

DC-22-0004: Land Use Code text amendments related to Floodplain Regulations

4-404.A. Clarify Minimum Federal and State Standards

Staff recommends revising this section to remove the implication that development in the Floodway may not increase the regulatory 100-year flood elevation more than 0.00 feet and development in the Flood Fringe may not increase such elevations more than 0.50 feet. Under National Flood Insurance Program (NFIP) and State floodplain management rules, such increases are allowed if they do not impact insurable structures and the proponent obtains a Conditional Letter of Map Revision (CLOMR) from FEMA prior to permitting. County regulations pertaining to development-caused rises in the FO District and modeling standards for demonstrating those rises are described in detail in Articles 4-404.C.2 and 4-404.2.E.4 of this code, which also refer to NFIP and State minimum standards. This section (4-404.A) should be revised to be consistent with other sections of the code.

- A. Minimum Federal and State Standards.** Development in the FO District must comply with the NFIP and State of Colorado minimum standards. These standards require applicants to demonstrate that those development projects allowed in the FEMA Floodway, when combined with all other existing and anticipated development, will not cause an increase in the modeled 1%-annual-chance water surface greater than 0.00 feet and, for projects in the Flood Fringe, will not cause an increase greater than 0.50 feet unless the applicant first receives an approved Conditional Letter of Map Revision (CLOMR) from FEMA prior to permitting, in compliance with the provisions of 4-404.2(E)(4).

4-404.B. Match Floodway Definitions

Staff recommends revising this section to match the definition of “Floodway” in Article 4-414 “Definitions.”

- B. Uses Prohibited in Floodway.** ~~The floodway is the portion of the FO District that must be reserved for passage or conveyance of the 1%-annual-chance (100-year) flood without cumulatively increasing the water surface elevation more than a designated height (described in Section 4-404.2(E)(3)). depicts the portion of the floodplain where flood depths and velocities are greatest, risk to health and safety is highest, and damages resulting from flooding are the most catastrophic. The following activities and uses are prohibited within all Floodways:~~

4-404.B.6. Prohibit Makeshift Structures in the Floodway (new MHFD regulation)

Staff recommends revising this section to comply with 2020 revisions to Mile High Flood District floodplain regulations. A portion of Boulder County lies within the District. The new District regulation states that "Tents and makeshift structures, enclosures, or other shelters used for human habitation, shall not be permitted in the Floodplain, except in locations expressly permitted by the local government... and having adequate sanitation facilities and flood evacuation plans." This section applies the MHFD regulation to floodway areas.

B. Uses Prohibited in Floodway

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- 6.** Dispersed camping, including the use of tents, makeshift structures, enclosures, and other temporary shelters used for habitation, except in locations approved through the issuance of a Group Gathering / Special Event Permit as defined in this Code that have adequate sanitation facilities and a flood evacuation plan; unless the camping is approved through the issuance of a Group Gathering / Special Event Permit as defined in the Land Use Code;

4-404.C.1. Clarify that Linear Transportation Infrastructure Is Allowed in the Floodway

Staff recommends adding a section to clarify that linear transportation infrastructure (e.g., roads and railways) are allowed uses in the Floodway.

C. Uses Allowed in Floodway under Certain Conditions.

- 1. The County Engineer may issue FDPs for the following development types and open uses within the Floodway unless the use (1) is prohibited in the underlying zoning district, (2) adversely affects the efficiency of the Floodway, (3) changes the direction of flow, or (4) poses a significant safety hazard:

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- c. ~~Industrial or commercial uses such as loading areas, railroad rights-of-way (but not including freight yards or switching, storage, or industrial sidings), parking areas, and airport landing strips;~~

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- f. Hydraulic structures such as bridges, culverts, weirs, diversions, drop structures, and fish ladders, for access and flood or stormwater control; ~~and~~

- g. Critical Facilities above 6,000 feet in elevation, as described in 4-405(D); ~~and~~

- h. Linear transportation infrastructure, including but not limited to roads, trails, and railroad rights-of-way (but not including freight yards or switching, storage, or industrial sidings).

4-404.D. Prohibit Camping and Makeshift Structures in the Flood Fringe without a Permit (new MHFD regulation)

Staff recommends adding a new item to this section to comply with 2020 revisions to Mile High Flood District floodplain regulations. A portion of Boulder County lies within the District. The new District regulation states that "Tents and makeshift structures, enclosures, or other shelters used for human habitation, shall not be permitted in the Floodplain, except in locations expressly permitted by the local government... and having adequate sanitation facilities and flood evacuation plans." This section applies the MHFD regulation to areas of the floodplain outside the floodway (the Flood Fringe).

