

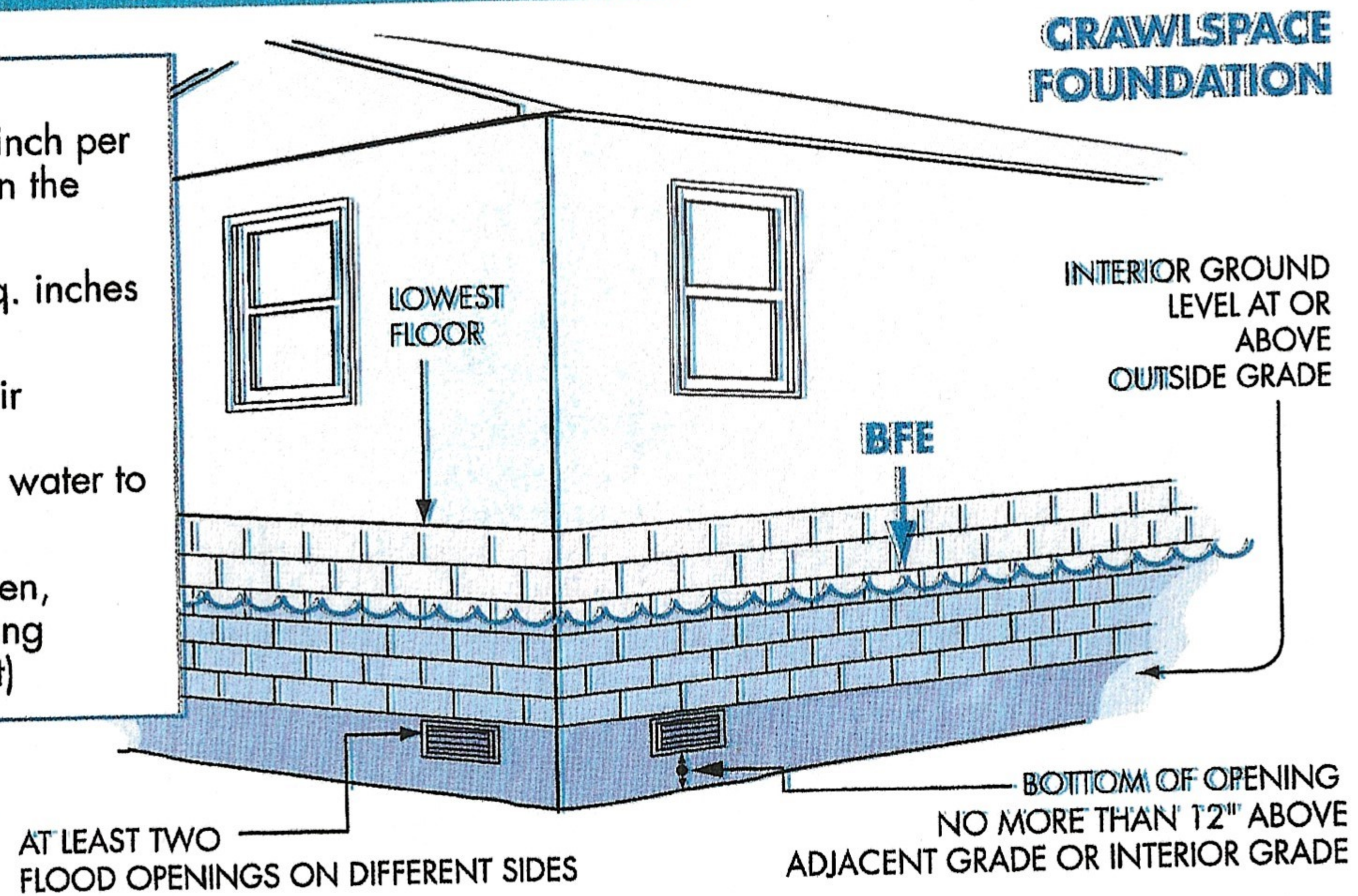
Enclosures Below the Lowest Floor (Zone A/AE)

NOTE:

