

Optional Higher Standards Language

A community can choose which higher standards it would like to enforce and add the optional language to its flood damage prevention ordinance (FDPO) where indicated for each higher standard.

Higher standards are arranged alphabetically and include:

- [Coastal A Zone](#) (coastal areas only)
- [Critical Facilities](#)
- [Enclosures in V Zones](#) (coastal areas only)
- [Flood Openings](#)
- [Freeboard](#)
- [Manufactured Homes](#)
- [No Rise in SFHA](#)
- [Placement of Fill and Limitations on Fill](#) to Elevate Structures in SFHAs (non-coastal areas)
- [Setback in Erosion-Prone Areas](#)
- [Subdivision Proposals and Development](#)
- [Substantial Damage](#)
- [Substantial Improvement](#)

Should a community wish to enforce a higher standard not in this document, such community should contact the State NFIP Coordinating Agency, which is the Texas Water Development Board (TWDB).

[Coastal A Zones](#) (model CDE [coastal] ordinance only)

Add definitions:

COASTAL A ZONE means an area within a *special flood hazard area*, landward of a *coastal high hazard area* (V Zone), or landward of a shoreline without a mapped *coastal high hazard area*, in which the principal source(s) of *flooding* are astronomical tides and storm surges and in which, during *base flood* conditions, the potential exists for breaking waves with heights greater than or equal to 1.5 feet. The inland limit of the Coastal A Zone may be delineated on FIRMs as the *Limit of Moderate Wave Action* (LiMWA).

LIMIT OF MODERATE WAVE ACTION (LiMWA) means the inland limit of the area affected by waves greater than 1.5 feet during the *base flood*. Base flood conditions between the VE Zone and the LiMWA will be similar to, but less severe than, those in the VE.

Retitle Article 5, Section B:

SECTION B. STANDARDS FOR SPECIAL FLOOD HAZARD AREAS THAT ARE NOT COASTAL HIGH HAZARD AREAS OR COASTAL A ZONES

Retitle Article 5, Section E:

SECTION E. COASTAL HIGH HAZARD AREAS AND COASTAL A ZONES

Add to introductory text:

“Located within the areas of special flood hazard established in Article 3, Section B are areas designated as Coastal High Hazard Areas (Zones V1-30, VE and/or V, and Coastal A Zones). These areas have special flood hazards associated with high velocity waters from tidal surges and hurricane wave wash; therefore, in addition to meeting **all** provisions outlined in this ordinance, the following provisions must also apply:”

Add “and Coastal A Zones” after “Zones V1-30, VE and/or V,” in:

Article 5, Sections E. Coastal High Hazard Areas and Coastal A Zones (2-9).

Critical Facilities

For All Model Ordinances:

Add definition:

CRITICAL FACILITIES means a structure or other improvement that, because of its function, size, service area, or uniqueness, has the potential to cause serious bodily harm, extensive property damage, or disruption of socioeconomic activities if it is destroyed or damaged or if its functionality is impaired. Critical facilities include health and safety facilities, utilities, government facilities, and hazardous materials facilities.

OR the community may use the International Codes’ definition for Category III and IV buildings.

For Model A:

Add to Article 5, Section A. General Standards:

“(§) Critical Facilities – If located in flood hazard areas other than *floodways*, be elevated to the higher elevation required by these regulations plus one (1) foot, the elevation required by the building code[, *the flood protection elevation,*] or the elevation of the 0.2-percent chance (500-year) flood.”

For Model BCD:

Add to Article 5, Section B. Specific Standards:

“(§) Critical Facilities – If located in flood hazard areas other than *floodways*, be elevated to the higher elevation required by these regulations plus one (1) foot, the elevation required by the building code[, *the flood protection elevation,*] or the elevation of the 0.2-percent chance (500-year) flood.”

Add to Article 5, Section E. Floodways:

“(#) Critical Facilities shall not be located in floodways.”

For Model CDE:

Add to Article 5, Section B. Standards for Special Flood Hazard Areas That Are Not Coastal High Hazard Areas (if adopting Coastal A Zones, reword title as indicated above under “Coastal A Zones”):

“(#) Critical Facilities – If located in flood hazard areas other than *coastal high hazard areas*[, *Coastal A Zones*,] and *floodways*, be elevated to the higher elevation required by these regulations plus one (1) foot, the elevation required by the building code[, the *flood protection elevation*,] or the elevation of the 0.2-percent chance (500-year) flood.”

