



SAN RAFAEL
THE CITY WITH A MISSION

Agenda Item No: 7.a

Meeting Date: June 17, 2024

SAN RAFAEL CITY COUNCIL AGENDA REPORT

Department: Public Works

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City Manager Approval: _____

TOPIC: AMENDMENTS TO TITLE 18 OF THE SAN RAFAEL MUNICIPAL CODE “PROTECTION OF FLOOD HAZARD AREAS”

SUBJECT: INTRODUCTION OF AN ORDINANCE AMENDING TITLE 18 OF THE SAN RAFAEL MUNICIPAL CODE “PROTECTION OF FLOOD HAZARD AREAS”, TO MEET OR EXCEED THE FEDERAL EMERGENCY MANAGEMENT AGENCY’S MINIMUM STANDARDS FOR DEVELOPMENT IN FLOOD HAZARD AREAS.

RECOMMENDATION:

Introduce an Ordinance amending Title 18 of the San Rafael Municipal Code, entitled “Protection of Flood Hazard Areas,” to meet or exceed the minimum standards of the Federal Emergency Management Agency for development within the flood hazard areas of the City of San Rafael, waive further reading of the Ordinance, and refer to it by title only.

BACKGROUND:

The City of San Rafael (City) has participated in the National Flood Insurance Program (NFIP) since May 1, 1984. The NFIP is administered by the Federal Emergency Management Agency (FEMA), with the California Department of Water Resources (DWR) serving as the coordinating agency. The City’s participation in the NFIP provides residents eligibility for federally backed flood insurance and other benefits such as federal disaster assistance. As a participating community, the City must adopt and enforce floodplain management regulations that meet the minimum NFIP requirements as developed by FEMA.

The City’s floodplain management regulations are contained within Title 18 of the San Rafael Municipal Code, entitled “Protection of Flood Hazard Areas.” Compliance with these regulations is intended to promote public health, safety, and general welfare and to minimize public and private losses due to flood conditions within flood hazard areas in the City. Title 18 was last amended in January 2003 by adopting Ordinance No. 1796.

As a FEMA representative, DWR periodically reviews the City’s floodplain management regulations through Community Assistance Visits (CAV). The last CAV occurred on February 28, 2024, and DWR commented on necessary revisions to the City’s floodplain management regulations to meet the minimum NFIP requirements.

FOR CITY CLERK ONLY

Council Meeting: _____

Disposition: _____

After receipt of comments from DWR, City staff prepared a draft of the revised floodplain management regulations, which includes the minimum necessary revisions identified by DWR, as well as some changes to update references to FEMA technical publications and other minor changes to clarify the procedure. City staff sent the draft to DWR on May 21, 2024, and addressed the final comments received from DWR on the draft.

ANALYSIS:

Revisions to the City’s floodplain management regulations, contained within Title 18 of the San Rafael Municipal Code, are necessary to meet or exceed the minimum requirements of the NFIP and maintain the City’s continued eligibility to participate in the NFIP. Ordinance amendments are not expected to majorly impact residents or future developments.

Ordinance amendments include the following revisions to the City’s floodplain management regulations:

- Addition of definitions to clarify terms used throughout the floodplain management regulations.
- Updating references to technical bulletins published by FEMA that guide design in flood hazard areas.
- Updating references to the most recent versions of the Flood Insurance Rate Map and Flood Insurance Study available for the City.
- Removing requirements applicable to AO¹ zones because the City has no mapped AO zones.
- Clarifying that the minimum elevation requirement is one foot above the base flood elevation to be consistent with the requirements in the building code.
- Other minor revisions for clarity.

The revisions have been reviewed and approved by FEMA’s representative, DWR. The proposed Ordinance amends Title 18 of the San Rafael Municipal Code to incorporate these revisions. Adopting the Ordinance will allow the City to continue participating in the NFIP and make flood insurance available to residents.

COMMUNITY OUTREACH:

On June 7, 2024, a public hearing was duly noticed in the Marin Independent Journal for the City Council to receive public comments and consider an Ordinance amending the San Rafael Municipal Code.

FISCAL IMPACT: There is no fiscal impact associated with this action.

OPTIONS:

The City Council has the following options to consider on this matter:

1. Introduce the Ordinance, waive further reading, and refer to it by title only.
2. Do not introduce the Ordinance, and direct staff to return with additional information or changes to the Ordinance.

RECOMMENDED ACTION:

Introduce an Ordinance amending Title 18 of the San Rafael Municipal Code, entitled “Protection of Flood Hazard Areas,” to meet or exceed the minimum standards of the Federal Emergency Management

¹ AO zone is defined as an “Area of special flood hazards having shallow water depths and/or unpredictable flow paths between (1) and (3) ft.”

Agency for development within the flood hazard areas of the City of San Rafael, waive further reading of the Ordinance, and refer to it by title only.

ATTACHMENTS:

1. Ordinance

ORDINANCE NO.

