

# LMAZ/MA/MAB Mudsill Anchors

Mudsill anchor provide an alternative to anchor bolts. They easily mount on forms and make finishing easier. The unique design provides installation flexibility, eliminating problems with misplaced anchor bolts. Suitable for stem wall or slab foundations, mudsill anchors are one piece so there are no more nuts and washers to lose.

LMAZ—an economical replacement for 1/2" sill plate anchor bolts

MA—for slab or stem wall construction

MAB—anchors mudsill to concrete block, poured walls or slab foundations

**MATERIAL:** LMAZ, MAB—18 gauge; MA—16 gauge

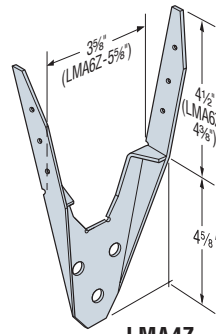
**FINISH:** MA, MAB—Galvanized (*some available in ZMAX® coating*); LMAZ—ZMAX only.

See Corrosion Information, page 10-11.

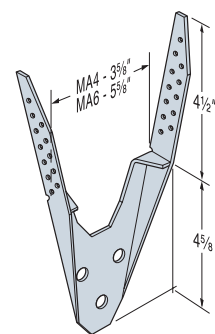
**INSTALLATION:**

- Use all specified fasteners. See General Notes.
- CMU shall have a minimum  $f'_m = 1500$  psi and concrete shall have a minimum  $f'_c = 2000$  psi.
- Not for use where a horizontal cold joint exists between the slab and foundation wall or footing beneath, unless provisions are made to transfer the load.
- Not for use in slabs poured over foundation walls formed of concrete block or with brick and 4" masonry block stemwalls.

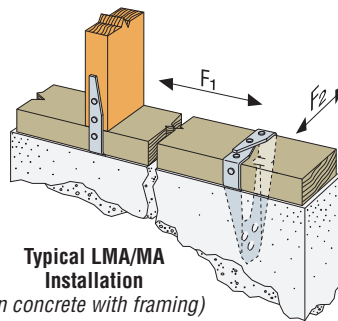
**CODES:** See page 12 for Code Reference Key Chart.



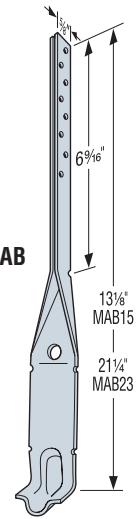
**LMA4Z**  
(LMA6Z similar)



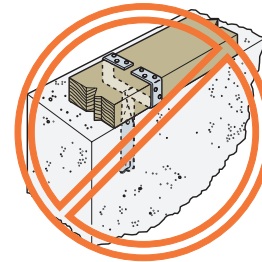
**MA4 and MA6**



**Typical LMA/MA Installation**  
(in concrete with framing)



**MAB**

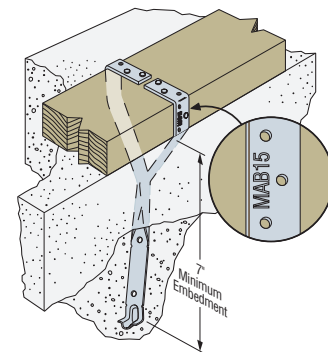


**MAB Misinstallation**  
(MAB straps must be separated before the concrete is poured)

These products are available with additional corrosion protection. Additional products on this page may also be available with this option, check with Simpson Strong-Tie for details.