Add to Article 5, Section E. Floodways:

“(#) Critical Facilities shall not be located in floodways.”

Add to Article 5, Section E. Coastal High Hazard Areas (if adopting Coastal A Zones, reword title as indicated above under “Coastal A Zones”)

“(#) Critical Facilities shall not be located in *coastal high hazard areas (V Zones)* [*or Coastal A Zones*].”

Enclosures in V Zones (Model CDE [Coastal] Ordinance only)

The definition for *nonconversion agreement* requires the owner to record the agreement on the property deed. Alternatively, the ordinance can require the community do this instead of the property owner. Add definition:

NONCONVERSION AGREEMENT means a form signed by the owner to agree not to convert or modify, in any manner that is inconsistent with the terms of the permit and this bylaw, enclosures below the lowest floor of elevated structures and certain detached *accessory structures*. The form requires the owner to record the agreement on the property deed to inform future owners of the restrictions

Article 5, Section E. Coastal High Hazard Areas (if adopting Coastal A Zones, reword title as indicated above under Coastal A Zones)

Add to (4) Breakaway walls:

“(v) Enclosures below the lowest floor shall be less than 299 square feet in area (exterior measurement).

(vi) Property owner shall sign a non-conversion agreement and record the agreement on the property deed to agree not to convert or modify the enclosure in any manner that is inconsistent with the terms of the permit and these regulations.

(vii) Utilities shall not be mounted on, pass through or be located along breakaway walls.”

Flood Openings

For Model BCD: Article 5, Section B. Specific Standards

For Model CDE: Article 5, Section B. Standards for Special Flood Hazard Areas That Are Not Coastal High Hazard Areas

Replace existing (3) Enclosures (b) with:

“(b) The bottom of each opening shall be no higher than 1 foot above the higher of the final interior grade or floor and the finished exterior grade immediately under each opening.”

Freeboard

For All Model Ordinances:

Add definition (Note: Retain definition of *Freeboard*):

FLOOD PROTECTION ELEVATION means the base flood elevation plus XX (#) inches of freeboard.

OR

FLOOD PROTECTION ELEVATION means:

(i) In tidal floodplain areas, it is the height and geographic extent of the 0.2-percent annual chance flood in the tidal area plus freeboard.

(ii) In non-tidal floodplain areas, it is the extent of the 0.2-percent annual chance flood, and the height of the 1-percent annual chance flood plus freeboard.

Replace all references in Article 5, Provisions for Flood Hazard Reduction that read: “to or above the base flood elevation” or similar with “to or above the flood protection elevation.”

Manufactured Homes

For Model A ordinance:

Article 5, Section A. General Standards (1-4) after this text:

“All new construction or substantial improvements”

Add

“ and placement, replacement, and *substantial improvement* (including repair of *substantial damage*) of manufactured homes”

For Model BCD:

Replace Article 5, Section B. Specific Standards, (4) Manufactured homes, (a) and (b) with:

“(a) All manufactured homes to be placed, replaced or substantially improved (including repair of *substantial damage*) within Zone A on a community's FHBM or FIRM shall be installed using methods and practices that minimize flood damage. For the purposes of this requirement, manufactured homes must be elevated and anchored to resist flotation, collapse and lateral movement. Methods of anchoring may include, but are not limited to, use of over-the-top or frame ties to ground anchors. This requirement is in addition to applicable State and local anchoring requirements for resisting wind forces.

(b) All manufactured homes that are placed, replaced, or substantially improved (including repair of *substantial damage*) within Zones A1-30, AH and AE on the community's FIRM on sites.”

Add to Article 5, Section E. Floodways

“(§) Manufactured Homes shall not be placed in floodways.”