D. Uses Allowed in Flood Fringe under Certain Conditions

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- 5. Dispersed Camping, overnight campgrounds, tents, makeshift structures, enclosures, and other temporary shelters used for habitation in the Flood Fringe must be approved through the issuance of a Group Gathering / Special Event Permit as defined in this Code and must have adequate sanitation facilities and a flood evacuation plan.

4-404. Allow for Emergency Work

The code does not specifically state that emergency work is allowed. Staff recommends adding a new section E to Article 4-404 to allow for emergency work in life-threatening situations while also clarifying that proper permitting is required within a reasonable time frame.

4-404 Floodplain Development Permits

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- E. Emergency Work. Emergency work necessary to prevent or mitigate an immediate threat to life or property is allowed. The property owner is responsible for notifying the County Engineer within 3 days of the initiation of all emergency work. A complete application for a Floodplain Development Permit shall be submitted within 30 days of commencement of work. Authorization to perform emergency work does not indicate approval of such work. If

necessary, modifications to the work already performed may be required in accordance with this Code.

4-404.1. Clarify Language Around General FDP “Notice”

Staff recommends revising Article 4-404.1, Sections D through I, to reflect the county's 2020 reorganization, clarify language/terminology, and clarify the process by which the County Engineer issues, amends, or rescinds a General Floodplain Development Permit (General FDP). The primary objective is to resolve confusion over the difference between advanced "notice" to the County Engineer of proposed development listed in the General FDP, and "public notice" (now called a 14-day review and comment period) of a proposed new, amended, or rescinded General FDP.

- D. Content of a General FDP.** If the County Engineer determines it appropriate to issue a General FDP after consideration of the factors in 4-404.1.B above, he or she shall include the following information on the face of the permit:-
- 1.** A list of specific uses and activities deemed within the scope of the General FDP;
 - 2.** Conditions of approval, if any, for work approved under the General FDP; and
 - 3.** Whether or not property owners must notify the County Engineer prior to beginning work on an activity included within the General FDP.
 - a.** The County Engineer shall require such notification for development activities for which it is necessary to evaluate individual and cumulative impacts, ensure minimum compliance with federal and state floodplain rules, and confirm that the uses or activities are unlikely to increase BFEs or have an adverse effect on neighboring properties, species, or ecosystems.
 - b.** For projects where the County Engineer will receive ~~notice~~ notification through referral required by a separate Community Planning & Permitting Code review process (such as Site Plan Review or Special Use Review), the County Engineer need not require duplicative notification. For all other projects where the County Engineer decides to require notification, the applicant must submit the following information to the County Engineer a minimum of 21 days prior to commencing work:
 - (i) Project description, including materials description and a discussion on the expected impact to the channel and floodplain;
 - (ii) Location description (an accompanying location map is best); and
 - (iii) Site plan, if necessary to further describe the work.
 - c.** If the work is within the scope of the General FDP, the County Engineer will respond to the owner with approval to proceed. If additional information is necessary or if the work requires issuance of an Individual FDP, the County Engineer will inform the owner within 14 days of notification submission, or through the Community Planning & Permitting Review referral process.
 - ~~3. Conditions of approval, if any, for work approved under the General FDP.~~
- E. Process for Issuing, Amending, or Rescinding a General FDP.**
- 1.** If the County Engineer determines that a new General FDP, amended General FDP, or rescission of a General FDP is appropriate after consideration of the factors in 4-404.1.B above, ~~the County Engineer he shall post the proposed General FDP on the Public Works Department website and also in the manner described in Article 3 by which the public is given notice of comprehensive rezonings, so that the public may review and comment. No such new FDP shall become effective until 14 days after the date it is posted. first provide a 14-day public review and comment period by:~~
 - a.** Posting the new General FDP, amended General FDP, or notice of General FDP recission on the County's website;
 - b.** Providing public notice of the new General FDP, amended General FDP, or notice of

General FDP rescission in the manner described in Article 3 for comprehensive rezonings; and

