

SECTION 1: **AMENDMENT** “15.16.010 General Standards” of the Payson Municode Code is hereby *amended* as follows:

AMENDMENT

15.16.010 General Standards

- A. **Provisions.** In all areas of special flood hazards, the following provisions are required for all new construction and substantial improvements, to include all new Development of the property:
1. All new construction or substantial improvements shall be designed (or modified) and adequately anchored to prevent flotation, collapse, or lateral movement of the structure resulting from hydrodynamic and hydrostatic loads, including the effects of buoyancy.
 2. All new construction or substantial improvements shall be constructed by methods and practices that minimize flood damage.
 3. All new construction or substantial improvements shall be constructed with materials resistant to flood damage.
 4. All new construction or substantial improvements shall be constructed with electrical, heating, ventilation, plumbing, and air conditioning equipment and other service facilities that are designed and/or located so as to prevent water from entering or accumulating within the components during conditions of flooding.
 5. All new and replacement water supply systems shall be designed to minimize or eliminate infiltration of flood waters into the system.
 6. New and replacement sanitary sewage systems shall be designed to minimize or eliminate infiltration of flood waters into the system and discharge from the systems into flood waters.
 7. On-site waste disposal systems shall be designed or located to avoid impairment to them or contamination from them during flooding.
 8. Within Zone AO all new construction and substantial improvement of residential structures have the lowest floor (including basement) elevated above the highest adjacent grade at a minimum of ~~one~~two - (2) ~~fooeet~~ feet above the community's FIRM (at least ~~two~~three (3) feet if no depth number is specified).
- B. **Substantial Improvements.** Any combination of repair, reconstruction, rehabilitation, addition, or improvement of a building or structure, if the cumulative cost of the entire project equals or exceeds fifty (50) percent of the market value of the structure only (not of the structure and land value combined) before the improvement or repair is started then the work shall be considered as substantial improvement. If the structure has sustained substantial damage, any repairs are considered substantial improvements regardless of the actual repair work performed.
- C. **Substantial Damage.** The term does not, however, include either:

1. Any project for improvement of a building required to correct existing health, sanitary, or safety code violations identified by the building official and that are the minimum necessary to assure safe living conditions.
2. Any alteration of a historic structure provided that the alteration will not preclude the structure's continued designation as a historic structure.

Substantial damage means damage of any origin sustained by a structure whereby the cost of restoring the structure to its pre-damaged condition would equal or exceed fifty (50) percent of the market value of the structure only before the damage occurred. This term also applies to structures which have incurred any damage that equals or exceeds fifty (50) percent of the structure's market value regardless of the actual repair work performed. When a structure or building has been determined as substantially damaged, any work or repair on said structure or building will be considered as substantial improvement and will be required to meet the development requirements set forth within this Title for substantial improvement.

D. Substantial Improvement And Substantial Damage Determination. For applications for building permits to improve buildings and structures, including alterations, movement, enlargement, replacement, repair, change of occupancy, additions, rehabilitations, renovations, and any other improvement of or work on such buildings and structures, the Floodplain Administrator, in coordination with the applicable city officials and staff, shall:

1. Estimate the market value; or require the applicant to obtain an appraisal of the market value prepared by a qualified independent appraiser, of the building or structure only, not of land and building, before the start of construction of the proposed work. In the case of repair, the market value of the building or structure shall be the market value before the damage occurred and before any repairs are made.
2. Compare the cost to perform the improvement, the cost to repair a damaged building to its pre-damaged condition, or the combined costs of improvements and repairs, if applicable, to the market value of the building or structure.
3. Determine and document whether the proposed work constitutes substantial improvement or repair of substantial damage; the determination requires evaluation of previous permits issued for improvements and repairs as specified in paragraph D, Substantial Improvement.
4. Utilize FEMA's Substantial Improvement/Substantial Desk Reference when making any determination on Substantial Improvement and/or Substantial Damage.
5. The substantial improvement regulations apply to all of the work that is proposed as the improvement, even if multiple permits are issued. Therefore, the determination of the cost of the improvement should consider all costs of all phases of the work before issuance of the first permit.
6. Notify the applicant that if it is determined that the work constitutes substantial improvement or repair of substantial damage and that compliance with the flood, this Title is required.

