

STANDARD BLOCK WALL DETAIL

The purpose of this Information Bulletin is to assist owners and builders who may choose to erect simple freestanding concrete masonry unit (CMU) block walls using the Building Division's standard detail. This Information Bulletin provides general requirements and specifications for the construction of standard CMU block walls of various height, or footing configurations. These walls are designed for the average condition and may not be suitable in all cases. Where the proposed wall construction is located on a site with slope steeper than 10%, with adverse soil conditions (e.g., expansive soil, liquefaction, flood hazard, etc.) or deviates from this Information Bulletin, a registered design professional licensed in the State of California should be consulted.

LIMITS OF APPLICABILITY STANDARDS:

Use of this document shall not permit the applicant to modify any portion(s) of these details.

GENERAL NOTES:

- 1. Finish grade shall be of equal elevation on each side of wall maximum of 6" offset is permitted in the grade level with no surcharge loads.
- 2. Concrete block wall over 30" in height measured from adjacent grade shall require a building permit.
- 3. Concrete block wall in any height within three (3) feet of the property lines shall require a building permit
- 4. Blocks shall be installed in running bond pattern such that the head joints in successive courses are horizontally offset at least ¼ unit length.
- 5. Provide clean outs for all lifts greater than 4 ft.
- 6. Expansion joint spacing shall not exceed 30 ft length.
- 7. No wall or fence shall be allowed within 36" of a fire hydrant and no wall, fence, or foundation shall be allowed within 12" of a water meter.
- 8. Zoning/Planning Division regulates the height and, location of the wall based on the zone, location on the property, and community design standards. Zoning/Planning division must approve the plans prior to any permit being issued.
- 9. Property corners shall be monumented (located) by a licensed surveyor prior to starting the construction
- 10. A licensed surveyor must certify the location of all new fences within three (3) feet of the property line prior to footing inspection/pouring concrete.
- 11. No projections allowed in the public right of way including stone cap or trim.
- 12. Site wall is standing alone. No retaining is permitted form part of building or other structure.
- 13. No railing, guard, or screen attachments are permitted where the wall height plus the rail, guard, or screen height exceed 6'-0" above lowest adjacent grade.



DESIGN CRITERIA:

- 1. Applicable codes: 2019 CBC and ASCE 7-16.
- 2. Wind speed 110 mph exposure C.
- 3. Seismic Design Category D.
- 4. Allowable soil bearing pressure 1,500 psf, passive soil bearing 100 psf/ft.
- 5. Footing thickness shall be min. 12 inches into undisturbed natural soil.

MATERIAL SPECIFICATIONS:

CONCRETE BLOCKS	Minimum compressive strength f'm = 1,500 psi, normal weight units, grade N conforming to ASTM C90.
GROUT	2,000 psi min. strength or optional mix of 1 part cement, 3 part sand, and 2 parts pea gravel of 3/8" max. size.
MORTAR	1,800 psi min. strength type S or optional mix of 1 part cement, 3 parts sand, and ½ part lime.
CONCRETE FOR FOOTING	2,500 psi min. strength or optional mix of 1 part cement, 2½ parts sand, 3½ parts gravel of ¾" max. size, and 7 gallons of water per 90 lb sack of cement.
STEEL REINFORCING BARS	Must be deformed bar, free from loose rust, and conforming to ASTM A615 grade 40 or 60.

REQUIRED INSPECTIONS:

- **1.** Footing inspection: Footing trenches with steel in place prior to placing the concrete.
- **2.** Reinforcing steel inspection: Steel in wall prior to grouting. <u>Mid-height steel and grouting</u> inspection is required when 6" slump stone block is used.
- 3. Final inspection: Wall completed and site clean.