

CITY OF ALAMEDA ORDINANCE NO. _____

New Series

AMENDING THE ALAMEDA MUNICIPAL CODE BY REPEALING CURRENT CHAPTER XX (FLOODPLAIN MANAGEMENT) IN ITS ENTIRELY AND ADOPTING A NEW CHAPTER XX (FLOODPLAIN MANAGEMENT) TO IMPLEMENT THE CITY OF ALAMEDA GENERAL PLAN, CLIMATE ADAPTATION AND RESILIENCY PLAN, AND MAKE OTHER TECHNICAL AMENDMENTS

WHEREAS, the Legislature of the State of California has, in Government Code sections 65302, 65560, and 65800, conferred upon local governments the authority to adopt regulations designed to promote the public health, safety, and general welfare of its citizenry; and

WHEREAS, the Federal Emergency Management Agency has identified special flood hazard areas within the boundaries of the City of Alameda ("City") and such areas may be subject to periodic inundation which may result in loss of life and property, health and safety hazards, disruption of commerce and governmental services, extraordinary public expenditures for flood protection and relief, and impairment of the tax base, all of which adversely affect the public health, safety and general welfare, and

WHEREAS, on August 1, 1978, the federal government accepted the City for participation in the National Flood Insurance Program and the City Council desires to continue to meet the requirements of Title 44 Code of Federal Regulations, Sections 59 and 60, necessary for such participation; and

WHEREAS, pursuant to the California Health and Safety Code, Division 13, Part 1.5 and Part 2.5, the City of Alameda is required to administer and enforce the California Building Standards Code (as adopted in Alameda Municipal Code section 13-2.1), which contains certain provisions that apply to the design and construction of buildings and structures in flood hazard areas; and

WHEREAS, the City Council has determined that it is in the public interest to adopt the proposed floodplain management regulations that are coordinated with the California Building Standards Code.

NOW, THEREFORE, BE IT ORDAINED by the City Council of the City of Alameda as follows:

SECTION 1. The City Council finds the foregoing recitals true and correct and hereby incorporates them in this Ordinance.

SECTION 2. The current version of Alameda Municipal Code, Chapter XX (Floodplain Management) is hereby repealed in its entirety, and replaced with the following regulations:

CHAPTER XX – FLOODPLAIN MANAGEMENT

PART I. – SCOPE AND ADMINISTRATION

ARTICLE 20-1 GENERAL PROVISIONS

Sec. 20-1.1 - Title. The following regulations shall be known as the “Floodplain Management Regulations of the City of Alameda”. Additionally, as set forth in Alameda Municipal Code (AMC), Chapter XIII, Article I, the City has adopted the California Building Standards Code as published and regularly updated by the California Building Standards Commission (CCR, tit. 24) (“Building Standards Code”). These regulations, in combination with the Building Standards Code, shall govern floodplain management within the City.

Sec. 20-1.2 - Statutory authority. The Legislature of the State of California has, in Government Code Sections 65302, 65560, and 65800, conferred upon local governments the authority to adopt regulations designed to promote the public health, safety, and general welfare of its citizenry.

Sec. 20-1.3 - Scope. The provisions of these regulations, in combination with the flood provisions of the Building Standards Code, shall apply to all proposed development entirely or partially in flood hazard areas established in Section 20-2.2 of these regulations.

Sec. 20-1.4 – Purposes and objectives. The purposes and objectives of these regulations and the flood load and flood resistant construction requirements of the Building Standards Code are to promote the public health, safety and general welfare and to minimize public and private losses due to flood conditions in specific flood hazard areas through the establishment of comprehensive regulations for management of flood hazard areas, designed to:

- A. Minimize unnecessary disruption of commerce, access and public service during times of flooding.
- B. Require the use of appropriate construction practices in order to prevent or minimize future flood damage.
- C. Manage the alteration of natural floodplains, stream channels and shorelines to minimize the impact of development on the natural and beneficial functions of the floodplain.
- D. Manage filling, grading, dredging, mining, paving, excavation, drilling operations, storage of equipment or materials, and other development which may increase flood damage or erosion potential.
- E. Prevent or regulate the construction of flood barriers which will divert floodwater or

increase flood hazards.

- F. Contribute to improved construction techniques in the floodplain.
- G. Minimize damage to public and private facilities and utilities.
- H. Help maintain a stable tax base by providing for the sound use and development of flood hazard areas.
- I. Minimize the need for rescue and relief efforts associated with flooding.
- J. Ensure that property owners, occupants, and potential owners are aware of property located in flood hazard areas.
- K. Minimize the need for future expenditure of public funds for flood control projects and response to and recovery from flood events.
- L. Meet the requirements of the National Flood Insurance Program for community participation as set forth in Title 44 Code of Federal Regulations, Section 59.22.

Sec. 20-1.5 - Coordination with the California Building Standards Code. Pursuant to the requirement established in State statute that the City administer and enforce the California Building Standards Code, the City acknowledges that the Building Standards Code contains certain provisions that apply to the design and construction of buildings and structures in flood hazard areas. Therefore, these regulations are intended to be administered and enforced in conjunction with the Building Standards Code.

Sec. 20-1.6 - Warning. The degree of flood protection required by these regulations and the Building Standards Code is considered reasonable for regulatory purposes and is based on scientific and engineering considerations. Larger floods can and will occur. Flood heights may be increased by man-made or natural causes. Enforcement of these regulations and the Building Standards Code does not imply that land outside the special flood hazard areas, or that uses permitted within such flood hazard areas, will be free from flooding or flood damage. The flood hazard areas and base flood elevations contained in the Flood Insurance Study and shown on Flood Insurance Rate Maps and the requirements of Title 44, Code of Federal Regulations, Sections 59 and 60 may be revised by the Federal Emergency Management Agency, requiring the City to revise these regulations to remain eligible for participation in the National Flood Insurance Program. No guaranty of vested use, existing use, or future use is implied or expressed by compliance with these regulations.

Sec. 20-1.7 - Disclaimer of liability. These regulations shall not create liability on the part of the City, including the City Council and any City officer, employee or agent, the State of California, or the Federal Emergency Management Agency, for any flood damage that results from reliance on these regulations or any administrative decision lawfully made hereunder. The Floodplain Administrator and any employee charged with the enforcement of these regulations, while acting on behalf the City in good faith and without malice in the discharge of the duties required by these regulations or other pertinent law or ordinance, shall not thereby be rendered liable personally and is hereby relieved from personal liability for any damage accruing to persons or property as a result of any act or by reason of an act or omission in the discharge of official duties. Any suit instituted against an officer or employee because of an act performed by that officer or employee in the lawful discharge of duties and under the provisions of these regulations shall be defended by

the City Attorney's Office until the final termination of the proceedings. The Floodplain Administrator and any subordinate shall not be liable for cost in any action, suit or proceeding that is instituted in pursuance of the provisions of these regulations.

Sec. 20-1.8 - Other laws. The provisions of these regulations shall not be deemed to nullify any provisions of local, State or federal law.

Sec. 20-1.9 - Abrogation and greater restrictions. These regulations supersede any City ordinance in effect in flood hazard areas. However, these regulations are not intended to repeal, abrogate or impair any existing ordinances including land development regulations, subdivision regulations, zoning ordinances, stormwater management regulations, or building codes, nor any existing easements, covenants, or deed restrictions. In the event of an overlap or conflict between these regulations and any other ordinance, code, regulation, easement, covenant, or deed restriction, the more restrictive shall govern.