AN ORDINANCE OF THE CITY COUNCIL OF THE CITY OF SAN RAFAEL AMENDING TITLE 18 OF THE SAN RAFAEL MUNICIPAL CODE, ENTITLED "PROTECTION OF FLOOD HAZARD AREAS", TO MEET OR EXCEED THE MINIMUM STANDARDS OF THE FEDERAL EMERGENCY MANAGEMENT AGENCY FOR DEVELOPMENT WITHIN THE FLOOD HAZARD AREAS OF THE CITY OF SAN RAFAEL

SECTION 1. FINDINGS

WHEREAS, development in the flood hazard areas of the City of San Rafael is regulated by Title 18 of the San Rafael Municipal Code; and

WHEREAS, the regulation of development in flood hazard areas is meant to promote the public health, safety, and general welfare; and

WHEREAS, the Federal Emergency Management Agency (FEMA) has established minimum standards for development in flood hazard areas; and

WHEREAS, the City's ordinance must comply with the minimum standards required by FEMA for flood insurance to be available under the National Flood Insurance Program; and

WHEREAS, FEMA has notified the City that it must update Title 18 of the Municipal Code to comply with FEMA's minimum standards for development in flood hazard areas; and

WHEREAS, modification to the City's ordinance as provided in the subject ordinance amendment is intended to meet or exceed FEMA's minimum standards.

NOW, THEREFORE, THE CITY COUNCIL OF THE CITY OF SAN RAFAEL DOES ORDAIN AS FOLLOWS:

SECTION 2. AMENDMENTS TO SAN RAFAEL MUNICIPAL CODE TITLE 18

Sections 18.20.010, 18.30.020, 18.40.010, 18.40.020, 18.40.030, 18.50.010, 18.50.030, 18.50.040, and 18.50.050 of Title 18 of the San Rafael Municipal Code, entitled "Protection of Flood Hazard Areas", are hereby amended to read as follows. Additions are shown in underline, and deletions are shown in ~~strike through~~. All other provisions of Title 18 are unaffected by these amendments.

18.20.010 Definitions.

Unless specifically defined below, words or phrases used in this title shall be interpreted so as to give them the meaning they have in common usage and to give this title its most reasonable application.

"Accessory use" means a use which is incidental and subordinate to the principal use of the parcel of land on which it is located.

"Alluvial fan" means a geomorphologic feature characterized by a cone or fan-shaped deposit of boulders, gravel, and fine sediments that have been eroded from mountain slopes, transported by flood flows, and then deposited on the valley floors, and which is subject to

flash flooding, high velocity flows, debris flows, erosion, sediment movement and deposition, and channel migration.

"Apex" means the point of highest elevation on an alluvial fan, which on undisturbed fans is generally the point where the major stream that formed the fan emerges from the mountain front.

"Appeal" means a request for a review of the floodplain administrator's interpretation of any provision of this title.

"Area of shallow flooding" means a designated AO or AH Zone on the Flood Insurance Rate Map (FIRM). The base flood depths range from one to three feet; a clearly defined channel does not exist; the path of flooding is unpredictable and indeterminate; and velocity flow may be evident. Such flooding is characterized by ponding or sheet flow.

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

"Base flood" means a flood which has a one percent chance of being equaled or exceeded in any given year (also called the "100-year flood"). Base flood is the term used throughout this ordinance.

"Base flood elevation" means the elevation of the base flood, including wave height, relative to the National Geodetic Vertical Datum (NGVD), North American Vertical Datum (NAVD) or other datum specified on the FIRM.

"Basement" means any area of the building having its floor subgrade - i.e., below ground level - on all sides.

"Breakaway walls" are any type of walls, whether solid or lattice, and whether constructed of concrete, masonry, wood, metal, plastic or any other suitable building material which is not part of the structural support of the building and which is designed to break away under abnormally high tides or wave action without causing any damage to the structural integrity of the building on which they are used or any buildings to which they might be carried by flood waters. A breakaway wall shall have a safe design loading resistance of not less than ten and no more than twenty pounds per square foot. Use of breakaway walls must be certified by a registered engineer or architect and shall meet the following conditions:

1. Breakaway wall collapse shall result from a water load less than that which would occur during the base flood, and
2. The elevated portion of the building shall not incur any structural damage due to the effects of wind and water loads acting simultaneously in the event of the base flood.

"Building" - see "Structure".

"Building code" means the family of building codes in Title 12 of this code specifically adopted and amended by the city council.

"Coastal high hazard area" means an area of special flood hazard extending from offshore to the inland limit of a primary frontal dune along an open coast and any other area subject to high velocity wave action from storms or seismic sources. It is an area subject to high velocity waters, including coastal and tidal inundation or tsunamis. The area is designated on a Flood Insurance Rate Map (FIRM) as Zone V1-V30, VE, or V.