For Model CDE:

Replace Article 5, Section B. Standards for Special Flood Hazard Areas That Are Not Coastal High Hazard Areas (if adopting Coastal A Zones, reword title as indicated above under Coastal A Zones), (4) Manufactured homes, (a) and (b) with:

“(a) All manufactured homes to be placed, replaced or substantially improved (including repair of *substantial damage*) within Zone A on a community's FHBM or FIRM shall be installed using methods and practices that minimize flood damage. For the purposes of this requirement, manufactured homes must be elevated and anchored to resist flotation, collapse, and lateral movement. Methods of anchoring may include, but are

not limited to, use of over-the-top or frame ties to ground anchors. This requirement is in addition to applicable State and local anchoring requirements for resisting wind forces.

(b) All manufactured homes that are placed, replaced, or substantially improved (including repair of *substantial damage*) within Zones A1-30, AH, and AE on the community's FIRM on sites.”

Add to Article 5, Section E. Floodways

“(7) Manufactured Homes shall not be placed in floodways.”

Article 5, Section E. Coastal High Hazard Areas (if adopting Coastal A Zones, reword title as indicated above under Coastal A Zones)

Replace existing (7) with this text:

“(7) Manufactured Homes shall not be placed in *coastal high hazard areas (V Zones)* *[or Coastal A Zones]*.”

No Rise in SFHA

For Model BCD and Model CDE ordinances:

Article 4, Section B. Duties & Responsibilities of the Floodplain Administrator, (12) replace existing text with:

“(12) When a regulatory floodway has not been designated, the Floodplain Administrator must require that no new construction, substantial improvements, or other development (including fill) shall be permitted within Zones A1-30 and AE on the community's FIRM, unless it is demonstrated that the cumulative effect of the proposed development, when combined with all other existing and anticipated development, will not increase the water surface elevation of the base flood at any point within the community.”

Delete Article 4, Section B. Duties & Responsibilities of the Floodplain Administrator (13):

(13) Notwithstanding any other provisions of this ordinance, a community may approve certain development in Zones A1-30, AE, and AH on the community's FIRM which increase the water surface elevation of the base flood by more than 1 foot, provided that the community first applies for a conditional FIRM revision, fulfills the requirements for such a revision as established under the provisions of [§ 65.12](#) and receives the approval of the Federal Insurance Administrator.

Placement of Fill and Limitations on Fill to Elevate Structures in SFHAs (Non-Coastal Areas)

For Model BCD:

Add to Article 5, Section B. Specific Standards:

“(#) Placement of Fill.

(a) Disposal of fill, including but not limited to earthen soils, rock, rubble, construction debris, woody debris, and trash shall not be permitted in special flood hazard areas.

(b) Fill proposed to be placed to elevate *structures* in special flood hazard areas (A Zones) shall comply with the *floodway* requirements in Article 5, Section E. Floodways.

(#) Limitations on Use of Fill to Elevate Structures.

(a) Fill placed for the purpose of the raising the ground level to support a *building* or *structure* shall:

(i) Consist of earthen soil or rock materials only;

(ii) Extend laterally from the building footprint to provide adequate access as a function of use;

(iii) Comply with the requirements of the building code and be placed and compacted to provide for stability under conditions of rising and falling flood waters and resistance to erosion, scour, and settling;

(iv) Be sloped to no steeper than one (1) vertical to two (2) horizontal, unless approved by the Floodplain Administrator;

(v) Be protected from erosion associated with expected velocities during the occurrence of the *base flood*; unless approved by the Floodplain Administrator, fill slopes shall be protected by vegetation if the expected velocity is less than 5 feet per second, and by other means if the expected velocity is 5 feet per second or more; and

(vi) Be designed with provisions for adequate drainage with no adverse effect on adjacent properties.

(#) No net fill in the *Special Flood Hazard Area*.

(a) Any fill placed within the special flood hazard area and below the elevation of the *base flood* must be offset with a like volume of excavation from the special flood hazard area below the base flood elevation.”

For Model CDE:

Add to Article 5, Section B. Standards for Special Flood Hazard Areas That Are Not Coastal High Hazard Areas (if adopting Coastal A Zones, reword title as indicated above under Coastal A Zones):

“(#) Placement of Fill.

(a) Disposal of fill, including but not limited to earthen soils, rock, rubble, construction debris, woody debris, and trash shall not be permitted in *special flood hazard areas*.

(b) Fill proposed to be placed to elevate *structures* in special flood hazard areas (A Zones) that are not *[Coastal A Zones or] coastal high hazard areas (V Zones)* shall comply with the *floodway* requirements in Article 5, Section E. Floodways.