ARTICLE 20-2 APPLICABILITY

Sec. 20-2.1 - General applicability. These regulations, in conjunction with the Building Standards Code, provide minimum requirements for development located in flood hazard areas, including the subdivision of land; filling, grading and other site improvements; installation of utilities; installation, placement and replacement of manufactured homes; placement of recreational vehicles; installation of tanks; temporary structures and temporary or permanent storage; utility and miscellaneous Group U buildings and structures; certain building work exempt from permit under the Building Standards Code; and flood control projects.

Sec. 20-2.2 - Establishment of flood hazard areas. The Flood Insurance Study for Alameda County, California and Incorporated Areas dated August 1, 1978, and all subsequent amendments and revisions, and the accompanying Flood Insurance Rate Maps (FIRM), and all subsequent amendments and revisions to such maps, are hereby adopted by reference as a part of these regulations and serve as the basis for establishing flood hazard areas. Where the Building Standards Code establishes flood hazard areas, such areas are established by this section. Additional maps and studies, when specifically adopted, supplement the FIS and FIRMs to establish additional flood hazard areas. Maps and studies that establish flood hazard areas are on file at the City of Alameda Public Works Department, 950 W. Mall Square, Room 110, Alameda, CA.

Sec. 20-2.3 - Interpretation. In the interpretation and application of these regulations, all provisions shall be:

- A. Considered as minimum requirements.
- B. Liberally construed in favor of the city.
- C. Deemed neither to limit nor repeal any other powers granted to the City under State statutes.

ARTICLE 20-3 DUTIES AND POWERS OF THE FLOODPLAIN ADMINISTRATOR

Sec. 20-3.1 - Designation. The Public Works Director is designated the Floodplain Administrator. The Floodplain Administrator shall have the authority to delegate performance of certain duties to other employees.

Sec. 20-3.2 - General authority. The Floodplain Administrator is authorized and directed to administer and enforce these regulations. The Floodplain Administrator shall have the authority to render interpretations of these regulations and to establish policies and procedures in order to clarify the application of its provisions. Such interpretations, policies and procedures shall be consistent with the intent and purpose of these regulations and the flood provisions of the Building Standards Code and shall not have the effect of waiving specific requirements without the granting of a variance pursuant to Article 20-7 of these regulations. The Floodplain Administrator is authorized to waive the submission of site plans, construction documents, and other data that are required by these regulations but that are not required to be prepared by a qualified California (CA) Licensed Land Surveyor or Civil Engineer when it is found that the nature of the proposed development is such that the review of such submissions is not necessary to ascertain compliance with these regulations.

Sec. 20-3.3 - Coordination. The Floodplain Administrator shall coordinate with and provide comments to the Building Official to administer and enforce the flood provisions of the Building Standards Code to ensure compliance with the applicable provisions of these regulations. The Floodplain Administrator and the Building Official have the authority to establish written procedures for reviewing applications and conducting inspections for buildings and for administering and documenting determinations of substantial improvement and substantial damage made pursuant to Section 20-3.5 of these regulations.

Sec. 20-3.4 - Duties. The Floodplain Administrator, in coordination with other City departments, shall:

- A. Review all permit applications and plans to determine whether proposed development is located in flood hazard areas.
- B. Review all applications and plans for development in flood hazard areas for compliance with these regulations.
- C. Review, in coordination with the Building Official, required design certifications and documentation of elevations specified by the Building Standards Code to determine that such certifications and documentations are complete.
- D. Review applications and plans for modification of any existing development in flood hazard areas for compliance with these regulations.
- E. Require development in flood hazard areas to be reasonably safe from flooding and to be designed and constructed with methods, practices and materials that minimize flood damage.
- F. Interpret flood hazard area boundaries and provide available flood elevation and flood hazard information.

- G. Determine whether additional flood hazard data shall be obtained from other sources or developed by the applicant.
- H. Complete the appropriate section of the Department of Housing and Community Development Floodplain Ordinance Compliance Certification for Manufactured Home/Mobil home Installations when submitted by applicants.
- I. Review requests submitted to the Building Official seeking approval to modify the strict application of the flood load and flood resistant construction requirements of the Building Standards Code, to determine whether such requests require consideration as a variance pursuant to Article 20-7 of these regulations.
- J. Coordinate with the Building Official and others to identify and investigate damaged buildings located in flood hazard areas and inform owners of the requirement to obtain permits for repairs.
- K. Require applicants who submit hydrologic and hydraulic engineering analyses to support permit applications to submit to FEMA the data and information necessary to maintain the Flood Insurance Rate Maps when the analyses indicate changes in base flood elevations, flood hazard area boundaries, or floodway designations; such submissions shall be made within 6 months of such data becoming available.
- L. Require applicants who propose alteration of a watercourse to notify adjacent communities and the NFIP State Coordinating Agency, and to submit copies of such notifications to the Federal Emergency Management Agency (FEMA).
- M. Inspect development in accordance with Article 20-6 of these regulations and inspect flood hazard areas to determine when development is undertaken without issuance of permits.
- N. Prepare comments and recommendations for consideration when applicants seek variances for development other than buildings in accordance with Article 20-7 of these regulations.
- O. Cite violations in accordance with Article 20-8 of these regulations.
- P. Notify FEMA when the corporate boundaries of the City have been modified and provide a map and legal description of the changes in the corporate boundaries.

Sec. 20-3.5 - Substantial improvement and substantial damage determinations. For applications for building permits to improve buildings and structures, including alterations, movement, enlargement, replacement, repair, additions, rehabilitations, renovations, substantial improvements, repairs of substantial damage, and any other improvement of or work on such buildings and structures, the Floodplain Administrator, in coordination with the Building Official, shall:

- A. Estimate the market value or require the applicant to obtain an appraisal of the market value prepared by a qualified independent appraiser, of the building or structure before the start of construction of the proposed work; in the case of repair, the market value of the building or structure shall be the market value before the damage occurred and before any repairs are made.
- B. Compare the cost to perform the improvement, the cost to repair the damaged building to its pre-damaged condition, or the combined costs of improvements and repairs, when applicable, to the market value of the building or structure.

- C. The cost of improvements or repairs shall be cumulative over a five (5) year period. The period of accumulation begins when the first improvement or repair of each building is permitted.
- D. Determine and document whether the proposed work constitutes substantial improvement or repair of substantial damage.
- E. Notify the applicant when it is determined that the work constitutes substantial improvement or repair of substantial damage and that compliance with the flood resistant construction requirements of the Building Standards Code is required and notify the applicant when it is determined that work does not constitute substantial improvement or repair of substantial damage.

Sec. 20-3.6 - Department records. In addition to the requirements of the Building Standards Code and these regulations, and regardless of any limitation on the period required for retention of public records, the Floodplain Administrator shall maintain and permanently keep and make available for public inspection all records that are necessary for the administration of these regulations and the flood provisions of the Building Standards Code, including Flood Insurance Studies and Flood Insurance Rate Maps; documents from FEMA that amend or revise FIRMs; records of issuance of permits and denial of permits; determinations of whether proposed work constitutes substantial improvement or repair of substantial damage; required certifications and documentation specified by the Building Standards Code and these regulations; notifications to adjacent communities, FEMA, and the State related to alterations of watercourses; assurance that the flood carrying capacity of altered waterways will be maintained; documentation related to variances, including justification for issuance or denial; and records of enforcement actions taken pursuant to these regulations and the flood resistant provisions of the Building Standards Code.

ARTICLE 20-4 PERMITS FOR FLOODPLAIN DEVELOPMENT

Sec. 20-4.1 - Permits required. Any person, owner or authorized agent who intends to conduct any development in a flood hazard area shall first make an application to the Floodplain Administrator and shall obtain the required permit for floodplain development. No permit shall be issued until compliance with the requirements of these regulations and all other applicable codes and regulations has been satisfied. No building permit shall be issued based on Conditional Letters of Map Revision issued by FEMA. Depending on the nature and extent of proposed development that includes a building or structure, the Floodplain Administrator may determine a permit for floodplain development is required in addition to a building permit.