- c. The County Engineer shall maintain a record of all property owners who wish to opt in to receiving direct notice of all proposed actions by the Engineer regarding a General FDP. The County Engineer shall send the new General FDP, amended General FDP, or notice of General FDP rescission (via electronic means to the most recent electronic mail address on file) to all such owners, provided, however, that inadvertent failure to notify every such owner shall not affect the validity of any action by the Engineer on a General FDP.
- ~~2.~~ If the County Engineer determines that an amendment to an existing General FDP is appropriate after consideration of the factors in 4-404.1.B above, he shall post the revised General FDP on the Public Works Department website and also in the manner described in Article 3 by which the public is given notice of comprehensive rezonings, so that the public may review and comment. No such revised FDP shall become effective until 14 days after the date the revision is posted.
- ~~3.~~ If the County Engineer determines that an existing General FDP should be rescinded in its entirety per section 4-404.1.C above, he shall post a notice to this effect on the Public Works Department website and in the manner described in Article 3 by which the public is given notice of comprehensive rezonings, so that the public may review and comment. The General FDP shall be deemed rescinded 14 days after the date the rescission notice was posted.
- ~~4.~~ In addition to the notice required above (per Section 3-205), the County Engineer shall maintain a record of all property owners who wish to opt in to receiving direct notice of all proposed actions by the Engineer regarding a General FDP. The Engineer shall send notice (via electronic means to the most recent electronic mail address on file) to all such owners regardless of whether the proposed action is issuance of a new General FDP, amending an existing General FDP, or rescinding a General FDP; provided, however, that inadvertent failure to notify every such owner shall not affect the validity of any action by the Engineer on a General FDP.
- ~~52.~~ If the County Engineer receives public comment on a proposed new, amended, or rescinded General FDP during the 14-day notice review and comment period, then prior to the effective date the County Engineer shall consider such comments to determine whether in their his professional judgment as floodplain administrator any changes to the proposed action are merited. If no comments are received, or if no changes to the proposed action are merited, the proposed action shall be deemed effective 14 days after the date it was posted.
- ~~63.~~ Subject to the notice 14-day review and comment period requirements described above, the County Engineer may issue, amend, or rescind a General FDP at any time, on their his own initiative, without the need for public hearings before Planning Commission and Board of County Commissioners.
- ~~74.~~ The County Engineer's decision to issue, amend, or rescind a General FDP shall be in writing and shall be a final action appealable pursuant to section 4-408.
- ~~85.~~ All General FDPs in effect at a given point in time must comply with all applicable provisions of this section 4-404.1.
- F. No Permit Fees.** If the County Engineer determines a use or activity falls under the approval granted in a General FDP, no permit fee will be charged.
- G. Work Not Approved under a General FDP.** Any development within the Floodplain FO District that does not meet the criteria of a General FDP requires either approval of an Individual FDP prior to beginning the work or a determination by the County Engineer that no FDP is required at all.

 - ~~1.~~ ~~1.~~—Should any work commence that is assumed by an applicant to be covered by a General FDP, and the County Engineer determines it is not covered by a General FDP, a Stop Work order will be issued. The unpermitted work will be treated as a zoning violation under

Article 17 until an approved Individual FDP is issued or the violation is otherwise resolved.

2. 2.—Anyone considering a project in the Floodplain FO District that varies from the projects described in an issued General FDP should contact the County Engineer to determine if an Individual FDP application is required. The County Engineer makes the final decision as to the applicability of a General FDP. Any project determined by the County Engineer to create a significant obstruction to flood flows will require an Individual FDP.

- H. **Other Permits.** Eligibility for a General FDP does not eliminate the need for applicants to obtain all other required permits, including building, grading, access, construction, and/or stormwater permits from Boulder County, as well as other state and federal permits.
- I. **Records of Issued General FDPs.** A copy of all issued General FDPs, including previous versions, will be kept on file in the County Engineer's office at the Community Planning & Permitting Department at all times and available for public review.

4-404.2.A. Remove Requirement for Floodplain Pre-Application Conferences

The experience of the Floodplain Management Program has been that pre-application conferences are not always necessary. Therefore, staff recommends revising this section to no longer require Floodplain Pre-Apps while reserving the authority to require them if deemed necessary. Program staff will continue to make themselves available for any applicant who requests a pre-application conference.

