BERNALILLO COUNTY

BOARD OF COUNTY COMMISSIONERS

ORDINANCE NO. 2016-29

AN ORDINANCE AMENDING BERNALILLO COUNTY CODE, CHAPTER 38 ARTICLE II, FLOOD DAMAGE PREVENTION, SECTION 101

ARTICLE II

DIVISION 1. - GENERALLY

Sec. 38-31. - Purpose of article.

The regulations and restrictions of this article are designed to promote the public health, safety, and general welfare and/or minimize public and private losses due to flooding in flood hazard areas as shown on the flood insurance rate map.

(Ord. No. 04-4, 2-24-04; Ord. No. 2008-10, 8-26-08, eff. 9-25-08)

The following words, terms and phrases, when used in this article, shall have the meanings ascribed to them in this section, except where the context clearly indicates a different meaning:

Appeal means a request for a review of the county floodplain administrator's interpretation of any provision of this article or a request for a variance.

Area of shallow flooding means a designated AO or AH zone on a community's flood insurance rate map (FIRM) with a one percent or greater annual chance of flooding to an average depth of one to three feet where a clearly defined channel does not exist, where the path of flooding is unpredictable, and where velocity flow may be evident. Such flow is characterized by ponding or sheet flow.

Area of special flood hazard is the land in the floodplain within a community subject to a one percent or greater chance of flooding in any given year. The area may be designated as Zone A on the Flood Hazard Boundary Map (FHBM). After detailed rate making has been completed in preparation for publication of the FIRM, Zone A usually is refined into Zones A, AO, AH, A1—30, AE, A99, AR, AR/A1—30, AR/AE, AR/AO, AR/AH, AR/A, VO, V1—30, VE or V.

Base flood means the flood having a one percent chance of being equaled or exceeded in any given year.

Base flood elevation (BFE) means the elevation shown on the Flood Insurance Rate Map (FIRM) and found in the accompanying Flood Insurance Study (FIS) for Zones A, AE, AH, A1—A30, AR, V1—V30, or VE that indicates the water surface elevation resulting from the flood that has a 1 percent chance of equaling or exceeding that level in any given year - also called the base flood.

Basement means any area of the building having its floor sub-grade (below ground level) on all sides.

Critical feature means an integral and readily identifiable part of a flood protection system, without which the flood protection provided by the entire system would be compromised.

Development means any manmade change to improved or unimproved land including, but not limited to, buildings or other structures on the land, mining, filling, paving, excavation, or drilling operations or storage of equipment or materials located within the area of special flood hazard.

Elevated building means a nonbasement building:

(1) Built, in the case of a building in zones A1—30, A, AO, AH, B, and C to have the top of the elevated floor elevated above the ground by means of pilings, columns (posts and piers), or shear walls parallel to the flow of the water; and

(2) Adequately anchored so as not to impair the structural integrity of the building during a flood of up to the magnitude of the base flood. In the case of zones A1—30, A, A99, AO, AH, B, and C the term "elevated building" also includes a building elevated by means of fill or solid foundation perimeter walls with openings sufficient to facilitate the unimpeded movement of floodwaters.

Existing construction means, for the purposes of determining rates, structures for which the "start of construction" commenced before the effective date of the FIRM, or before January 1, 1975, for FIRMs effective before that date. The term "existing construction" may also be referred to as "existing structures."

Existing structures. See "existing construction."

Existing manufactured home park or *subdivision* means a manufactured home park or subdivision for which the construction of facilities for servicing the lots on which the manufactured homes are to be affixed (including, at a minimum, the installation of utilities, the construction of streets, and either final site grading or the pouring of concrete pads) is completed before the effective date of the floodplain management regulations adopted by a community.

Expansion to an existing manufactured home park or *subdivision* means the preparation of additional sites by the construction of facilities for servicing the lots on which the manufactured homes are to be affixed (including the installation of utilities, the construction of streets, and either final site grading or the pouring of concrete pads).

Flood or *flooding* means a general and temporary condition of partial or complete inundation of normally dry land areas from:

(1) The overflow of inland waters.

(2) The unusual and rapid accumulation or runoff of surface waters from any source.

Flood elevation study means an examination, evaluation and determination of flood hazards and, if appropriate, corresponding water surface elevations, or an examination, evaluation and determination of mudslide (i.e., mudflow) and/or flood-related erosion hazards.

Flood insurance rate map (FIRM) means the official map of a community, on which the Federal Emergency Management Agency has delineated both the areas of special flood hazards and the risk premium zones applicable to the community.

Flood insurance study. See "flood elevation study."

Flood protection system means those physical structural works for which funds have been authorized, appropriated and expended, and which have been constructed specifically to modify flooding in order to reduce the extent of the areas within the community subject to a special flood hazard, and the extent of the depths of associated flooding. Such a system typically includes dams, reservoirs, levees or dikes. These specialized flood modifying works are those constructed in conformance with sound engineering standards.

Floodplain or *floodprone area* means any land area susceptible to being inundated by water from any source. See the definition of flooding.

Floodplain administrator means an assigned public official certified in floodplain administration per NM State statute 3-18-7 NMSA 1978

Flood proofing means any combination of structural and non-structural additions, changes, or adjustments to structures which reduce or eliminate flood damage to real estate or improved real property, water and sanitary facilities, structures and their contents.

Floodway means the channel of a river or other watercourse and the adjacent land areas that must be reserved in the order to discharge the base flood without cumulatively increasing the water surface elevation more than a designated height.

Functionally dependent use means a use which cannot perform its intended purpose unless it is located or carried out in close proximity to water. The term includes only docking facilities, port facilities that are necessary for the loading and unloading of cargo or passengers, and ship building and ship repair facilities, but does not include long-term storage or related manufacturing facilities.

Highest adjacent grade means the highest natural elevation of the ground surface prior to construction next to the proposed walls of a structure.

Historic structure means any structure that is:

(1) Listed individually in the National Register of Historic Places (a listing maintained by the Department of Interior) or preliminarily determined by the Secretary of the Interior as meeting the requirements for individual listing on the National Register;

(2) Certified or preliminarily determined by the Secretary of the Interior as contributing to the historical significance of a registered historic district or a district preliminarily determined by the Secretary to qualify as a registered historic district;

(3) Individually listed on a state inventory of historic places in states with historic preservation programs which have been approved by the Secretary of Interior; or

(4) Individually listed on a local inventory or historic places in communities with historic preservation programs that have been certified either:

a. By an approved state program as determined by the Secretary of the Interior or;

b. Directly by the Secretary of the Interior in states without approved programs.

Levee means a manmade structure, usually an earthen embankment, designed and constructed in accordance with sound engineering practices to contain, control or divert the flow of water so as to provide protection from temporary flooding.

Levee system means a flood protection system which consists of levees and associated structures, such as closure and drainage devices, which are constructed and operated in accordance with sound engineering practices.

Lowest floor means the lowest floor of the lowest enclosed area, including the basement. An unfurnished or flood-resistant enclosure, usable solely for parking of vehicles, building access, or storage in an area other than a basement area, is not considered a building's lowest floor, provided that such enclosure is not built so as to render the structure in violation of the applicable nonelevation design requirement of section 60.3 of the National Flood Insurance Program regulations.

Manufactured home means a structure transportable on one or more sections, which is built on a permanent chassis and is designed for use with or without a permanent foundation when connected to the required utilities. The term "manufactured home" does not include recreational vehicles.

Manufactured home park or *subdivision* means a parcel (or contiguous parcels) of land divided into two or more manufactured home lots for rent or sale.

Mean sea level. Effective November 19, 2003 the mean sea level means for purposes of the National

Flood Insurance Program, the National American Vertical Datum of 1988 (NAVD '88) to which base flood elevations shown on the community's flood insurance rate map are referenced.

Mobile home. See "manufactured home."

New construction means, for the purpose of determining insurance rates, structures for which the "start of construction" commenced on or after the effective date of an initial FIRM or after December 31, 1974, whichever is later, and includes any subsequent improvements to such structures. For floodplain management purposes, "new construction" means structures for which the "start of construction" commenced on or after the effective date of a floodplain management regulation adopted by a community and includes any subsequent improvements to such structures.

New manufactured home park or *subdivision* means a manufactured home park or subdivision for which the construction of facilities for servicing the lots on which the manufactured homes are to be affixed (including at a minimum, the installation of utilities, the construction of streets, and either final site grading or the pouring of concrete pads) is completed on or after the effective date of floodplain management regulations adopted by a community.

Recreation vehicle means a vehicle which is (i) built on a single chassis; (ii) 400 square feet or less when measured at the largest horizontal projections; (iii) designed to be self-propelled or permanently towable by a light duty truck; and (iv) designed primarily not for use as a permanent dwelling but as temporary living quarters for recreational, camping, travel, or seasonal use.

Special flood hazard area. See "area of special flood hazard."

