation to comply with this Table and satisfy the prescriptive path minimum requirement. **Table 1** below is strictly for the use in **Prescriptive Wall** design and is often the single source of the misconception that continuous insulation is required in order to comply with the minimums established by the IECC.

Table 1: Excerpt from 2012 IECC Table C402.2 Showing Prescriptive Wall and Roof R-Value Requirements

Climate Zone	1		2		3		4 Except Marine		5 and Marine 4	
	All other	Group R	All other	Group R	All other	Group R	All other	Group R	All other	Group R
Roofs										
Insulation entirely above deck	R-20 ci	R-20 ci	R-20 ci	R-20 ci	R-20 ci	R-20 ci	R-25 ci	R-25 ci	R-25 ci	R-25 ci
Attic and other	R-38	R-38	R-38	R-38	R-38	R-38	R-38	R-38	R-38	R-49
Walls Above Grade										
Mass	R-5.7 ci	R-5.7 ci	R-5.7 ci	R-7.6 ci	R-7.6 ci	R-20 ci	R-25 ci	R-25 ci	R-25 ci	R-25 ci
Metal building	R-13 + R-6.5 ci	R-13 + R-6.5 ci	R-13 + R-6.5 ci	R-13 + R-13 ci	R-13 + R-6.5 ci	R-13 + R-13 ci	R-13 + R-13 ci	R-13 + R-13 ci	R-13 + R-13 ci	R-13 + R-13 ci
Metal framed	R-13 + R-5 ci	R-13 + R-5 ci	R-13 + R-5 ci	R-13 + R-7.5 ci	R-13 + R-7.5 ci	R-13 + R-7.5 ci	R-13 + R-7.5 ci	R-13 + R-7.5 ci	R-13 + R-7.5 ci	R-13 + R-7.5 ci
Wood framed and other	R-13 + R-3.8 ci or R-20	R-13 + R-3.8 ci or R-20	R-13 + R-3.8 ci or R-20	R-13 + R-3.8 ci or R-20	R-13 + R-3.8 ci or R-20	R-13 + R-3.8 ci or R-20	R-13 + R-3.8 ci or R-20	R-13 + R-3.8 ci or R-20	R-13 + R-3.8 ci or R-20	R-13 + R-7.5 ci or R-20 + R-3.8 ci

Notes

1. ci = continous insulation
2. R-5.7 ci is allowed to be substituted with concrete block walls complying with ASTM C90, ungrouted or partially grouted at a spacing no less than 32" o.c. vertically and 48" o.c. horizontally, with ungrouted cores filled with insulation.