(#) Limitations on Use of Fill to Elevate Structures.

(a) Fill placed for the purpose of the raising the ground level to support a *building* or *structure* shall:

(i) Consist of earthen soil or rock materials only;

(ii) Extend laterally from the building footprint to provide adequate access as a function of use;

(iii) Comply with the requirements of the building code and be placed and compacted to provide for stability under conditions of rising and falling flood waters and resistance to erosion, scour, and settling;

(iv) Be sloped to no steeper than one (1) vertical to two (2) horizontal, unless approved by the Floodplain Administrator;

(v) Be protected from erosion associated with expected velocities during the occurrence of the *base flood*; unless approved by the Floodplain Administrator, fill slopes shall be protected by vegetation if the expected velocity is less than 5 feet per second, and by other means if the expected velocity is 5 feet per second or more; and

(vi) Be designed with provisions for adequate drainage with no adverse effect on adjacent properties.

(#) No net fill in the *Special Flood Hazard Area*.

(b) Any fill placed within the special flood hazard area and below the elevation of the *base flood* must be offset with a like volume of excavation from the special flood hazard area below the base flood elevation.”

Setbacks in Erosion-Prone Areas

For Model CDE:

Article 5, Section G. Flood-Related Erosion-Prone Areas, (2) replace existing text under (i) with this text:

“(i) At a minimum, all parts of new buildings including attached porches and similar structures are prohibited in the 30-year setback area. Setback area calculations shall not incorporate beach nourishment projects.”

Subdivision Proposals and Development

For Model BCD and CDE ordinances:

Article 5, Section C. Standards for Subdivision Proposals, (3) replace existing text with:

“(3) Base flood elevation data shall be generated for subdivision proposals and other proposed development (including proposals for manufactured home parks and subdivisions) containing at least 50 lots or occupying at least 5 acres, whichever is lesser, include within such proposals base flood elevation data.”

For Model BCD only:

Add as (6):

“(6) Subdivision proposals shall be laid out such that proposed building pads are located outside of the *special flood hazard area*, and any portion of platted lots that include land areas that are below the *base flood elevation* [or *flood protection elevation*] shall be used for other purposes, deed restricted, or otherwise protected to preserve such areas as open space.

(a) Subdivision access roads shall have the driving surface at or above the *base flood elevation* [or *flood protection elevation*].”

For Model CDE only:

Add:

“(6) In special flood hazard areas that are not coastal high hazard areas [and Coastal A Zones – if those are adopted by the community], subdivision proposals shall be laid out such that proposed building pads are located outside of the *special flood hazard area*, and any portion of platted lots that include land areas that are below the *base flood elevation* [or *flood protection elevation*] shall be used for other purposes, deed restricted, or otherwise protected to preserve such areas as open space.

- (a) Subdivision access roads shall have the driving surface at or above the *base flood elevation* *[or flood protection elevation]*.”

Substantial Damage

For All Model Ordinances:

Adopt this definition in place of NFIP definition:

SUBSTANTIAL DAMAGE means (1) damage of any origin sustained by a structure whereby the cost of restoring the structure to its before damaged condition would equal or exceed 50 percent of the market value of the structure before the damage occurred; OR (2) flood-related damages sustained by a structure on two separate occasions during a 10-year period for which the cost of repairs at the time of each such flood event, on the average, equals or exceeds 25 percent of the market value of the structure before the damage occurred.

Substantial Improvement

For All Model Ordinances:

Adopt this definition in place of NFIP definition:

SUBSTANTIAL IMPROVEMENT means any reconstruction, rehabilitation, addition or other improvement of a structure, the cost of which equals or exceeds 50 percent of the market value of the structure before *start of construction* of the improvement. This term includes structures which have incurred *substantial damage*, regardless of the actual repair work performed. The total cost of any and all repairs, reconstructions or improvements shall be cumulative for a rolling period of ten (10) years. The term does not, however, include either:

(1) Any project for improvement of a structure to correct existing violations of State or local health, sanitary, or safety code specifications which have been identified by the local code enforcement official and which are the minimum necessary to assure safe living conditions; or

(2) Any alteration of a *historic structure* provided that the alteration will not preclude the structure's continued designation as a *historic structure*.