Building Inspections Flood Design & Construction Field Checklist

Special Flood Hazard Area (SFHA) - AE, Coastal A and VE Flood Zones

Residential New Construction and Substantial Improvements

- ✓ **The bottom floor is not a basement or subgrade on all sides.**
  - *See Elevation Certificate fields C2.a and C2.f.*
- ✓ **All habitable and living space elevated at or above the DFE.**
  - Areas below DFE can only be used for parking, storage and building access.
  - Residential uses may not be directly on slab foundations beginning with "SF2024-" permits.
  - *See Elevation Certificate fields A7, C2.a and C2.b.*
- ✓ **All MEPG elevated at or above the DFE.**
  - Per National Electrical Code, 1 electrical outlet and 1 switch on GFCI are allowed below DFE.
  - Building Electrical Disconnect – Max. Height above grade: 6ft-7in.
  - *See Elevation Certificate field C2.e and Section D Comments.*
- ✓ **All enclosures below DFE have adequate flood openings.**
  - Exterior and interior (stairways, elevator shafts, storage rooms, etc.) enclosure walls have:
    - Flood openings on at least 2 different sides of the enclosure,
    - 1 in^2 net permanent opening per 1 ft^2 of enclosed area or engineered, and
    - The bottom of openings are within 1 ft of finished interior or exterior grade.
  - *See Elevation Certificate fields A8 and A9.*
- ✓ **All construction materials below DFE are flood damage resistant.**
  - Per NFIP Technical Bulletin 2, Classes 4 & 5 are acceptable materials.
- ✓ **Tanks and pumps elevated at or above DFE or anchored from flotation.**
- ✓ **Coastal A and V-Zones (Coastal High Hazard Area) free-of-obstructions.**
  - Breakaway walls with flood openings, otherwise louvers or lattice is allowed.
  - No utilities (MEPG) attached to breakaway walls, louvers, or lattice.
  - Lowest Horizontal Structural Member elevated at or above DFE.
  - *See V-Zone Design and Breakaway Wall Certificates and Elevation Certificate fields B13 and C2.c.*

Design Flood Elevation (DFE) = Base Flood Elevation (BFE) + 2' Freeboard (1' Freeboard for Residential SI/SD)

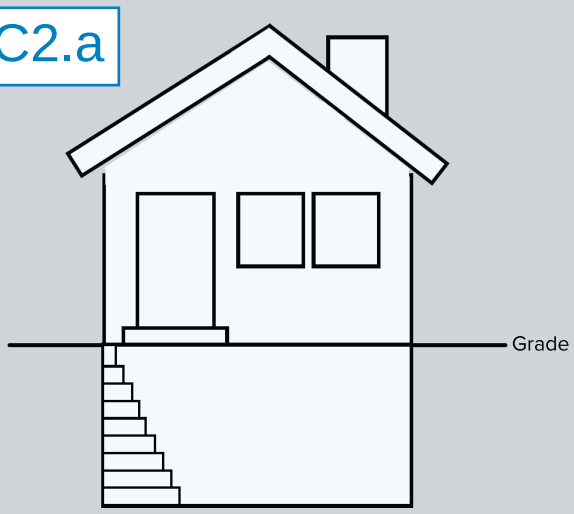
Slab-on-Grade
(non-elevated)

Lowest Floor = C2.a

A building whose foundation is slab-on-grade or slab-on-stem-wall with fill. The bottom floor is at or above ground level (grade) on at least one side. If slab-on-grade, there is no airspace between the ground & the lowest floor of the building. Note: An elevated building that has a crawlspace foundation w/an attached slab-on-grade finished room or slab-on-grade garage converted to a living area would be slab-on-grade.

Includes EC Diagrams 1a, 1b & 3

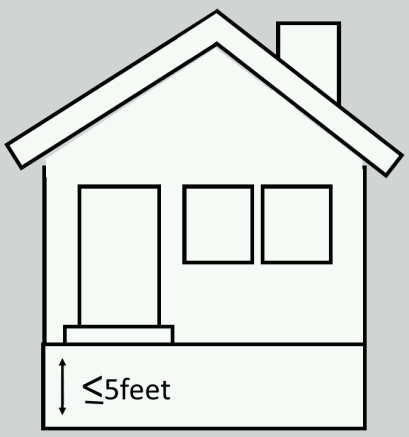
Basement
(non-elevated)



A building that has a floor or any area of the building, including any sunken room or portion of a room, below the ground level on all sides. If the building has a "walkout basement" refer to foundation type elevated with enclosure not posts piles or piers.

Includes EC Diagrams 2a, 2b & 4

Crawlspace



A building that has its lowest floor raised above ground by a crawlspace. If the building has an above grade crawlspace, the crawlspace floor is no more than 5 feet below the top of the next higher floor above the crawlspace. If the building has a subgrade crawlspace, the crawlspace floor must be within 2 feet below grade & the crawlspace floor is no more than 5 feet below the top of the next higher floor.