- A. **Floodplain Pre-Application Conference.** A Floodplain Pre-Application Conference (Floodplain Pre-App) between the applicant and the County Engineer (or his/her designee) is required for all Individual FDPs, unless waived in writing by the County Engineer as unnecessary under the circumstances. The Boulder County Community Planning & Permitting Department may require a Pre-Application Conference as defined in Section 3-201, which may be substituted for the Floodplain Pre-App requirement of this section. The Floodplain Pre-App should include discussion of conforming and nonconforming structures and uses on the subject property. At the discretion of the County Engineer, a Floodplain Pre-Application Conference (Floodplain Pre-App) may be required prior to submittal of a complete individual FDP application. The Floodplain Pre-App should include a discussion of conforming and nonconforming structures and uses of the subject property.

4-405.C.1.e. Clarify Language Related to Building Orientation Relative to Flood Flows

Staff finds the current language confusing and proposes clarifying while maintaining the original intent.

- e. New buildings or other structures must minimize obstruction to flood flows. Whenever practicable and to the extent consistent with other provisions of this Code, new buildings and other structures must be placed with their longitudinal axes parallel to the predicted direction of flow of flood waters or with the same orientation as neighboring structures. ~~be placed with their longitudinal axes parallel to the predicted direction of flow of flood waters or be placed so that their longitudinal axes are on lines, parallel to those of adjoining structures, to the extent consistent with other provisions of this code. This is intended to minimize the obstruction to flow caused by a building or structure.~~

4-405.C.2.a. Remove Language Indicating that Basements are Allowed in the FO District

Basements are currently prohibited for all New Floodplain Construction (Article 4-405.C.1.c). Staff recommends removing the reference to Basements in this section below, since it implies Basements are allowed when they are not.

- a. All new residential buildings constructed in the Flood Fringe or within Zones A, AO, or AH must have their Lowest Floors (including ~~Basements~~, porches, and decks), as well as any and all service equipment (excepting the necessary connections to public utility),

elevated to the FPE, either by the placement of fill or by construction on elevated foundation walls.

4-405.C.3.c. Create Variance Process for Wet-Floodproofed Agricultural Structures (new FEMA policy)

In February 2020, FEMA released an NFIP policy document (FEMA Policy #104-008-03, “the policy”) to clarify flood protection requirements for accessory and agricultural structures. While Article 4-400 conforms to the policy’s flood protection requirements for accessory structures, it does not conform to the policy’s requirements for agricultural structures.

Currently, Article 4-405.C.3.c allows new and substantially improved agricultural structures to be built at grade if they are “wet floodproofed” with flood vents. However, FEMA’s policy states that all new and substantially improved agricultural structures must be elevated to the base flood elevation or designed to be watertight (“dry floodproofed”) unless 1) the community (Boulder County) grants a “variance” based on defined criteria, or 2) FEMA grants the community a “community-wide exception” to the policy.

Elevating or dry floodproofing an agricultural structure can be overly burdensome for the agricultural community in a way that conflicts with the county’s commitment to promoting and assisting in the preservation of agricultural lands and land uses. Therefore, staff recommends updating Article 4-405.C.3.c with a new administrative variance process to allow agricultural structures to be built at grade (or otherwise with their floors below the Flood Protection Elevation) if the structure has low damage potential with respect to its value, contents, and location within the floodplain. In other words, variances can you be granted if the anticipated 100-year flooding depths and velocities at the structure are relatively low and the cost of recovery with respect to the structure’s construction, contents, and purpose are also low.

- c. Agricultural Buildings and Structures. New Floodplain Construction of any Permanent agricultural building or structure in the Flood Fringe must be limited in use to agricultural purposes, in which the use is exclusively in connection with the production, harvesting, storage, drying, or raising of agricultural commodities, including the raising of livestock. Agricultural buildings and structures are those used exclusively for agricultural purposes or uses in connection with the production, harvesting, storage, raising, or drying of agricultural commodities and livestock. Buildings and structures used for human habitation and those that are places of employment or entertainment and structures with multiple or mixed purposes do not satisfy the “exclusive use” requirement and are not agricultural buildings and structures. Types of buildings and structures that qualify under this section include farm storage structures (used exclusively for the storage of farm machinery and equipment), silos, grain elevators, grain bins, corn cribs, and general purpose barns/loafing sheds.
- (i) The building or structure must not be designed for or used as Habitable Space.
 - ~~(ii)~~ ~~The building or structure must be wet-floodproofed according to 4-405(C)(2)(b).~~
 - ~~(iii)~~ Service equipment must be elevated to the FPE, unless elevation of such equipment impedes its agricultural use.
 - ~~(iiiv)~~ Permanent agricultural buildings or structures are prohibited in the Floodway.
 - (iv) Temporary agricultural buildings or structures are allowed in the Floodway, but are required to be relocated outside of the FO District or deconstructed in the event of a flood warning. If relocation outside of the FO District is not possible, then relocation to the Flood Fringe will be allowed, so long as the temporary structure is properly anchored.
 - (v) Agricultural buildings or structures that do not have at least two rigid walls and a fully secured roof, including but not limited to pens, pole barns, shade structures,

and some livestock shelters may be constructed at grade and must use flood-resistant materials up to the FPE.

