RAISING OR RELOCATING YOUR HOME

Raising or relocating a home so that flood water cannot reach those portions subject to damage are effective flood proofing techniques. Since this method of flood proofing actually incorporates two separate procedures with differing applicability, raising and relocating are discussed separately in the paragraphs that follow. Remember, building/ zoning permits are required.

Building to or above the base flood elevation (BFE) is the best method of flood proofing. What is the BFE? It is the elevation to which you must build to equal or exceed the 1% chance of being flooded in any given year (the 100-year flood). In other words, the 100-year flood is a flood event which has a 1% chance of occurring each year.

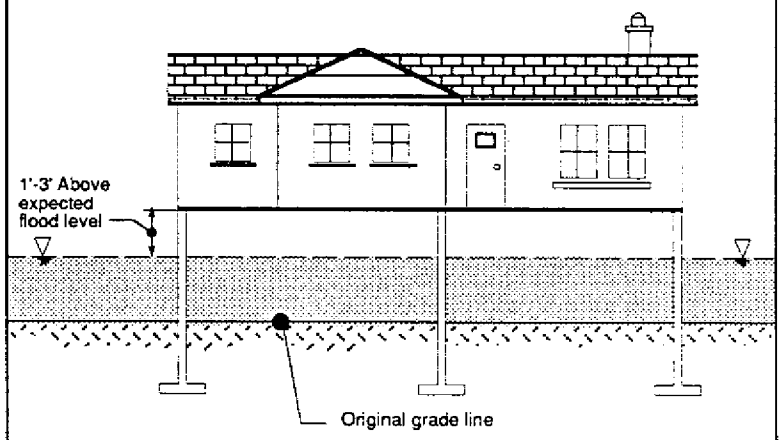
In 30 years, the life of a typical mortgage, there is a 26% chance of being flooded if the home is located at the 100-year flood level. The chance will be less if the structure is elevated above the 100-year flood.

RAISING YOUR HOME

Raising your home has the most widespread applicability for reducing flood damage problems. It may reduce the cost of flood insurance, possibly by hundreds of dollars. For Virginia contractors, it represents an untapped market for home improvement jobs. Unlike relocation, a new site is not needed. And unlike some of the types of flood proofing discussed later, it has the potential to provide almost guaranteed protection, depending on how high the home will be elevated.

Raising a home or livable area can be done in several ways. The most common technique entails placing jacks and lifting beams below the structural members of the home, detaching the home and its utilities from its foundation, jacking it up to the desired height (typically above the 100-year flood elevation), building up the foundation to meet the new level of the home, and attaching the home to the new foundation. Homes can be elevated on piles or columns, on extended foundation walls, or on fill (although fill may require moving the home aside to construct a properly engineered soil foundation which adds to the cost).

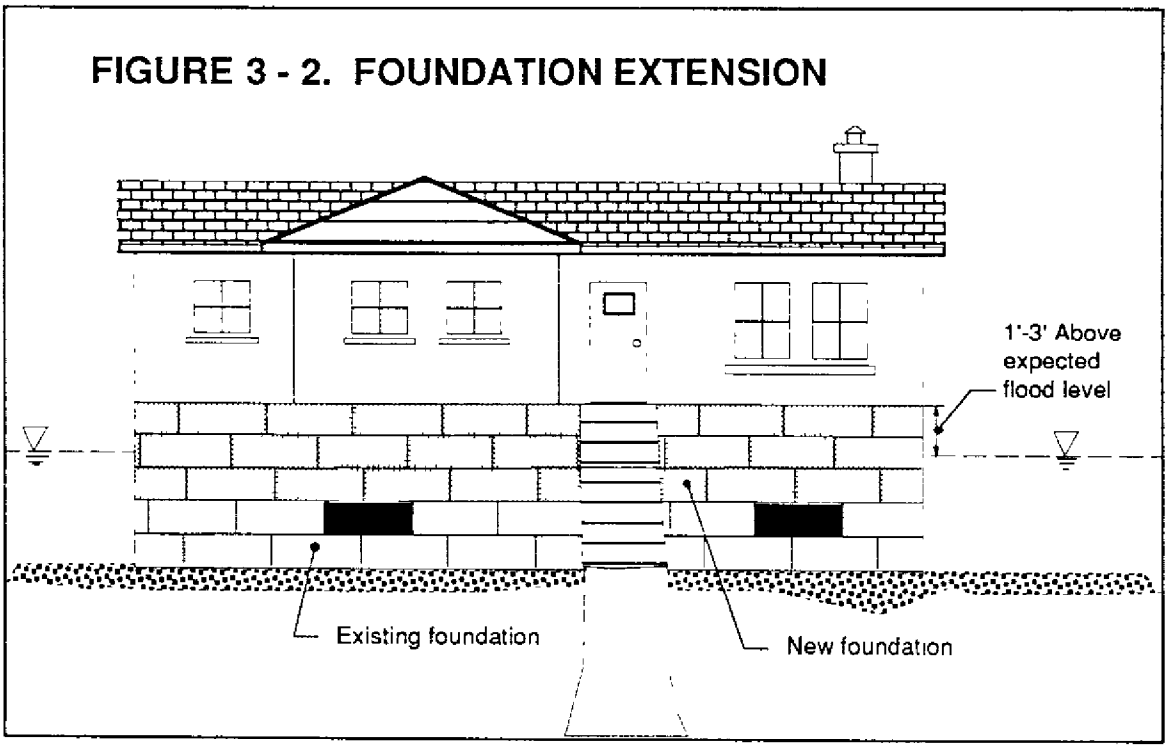
FIGURE 3 - 1. PIERS AND COLUMNS



Why Raise?

