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## MASONRY WALLS – NON STRUCTURAL

# IR 21-1

References: 2001 California Building Code, Sections 2112A and 2113A  
2007 California Building Code, Sections 2114A and 2115A

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Discipline: Structural

This Interpretation of Regulation (IR) is intended for use by the Division of the State Architect (DSA) staff, and as a resource for design professionals, to promote more uniform statewide criteria for plan review and construction inspection of projects within the jurisdiction of DSA, which include State of California public elementary and secondary schools (grades K-12), community colleges, and state-owned or state-leased essential services buildings. This IR indicates an acceptable method for achieving compliance with applicable codes and regulations, although other methods proposed by design professionals may be considered by DSA.

This IR is reviewed on a regular basis and is subject to revision at any time. Please check the DSA web site for currently effective IR's. Only IR's listed in the document at <http://www.dsa.dgs.ca.gov/Pubs/default.htm> (click on "DSA Interpretations of Regulations Manual") at the time of plan submittal to DSA are considered applicable.

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**Purpose:** This IR provides various requirements for non-structural masonry walls.

**1. Garden Wall and Screen Wall Construction:** A garden wall or screen wall is any non-bearing wall, which is not part of the structural system of a building. In general, construction is as required for non-bearing partitions except that minimum thickness permitted is six inches. Wall reinforcement is as required for design loads with minimum of #4 @ 24" o.c. vertical for running bond, or #4 @ 16" o.c. for stacked bond. Horizontal steel is to be 0.001 times the nominal cross sectional area and may be spaced up to 4'-0" o.c. maximum. **Cells containing reinforcement shall be grouted.** Though walls less than six feet high are not required to be approved by the Division of the State Architect (DSA), if shown on drawings, the design should consider the above requirements.

**2. Grouting:** If a 16" grout lift is called for, horizontal steel spacing should be 16" o.c. The high lift grout method will be allowed for both brick and block walls when the design indicates the use is feasible. Specifications should include the procedures outlined in DSA IR 21-2 and IR 21-3.

**3. Thickness of Walls:** In figuring stresses use the net dimensions of the block or brick walls. It is not necessary to deduct for raked or tooled joints less than 1/2" in depth.

**4. Wall Projection Beyond Foundation:** The maximum allowable projection for a brick wall is one-half brick for a block wall, the shell thickness minus 1/2". Design the wall to be capable of carrying its load on the reduced area.

**5. Concentrated Loads:** Extra bars are necessary only when required by design. For concentrated loads causing eccentric moments, use four times the wall thickness plus length of bearing to compute bending stresses for interior supports. Use two times the wall thickness plus length of bearing for support at ends of walls.