SECTION 2: **AMENDMENT** “15.16.020 Specific Standards” of the Payson Municode Code is hereby *amended* as follows:

AMENDMENT

15.16.020 Specific Standards

- A. **Provisions.** In all SFHAs, and if PCC 15.08.010 paragraph A,1, Use of Best Available Data – Higher Standard Option has been selected, areas of known or suspected flood risk areas, the following provisions are required:
- B. **Residential Construction.** New construction and substantial improvement of any residential structure shall have the lowest floor (including basement) elevated to the BFE, unless a freeboard option is noted below. If a freeboard option is noted, new construction and substantial improvement shall have the lowest floor (including basement) elevated to the freeboard elevation. A registered professional engineer, architect, or land surveyor shall submit certified elevations to the Floodplain Administrator that the standards of this Title are satisfied.
- C. **Residential Construction Freeboard - Higher Standard Option.** The city has elected to adopt a freeboard option for new construction and substantial improvement of any residential structure. The freeboard option requires that lowest floor elevation to be built above the BFE by the height selected. The City has elected ~~one~~two (+2) ~~feet~~ of freeboard meaning the lowest floor must be built ~~one~~two (+2) ~~feet~~ above the BFE.
- D. **Nonresidential Construction.** New construction and substantial improvements of any commercial, industrial, or other nonresidential structure shall either have the lowest floor (including basement) elevated to the base flood level, unless a freeboard option is noted below, or together with attendant utility and sanitary facilities, be designed so that below the base flood level the structure is watertight with walls substantially impermeable to the passage of water and with structural components having the capability of resisting hydrostatic and hydrodynamic loads and effects of buoyancy. A registered professional engineer or architect shall develop and/or review structural design, specifications, and plans for the construction, and shall certify that the design and methods of construction are in accordance with accepted standards of practice as outlined in this subsection. A record of such certification that includes the specific elevation (in relation to mean sea level) to which such structures are floodproofed shall be maintained by the Floodplain Administrator. If the use or occupancy of the building changes in the future to residential, then the dry floodproofing of the structure cannot be used when determining compliance of the structure to the residential construction of this Title, PCC 15.16.020 paragraph B, Residential Construction and if elected, PCC 15.16.020 paragraph C, Residential Construction Freeboard – Higher Standard Option. As such, the building will not be grandfathered into compliance and will be required to be brought into compliance with the residential construction requirements of this Title.

E. **Nonresidential Construction Freeboard - Higher Standard Option.** The City has elected to adopt a freeboard option for new construction and substantial improvement of any nonresidential structure. The freeboard option requires that lowest floor elevation to be built above the BFE by the height selected. The City has elected ~~one~~two (+2) ~~feet~~ of freeboard meaning the lowest floor must be built ~~one~~two (+2) ~~feet~~ above the BFE.

F. **Nonresidential Construction Wet Floodproofing - Higher Standard Option.**

1. New construction and substantial improvements of any commercial, industrial, or other non-residential structure including but not limited to detached garages, agricultural buildings, and storage buildings may be allowed to be wet floodproof provided that the structure:

- a. Is strictly a nonresidential structure used for building access, parking or storage only.
- b. Is an accessory or appurtenant structure of low value.
- c. Is designed to allow for the automatic entry and exit of flood waters through the use of openings.
- d. Is constructed of flood resistant materials.
- e. Is properly anchored to resist flotation, collapse, and lateral movement~~;~~.
- f. Must have mechanical and utility equipment elevated or floodproofed to or above the BFE.
- g. Must comply with the floodway encroachment provisions of the NFIP and this Title.
- h. Is designed and built to adhere to FEMA Technical Bulletins a, b, and g.
- i. Must comply with FEMA Policy: Floodplain Management Requirements for Agricultural Structures and
- j. Accessory Structures, FEMA Policy #104-008-03 Date Issued: February 2020.