Raising homes is adaptable to any floodplain environment, coastal or riverine. The raising of homes on engineered fill provides the most assured protection from flooding through elevation because the height of the fill keeps flood waters away from the home. Elevation on fill may increase flood heights upon other properties and may not be allowed under local zoning regulations and National Flood Insurance Program (discussed in chapter 6)

An attractive example of an elevated home



regulations. Homes constructed on fill are not allowed in special flood hazard areas along coasts subject to inundation by the 100-year flood that have the additional hazards associated with storm waves (V-zones).

Advantages of Raising a Structure

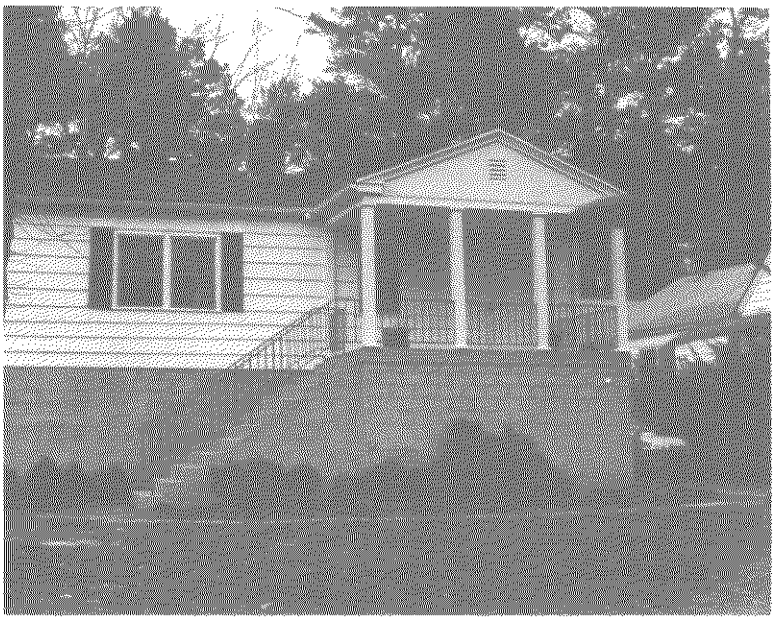
- Reduces or eliminates flood damage to homes and contents.
- Flood insurance premiums can be significantly reduced, possibly eliminated in the case of raising on fill as long as there is no basement.
- Allows use of a desirable, but floodprone site.

Disadvantages of Raising a Structure

- Cost can be beyond the means of an average homeowner without special budgeting or a home improvement loan.
- May lose basement storage capacity.
- Evacuation during a flood is still necessary.

Costs

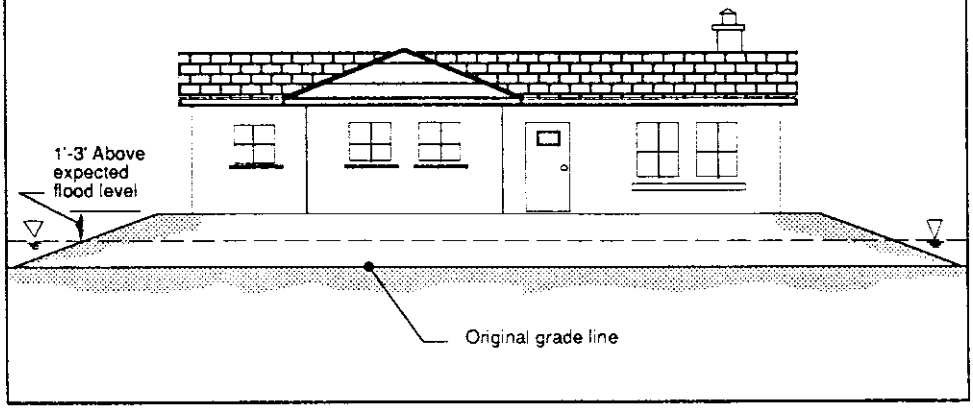
Raising structures can be costly. Cost depends on the type, shape, and size of home being raised and the required increase in elevation. Cost will be lower if the home is light enough to be elevated with ordinary home-moving jacks, if there is at least 18 inches of access under the