"Design flood" means the flood associated with:

1. Area with a flood plain subject to a 1-percent or greater chance of flooding in any year.
2. Area designated as a flood hazard area on a community's flood hazard map, or otherwise legally designated.

"Design flood elevation" means the elevation of the "design flood," including wave height, relative to the datum specified on the community's legally designated flood hazard map. In areas designated as Zone AO, the design flood elevation shall be the elevation of the highest existing grade of the building's perimeter plus the depth number (in feet) specified on the flood hazard map. In areas designated as Zone AO where a depth number is not specified on the map, the depth number shall be taken as being equal to 2 feet.

"Development" means any man-made change to improved or unimproved real estate, including but not limited to buildings or other structures, mining, dredging, filling, grading, paving, excavation or drilling operations or storage of equipment or materials.

"Encroachment" means the advance or infringement of uses, plant growth, fill, excavation, buildings, permanent structures or development into a floodplain which may impede or alter the flow capacity of a floodplain.

"Existing manufactured home park or manufactured housing 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 manufactured housing 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, flooding, or flood water" means:

1. A general and temporary condition of partial or complete inundation of normally dry land areas from the overflow of inland or tidal waters; the unusual and rapid accumulation or runoff of surface waters from any source; and/or mudslides (i.e., mudflows); and
2. The condition resulting from flood-related erosion.

"Flood Boundary and Floodway Map (FBFM)" means the official map on which the Federal Emergency Management Agency or Federal Insurance Administration has delineated both the areas of special flood hazards and the floodway.

"Flood control project" means a dam or barrier designed and constructed to keep water away from or out of a specified area, including but not limited to levees, floodwalls, and channelization.

"Flood Hazard Boundary Map" means the official map on which the Federal Emergency Management Agency (FEMA) or Federal Insurance Administration has delineated the areas of flood hazards.

"Flood Insurance Rate Map (FIRM)" means the official map on which ~~the Federal Emergency Management Agency~~ FEMA or Federal Insurance Administration has delineated both the areas of special flood hazards and the risk premium zones applicable to the community.

"Flood Insurance Study (FIS)" means the official report provided by the Federal Insurance Administration that includes flood profiles, the ~~Flood Insurance Rate Map~~ FIRM, the ~~Flood Boundary and Floodway Map~~ FBFM, and the water surface elevation of the base flood.

"Floodplain or flood-prone area" means any land area susceptible to being inundated by water from any source - see "Flooding".

"Floodplain Administrator" is the individual appointed to administer and enforce the floodplain management regulations.

"Floodplain management" means the operation of an overall program of corrective and preventive measures for reducing flood damage and preserving and enhancing, where possible, natural resources in the floodplain, including but not limited to emergency preparedness plans, flood control works, floodplain management regulations, and open space plans.

"Floodplain management regulations" means this title and other zoning ordinances, subdivision regulations, building codes, health regulations, special purpose ordinances (such as grading and erosion control) and other application of police power which control development in flood-prone areas. This term describes federal, state or local regulations in any combination thereof which provide standards for preventing and reducing flood loss and damage.

"Floodproofing" means any combination of structural and nonstructural 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 (Refer to FEMA Technical Bulletin 1, Openings in Foundation Walls and Walls of Enclosures; Technical Bulletin 3, Non-Residential Floodproofing Requirements and Certifications; and Technical Bulletin 7, Wet Floodproofing Requirements and Limitations ~~FEMA Technical Bulletins TB 1-93, TB 3-93, and TB 7-93~~ for guidelines on dry and wet floodproofing.)

"Floodway" means the channel of a river or other watercourse and the adjacent land areas that must be reserved in order to discharge the base flood without cumulatively increasing the water surface elevation more than one foot. Also referred to as "regulatory floodway".

"Floodway fringe" is that area of the floodplain on either side of the "regulatory floodway" where encroachment may be permitted.

"Fraud and victimization" as related to Chapter 18.60, Variances, of this ordinance, means that the variance granted must not cause fraud on or victimization of the public. In examining this requirement, the community governing body will consider the fact that every newly constructed building adds to government responsibilities and remains a part of the community for fifty to one-hundred years. Buildings that are permitted to be constructed below the base flood elevation are subject during all those years to increased risk of damage from floods, while future owners of the property and the community as a whole are subject to all the costs, inconvenience, danger, and suffering that those increased flood damages bring. In

addition, future owners may purchase the property, unaware that it is subject to potential flood damage, and can be insured only at very high flood insurance rates.

"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, and does not include long-term storage or related manufacturing facilities.

"Governing body" is the local governing unit, i.e. city council of the City of San Rafael, that is empowered to adopt and implement regulations to provide for the public health, safety and general welfare of its citizenry.