Start of construction means substantial improvement and means the date the building permit was issued, provided the actual start of construction, repair, reconstruction, placement, or other improvement was within 180 days of the permit date. The actual start means either the first placement or permanent construction of a structure on a site, such as the pouring of slab or footings, the installation of piles, the construction of columns, or any work beyond the stage of excavation; or the placement of a manufactured home on a foundation. Permanent construction does not include land preparation, such as clearing, grading and filling; nor does it include the installation of streets and/or walkways; nor does it include excavation for basement, footings, piers or foundations or the erection of temporary forms; nor does it include the installation on the property of accessory buildings, such as garages or sheds not occupied as dwelling units or not part of the main structure.

Structure means a walled and roofed building, a mobile home, or a gas or liquid storage tank, that is principally located above the ground.

Substantial improvements means any repair, reconstruction, or improvement of a structure, the cost of which equals or exceeds 50 percent of the market value of the structure either:

(1) Before the improvement or repair is started, or

(2) If the structure has been damaged and is being restored, before the damage occurred.

For the purpose of this article, substantial improvement is considered to occur when the first alteration of any wall, ceiling, floor, or other structural part of a structure commences, whether or not that alteration affects the external dimensions of the structure. Exception: Any project for improvement of a structure to comply with existing state or local health, sanitary, safety, and building code specifications which are solely necessary to ensure safe living conditions and any alteration of a structure listed in the National Register of Historic Places or in the state inventory of historic places are exempted from the definition of the term "substantial improvement."

Substantial damage means 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.

Variance means a grant of relief from the requirements of this article which permits construction in a manner that would otherwise be prohibited by this article.

Violation means the failure of a structure or other development to be fully compliant with the community's floodplain management regulations. A structure or other development without the elevation certificate, other certifications, or other evidence of compliance required in sections 38-71(b)(1), 38-72, 38-101, and 38-102 is presumed to be in violation until such time as that documentation is provided.

Water surface elevation. Effective November 19, 2003 the water surface elevation means the height, in relation to the National American Vertical Datum of 1988 (NAVD '88) for floods of various magnitudes and frequencies in the floodplains of riverine areas.

(Ord. No. 04-4, 2-24-04; Ord. No. 2008-10, 8-26-08, eff. 9-25-08)

Cross reference— Definitions generally, § 1-2.

Sec. 38-33. - Penalty for violation of article.

Except as otherwise provided in this article, violations of this article are punishable as provided in Chapter 1, section 1-6 of the Bernalillo County Code.

(Ord. No. 04-4, 2-24-04)

Sec. 38-34. - Interpretation of article and conflicting provisions.

The regulations, restrictions and requirements of this article shall be held to be the minimum standards to carry out the purpose of this article. This article is not intended to interfere with, abrogate, or annul any easement, covenant or other agreement between parties or other valid ordinances. Where this article imposes a greater restriction upon the use of land or building, or upon the height and method of construction of a building than is imposed by other rules, regulations, easements, covenants, agreements or ordinances, the provisions of this article shall control.

(Ord. No. 04-4, 2-24-04)

Sec. 38-35. - Methods and provisions for achieving purpose of article.

In order to accomplish its purpose, this article includes methods and provisions for:

(1) Restricting or prohibiting uses which are dangerous to health, safety, and property due to water or erosion hazards; or which result in damaging increases in erosion or in flood heights or velocities.

(2) Requiring that uses vulnerable to floods, including facilities which serve such uses, be protected against flood damage at the time of initial construction.

(3) Controlling the alteration of natural floodplains, stream channels, and natural protective barriers, which help accommodate or channel floodwaters.

(4) Controlling, filling, grading, and other development which may increase flood damage.

(5) Preventing or regulating the construction of flood barriers which will unnaturally divert floodwaters or which may increase flood hazards in other areas.

(Ord. No. 04-4, 2-24-04)

Secs. 38-36—38-70. - Reserved.

DIVISION 2. - ADMINISTRATION AND ENFORCEMENT

Sec. 38-71. - Floodplain Administrator; creation of position; duties and responsibilities.

(a) Pursuant to NM state statute 3-18-7 NMSA 1978

There is hereby created by the county the position of county floodplain administrator to administer and implement this article by granting or denying development permit applications in accordance with Bernalillo County and State of New Mexico codes, rules, ordinances and statutes.

(b) The floodplain administrator shall enforce this article, and, in addition thereto and in furtherance thereof, shall:

(1) Review all applications for development permits to assure sites are reasonably safe from flooding and to determine:

a. That the permit requirements of this article have been satisfied.

b. That all necessary permits have been obtained from those federal, state or local governmental agencies from which prior approval is required.

c. Whether or not the proposed development adversely affects the flood-carrying capacity of the area of special flood hazard. For the purpose of this article the expression "adversely affects" means damage to adjacent properties because of rises in flood stages attributed to physical changes of the channel, arroyo and adjoining areas.

1. If it is determined that there is no adverse effect, then the permit shall be granted consistent with the provisions of this article

2. If it is determined that there is an adverse effect, then flood damage mitigation measures shall be made a condition of the permit.

(2) Obtain, review and reasonably utilize any base flood elevation data and floodway data available from a federal, state or other source until base flood elevation data is made available by the federal insurance administrator, in order to carry out the provisions of this article.

(3) Obtain and maintain records of the actual elevation, in relation to mean sea level, of the lowest habitable floor, including the basement, of all new or substantially improved structures.

(4) Obtain and maintain records of actual elevations, in relation to mean sea level, to which structures have been floodproofed and keep the floodproofing certifications required by this article.

(5) Notify adjacent communities, the state and other affected agencies prior to any alterations or relocations of a watercourse, and submit evidence of such notification to the federal insurance administrator.

(6) Require that maintenance is provided within the altered or relocated portion of watercourse so that the flood-carrying capacity is not diminished.

(7) Make interpretations and determine, when needed, the exact location of the boundaries of the areas of special flood hazards in case of conflict between a boundary shown on the flood hazard boundary map and actual field conditions.

(8) Review all subdivision proposals and other proposed new development, including manufactured home parks and subdivisions for compliance with the provisions of this article and to ensure that the proposals are reasonably safe from flooding.

(9) 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 more than one foot at any point within the community.

(Ord. No. 04-4, 2-24-04; Ord. No. 2008-10, 8-26-08, eff. 9-25-08, Ord. No. 2012-17, 8-14-12)

Sec. 38-72. - Development permits.

(a) A development permit shall be obtained before construction of development begins within any area of special flood hazard as shown on the flood insurance rate map.

(b) An application for a development permit (same as building permit) shall be made to the county building section. The applicant shall submit to the county administrator plans drawn to scale showing the nature, location, dimensions and elevations of the area to be developed, existing and/or proposed structures, fill, storage of materials, drainage facilities and the location of the foregoing.

(c) The plans mentioned in subsection (b) of this section shall specifically include the following information:

(1) Elevation, in relation to mean sea level, of the lowest floor, including the basement, of all structures.

(2) Elevation, in relation to mean sea level, to which any structure has been floodproofed.

(3) Certification by a registered professional engineer that the floodproofing methods for any nonresidential structure meet the floodproofing criteria set forth in section 38-102(2)c.

(4) Description of the extent to which any watercourse will be altered or relocated as a result of proposed development.

(d) Fees. An application for a development permit shall be accompanied by a filing fee in accordance with the following schedule:

(1) Twenty dollars for new buildings of 1,000 square feet or more, or additions of 1,000 square feet or more to existing buildings.

(2) Ten dollars for new buildings of less than 1,000 square feet, additions of less than 1,000 square feet to existing buildings, or for the erection of structures other than buildings.

(Ord. No. 04-4, 2-24-04)

Sec. 38-73. - Variances and appeals.

(a) In passing upon applications for variances and appeals, the county floodplain administrator shall consider all technical evaluations, all relevant factors, standards specified in other sections of this article and:

(1) The danger that materials may be swept onto other lands to the injury of others;

(2) The danger of life and property due to flooding or erosion damage;

(3) The susceptibility of the proposed facility and its contents to flood damage and the effect of such damage on the individual owner;

(4) The importance of the services provided by the proposed facility to the community;

(5) The availability of alternative locations for the proposed use which are not subject to flooding or erosion damage;

(6) The compatibility of the proposed use with existing and anticipated development;

(7) The relationship of the proposed use to the comprehensive and floodplain management program of that area;

(8) The safety of access to the property in times of flood for ordinary and emergency vehicles;

(9) The expected heights, velocities, duration, rate of rise, and sediment transport of the floodwaters and the effects of wave action, if applicable at the site; and

(10) The costs of providing governmental services during and after flood conditions, including maintenance and repair of public facilities such as sewer, gas, electrical, water system, and streets and bridges.

(b) The county floodplain administrator shall maintain the records of all appeal actions, including technical information, and report any variances to the Federal Insurance Administration upon request.

(c) Conditions for a variance are as follows:

(1) Generally, variances may be issued for new construction and substantial improvements to be erected on a lot of one-half acre or less in size, contiguous to, and surrounded by, lots with existing structures constructed below the base flood level, and not in a designated floodway, providing items in subsection (a) of this section have been fully considered. As the lot size increases beyond the one-half acre, the technical justification required for issuing the variances increases.