Sec. 20-4.2 - Application for permit. The applicant shall file an application in writing on a form furnished by the Floodplain Administrator. The information provided shall:

- A. Identify and describe the development to be covered by the permit.
- B. Describe the land on which the proposed development is to be conducted by legal description, street address or similar description that will readily identify and definitely locate the site.

- C. Indicate the use and occupancy for which the proposed development is intended.
- D. Be accompanied by a site plan and construction documents as specified in Article 20-5 of these regulations, including grading, excavation and filling plans and other information deemed appropriate by the Floodplain Administrator.
- E. State the valuation of the proposed work.
- F. Be signed by the applicant or the applicant's authorized agent.
- G. Include such other data and information required by the Floodplain Administrator to demonstrate compliance with these regulations.

Sec. 20-4.3 - Validity of permit. The issuance of a permit for floodplain development under these regulations or the Building Standards Code shall not be construed to be a permit for, or approval of, any violation of these regulations, the Building Standards Code, or any other applicable City law. The issuance of a permit for floodplain development based on submitted documents and information shall not prevent the Floodplain Administrator from requiring the correction of errors and omissions. The Floodplain Administrator is authorized to prevent occupancy or use of a structure or site which is in violation of these regulations.

Sec. 20-4.4 - Other permits required. The applicant shall obtain all other required State and federal permits prior to initiating work authorized by these regulations and shall provide documentation of such permits to the Floodplain Administrator. Such permits include but are not limited to the California State Water Resources Control Board for activities that affect wetlands and alter surface water flows, in conjunction with the U.S. Army Corps of Engineers; Section 404 of the Clean Water Act.

Sec. 20-4.5 - Expiration. A permit for floodplain development shall become invalid when the proposed development is not commenced within 180 days after its issuance, or when the work authorized is suspended or abandoned for a period of 180 days after the work commences. Extensions shall be requested in writing and justifiable cause demonstrated. The Floodplain Administrator is authorized to grant, in writing, one or more extensions of time, for periods not more than 180 days each unless FEMA has issued notification of revision to the Flood Insurance Rate Study and Flood Insurance Rate Maps that alter the flood hazard area or floodway boundaries, flood zones, or base flood elevations, in which case the permit is invalid.

Sec. 20-4.6 - Suspension or revocation. The Floodplain Administrator is authorized to suspend or revoke a permit for floodplain development issued under these regulations wherever the permit is issued in error or on the basis of incorrect, inaccurate or incomplete information, or in violation of these regulations or any other applicable City law.

Sec. 20-4.7 - Appeals of decisions. When it is alleged, there is an error in any decision or determination made by the Floodplain Administrator in the interpretation or enforcement of these regulations, such decision or determination may be appealed to the City Council by filing a written appeal with the City Clerk setting forth the reasons of the appeal. Such notice must be filed within fourteen (14) days after notice of such action appealed from.

The City Clerk shall set the matter for hearing not less than five (5) days prior to such hearing. At such hearing the applicant shall show cause, on the grounds specified in the notice of appeal, why the action accepted to should not be approved. Such hearing may, by the Council, be continued over, and its findings on the appeal shall be final and conclusive in the matter.

ARTICLE 20-5 SITE PLANS AND CONSTRUCTION DOCUMENTS

Sec. 20-5.1 - Information for development in flood hazard areas. The site plan or construction documents for any development subject to the requirements of these regulations shall be drawn to scale and shall include, as applicable to the proposed development:

- A. Delineation of flood hazard areas; floodway boundaries and flood zone(s); base flood elevation(s); ground elevations; proposed filling, grading, and excavation; and drainage patterns and facilities when necessary for review of the proposed development.
- B. Where base flood elevations or floodway data are not included on the FIRM or in the Flood Insurance Study, they shall be established in accordance with Section 20-5.2 or Section 20-5.3 of these regulations.
- C. Where the parcel on which the proposed development will take place will have more than 50 lots or is larger than 5 acres and base flood elevations are not included on the FIRM or in the Flood Insurance Study, such elevations shall be established in accordance with Section 20-5.2(B) of these regulations.
- D. Location of the proposed activity and proposed structures; locations of water supply, sanitary sewer, and other utilities; and locations of existing buildings and structures.
- E. Location, extent, amount, and proposed final grades of any filling, grading, or excavation.
- F. Where the placement of fill is proposed, the amount, type, and source of fill material; compaction specifications; a description of the intended purpose of the fill areas; and evidence that the proposed fill areas are the minimum necessary to achieve the intended purpose.
- G. Existing and proposed alignment of any proposed alteration of a watercourse.

Sec. 20-5.2 - Information in flood hazard areas without base flood elevations (approximate Zone A). Where flood hazard areas are delineated on the FIRM and base flood elevation data have not been provided, the Floodplain Administrator is authorized to:

- (1) Require the applicant to include base flood elevation data prepared by a qualified CA Licensed Civil Engineer in accordance with currently accepted engineering practices. Such analyses shall be performed and sealed by a qualified CA Licensed Civil Engineer. Studies, analyses and computations shall be submitted in sufficient detail to allow review and approval by the Floodplain Administrator. The accuracy of data submitted for such determination shall be the responsibility of the applicant.

- (2) Obtain, review, and provide to applicants base flood elevation and floodway data available from a federal or state agency or other source or require the applicant to obtain and use base flood elevation and floodway data available from a federal or state agency or other source.
- (3) Where base flood elevation and floodway data are not available from another source, where the available data are deemed by the Floodplain Administrator to not reasonably reflect flooding conditions, or where the available data are known to be scientifically or technically incorrect or otherwise inadequate:
 - (a) Require the applicant to include base flood elevation data in accordance with Section 20-5.2(a) of these regulations; or
 - (b) Specify that the base flood elevation is two (2) feet above the highest adjacent grade at the location of the development, provided there is no evidence indicating flood depths have been or may be greater than two (2) feet.
- (4) Where the base flood elevation data are to be used to support a request for a Letter of Map Change from FEMA, advise the applicant that the analyses shall be prepared by a qualified CA Licensed Civil Engineer in a format required by FEMA, and that it shall be the responsibility of the applicant to satisfy the submittal requirements and pay the processing fees.

Sec. 20-5.3 - Additional analyses and certifications. As applicable to the location and nature of the proposed development activity, and in addition to the requirements of these regulations, the applicant shall have the following analyses signed and sealed by a qualified CA Licensed Civil Engineer for submission with the site plan and construction documents:

- A. For development activities proposed to be located in a floodway, a floodway encroachment analysis that demonstrates that the encroachment of the proposed development will not cause any increase in base flood elevations; where the applicant proposes to undertake development activities that do increase base flood elevations, the applicant shall submit such analysis to FEMA as specified in Section 20-5.4 of these regulations and shall submit the Conditional Letter of Map Revision, when issued by FEMA, with the site plan and construction documents.
- B. For development activities proposed to be located in a riverine flood hazard area where base flood elevations are included in the Flood Insurance Study or on the FIRM but floodways have not been designated, hydrologic and hydraulic analyses that demonstrate that the cumulative effect of the proposed development, when combined with all other existing and anticipated flood hazard area encroachments, will not increase the base flood elevation more than one (1) foot at any point within the City. This requirement does not apply in isolated flood hazard areas not connected to a riverine flood hazard area or in flood hazard areas identified as Zone AO or Zone AH.
- C. For alteration of a watercourse, an engineering analysis prepared in accordance with standard engineering practices that demonstrates the flood-carrying capacity of the altered or relocated portion of the watercourse will not be decreased, and certification that the altered watercourse shall be maintained in a manner which

preserves the channel's flood-carrying capacity. The applicant shall submit the analysis to FEMA as specified in Section 20-5.4 of these regulations. The applicant shall notify the chief executive officer of adjacent communities and the California Department of Water Resources. The Floodplain Administrator shall maintain a copy of the notification in the permit records and shall submit a copy to FEMA.