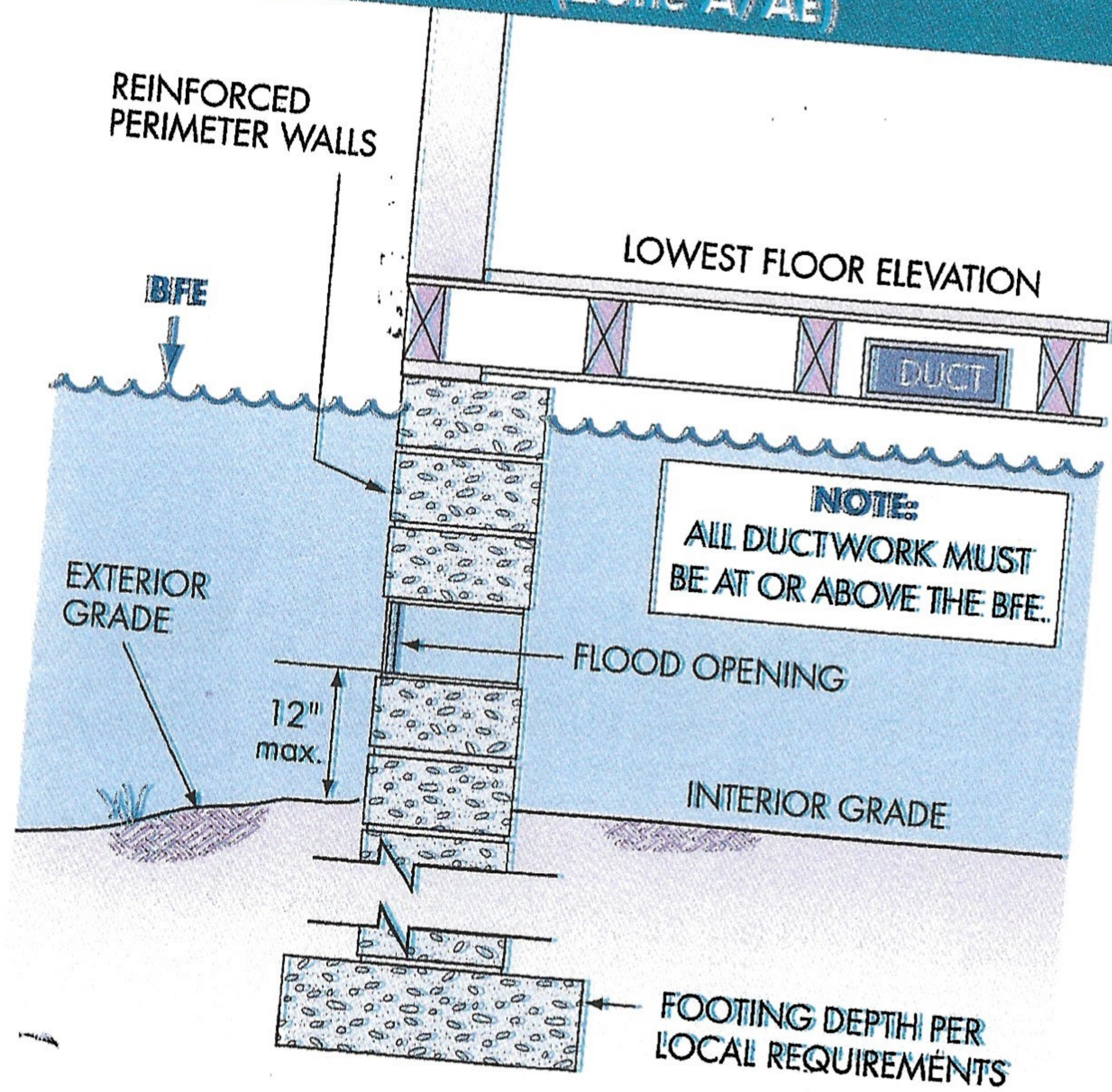
- Total net area of all openings is 1 sq. inch per sq. foot of enclosed area (measured on the outside)
- A 30' x 40' enclosure needs 1,200 sq. inches of openings
- If inserted in flood openings, typical air ventilation units must be permanently disabled in the open position to allow water to flow in and out
- A typical air ventilation unit, with screen, provides 42 to 65 sq. inches of opening (look for "net free area" stamp on unit)

ALTERNATIVE: Engineered openings are acceptable **if certified** to allow adequate automatic inflow and outflow of floodwater.

Solid perimeter wall foundations can enclose flood-prone space. A crawlspace is a good way to elevate just a couple of feet. The following are required: Flood openings, elevated utilities, flood damage-resistant materials, and limitations on use. See NFIP Technical Bulletin #1 *Openings in Foundation Walls and Walls of Enclosures* and Technical Bulletin #2 *Flood Damage-Resistant Materials Requirements*.