(2) Variances may be issued for the reconstruction, rehabilitation or restoration of structures listed on the state cultural properties register, without regard to the procedures set forth in the remainder of this division.

(3) Variances shall not be issued within any designated floodway if any increase in flood levels or adverse realignment during the base flood discharge would occur as a result of allowing such discharge variances.

(4) Variances shall only be issued upon a determination that the variance is the minimum penalty, considering the flood hazard, to afford relief.

(Ord. No. 04-4, 2-24-04)

Secs. 38-74—38-100. - Reserved.

DIVISION 3. - PROVISIONS FOR FLOOD HAZARD REDUCTION

SEC. 38-101. - GENERAL STANDARDS.

For development in all areas of special flood hazards, the following standards must be complied with:

(1) *Anchoring.* 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) *Construction materials and methods.* All new construction and substantial improvements shall be constructed:

a. With materials and utility equipment resistant to flood damage; and

b. Using methods and practices that minimize flood damage.

(3) *Utilities.*

a. All new and replacement water supply systems shall be designed to minimize or eliminate infiltration of floodwaters into the system.

b. New and replacement sanitary sewerage systems shall be designed to minimize or eliminate infiltration of floodwaters into the systems and discharge from the systems into floodwaters.

c. Onsite waste disposal systems shall be located to avoid impairment to them or contamination from them during flooding.

All new construction or substantial improvements shall be constructed with electrical, heating, plumbing, ventilation 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.

(4) *Subdivision proposals in special flood hazard areas.* Subdivision proposals in special flood hazard areas shall conform to the following:

a. All subdivision proposals shall be consistent with the need to minimize flood damage and shall be reasonably safe from flooding.

b. All subdivision proposals shall have public utilities and facilities such as sewer, gas, electrical and water systems located and constructed to minimize flood damage.

c. All subdivision proposals shall have adequate drainage provided to reduce exposure to flood damage.

d. Base flood elevation data shall be provided for subdivision proposals and other proposed development which contain at least 50 lots or five acres, whichever is less.

(5) *Floodways.* Located within areas of special flood hazard established by the Federal Emergency Management Agency (FEMA) in the current report entitled "The Flood Insurance Study (FIS), Bernalillo County, New Mexico and Incorporated Areas" dated November 4, 2016 and accompanying Flood Insurance Rate Maps (FIRMs) dated September 23, 2008, August 16, 2012 and November 4, 2016, or any other subsequent study, are areas designated as floodways. Since the floodway is an extremely hazardous area due to the velocity of floodwaters which carry debris, potential projectiles and erosion potential, the following provisions shall apply:

a. Encroachments are prohibited, including fill, new construction, substantial improvements and other developments unless certification by a registered professional engineer is provided demonstrating that encroachments shall not result in any increase in flood levels during occurrence of the base flood discharge.

b. If subsection (5)a. of this section is satisfied, all new construction and substantial improvements shall comply with all applicable flood hazard reduction provisions of this section.

c. Prohibit placement of any mobile homes, except which meet the requirements of section 38-102(4).

(6) *Standards of areas of shallow flooding (AO and AH zones).* Located within the areas of special flood hazard established by "The Flood Insurance Study (FIS) Bernalillo County, New Mexico and Incorporated Area" dated November 4, 2016 and accompanying Flood Insurance Rate

Maps (FIRMs) dated September 23, 2008, August 16, 2012 and November 4, 2016, or any other subsequent study, are areas designated as shallow flooding. These areas have special flood hazards associated with base flood depths of one to three feet where a clearly defined channel does not exist and where the path of flooding is unpredictable and indeterminate. Therefore, the following provisions apply:

a. All new construction and substantial improvements of residential structures must have the lowest floor, including the basement, elevated 1 foot or more above the base flood elevation or the highest adjacent grade at least 1 foot above the depth number specified in feet on the county flood insurance rate map (at least two feet if no depth number is specified).

b. All new construction and substantial improvements of nonresidential structures must:

1. Have the lowest floor, including the basement, elevated to or above the base flood elevation or the highest adjacent grade at least as high as the depth number specified in feet on the county flood insurance rate map (at least two feet if no depth is specified); or

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

c. A registered professional engineer shall submit a certification to the county floodplain administrator that the standards of this section, as proposed in section 38-102(1), (2) and (3) are satisfied.

d. Require within zones AH and AO, adequate drainage paths around structures on slopes, to guide floodwaters around and away from proposed structures.

(Ord. No. 04-4, 2-24-04; Ord. No. 2008-10, 8-26-08, eff. 9-25-08, Ord. No. 2012-17, 8-14-12)

Sec. 38-102. - Specific standards.

In all areas of special flood hazards where base flood elevation data has been provided, the following specific standards apply:

(1) *Residential construction.* New construction and substantial improvements of any residential structure shall have the lowest floor, including the basement, elevated to 1 foot or more above the base flood elevation.

(2) *Nonresidential construction.* New construction and substantial improvement of any commercial, industrial or other nonresidential structure shall either have the lowest floor, including the basement, elevated to or above the base flood elevations, or it, together with attendant utility and sanitary facilities shall:

a. Be floodproofed so that below the base flood level the structure is watertight with walls substantially impermeable to the passage of water;

b. Have structural components capable of resisting hydrostatic and hydrodynamic loads and effects of buoyancy; and

c. Be certified by a registered professional engineer that the standards of this subsection are satisfied and that the design and methods of construction are in accordance with acceptable standards of practice as outlined in this subsection.

(3) *Enclosures.* New construction and substantial improvements, with fully enclosed areas below the lowest floor that are subject to flooding, shall be designed automatically to 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 meet or exceed the following minimum criteria:

a. A minimum of two openings on separate walls having a total net area of not less than one 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 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.

(4) *Manufactured homes.*

a. All manufactured homes to be placed or substantially improved within Zone A shall be installed using methods and practices which minimize flood damage. For the purpose of this subsection, 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.

b. Manufactured homes to be placed or substantially improved within Zones AH and AE on the community's FIRM (i) outside of a manufactured home park or subdivision, (ii) in a new manufactured home park or subdivision, (iii) in an expansion to an existing manufactured home park or subdivision, or (iv) in an existing manufactured home park or subdivision on which a manufactured home has incurred "substantial damage" as a result of a flood, shall be elevated on a permanent foundation such that the lowest floor of the manufactured home is elevated to or above the base flood elevation and be securely anchored to an adequately anchored foundation system to resist flotation, collapse, and lateral movement.

c. Manufactured homes placed or substantially improved on sites in an existing manufactured home park or subdivision within Zones AH and AE on the community's FIRM that are not subject to the provisions of paragraph (4) of this section shall be elevated so that either:

1. The lowest floor of the manufactured home is at or above the base flood elevation, or

2. The manufactured home chassis is supported by reinforced piers or other foundation elements of at least equivalent strength that are no less than 36 inches in height above grade and be securely anchored to an adequately anchored foundation system to resist flotation, collapse, and lateral movement.

(5) *Recreational vehicles.* Recreational vehicles placed on sites within Zones AH and AE shall either (i) be on the site for fewer than 180 consecutive days, or (ii) be fully licensed and ready for highway use, or (iii) meet the permit requirements of these regulations, and the elevation and anchoring requirements for "manufactured homes" in paragraph (4) of this section. 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.

(Ord. No. 04-4, 2-24-04; Ord. No. 2008-10, 8-26-08, eff. 9-25-08, Ord. No. 2012-17, 8-14-12)

Secs. 38-103—38-140. - Reserved.

ARTICLE III

DIVISION 1. - GENERALLY

Sec. 38-141. - Purpose and intent of article.

It is the purpose of this article to promote the public health, safety and general welfare, and to minimize public and private losses due to flooding by provisions designed:

(1) To establish policies, procedures, criteria and requirements to complement and to supplement Article II of this chapter for the assistance and guidance of county officials, county staff and all persons and entities within the jurisdiction of the county.

(2) As to flood control, to:

a. Prevent the loss of or injury to human life.

b. Minimize flood damages to public and private property.

c. Provide for timely and effective construction and maintenance of flood control facilities.

(3) As to storm drainage, to:

a. Prevent the creation of public safety hazards and seek to eliminate existing problems.

b. Prevent, to the extent feasible, the discharge of storm runoff from public facilities onto private property.

c. Prevent the increased risk of damage to private property caused by storm runoff from other private property.

d. Coordinate with the MRGCD, AMAFCA and the City of Albuquerque the discharge of storm runoff into MRGCD and AMAFCA facilities and minimize impact on downstream facilities.

e. Provide a reasonable level of public health and convenience at reasonable cost.

f. Provide for timely and effective construction and maintenance of storm drainage facilities.

g. Design storm drainage facilities, which provide effective storm drainage and flood, control protection as well as promote quality of life and further other adopted county policies, including development of multiple use drainage facilities.

h. Improve the quality of storm runoff.