Sec. 20-5.4 - Submission of additional data. When additional hydrologic, hydraulic or other engineering data, studies, and additional analyses are submitted to support an application, the applicant has the right to seek a Letter of Map Change from FEMA to change the base flood elevations, change floodway boundaries, or change boundaries of flood hazard areas shown on FIRMs, and to submit such data to FEMA for such purposes. The analyses shall be prepared by a qualified CA Licensed Civil Engineer in a format required by FEMA. Submittal requirements and processing fees shall be the responsibility of the applicant. Provided FEMA issues a Conditional Letter of Map Revision, construction of proposed flood control projects and land preparation for development are permitted, including clearing, excavation, grading, and filling. Permits for construction of buildings shall not be issued until the applicant satisfies the FEMA requirements for issuance of a Letter of Map Revision.

ARTICLE 20-6 INSPECTIONS

Sec. 20-6.1 - Inspections, in general. Development for which a permit for floodplain development is required shall be subject to inspection. Approval as a result of an inspection shall not be construed to be an approval of a violation of the provisions of these regulations or the Building Standards Code. Inspections presuming to give authority to violate or cancel the provisions of these regulations or the Building Standards Code or other ordinances shall not be valid.

Sec. 20-6.2 - Inspections of development other than buildings and structures. The Floodplain Administrator shall make or cause to be made, inspections of all development other than buildings and structures that is authorized by issuance of a permit for floodplain development under these regulations. The Floodplain Administrator shall inspect flood hazard areas from time to time to determine when development is undertaken without issuance of a permit.

Sec. 20-6.3 - Inspections of manufactured homes installations. The Floodplain Administrator shall make or cause to be made, inspections of installation and replacement of manufactured homes in flood hazard areas authorized by issuance of a permit for floodplain development under these regulations. Upon installation of a manufactured home and receipt of the elevation certification required in Section 20-13.1 of these regulations the Floodplain Administrator shall inspect the installation or have the installation inspected.

Sec. 20-6.4 - Buildings and structures. The Building Official shall make or cause to be made, inspections for buildings and structures in flood hazard areas authorized by permit,

in accordance with the Building Standards Code:

- A. Lowest floor elevation. Upon placement of the lowest floor, including the basement, and prior to further vertical construction, certification of the elevation required in the Building Standards Code shall be prepared by a CA Licensed Land Surveyor or Civil Engineer and submitted to the Building Official.
- B. Final inspection. Prior to the final inspection, certification of the elevation required in the Building Standards Code shall be prepared by a CA Licensed Land Surveyor or Civil Engineer and submitted to the Building Official.

ARTICLE 20-7 VARIANCES

Sec. 20-7.1 - Nature of variances. The considerations and conditions for variances set forth in this article are based on the general principle of zoning law that variances pertain to a piece of property and are not personal in nature. A variance may be issued for a parcel of property with physical characteristics so unusual that complying with the requirements of these regulations would create an exceptional hardship to the applicant or the surrounding property owners. The characteristics must be unique to the property and not be shared by adjacent parcels. The unique characteristic must pertain to the land itself, not to the structure, its inhabitants, or the property owners. The issuance of a variance is for floodplain management purposes only. Federal flood insurance premium rates are determined by the National Flood Insurance Program according to actuarial risk and will not be modified by the granting of a variance.

It is the duty of the City to promote public health, safety and welfare and minimize losses from flooding. This duty is so compelling and the implications of property damage and the cost of insuring a structure built below flood level are so serious that variances from the elevation or other requirements in the Building Standards Code should be quite rare. The long term goal of preventing and reducing flood loss and damage, and minimizing recovery costs, inconvenience, danger, and suffering, can only be met when variances are strictly limited. Therefore, the variance requirements in these regulations are detailed and contain multiple provisions that must be met before a variance can be properly issued. The criteria are designed to screen out those situations in which alternatives other than a variance are more appropriate.

Sec. 20-7.2 – Variances; general. The City Council shall hear and decide requests for variances from the strict application of these regulations.

Sec. 20-7.3 - Limitations on authority. The City Council shall base its determination on technical justifications submitted by applicants, the considerations and conditions set forth in this article, the comments and recommendations of the Floodplain Administrator and Building Official, as applicable, and has the right to attach such conditions to variances as it deems necessary to further the purposes and objectives of these regulations and the Building Standards Code.

Sec. 20-7.4 - Records. The Floodplain Administrator shall maintain a permanent record

of all variance actions, including justification for issuance.

Sec. 20-7.5 - Historic structures. A variance is authorized to be issued for the repair, improvement, or rehabilitation of a historic structure upon a determination that the proposed repair, improvement, or rehabilitation will not preclude the structure's continued designation as a historic structure, and the variance is the minimum necessary to preserve the historic character and design of the structure. When the proposed work precludes the structure's continued designation as a historic building, a variance shall not be granted and the structure and any repair, improvement, and rehabilitation shall be subject to the requirements of the Building Standards Code.

Sec. 20-7.6 - Restrictions in floodways. A variance shall not be issued for any proposed development in a floodway when any increase in flood levels would result during the base flood discharge, as evidenced by the applicable analyses required in Section 20-5.3(A) of these regulations.

Sec. 20-7.7 - Functionally dependent uses. A variance is authorized to be issued for the construction or substantial improvement necessary for the conduct of a functionally dependent use provided the criteria in Section 1612 of the California Building Code (CCR Title 24 Part 2) or Section R322 of the California Residential Code (CCR Title 24 Part 2.5) are met, as applicable, and the variance is the minimum necessary to allow the construction or substantial improvement, and that all due consideration has been given to use of methods and materials that minimize flood damages during the base flood and create no additional threats to public safety.

Sec. 20-7.8 - Considerations for issuance of variances. In reviewing applications for variances, all technical evaluations, all relevant factors, all other requirements of these regulations and the Building Standards Code, as applicable, and the following shall be considered:

- A. The danger that materials and debris may be swept onto other lands resulting in further injury or damage.
- B. The danger to life and property due to flooding or erosion damage.
- C. The susceptibility of the proposed development, including contents, to flood damage and the effect of such damage on current and future owners.
- D. The importance of the services provided by the proposed development to the City.
- E. The availability of alternate locations for the proposed development that are not subject to flooding or erosion and the necessity of a waterfront location, where applicable.
- F. The compatibility of the proposed development with existing and anticipated development.
- G. The relationship of the proposed development to the comprehensive plan and floodplain management program for that area.
- H. The safety of access to the property in times of flood for ordinary and emergency vehicles.
- I. The expected heights, velocity, duration, rate of rise and debris and sediment

transport of the floodwater and the effects of wave action, if applicable, expected at the site.

- J. The costs of providing governmental services during and after flood conditions including maintenance and repair of public utilities and facilities such as sewer, gas, electrical and water systems, streets and bridges.