Crawlspace Details (Zone A/AE)

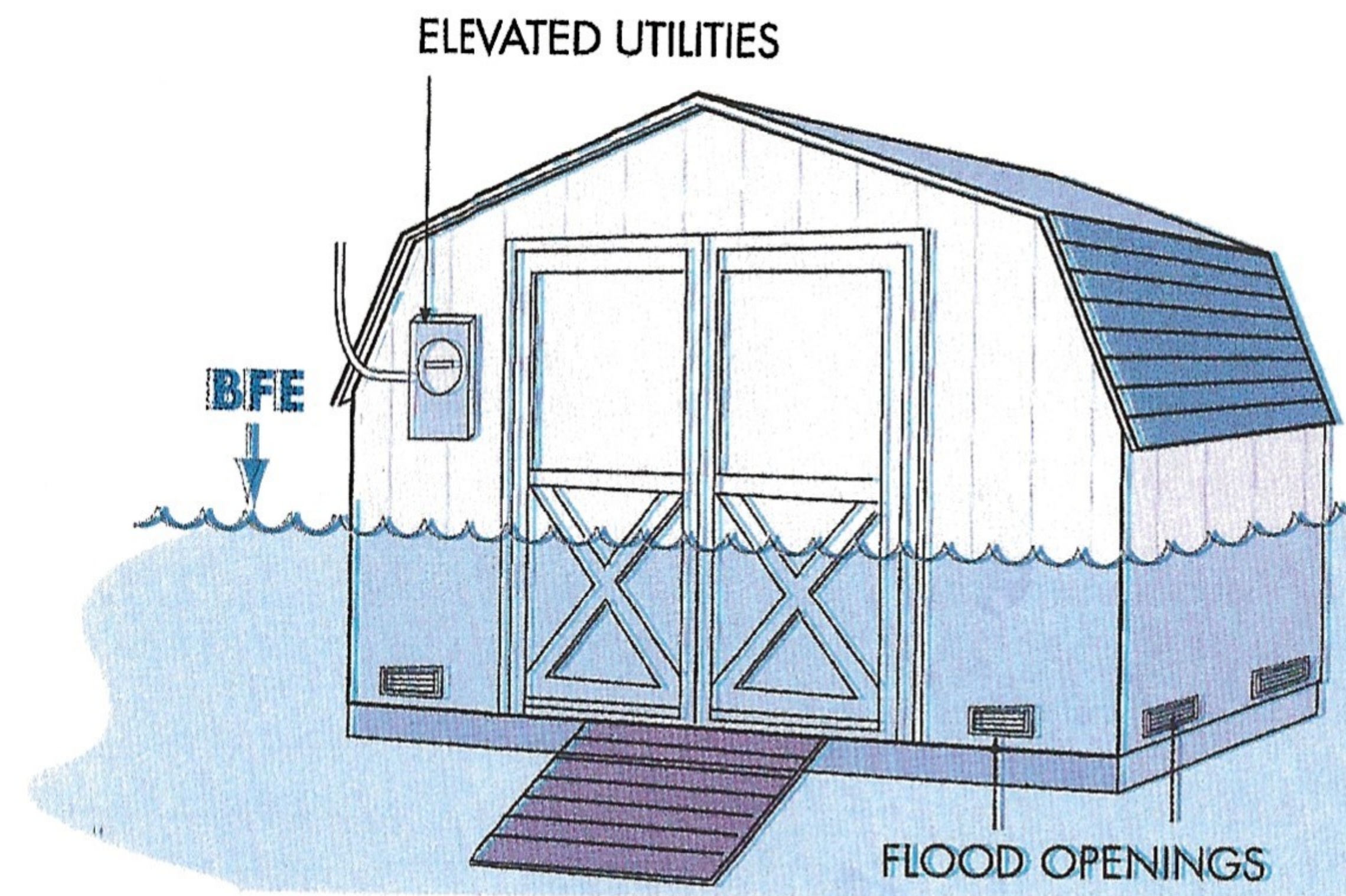


- The Lowest Floor must be at or above the BFE. SEMA recommends another foot or more for greater protection.
- All materials below the lowest floor must be flood resistant.
- Flood openings must provide 1 sq. in. of net open area for every sq. ft. of area enclosed by the perimeter walls – or certified engineered openings may be used.
- A 30' x 40' building needs 1,200 sq. in. of net opening (non-engineered).
- The bottom of flood openings must be no more than 12 inches above the higher of the interior and exterior grades.
- Standard air ventilation units must be permanently disabled in the "open" position to allow water to flow in and out.
- Interior grade must be equal to or higher than exterior grade on at least one side.

Accessory Structures

If not elevated, accessory structures in flood zones must:

- Not be habitable
- Be used only for parking or storage (not pollutants or hazardous materials)
- Be anchored to resist floating
- Have flood openings
- Be built of flood damage-resistant materials
- Have elevated utilities
- Not be modified for different use in the future



Even small buildings are "development" and permits or variances with noted conditions are required. They must be elevated or anchored and built to withstand flood damage.
Caution! Remember, everything inside will get wet when flooding occurs.