- (vi) Agricultural buildings or structures with at least two rigid walls and a fully secured roof must conform with 4-405(C)(2), or must be designed to be water-tight with walls substantially impermeable to the passage of water below the FPE, unless an administrative variance is granted by the County Engineer to allow the building or structure to be either elevated to the BFE, or wet-floodproofed at-grade in accordance with 4-405(C)(2)(b).
- (vii) Requests for an administrative variance described in (vi) above must be made in writing using an approved form and submitted with a complete Individual Floodplain Development Permit application. An administrative variance allowing an agricultural building or structure to be wet-floodproofed may be granted if the following criteria are met:
 - (A) The building or structure meets all flood protection requirements of 4-405(B), 4-405(C)(1), and 4-405(C)(2)(b);
 - (B) The building or structure has low flood damage potential and cost of recovery with respect to construction, contents, and function;
 - (C) The building or structure does not increase risks and pose a danger to public health, safety, and welfare if flooded and contents are released, including but not limited to the effects of flooding on manure storage, livestock confinement operations, liquified natural gas terminals, and production and storage of highly volatile, toxic, or water-reactive materials; and
 - (D) The variance would provide the minimum relief necessary to avoid exceptional hardship.
- (viii) Prior to issuance of Certificate of Occupancy or final inspection, whichever occurs last, the property owner may be required to execute a Non-Conversion Agreement and the County must record the agreement in the real estate records. If required, the agreement will be in the form of a restrictive covenant or other County approved binding instrument, where the benefits of the covenant run in favor of the County. The covenant must be drafted to run with the land and bind successors, in perpetuity. The purpose of the covenant is to document the current owner's understanding of the limitations on construction and use of the building in accordance with the provisions of this section 4-405(C)(3)(c) (Agricultural Buildings and Structures), and to put prospective purchasers on notice of such restrictions. The covenant will also reference retrofitting criteria necessary to properly convert the building to habitable space, should the owner choose to do so. In addition to any other enforcement mechanisms available, violation of the agreement will be considered a violation of this Article 4-400 and subject to all applicable zoning enforcement procedures.

4-405.C.3.d. Move "Crawlspace" to the "General Requirements" Section

Currently, the flood protection requirements for Crawlspace are listed under the section titled "Non-Residential Construction." Staff propose moving Crawlspace information to 4-405.C.1, "New Floodplain Construction/General Requirements" to clarify that Crawlspace requirements apply to all New Floodplain Construction (both Residential and Non-Residential).

C. New Floodplain Construction

1. General Requirements

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i. New Floodplain Construction of any Below-Grade Crawlspace must:

- (i) Have the interior grade elevation, that is below BFE, no lower than two feet below**

the Lowest Adjacent Grade:

- (ii) Have the height of the Below-Grade Crawlspace measured from the interior grade of the Crawlspace to the top of the foundation wall, not exceed four feet at any point; and
- (iii) Have an adequate drainage system that allows floodwaters to drain from the interior area of the Crawlspace following a flood.

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3. Non-residential Buildings.

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~~d. Crawlspace. New Floodplain Construction of any Below-Grade Crawlspace must:~~

- ~~(i) Have the interior grade elevation, that is below BFE, no lower than two feet below the Lowest Adjacent Grade;~~
- ~~(ii) Have the height of the Below-Grade Crawlspace measured from the interior grade of the Crawlspace to the top of the foundation wall, not to exceed four feet at any point;~~
- ~~(iii) Have an adequate drainage system that allows floodwaters to drain from the interior area of the Crawlspace following a flood; and~~
- ~~(iv) Meet the provisions 4-405(C)(1), General Requirements.~~

4-405.E. Clarify and Revise Requirements for Manufactured Homes

Staff recommend revising this section to remove any intent to require entire parks to be retrofitted/elevated. Rather, the intent is to require flood protection on a home-by-home basis. Additionally, staff recommends requiring elevation of mechanical equipment and outdoor appliances and allowing multiple anchoring configurations that meet minimum NFIP requirements.