Sec. 20-7.9 - Conditions for issuance of variances. Variances shall only be issued upon:

- A. Submission by the applicant of a showing of good and sufficient cause that the unique characteristics of the size, configuration or topography of the site limit compliance with any provision of these regulations or renders the elevation standards of the Building Standards Code inappropriate.
- B. A determination that failure to grant the variance would result in exceptional hardship due to the physical characteristics of the land that render the lot undevelopable.
- C. A determination that the granting of a variance will not result in increased flood heights, additional threats to public safety, extraordinary public expense, nor create nuisances, cause fraud on or victimization of the public or future property owners, or conflict with existing local laws or ordinances.
- D. A determination that the variance is the minimum necessary, considering the flood hazard, to afford relief.
- E. When the request is to allow construction of the lowest floor of a new building or substantial improvement of a building below the base flood elevation, notification to the applicant in writing over the signature of the Floodplain Administrator specifying the difference between the base flood elevation and the proposed elevation of the lowest floor, stating that issuance of a variance to construct below the elevation required in the Building Standards Code will result in increased premium rates for federal flood insurance up to amounts as high as \$25 for \$100 of insurance coverage, and that such construction below the required elevation increases risks to life and property.

ARTICLE 20-8 VIOLATIONS

Sec. 20-8.1 - Violations. Any development in any flood hazard area that is being performed without an issued permit or that is in conflict with an issued permit shall be deemed a violation of these regulations. A building or structure without the documentation of the elevation of the lowest floor, other required design certifications, or other evidence of compliance required by these regulations or the Building Standards Code, is presumed to be a violation until such time as required documentation is submitted. Violation of the requirements shall constitute a misdemeanor.

Sec. 20-8.2 - Authority. The Floodplain Administrator is authorized to serve notices of violation or stop work orders to owners of property involved, to the owner's agent, or to the person or persons doing the work for development that is not within the scope of the Building Standards Code, but is regulated by these regulations and that is determined to be a violation thereof.

Sec. 20-8.3 - Unlawful continuance. Any person who shall continue any work after having been served with a notice of violation or a stop work order, except such work as that person is directed to perform to remove or remedy a violation or unsafe condition, shall be subject to any applicable penalties as prescribed by law, including but not limited to those set forth in Alameda Municipal Code section 1-5.

PART II. – DEFINITIONS

ARTICLE 20-9 DEFINITIONS

Sec. 20-9.1 - General. The following words and terms shall, for the purposes of these regulations, have the meanings shown herein. Where terms are not defined in these regulations and are defined in the California Building Code (CCR Title 24 Part 2) and used in the California Residential Code (CCR Title 24 Part 2.5), such terms shall have the meanings ascribed to them in those codes. Where terms are not defined in these regulations or the Building Standards Code, such terms shall have ordinarily accepted meanings such as the context implies.

Sec. 20-9.2 - Definitions

“Accessory Structure” means a structure on the same parcel of property as a principal structure and the use of which is incidental to the use of the principal structure. For floodplain management purposes, the term includes only accessory structures used for parking and storage.

“Agricultural Structure” means a walled and roofed structure used exclusively for agricultural purposes or uses in connection with the production, harvesting, storage, raising, or drying of agricultural commodities and livestock, including aquatic organisms. Structures that house tools or equipment used in connection with these purposes or uses are also considered to have agricultural purposes or uses.

“Alteration of a watercourse” means a dam, impoundment, channel relocation, change in channel alignment, channelization, or change in cross-sectional area of the channel or the channel capacity, or any other form of modification which may alter, impede, retard or change the direction and/or velocity of the riverine flow of water during conditions of the base flood.

“ASCE 24” means the standard Flood Resistant Design and Construction as referenced by the Building Standards Code, developed and published by the American Society of Civil Engineers, Reston, VA. Where cited, ASCE 24 refers to the edition of the standard that is referenced by the Building Standards Code.

“Base flood” means the flood having a 1-percent chance of being equaled or exceeded in any given year. [Also defined in CCR Title 24 Part 2.]

"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 Flood Insurance Rate Map (FIRM). [Also defined in CCR Title 24 Part 2.]

"Basement" means, for the purpose of floodplain management, the portion of a building having its floor subgrade (below ground level) on all sides. [Also defined in CCR Title 24 Part 2.]

"Building Standards Code" means California Code of Regulations Title 24, which is comprised of the family of building codes specifically adopted by the State of California including:

- (1) Part 2, applicable to buildings and structures other than dwellings within the scope of this part;
- (2) Part 2.5, applicable to one- and two-family dwellings and townhouses not more than three stories, and accessory structures;
- (3) Part 10, applicable to existing buildings (as defined in that code);
- (4) The remaining Parts 1 through 10 of the Building Standards Code.

"Design flood" means the flood associated with the greater of the following two areas: [Also defined in CCR Title 24 Part 2.]

- (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 the City'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 City'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 plus 1 foot (305 mm). 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 (610 mm) plus 1 foot (305mm) for a total of 3 feet (915 mm). [Also defined in CCR Title 24 Part 2.]

"Development" means any manmade change to improved or unimproved real estate, including but not limited to, buildings or other structures, temporary structures, temporary or permanent storage of materials, mining, dredging, filling, grading, paving, excavations, drilling operations, flood control projects, and other land-disturbing activities.

"Encroachment" means the placement of fill, excavation, buildings, permanent structures or other development into a flood hazard area which may impede or alter the flow capacity of riverine flood hazard areas.

"Exceptional hardship" means, for the purpose of variances from these regulations or the

Building Standards Code, the exceptional difficulty that would result from a failure to grant a requested variance. Mere economic or financial hardship is not exceptional. Inconvenience, aesthetic considerations, physical handicaps, personal preferences, or the disapproval of one's neighbors do not, as a rule, qualify as exceptional hardships. All of these circumstances can be resolved through other means without granting variances, even when the alternatives are more expensive or require the property owner to build elsewhere or put the parcel to a different use than originally intended.

"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) was completed before June 17, 2009.

"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 from:

- (1) The overflow of inland or tidal waters.
- (2) The unusual and rapid accumulation or runoff of surface waters from any source.
- (3) Mudslides (i.e., mudflows) which are proximately caused by flooding.

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

"Flood damage-resistant materials" means any construction material capable of withstanding direct and prolonged contact with floodwaters without sustaining any damage that requires more than cosmetic repair. [Also defined in CCR Title 24 Part 2.]

"Flood hazard area" means the greater of the following two areas: [Also defined in CCR Title 24 Part 2.]

- (1) The area within a floodplain subject to a 1-percent or greater chance of flooding in any year.
- (2) The area designated as a flood hazard area on the City's flood hazard map, or otherwise legally designated.

"Flood Insurance Rate Map (FIRM)" means an official map of the City on which the Federal Emergency Management Agency (FEMA) has delineated both the special flood hazard areas and the risk premium zones applicable to the City. [Also defined in CCR Title 24 Part 2.]

“Flood Insurance Study” means the official report provided by the Federal Emergency Management Agency containing the Flood Insurance Rate Map (FIRM), the Flood Boundary and Floodway Map (FBFM), the water surface elevation of the base flood and supporting technical data. [Also defined in CCR Title 24 Part 2.]

“Floodplain Administrator” means the City official designated by title to administer and enforce the floodplain management regulations.

“Floodway” means the channel of the river, creek or other watercourse and the adjacent land areas that must be reserved in order to discharge the base flood without cumulatively increasing the water surface elevation more than a designated height. [Also defined in CCR Title 24 Part 2.]

“Fraud or victimization” means, for the purpose of variances from these regulations or the Building Standards Code, the intentional use of deceit to deprive another of rights or property, making a victim of the deprived person or the public. As it pertains to buildings granted variances to be constructed below the elevation required by the Building Standards Code, future owners or tenants of such buildings and the City as a whole may bear the burden of increased risk of damage from floods, increased cost of flood insurance, and increased recovery costs, inconvenience, danger, and suffering.

“Functionally dependent use” means a use that cannot perform its intended purpose unless it is located or carried out in close proximity to water, including only docking facilities, port facilities necessary for the loading or unloading of cargo or passengers, and shipbuilding or ship repair facilities. The term does not include long-term storage, manufacture, sales or service facilities.