(4) As to erosion control, to:

a. Protect the hydraulic capacity of flood control and storm drainage facilities from losses due to sedimentation and degradation.

b. Preserve public health, safety and convenience from jeopardy due to erosion and sedimentation in private and public facilities of all types.

c. Preserve the quality of surface runoff.

(Ord. No. 04-4, 2-24-04)

Sec. 38-142. - Definitions.

The following words, terms and phrases, when used in this article, shall have the meanings ascribed to them in this section, except where the context clearly indicates a different meaning:

AMAFCA means the Albuquerque Metropolitan Arroyo Flood Control Authority.*BMP* means best management practice. Best management practices are schedules of activities, prohibitions or practices, maintenance procedures and other management practices to prevent or reduce the pollution of waters of the United States. BMPs also include treatment requirements, operating procedures, and practices to control runoff, spillage or leaks, sludge or waste disposal or drainage from raw material storage. With regard to construction these practices may include structural devices or nonstructural practices that are designed to prevent pollutants from entering water or to direct the flow of water.

Board of adjustment means board of adjustment as defined in the comprehensive zoning ordinance of the county, as may be amended from time to time.

Channel means any arroyo, stream, swale, ditch, diversion or watercourse that conveys storm runoff, including manmade facilities.

Channel stability means a condition in which a channel neither degrades to the degree that structures, utilities or private property are endangered, nor aggrades to the degree that flow capacity is significantly diminished as a result of one or more storm runoff events or moves laterally to the degree that adjacent property is endangered.

Channel treatment measure means a physical alteration of a channel for any purpose.

City means the City of Albuquerque.

Comprehensive plan means the Albuquerque/Bernalillo County Comprehensive Plan and amendments thereto.

Conceptual grading and drainage plan means a plan prepared in graphical format showing existing and proposed grading, drainage, control, flood control and erosion control information in sufficient detail to determine project feasibility.

Conservancy district engineer means the MRGCD's engineer or appointed representative.

County engineer means the engineering manager of the engineering division of the county public works department or his designee.

County surface water hydrologist means a staff professional engineer designated by the county engineer to exercise primary responsibility for drainage control, flood control and erosion control matters assigned to the office of the county engineer.

Design storm means a storm which deposits a stated amount of precipitation within a stated period over a defined area and which is used in calculating storm runoff and in designing drainage control, flood control and erosion control measures.

Developed land means any lot or parcel of land occupied by any structure intended for human occupation, including structures intended for commercial enterprise.

Developer means any individual, estate, trust, receiver, cooperative association, club, corporation, company, firm, partnership, joint venture, syndicate or other entity engaging in the platting, subdivision, filling, grading, excavating or construction of structures or facilities.

Downstream capacity means the ability of downstream major facilities to accept and safely convey runoff generated upstream from the 100-year design storm.

Drainage means storm drainage.

Drainage covenant means a legal document executed between a real property owner and the county and, in general, identifies, addresses and defines a drainage facility or facilities, maintenance, county's right of entry, demand for removal or repair, failure to perform by owner and emergency work by county, liability of county, indemnification, cancellation of agreement and release of covenant, assessments, notification, term, binding of property, changes and severability. The drainage covenant shall be in a form provided by the county.

Drainage management or treatment means the treatment and/or management of surface runoff from all storms up to and including a ten-year design storm.

Drainage management plan means a plan prepared and adopted by the county, city or AMAFCA which details the drainage controls required within a particular watershed, arroyo corridor or other designated drainage district. The drainage management plan shall comply with an arroyo corridor plan if one has been adopted.

Drainage plan means a short, detailed plan prepared in graphical format with or on a detailed grading plan addressing onsite and off-site drainage control, flood control and erosion control issues for lots or parcels of less than five acres.

Drainage report means a comprehensive analysis of the drainage, flood control and erosion control constraints on and impact resulting from a proposed platting, development or construction project.

Drainage right-of-way means a public right-of-way acquired whether in fee or in easement, by the city, county, AMAFCA, the MRGCD, or the state for the primary purpose of handling storm drainage.

East Mountain Area means that portion of the county between the eastern limit of the county and the eastern limit of the city, which is more particularly described as that portion of the county east of the east line of Township 4 East of the New Mexico Principal Meridian and as such line is projected through land grant boundaries (being 24 miles east of the New Mexico Principal Meridian).

EPA means United States Environmental Protection Agency.

Erosion control means treatment measures for the prevention of damages due to soil movement and to deposition.

Erosion control plan means a plan for the mitigation of damages due to soil erosion and to deposition.

Flood control means the treatment measures necessary to protect life and property from the 100-year design storm runoff.

Flood hazard area means an area subject to inundation from the 100-year design storm runoff.

Floodway means the channel of a river, arroyo or other watercourse and adjacent land areas that must be reserved in order to safely discharge the 100-year design storm runoff.

Freeboard means that part of the drainage channel that is designed to contain the wave action of the 100-year design storm.

Fully developed watershed means a hydrologic condition in which all areas upstream and downstream of a point in question are assumed completely developed, including any undeveloped areas which are assumed to be developed in accordance with mid-range development densities as established by the comprehensive plan, appropriate area plans or sector plans, adopted facilities master plans and the hydraulic and hydrologic standards established by this article.

Grading plan means a plan describing the existing topography and proposed grading, including retaining wall locations and details, interfaces with adjacent properties, streets, alleys and channels, referenced to

mean sea level (1929 or 1988 datum) such as city benchmark or NMSHTD benchmark, and showing sufficient contours, spot elevations and cross sections to allow a clear understanding by reviewers, contractors and inspectors.

Maintenance means the cleaning, shaping, grading, repair and minor replacement of drainage, flood control and erosion control facilities, but not including the cost of power consumed in the normal operation of pump stations.

Major arroyo means any channel whose watershed exceeds 320 acres in a 100-year design storm, whether such watershed is in its natural or unaltered state or has been altered by development, runoff diversions or detention facilities.

Major facility means any facility, including a street or alley, which would collect, divert or convey a peak discharge of more than 50 cubic feet per second (50 cfs) or store two acre-feet or more of runoff in the event of a 100-year design storm.

Master planned facility means any drainage control, flood control or erosion control facility recommended in the Albuquerque Master Drainage Plan (1981), amendments thereto, or any voter approved general obligation bond financed drainage control, flood control or erosion control facility.

Minor facility means any facility which would collect, divert or convey a peak discharge of 50 cubic feet per second (50 cfs) or less, or store less than two acre-feet of runoff in the event of the 100-year design storm.

MRGCD means the Middle Rio Grande Conservancy District.

Multiple use facility means a drainage control, flood control or erosion control facility in which other secondary uses are planned or allowed including, but not limited to, recreation, open space, transportation and utility location.

NOI means notice of intent.

NPDES Phase II means National Pollution Discharge Elimination System, Phase II.

Nuisance waters means those waters leaving a site and entering a public street, which do not result from precipitation, such as landscape overwatering or car washing.

100-year design storm means that storm whose precipitation within a six-hour period and resulting runoff has a one percent chance of being equaled or exceeded in any given year. A special condition may require/allow use of storms of longer duration.

Project design swale (drainage ditch, borrow ditch or bar ditch) means a swale or ditch parallel to the driving surface to convey stormwater runoff from the street right-of-way.

Prudent line (erosion limit line) means that line which will not be disturbed by erosion, scour or meandering of a natural (unlined) arroyo, channel or watercourse over a period of 30 years and which will not be disturbed by a 100-year storm occurring at any time during the 30-year period. The prudent line shall be so located as to include all freeboard required to contain the wave action of the 100-year design storm.

Storm drainage system means arroyos, storm drains, roadways, culverts, bar ditches, ponds, pump stations, dams, detention ponds, retention ponds, inlets and appurtenant structures and other facilities which convey stormwater.

Stormwater means stormwater runoff, which is flow on the surface or in the subsurface that percolates from the ground resulting from precipitation.

Stormwater pollution prevention plan means the information and program required by EPA, NMED and/or

the county for construction phase stormwater management.

Stormwater quality control means the treatment methods necessary to protect and enhance the quality of stormwater.

Temporary drainage facility means a nonpermanent drainage control, flood control or erosion control facility constructed as part of a phased project or to serve until such time that a permanent facility is in place including, but not limited to, desilting ponds, berms, diversions, channels, detention ponds, retention ponds, bank protection and channel stabilization measures.

Ten-year design storm means that storm whose precipitation within a six-hour period and resulting runoff has a ten percent chance of being equaled or exceeded in any given year. A special condition may require/allow use of storms of longer duration.

Urbanized area means that area identified in the most current US Census as having a population in excess of 50,000 persons, or a density of 1,000 persons per acre or greater.

Watercourse means any river, creek, arroyo, canyon, draw or wash, or any other channel having definite banks and bed with visible evidence of the occasional flow of water.

Zoning administrator means the official designated to enforce the county comprehensive zoning ordinance, as may be amended from time to time.

