



City of Long Beach
Department of Development Services
Building and Safety Bureau

Standard CMU Block Wall Detail

Information
Bulletin

BU-009

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The purpose of this Information Bulletin is to assist owners and builders with erecting simple, standard freestanding concrete masonry unit (CMU) block walls of various heights, thicknesses, or footing configurations. The information below provides general requirements and specifications for the average condition and may not be suitable in all cases. Where the proposed wall construction is located on a site with a slope steeper than 10%, with adverse soil conditions (e.g., expansive soil, liquefaction, flood hazard, etc.), retains soil, or that deviates from this Information Bulletin, a registered design professional licensed in the State of California should be consulted.

GENERAL ZONING REQUIREMENTS

Wall heights shall not exceed the maximum heights set forth in Long Beach Municipal Code §21.43.020. For zoning code purposes, wall height shall be measured from grade adjoining the wall on the public right-of-way side of the wall and/or from the average grade of both sides of the wall between two private properties. For lots that slope more than 5-feet from front to rear, please contact Planning staff at the Development Services Permit Center to help establish the wall height. A 6-foot corner cutoff may be required for walls adjacent to driveways and sidewalks that obstruct visibility.

Note that common property walls (i.e., wall located on a property line) are not permissible. The wall, footings, and other attachments or support must be entirely located within the property. A lot surveyed and staked by a registered surveyor may be required to determine the proper location of the lot.

GENERAL BUILDING REQUIREMENTS

CMU walls over 4-feet in height above grade shall require a building permit. Foundation must be poured against undisturbed soil with no appreciable slope of sidewalls. All horizontal and vertical reinforcements shall maintain a minimum 3-inch clearance from the bottom and sides of the trench. Horizontal bond beam reinforcement is required to be located in the 2nd course from the top of the wall. Prefabricated joint reinforcement in each two top mortar joints consisting of two No. 9 gage galvanized wires with No. 9 gage steel welded cross wires spaced a maximum 16-inches off-center may be substituted for the horizontal bond beam reinforcement in the top of walls 6-feet, 6-inches or less in height. All wires shall be thoroughly embedded in the bed joint mortar and lapped a minimum of 12-inches. Units shall be staggered (common bond are not permitted) and may be partially grouted with grout confined to those cells that have horizontal and vertical reinforcing steel. *Refer to Figure 1.*

REQUIRED INSPECTIONS

Foundation Insp.: When trench is ready for concrete and all steel reinforcements are tied in place.
Pre-Grout Insp.: When top horizontal bar and all vertical bars are in place, **but not grouted!**
Final Insp.: After wall is grouted and cap is installed.

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Figure 1:

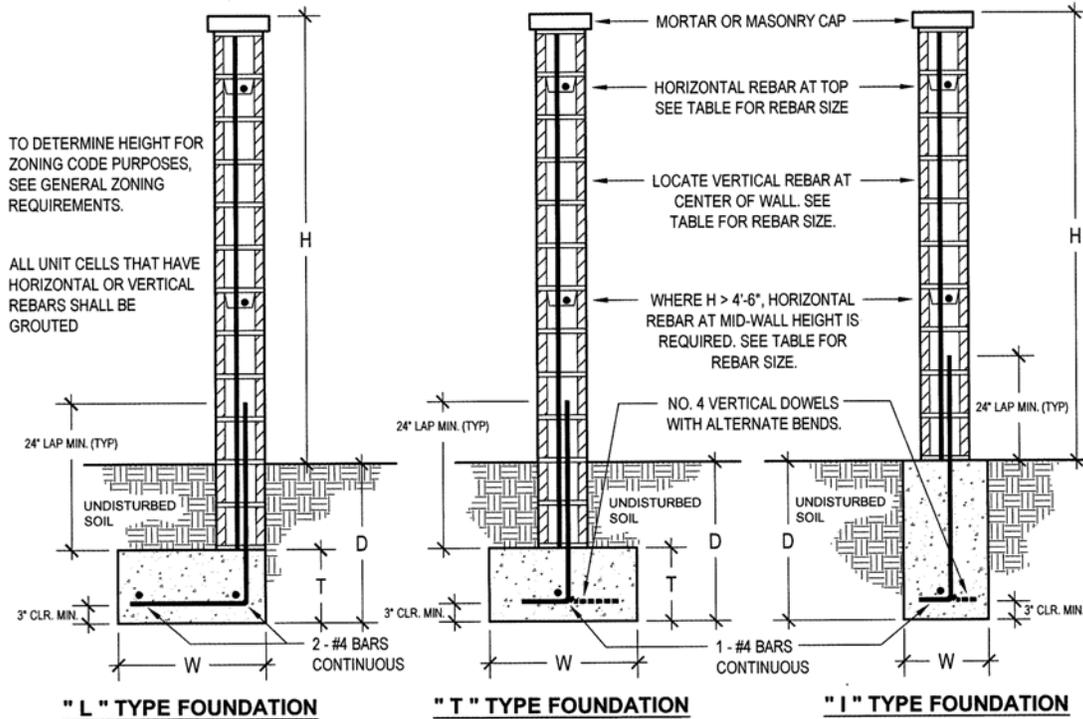


Table 1: Foundation Dimensions and Steel Reinforcement Size

WALL HT	"L" TYPE FOUNDATION			"T" TYPE FOUNDATION			"I" TYPE FOUNDATION		VERTICAL REBAR	HORIZONTAL REBAR
	W	D	T	W	D	T	W	D		
3' - 6"	18"	18"	9"	14"	12"	6"	12"	22"	#4 Rebar @ 48" o.c.	#4 Rebar
4' - 6"	18"	18"	9"	18"	12"	6"	12"	26"	#4 Rebar @ 48" o.c.	#4 Rebar
5' - 6"	24"	24"	12"	22"	12"	6"	12"	30"	#4 Rebar @ 48" o.c.	#4 Rebar
6' - 6"	24"	24"	12"	26"	14"	9"	12"	36"	#4 Rebar @ 24" o.c.	#4 Rebar

SPECIFICATIONS

- Concrete: Min. 2,500 psi strength in 28 days. Mix for concrete footing to be 1 part cement to 2-1/2 parts sand to 3-1/2 parts gravel with a max. of 7-1/2 gallons of water per sack of cement.
- Block: Grade "N" ASTM C 90-03. Nominal width of units shall be a min. 6".
- Reinforcement: Deformed steel bar conforming to ASTM A-615 Grade 40 or Grade 60.
- Mortar (Type "S"): Mix to be 1 part cement to 1/2 part lime to 3 parts damp loose sand.
- Grout: Mix to be 1 part cement to 3 parts sand to max. 1/10 part lime. Sufficient water should be added to produce consistency for pouring without segregation of the constituents. May contain 2 parts pea gravel (max. size 3/8").