E. Manufactured Homes Home Parks

1. General Requirements. All manufactured homes must be installed using methods and practices which minimize flood damage. ~~For the purposes of this requirement, manufactured homes must be elevated to the FPE and anchored to resist floatation, collapse, or lateral movement.~~ All requirements below are in addition to applicable state and local requirements, including those to address wind loads.
2. ~~For new parks commenced on or after February 1, 1979; expansions to existing parks; existing parks where the value of the repair, reconstruction, or improvement of the streets, utilities, and pads equals or exceeds 50 percent of the value of the streets, utilities and pads before the repair, reconstruction or improvement has commenced; an existing park on which a manufactured home has incurred Substantial Damage; manufactured homes to be placed or substantially improved on sites in a new manufactured home park, an existing park, or outside a manufactured home park existing parks; and for manufactured homes not placed in a park:~~
 - a. Stands or lots must be elevated on compacted fill or on pilings so that the lowest floor of the manufactured home will be at or above the FPE. For homes placed on pilings:
 - (i) lots must be large enough to permit steps;
 - (ii) piling foundations must be placed in a stable soil no more than ten feet apart; and
 - (iii) reinforcements must be provided for pilings more than six feet above the ground level.
 - b. Adequate surface drainage must be provided.
 - c. New m Manufactured homes and additions to manufactured homes must be anchored to resist floatation, collapse, or lateral movement. The foundation system must be certified by a P.E. registered in the State of Colorado to withstand the anticipated forces of the 1%-

~~annual-chance (100-year) flood or use by providing over-the-top and frame ties to ground anchors as well as the following that meet the following requirements:~~

- ~~(i) over-the-top ties at each of the four corners, with two additional ties per side at intermediate locations, with the exception of manufactured homes less than 50 feet long which require only one additional tie per side;~~
- ~~(ii) frame ties at each corner with five additional ties per side at intermediate points, with the exception of manufactured homes less than 50 feet long which require only four additional ties per side; and~~
- ~~(iii) all components of a manufactured home anchoring system must be capable of carrying a force of 4800 pounds; and~~
- ~~(iv) Any additions to the manufactured home be similarly anchored.~~
- d. All mechanical equipment and outside appliances must be elevated to or above the FPE.
- e. Fully enclosed areas below the lowest floor of the manufactured home must comply with 4-405.C.2.b.

4-405.G.4. Clarify OWTS Language

Staff recommends clarifying that individual components of an Onsite Wastewater Treatment System (OWTS) in the FO District may be repaired or replaced without replacing the entire system.

4. Repair/Replacement OWTS

- a. For any OWTS or OWTS component in the Flood Fringe that requires replacement, the system or component must meet the requirements of 4-405.G.3.
- b. In addition to the requirements of 4-405.G.4.a, for any repair or replacement of an existing OWTS or OWTS component in the Floodway the County Engineer must determine that the proposed repair/replacement is consistent with Subsections (i) through (iii), below.

4-405.J. Clarify when Elevation Certificates are Required

NFIP regulations require that the county obtain certified as-built Lowest Floor elevations for all new and Substantially Improved structures. Often, but not always, such elevations must be submitted in the form of a FEMA Elevation Certificate. For example, accessory buildings that are wet-floodproofed and constructed at grade do not require FEMA Elevation Certificates. Staff recommends clarifying when the full Elevation Certificate is required and when a certified letter from a surveyor is sufficient. Not requiring a full Elevation Certificate means less expense for permittees and less time reviewing unnecessary closeout materials for staff.

J. Elevation Certificate Requirements

- 1. As built Lowest Floor Elevations (referenced to the NAVD88 datum) for all New Floodplain Construction, Substantial Improvements, other improvements involving new floor area, and ~~or for~~ new manufactured home stands, must be certified by a Colorado Registered Professional Engineer or Colorado Registered Professional Land Surveyor. For construction of new accessory structures built at grade in accordance with 4-405.C.2.b and lateral additions to buildings that are not Substantial Improvements, as-built Lowest Floor elevations may be submitted in a certified letter and must be submitted prior to the issuance of a Certificate of Occupancy or final inspection. For all other projects, including new and Substantially Improved permanent buildings with elevated Lowest Floors, FEMA Elevation Certificates are required. FEMA Elevation Certificates must be submitted to the Building Division Inspector and County Engineer twice over the duration of the project. Failure to submit an Elevation Certificate will result in a Stop Work Order until proper certification is provided. To ensure compliance

with flood protection requirements during and after construction, completed Elevation Certificates must be submitted at the following times:

- a. For slab-on-grade foundations, a FEMA Elevation Certificate must be submitted prior to final pour of foundation when foundation forms are completed.
 - b. For buildings on elevated foundations, such as extended foundation walls, stem walls, or piles, a FEMA Elevation Certificate must be submitted prior to rough framing when the foundation is completed.
 - c. ~~For all buildings that have achieved finished construction, a~~ final FEMA Elevation Certificate must be submitted prior to the issuance of Certificate of Occupancy or final inspection.
2. To convert another elevation reference datum to NAVD88, applicants are directed to datum conversion factors within the current effective FEMA FIS report for Boulder County, or to an online datum conversion program. Assumptions used for the datum conversion must be explicitly described to Boulder County on the all required Elevation Certificates and certified elevation letters. For datum requirements for permit submittals, see 4-404.2(B).

4-409.D.2.b. Clarify When A Variance Requires Notice of Flood Insurance Impacts

Staff recommends clarifying that this section only applies to variances exempting the applicant from the requirements to elevate a building's Lowest Floor to or above the Flood Protection Elevation. This section does not necessarily apply to all variances

- b. For variances that allow construction of a building's Lowest Floor below the FPE, the County must notify the applicant in writing. ~~Any applicant to whom such a variance is granted must be given written notice that the building will be permitted to be built with a Lowest Floor Elevation below the FPE and that the cost of flood insurance will be commensurate with the increased risk associated with the reduced Lowest Floor Elevation.~~

4-414 Revise Definitions to More Closely Align with NFIP Definitions

The NFIP defines a basement as "any area or the building having its floor subgrade (below ground level) on all sides." According to the NFIP definition, a basement may have a finished or an unfinished floor. Staff recommends revising the county's definition of Basement to include areas with finished or unfinished floors.

The NFIP defines a regulatory floodway as "the channel of a river or other watercourse and the adjacent land areas that must be reserved in order to discharge the base flood without cumulatively increasing the water surface elevation more than a designated height." Staff recommends revising the county's definition of Floodway to clarify that the Floodway is primarily defined as in the NFIP and may also coincide with areas of significant depths and velocities.

Staff recommends removing the definitions of Maintenance and In-Kind Replacement because they are not referenced anywhere in this Code. These two terms are better defined separately in the General FDP, which specifically addresses activities that are covered under the General FDP as Maintenance and In-Kind Replacement.

Basement. Any area of a building having a ~~finished~~ floor subgrade on all sides, where the ~~finished~~ floor is greater than four feet below the top of the foundation walls or greater than 2 feet below the Lowest Adjacent Grade.

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Floodway. Those portions of the FO District required for the passage or conveyance of the 1% annual-chance (100-year) flood in which waters ~~may will~~ flow at significant depths or with significant velocities, including the channel of a river or other watercourse and any adjacent floodplain areas that must be kept free of development and other encroachments in order to protect the health and safety of the residents of and visitors to Boulder County, and to discharge the 100-year flood without cumulatively increasing the water surface elevation more than a designated height (also called ‘surcharge’ and described in Section 4-404.2(E)(3)).

In-Kind Replacement. For storm drainage systems and system components, replacement of any system or system component with the same system or component. In-kind Replacement does not include projects that will change the size or function of the system or component.

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Maintenance. Maintenance means any routine or regularly-scheduled activity undertaken to repair or prevent the deterioration, impairment, or failure of any utility, structure, or infrastructure component. Maintenance includes activities to restore or preserve function and/or usability of a storm drainage, water delivery, or ditch system. Such activities may include, without limitation, the removal or movement of sediment, debris, and vegetation, installation of erosion and sediment control devices, stabilization of stream channel and/or water delivery channel (ditch) banks, and the replacement of structural components, so long as the work substantially conforms to the most recent County approved design, flow condition, and vertical grade, as applicable. Maintenance does not include expansion or enlargement of a building or structure, Substantial Modifications, Substantial Improvements, total replacement of existing facilities, or total reconstruction of a facility.

Other Minor Fixes in 4-400.

Staff recommends replacing “Boulder County website” with “the County’s website”; “Land Use Code” with “this Code”; and “a FDP” with “an FDP” to be consistent with the rest of the Code. Other minor punctuation issues should also be fixed, as detailed below.