(Ord. No. 04-4, 2-24-04)

Sec. 38-143. - Violations of article; procedures for remedy; penalty.

(a) *Notice of violation; noncompliance; abatement by county; lien.* Where, after investigation, a notice has been issued by the county engineer to the owner of the property on which a violation has occurred and the order is not complied with, within such reasonable time as may be prescribed by the county engineer, or if the responsible party or violator cannot be found or determined, the county engineer may cause such remedies as are necessary to be made. The reasonable cost of such remedies shall constitute a lien against the property on which the violation occurred and was remedied. The lien shall be imposed and foreclosed in the manner provided in NMSA 1978, Sections 3-36-1—3-36-6.

(b) *Notice of violation; noncompliance; abatement by county; other remedies.* Where, after investigation, a notice has been issued by the county engineer to the owner of the property on which a violation has occurred and the order is not complied with, within such reasonable time as may be prescribed by the county engineer, the county may revoke or refuse to renew or issue any permit to the violator and/or the property owner until such remedies as are necessary are made, or if remedy is made by the county, until the cost of such remedies is paid to the county.

(c) *Service of notice; publication; right to appeal.* It shall be sufficient notice under the provisions of this section to make delivery of such notices by registered mail. If the name and address of the owner cannot be reasonably ascertained from the current county tax rolls and the premises are unoccupied, it shall be sufficient notice under this section to publish the notice in English in a newspaper of general circulation in the county once a week for four consecutive weeks. The owner of the property shall have the right to appeal pursuant to section 38-172

(d) *Penalty.* Except as otherwise provided in this article, violations of this article are punishable as provided in Chapter 1, section 1-6 of the Bernalillo County Code.

(Ord. No. 04-4, 2-24-04)

Sec. 38-144. - Interpretation of article.

In the interpretation and application of this article, all provisions shall be:

(1) Considered as minimum requirements;

(2) Liberally construed in favor of the county;

(3) Deemed neither to limit nor repeal any other powers granted under state statutes; and

(4) Deemed not to limit any ordinance unless expressly stated herein.

(Ord. No. 04-4, 2-24-04)

Sec. 38-145. - Warning and disclaimer of liability.

The degree of flood protection required by this article is considered reasonable for regulatory purposes and is based on scientific and engineering considerations. Larger floods can and will occur on rare occasions. Flood heights may be increased by manmade or natural causes. This article does not imply that land outside flood hazard areas or uses permitted within such areas will be free from flooding or flood damages. This article shall not create liability on the part of the county or on any officer or employee of the county for any flood damages that result from reliance on this article or any administrative decision lawfully made under this article.

(Ord. No. 04-4, 2-24-04)

Sec. 38-146. - Jurisdiction of article.

This article shall apply to all unincorporated lands within the county with respect to site development, land use changes, building permits, major or minor subdivisions, or replatting matters.

NPDES Phase II requirements for post-construction stormwater quality controls shall apply in the urbanized area of the county.

This article shall not apply to federal lands and reservations, and the city. This jurisdiction is not exclusive. In particular AMAFCA and the MRGCD, where applicable, share jurisdiction in matters of flood control and stormwater quality.

(Ord. No. 04-4, 2-24-04)

Sec. 38-147. - Stormwater quality protection.

(a) *Construction phase stormwater quality protection.* For all construction, development and redevelopment projects with land disturbances equal to or greater than one acre, including sites which disturb less than one acre but are part of a larger common plan of development, a stormwater pollution prevention plan in accordance with EPA NPDES Phase II regulations for construction site storm water runoff control and certification that a notice of intent has been submitted to the EPA shall be submitted to the county engineer, prior to the issuance of a grading or paving permit. This requirement is in addition to any other provisions of this article that may apply.

The stormwater pollution prevention plan shall outline the BMPs to be undertaken by the operator/owner of the project to protect stormwater quality during the construction phase of the project. These BMPs shall be maintained by the owner of the property. Inspection of these BMPs shall be made at a minimum once a week by the owner, and a log of this inspection shall be kept on-site for review by the county engineer. The county shall also inspect these BMPs on a periodic basis. These BMPs shall be subject to the approval of the county engineer.

(b) *Post-construction stormwater quality protection.* For all development and redevelopment projects with land disturbances equal to or greater than one acre, including sites which disturb less than one acre but are part of a larger common plan of development, that discharge into the county's storm drainage system, within the urbanized area of the county, post construction water quality BMPs are required. This requirement is in addition to any other requirements that may apply. These BMPs shall be subject to the

approval of the county engineer.

Maintenance responsibility of stormwater quality control facilities is the responsibility of the property owner up to the point where stormwater enters public facilities.
(Ord. No. 04-4, 2-24-04)

DIVISION 2. - ADMINISTRATION AND ENFORCEMENT

Sec. 38-171. - Generally.

(a) The design, construction and maintenance of all drainage control, flood control, erosion control and stormwater quality control facilities within the county shall be performed in accordance with procedures, criteria and standards formulated by the county engineer and in accordance with the policies established in this article or an adopted drainage management plan.

(b) All construction activities within the jurisdiction of the county shall conform to the requirements of the county engineer with respect to drainage control, flood control, erosion control and stormwater quality control. Original construction and modifications and/or additions to existing structures are excluded when they constitute less than 500 square feet in plan view and the county engineer determines that this change will not adversely affect other properties and/or will not alter, block or divert any arroyos, watercourses, swales, designated 1% annual chance floodplain or easements,

(1) Construction, grading or paving on any lot within the jurisdiction of the county shall not increase the damage potential to upstream, downstream or adjacent properties or public facilities. Damages shall be defined as those caused by flooding, erosion and sedimentation from the 100-year design storm and all smaller storms.

(2) During the months of July, August or September, any grading within or adjacent to a watercourse defined as a major facility shall provide for erosion control and the safe passage of the ten-year design storm runoff during the construction phase and until the permanent improvements are completed.

(3) Grading, cut, fill or importation of material in excess of 500 cubic yards or grading of any area of one acre or more, or any grading which will adversely affect other properties, arroyos, watercourses or easements shall conform to drainage control, flood control, erosion control and stormwater quality control policies and to standards, criteria and procedures established by the county engineer with respect to drainage, flood control, erosion control and stormwater quality control. A grading permit, issued by the county engineer, shall be required for projects involving more than 500 cubic yards of material or one acre or more in area. Applications for development of areas known to have been sanitary landfills shall be accompanied by a report which discusses potential health and soil mechanics problems and their solutions. Such reports shall be prepared by a state professional engineer competent in soil mechanics. The application processing fee and the grading permit fee shall be as shown in the attached fee schedule. Any fees applicable under this article shall be reviewed from time to time by the county manager and any changes to these fees shall be made by resolution of the board of county commissioners. The issuance of a grading permit by the county engineer does not relieve the owner/developer from obtaining any additional grading or fill permits that may be required by other county departments, agencies or governmental bodies. A grading permit may be issued for rough grading of large projects provided the applicant has made a written request and submitted and received approval of a conceptual grading & drainage plan for the project.

(4) Paving an area larger than 1,000 square feet shall require a paving permit. Applications for paving permits shall be accompanied by a drainage plan if deemed necessary by the county engineer. Repaving of existing paved areas in which no grading is planned is excluded. The application processing fee and the paving permit fee shall be as shown in the attached fee

schedule.

Editor's note— The attached fee schedules are not set out herein, but are on file and available for inspection in the offices of the County.

(5) The county engineer shall not issue a grading or paving permit unless the proposed grading or paving is in compliance with the policies of this article and the standards and criteria of the county engineer, as provided for by section 38-173. All construction activities within MRGCD land or rights-of-way shall conform to the requirements of the conservancy district engineer of the MRGCD.

(c) The county may participate with the private sector, other public bodies, and agencies operating within the jurisdiction of this policy in order to accomplish the goals and implement the policies adopted in this article. This includes, but shall not be limited to, the development and adoption of master plans, participation in the construction of projects, and exercising control through the planning, platting, zoning and permitting processes.

(d) It shall be the responsibility of the county engineer to produce, approve, make and retain records of all drainage plans, drainage reports, design analyses, design drawings, as-built drawings and maintenance schedules related to all drainage control, flood control, erosion control and stormwater quality control facilities constructed within county rights-of-way or easements.

(e) Application for all land use changes shall address drainage control, flood control, and erosion control in terms of the interaction of these parameters with other requirements and needs produced by the proposed land use changes, and shall comply with an adopted drainage management plan.

(f) Requests for building permits, site plan approval, or the platting of land for the purpose of major or minor subdivisions, and for replats, shall be accompanied by appropriate grading, drainage control, flood control, erosion control and stormwater quality control information. Drainage information requirements for building permits will be waived where a drainage report meeting the requirements of this article have been previously approved by the county or AMAFCA, and a copy of such report is filed with the county engineer. Drainage information requirements for bulk land plats will be waived, provided that plat language indicates that drainage information, meeting the requirements of this article and AMAFCA, if applicable, will be submitted prior to any subdivision.