“Highest adjacent grade” means the highest natural elevation of the ground surface prior to construction next to the proposed walls or foundation 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 the inventory of historic places maintained by the California Office of Historic Preservation; or
- (4) Individually listed on a local inventory of historic places in communities with historic preservation programs that have been certified by the California Office of Historic Preservation.

“Letter of Map Change (LOMC)” means an official determination issued by FEMA that amends or revises an effective Flood Insurance Rate Map or Flood Insurance Study.

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 Flood Insurance Rate Map 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 City'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 NFIP requirements for such projects with respect to delineation of special flood hazard areas. A CLOMR does not revise the effective Flood Insurance Rate Map or Flood Insurance Study; upon submission and approval of certified as-built documentation, a Letter of Map Revision may be issued by FEMA to revise the effective FIRM.

"Light-duty truck" means, as defined in 40 C.F.R. 86.082-2, 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, but excluding any unfinished or flood-resistant enclosure, usable solely for vehicle parking, building access or limited storage provided that such enclosure is not built so as to render the structure in violation of the non-elevation requirements of the Building Standards Code. [Also defined in CCR Title 24 Part 2.]

"Manufactured home" means a structure that is transportable in one or more sections, built on a permanent chassis, designed for use as a single-family dwelling with or without a permanent foundation when connected to the required utilities, and constructed to the Manufactured Home Construction and Safety Standards promulgated by the U.S. Department of Housing and Urban Development. Also see definitions in Health and Safety Code sections 18000.(a)(2) and 18001.(a). For the purposes of floodplain management, the term also includes mobile homes and recreational vehicles, park

trailers, travel trailers and similar transportable structures that are placed on a site for 180 consecutive days or longer.

“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” means the price at which a property will change hands between a willing buyer and a willing seller, neither party being under compulsion to buy or sell and both having reasonable knowledge of relevant facts. As used in these regulations, the term refers to the market value of buildings and structures, excluding the land and other improvements on the parcel. Market value may be established by one of the following methods: (1) Actual Cash Value (replacement cost depreciated for age and quality of construction), (2) tax assessment value adjusted to approximate market value by a factor provided by the Property Appraiser, or (3) a qualified independent appraiser.

"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) was completed on or after June 17, 2009.

"Nuisance" means that 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.

“Permit for floodplain development” means an official document or certificate issued by the City, or other evidence of approval or concurrence, which authorizes performance of specified development activities that are located in flood hazard areas and that are determined to be compliant with these regulations.

“Recreational vehicle” means a vehicle that is built on a single chassis, 400 square feet (37.16 m²) or less when measured at the largest horizontal projection, designed to be self-propelled or permanently towable by a light-duty truck, and designed primarily not for use as a permanent dwelling but as temporary living quarters for recreational, camping, travel or seasonal use. A recreational vehicle is ready for highway use when 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. Also see definitions in Health and Safety Code section 18010.

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

"Special flood hazard area (SFHA)" means the land area subject to flood hazards and shown on a Flood Insurance Rate Map or other flood hazard map as Zone A, AE, A1-30,

A99, AR, AO, AH, V, VO, VE, or V1-30. [Also defined in CCR Title 24 Part 2.]

“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. [Also defined in CCR Title 24 Part 2.]

“Substantial improvement” means any repair, reconstruction, rehabilitation, alteration, addition or other improvement of a building or structure, taking place during a five (5) year period, the cumulative cost of which equals or exceeds 50 percent of the market value of the structure before the improvement or repair is started. The period of accumulation begins when the first improvement or repair of each building is permitted. When the structure has sustained substantial damage, any repairs are considered substantial improvement regardless of the actual repair work performed. The term does not, however, include either: [Also defined in CCR Title 24 Part 2.]

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

“Utility and Miscellaneous Group U” means buildings and structures of an accessory character and miscellaneous structure not classified in any special occupancy, as described in the Building Standards Code.

“Variance” means a grant of relief from the requirements of these regulations which permits construction in a manner otherwise prohibited and where specific enforcement would result in exceptional hardship.

“Violation” means a development that is not fully compliant with these regulations or the flood provisions of the Building Standards Code, as applicable.

“Watercourse” means a river, creek, stream, channel or other topographic feature in, on, through, or over which water flows at least periodically.

PART III. – FLOOD RESISTANT DEVELOPMENT

ARTICLE 20-10 BUILDINGS AND STRUCTURES

Sec. 20-10.1 - Requirements for buildings and structures in flood hazard areas. Applications for new buildings and structures and substantial improvements within the scope of the Building Standards Code that are proposed in flood hazard areas shall comply with the applicable requirements of the Building Standards Code, or the base flood elevation plus one (1) foot, whichever provides greater flood protection. Buildings and structures which are part of a new subdivision shall be constructed to the grades and

finish floor elevations shown in the approved tentative map, or the applicable requirements of the Building Standards Code, or the base flood elevation plus one (1) foot, whichever provides greater flood protection.

Mechanical, plumbing and electrical systems, including plumbing fixtures related to or supporting a building and structure in a flood hazard area, shall be elevated to the applicable requirements of the Building Standards Code or the base flood elevation plus one (1) foot, whichever provides greater flood protection.

Sec. 20-1.2 – Non-Conversion Agreement. Property owners constructing new or substantially improved structures with a finish floor elevation more than four (4) feet above the lowest adjacent grade shall enter into a non-conversion agreement with the City acknowledging and agreeing to and shall ensure, that the following conditions of the building shall be maintained in perpetuity:

- A. The enclosed area below the lowest floor of the building shall be used solely for parking of vehicles as allowed by the Zoning Code, limited storage, or access to the building, and shall never be used for human habitation.
- B. All interior walls, ceilings, and floors in the building below the base flood elevation plus one foot shall be unfinished and constructed of flood-resistant materials.
- C. All mechanical, electrical, or plumbing devices that service the building shall not be installed below the base flood elevation plus one (1) foot.
- D. The openings in the walls of the enclosed area below the lowest floor of the building shall not be blocked, obstructed, or otherwise altered to reduce the size of the openings or restrict the automatic entry and exit of floodwater.
- E. Any construction in, on, or around the building that differs from the type, scope, or manner of construction authorized under the approved building permit, this Agreement, or applicable sections of the Alameda Municipal Code or State law shall constitute a violation of this Agreement.

Sec. 20-10.3 – Detached garages and accessory storage structures. Detached garages and accessory storage structures used only for parking or storage are permitted below the base flood elevation provided the garages and accessory storage structures:

- A. Are one story and not larger than 600 square feet in area when located in special flood hazard areas.
- B. Are anchored to resist flotation, collapse or lateral movement resulting from flood loads.
- C. Have flood openings in accordance with the Building Standards Code.
- D. Have flood damage-resistant materials used below the base flood elevation plus one (1) foot.
- E. Have mechanical, plumbing and electrical systems, including plumbing fixtures, elevated to or above the base flood elevation plus one (1) foot.