2. A registered professional engineer or architect shall develop and/or review structural design, specifications, and plans for the construction, and shall certify that the design and methods of construction are in accordance with accepted standards of practice as outlined in this subsection. A record of such certification that includes the specific elevation (in relation to mean sea level) to which such structures are floodproofed shall be maintained by the Floodplain Administrator. If the use or occupancy of the building changes in the future to residential, then the wet floodproofing of the structure cannot be used when determining compliance of the structure to the residential construction of this Title, PCC 15.16.020 paragraph B, Residential Construction and if elected, PCC 15.16.020 paragraph C, Residential Construction Freeboard – Higher Standard Option. As such, the building will not be grandfathered into compliance and will be required to be brought into compliance with the residential construction of this Title.

G. **Wet Floodproofing Nonconversion Agreement - Higher Standard Option.** For any nonresidential construction that has been wet floodproofed, a non-conversion

agreement must be completed as part of the permitting process. The non-conversion agreement:

1. Acknowledges the risk associated with this building practice.
2. Acknowledges the use of the area that was wet floodproof will be used solely on nonresidential accessory or appurtenant structure of low value whose usage is only for building access, parking or storage.
3. Allows for city, state and/or federal officials to conduct periodic inspections to ensure compliance.

H. Enclosures.

1. New construction and substantial improvements, with fully enclosed areas below the lowest floor that are to be used solely for parking of vehicles, building access, or storage in an area other than a basement, and are subject to flooding shall be designed to automatically equalize hydrostatic flood forces on exterior walls by allowing for the entry and exit of floodwaters. Designs for meeting this requirement must either be certified by a registered professional engineer or architect, or must meet or exceed the following minimum criteria:
 - a. A minimum of two openings having a total net area of not less than one (1) square inch for every square foot of enclosed area subject to flooding shall be provided.
 - b. The bottom of all openings shall be no higher than one (1) foot above grade.
 - c. Openings may be equipped with screens, louvers, valves, or other coverings or devices provided that they permit the automatic entry and exit of floodwaters.
2. The development and construction of the structure must conform with the provision in FEMA/Federal Insurance Administration (FIA)-Technical Bulletins a. and b. Certification and documentation from a professional, licensed engineer or architect is required if the structure's lowest floor is built below the BFE.

I. Enclosure Nonconversion Agreement - Higher Standard Option. For any nonresidential construction that has an enclosure, a non-conversion agreement must be completed as part of the permitting process. The non-conversion agreement:

1. Acknowledges the risk associated with this building practice.
2. Acknowledges the use of the area that was permitted as an enclosure will be used solely on nonresidential accessory or appurtenant structure of low value whose usage is only for building access, parking or storage.
3. Allows for city, state and/or federal officials to conduct periodic inspections to ensure compliance.

J. Crawlspace. New construction and substantial improvements built on a crawlspace or sub-grade (below grade) crawlspace may be permitted if the development is designed and meets or exceeds the standards found in FEMA's Technical Bulletins 1, 2, and 11, which include but are not limited to the following:

1. The structure must be affixed to a permanent foundation, designed and

adequately anchored to resist flotation, collapse, and lateral movement of the structure resulting from hydrodynamic and hydrostatic loads, including the effects of buoyancy. Because of hydrodynamic loads, crawlspace construction is not allowed in areas with flood velocities greater than five (5) feet per second unless the design is reviewed by a qualified design professional, such as a registered architect or professional engineer.

