

# CITY OF ENGLEWOOD FLOODPROOFING TECHNIQUES

## ELEVATING MAIN FLOOR LEVEL OF BUILDING (JACKING)

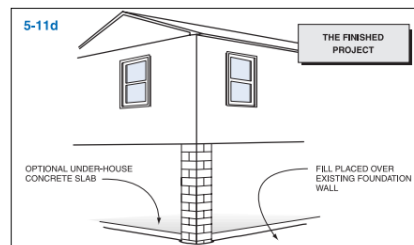
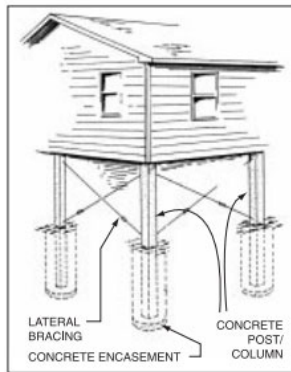
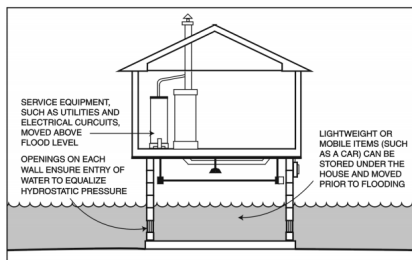
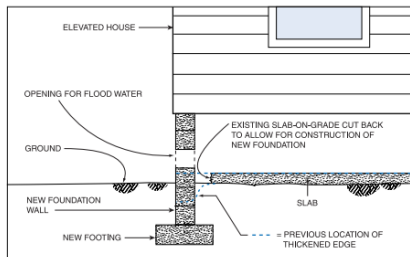
### DESCRIPTION:

If a house has high floodwaters that present structural risk (3' or more of inundation), one option is to raise the elevation of the finished floor of the building, either on stilts, columns, or piers. Any basement present will be filled in and compacted with soils. This below-home area can be used for storage only.

Applicable to any home where flood levels are high enough to potentially cause structural risk of collapse.

### CHARACTERISTICS:

- Houses can be raised above projected flood levels using piers, columns, or stilting
- The area beneath the home may be used for parking, storage, and must be open to the air, i.e. no walls may be built and this area may not be enclosed
- This option is rather expensive, however it will fully remove a home from the area of probable flooding



### PRELIMINARY COST ESTIMATE STRUCTURE ELEVATION

#### USING FILL:

Approximate Cubic Yards Required  
\_\_\_\_\_ X \$7.00 = \_\_\_\_\_  
or  
From Table V-6 = \_\_\_\_\_

#### USING PILES, POSTS, COLUMNS OR WALLS:

Single Story Floor Area \_\_\_\_\_ x \$6.40 = \_\_\_\_\_  
If Elevated Less than 5 feet, Multiply by 0.93. = \_\_\_\_\_  
If Elevated 5 to 7 feet, Multiply by 0.96 = \_\_\_\_\_  
If Elevated 7 to 9 feet, Multiply by 1.00 = \_\_\_\_\_  
If Elevated 10 feet, Multiply by 1.04 = \_\_\_\_\_

#### RAISING EXISTING STRUCTURE:

Wood Frame with Joist Floor:  
\_\_\_\_\_ s.f. x \$4.10 = \_\_\_\_\_  
Brick Veneer or Masonry with Joist  
Floor: \_\_\_\_\_ s.f. x \$8.10 = \_\_\_\_\_

#### SECONDARY COSTS:

Lost Space Table V-7 (sq. ft.) \_\_\_\_\_  
x Cost Per Sq. Ft. \_\_\_\_\_ = \_\_\_\_\_  
or Lost Space (sq. ft./43560) (Acres) \_\_\_\_\_  
x Cost per Acre \_\_\_\_\_ = \_\_\_\_\_

#### Extending Access and Utilities:

Square Feet of Single Story Floor Space  
\_\_\_\_\_ x \$3.80 = \_\_\_\_\_  
Insulating/Finishing Bottom of Buildings  
on Piles, Columns, etc. (Insert Lump  
Cost Based on Local Estimate) = \_\_\_\_\_  
Erosion Protection (Table V-8) \_\_\_\_\_  
cubic yards x \$22 = \_\_\_\_\_

TOTAL PRIMARY AND  
SECONDARY COSTS (Sum of Above) = \_\_\_\_\_  
Correction Factor: Current ENR  
Construction Index/4194 x \_\_\_\_\_  
Corrected Total Cost of Elevation  
(Multiply by Two Numbers Above) = \_\_\_\_\_

### Average Price for Elevating the Home\*

Type	Cost
Property Fill	\$7 per cubic yard
Piles, posts, piers, walls	\$7 per square foot of space
Raising structures	\$4 - \$13 per square foot, depending on material
Extending utilities	\$4 per square foot
Erosion protection	\$22 per cubic yard
Subfloor drainage	\$3 per square foot
Periphery drainage modifications	\$26 per linear foot
Approximate total for raising a home	\$5,000 - \$30,000

Note that some houses in extreme cases can cost up to \$100,000 to raise/jack.

\*Dependent on many factors, including size of home, height of elevation, if a basement is present, and soil conditions.