(g) The county engineer shall not approve any plan or report pertaining to proposed construction, platting or other development where the proposed activity or change in the land affected would result in downstream capacity being exceeded. Downstream capacity is determined based on the assumption of fully developed watersheds. This assumption prevents the first come, first served approach where downstream development unduly constrains upstream development. Parameters used in the determination of downstream capacity include, but are not limited to:

(1) Channel stability and location of prudent line.

(2) Crossing structure hydraulic capacity.

(3) Reservoir capacity.

(4) Hydraulic capacity of street, storm sewer or channel.

(5) Public safety.

(6) Maintenance constraints.

Planned public storm drainage facilities are assumed as in place in determining downstream capacity, provided that construction funds are available and design has progressed to the point where capacity can be ascertained.

(h) Temporary facilities are only allowed and/or required on a case-by-case basis as determined by the

county engineer. The level of protection to be provided by temporary facilities shall be determined by considering:

(1) The likelihood and consequences of a failure.

(2) Length of time until permanent facilities will be in place.

The acceptance by the developer of maintenance responsibilities and legal liabilities.

(i) Requests for approvals of site development plans, building permits, major or minor subdivisions or replatting proposals to the county engineer shall be accompanied by drainage control, flood control and erosion control information and/or commitments. The particular nature, location and scope of the proposed development defines the degree of detail. One or more of the following levels of submittal may be required based on the following:

(1) *Conceptual grading and drainage plan.* A graphic representation of existing and proposed grading, drainage, flood control and erosion control information. The information should be of sufficient detail to determine project feasibility. The purposes of this plan are to check the compatibility of the proposed development within grading, drainage, flood hazard and erosion control constraints as dictated by on-site physical features as well as adjacent properties, streets, alleys and channels. Modifications to the comprehensive plan and the development of area plans, sector plans, site development plans and landscaping plans on tracts of five acres or more are appropriate applications of conceptual grading and drainage plans.

(2) *Drainage plan.* A short, detailed presentation required for approval of small, simple development approvals. Drainage plans are prepared with or on the detailed grading plan and address both on-site and off-site drainage control, flood control and erosion control issues. Drainage plans are required for building permits, minor subdivision less than six lots, site development plans and landscaping plans for development involving less than five acres.

(3) *Drainage report.* A drainage report is a comprehensive analysis of the drainage control, flood control and erosion control constraints on and impacts resulting from a proposed platting, development or construction project. Drainage reports are required for major subdivisions containing more than five lots or constituting five acres or more, platting or construction within a designated flood hazard area and for any platting or development adjacent to a major arroyo.

(4) *Erosion control plan.* An erosion control plan is usually incorporated into the drainage plan or drainage report. Erosion control plans address all phases of each project from initial grading through and including final occupancy. The ten-year design storm shall be used to determine the treatment measures necessary for the prevention of damage due to soil movement for the on-site area of development. Where an arroyo or watercourse abuts or traverses the site of development, or a development or subdivision proposes to discharge to any arroyo or watercourse, a more stringent criteria, including determination of the prudent line, may be appropriate and will be determined on a case-by-case basis by the county engineer. Phased projects require special attention. All construction projects, both public and private, within the jurisdiction of this article, unless specifically excluded, require an approved erosion control plan prior to the start of construction. The erosion control plan must address stormwater quality where the land disturbance is one acre or greater, or is part of a larger common plan of development.

(5) *Special provisions for East Mountain Area.*

a. Drainage reports and/or plans will not be required where the tract, lot or parcel is 40 acres or less and is subdivided into lots, tracts or parcels of five acres or more and is zoned strictly for single-family dwelling (R-1).

b. Drainage reports and/or plans will not be required where the tract, lot or parcel is five acres or less, and the total impervious area is 15 percent or less of the area of the tract, lot or

parcel. The impervious area shall include all existing improvements, proposed improvements and future improvements if applicable. Impervious areas are defined as that area not covered by grass or natural vegetation. Dirt, gravel and paved roads, streets, drives, walks, trials, play areas and areas of human activity shall be considered impervious. Roofs shall be considered impervious. Landscaping that is underlain by an impervious membrane (plastic) shall be considered impervious.

c. Drainage easements and/or dedicated rights-of-way shall be required for any arroyo, watercourse or storm drainage facility flowing through or adjacent to any lot, tract or parcel.

1. For an upstream drainage basin of ten acres or more, the minimum width of drainage easement or right-of-way for natural arroyos or watercourses shall include the top of each definable bank of the arroyo or watercourse and be set back from the top of each bank a horizontal distance equal to 1.2 times the difference in elevation between the top of each definable bank and the adjacent flowline of the greater. The minimum width shall be 50 feet. For an upstream drainage basin of ten acres or less the minimum width of drainage easement or right-of-way for natural arroyos or watercourse shall include the top of each definable bank of horizontal distance equal to 1.2 times the difference in elevation between the top of each definable bank and the adjacent flowline of the arroyo or watercourse, or the 100-year floodplain, whichever is greater. The minimum width shall be 25 feet for natural channels, arroyos or watercourses. It shall be ten feet for line channels where adequate maintenance and vehicular access is available.

2. The minimum width drainage easement or right-of-way for an improved drainage facility shall be defined as the width necessary to contain a trapezoidal concrete lined channel, having a bottom width of ten feet and two to one side slopes, designed to convey the full 100-year design storm, including necessary freeboard and also the outer limits of a maintenance road 12 feet wide on one side of the channel.

3. The centerline of any arroyo, watercourse or storm drainage facility requiring a drainage easement or right-of-way shall be located by field survey prior to platting or development.

The special provisions for the East Mountain Area are exclusive of the drainage requirements established in the county street standards (Ordinance No. 88-42).

(j) All drainage submittals shall be prepared under the direction of and signed by a registered professional engineer competent in surface hydrology and drainage, and shall include a statement that the engineer has personally inspected the land, and a statement as to whether it appears that grading, filling or excavation has occurred thereon since the existing contour map was prepared.

(k) Drainage control considerations specifically address safety, convenience and economics for both private property and public facilities.

(l) The county 100-year design storm is the 100-year six-hour storm as defined by the National Oceanic Atmospheric Administration (NOAA) and by the storm distributions for time and areas as developed by the city engineer of the City of Albuquerque, AMAFCA, and the county engineer, as applicable. The 100-year storm has a one percent probability of occurring in any year. Watersheds with times of concentration greater than six hours will require the use of the 100-year, 24-hour storm volumes and distributions. Detention basins with longer than six-hour evacuation times shall use a 24-hour or longer storm volume and distribution. Design circumstances may require larger or smaller storm frequencies or volumes. Examples are emergency spillways for dams and erosion control plans, respectively. The sources for rainfall data are current NOAA publications. When the need for other design storms is apparent, the county engineer will provide requirements concerning appropriate storms, frequencies and durations.

(m) The county engineer shall, within 21 calendar days after the submission to him of a request in writing for the approval of a plat, development plan, drainage submittal or exemption, approve or deny the request and mail a copy of his decision to the applicant. If the request is denied, the reasons for such denial shall be stated in writing. Appeal of such decisions is as provided in section 38-172

(Ord. No. 04-4, 2-24-04, Ord. No. 2012-17, 8-14-12)

Sec. 38-172. - Appeals from county engineer determinations.

An appeal of a determination of the county engineer may be made in the manner prescribed in this section:

(1) An appeal shall be made in writing and shall be filed in duplicate in the office of the county engineer on forms provided by the county engineer. Such appeal must set forth specifically wherein it is claimed there was an error or an abuse of discretion by this action, or where the decision is not supported by evidence in the matter. A filing fee of $40.00 shall accompany each appeal. When an appeal is withdrawn, the filing fee shall not be refunded.

(2) Any appeal not filed within 15 days after the rendition in writing of the decision appealed from shall be dismissed by the board of adjustment.

(3) Within ten days after the filing of the appeal, the county engineer shall transmit to the board of adjustment all papers involved in the proceedings, a copy of his findings and determination relative thereto, and one copy of the appeal. In addition, he may make and transmit to the board of adjustment such supplementary report as he may deem necessary to present clearly the facts and circumstances of the case.

(4) Upon receipt of the record, the board of adjustment shall set the matter for hearing and give notice by mail of the time, place and purpose thereof to the appellant, to the county engineer, zoning administrator and to any interested party who has requested in writing to be so notified. No other notice need be given.

(5) Upon hearing of such appeals, the board of adjustment may affirm the change or modify the ruling, decision or determination appealed from or, in lieu thereof, make such other or additional determination as shall deem proper in the premises.

(6) The decision of the board of adjustment upon the appeal shall be in writing, concurred in by a majority of the members present of the board of adjustment, which shall forthwith transmit a copy to the appellant and to the county engineer and zoning administrator. Any decision shall, in all instances, be the final administrative decision and shall be subject to judicial review as may be provided by law.

(Ord. No. 04-4, 2-24-04)

Sec. 38-173. - Rule change procedures; criteria and standards.