"Hardship" as related to Chapter 18.60, Variances, of this ordinance means the exceptional hardship that would result from a failure to grant the requested variance. The city council requires that the variance be exceptional, unusual, and peculiar to the property involved. Mere economic or financial hardship alone is not exceptional. Inconvenience, aesthetic considerations, physical handicaps, personal preferences, or the disapproval of one's neighbors likewise cannot, as a rule, qualify as an exceptional hardship. All of these problems can be resolved through other means without granting a variance, even if the alternative is more expensive, or requires the property owner to build elsewhere or put the parcel to a different use than originally intended.

"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 of historic places in communities with historic preservation programs that have been certified either by an approved state program as determined by the secretary of the interior or directly by the secretary of the interior in states without approved programs.

"Letter of Map Change (LOMC)" means an official determination issued by FEMA that amends or revises an effective FIRM or FIS. Letters of Map Change include:

1. Letter of Map Amendment (LOMA): An amendment based on technical data showing that a property was incorrectly included in a designated special flood hazard area. A LOMA amends the current effective FIRM and establishes that a specific property, portion of a property, or structure is not located in a special flood hazard area.
2. Letter of Map Revision (LOMR): A revision based on technical data that may show changes to flood zones, flood elevations, special flood hazard area boundaries and floodway delineations, and other planimetric features.

3. Letter of Map Revision Based on Fill (LOMR-F): A determination that a structure or parcel of land has been elevated by fill above the base flood elevation and is, therefore, no longer located within the special flood hazard area. In order to qualify for this determination, the fill must have been permitted and placed in accordance with the community's floodplain management regulations.
4. Conditional Letter of Map Revision (CLOMR): A formal review and comment as to whether a proposed flood protection project or other project complies with the minimum National Flood Insurance Program requirements for such projects with respect to delineation of special flood hazard areas. A CLOMR does not revise the effective FIRM or FIS; upon submission and approval of certified as-built documentation, a LOMR may be issued by FEMA to revise the effective FIRM.

"Levee" means a man-made 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 a levee, or levees, and associated structures, such as closure and drainage devices, which are constructed and operated in accord with sound engineering practices.

"Light-duty truck" means any motor vehicle rated at 8,500 pounds Gross Vehicular Weight Rating or less which has a vehicular curb weight of 6,000 pounds or less and which has a basic vehicle frontal area of forty-five (45) square feet or less, which is:

1. Designed primarily for purposes of transportation of property or is a derivation of such a vehicle, or
2. Designed primarily for transportation of persons and has a capacity of more than twelve (12) persons; or
3. Available with special features enabling off-street or off-highway operation and use.

"Lowest floor" means the lowest floor of the lowest enclosed area, including basement (see "Basement" definition).

1. An unfinished or flood resistant enclosure below the lowest floor that is 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 it conforms to applicable non-elevation design requirements, including, but not limited to:
 - a. The wet floodproofing standard in Chapter 18.50.010 C.3;
 - b. The anchoring standards in Chapter 18.50.010 A;
 - c. The construction materials and methods standards in Chapter 18.50.010 B; and
 - d. The standards for utilities in Chapter 18.50.020.
2. For residential structures, all subgrade enclosed areas are prohibited as they are considered to be basements (see "Basement" definition). This prohibition includes below-grade garages and storage areas.

"Manufactured home" means a structure, transportable in one or more sections, which is built on a permanent chassis and is designed for use with or without a permanent

foundation when attached to the required utilities. The term "manufactured home" does not include a "recreational vehicle".

"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.

"Market Value" shall be determined by estimating the cost to replace the structure in new condition and adjusting that cost figure by the amount of depreciation which has accrued since the structure was constructed. The cost of replacement of the structure shall be based on a square foot cost factor determined by reference to a building cost estimating guide recognized by the building construction industry. The amount of depreciation shall be determined by taking into account the age and physical deterioration of the structure and functional obsolescence as approved by the floodplain administrator, but shall not include economic or other forms of external obsolescence. Use of replacement costs or accrued depreciation factors different from those contained in recognized building cost estimating guides may be considered only if such factors are included in a report prepared by an independent professional appraiser and supported by a written explanation of the differences.

"Mean sea level" means, for purposes of the National Flood Insurance Program, the National Geodetic Vertical Datum (NGVD) of 1929 or other datum, to which base flood elevations shown on a community's ~~Flood Insurance Rate Map~~ FIRM are referenced.

"Mudslide" describes a condition where there is a river, flow or inundation of liquid mud down a hillside, usually as a result of a dual condition of loss of brush cover and the subsequent accumulation of water on the ground, preceded by a period of unusually heavy or sustained rain.

"Mudslide (i.e., mudflow) prone area" means an area with land surfaces and slopes of unconsolidated material where the history, geology, and climate indicate a potential for mudflow.

"New construction," for floodplain management purposes, means structures for which the "start of construction" commenced on or after the effective date of floodplain management regulations adopted by this 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 this community.