An example of an extended foundation

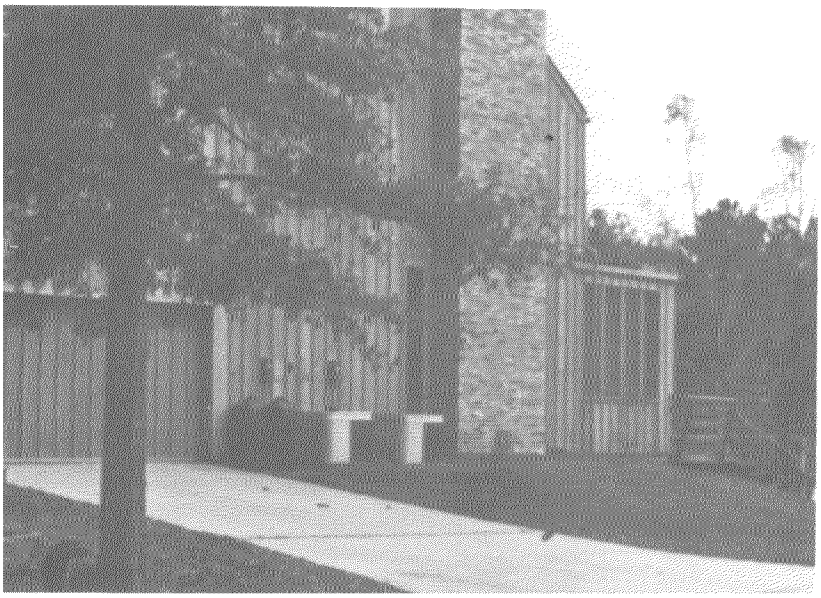
first floor for the placement of beams and jacks, and the home is small enough to be lifted without partitioning. Given the above conditions, a small frame house of about 1,000 square feet could be raised several feet for about $10,000, while a 2,000-square-foot home could cost as much as $40,000 to raise. Generally, the additional cost to raise a structure an additional foot or so is small compared to the initial set-up cost. Due to the complexity of the operation and the number of variables involved, the services of a professional engineer would be required.

FIGURE 3 - 3. SLOPED FILL



Conclusions

Elevating a house on site should be seriously considered by any homeowner living in a flood risk area. Utilizing the services of a reputable house-moving company will make this option more attractive. The peace of mind alone is of considerable value. Remember, even if you have flood insurance you will have a deductible to pay and quite likely your claim will not cover all of your losses, particularly personal possessions. The best way to recover from a flood on your lot is to have no damage to your home or possessions at all. Wouldn't you like to say after a flood, "The water didn't reach us." Think about it. No damage. No hassles. Life back to normal when the water recedes.



Flood protection provided by sloped fill

RELOCATING YOUR HOME

Relocating your home away from the flood risk area will provide the greatest possible protection from flooding. You would then have peace of mind, no flood damage, and no threats to your family's safety. But there are drawbacks. It is the most expensive approach, ranging upward from $20,000. Relocation entails placing lifting beams and hydraulic jacks under a home, having a new site prepared and ready, raising the home, positioning it on a trailer for transporting, transporting the home, positioning it upon its new site, then settling it down on its new location. Although this involves many steps, it has been done many times.

Why Relocate?

There are several compelling reasons for a homeowner to relocate his or her home. The availability of high ground on the existing lot or a nearby lot, a feeling of attachment to a home or neighborhood, and an expectation of remaining in the home for many years are convincing reasons to choose relocation.

Advantages of Relocating

- Flood damage and loss of personal possessions due to flooding are eliminated.
- Family's safety is increased by not living in a floodprone home.
- Periodic outlay of time and money for cleanup is eliminated.
- Your family will not have to stay in shelters, motels, or friends' homes during floods.
- Homes may be left during trips without fear of flooding.
- Flood insurance premiums typically are eliminated.
- Being out of the flood risk area would provide peace of mind.

- Your vacated lot may be deeded to your community as open space parkland.

Disadvantages of Relocating

- Initial expense is high compared with other flood proofing measures.
- You still own a floodprone lot which may require maintenance and associated costs (such as taxes).
- Aesthetic advantages of being near the water may be lost.
- You may have to move out of your neighborhood.

Costs

Let's face the high cost of relocation head on. It has high initial cost for a long-term benefit.

Relocation is the most costly flood protection measure. Although most types and sizes of homes including brick or concrete can be relocated, some are much more difficult and therefore more expensive to move. The easiest to move are wood frame homes that are located over a crawl space or basement that provides easy access to floor joists, are light enough to be lifted with ordinary house-moving equipment, and small enough to be moved without partitioning. Houses of brick or concrete that are over crawl spaces or basements are also movable if excessive cracking can be prevented. Sometimes it is less costly to remove brick facing, move the house frame, and install new facing at the new site.

Slab structures present special problems in relocation; however, technologies have been developed that now make relocation feasible. The costs of preparing a house for relocation, moving, and setting up vary greatly and can easily exceed $20,000. Key variables which impact costs are size and type of home, and cost of the new site and needed improvements.

Conclusions

Practically speaking, moving a home appears overwhelming. Many logistical details need to be resolved. But it can be done. Relocation is particularly successful when several homes are moved as part of a major project. A good example would be the case where a community is willing to provide good buildable upland lots to floodplain homeowners in exchange for taking ownership of the floodplain lots to be used for a river park site.

Relocation of home