2. The crawlspace is an enclosed area below the BFE and, as such, must have openings that equalize hydrostatic pressures by allowing the automatic entry and exit of floodwaters. The bottom of each flood vent opening can be no more than one (1) foot above the LAG.
3. The crawlspace enclosure must have proper openings that allow equalization of hydrostatic pressure by allowing automatic entry and exit of floodwaters. To achieve this, a minimum of one (1) square inch of flood opening is required per one (1) square foot of the enclosed area subject to flooding.
4. Portions of the building below the BFE must be constructed with materials resistant to flood damage. This includes not only the foundation walls of the crawlspace used to elevate the building, but also any joists, insulation, piers, or other materials that extend below the BFE. Ductwork, in particular, must either be placed above the BFE or sealed from floodwaters.
5. Any building utility systems within the crawlspace must be elevated above the BFE or designed so that floodwaters cannot enter or accumulate within the system components during flood conditions.
6. The interior grade of a crawlspace below the BFE must not be more than two (2) feet below the LAG.
7. The height of the below-grade crawlspace, measured from the lowest interior grade of the crawlspace floor to the bottom of the floor joist of the next higher floor cannot exceed four (4) feet at any point.
8. There must be an adequate drainage system that removes floodwaters from the interior area of the crawlspace. The enclosed area should be drained within a reasonable time after a flood event.
9. Buildings with below-grade crawlspaces will have higher flood insurance premiums than buildings that have the preferred crawlspace construction, with the interior elevation at or above the LAG.

K. Manufactured Homes.

1. Require that all manufactured homes to be placed within Zone A on the city'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, or 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.
2. Require that manufactured homes that are placed or substantially improved within Zones A1-30, AH, and AE on the city's FIRM on sites outside of a manufactured home park or subdivision;) in a new manufactured home park or subdivision; in an expansion to an existing manufactured home park or

subdivision; or in an existing manufactured home park or subdivision on which a manufactured home has incurred "substantial damage" as a result of a flood, be elevated on a permanent foundation such that the lowest floor of the manufactured home is elevated to or above the BFE, unless a higher standard option was selected, and be securely anchored to an adequately anchored foundation system to resist flotation, collapse, and lateral movement.

3. In A-1-30, AH, AO and AE Zones, require that manufactured homes to be placed or substantially improved in an existing manufactured home park to be elevated so that the lowest floor is at or above the BFE, unless a higher standard option was selected; or the chassis is supported by reinforced piers no less than thirty-six (36) inches in height above grade and securely anchored.

L. I Beam Placement - Higher Standard Option. All manufactured homes are placed so that the bottom of the I-beam be at or above the BFE in zones A1-A30, AH, AO, and AE on the city's FIRM plus any applicable freeboard as established by this Title by the City and be securely anchored to an adequately anchored foundation system to resist flotation, collapse, and lateral movement.

M. Recreational Vehicles. Recreational vehicles placed on sites within Zones A1-30, AH, and AE on the city's FIRM require either:

1. Be on the site for fewer than one hundred eighty (180) consecutive days unless the City has elected a higher standard option and be fully licensed and ready for highway use. A recreational vehicle is ready for highway use if it is on its wheels or jacking system, is attached to the site only by quick disconnect type utilities and security devices, and has no permanently attached additions, or
2. Meet the permit requirements of PCC 15.12.040, Permit Procedures, and the elevation and anchoring requirements for "manufactured homes" of this Subsection.

N. Appurtenant Or Accessory Structure - Higher Standard Option. Accessory or appurtenant structures shall not exceed one hundred (100) square feet in size. Accessory or appurtenant structures located within zones A, A1-A30, AH, AO, or AE must be:

1. Detached from a residence.
2. On the same parcel of property as the principal structure to be insured.
3. Incidental to the use of the principal structure.
4. Solely used for parking or limited storage and not human habitation.
5. Low valued, represents a minimal investment, and unfinished on the interior.
6. As required in the 44 CFR Section 60.3(a)3:
 - a. "be designed (or modified) and adequately anchored to prevent flotation, collapse, or lateral movement of the structure resulting from hydrodynamic and hydrostatic loads including the effects of buoyancy;"
 - b. "be constructed with materials resistant to flood damage" below the BFE, be designed to allow for the automatic entry of flood waters and meet all applicable building codes;"
 - c. "be constructed by methods and practices that minimize flood