"Obstruction" includes, but is not limited to, any dam, wall, wharf, embankment, levee, dike, pile, abutment, protection, excavation, channelization, bridge, conduit, culvert, building, wire, fence, rock, gravel, refuse, fill, structure, vegetation or other material in, along, across or projecting into any watercourse which may alter, impede, retard or change the direction and/or velocity of the flow of water, or due to its location, its propensity to snare or collect debris carried by the flow of water, or its likelihood of being carried downstream.

"One-hundred-year flood" or "~~one hundred~~-100-year flood" - see "Base flood."

"Primary frontal dune" means a continuous or nearly continuous mound or ridge of sand with relatively steep seaward and landward slopes immediately landward and adjacent to the

beach and subject to erosion and overtopping from high tides and waves during major coastal storms. The inland limit of the primary frontal dune occurs at the point where there is a distinct change from a relatively mild slope.

"Public safety and nuisance" as related to Chapter 18.60, Variances, of this title means that the granting of a variance must not result in anything which is injurious to safety or health of an entire community or neighborhood, or any considerable number of persons, or unlawfully obstructs the free passage or use, in the customary manner, of any navigable lake, or river, bay, stream, canal, or basin.

"Recreational vehicle" means a vehicle which is:

1. Built on a single chassis;
2. Four hundred (400) square feet or less when measured at the largest horizontal projection;
3. Designed to be self-propelled or permanently towable by a light-duty truck; and
4. Designed primarily not for use as a permanent dwelling but as temporary living quarters for recreational, camping, travel, or seasonal use.

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

"Remedy a violation" means to bring the structure or other development into compliance with state or local floodplain management regulations, or, if this is not possible, to reduce the impacts of its noncompliance. Ways that impacts may be reduced include protecting the structure or other affected development from flood damages, implementing the enforcement provisions of this title or otherwise deterring future similar violations, or reducing state or federal financial exposure with regard to the structure or other development.

"Riverine" means relating to, formed by, or resembling a river (including tributaries), stream, brook, etc.

"Sand dunes" mean naturally occurring accumulations of sand in ridges or mounds landward of the beach.

"Sheet flow area" - see "Area of shallow flooding".

"Special flood hazard area (SFHA)" means an area in the floodplain subject to a one percent or greater chance of flooding in any given year. It is shown on an FHBM or FIRM as Zone A, AO, A1-A30, AE, A99, AH, V1-V30, VE or V.

"Start of construction" includes substantial improvement and other proposed new development and means the date the building permit was issued, provided the actual start of construction, repair, reconstruction, rehabilitation, addition, placement, or other improvement was within one hundred eighty (180) days from the date of the permit. The actual start means either the first placement of 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 a 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. For a substantial improvement, the actual start of construction means the first alteration of any wall, ceiling, floor, or other structural part of a building, whether or not that alteration affects the external dimensions of the building.

"Structure" means a walled and roofed building that is principally above ground; this includes a gas or liquid storage tank or a manufactured home.

"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 fifty percent (50%) of the market value of the structure before the damage occurred.

"Substantial improvement" means any reconstruction, rehabilitation, addition, or other proposed new development of a structure, the cost of which equals or exceeds fifty percent (50%) of the market value of the structure before the "start of construction" of the improvement. This term includes structures which have incurred "substantial damage," regardless of the actual repair work performed. The term does not, however, include either:

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

"V zone" - see "Coastal high hazard area".

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

"Violation" means the failure of a structure or other development to be fully compliant with this title. A structure or other development without the elevation certificate, other certifications, or other evidence of compliance required in this title is presumed to be in violation until such time as that documentation is provided.

"Water surface elevation" means the height, in relation to the National Geodetic Vertical Datum (NGVD) of 1929, (or other datum, where specified) of floods of various magnitudes and frequencies in the floodplains of coastal or riverine areas.

"Watercourse" means a lake, river, creek, stream, wash, arroyo, channel or other topographic feature on or over which waters flow at least periodically. Watercourse includes specifically designated areas in which substantial flood damage may occur.

18.30.020 Basis for establishing the areas of special flood hazard.

The areas of special flood hazard identified by the Federal Emergency Management Agency (FEMA) in the current version of the Flood Insurance Study (FIS) for Marin County and Incorporated Areas revised August 15, 2017, and accompanying Flood Insurance Rate Maps (FIRMs) and Flood Boundary and Floodway Maps (FBFMs) revised August 15, 2017, and all subsequent amendments and/or revisions, are hereby adopted by reference and declared to be a part of this title. The areas of special flood hazard identified by the Federal Insurance Administration (FIA) of the Federal Emergency Management Agency (FEMA) in the Flood Insurance Study (FIS) dated June 28, 1983 and accompanying Flood Insurance Rate Maps (FIRMs) and Flood Boundary and Floodway Maps (FBFMs), dated May 1, 1984,

~~and all subsequent amendments and/or revisions, are hereby adopted by reference and declared to be a part of this title.~~ This FIS and attendant mapping is the minimum area of applicability of this title and may be supplemented by studies for other areas which allow implementation of this title and which are recommended to the city by the floodplain administrator. The study, FIRMs and FBFMs are electronically on file at the 1400 Fifth Avenue, City Hall, Department of Public Works.

