

Crawl Spaces and Basements in the Floodplain

Regulations on Crawl Spaces and Basements

Foundations in new or substantially improved floodplain structures must meet the following requirements of the National Flood Insurance Program (NFIP):

- There must be a minimum of two openings with a total net area of at least one square inch for every square foot of enclosed area subject to flooding.
- The bottom of all openings must be no higher than one foot above grade. Openings may be equipped with screens, louvers, valves, or other coverings or devices, provided that they permit automatic entry and exit of flood waters.

Local laws on floodplain management are based on NFIP regulations.

Certain construction features of buildings in floodplains directly affect their flood-insurance rates. In new or substantially improved structures, elevating must be carried out correctly or the structure will face inordinately high premiums. (In most cases, the purchase of flood insurance is mandatory when obtaining financing for construction in a floodplain.) In Texas, due to climate and other considerations, fill is the best method of elevating structures to prevent flood damage.

The diagrams on the inside pages show three examples of elevated residences in areas identified as flood prone. The first example meets the NFIP requirements; the second and third do not.

For more information on NFIP technical bulletins relating to crawl spaces and basements, contact the Flood Mitigation Planning Division

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DEFINITIONS

Here are some key NFIP definitions related to crawl spaces and basements:

- **Basement**—any area of the building having its floor below ground level on all sides.
- **Lowest floor**—the lowest floor of the lowest enclosed area (including the basement).

Exception—An unfinished or flood-resistant enclosure, usable solely for parking of vehicles, building access, or storage is not considered a building's lowest floor for the purposes of these definitions.

A floor in these definitions may either be finished (concrete) or unfinished (dirt, gravel, sand).

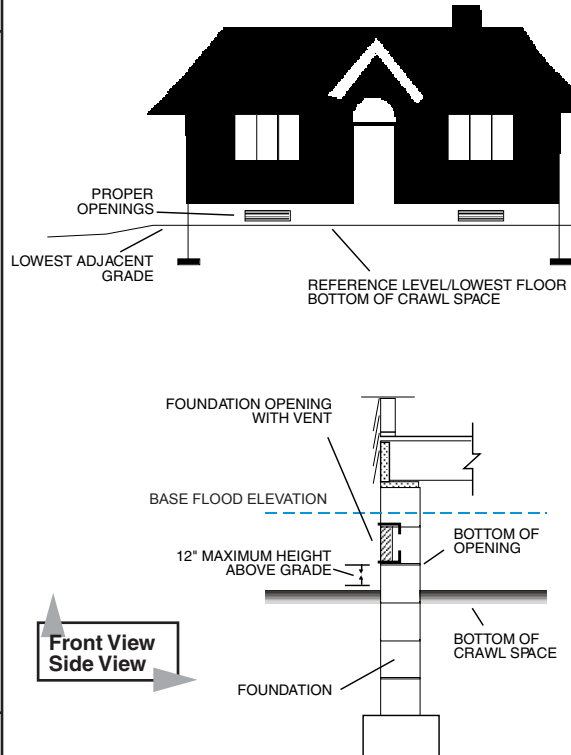
Residence NFIP Requirements

These diagrams show three examples of elevated residences in areas identified as flood prone.

The first example meets the NFIP requirements; the second and third do not.

RESIDENCE MEETS NFIP REQUIREMENTS

*Meets NFIP Requirements—
approved construction lowers risk of flooding
damage in crawl space, lowering premium.*



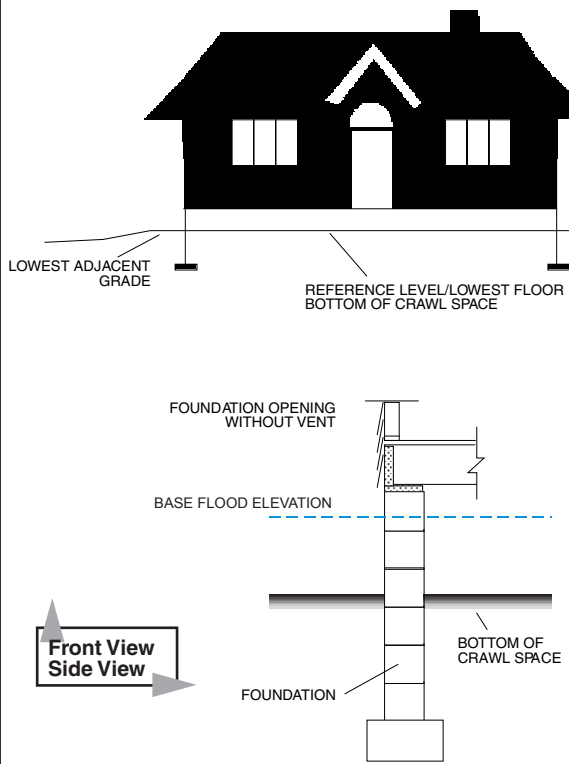
BUILDING: one floor with bottom of crawl space at or above lowest adjacent grade	Yes
ELEVATING FOUNDATION: solid perimeter walls	Yes
ENCLOSURE: unfinished crawl space with proper openings.	Yes
MEETS NFIP REQUIREMENTS	Yes

Residence

NFIP Requirements (cont.)

RESIDENCE DOES NOT MEET NFIP REQUIREMENTS

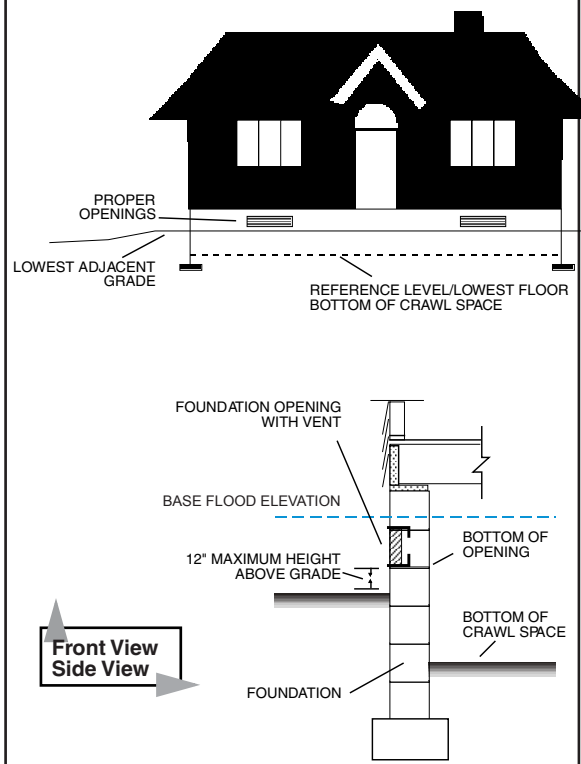
*Lacks Proper Openings—
Crawl space exposed to greater risk of damage from flooding, resulting in higher premium.*



BUILDING: one floor with bottom of crawl space at or above lowest adjacent grade	Yes
ELEVATING FOUNDATION: solid perimeter walls	Yes
ENCLOSURE: unfinished crawl space with proper openings.	NO
MEETS NFIP REQUIREMENTS	NO

RESIDENCE DOES NOT MEET NFIP REQUIREMENTS

*Bottom of Crawl Space below Grade—
Crawl space exposed to greater risk of damage from flooding, resulting in higher premium.*



BUILDING: one floor with bottom of crawl space at or above lowest adjacent grade	NO
ELEVATING FOUNDATION: solid perimeter walls	Yes
ENCLOSURE: unfinished crawl space with proper openings.	Yes
MEETS NFIP REQUIREMENTS	NO