4-403.B.1 (website language)

1. The most current Official Map and supporting data shall be on file in the County Engineer’s Office in electronic format, available for public inspection during normal business hours, with electronic and paper copies available upon request. The Official Map must also be available to the public on the Boulder County’s website.

4-404.B.2 (“this Code” language)

2. Construction of new temporary buildings (either residential or non-residential), unless the County Engineer reviews and approves a specific location in the Floodway in conjunction with a Special Event as defined in the Multimodal Transportation Standards, a Group Gathering / Special Event as defined in this Code ~~the Land Use Code~~, or another temporary activity permitted by county regulations;

4-404.B.13 and 4-404.B.14 (fix list punctuation)

13. New or expanded Critical Facilities located on land lower than 6,000 feet in elevation; ~~and~~
14. Any encroachment (including filling and grading) that would adversely affect the efficiency of the Floodway or change the direction of flow, unless it conforms with section 4-404(C);~~;~~

4-404.2.B.1.b and 4-404.2.B.1.c (fix list punctuation)

- b. A narrative describing the work to be performed; ~~and~~
- c. A location map, showing the specific areas and property(ies) where the work will be performed; and:

4-404.2.B.3.b (add list punctuation)

- b. Description and locations of any proposed site, filling, dredging, grading, and/or channel improvements;

4-404.2.B.4.a.vii (add list punctuation)

- (i) existing buildings;

4-405.D.3 (“Code” capitalization)

- 3. Improvements to existing Critical Facilities that are determined to be Substantial Improvements require that the entire facility (including attendant utility and sanitary facilities) be elevated to the Boulder County FPE or, if not prohibited elsewhere in this Code, be retrofitted such that the building is watertight with walls substantially impermeable to the passage of water and with structural components having the capability of resisting hydrostatic and hydrodynamic loads, including the effects of buoyancy.

4-406.D (“an FDP” correction)

- D. Any determination by the County Engineer to approve, conditionally approve, or deny an FDP must be in writing and mailed or otherwise provided to the applicant.

4-407.A (website language)

- A. In the event that the County Engineer determines that an Individual FDP application for any development in the Floodway meets the applicable standards for approval, within five business days of permit issuance the County Engineer must publish a notice of the proposed use and the permit issuance on the Boulder County’s website and transmit a copy of the notice to property owners adjacent to the subject property as well as a description of the process for appealing the decision to the Board of Adjustment.

4-410 (remove gender-specific language)

All approved Individual FDPs are subject to final inspection by the County Engineer or his designee to verify that all conditions of approval have been satisfied.

4-413.C.2.a (erroneous parentheses)

- (i) {Relocation is subject to other provisions of this Code, including without limitation setback and zoning requirements.
- (ii) {Relocation to less hazardous locations is strongly encouraged, but not required.

4-415 (“this Code” language)

Certain terms used in this Article 4-400 are derived from FEMA and/or CWCB regulations. The federal and state definitions of these terms may not correspond precisely to county definitions of the same or similar terms as used elsewhere in this Code the Land Use Code and related local regulations such as the Building Code. ...

4-802. Clarify Site Plan Review Trigger for Projects Requiring an Individual FDP

Currently, Article 4-802 requires all projects requiring an individual FDP to go through Site Plan Review (SPR) unless the individual FDP is the only trigger for SPR, in which case the Director may waive or exempt SPR if there are no conflicts with the SPR review criteria. Staff recommends clarifying which types of projects will likely be exempt for SPR if an individual FDP is the only SPR trigger.

A. Site Plan Review shall be required for (unless not required or waived pursuant to sections B and C below):

...

8. Any development or earthwork requiring an Individual Floodplain Development Permit.

...

B. Site Plan Review shall not be required for:

...

6. Any development or earthwork eligible for a General Floodplain Development Permit.

7. Any development or earthwork requiring an Individual Floodplain Development Permit, so long as the Community Planning & Permitting Director finds no conflicts with the standards listed in Article 4-806 of this Code, such as projects that do not change building footprints or grading that does not otherwise require SPR.

...

C. Site Plan Review may be waived for the following circumstances if the Community Planning & Permitting Director determines that there is no potential for any significant conflict with the criteria listed in Article 4-806 of this Code:

...

9. Any development or earthwork requiring an Individual Floodplain Development Permit for which the Director does not exempt Site Plan Review per 4-802.B.7. above.