18.40.010 Establishment of floodplain development permit.

A floodplain development permit shall be obtained before any construction or other development begins within any area of special flood hazard established in Section 18.30.020. Application for a floodplain development permit shall be made on forms furnished by the floodplain administrator and may include, but not be limited to: plans in duplicate drawn to scale showing the nature, location, dimensions, and elevation of the area in question; existing or proposed structures, fill, storage of materials, drainage facilities; and the location of the foregoing. Specifically, the following information is required:

- A. Site plan, including but not limited to:
 - 1. For all proposed structures, spot ground elevations at building corners and twenty (20) foot or smaller intervals, along the foundation footprint, or one foot contour elevations throughout the building site; and
 - 2. Proposed locations of water supply, sanitary sewer, and utilities; and
 - 3. If available, the base flood elevation from the Flood Insurance Study and/or Flood Insurance Rate Map; and
 - 4. If applicable, the location of the regulatory floodway; and
- B. Foundation design detail, including but not limited to:
 - 1. Proposed elevation in relation to mean sea level, of the lowest floor (including basement) of all structures; and
 - 2. For a crawl-space foundation, location and total net area of foundation openings as required in Section ~~5.1.C.3~~18.50.010.C.3 of this ~~ordinance title~~ and Federal Emergency Management Agency (FEMA) Technical Bulletins 4-931 and 7-937; and
 - 3. For foundations placed on fill, the location and height of fill, and compaction requirements (compacted to ninety-five percent (95%) using the Standard Proctor Test method); and
- C. Proposed elevation in relation to mean sea level to which any nonresidential structure will be flood proofed, as required in Section 18.50.010 C.2 of this title and FEMA Technical Bulletin TB ~~3-933~~; and
- D. All appropriate certifications listed in Section 18.40.030 D of this ordinance; and
- E. Description of the extent to which any watercourse will be altered or relocated as a result of proposed development.

18.40.020 Designation of the floodplain administrator.

The director of public works, is hereby appointed to administer, implement, and enforce this ordinance by granting or denying floodplain development permits in accord with its provisions.

18.40.030 Duties and responsibilities of the floodplain administrator.

The duties and responsibilities of the floodplain administrator shall include, but not be limited to the following:

- A. Permit Review. Review all floodplain development permits to determine that:
 1. Permit requirements of this title have been satisfied,
 2. All other required state and federal permits have been obtained,
 3. The site is reasonably safe from flooding, and
 4. The proposed development does not adversely affect the carrying capacity of areas where base flood elevations have been determined but a floodway has not been designated. For purposes of this title, "adversely affects" means that the cumulative effect of the proposed development when combined with all other existing and anticipated development will increase the water surface elevation of the base flood more than one foot at any point.
- B. Review, use and development of other base flood data.
 1. When base flood elevation data has not been provided in accordance with Section 18.30.020, the floodplain administrator shall obtain, review, and reasonably utilize any base flood elevation and floodway data available from a federal or state agency, or other source, in order to administer Chapter 18.50. Any such information shall be submitted to the city for adoption; or
 2. If no base flood elevation data is available from a federal or state agency or other source, then a base flood elevation shall be obtained using one of two methods from the ~~FEMA~~ Federal Emergency Management Agency (FEMA) publication "Managing Floodplain Development in Approximate Zone A Areas—A Guide for Obtaining and Developing Base (one hundred 100-year) Flood Elevations" dated July 1995 in order to administer Section 5:
 - a. Simplified method
 - i. One hundred (100) year or base flood discharge shall be obtained using the appropriate regression equation found in a U.S. Geological Survey publication, or the discharge-drainage area method; and
 - ii. Base flood elevation shall be obtained using the Quick-2 computer program developed by FEMA; or
 - b. Detailed method
 - i. One hundred (100) year or base flood discharge shall be obtained using the U.S. Army Corps of Engineers' HEC-HMS computer program; and
 - ii. Base flood elevation shall be obtained using the U.S. Army Corps of Engineers' HEC-RAS computer program.