- damages;”
- d. "be constructed with electrical, heating, ventilation, plumbing, and air-conditioning equipment and other service facilities that are designed and/or located to prevent water from entering or accumulating within the components during conditions of flooding.”.
7. In compliance with the floodway encroachment “no-rise” provisions of the NFIP Regulations and PCC 15.16.050, Floodways.
8. Not be used for human habitation including but not limited to working, sleeping, and living.
9. Include, in the submittal for Floodplain Development Permit, sufficient documentation demonstrating full compliance with this section, including, but not limited to, the use of flood resistant materials, anchoring, and flood openings.
10. Must comply with FEMA Policy: Floodplain Management Requirements for Agricultural Structures and Accessory Structures, FEMA Policy #104-008-03 Date Issued: February 2020.

SECTION 3: AMENDMENT “15.16.040 Shallow Flooding” of the Payson Municode Code is hereby *amended* as follows:

AMENDMENT

15.16.040 Shallow Flooding

- A. Standards For Areas Of Shallow Flooding (AO/AH Zones).** Areas located within the SFHAs established in PCC 15.08.010, Lands to Which This Title Applies, are designated as shallow flooding. These areas have special flood hazards associated with base flood depths of one (1) to three (3) feet where a clearly defined channel does not exist and where the path of flooding is unpredictable, and where velocity flow may be evident. Such flooding is characterized by ponding or sheet flow; therefore, the following provisions apply:
1. All new construction and substantial improvements of residential structures have the lowest floor (including basement) elevated above the highest adjacent grade at least as high as the depth number specified in feet on the city's FIRM (at least ~~two~~three (2~~3~~) feet if no depth number is specified). If the City has elected a freeboard standard, then the lowest floor elevation must be elevated above the highest adjacent grade above the depth number specified in feet on the city's FIRM (at least ~~two~~three (2~~3~~) feet if no depth number is specified) plus the freeboard height option selected below.
 2. All new construction and substantial improvements of non-residential structures:
 - a. Have the lowest floor (including basement) elevated above the highest

adjacent grade at least as high as the depth number specified in feet on the city's FIRM (at least ~~two~~three (23) feet if no depth number is specified). If the City has elected a freeboard standard, then the lowest floor elevation must be elevated above the highest adjacent grade above the depth number specified in feet on the city's FIRM (at least ~~two~~three (23) feet if no depth number is specified) plus the freeboard height option selected below; or

b. Together with attendant utility and sanitary facilities designed so that below the base flood level the structure is watertight with walls substantially impermeable to the passage of water and with structural components having the capability of resisting hydrostatic and hydrodynamic loads of effects of buoyancy.

3. A registered professional engineer or architect shall submit a certification to the Floodplain Administrator that the standards of this Subsection.

4. Require within Zones AH or AO adequate drainage paths around structures on slopes, to guide flood waters around and away from proposed structures.

B. Shallow Flooding Freeboard - Higher Standard Option. The City has elected to adopt a freeboard option for new construction and substantial improvement of any residential structure. The freeboard option requires that the lowest floor be built above the BFE by the height selected. The City has elected a ~~one~~two (+2) foot freeboard. The lowest floor must be built a minimum of ~~one~~two (+2) ~~foe~~et above the BFE or flood depth identified on the FIRM.

SECTION 4: AMENDMENT “15.16.070 Standards For Protection Of Critical Facilities - Higher Standard Option” of the Payson Municode Code is hereby *amended* as follows:

AMENDMENT

15.16.070 Standards For Protection Of Critical Facilities - Higher Standard Option

All new and substantially improved Critical Facilities and new additions to Critical Facilities located within the SFHA shall be regulated to a higher standard than structures not determined to be Critical Facilities. For the purposes of this Title, protection shall include ~~one~~two (+2) of the following:

A. Location outside the SFHA; or

B. Elevation of the lowest floor or floodproofing of the structure, together with attendant utility and sanitary facilities, to at least two (2) feet above the BFE. Ingress and Egress for new critical facilities shall, when practicable as determined by the City, have continuous non-inundated access (ingress and egress for evacuation and emergency services) during a 100-year flood event.