Includes EC Diagrams 8 & 9

Elevated without Enclosure on Posts, Piles, or Piers

A building that has a lowest floor raised above the ground by posts, piles, piers, columns, or parallel shear walls with an enclosure below the lowest elevated floor. The area below the elevated floor is open, with no obstruction to flow of floodwaters (open lattice work and/or insect screening is permissible). A hanging floor, would fall into this foundation type.

Includes EC Diagram 5

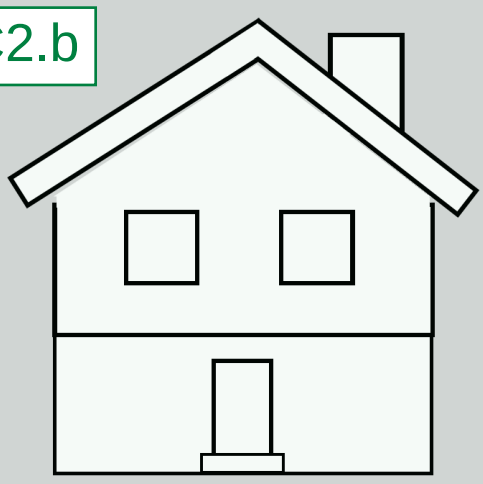
Elevated with Enclosure on Posts, Piles, or Piers

Lowest Floor = C2.b

A building that has its lowest floor raised above ground by posts, piles, piers, columns, or parallel shear walls with an enclosure below the elevated floor. The area below the elevated floor is enclosed, either partially or fully.

Includes EC Diagram 6

Elevated with Enclosure Not Posts, Piles, or Piers



A building that has its lowest floor raised above the ground by foundation walls (solid perimeter walls) with a full floor enclosure. The bottom floor is at or above ground level (grade) on at least one side (no portion of the building is below grade on all sides).

Includes EC Diagram 7

Table 2. Types, Uses, and Classifications of Materials

Types of Building Materials	Uses of Building Materials		Classes of Building Materials				
			Acceptable		Unacceptable		
	Floors	Walls/ Ceilings	5	4	3	2	1
Structural Materials (floor slabs, beams, subfloors, framing, and interior/exterior sheathing)							
Asbestos-cement board		■	■				
Brick							
Face or glazed		■	■				
Common (clay)		■		■			
Cast stone (in waterproof mortar)		■	■				
Cement board/fiber-cement board		■	■				
Cement/latex, formed-in-place	■			■			
Clay tile, structural glazed		■	■				
Concrete, precast or cast-in-place	■	■	■				
Concrete block[1]		■	■				
Gypsum products							
Paper-faced gypsum board		■			■		
Non-paper-faced gypsum board		■		■			
Greenboard		■				■	
Keene's cement or plaster		■			■		
Plaster, otherwise, including acoustical		■				■	
Sheathing panels, exterior grade		■			■		
Water-resistant, fiber-reinforced gypsum exterior sheathing		■		■			
Hardboard (high-density fiberboard)							
Tempered, enamel or plastic coated		■				■	
All other types		■					■
Mineral fiberboard		■					■
Oriented-strand board (OSB)							
Exterior grade	■	■				■	
Edge swell-resistant OSB	■	■				■	
All other types	■	■					■
Particle board	■						■
Plywood							
Marine grade	■	■	■				
Preservative-treated, alkaline copper quaternary (ACQ) or copper azole (C-A)	■	■		■			

Table 2. Types, Uses, and Classifications of Materials (continued)

Types of Building Materials	Uses of Building Materials		Classes of Building Materials				
			Acceptable		Unacceptable		
	Floors	Walls/ Ceilings	5	4	3	2	1
Structural Materials (floor slabs, beams, subfloors, framing, and interior/exterior sheathing)							
Preservative-treated, Borate[2]	■	■	■				
Exterior grade/Exposure1 (WBP – weather and boil proof)	■	■		■			
All other types	■	■					■
Recycled plastic lumber (RPL)							
Commingled, with 80-90% polyethylene (PE)	■		■				
Fiber-reinforced, with glass fiber strands	■		■				
High-density polyethylene (HDPE), up to 95%	■		■				
Wood-filled, with 50% sawdust or wood fiber	■				■		
Stone							
Natural or artificial non-absorbent solid or veneer, waterproof grout	■	■	■				
All other applications		■				■	
Structural Building Components							
Floor trusses, wood, solid (2x4s), decay-resistant or preservative-treated	■	■		■			
Floor trusses, steel[3]	■		■				
Headers and beams, solid (2x4s) or plywood, exterior grade or preservative-treated		■		■			
Headers and beams, OSB, exterior grade or edge-swell resistant		■				■	
Headers and beams, steel[3]		■	■				
I-joists	■					■	
Wall panels, plywood, exterior grade or preservative-treated		■		■			
Wall panels, OSB, exterior grade or edge-swell resistant		■				■	
Wall panels, steel[3]		■		■			