- C. Notification of Other Agencies. In alteration or relocation of a watercourse:
1. Notify adjacent communities and the California Department of Water Resources prior to alteration or relocation;
 2. Submit evidence of such notification to the Federal Insurance Administration, Federal Emergency Management Agency; and
 3. Assure that the flood carrying capacity within the altered or relocated portion of said watercourse is maintained.
- D. Documentation of Floodplain Development. Obtain and maintain for public inspection and make available as needed the following:
1. Certification required by Section 18.50.010 C.1 and 18.50.040 (lowest floor elevations),
 2. Certification required by Section 18.50.010 C.2 (elevation or floodproofing of nonresidential structures),
 3. Certification required by Sections 18.50.010 C.3 (wet floodproofing standard),
 4. Certification of elevation required by Section 18.50.030 B (subdivision standards),
 5. Certification required by Section 18.50.060 A (floodway encroachments),
 6. Information required by Section 18.50.070 F (coastal construction standards), and
- E. Map Determinations. Make interpretations where needed, as to the exact location of the boundaries of the areas of special flood hazard. Where there appears to be a conflict between a mapped boundary and actual field conditions, grade and base flood elevations shall be used to determine the boundaries of the special flood hazard area. The person contesting the location of the boundary shall be given a reasonable opportunity to appeal the interpretation as provided in Chapter 18.60.
- F. Remedial Action. Take action to remedy violations of this ordinance as specified in Section 18.30.030.
- G. Base Flood Elevation Changes Due to Physical Alterations. Within six months of information becoming available or project completion, whichever comes first, the floodplain administrator or their designee, shall submit or assure that the permit applicant submits technical or scientific data to FEMA for a letter of map revision (LOMR).

18.50.010 Standards of construction.

In all areas of special flood hazards the following standards are required:

- A. Anchoring
1. All new construction and substantial improvements shall be adequately anchored to prevent flotation, collapse or lateral movement of the structure resulting from hydrodynamic and hydrostatic loads, including the effects of buoyancy.

2. All manufactured homes shall meet the anchoring standards of Section 18.50.040.
- B. Construction materials and methods. All new construction and substantial improvement shall be constructed:
1. With flood resistant materials as specified in Federal Emergency Management Agency (FEMA) Technical Bulletin 2-TB-2-93, and utility equipment resistant to flood damage;
 2. Using methods and practices that minimize flood damage;
 3. With electrical, heating, ventilation, plumbing and air conditioning equipment and other service facilities that are designed and/or located so as to prevent water from entering or accumulating within the components during conditions of flooding; and if
 4. Within Zones AH or AO, so that there are adequate drainage paths around structures on slopes to guide flood waters around and away from proposed structures.
- C. Elevation and floodproofing. (See Chapter 18.20 definitions for "basement," "lowest floor," "new construction," "substantial damage" and "substantial improvement".)
1. Residential construction, new or substantial improvement, shall have the lowest floor, including basement,
 - a. ~~In an AO zone, elevated above the highest adjacent grade to a height equal to or exceeding the depth number specified in feet on the FIRM plus predicted thirty (30) years settlement, or elevated at least two feet above the highest adjacent grade if no depth number is specified.~~
 - ab. In an AE or AH zone, elevated to a height equal to or exceeding one (1) foot above the base flood elevation plus predicted thirty (30) years settlement; said base flood elevation shall be determined by one of the methods on Section 18.40.030 B of this ordinance.
 - be. In ~~all other zones~~ a V or VE zone, elevated to a height equal to or exceeding one (1) foot above the base flood elevation plus predicted thirty (30) years settlement.
 - c. Upon the completion of the structure, the elevation of the lowest floor including basement shall be certified by a registered professional engineer or surveyor, and verified by the community building inspector to be properly elevated. Such certification and verification shall be provided to the floodplain administrator.
 2. Nonresidential construction, new or substantial improvement, shall either be elevated to conform with Section 18.50.010 C.1 or together with attendant utility and sanitary facilities:
 - a. Be flood proofed below the elevation recommended under Section 18.50.010 C.1 so that 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 or architect that the standards of this section (18.50.010 C.2) are satisfied. Such certification shall be provided to the floodplain administrator.
3. All new construction and substantial improvement with fully enclosed areas below the lowest floor (excluding basements) that are usable solely for parking of vehicles, building access or storage, and which are subject to flooding, shall be designed to automatically equalize hydrostatic flood forces on exterior walls by allowing for the entry and exit of floodwater. Designs for meeting this requirement shall follow the guidelines in FEMA Technical Bulletins ~~TB 1-931~~ and ~~TB 7-937~~, and must exceed the following minimum criteria:
- a. Have a minimum of two openings having a total net area of not less than one square inch for every square foot of enclosed area subject to flooding. The bottom of all openings shall be no higher than one foot above grade. Openings may be equipped with screens, louvers, valves or other coverings or devices provided that they permit the automatic entry and exit of floodwater; or
 - b. Be certified by a registered professional engineer or architect.
4. Manufactured homes shall also meet the standards in Section 18.50.040.

18.50.030 Standards for subdivisions and other proposed development, including proposals for manufactured home parks and subdivisions, greater than fifty lots or five acres, whichever is the lesser.