| Model No. | Sill Size | Fasteners   |             | Allowable Loads <sup>1</sup> DF/SP (160) |                                     |                                  | Code Ref.              |
|-----------|-----------|-------------|-------------|--|-------------------------------------|----------------------------------|------------------------|
|           |           | Sides       | Top         | Uplift <sup>2</sup>                      | Parallel to Plate (F <sub>1</sub> ) | Perp. to Plate (F <sub>2</sub> ) |                        |
| LMA4Z     | 2x4       | 2-10dx1 1/2 | 4-10dx1 1/2 | 905                                      | 675                                 | 520                              | F24 <sup>6</sup>       |
|           | 3x4       | 4-10dx1 1/2 | 2-10dx1 1/2 | 905                                      | 675                                 | 520                              |                        |
| LMA6Z     | 2x6       | 2-10dx1 1/2 | 4-10dx1 1/2 | 905                                      | 825                                 | 650                              |                        |
|           | 3x6       | 4-10dx1 1/2 | 4-10dx1 1/2 | 1110                                     | 825                                 | 650                              |                        |
| MA4       | 2x4       | 2-10dx1 1/2 | 2-10dx1 1/2 | 830                                      | 575                                 | 430                              | IL16, L15 <sup>6</sup> |
|           | 3x4       | 4-10dx1 1/2 | 2-10dx1 1/2 | 915                                      | 680                                 | 430                              |                        |
| MA6       | 2x6       | 2-10dx1 1/2 | 4-10dx1 1/2 | 915                                      | 680                                 | 430                              |                        |
|           | 3x6       | 4-10dx1 1/2 | 4-10dx1 1/2 | 915                                      | 680                                 | 430                              |                        |
| MAB15     | 2x4,6     | 2-10dx1 1/2 | 4-10dx1 1/2 | 565                                      | 500                                 | 500                              | IL8 <sup>6</sup>       |
| MAB23     | 2x4,6     | 2-10dx1 1/2 | 4-10dx1 1/2 | 565                                      | 500                                 | 500                              |                        |

1. Loads have been increased for short-term loading.
2. For uplift loads, provide attachment from mudsill to building's structural components to prevent cross-grain bending.
3. MA installed attached to the stud has no load reduction for parallel loads, has a perpendicular load of 670 lbs. and an uplift of 835 lbs.
4. LMAZ installed attached to the stud has no load reduction for parallel and perpendicular loads and an uplift of 600 lbs. for LMA4 and 835 lbs. for LMA6.
5. For stemwall applications, allowable loads are based on a minimum stemwall width of 6".
6. Testing to new ICC-ES acceptance criteria to be completed in 2009. Reference [www.strongtie.com](http://www.strongtie.com) for latest loads and information.
7. **NAILS:** 10dx1 1/2 = 0.148" dia. x 1 1/2" long. See page 16-17 for other nail sizes and information.

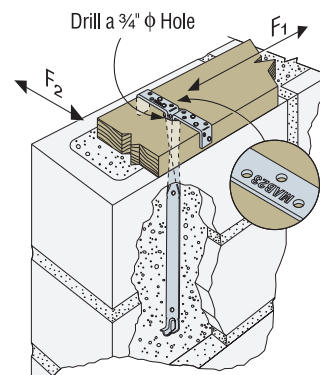


**Typical MAB15 Installation in Concrete**  
(MAB23 similar, with 15" minimum embedment)  
Not applicable for concrete block installation

**Prescriptive Anchor Spacing**

| Model No. | O.C. Spacing to replace 1/2" Anchor Bolt<br>6' O.C. (160) | O.C. Spacing to replace 5/8" Anchor Bolt<br>6' O.C. (160) | Min. Concrete End Distance | Min. C-C Spacing |
|-----------|---|---|----------------------------|------------------|
| LMA4Z     | 3'-8"   | 2'-7"   | 4 5/8"                     | 9 1/4"           |
| LMA6Z     | 4'-6"   | 3'-2"   |                            |                  |
| MA4       | 3'-2"   | 2'-2"   | 4 5/8"                     | 9 1/4"           |
| MA6       | 3'-9"   | 2'-7"   |                            |                  |
| MAB15     | 2'-9"   | 1'-11"  | 6 1/2"                     | 13"              |
| MAB23     | 2'-9"   | 1'-11"  | 12"                        | 24"              |

1. Place anchors not more than 12" from the end of each sill per code.
2. Spacing is based on parallel to plate load direction only.
3. CMU shall have a minimum  $f'_m = 1500$  psi and concrete shall have a minimum  $f'_c = 2000$  psi.
4. Spacing applies to DF, SP, and HF 2x sill plates.



**Typical MAB23 Installation in Concrete Block**  
(MAB15 similar)  
MAB23 provides a two block embedment, if required by the local code jurisdiction