(a) Rules concerning procedures, criteria and standards shall be adopted, amended or abolished in compliance with the policies of this article and as provided by the procedures of this section.

(b) Proposed rule changes relating to procedures, criteria and standards pursuant to this article are initiated by the county engineer, or any person may submit such proposed rule changes to the county engineer. If a person other than an official of the county submits such a proposal, there may be a processing fee of up to $50.00 set by a rule of the county engineer.

(c) Prior to the adoption, amendment or repeal of any rule pursuant to this article (hereafter, rule change), the county engineer shall:

(1) Publish summary notice of the proposed rule change and solicit comments in a daily

newspaper of general circulation in the county and also where appropriate in trade, industrial or professional publications as will reasonably give public notice to an interested person;

(2) Send the proposed rule change to all applicable county departments, AMAFCA, the City of Albuquerque and MRGCD.

(3) Send the proposed rule change to any person or group filing written request for notice of all such rule changes. A fee may be charged those requesting notices to cover reasonable county costs.

(4) Solicit written comment on any proposed rule change for a period of 30 days from the date of its distribution and consider all comments before ruling on proposed rule changes.

(5) Upon adoption of a contested rule change, issue a concise statement of his principal reasons for the rule change and statement of positions rejected in adopting the rule change together with the reasons for the rejection. All persons who submit any writing to be considered in connection with the proposed rule change shall promptly be given a copy of the decision, by mail or otherwise.

(d) If a proposed rule change is approved by the county engineer after receiving comments, notice shall be posted in a conspicuous place in the city/county government center, and a reasonable effort shall be made to notify all interested parties. Proposed rule changes shall not take effect sooner than 30 days from posting of notice or sooner than 90 days from the original distribution for comment.

(e) In the event of an emergency, the chairman of the board of county commissioners may direct that rules concerning procedures, criteria or standards take effect immediately upon their posting and distribution. The chairman's finding of an emergency and brief statement of the reasons for this finding shall be incorporated in the emergency and brief statement of the reasons for this finding shall be incorporated in the emergency rule change. Upon adoption of an emergency rule change which change shall remain in effect for longer than 60 days, notice to the public shall be given within seven days, and opportunity for public comment shall be given in the manner required in this section for proposed rules.

(f) Appeal of the county engineer's rulemaking decisions is as provided in section 38-172. Regular rules, adopted under subsection (d) of this section, do not take effect until an appeal is decided if they are appealed prior to taking effect. Emergency rules adopted under subsection (e) of this section and regular rules which have taken effect prior to appeal are in effect until such time as they may be reversed by appeal action.

(g) Recommendations for changes to this section may be prepared by a county technical standards advisory council, as established by the county street standards, Ordinance 88-42 or the most current version of this ordinance, or the county engineer. Proposals for standards changes shall be forwarded to the county engineer for his recommendations when changes are prepared by the county technical standards advisory council. The county engineer shall then forward his recommendations either for or against the proposed change to the board of county commissioners for their approval or disapproval.

(Ord. No. 04-4, 2-24-04)

Sec. 38-174. - Inspections.

Whenever necessary to make an inspection to enforce any of the provisions of this article, the county engineer or his authorized representative may enter such premises at any reasonable time to inspect the premises or to perform any duty imposed upon him by this article; provided, however, that if such premises is occupied, he shall first present proper credentials and demand entry. If such premises is unoccupied, he shall first make a reasonable effort to locate the owner or other persons having charge or control of the premises and demand entry. If entry is refused or if the owner or other responsible person is not found, the county engineer or his authorized representative shall proceed to obtain a search warrant by filing a complaint made in the metropolitan court or district court upon oath or affirmation. The complaint shall:

(1) Set forth the particular premises, or portion thereof sought to be inspected;

(2) State that the owner or occupant of the premises, or portion thereof, has refused entry;

(3) State that inspection of the premises, or portion of the premises is necessary to determine whether it complies with the requirements of this article;

(4) Set forth the particular provisions of this article sought to be enforced;

(5) Set forth any other reason necessitating the inspection, including knowledge or belief that a particular condition exists in the premises or portion of the premises which constitutes a violation of this article; and

(6) State that the complainant is authorized by the county to make the inspection. Each inspector shall be furnished with an identification card signed by the county engineer indicating his authority and must present such card to the metropolitan court or district court for the purpose of this section, and to other persons, when requested to do so during the performance of his duty. No owner or occupant or any other person having charge, care or control of any premises shall fail or neglect, after proper demand is made as provided in this section, to promptly permit entry therein by the authorized inspector for the purpose of inspection and examination pursuant to this article.

(Ord. No. 04-4, 2-24-04)

Secs. 38-175—38-200. - Reserved.

DIVISION 3. - DESIGN STANDARDS

Sec. 38-201. - General provisions.

(a) The county is and shall remain an active participant in the National Flood Insurance Program. The county endorses the program goal of flood damage reduction through the regulation of development within flood hazard areas and the preservation of floodways. This article is intended to complement and supplement article II of this chapter, and shall be administered in concert therewith.

(b) All developed land within the county shall be provided with adequate drainage, flood control and erosion control facilities. The protection of life and property shall be considered the primary function in the planning, design, construction and maintenance of drainage control, flood control and erosion control facilities, but other concerns, not limited to the following, shall be addressed: channel capacity, watershed characteristics, channel stability, maintenance, transitions between treatment types, multiple use goals and appearance. The needs of the community in transportation, utility services, recreation and open space shall be considered in planning, design, construction and maintenance (especially in the selection of channel treatment measures). These needs shall always be considered subsidiary to the primary function of the drainage control, flood control and/or erosion control facility.

(c) The design, construction and maintenance of dams, levees and diversions that fall within the jurisdiction of the state engineer shall meet or exceed standards established by the state engineer.

(d) The design, construction and maintenance of flood control and stormwater quality control facilities that fall within the jurisdiction of AMAFCA shall be coordinated with AMAFCA. The design, construction and maintenance of flood control and stormwater quality control facilities that fall within the jurisdiction of the city shall be coordinated with the city.

(e) The design, construction and maintenance of flood control and stormwater quality control facilities shall not allow any additional flows to be routed into MRGCD facilities unless specific plans are approved

by the district. It shall be the responsibility of the developer to obtain all necessary approvals and permits from the MRGCD.

(f) All major facilities shall be constructed within dedicated rights-of-way or recorded drainage easements granted to and accepted by the proper public authority or historic channels and watercourse when easements or rights-of-way cannot be obtained.

(g) All detention ponds that are also defined as minor facilities shall be constructed on private property, as follows unless otherwise authorized by the county engineer:

(1) Except as is necessary for the treatment of nuisance water or to prevent smaller and more frequently occurring storms from damaging downstream property, arroyos and watercourses, ponds shall be designed and constructed to be emptied in 24 hours or less. Ponds with evacuation times greater than six hours and less than or equal to 24 hours shall be designed to safely carry a 100-year, 24-hour storm.

(2) Ponds may be designed to be emptied for periods longer than 24 hours and up to 96 hours where downstream capacity limits allowable discharge and when such ponds are either:

a. Designed to safely carry a 100-year, 96-hour storm; or

b. Designed to safely carry a ten-year design storm (six-hour) followed immediately by a 100-year design storm (six-hour).

(3) Where the lack of an adequate outfall prevents the discharge of stormwater to a downstream facility of adequate capacity, the design may provide for on-site retention of the storm runoff. The volume of the retention facility shall be equal to the volume of runoff generated from the site for: a 100-year, ten-day storm, or two consecutive 100-year design storms (six-hour). Design of retention facilities may include the influence of long-term soil infiltration rates where substantiated by tests and documentation. In no case shall retention facilities be smaller than the volume required to hold a 100-year, 24-hour storm without infiltration. Retention facilities shall be considered temporary facilities unless demonstrated to be otherwise to the satisfaction of the county engineer.

(4) Detention ponds may be designed to include a retention capacity for a portion of the pond volume. Sizing of the pond shall be based on the storm length equivalent to the time to empty the entire pond.

(5) Where detention and retention ponds are designed based on impervious areas being less than 40 percent of the total drainage area, or where undeveloped areas contribute flow to the ponds, ponds shall provide for additional volume to accommodate sediment. Detention and retention ponds should, where practical, be located in such a manner as to allow for discharge to future outfall facilities when they become available. In computing runoff, no credit will be given to individual lot ponding in residential zones except when such ponds are protected by a drainage covenant and are accessible to and maintainable by county maintenance equipment. All retention and detention ponds shall be constructed on private property unless otherwise authorized by the county engineer. Any water draining from public right-of-way that is conveyed through or ponded on private property shall require a drainage covenant and/or a drainage easement except in recorded drainage or flood control easements or rights-of-way or historic channels and watercourses where easements or rights-of-way cannot be obtained.

(6) All detention and retention ponds with side slopes steeper than 3:1, with a ponding depth greater than 18" deep and will pond water longer than 96 hours shall have safety fencing. Safety fencing shall be a minimum height of 42" and conform to the City of Albuquerque's Standard Specifications for Public Works Construction current edition.