Sec. 20-10.4 - Utility and Miscellaneous Group U. Utility and miscellaneous Group U includes buildings that are accessory in character and miscellaneous structures not classified in any specific occupancy in the Building Standards Code, including, but not

limited to, agricultural buildings, aircraft hangars (accessory to a one- or two-family residence), barns, carports, fences more than 6 feet (1829 mm) high, grain silos (accessory to a residential occupancy), greenhouses, livestock shelters, private garages, retaining walls, sheds, stables, and towers. In addition to the Building Standards Code requirements for fire and life safety, the following shall apply to utility and miscellaneous Group U buildings and structures in flood hazard areas:

- A. New construction and substantial improvement of such buildings and structures shall be anchored to prevent flotation, collapse or lateral movement resulting from flood loads, including the effects of buoyancy, during conditions of the design flood.
- B. New construction and substantial improvement of such buildings and structures, when fully enclosed by walls, shall be elevated such that the lowest floor, including basement, is elevated to or above the design flood elevation in accordance with ASCE 24 or shall be dry floodproofed in accordance with ASCE 24.
- C. Unless dry floodproofed, fully enclosed areas below the design flood elevation shall be constructed in accordance with ASCE 24 and limited to parking, storage, and building access.
- D. When fully enclosed by walls, flood openings shall be installed in accordance with ASCE 24.
- E. Flood damage-resistant materials shall be used below the design flood elevation.
- F. Mechanical, plumbing and electrical systems, including plumbing fixtures, shall be located or installed in accordance with ASCE 24.

ARTICLE 20-11 SUBDIVISIONS

Sec. 20-11.1 - Minimum requirements. Subdivision proposals in flood hazard areas, including proposals for manufactured home parks and subdivisions, shall be reviewed to determine that:

- (1) Such proposals are consistent with the need to minimize flood damage and will be reasonably safe from flooding.
- (2) All public utilities and facilities, such as sewer, gas, electric, communications, and water systems are located and constructed to minimize or eliminate flood damage in accordance with Section 20-12.2 and Section 20-12.3 of these regulations, as applicable, and appropriate codes.
- (3) Adequate drainage is provided to reduce exposure to flood hazards; in Zones AH and AO, adequate drainage paths shall be provided to guide floodwater around and away from proposed structures.

Sec. 20-11.2 - Subdivision requirements. In addition to the requirements of Section 20-11.1 and 20-12.1 of these regulations, where any portion of proposed subdivisions, including proposals for manufactured home parks and subdivisions, lies within a flood hazard area, the following shall be required:

- (1) The flood hazard area, including floodways, as appropriate, shall be delineated on preliminary subdivision plats.
- (2) Where the subdivision has more than 50 lots or is larger than 5 acres and base flood elevations are not included on the FIRM, the base flood elevations

determined in accordance with Section 20-5.2(A) of these regulations.

- (3) When, as part of a proposed subdivision, fill will be placed to support buildings, the fill shall be placed in accordance with the Building Standards Code and approval of the subdivision shall require submission of as-built elevations for each filled pad certified by a licensed land surveyor or registered civil engineer.

ARTICLE 20-12 SITE IMPROVEMENTS, UTILITIES AND LIMITATIONS

Sec. 20-12.1 - Minimum requirements. All proposed development in flood hazard areas shall be reviewed to determine that:

- A. Such proposals are consistent with the need to minimize flood damage and will be reasonably safe from flooding.
- B. Where the proposed development has more than 50 lots or is larger than 5 acres and base flood elevations are not included on the FIRM, the base flood elevations determined in accordance with Section 20-5.2(A) of these regulations.
- C. All public utilities and facilities, such as sewer, gas, electric, communications, and water systems are located and constructed to minimize or eliminate flood damage.
- D. Adequate drainage is provided to reduce exposure to flood hazards; in Zones AH and AO, adequate drainage paths shall be provided to guide floodwater around and away from proposed structures.

Sec. 20-3.2 - Sanitary sewer facilities. All new and replaced sanitary sewer facilities, private sewage treatment plants (including all pumping stations and collector systems) and on-site waste disposal systems shall be designed in accordance with Chapter 7, ASCE 24, to minimize or eliminate infiltration of floodwaters into the facilities and discharge from the facilities into flood waters, and impairment of the facilities and systems.

Sec. 20-3.3 - Water supply facilities. All new and replaced water supply facilities shall be designed in accordance with the provisions of Chapter 7, ASCE 24, to minimize or eliminate infiltration of floodwaters into the systems.

Sec. 20-3.4 - Development in floodways. Development, site improvements and land disturbing activity involving fill or regrading shall not be authorized in the floodway unless the floodway encroachment analysis required in Section 20-5.3(A) of these regulations demonstrates the proposed work will not result in any increase in the base flood level during occurrence of the base flood discharge.

Sec. 20-3.5 - Limitations on placement of fill. Subject to the limitations of these regulations, fill shall be designed to be stable under conditions of flooding including rapid rise and rapid drawdown of floodwaters, prolonged inundation, and protection against flood-related erosion and scour. In addition to these requirements, when intended to support buildings and structures, fill shall comply with the requirements of the Building Standards Code. The placement of fill intended to change base flood elevations, change floodway boundaries, or change boundaries of flood hazard areas shown on FIRMs shall

be subject to the requirements of Section 20-5.4 of these regulations.

ARTICLE 20-13 INSTALLATION OF MANUFACTURED HOMES

Sec. 20-13.1 - Installation. All manufactured homes installed in flood hazard areas shall be installed by an installer that is licensed pursuant to the Business and Professions Code and shall comply with the requirements of the Department of Housing and Community Development (HCD) and the requirements of these regulations. In addition to permits pursuant to these regulations, permits from the HCD are required where the HCD is the enforcement agency for installation of manufactured homes. Upon completion of installation and prior to the final inspection by the Floodplain Administrator, the installer shall submit certification of the elevation of the manufactured home, prepared by a licensed land surveyor or registered civil engineer, to the Floodplain Administrator.

Sec. 20-13.2 - Foundations. All new and replacement manufactured homes, including substantial improvement of manufactured homes installed in flood hazard areas shall be installed on permanent, reinforced foundations that are designed in accordance with the foundation requirements of Section R322.2 of the residential code (CCR Title 24 Part 2.5) and these regulations. Foundations for manufactured homes subject to Section 20-13.5 of these regulations are permitted to be reinforced piers or other foundation elements of at least equivalent strength.

Sec. 20-13.3 - Anchoring. All new and replacement manufactured homes to be placed or substantially improved in a flood hazard area shall be installed using methods and practices which minimize flood damage and shall be securely anchored to an adequately anchored foundation system to resist flotation, collapse and lateral movement. Methods of anchoring are authorized to 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 loads and seismic loads.

Sec. 20-13.4 - General elevation requirement. Unless subject to the requirements of Section 20-13.5 of these regulations, all manufactured homes that are placed, replaced, or substantially improved on sites located: (a) outside of a manufactured home park or subdivision; (b) in a new manufactured home park or subdivision; (c) in an expansion to an existing manufactured home park or subdivision; or (d) in an existing manufactured home park or subdivision upon which a manufactured home has incurred "substantial damage" as the result of a flood, shall be elevated such that the lowest floor, or bottom of the lowest horizontal member of the lowest floor, as applicable to the flood hazard area, is at or above the base flood elevation plus one (1) foot.

Sec. 20-13.5 - Elevation requirement for certain existing manufactured home parks and subdivisions. Manufactured homes that are not subject to Section 20-13.4 of these regulations, including manufactured homes that are placed, replaced, or substantially improved on sites located in an existing manufactured home park or subdivision, unless on a site where substantial damage as a result of flooding has occurred, shall be elevated

such that the lowest floor, or bottom of the lowest horizontal structural member, as applicable to the flood hazard area, is at or above the base flood elevation plus 1 foot.

Sec. 20-13.6 - Flood damage-resistant materials. Materials below elevated manufactured homes shall comply with the flood-damage resistant materials requirements of Section R322 of the residential code (CCR Title 24 Part 2.5).

Sec. 20-13.7 - Enclosures. Fully enclosed areas below elevated manufactured homes shall comply with the enclosed area requirements of Section R322 of the residential code (CCR Title 24 Part 2.5).

Sec. 20-13.8 - Protection of mechanical equipment and outside appliances. Mechanical equipment and outside appliances shall have the lowest floor or bottom of the lowest horizontal member of the manufactured home, as applicable to the flood hazard area be elevated to or above the base flood elevation plus one (1) foot.

