



COUNTY OF LAKE WATER RESOURCES

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FLOOD CONTROL CONSTRUCTION GUIDELINES

To minimize damage to buildings during flood events, the County has certain requirements for all new construction in floodplains.

As a service to the applicant for a Building Permit, the Lake County Watershed Protection District will determine whether or not a given parcel of land lies within the 100 year floodplain or floodway as determined by maps prepared by the Federal Emergency Management Agency for the Lake County Flood Insurance Program.

If a proposed building site is determined to be within a floodplain or near a floodway, Chapter 25 of the County Code, Floodplain Management, applies. All new construction must be anchored against movement by floodwaters, be resistant to flood forces, be constructed of flood resistant materials, be flood-proofed or elevated so the lowest floor is at least one foot above the level of the 100-year flood, and all utilities must be resistant to flood damage.

It is the builder's responsibility to retain the services of a registered civil engineer or licensed surveyor to accurately locate the building site and to establish proper lowest floor elevations. A permanent elevation benchmark must be set on the property in question by the engineer or surveyor prior to the initial foundation inspection.

Upon completion of construction, an Elevation Certificate confirming the elevation of this floor must be sent by the engineer or surveyor to the Building & Safety Department. The Elevation Certificate may also be required for obtaining flood insurance.

Since the Flood Insurance Study and associated mapping do not address all minor drainage areas and localized low spots in the County, the findings made by the Lake County Watershed Protection District apply only to the flood zones as delineated by the Flood Insurance Rate Maps.

The builder is responsible for considering local drainage patterns and building site elevations to ensure the safety of the structure from flooding.

REQUIREMENTS for BUILDINGS in FLOOD ZONES

National Flood Insurance Program, Lake County, California

NOTE: BFE = Base Flood Elevation, in this case _____.

The lowest floor of the dwelling must be a minimum of 1'-0" above the BFE with all materials used below the BFE to be "flood resistant" (concrete or PTDF)

UTILITIES: Electrical switch boxes, outlets, heaters, air conditioners, etc. should be elevated to be above the BFE, or be installed in flood resistant enclosures. Propane tanks are to be anchored to prevent floating.

MANUFACTURED HOMES: To be on a permanent foundation such that the lowest floor of the manufactured home is elevated a minimum of 1'-0" above the BFE and be securely anchored to an adequately anchored foundation system to resist flotation, collapse and lateral movement. All materials used below the BFE to be "flood resistant" (concrete or PTDF).

GUIDANCE FOR NON-ENGINEERED OPENINGS IN FOUNDATIONS: Each of the following four (4) design criteria must be met for new and substantially improved A-zone buildings that have enclosed areas below the BFE with openings not designed by a registered professional engineer or architect.

1. There must be a minimum of two openings on different sides of each enclosed area. If a building has more than one (1) enclosed area, such as an attached garage, each area must have openings on exterior walls to allow floodwater to directly enter and leave.
2. The total area of all openings must be at least one (1) square inch for each one (1) square foot of enclosed area. Each enclosed area shall be calculated separately.
3. The bottom of each opening can be no more than one (1) foot above the exterior or interior grade, whichever is higher.
4. Any louvers, screens, or other opening covers must not block or impede the automatic flow of flood water into and out of the enclosed area.

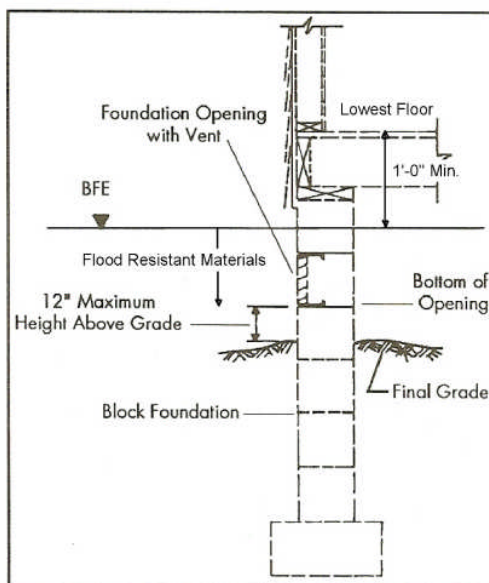


Figure 1. Opening for Solid Foundation Wall

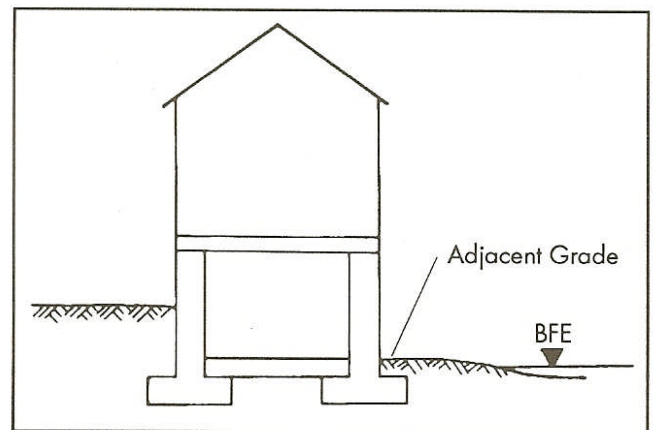


Figure 2. Compliant Grading for a Walkout Basement

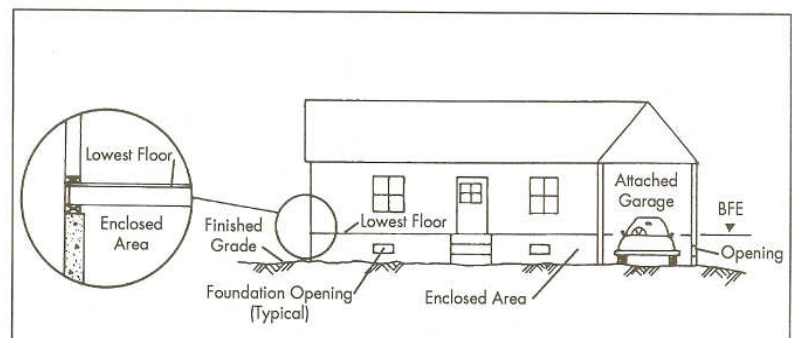


Figure 3. Compliant Residential Building Built on Solid Foundation Walls With Attached Garage