Table 2. Types, Uses, and Classifications of Materials (continued)

Types of Building Materials	Uses of Building Materials		Classes of Building Materials				
			Acceptable		Unacceptable		
	Floors	Walls/ Ceilings	5	4	3	2	1
Structural Materials (floor slabs, beams, subfloors, framing, and interior/exterior sheathing)							
Wood							
Solid, standard, structural (2x4s)		■		■			
Solid, standard, finish/trim		■			■		
Solid, decay-resistant[4]	■	■	■				
Solid, preservative-treated, ACQ or C-A		■		■			
Solid, preservative-treated, Borate[2]		■		■			
Finish Materials (floor coverings, wall and ceiling finishes, insulation, cabinets, doors, partitions, and windows)							
Asphalt tile[5]							
With asphaltic adhesives	■				■		
All other types	■						■
Cabinets, built-in							
Wood		■				■	
Particle board		■					■
Metal[3]		■		■			
Carpeting	■						■
Ceramic and porcelain tile							
With mortar set	■	■		■			
With organic adhesives	■	■				■	
Concrete tile, with mortar set	■		■				
Corkboard		■				■	
Doors							
Wood, hollow		■				■	
Wood, lightweight panel construction		■				■	
Wood, solid		■				■	
Metal, hollow[3]		■		■			
Metal, wood core[3]		■		■			
Metal, foam-filled core[3]		■		■			
Fiberglass, wood core		■		■			
Epoxy, formed-in-place	■		■				

Table 2. Types, Uses, and Classifications of Materials (continued)

Types of Building Materials	Uses of Building Materials		Classes of Building Materials				
			Acceptable		Unacceptable		
	Floors	Walls/ Ceilings	5	4	3	2	1
Finish Materials (floor coverings, wall and ceiling finishes, insulation, cabinets, doors, partitions, and windows)							
Glass (sheets, colored tiles, panels)		■		■			
Glass blocks		■	■				
Insulation							
Sprayed polyurethane foam (SPUF) or closed-cell plastic foams	■	■	■				
Inorganic – fiberglass, mineral wool: batts, blankets, or blown	■	■			■		
All other types (cellulose, cotton, open-cell plastic foams, etc.)	■	■				■	
Linoleum	■						■
Magnesite (magnesium oxychloride)	■						■
Mastic felt-base floor covering	■						■
Mastic flooring, formed-in-place	■		■				
Metals, non-ferrous (aluminum, copper, or zinc tiles)		■			■		
Metals							
Non-ferrous (aluminum, copper, or zinc tiles)		■			■		
Metals, ferrous[3]		■		■			
Paint							
Polyester-epoxy and other oil-based waterproof types		■		■			
Latex		■		■			
Partitions, folding							
Wood		■				■	
Metal[3]		■		■			
Fabric-covered		■					■
Partitions, stationary (free-standing)							
Wood frame		■		■			
Metal[3]		■		■			
Glass, unreinforced		■		■			
Glass, reinforced		■		■			
Gypsum, solid or block		■					■

Table 2. Types, Uses, and Classifications of Materials (continued)

Types of Building Materials	Uses of Building Materials		Classes of Building Materials				
			Acceptable		Unacceptable		
	Floors	Walls/ Ceilings	5	4	3	2	1
Finish Materials (floor coverings, wall and ceiling finishes, insulation, cabinets, doors, partitions, and windows)							
Polyurethane, formed-in-place	■		■				
Polyvinyl acetate (PVA) emulsion cement	■						■
Rubber							
Moldings and trim with epoxy polyamide adhesive or latex-hydraulic cement		■		■			
All other applications		■					■
Rubber sheets or tiles[5]							
With chemical-set adhesives[6]	■		■				
All other applications	■						■
Silicone floor, formed-in-place	■		■				
Steel (panels, trim, tile)							
With waterproof adhesives[3]		■	■				
With non-waterproof adhesives		■				■	
Terrazo	■			■			
Vinyl asbestos tile (semi-flexible vinyl)[5]							
With asphaltic adhesives	■		■				
All other applications	■						■
Vinyl sheets or tiles (coated on cork or wood product backings)	■						■
Vinyl sheets or tiles (homogeneous)[5]							
With chemical-set adhesives[6]	■			■			
All other applications	■						■
Wall coverings							
Paper, burlap, cloth types		■					■
Vinyl, plastic, wall paper		■					■
Wood floor coverings							
Wood (solid)	■						■
Engineered wood flooring	■					■	
Plastic laminate flooring	■					■	
Wood composition blocks, laid in cement mortar	■					■	
Wood composition blocks, dipped and laid in hot pitch or bitumen	■					■	