Exception. Where such equipment and appliances are designed and installed to prevent water from entering or accumulating within their components and the systems are constructed to resist hydrostatic and hydrodynamic loads and stresses, including the effects of buoyancy, during the occurrence of flooding up to the elevation required by Section 20-13.4 or Section 20-13.5, as applicable, the systems and equipment shall be permitted to be located below that elevation. Electrical wiring systems shall be permitted below the design flood elevation provided they conform to the provisions of NFPA 70 (National Electric Code).

ARTICLE 20-14 RECREATIONAL VEHICLES

Sec. 20-14.1 - Temporary placement. Recreational vehicles in flood hazard areas, shall be placed on a site for less than 180 consecutive days or shall be fully licensed and ready for highway use. Ready for highway use means the recreational vehicle is on wheels or jacking system, is attached to the site only by quick disconnect type utilities and security devices, and has no permanently attached additions, such as rooms, stairs, decks and porches.

Sec. 20-14.2 - Permanent placement. Recreational vehicles that do not meet the limitations in Section 20-14.1 for temporary placement shall meet the requirements of Article 20-13 for manufactured homes.

ARTICLE 20-15 OTHER DEVELOPMENT

Sec. 20-15.1 - General requirements for other development. All development, including man-made changes to improved or unimproved real estate for which specific provisions are not specified in these regulations or the Building Standards Code, shall:

- A. Be located and constructed to minimize flood damage.
- B. Meet the limitations of Section 20-12.4 of these regulations when located in a

regulated floodway.

- C. Be anchored to prevent flotation, collapse or lateral movement resulting from hydrostatic loads, including the effects of buoyancy, during conditions of the design flood.
- D. Be constructed of flood damage-resistant materials.
- E. Have mechanical, plumbing, and electrical systems above the design flood elevation or meet the requirements of ASCE 24, except that minimum electric service required to address life safety and electric code requirements is permitted below the design flood elevation provided it conforms to the provisions of the electrical part of the Building Standards Code for wet locations.

Sec. 20-15.2 - Tanks. Tanks that serve buildings shall comply with the requirements of the Building Standards Code. Underground and above-ground tanks that serve other purposes shall be designed, constructed, installed and anchored in accordance with ASCE 24.

Sec. 20-15.3 - Requirements for temporary structures and temporary storage in flood hazard areas. Temporary structures shall be erected for a period of less than 180 days and temporary storage of goods and materials shall be permitted for a period of less than 180 days. Extensions may be granted in accordance with Section 20-4.5 of these regulations. In addition, the following apply:

- (1) Temporary structures shall be anchored to prevent flotation, collapse or lateral movement resulting from hydrostatic loads, including the effects of buoyancy, during conditions of the design flood. Fully enclosed temporary structures shall have flood openings that are in accordance with ASCE 24 to allow for the automatic entry and exit of flood waters.
- (2) Temporary stored materials shall not include hazardous materials.
- (3) The requirements of Section 20-12.4 of these regulations, when located in floodways.

Sec. 20-15.4 - Fences in floodways. Fences in floodways that have the potential to block the passage of floodwaters, such as stockade fences and wire mesh fences, shall meet the limitations of Section 20-12.4 of these regulations.

Sec. 20-15.5 - Oil derricks. Oil derricks located in flood hazard areas shall be designed in conformance with flood loads required by the Building Standards Code.

Sec. 20-15.6 - Retaining walls, sidewalks and driveways in floodways. Retaining walls and sidewalks and driveways that involve placement of fill in floodways shall meet the limitations of Section 20-12.4 of these regulations and the requirements for site grading in Chapter 18 of the Building Standards Code.

Sec. 20-15.7 - Roads and watercourse crossings in floodways. Roads and watercourse crossings that encroach into floodways or riverine waterways with base flood elevations

where floodways have not been designated, including roads, bridges, culverts, low-water crossings and similar means for vehicles or pedestrians to travel from one side of a watercourse to the other side shall meet the limitations of Section 20-12.4 of these regulations. Alteration of a watercourse that is part of work proposed for a road or watercourse crossing shall meet the requirements of Section 20-5.3(C) of these regulations.

Sec. 20-15.8 - Swimming pools. Above-ground swimming pools, on-ground swimming pools, and in-ground swimming pools that involve placement of fill in floodways shall meet the requirement of Section 20-12.4 of these regulations.

ARTICLE 20-16 FLOOD CONTROL PROJECTS

Sec. 20-16.1 - Flood control projects; general. In addition to applicable Federal, State and other local permits, a permit for floodplain development is required for construction of flood control projects. The purpose for the permit is to examine the impact on flood hazard areas, floodways, and base flood elevations shown on the FIRM. Unless otherwise authorized by separate regulations, issuance of this permit does not address the sufficiency of the structural elements of the proposed flood control project. Permits for floodplain development and building permits in areas affected by proposed flood control projects shall not be issued based on Conditional Letters of Map Revision issued by FEMA.

Sec. 20-16.2 - Flood control projects; applications. Applications for permits for flood control projects shall include documentation including but not limited to:

- A. Site plan or document showing the existing topography and the boundaries of the flood hazard areas, floodway boundaries, and base flood elevations shown on the FIRM.
- B. Site plan or document showing the proposed topography and the proposed changes to the boundaries of the flood hazard areas, floodway boundaries, and base flood elevations.
- C. The documentation submitted to FEMA for a Conditional Letter of Map Revision (CLOMR) and, if issued, the Conditional Letter of Map Revision. Submittal requirements and processing fees shall be the responsibility of the applicant. A CLOMR is required when a proposed flood control project alters a floodway and increases base flood elevations more than greater than 0.00 feet, or alters a watercourse a riverine flood hazard area for which base flood elevations are included in the Flood Insurance Study or on the FIRM and floodways have not been designated and increases base flood elevations more than 1.0 foot.

SECTION 3. APPLICABILITY.

The regulations set forth in this ordinance shall apply to all applications for development within the City, including building permit applications and subdivision proposals, submitted on or after the effective date of this ordinance.

SECTION 4. INCLUSION INTO THE CODE OF ORDINANCES.

It is the intent of the City Council that the provisions of this ordinance shall become and be made a part of the City's Code of Ordinances, and that the sections of this ordinance may be renumbered or relettered and the word "ordinance" may be changed to "section," "article," "regulation," or such other appropriate word or phrase in order to accomplish such intentions.

SECTION 5. SEVERABILITY.

If any provision of this Ordinance is held by a court of competent jurisdiction to be invalid, this invalidity shall not affect other provisions of this Ordinance that can be given effect without the invalid provision and therefore the provisions of this Ordinance are severable. The City Council declares that it would have enacted each section, subsection, paragraph, subparagraph and sentence notwithstanding the invalidity of any other section, subsection, paragraph, subparagraph or sentence.

SECTION 6. EFFECTIVE DATE.

This Ordinance shall be in full force and effect from and after the expiration of thirty (30) days from the date of its final passage.

Presiding Officer of the City Council

Attest:

Lara Weisiger, City Clerk

* * * * *

I, the undersigned, hereby certify that the foregoing Ordinance was duly and regularly adopted and passed by the Council of the City of Alameda in a regular meeting assembled on the _____ day of _____ 2024, by the following vote to wit:

AYES:

NOES:

ABSENT:

ABSTENTIONS:

IN WITNESS, WHEREOF, I have hereunto set my hand and affixed the official seal of said City this _____ day of _____ 2024.

Lara Weisiger, City Clerk
City of Alameda

APPROVED AS TO FORM:

Yibin Shen, City Attorney
City of Alameda