(h) All detention and retention facilities shall have a designated overflow spillway. The overflow spillway shall, as a minimum, be capable of safely discharging the runoff entering the facility from a 100-year

design storm. Safety shall be considered in the design of detention and retention facilities.

(i) Where a site development, building permit, a major or minor subdivision or a replat alters the elevation or location of any designated 100-year floodplain, as shown on current FEMA flood insurance rate maps, the developer shall be required to provide to the county engineer all necessary data needed to effect the flood boundary revision or amendment. Any required fees for processing shall be the responsibility of the developer.

(j) Site development and major or minor subdivisions for or replats for industrial activities shall be designed and constructed such that non-stormwater discharges into storm sewers, arroyos or watercourses will not occur.

(k) Where flood control, drainage or erosion control improvements are necessary within dedicated or proposed public open space, such improvements shall be designed and constructed in a manner reasonably consistent with the natural surroundings. All construction and maintenance activities in dedicated open space shall be performed so as to minimize the disruption and destruction of vegetation and adjacent land forms. Where such disturbance or destruction is unavoidable, revegetation shall be performed at the earliest practical time by the responsible person responsible for such disturbance and/or destruction.

(l) The county engineer is responsible for establishing criteria, procedures and standards for design and construction of flood control, drainage control and erosion control improvements within the county. The county engineer shall be responsible, subject to the direction of and approval by the board of county commissioners, for preparing and adopting a drainage management plan for all watersheds in its jurisdiction unless AMAFCA has assumed responsibility therefor. The county engineer is also the designated flood control official for the county in accordance with the requirements of the Federal Insurance Administration.

(Ord. No. 04-4, 2-24-04, Ord. No. 2012-17, 8-14-12)

Sec. 38-202. - Surface use of streets for drainage and flood control purposes.

(a) *Generally.* The surface of streets may be used for drainage and flood control purposes, to the extent such use does not interfere with the safe transportation of people and vehicles.

(b) *Urban streets.*

(1) The 100-year design storm runoff shall be contained within the street right-of-way and shall not exceed a depth of 87 percent of the difference between the gutter flowline elevation and the adjacent right-of-way elevation, and shall in no event exceed 0.87 feet. Storm runoff from the 100-year storm and smaller storms shall not enter private property from a street, except in recorded drainage or flood control easements or rights-of-way or historic channels and watercourses where easements or rights-of-way cannot be obtained.

(2) The ten-year design storm runoff shall not exceed a depth of 50 percent of the difference in elevation between the gutter flowline elevation and the adjacent right-of-way elevation and shall flow such that one 12-foot driving lane in each direction is free of flowing or standing water in any arterial street. Arterial streets that are in the state highway system may require more stringent drainage criteria.

(3) The ten-year design storm runoff shall not exceed a depth of 50 percent of the difference in elevation between the gutter flowline elevation and the adjacent right-of-way elevation in any collector street. Collector streets that are in the state highway system may require more stringent drainage criteria.

(4) The product of depth times velocity shall not exceed 6.5 at any location in any street in the event of a ten-year design storm (with velocity calculated as the average velocity measured in feet

per second and depth measured at the gutter flowline in feet).

(5) The discharge of nuisance waters to public streets shall be discouraged. Arterial and collector streets shall be protected from damages to the prevent surface and from the safety hazards created by surface flow of nuisance waters across them.

(6) All developed land, with urban street sections, within the county shall be served by an access that shall be an all-weather facility during a 100-year design storm, with all channel crossing structures beneath the roadway being able to pass a 100-year design storm runoff event.

(c) *Rural streets.*

(1) The design flow depth and velocity in the project design swale (see County Street Standards, Ordinance No. 88-42) shall be such that the integrity of the street surfacing is not endangered.

(2) Design and construction of the project design swale shall include provisions for erosion control. Measures to minimize erosion of the project design swale may include, but are not limited to, granular (gravel) filter and riprap lining, soil cement or asphalt lining.

(Ord. No. 04-4, 2-24-04)

Sec. 38-203. - Crossings.

(a) Channel crossing structures shall be provided on all arterial and collector streets to safely pass the 100-year design storm runoff from major arroyos assuming a fully developed watershed.

(b) Streets other than arterial, collector and sole access streets to major subdivisions may cross major arroyos and other watercourses by means of a dip section or overflow section, provided that depth times velocity (with velocity calculated as the average velocity measured in feet per second and depth measured in feet at the upstream edge of the roadway including sidewalk, if applicable) does not exceed 6.5 for that portion of the ten-year design storm runoff crossing the street. However, the depth of flow shall not be greater than 0.67 feet for urban or rural streets.

(c) Where feasible, temporary crossings shall be designed so they may be incorporated into the future permanent crossing structure and so that they meet street design standards established by the county engineer.

(d) Crossing of major arroyos by arterials and collectors shall be constructed at public expense, provided that public funds are available. Crossing of arroyo by streets other than arterials and collectors shall be constructed at the developer's expense and shall meet street design standards established by the county engineer.

(e) Temporary crossing required for access, including those on arterials and collectors, shall be constructed at the developer's expense.

(f) Temporary and permanent crossings of MRGCD and AMAFCA facilities shall be coordinated with the MRGCD and/or AMAFCA, as applicable.

(Ord. No. 04-4, 2-24-04)

Sec. 38-204. - Financial responsibility and guarantee.

(a) The county may participate in the construction of permanent flood control facilities to the extent that public benefits are derived from such construction and subject to the availability of public funds.

(b) The county may participate in the costs of channel crossing structures on arterial and collector streets which are required for sole access to a development, provided that public funds are available.

(c) Except as otherwise provided in this section, all drainage control, flood control facilities and stormwater quality control facilities that directly result from a proposed subdivision or site development are the responsibility of the developer. Developer-financed facilities include all those within the boundaries of the development, those required for development adjacent to a major arroyo or within a flood hazard area and all temporary and permanent off-site drainage facilities. If the construction of such facilities is a condition of plat approval or building permit issuance, then financial guarantees of such construction satisfactory to the county engineer shall also be provided as a prerequisite. The format of such guarantees shall be as set forth in the county street standards improvements agreement. The county engineer shall coordinate the construction and location of temporary facilities with AMAFCA and the city where applicable. If the ultimate on-site drainage control, flood control, and/or erosion control facilities require permanent rights-of-way or easements, such rights-of-way or easements shall be dedicated at the time of platting or building permit issuance, whichever occurs first.

(d) Except as allowed by AMAFCA Resolution 81-8 and amendments thereto, the dedication of land for public purposes does not relieve a developer of responsibilities for the construction of drainage control, flood control, erosion control and stormwater quality control facilities that would otherwise be necessary. The dedication of rights-of-way or easements for drainage control, flood control or erosion control facilities does not relieve a developer of responsibilities that would otherwise exist for the construction of other public infrastructure.

(Ord. No. 04-4, 2-24-04)

Sec. 38-205. - Multiple use rights-of-way and easements.

Multiple use is encouraged for drainage rights-of-way and drainage easements including, but not limited to, utility corridors and recreation trails. Where multiple use is planned by the county, another public agency or a public utility, the county may require that dedication statements include language which permits such specified multiple uses in addition to the primary drainage function. However, land required to be dedicated for drainage rights-of-way shall be limited to those land areas necessary for drainage control, flood control, erosion control and necessary appurtenances.

(Ord. No. 04-4, 2-24-04)

Sec. 38-206. - Maintenance responsibility.

(a) Except as otherwise noted in this section, the county or other public body shall maintain all permanent major facilities that receive drainage from public rights-of-way. The maintenance of multiple use facilities to which the general public is denied access shall be the responsibility of the owners and shall be performed to county engineer standards. The county engineer may allow private maintenance within public rights-of-way or easements, provided that adequate guarantees and indemnifications are supplied.

(b) Their owners to county engineer standards shall maintain minor facilities. Based on likelihood and consequence of failure, or failure to maintain, the county engineer may require a drainage covenant.

(c) The maintenance of temporary facilities constructed at private expense is the responsibility of the developer until permanent facilities are in place. However, those temporary facilities which, in the event of failure of the facility, or failure to maintain, would endanger existing downstream facilities, other properties or the general public shall require a drainage covenant.

(d) The maintenance of major facilities that only serve private property or a development is the responsibility of the developer and/or owner. In each case, a drainage covenant shall be required.

(Ord. No. 04-4, 2-24-04)

BE IT ORDAINED BY THE BOARD OF COUNTY COMMISSIONERS OF BERNALILLO COUNTY, NEW MEXICO this 25th day of October, 2016.

APPROVED AS TO FORM

W. Ken Martinez, County Attorney

BOARD OF COUNTY COMMISSIONERS

Art De La Cruz, Chair

Wayne A. Johnson, Vice Chair

Debbie O'Malley, Member

Maggie Hart Stebbins, Member

EXCUSED

Lonnie C. Talbert, Member

ATTEST:

Maggie Toulouse Oliver, County Clerk

STATE OF N