- A. All preliminary subdivision proposals shall identify the special flood hazard area and the elevation of the base flood.
- B. All subdivision plans will provide the elevation of the lowest floor of all proposed structure(s) and pad(s). If the site is filled above the base flood elevation, the lowest floor and pad elevations shall be certified by a registered professional engineer or surveyor and provided as part of an application for a Letter of Map Revision Based on Fill (LOMR-F) to the floodplain administrator.
- C. All subdivision proposals shall be consistent with the need to minimize flood damage.
- D. All subdivision proposals shall have public utilities and facilities such as sewer, gas, electrical and water systems located and constructed to minimize flood damage.
- E. All subdivisions shall provide adequate drainage to reduce exposure to flood hazards.

18.50.040 Standards for manufactured homes.

- A. All manufactured homes that are placed or substantially improved, within Zones A1-30, AH, and AE on the community's Flood Insurance Rate Map (FIRM), on sites located:
 - 1. Outside of a manufactured home park or subdivision,

2. In a new manufactured home park or subdivision,
 3. In an expansion to an existing manufactured home park or subdivision, or
 4. In an existing manufactured home park or subdivision on a site upon which a manufactured home has incurred "substantial damage" as the 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 fastened to an adequately anchored foundation system to resist flotation, collapse, and lateral movement.
- B. All manufactured homes that are placed or substantially improved on sites located within Zones V1-30, V, and VE on the community's ~~Flood Insurance Rate Map~~ FIRM will meet the requirements of Section 18.50.040 A and Section 18.50.070.
- C. All manufactured homes to be placed or substantially improved on sites in an existing manufactured home park or subdivision within Zones A1-30, AH, AE, V1-30, V, and VE on the community's Flood Insurance Rate Map that are not subject to the provisions of Section 18.50.040 A will be securely fastened to an adequately anchored foundation system to resist flotation, collapse, and lateral movement, and be elevated so that either the:
1. Lowest floor of the manufactured home is at or above the base flood elevation, or
 2. Manufactured home chassis is supported by reinforced piers or other foundation elements of at least equivalent strength that are no less than thirty-six inches (36") in height above grade.
- D. Upon the completion of the structure, the elevation of the lowest floor including basement shall be certified by a registered professional engineer or surveyor, and verified by the community building inspector to be properly elevated. Such certification and verification shall be provided to the floodplain administrator.

18.50.050 Standards for recreational vehicles.

- A. All recreational vehicles placed on sites within Zones A1-30, AH, and AE on the community's Flood Insurance Rate Map (FIRM) will either:
1. Be on the site for fewer than one hundred eighty (180) consecutive days, and be fully licensed and ready for highway use—a recreational vehicle is ready for highway use if it is on its wheels or jacking system, is attached to the site only by quick disconnect type utilities and security devices, and has no permanently attached additions, or
 2. Meet the permit requirements of Section ~~418.40.010 of this ordinance~~ and the elevation and anchoring requirements for manufactured homes in Section 18.50.040 A.
- B. Recreation vehicles placed on sites within Zones V1-30, V, and VE on the community's ~~Flood Insurance Rate Map~~ FIRM will meet the requirements of Section 18.50.050 A and Section 18.50.070.

SECTION 3. SEVERABILITY

Every section, paragraph, clause, and phrase of this Ordinance is hereby declared to be

severable. If for any reason, any section, paragraph, clause, or phrase is held to be invalid or unconstitutional, such invalidity or unconstitutionality shall not affect the validity or constitutionality of the remaining sections, paragraphs, clauses or phrases, and the remaining portions of this Ordinance shall continue in full force and effect unless amended or modified by the city.

SECTION 4. COMPLIANCE WITH CEQA

The California Environmental Quality Act (CEQA) Guidelines, Section 15308, categorically exempts actions taken by regulatory agencies, as authorized by state or local ordinance, to assure the maintenance, restoration, enhancement, or protection of the environment where the regulatory process involves procedures for protection of the environment. The City Council hereby finds that under Section 15308, the subject ordinance amendment is exempt from CEQA because it is an update of public safety regulations enacted to avoid environmental impacts.

SECTION 5. EFFECTIVE DATE AND PUBLICATION

This Ordinance shall be published once, in full or in summary form, before its final passage, in a newspaper of general circulation, published and circulated in the City of San Rafael and shall be in full force and effect thirty (30) days after its adoption. If published in summary form, the summary shall also be published within fifteen (15) days after the adoption, together with the names of those Councilmembers voting for or against same, in a newspaper of general circulation published and circulated in the City of San Rafael, County of Marin, State of California.

Within fifteen (15) days after adoption, the City Clerk shall also post in the office of the City Clerk, a certified copy of the full text of this Ordinance along with the names of those Councilmembers voting for and against the Ordinance.

THE FOREGOING ORDINANCE was first read and introduced at a regular meeting of the San Rafael City Council on the 17th day of June 2024, and was passed and adopted at a regular meeting of the San Rafael City Council on the 15th of July by the following vote, to wit:

AYES: COUNCILMEMBERS:
NOES: COUNCILMEMBERS:
ABSENT: COUNCILMEMBERS:

KATE COLIN, Mayor

ATTEST:

LINDSAY LARA, City Clerk